



# Development Charges Background Study

City of Hamilton

This report consolidates the December 21, 2023 Background Study and the March 28, 2024 Addendum Report

June 7, 2024

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## **Refinements to Report**

Subsequent to the release of the Background Study on December 21, 2023, it was identified that Schedule 10 in Appendix A was not included in error. The schedule has been added on Page A-18.

In addition, it is noted that the report was released on December 21, 2023, however, the background study indicated a December 20, 2023 release date. This has been corrected on the following pages:

- Title page;
- Page 1-2;
- Figure 1-1 on Page 1-2; and
- Page 7-12

The above revisions do not impact the calculations throughout the report.



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## List of Acronyms and Abbreviations

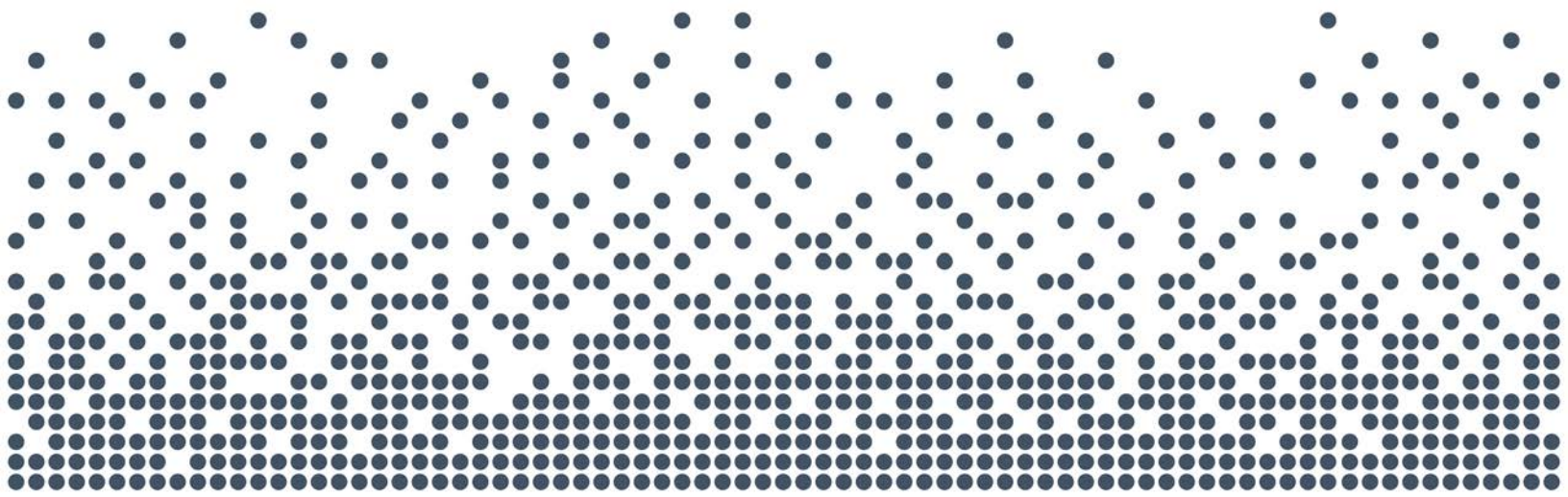
<b>Acronym</b>	<b>Full Description of Acronym</b>
A.E.G.D.	Airport Employment Growth District
A.M.P.	Asset management plan
BIA	Business Improvement Area
C.B.C.	Community benefits charge
CIPA	Community Improvement Project Areas
D.C.	Development charge
D.C.A.	<i>Development Charges Act, 1997, as amended</i>
ERASE	Environmental, Remediation, and Site Enhancement
G.F.A.	Gross floor area
GI	Green infrastructure
H.T.M.P.	City of Hamilton Transportation Master Plan (2017)
LID	Low impact development
N.F.P.O.W.	No fixed place of work
N.H.S.	Natural Heritage System
OLT	Ontario Land Tribunal
O.P.A.	Official Plan Amendment
O. Reg.	Ontario Regulation



## List of Acronyms and Abbreviations (Cont'd)

P.O.A.	<i>Provincial Offences Act</i>
P.P.U.	Persons per unit
R.O.W.	Right-of-way
S.C.U.B.E.	Stoney Creek Urban Boundary Expansion
S.D.E.	Single detached equivalent
S.W.M.	Stormwater management
sq.ft.	Square foot/feet





# Executive Summary



# Executive Summary

1. The report provided herein represents the Development Charges (D.C.) Background Study for the City of Hamilton required by the *Development Charges Act, 1997*, as amended (D.C.A.). This report has been prepared in accordance with the methodology required under the D.C.A. The contents include the following:
  - Chapter 1 – Overview of the legislative requirements of the Act;
  - Chapter 2 – Review of present D.C. policies of the City;
  - Chapter 3 – Summary of the residential and non-residential growth forecasts for the City;
  - Chapter 4 – Approach to calculating the D.C.;
  - Chapter 5 – Review of historical service standards and identification of future capital requirements to service growth and related deductions and allocations;
  - Chapter 6 – Calculation of the D.C.s;
  - Chapter 7 – D.C. policy recommendations and rules; and
  - Chapter 8 – By-law implementation.
  
2. D.C.s provide for the recovery of growth-related capital expenditures from new development. The D.C.A. is the statutory basis to recover these charges. The methodology is detailed in Chapter 4; a simplified summary is provided below.
  - 1) Identify amount, type and location of growth;
  - 2) Identify servicing needs to accommodate growth;
  - 3) Identify capital costs to provide services to meet the needs;
  - 4) Deduct:
    - Grants, subsidies and other contributions;
    - Benefit to existing development;
    - Amounts in excess of 15-year historical service calculation; and
    - D.C. reserve funds (where applicable).



- 5) Allocate net costs between residential and non-residential benefit; and
  - 6) Divide net costs by growth to provide the D.C.
3. A number of changes to the D.C.A. have occurred since the passage of the City's 2019 D.C. By-law. These changes were introduced through four bills passed in the Ontario legislature: Bill 108, Bill 138, Bill 197, and Bill 213, and were detailed in the City's 2021 D.C. Update Study, dated, March 5, 2021. These changes included the following:
- Instalment payments for rental housing, institutional developments, and non-profit housing;
  - Rate freeze on D.C.s for applications proceeding through Site Plan or Zoning By-law Amendment applications;
  - Removal of the 10% mandatory deduction on all D.C. eligible services;
  - Introduction of a new authority under the *Planning Act* to implement community benefits charges (C.B.C.s);
  - Expansion to the list of eligible services – as part of Bill 108, the list of eligible services for the D.C. was limited to “hard services”, with “soft services” being removed from the D.C.A. Through Bill 197, the list of D.C. eligible services was expanded to include most services eligible under the D.C.A. prior to Bill 108; and
  - New exemption for universities that receive operating funds from the government.
4. Since the completion of the D.C. Update Study in 2021, further legislative changes have been made to the D.C.A.
- 1) On November 28, 2022, Bill 23, the *More Homes Built Faster Act, 2022*, received Royal Assent. The Bill provides the following changes (further details are provided in section 1.4 of this report). It is noted that, as of the time of writing, the Province has announced (on December 13, 2023) potential changes to the phased-in requirements and the removal of studies as eligible capital costs. The details of these changes will be forthcoming in early 2024 and Watson will monitor and advise as to the nature of these changes:



- Additional residential unit exemption: exemptions for up to two additional units;
- Removal of housing as an eligible D.C. service;
- New statutory exemptions for affordable and attainable units (currently not in force);
- New statutory exemption: affordable inclusionary zoning units;
- New statutory exemption: non-profit housing;
- Historical level of service extended to previous 15-year period instead of the previous 10-year period;
- Capital cost definition revised to remove studies and prescribe services for which land or an interest in land will be restricted (nothing prescribed to date);
- Mandatory phase-in of a D.C. passed after January 1, 2022, as follows:
  - Year 1 – 80% of the maximum charge;
  - Year 2 – 85% of the maximum charge;
  - Year 3 – 90% of the maximum charge;
  - Year 4 – 95% of the maximum charge; and
  - Year 5 to expiry – 100% of the maximum charge;
- D.C. by-law expiry will be a maximum of 10 years after the date the by-law comes into force;
- D.C. for rental housing developments to receive a discount as follows:
  - Three or more bedrooms – 25% reduction;
  - Two bedrooms – 20% reduction; and
  - All other bedroom quantities – 15% reduction;
- Maximum interest rate for instalments and the determination of the charge for eligible Site Plan and Zoning By-law Amendment applications to be set at the average prime rate plus 1%; and
- Requirement to allocate funds received – municipalities are required to spend or allocate at least 60% of their reserve fund at the beginning of the year for water, wastewater, and services related to a highway.

2) On April 14, 2022, Bill 109, the *More Homes for Everyone Act, 2022*, received Royal Assent. The Bill provides for additional reporting



requirements as part of the Annual Treasurer’s statement. Further details are provided in section 1.5 of this report.

5. On December 4, 2023, Bill 134, the *Affordable Homes and Good Jobs Act, 2023*, received Royal Assent. This Bill provides for a change to the definition of affordable residential units. Further discussion is provided in section 1.5 of this report.
6. The growth forecast (Chapter 3), on which the City-wide D.C. is based, projects the following population, housing, and non-residential floor area for the 10-year (2023 to 2032) period. It is noted that for water service, wastewater service, stormwater service and services related to a highway, the forecast is based on the targeted population and employment numbers included in the prior D.C. study. The City is undertaking master plan studies for each of these services to assess the servicing needs of growth beyond these targets; however, as of the time of writing, these studies are not complete. As the servicing information is not available for growth identified beyond the 2019 D.C. targets, the former growth targets have been continued for this study.

Table ES-1  
Summary of Growth Forecast by Planning Period

Measure	Urban Area: Water/Wastewater Servicing Target	Separate Sewer System Area: Servicing Target	Combined Sewer System Area: Servicing Target	Services Related to a Highway City-Wide Servicing Target	City-wide: 2023 to 2032
(Net) Population Increase	43,099	42,278	821	42,157	62,136
Residential Unit Increase	26,358	21,143	5,215	26,570	36,113
Non-Residential Gross Floor Area Increase (sq.ft.)	10,258,200	7,470,100	2,788,200	10,375,800	15,617,600

Source: Watson & Associates Economists Ltd. Forecast 2023



7. On June 13, 2019, the City of Hamilton passed By-law 19-142 under the D.C.A. The by-law imposes D.C.s on residential and non-residential uses. This by-law was amended on July 6, 2021, via By-law 21-102. This by-law was also amended by 19-142-OLT-01 Schedule A and 19-142-OLT-02 Schedule A. This amended by-law will expire on June 13, 2024. The City is undertaking a D.C. public process and anticipates passing a new by-law in advance of the expiry date. The mandatory public meeting has been set for February 22, 2024, with adoption of the by-laws anticipated for April/May 2024.
8. The City's D.C.s currently in effect (excluding GO Transit service charges) for single detached dwelling units are \$58,127 for the combined sewer system and \$66,964 for the separated sewer system. The non-residential charge (excluding GO Transit service charges) per sq.ft. of building area is \$25.08 for the combined sewer system and \$28.01 for the separated sewer system. This report has undertaken a recalculation of the charges based on future identified needs (presented in Table ES-3). It is noted that the costs and calculations undertaken herein are based on 2023 dollars. Charges have been provided on a City-wide basis for all services, excluding water and wastewater, (calculated on an urban service area basis) and stormwater services (calculated on a combined versus separated sewer system area basis). The corresponding single detached unit charge is \$71,494 within the combined sewer system area and \$84,682 in the separated sewer system area. The non-residential charge is \$33.31 per sq.ft. of building area within the combined sewer system area and \$38.06 per sq.ft. of building area within the separated sewer system area. These rates are submitted to Council for its consideration.
9. The D.C.A. requires a summary be provided of the gross capital costs and the net costs to be recovered over the life of the by-laws. This calculation is provided by service and is presented in Table 6-7. A summary of these costs is provided below:



Table ES-2  
Summary of Expenditures Anticipated Over the Life of the By-laws

Summary of Expenditures Anticipated Over the Life of the By-laws	Expenditure Amount
Total gross expenditures planned over the next 10 years	\$4,713,771,389
Less: Benefit to existing development	\$1,162,295,003
Less: Post planning period benefit	\$379,320,827
Less: Other Deductions	\$153,260,402
Less: Grants, subsidies and other contributions	\$631,928,900
<b>Net costs to be recovered from development charges</b>	<b>\$2,386,966,257</b>

This suggests that for the non-D.C. cost over the life of the D.C. by-laws (benefit to existing development, and grants, subsidies and other contributions), approximately \$1.95 billion (or an annual amount of approximately \$194.75 million) will need to be contributed from taxes and rates, or other sources. With respect to the post period benefit amount of \$379.32 million, it will be included in subsequent D.C. study updates to reflect the portion of capital that benefits growth in the post period D.C. forecasts.

Based on the above table, the City plans to spend \$4.71 billion over the life of the by-laws, of which approximately \$2.39 billion (51%) is recoverable from D.C.s. Of this net amount, \$1.90 billion is recoverable from residential development and \$486.82 million from non-residential development. It is noted also that any exemptions or reductions in the charges would reduce this recovery further.

10. Considerations by Council – The Background Study represents the service needs arising from residential and non-residential growth over the forecast periods.

The following services are calculated based on an urban area servicing target forecast:

- Wastewater services; and
- Water services.

The following service is calculated based on a City-wide servicing target forecast:



- Services related to a highway.

The following service is based on an area-specific servicing target forecast for the separated sewer system and combined sewer system areas:

- Stormwater drainage and control services
  - Separated sewer system area; and
  - Combined sewer system area.

All other services are calculated based on a 10-year forecast. These include:

- Public works – facilities and fleet;
- Fire protection services;
- Policing services;
- Transit services;
- Parks and recreation services;
- Library services;
- Long-term care services;
- Child care and early years programs;
- Public health services;
- *Provincial Offences Act* (P.O.A.) services;
- Ambulance services; and
- Waste diversion.

Council will consider the findings and recommendations provided in the report and, in conjunction with public input, approve such policies and rates it deems appropriate. The draft D.C. by-laws are appended in Appendix J (under separate cover). These decisions may include:

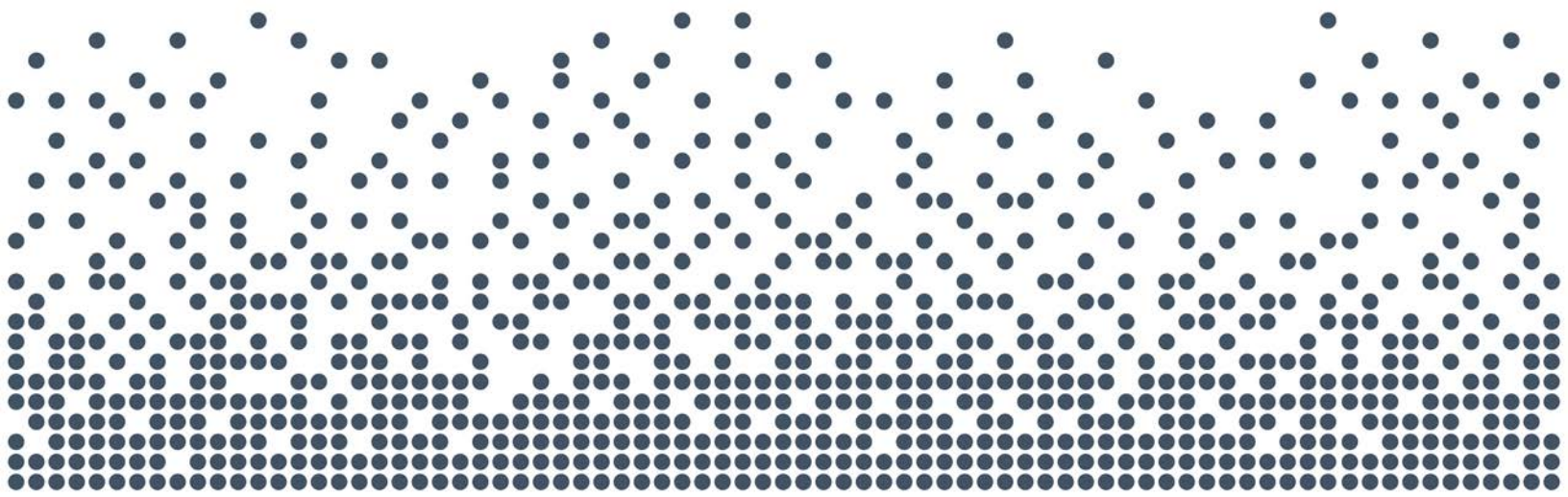
- Adopting the charges and policies recommended herein;
- Considering additional recommended exemptions to the by-laws; and
- Considering reductions in the charge by class of development (obtained by removing certain services on which the charge is based and/or by a general reduction in the charge).





**Table ES-3  
Schedule of Development Charges**

Service/Class of Service	RESIDENTIAL					NON-RESIDENTIAL
	Single and Semi-Detached Dwelling	Other Multiples	Apartments - 2 Bedrooms+	Apartments - Bachelor and 1 Bedroom	Residential Facility	(per sq.ft. of Gross Floor Area)
<b>City Wide Services/Class of Service:</b>						
Services Related to a Highway	18,103	13,512	11,099	6,876	5,636	13.31
Public Works (Facilities and Fleet)	1,335	996	818	507	416	0.80
Transit Services	1,601	1,195	982	608	498	0.96
Fire Protection Services	1,151	859	706	437	358	0.69
Policing Services	1,018	760	624	387	317	0.61
Parks and Recreation	11,065	8,259	6,784	4,203	3,445	0.95
Library Services	2,061	1,538	1,264	783	642	0.18
Long-term Care Services	231	172	142	88	72	0.04
Child Care and Early Years Programs	-	-	-	-	-	0.00
Provincial Offences Act Services including By-Law Enforcement	52	39	32	20	16	0.03
Public Health Services	42	31	26	16	13	0.01
Ambulance	325	243	199	123	101	0.06
Waste Diversion	346	258	212	131	108	0.03
<b>Total City Wide Services/Class of Services</b>	<b>37,330</b>	<b>27,862</b>	<b>22,888</b>	<b>14,179</b>	<b>11,622</b>	<b>17.67</b>
<b>Urban Services</b>						
Wastewater Facilities	7,125	5,318	4,368	2,706	2,218	4.53
Wastewater Linear Services	10,630	7,934	6,517	4,038	3,310	6.75
Water Services	6,856	5,117	4,203	2,604	2,135	4.36
<b>Combined Sewer System</b>						
Stormwater Drainage and Control Services	9,553	7,130	5,857	3,629	2,974	0.00
<b>Separated Sewer System</b>						
Stormwater Drainage and Control Services	22,741	16,974	13,942	8,638	7,080	4.75
<b>GRAND TOTAL RURAL AREA</b>	<b>37,330</b>	<b>27,862</b>	<b>22,888</b>	<b>14,179</b>	<b>11,622</b>	<b>17.67</b>
<b>GRAND TOTAL COMBINED SEWER SYSTEM</b>	<b>71,494</b>	<b>53,361</b>	<b>43,833</b>	<b>27,156</b>	<b>22,259</b>	<b>33.31</b>
<b>GRAND TOTAL SEPARATED SEWER SYSTEM</b>	<b>84,682</b>	<b>63,205</b>	<b>51,918</b>	<b>32,165</b>	<b>26,365</b>	<b>38.06</b>



# Report



# Chapter 1

## Introduction



# 1. Introduction

## 1.1 Purpose of this Document

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This Background Study has been prepared pursuant to the requirements of the *Development Charges Act, 1997*, as amended, (D.C.A.) (section 10) and, accordingly, recommends new development charges (D.C.s) and policies for the City of Hamilton.

The City retained Watson & Associates Economists Ltd. (Watson), to undertake the D.C. study process beginning in late 2022 with anticipated completion prior to by-law expiry in mid-2024. Watson worked with City staff as well as engineering consultants GM BluePlan Engineering Consultants Limited (GM BluePlan), Arcadis Canada Inc. (Arcadis), and WSP Inc. (WSP) in association with Scheckenberger & Associates Ltd. in preparing the D.C. analysis and policy recommendations.

This D.C. Background Study, containing the proposed D.C. by-laws, will be distributed to members of the public in order to provide interested parties with sufficient background information on the legislation, the study's recommendations, and an outline of the basis for these recommendations.

This report has been prepared, in the first instance, to meet the statutory requirements applicable to the City's D.C. Background Study, as summarized in Chapter 4. It also addresses the requirement for "rules" (contained in Chapter 7) and the proposed by-laws to be made available as part of the approval process (included as Appendix J).

In addition, the report is designed to set out sufficient background on the legislation (Chapter 4), Hamilton's current D.C. policies (Chapter 2) and the policies underlying the proposed by-laws, to make the exercise understandable to those who are involved.

Finally, it addresses post-adoption implementation requirements (Chapter 8) which are critical to the successful application of the new policy.

The chapters in the report are supported by appendices containing the data required to explain and substantiate the calculation of the charge. A full discussion of the statutory requirements for the preparation of a background study and calculation of a D.C. is provided herein.



## 1.2 Summary of the Process

The public meeting required under section 12 of the D.C.A. has been scheduled for February 22, 2024. Its purpose is to present the study to the public and to solicit public input. The meeting is also being held to answer any questions regarding the study's purpose, methodology, and the proposed modifications to the City's D.C.s.

In accordance with the legislation, the Background Study and proposed D.C. by-laws will be available for public review on December 21, 2023.

The process to be followed in finalizing the report and recommendations includes:

- Consideration of responses received prior to, at, or immediately following the public meeting; and
- Finalization of the report and Council consideration of the by-laws subsequent to the public meeting.

Figure 1-1 outlines the proposed schedule to be followed with respect to the D.C. by-laws adoption process.

Figure 1-1  
Schedule of Key D.C. Process Dates for the City of Hamilton

Schedule of Study Milestone	Dates
1. Data collection, staff review, D.C. calculations and policy work	September 2022 to November 2023
2. Development Charges Stakeholders Sub-Committee Meeting	1. April 13, 2023 2. September 18, 2023 3. November 9, 2023
3. Public meeting advertisement placed in Hamilton Spectator and Social Media Outlets	Last week of January 2024
4. Background study and proposed by-laws available to public	December 21, 2023
5. Public Engagement Sessions	January 23 & 24, 2024
6. Public meeting at Audit, Finance & Administration Committee	February 22, 2024
7. Release of Addendum Report	March 28, 2024
8. Audit, Finance & Administration Committee considers adoption of Background Study and passage of by-laws	April/May 2024



Schedule of Study Milestone	Dates
9. Newspaper notice given of by-law(s) passage	By 20 days after passage
10. Last day for by-law(s) appeal	40 days after passage
11. City makes pamphlet available (where by-law(s) not appealed)	By 60 days after in force date

## 1.3 Changes to the D.C.A. – Bills 108, 138, 197, and 213

### 1.3.1 ***Bill 108: More Homes, More Choice Act – An Act to Amend Various Statutes with Respect to Housing, Other Development, and Various Matters***

On May 2, 2019, the Province introduced Bill 108, which proposed changes to the D.C.A. The Bill was introduced as part of the Province's "More Homes, More Choice: Ontario's Housing Supply Action Plan." The Bill received Royal Assent on June 6, 2019.

While having received Royal Assent, many of the amendments to the D.C.A. will not come into effect until they are proclaimed by the Lieutenant Governor (many of these changes were revised through Bill 197). At the time of writing, the following provisions have been proclaimed:

- Effective January 1, 2020, rental housing and institutional developments will pay D.C.s in six equal annual payments commencing at occupancy. Interest may be charged on the instalments, and any unpaid amounts may be added to the property and collected as taxes. As per Bill 23, non-profit housing developments are now exempt from paying D.C.s; however, prior to Bill 23, and as a result of Bill 108, non-profit housing developments paid D.C.s in 21 equal annual payments. Effective January 1, 2020, the D.C. amount for all developments occurring within two years of a Site Plan or Zoning By-law Amendment planning approval (for applications submitted after this section is proclaimed), shall be determined based on the D.C. in effect on the day of Site Plan or Zoning By-law Amendment application, subject to applicable interest. If the development is not proceeding via these planning approvals, then the amount is determined as of the date of issuance of a building permit.



On February 28, 2020, the Province released updated draft regulations related to the D.C.A. and the *Planning Act*. A summary of the changes that were to take effect upon proclamation by the Lieutenant Governor is provided below.

**Changes to Eligible Services** – Prior to Bill 108, the D.C.A. provided a list of ineligible services whereby municipalities could include growth-related costs for any service that was not listed. With Bill 108, the changes to the D.C.A. would now specifically list the services that are eligible for inclusion in the by-law. Furthermore, the initial list of eligible services under Bill 108 was limited to "hard services," with "soft services" being removed from the D.C.A. These services would be considered as part of a new community benefits charge (C.B.C.) (discussed below) imposed under the *Planning Act*. As noted in the next section, this list of services has been amended through Bill 197.

**Mandatory 10% Deduction** – The amending legislation would have removed the mandatory 10% deduction for all services that remain eligible under the D.C.A.

**Remaining Services to be Included in a New C.B.C. Under the *Planning Act*** – It was proposed that a municipality may, by by-law, impose a C.B.C. against land to pay for the capital costs of facilities, services and matters required because of development or redevelopment in the area to which the by-law applies. The C.B.C. was proposed to include formerly eligible D.C. services that are not included in the listing below, in addition to parkland dedication and bonus zoning contributions.

### **1.3.2 Bill 138: Plan to Build Ontario Together Act, 2019**

On November 6, 2019, the Province released Bill 138 which provided further amendments to the D.C.A. and the *Planning Act*. This Bill received Royal Assent on December 10, 2019, and was proclaimed, which resulted in sections related to the D.C.A. (schedule 10) becoming effective on January 1, 2020. The amendments to the D.C.A. included removal of instalment payments for commercial and industrial developments that were originally included in Bill 108.

### **1.3.3 Bill 197: COVID-19 Economic Recovery Act, 2020**

In response to the global pandemic that began affecting Ontario in early 2020, the Province released Bill 197 which provided amendments to a number of Acts, including the D.C.A. and the *Planning Act*. This Bill also revised some of the proposed changes identified in Bill 108. Bill 197 was tabled on July 8, 2020, received Royal Assent on July



21, 2020, and was proclaimed on September 18, 2020. The following provides a summary of the changes.

### 1.3.3.1 D.C.-Related Changes

#### List of D.C. Eligible Services

- As noted above, under Bill 108 some services were to be included under the D.C.A. and some would be included under the C.B.C. authority. Bill 197, however, revised this proposed change and has included all services (with some exceptions) under the D.C.A. These services are as follows:
  - Water supply services, including distribution and treatment services;
  - Wastewater services, including sewers and treatment services.
  - Storm water drainage and control services.
  - Services related to a highway.
  - Electrical power services.
  - Toronto-York subway extension.
  - Transit services.
  - Waste diversion services.
  - Policing services.
  - Fire protection services.
  - Ambulance services.
  - Library services.
  - Long-term care services.
  - Parks and recreation services, but not the acquisition of land for parks.
  - Public health services.
  - Child care and early years services.
  - Housing services (no longer eligible as per Bill 23).
  - *Provincial Offences Act* services.
  - Services related to emergency preparedness.
  - Services related to airports, but only in the Regional Municipality of Waterloo.
  - Additional services as prescribed.





## **Classes of Services – D.C.**

Pre-Bill 108/197 legislation (i.e., the D.C.A., 1997) allowed for categories of services to be grouped together into a minimum of two categories (90% and 100% services).

The Act (as amended) repeals and replaces the above with the four following subsections:

- A D.C. by-law may provide for any eligible service or capital cost related to any eligible service to be included in a class, set out in the by-law.
- A class may be composed of any number or combination of services and may include parts or portions of the eligible services or parts or portions of the capital costs in respect of those services.
- A D.C. by-law may provide for a class consisting of studies in respect of any eligible service whose capital costs are described in paragraphs 5 and 6 of section 5 of the D.C.A.
- A class of service set out in the D.C. by-law is deemed to be a single service with respect to reserve funds, use of monies, and credits.

Note: An initial consideration of “class” appears to mean any group of services.

## **Mandatory 10% Deduction**

As well, the removal of the 10% deduction for soft services under Bill 108 has been maintained.

As a result of the passage of Bill 197, and its subsequent proclamation on September 18, 2020, this report has provided the D.C. calculations without the 10% mandatory deduction.

### ***1.3.3.2 C.B.C.-Related Changes***

#### **C.B.C. Eligibility**

The C.B.C. is limited to lower-tier and single-tier municipalities; upper-tier municipalities will not be allowed to impose this charge.



### 1.3.3.3 Combined D.C. and C.B.C. Impacts

#### **D.C. versus C.B.C. Capital Cost**

- A C.B.C. may be imposed with respect to the services listed in section 2 (4) of the D.C.A. (eligible services) “provided that the capital costs that are intended to be funded by the community benefits charge are not capital costs that are intended to be funded under a development charge by-law.”

### 1.3.3.4 City of Hamilton’s C.B.C. By-law

It is noted that the City undertook a process to develop a C.B.C. strategy and by-law in 2022. The C.B.C. by-law (By-law 22-158) was passed on June 22, 2022, with an effective date of September 18, 2022.

### 1.3.4 Bill 213: Better for People, Smarter for Business Act, 2020

On December 8, 2020, Bill 213 received Royal Assent. One of the changes of the Bill that took effect upon Royal Assent included amending the *Ministry of Training, Colleges and Universities Act* by introducing a new section that would exempt the payment of D.C.s for developments of land intended for use by a university that receives operating funds from the government. As a result, this mandatory exemption will be included in the D.C. by-laws.

## **1.4 Changes to the D.C.A. – Bill 23: More Homes Built Faster Act, 2022**

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On November 28, 2022, Bill 23 received Royal Assent. This Bill amends a number of pieces of legislation including the *Planning Act* and the D.C.A. The following provides a summary of the changes to the D.C.A. It is noted that, as of the time of writing, the Province has announced (on December 13, 2023) potential changes to the phased-in requirements and the removal of studies as eligible capital costs. The details of these changes will be forthcoming in early 2024 and Watson will monitor and advise as to the nature of these changes.



### **1.4.1 Additional Residential Unit Exemption**

The rules for these exemptions are now provided in the D.C.A., rather than the regulations and are summarized as follows:

- Exemption for residential units in existing rental residential buildings – For rental residential buildings with four or more residential units, the creation of the greater of one unit or 1% of the existing residential units will be exempt from a D.C.
- Exemption for additional residential units in existing and new residential buildings – The following developments will be exempt from a D.C.:
  - A second unit in a detached, semi-detached, or rowhouse if all buildings and ancillary structures cumulatively contain no more than one residential unit;
  - A third unit in a detached, semi-detached, or rowhouse if no buildings or ancillary structures contain any residential units; and
  - One residential unit in a building or structure ancillary to a detached, semi-detached, or rowhouse on a parcel of urban land, if the detached, semi-detached, or rowhouse contains no more than two residential units and no other buildings or ancillary structures contain any residential units.

### **1.4.2 Removal of Housing as an Eligible D.C. Service**

Housing is removed as an eligible service as of November 28, 2022. Municipalities with by-laws that include a charge for housing services can no longer collect for this service. It is noted that the charge for housing services is still applicable where rates have been frozen for the purposes of instalment payments under the D.C.A.

### **1.4.3 New Statutory Exemption for Non-Profit Housing**

Non-profit housing units are exempt from D.C.s and D.C. instalment payments due after November 28, 2022.

### **1.4.4 New Statutory Exemptions for Affordable Units, Attainable Units, and Affordable Inclusionary Zoning Units**

Affordable units, attainable units, and inclusionary zoning units (affordable) are exempt from the payment of D.C.s, as follows:



- **Affordable Rental Units**: Where rent is no more than 80% of the average market rent, as defined by a new bulletin published by the Ministry of Municipal Affairs and Housing.
- **Affordable Owned Units**: Where the price of the unit is no more than 80% of the average purchase price, as defined by a new bulletin published by the Ministry of Municipal Affairs and Housing.

*Note: As discussed in Section 1.6, the definitions above of an Affordable Rental Unit and Affordable Owned Unit have been modified through Bill 134.*

- **Attainable Units**: Excludes affordable units and rental units; will be defined as prescribed development or class of development and sold to a person who is at “arm’s length” from the seller.
  - Note: for affordable and attainable units, the municipality shall enter into an agreement that ensures the unit remains affordable or attainable for 25 years.

*Note: the above exemptions are not currently in force. These exemptions will be in force upon proclamation and revisions to the regulations. The bulletin has yet to be published as at the time of writing this report.*

- **Inclusionary Zoning Units**: Affordable housing units required under inclusionary zoning by-laws are exempt from a D.C.

#### **1.4.5 Historical Level of Service Extended to Previous 15-year Period**

Prior to Bill 23, the increase in need for service was limited by the average historical level of service calculated over the 10-year period preceding the preparation of the D.C. background study. This average is now extended to the historical 15-year period.

#### **1.4.6 Revised Definition of Capital Costs**

The definition of capital costs has been revised to remove studies. Furthermore, the regulations to the Act may prescribe services for which land or an interest in land will be restricted. As at the time of writing, no services have been prescribed.



### **1.4.7 Mandatory Phase-in of a D.C.**

For all D.C. by-laws passed after January 1, 2022, the charge must be phased-in annually over the first five years the by-law is in force, as follows:

- Year 1 – 80% of the maximum charge;
- Year 2 – 85% of the maximum charge;
- Year 3 – 90% of the maximum charge;
- Year 4 – 95% of the maximum charge; and
- Year 5 to expiry – 100% of the maximum charge.

### **1.4.8 D.C. By-law Expiry**

A D.C. by-law now expires 10 years after the day it comes into force (unless the by-law provides for an earlier expiry date). This extends the by-law's life from five years, prior to Bill 23.

### **1.4.9 Instalment Payments**

Non-profit housing development has been removed from the instalment payment section of the Act (section 26.1), as these units are now exempt from the payment of a D.C.

### **1.4.10 Rental Housing Discount**

The D.C. payable for rental housing development will be reduced based on the number of bedrooms in each unit, as follows:

- Three or more bedrooms – 25% reduction;
- Two bedrooms – 20% reduction; and
- All other bedroom quantities – 15% reduction.

### **1.4.11 Maximum Interest Rate for Instalments and Determination of Charge for Eligible Site Plan and Zoning By-law Amendment Applications**

No maximum interest rate was previously prescribed. As per Bill 23, the maximum interest rate is set at the average prime rate plus 1%. This maximum interest rate



provision would apply to all instalment plans and eligible Site Plan and Zoning By-law Amendment applications occurring after November 28, 2022.

#### **1.4.12 Requirement to Allocate Funds Received**

Annually, beginning in 2023, municipalities will be required to spend or allocate at least 60% of the monies in a reserve fund at the beginning of the year for water, wastewater, and services related to a highway. Other services may be prescribed by the regulation.

### **1.5 Changes to the D.C.A. – Bill 109: More Homes for Everyone Act, 2022**

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Bill 109, the *More Homes for Everyone Act, 2022*, provides that Council shall make the Annual Treasurer's Statement available to the public by posting the statement on the website or, if there is no such website, in the municipal office. In addition, Bill 109 introduced the following requirements that shall be included in the Treasurer's Statement:

- For each service for which a D.C. is collected during the year,
  - i. whether, as of the end of the year, the municipality expects to incur the amount of capital costs that were estimated, in the relevant D.C. background study, to be incurred during the term of the applicable D.C. by-law; and
  - ii. if the answer to subparagraph i (above) is no, the amount the municipality now expects to incur and a statement as to why this amount is expected;
- For any service for which a D.C. was collected during the year but in respect of which no money from a reserve fund was spent during the year, a statement as to why there was no spending during the year.

### **1.6 Changes to the D.C.A. – Bill 134: Affordable Homes and Good Jobs Act, 2023**

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The exemption for affordable residential units was included in the *More Homes Built Faster Act* (Bill 23), enacted by the Province on November 28, 2022. Under this legislation, affordable residential units were defined within subsection 4.1 of the D.C.A. and exemptions for D.C.s were provided in respect of this definition. While the



legislation was enacted in November 2022, the ability for municipalities to implement the exemptions required the Minister of Municipal Affairs and Housing to publish an “Affordable Residential Units for the Purposes of the Development Charges Act, 1997 Bulletin.” This bulletin would inform the average market rent and purchase price to be used in determining which developments qualify as affordable residential units. As of the time of writing, this bulletin had not been published by the Minister.

Bill 134 received Royal Assent on December 4, 2023 and provides for a modification to the affordable residential unit definition by:

- Introducing an income-based test for affordable rent and purchase price; and
- Increasing the threshold for the market test of affordable rent and purchase price.

This change provides the exemption based on the lesser of the two measures. Moreover, the rules in subsection 4.1 of the D.C.A. are unchanged with respect to:

- The tenant and purchaser transacting the affordable unit being at arm’s length;
- The intent of maintaining the affordable residential unit definition for a 25-year period, requiring an agreement with the municipality (which may be registered on title); and
- Exemptions for attainable residential units and associated rules (requiring further regulations).

The following table provides a comparison of the definitions provided through Bill 23 and those provided through Bill 134 (underlining added for emphasis).

Item	Bill 23 Definition	Bill 134 Definition (Current D.C.A. Definition)
Affordable residential unit rent (subsection 4.1 (2), para. 1)	The rent is no greater than <u>80 per cent of the average market rent</u> , as determined in accordance with subsection (5).	The rent is no greater than <u>the lesser of</u> , i. <u>the income-based affordable rent</u> for the residential unit set out in the Affordable Residential Units bulletin, as identified by the Minister of Municipal Affairs and Housing in



Item	Bill 23 Definition	Bill 134 Definition (Current D.C.A. Definition)
		<p>accordance with subsection (5), and</p> <p>ii. the <u>average market rent</u> identified for the residential unit set out in the Affordable Residential Units bulletin.</p>
<p>Average market rent/rent based on income (subsection 4.1 (5)) for the purposes of subsection 4.1 (2), para. 1</p>	<p>The <u>average market rent for the year in which the residential unit is occupied by a tenant</u>, as identified in the bulletin entitled the “Affordable Residential Units for the Purposes of the Development Charges Act, 1997 Bulletin.”</p>	<p>The Minister of Municipal Affairs and Housing shall,</p> <p>(a) determine the <u>income of a household</u> that, in the Minister’s opinion, is <u>at the 60<sup>th</sup> percentile of gross annual incomes for renter households in the applicable local municipality</u>; and</p> <p>(b) identify the <u>rent</u> that, in the Minister’s opinion, is <u>equal to 30 per cent of the income of the household</u> referred to in clause (a).</p>
<p>Affordable residential unit ownership (subsection 4.1 (3), para. 1)</p>	<p>The price of the residential unit is no greater than <u>80 per cent of the average purchase price</u>, as determined in accordance with subsection (6).</p>	<p>The price of the residential unit is no greater than <u>the lesser of</u>,</p> <p>i. the <u>income-based affordable purchase price</u> for the residential unit set out in the Affordable Residential Units bulletin, as identified by the Minister of Municipal Affairs and Housing in accordance with subsection (6), and</p> <p>ii. <u>90 per cent of the average purchase price</u> identified for the residential unit set out in the Affordable Residential Units bulletin.</p>





Item	Bill 23 Definition	Bill 134 Definition (Current D.C.A. Definition)
<p>Average market purchase price/purchase price based on income (subsection 4.1 (6)) for the purposes of subsection 4.1 (3), para. 1</p>	<p>The <u>average purchase price for the year in which the residential unit is sold</u>, as identified in the bulletin entitled the “Affordable Residential Units for the Purposes of the Development Charges Act, 1997 Bulletin,” as it is amended from time to time, that is published by the Minister of Municipal Affairs and Housing on a website of the Government of Ontario.</p>	<p>The Minister of Municipal Affairs and Housing shall,</p> <ul style="list-style-type: none"> <li>(a) determine the <u>income of a household</u> that, in the Minister’s opinion, is at the <u>60<sup>th</sup> percentile of gross annual incomes for households in the applicable local municipality</u>; and</li> <li>(b) identify the <u>purchase price</u> that, in the Minister’s opinion, <u>would result in annual accommodation costs equal to 30 per cent of the income of the household</u> referred to in clause (a)</li> </ul>



# Chapter 2

## Current City of Hamilton Policy



## 2. Current City of Hamilton Policy

### 2.1 Schedule of Charges

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On June 13, 2019, the City of Hamilton passed By-law 19-142 under the D.C.A. This by-law was amended on July 6, 2021, via By-law 21-102. The by-law was also amended by 19-142-OLT-01 Schedule A and 19-142-OLT-02 Schedule A.

By-law 11-174 was passed on June 15, 2011, and amended by By-laws 12-053, 18-228 and 19-141. This by-law sets out the GO Transit D.C.s (note: this Background Study does not include any updates to the GO Transit D.C.s).

These by-laws impose D.C.s for residential and non-residential uses. The table below provides the rates currently in effect, as at July 6, 2023.



Table 2-1  
City of Hamilton  
Current D.C. Rates

Service	Residential					Non-Residential
	Single-Detached Dwelling & Semi Detached Dwelling (per dwelling unit)	Townhouses & Other Multiple Unit Dwellings (per dwelling unit)	Apartments & Stacked Townhouses & Mobile Homes 2-bedrooms+ (per dwelling unit)	Apartments & Stacked Townhouses & Mobile Homes Bachelor & 1-bedroom (per dwelling unit)	Residential Facility Dwelling & Lodging House & Garden Suite (per bedroom)	per sq.ft. of Gross Floor Area
Parkland Development	3,518	2,517	2,059	1,409	1,137	0.16
Indoor Recreation Services	6,695	4,792	3,920	2,682	2,163	0.30
Library Services	1,554	1,111	910	622	501	1.36
Growth Studies	549	392	322	220	178	0.28
Long-term Care Services	246	177	145	99	80	0.02
Public Health Services	3	2	2	1.00	1.00	-
Child Care and Early Years Programs	21	15	13	8	6	-
Provincial Offences Act	55	40	31	22.00	17.00	0.02
Services Related to a Highway	14,608	10,456	8,555	5,853	4,720	10.92
Public Works	1,092	781	639	437	352	0.56
Policing Services	711	509	416	285	229	0.36
Fire Protection Services	626	450	367	251	202	0.31
Ambulance	201	144	119	80	65	0.02
Transit Services	2,600	1,862	1,524	1,042	840	1.32
Waste Diversion	990	708	579	396	321	0.17
<b>Total Municipal Wide Services</b>	<b>33,469</b>	<b>23,956</b>	<b>19,601</b>	<b>13,407</b>	<b>10,812</b>	<b>15.80</b>
<b>Water and Wastewater Services</b>						
Wastewater Facilities	5,491	3,930	3,216	2,200	1,775	2.65
Wastewater Linear Services	7,346	5,259	4,301	2,943	2,372	3.53
Water Services	6,466	4,629	3,787	2,592	2,090	3.10
<b>Stormwater Services - Combined Sewer System</b>						
Stormwater Drainage and Control	5,355	3,833	3,137	2,145	1,729	-
<b>Stormwater Services - Separated Sewer System</b>						
Stormwater Drainage and Control	14,192	10,158	8,312	5,685	4,586	2.93
<b>Total Urban Services - Combined Sewer System</b>	<b>24,658</b>	<b>17,651</b>	<b>14,441</b>	<b>9,880</b>	<b>7,966</b>	<b>9.28</b>
<b>Total Urban Services - Separated Sewer System</b>	<b>33,495</b>	<b>23,976</b>	<b>19,616</b>	<b>13,420</b>	<b>10,823</b>	<b>12.21</b>
<b>CITY DC TOTAL - COMBINED SEWER SYSTEM</b>	<b>58,127</b>	<b>41,607</b>	<b>34,042</b>	<b>23,287</b>	<b>18,778</b>	<b>25.08</b>
<b>CITY DC TOTAL - SEPARATED SEWER SYSTEM</b>	<b>66,964</b>	<b>47,932</b>	<b>39,217</b>	<b>26,827</b>	<b>21,635</b>	<b>28.01</b>

## 2.2 Services Covered

The following services are covered under By-law 19-142 (as amended):

- Services related to a highway;
- Public works services;
- Transit services;
- Fire protection services;



- Policing services;
- Parkland development services;
- Indoor recreation services;
- Library services;
- Growth studies;
- Ambulance services;
- Long-term care services;
- Public health services;
- Child care and early years Programs;
- Waste diversion services;
- *Provincial Offences Act (P.O.A.)* services;
- Water services;
- Wastewater services; and
- Stormwater services.

## 2.3 Timing of D.C. Calculation and Payment

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D.C.s are calculated and payable at the time of building permit issuance, subject to Section 26.2 of the D.C.A.

## 2.4 Indexing

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Rates shall be indexed on the anniversary date of the D.C. by-law (every July 6) in accordance with the Statistics Canada Quarterly, Non-Residential Building Construction Price Index (Table 18-10-0276-02).<sup>[1]</sup>

## 2.5 Redevelopment Allowance

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As a result of the redevelopment of land, a building or structure existing on the same land within five years prior to the date of payment of D.C.s in regard to such

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<sup>[1]</sup> O. Reg. 82/98 referenced “The Statistics Canada Quarterly, Construction Price Statistics, catalogue number 62-007” as the index source. Since implementation, Statistics Canada has modified this index twice and the above-noted index is the most current. The draft by-law provided herein refers to O. Reg. 82/98 to ensure traceability should this index continue to be modified over time.



redevelopment that was issued a demolition permit, or converted from one principal use to another principal use on the same land in order to facilitate the redevelopment, the D.C.s otherwise payable with respect to such redevelopment shall be reduced by the following amounts:

- (a) in the case of a residential building or structure, or in the case of a mixed-use building or structure, the residential uses in the mixed-use building or structure, an amount calculated by multiplying the applicable D.C. by the number, according to type, of dwelling units that have been or will be demolished or converted to another principal use; and
- (b) in the case of a non-residential building or structure or, in the case of mixed-use building or structure, the non-residential uses in the mixed-use building or structure, an amount calculated by multiplying the applicable D.C. by the gross floor area (G.F.A.) that has been or will be demolished or converted to another principal use;

provided that such amounts shall not exceed, in total, the amount of the D.C.s otherwise payable with respect to the redevelopment.

## 2.6 Exemptions and Discounts

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The following non-statutory exemptions and discounts are provided under By-law 19-142 (as amended):

- Buildings used for parking, excluding a building or part thereof used for commercial parking;
- Agricultural use;
- Places of worship;
- Downtown public art – 10% of D.C.s can be repurposed to contribute to the Public Art Reserve;
- Temporary buildings or structures;
- Downtown Hamilton Community Improvement Project Area (CIPA) (40% discount except for office which is reduced by 70%);
- Reduced industrial rate: City-wide 37% discount of the current D.C. rate for industrial development;



- No D.C.s are imposed on new industrial buildings on the same lot as an existing building(s) up to 50% of the combined G.F.A. of the existing building(s);
- The rates for non-industrial development (excluding medical clinics) within a CIPA or Business Improvement Area (BIA) are phased as follows:
  - First 5,000 sq.ft.: 50% of charge,
  - For each sq.ft. in excess of 5,000 sq.ft. and under 10,000 sq.ft.: 75% of charge, and
  - 100% of charge for development exceeding 10,000 sq.ft.;
- City-wide 50% D.C. exemption for the redevelopment of an existing residential development for the purpose of creating residential facilities within the existing building envelope;
- Initial 5,000 sq.ft. of G.F.A. of an office development (medical clinics excluded) is D.C. exempt on a City-wide basis;
- Heritage buildings; and
- Transition policy: the previous D.C. rate prior to a rate increase is honoured if the building permit is issued within six months of the rate increase.



# Chapter 3

## Anticipated Development in the City of Hamilton





## 3. Anticipated Development in the City of Hamilton

### 3.1 Requirements of the Act

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The growth forecast contained in this chapter (with supplemental tables in Appendix A) provides for the anticipated development for which the City will be required to provide services over a 10-year (2023 to 2033) time horizon and service target horizons.

Chapter 4 provides the methodology for calculating a D.C. as per the D.C.A. Figure 4-1 presents this methodology graphically. It is noted in the first box of the schematic that in order to determine the D.C. that may be imposed, it is a requirement of subsection 5 (1) of the D.C.A. that “the anticipated amount, type and location of development, for which development charges can be imposed, must be estimated.”

### 3.2 Basis of Population, Household and Non-Residential Gross Floor Area Forecast

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The D.C. growth forecast has been derived by Watson. In preparing the growth forecast, the following information sources were consulted to assess the residential and non-residential development potential for the City over the forecast period:

- Urban Hamilton Official Plan, including O.P.A. No. 167;
- Growth Related Integrated Development Strategy (G.R.I.D.S.) 2 and Municipal Comprehensive Review – Final Land Needs Assessment and Addendum and Peer Review Results (PED17010(n)) (City Wide), November 9, 2021;
- City of Hamilton 2019 Development Charges Background Study, July 5, 2019, Watson & Associates Economists Ltd., in association with Dillon Consulting Limited, GM BluePlan Engineering Limited, and Wood Environment & Infrastructure Solutions;
- 2011, 2016 and 2021 population, household and employment Census data;
- Historical residential building permit data over the 2013 to 2022 period;
- Residential and non-residential supply opportunities as identified by City of Hamilton staff; and
- Discussions with City staff regarding anticipated residential and non-residential development in the City of Hamilton.



### 3.3 Summary of Growth Forecast

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A detailed analysis of the residential and non-residential growth forecasts is provided in Appendix A and the methodology employed is illustrated in Figure 3-1. The discussion provided herein summarizes the anticipated growth for the City and describes the basis for the forecast. The results of the residential growth forecast analysis are summarized in Table 3-1 below, and Schedule 1 in Appendix A. It is noted that for water service, wastewater service, stormwater service and services related to a highway, the forecast is based on the targeted population and employment numbers included in the prior D.C. study. The City is undertaking master plan studies for each of these services to assess the servicing needs of growth beyond these targets, however, as of the time of writing, these studies are not complete. As servicing information is not available for the growth identified beyond the 2019 D.C. study forecast, the former growth targets have been continued for this study.

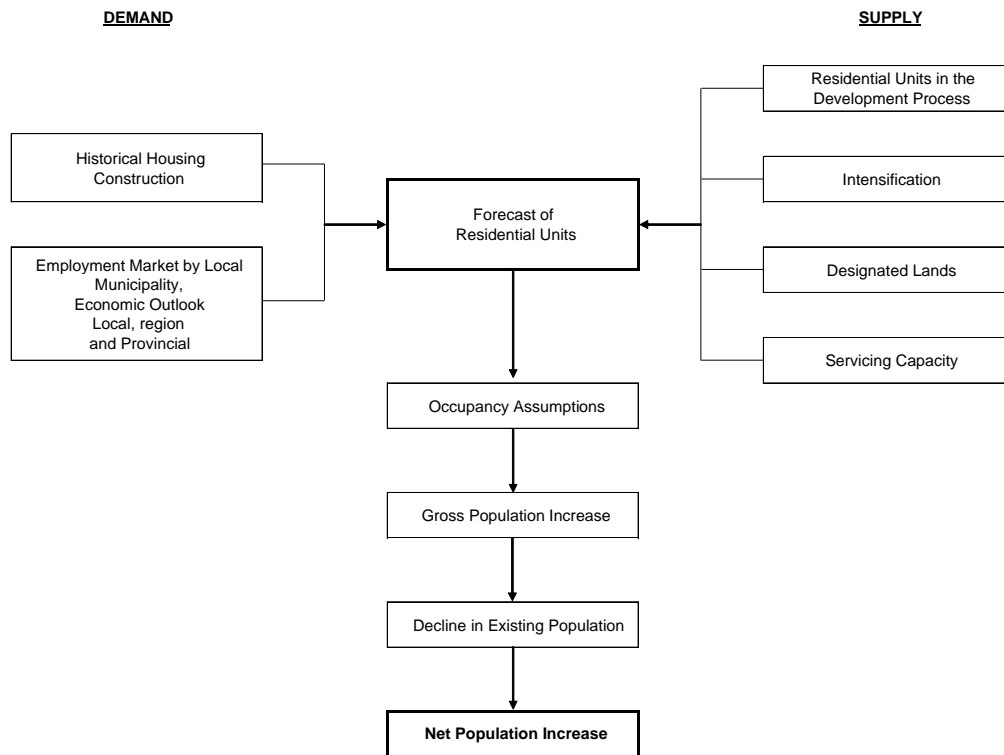
As identified in Table 3-1 and Appendix A – Schedule 1, population in the City of Hamilton (excluding the Census undercount) is anticipated to reach approximately 653,850 by late 2033, resulting in an increase of approximately 62,140 people.<sup>[1]</sup>

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[1] The population figures used in the calculation of the 2023 D.C. exclude the net Census undercount, which is estimated at approximately 2.9%. Population figures presented herein have been rounded.



Figure 3-1  
Population and Household Forecast Model





**Table 3-1  
City of Hamilton  
Residential Growth Forecast Summary**

	Year	Population (Including Census Undercount) <sup>[1]</sup>	Excluding Census Undercount			Housing Units					Persons Per Unit (P.P.U.): Total Population/ Total Households	
			Population	Institutional Population	Population Excluding Institutional Population	Singles & Semi-Detached	Multiple Dwellings <sup>[2]</sup>	Apartments <sup>[3]</sup>	Other	Total Households		Equivalent Institutional Households
Historical	Mid 2011	534,820	519,949	10,309	509,640	124,433	27,760	50,800	813	203,806	9,372	2.551
	Mid 2016	552,270	536,917	8,982	527,935	127,705	31,405	51,680	810	211,600	8,165	2.537
	Mid 2021	585,640	569,353	8,438	560,915	131,900	34,835	55,510	560	222,805	7,671	2.555
Forecast	Late 2023	608,640	591,714	8,675	583,039	133,641	38,018	59,930	560	232,149	7,886	2.549
	Late 2033	672,550	653,850	9,651	644,199	143,468	49,172	74,175	560	267,375	8,774	2.445
Incremental	Mid 2011 - Mid 2016	17,450	16,968	-1,327	18,295	3,272	3,645	880	-3	7,794	-1,207	
	Mid 2016 - Mid 2021	33,370	32,436	-544	32,980	4,195	3,430	3,830	-250	11,205	-494	
	Mid 2021 - Late 2023	23,000	22,361	237	22,124	1,741	3,183	4,420	0	9,344	215	
	Late 2023 - Late 2033	63,910	62,136	976	61,160	9,827	11,154	14,245	0	35,226	888	

[1] Population includes the Census undercount estimated at approximately 2.9% and has been rounded.

[2] Includes townhouses and apartments in duplexes.

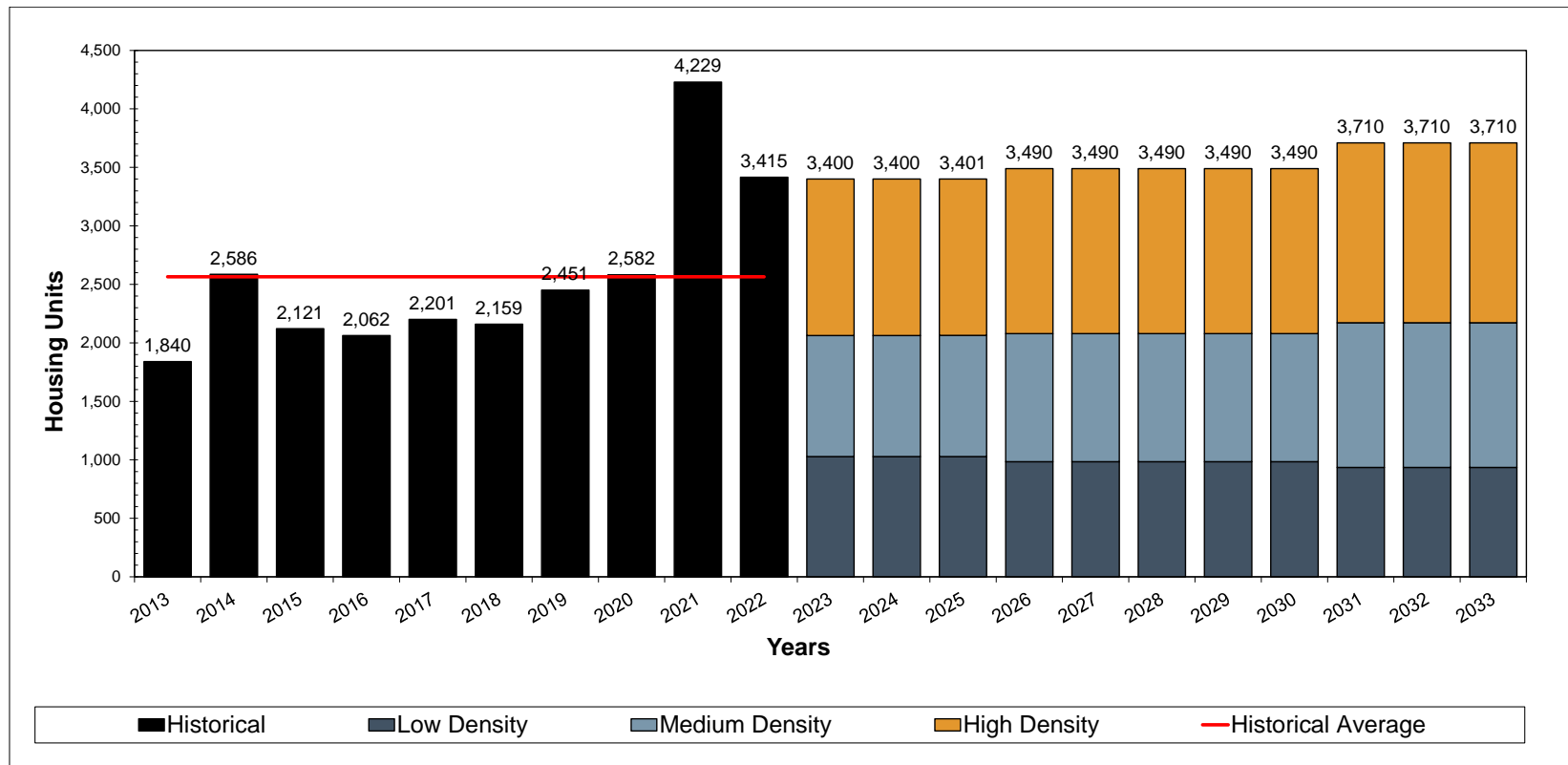
[3] Includes bachelor, 1-bedroom, and 2-bedroom+ apartment units.

Note: Numbers may not add due to rounding.

Source: Derived from City of Hamilton Official Plan Amendment No. 167 to the Urban Hamilton Official Plan Respecting Municipal Comprehensive Review – Phase 1 (City-Wide), by Watson & Associates Economists Ltd.



Figure 3-2  
City of Hamilton  
Annual Housing Forecast<sup>[1]</sup>



<sup>[1]</sup> Growth forecast represents calendar year.

Source: Historical housing activity derived from City of Hamilton building permit data, 2013 to 2022.



Provided below is a summary of the key assumptions and findings regarding the City of Hamilton D.C. growth forecast:

1. Unit Mix (Appendix A – Schedules 1 and 6)

- The housing unit mix for the City was derived from a detailed review of historical development activity (as per Schedule 6), as well as active residential development applications and discussions with City staff regarding anticipated development trends for the City of Hamilton.
- Based on the above indicators, the 2023 to 2033 household growth forecast for the City comprise a unit mix of 28% low-density units (single detached and semi-detached), 32% medium-density units (multiples except apartments) and 40% high-density units (bachelor, 1-bedroom and 2-bedroom+ apartments).

2. Geographic Location of Residential Development (Appendix A – Schedule 2)

- Schedule 2 summarizes the anticipated amount, type, and location of development by area for the City of Hamilton.
- In accordance with forecast demand and available land supply, the amount and percentage of forecast housing growth between 2023 and 2033 by development location is summarized below.

Table 3-2  
City of Hamilton  
Geographic Location of Residential Development

Development Location	Amount of Housing Growth, 2023 to 2033	Percentage of Housing Growth, 2023 to 2033
Combined Sewer System	7,130	20%
Separate Sewer System – Other Built Boundary	8,910	25%
Separate Sewer System – Greenfield	18,900	54%
Urban Total	34,940	99%
Rural Total	280	1%
<b>City of Hamilton</b>	<b>35,230</b>	<b>100%</b>

Note: Figures may not sum precisely due to rounding.



### 3. Planning Period

- The D.C.A. limits the planning horizon for transit services to a 10-year planning horizon. All other services can utilize any planning period if the municipality has identified the growth-related capital infrastructure needs associated with the planning period. A 10-year forecast has been utilized for all services except water, wastewater, stormwater, and transportation to align with the City's 10-year capital forecast.
- A “target” forecast period has been utilized for water, wastewater, transportation (excluding transit), and stormwater given that the capital needs for these services have not yet been identified over a longer-term forecast period. Master plans for these services are currently underway or will be undertaken to identify the infrastructure required to support the growth forecast to 2051. The capital needs and the associated growth will be incorporated in future D.C. updates.

### 4. Population in New Units (Appendix A – Schedules 3, 4 and 5)

- The number of housing units to be constructed by 2033 in the City of Hamilton over the forecast period is presented in Figure 3-2. Over the 2023 to 2033 forecast period, the City is anticipated to average approximately 3,520 new housing units per year.
- Institutional population<sup>[1]</sup> is anticipated to increase by approximately 980 people between 2023 and 2033.
- Population in new units is derived from Schedules 3, 4 and 5, which incorporate historical development activity, anticipated units (see unit mix discussion) and average persons per unit (P.P.U.) by dwelling type for new units.
- Schedule 7 summarizes the average P.P.U. assumed for new housing units by age and type of dwelling based on Statistics Canada 2021 custom Census data for the City of Hamilton. The total calculated P.P.U. for all density types has been adjusted accordingly to account for the P.P.U.

---

<sup>[1]</sup> Institutional population largely includes special care facilities such as nursing homes or residences for senior citizens. A P.P.U. of 1.100 depicts 1-bedroom and 2-or-more-bedroom units in collective households.



trends which have been recently experienced in both new and older units. Forecast 15-year average P.P.U.s by dwelling type are as follows:

- Low density: 3.533
- Medium density: 2.637
- High density: 1.721

#### 5. Existing Units and Population Change (Appendix A – Schedules 3, 4, and 5)

- Existing households for late 2023 are based on the 2021 Census households, plus estimated residential units constructed between mid-2021 to the beginning of the growth period, assuming a minimum six-month lag between construction and occupancy (see Schedule 3).
- The change in average occupancy levels for existing housing units is calculated in Schedules 3 through 5.<sup>[1]</sup> The forecast population change in existing households from 2023 to 2033 is forecast to decline by approximately 27,490.

#### 6. Employment (Appendix A – Schedules 9a, 9b and 9c)

- The employment projections provided herein are largely based on the activity rate method, which is defined as the number of jobs in the City divided by the number of residents. Key employment sectors include primary, industrial, commercial/population-related, institutional, and work at home, which are considered individually below.
- 2016 employment data<sup>[2],[3]</sup> (place of work) for the City of Hamilton is outlined in Schedule 9a. The 2016 employment base comprised the following sectors:
  - 1,845 primary (1%);

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<sup>[1]</sup> Change in occupancy levels for existing households occurs due to aging of the population and family life cycle changes, lower fertility rates and changing economic conditions.

<sup>[2]</sup> 2016 employment is based on Statistics Canada 2016 Place of Work Employment dataset by Watson & Associates Economists Ltd.

<sup>[3]</sup> Statistics Canada 2021 Census place of work employment data has been reviewed. The 2021 Census employment results have not been utilized due to a significant increase in work at home employment captured due to Census enumeration occurring during the provincial COVID-19 lockdown from April 1, 2021 to June 14, 2021.





- 15,805 work at home employment (8%);
  - 47,760 industrial (23%);
  - 74,260 commercial/population-related (37%); and
  - 63,665 institutional (31%).
- The 2016 employment by usual place of work, including work at home, was 203,335. An additional 29,160 employees have been identified for the City of Hamilton in 2016 that have no fixed place of work (N.F.P.O.W.).<sup>[1]</sup>
  - Total employment, including work at home and N.F.P.O.W. for the City of Hamilton is anticipated to reach approximately 280,760 by late 2033. This represents an employment increase of approximately 28,920 for the 10-year forecast period.
  - Schedule 9b, Appendix A, summarizes the employment forecast, excluding work at home employment and N.F.P.O.W. employment, which is the basis for the D.C. employment forecast. The impact on municipal services from work at home employees has already been included in the population forecast. The need for municipal services related to N.F.P.O.W. employees has largely been included in the employment forecast by usual place of work (i.e., employment and G.F.A. generated from N.F.P.O.W. construction employment). Furthermore, since these employees have no fixed work address, they cannot be captured in the non-residential G.F.A. calculation. Accordingly, work at home and N.F.P.O.W. employees have been removed from the D.C.A. employment forecast and calculation.
  - Total employment for the City of Hamilton (excluding work at home and N.F.P.O.W. employment) is anticipated to reach approximately 222,860 by late 2033. This represents an employment increase of approximately 23,960 for the 10-year forecast period.<sup>[2]</sup>

---

<sup>[2]</sup> N.F.P.O.W. is defined by Statistics Canada as "persons who do not go from home to the same workplace location at the beginning of each shift. Such persons include building and landscape contractors, travelling salespersons, independent truck drivers, etc."

<sup>[2]</sup> G.F.A. and employment associated within special care institutional dwellings are treated as residential, resulting in an institutional employment difference between Schedules 9a and 9b. Total employment growth in Schedule 9b (excluding work at



## 7. Non-Residential Square Footage Estimates (G.F.A.) (Appendix A – Schedule 9b)

- Square footage estimates were calculated in Schedule 9b based on the following employee density assumptions:
  - 1,200 sq.ft. per employee for industrial;
  - 400 sq.ft. per employee for commercial/population-related; and
  - 680 sq.ft. per employee for institutional employment.
- The City-wide incremental G.F.A. is anticipated to increase by 15.6 million sq.ft. over the 10-year forecast period.
- In terms of percentage growth, the 2023 to 2033 incremental G.F.A. forecast by sector is broken down as follows:
  - industrial – 46%;
  - commercial/population-related – 32%; and
  - institutional – 22%.

## 8. Geographic Location of Non-Residential Development (Appendix A, Schedule 9c)

- Schedule 9c summarizes the anticipated amount, type and location of non-residential development by servicing area for the City of Hamilton by area.
- The amount and percentage of forecast total non-residential growth between 2023 and 2033 by development location is summarized below.

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home and N.F.P.O.W. employment) has been downwardly adjusted to account for institutional employment associated with special care facilities. Total employment in Schedule 9b is anticipated to reach approximately 222,410 by late 2033.

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Table 3-3  
City of Hamilton  
Geographic Location of Non-Residential Development

Development Location	Amount of Non-Residential G.F.A., 2023 to 2033 (sq.ft.)	Percentage of Non-Residential G.F.A., 2023 to 2033
Combined Sewer System	4.2 million	27%
Separate Sewer System – Other Built Boundary	3.5 million	22%
Separate Sewer System – Greenfield	7.8 million	50%
Urban Total	15.4 million	99%
Rural Total	0.2 million	1%
<b>City of Hamilton</b>	<b>15.6 million</b>	<b>100%</b>

Note: Figures may not sum precisely due to rounding.



# Chapter 4

## The Approach to the Calculation of the Charge



## 4. The Approach to the Calculation of the Charge

### 4.1 Introduction

---

This chapter addresses the requirements of subsection 5 (1) of the D.C.A. with respect to the establishment of the need for service which underpins the D.C. calculation. These requirements are illustrated schematically in Figure 4-1.

### 4.2 Services Potentially Involved

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Table 4-1 lists the full range of municipal services that are provided within the City.

A number of these services are not included in the list of eligible services provided in subsection 2 (4) of the D.C.A. as being ineligible for inclusion in D.C.s. These are shown as “ineligible” on Table 4-1. Two ineligible costs defined in subsection 5 (3) of the D.C.A. are “computer equipment” and “rolling stock with an estimated useful life of (less than) seven years.” In addition, local roads are covered separately under subdivision agreements and related means (as are other local services). Services that are potentially eligible for inclusion in the City’s D.C. are indicated with a “Yes.”

### 4.3 Increase in the Need for Service

---

The D.C. calculation commences with an estimate of “the increase in the need for service attributable to the anticipated development” for each service to be covered by the by-laws. There must be some form of link or attribution between the anticipated development and the estimated increase in the need for service. While the need could conceivably be expressed generally in terms of units of capacity, subsection 5 (1) 3, which requires that City Council indicate that it intends to ensure that such an increase in need will be met, suggests that a project-specific expression of need would be most appropriate.



Figure 4-1  
The Process of Calculating a Development Charge under the Act  
that must be followed

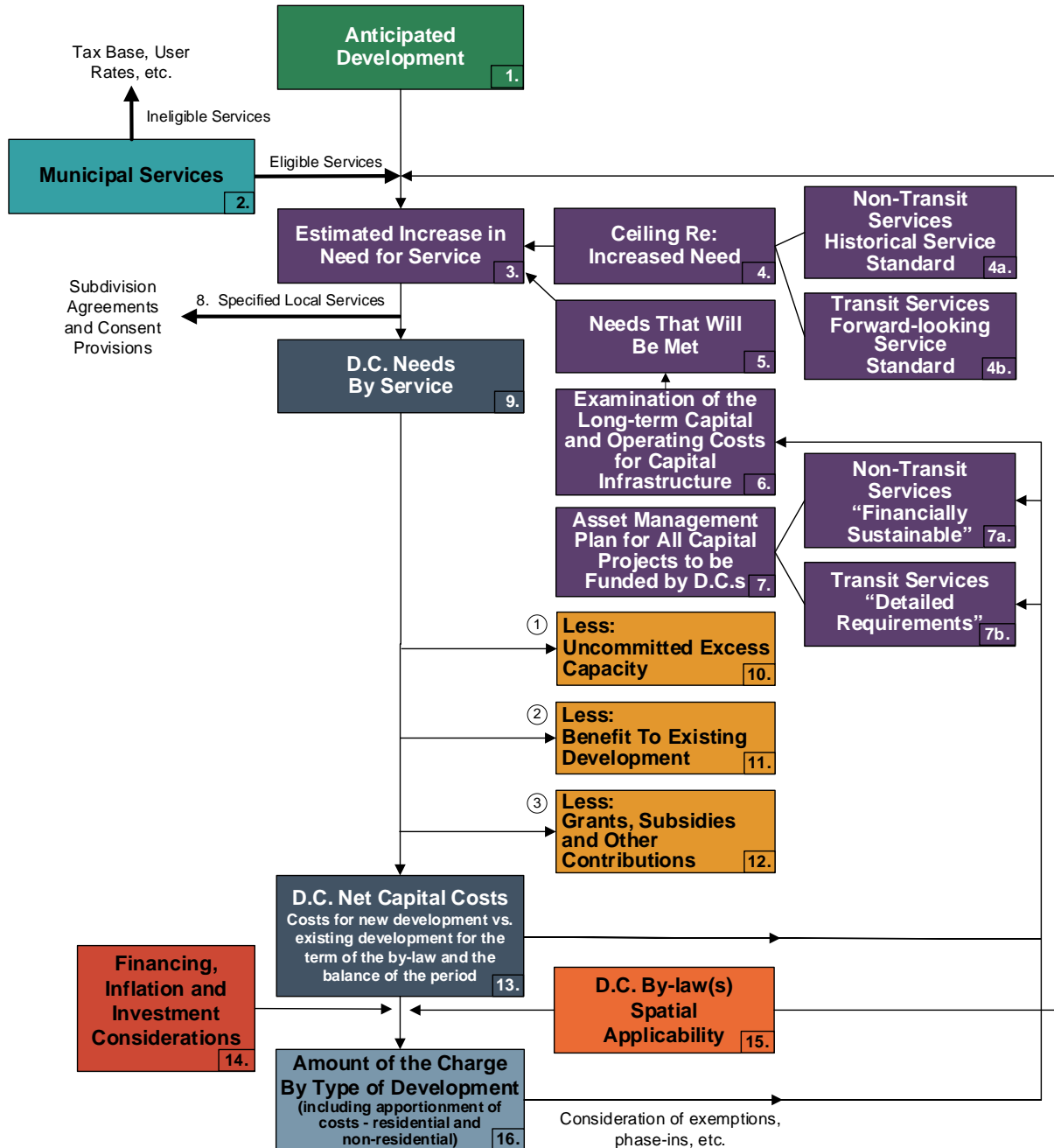




Table 4-1  
Categories of Municipal Services to be Addressed as Part of the Calculation

Eligibility for Inclusion in the D.C. Calculation	Description
Yes	Municipality provides the service – service has been included in the D.C. calculation.
No	Municipality provides the service – service has not been included in the D.C. calculation.
n/a	Municipality does not provide the service.
Ineligible	Service is ineligible for inclusion in the D.C. calculation.

Categories of Municipal Services	Eligibility for Inclusion in the D.C. Calculation	Service Components	Maximum Potential D.C. Recovery %
1. Services Related to a Highway	Yes	1.1 Arterial roads	100
	Yes	1.2 Collector roads	100
	Yes	1.3 Bridges, culverts and roundabouts	100
	No	1.4 Local municipal roads	100
	Yes	1.5 Traffic signals	100
	Yes	1.6 Sidewalks and streetlights	100
	Yes	1.7 Active transportation	100
2. Other Transportation Services	Yes	2.1 Transit vehicles <sup>[1]</sup> and facilities	100
	Yes	2.2 Other transit infrastructure	100
	Ineligible	2.3 Municipal parking spaces – indoor	0
	Ineligible	2.4 Municipal parking spaces – outdoor	0
	Yes	2.5 Works yards	100
	Yes	2.6 Rolling stock <sup>[1]</sup>	100
	n/a	2.7 Ferries	0
	Ineligible	2.8 Airport (Waterloo Region only)	0
	Yes	3.1 Main channels and drainage trunks	100

<sup>[1]</sup> with 7+ year life-time computer equipment excluded throughout



Categories of Municipal Services	Eligibility for Inclusion in the D.C. Calculation	Service Components	Maximum Potential D.C. Recovery %
3. Stormwater Drainage and Control Services	Yes	3.2 Channel connections	100
	Yes	3.3 Retention/detention ponds	100
4. Fire Protection Services	Yes	4.1 Fire stations	100
	Yes	4.2 Fire pumpers, aerials and rescue vehicles <sup>[1]</sup>	100
	Yes	4.3 Small equipment and gear	100
5. Parks Services (i.e., Parks and Open Space)	Ineligible	5.1 Acquisition of land for parks, woodlots and environmentally significant areas	0
	Yes	5.2 Development of area municipal parks	100
	Yes	5.3 Development of district parks	100
	Yes	5.4 Development of municipal-wide parks	100
	Yes	5.5 Development of special purpose parks	100
6. Recreation Services	Yes	6.1 Arenas, indoor pools, fitness facilities, community centres, etc. (including land)	100
	Yes	6.2 Recreation vehicles and equipment <sup>[1]</sup>	100
7. Library Services	Yes	7.1 Public library space (incl. furniture and equipment)	100
	Yes	7.2 Library vehicles <sup>[1]</sup>	100
	Yes	7.3 Library materials	100
8. Emergency Preparedness Services	No	8.1 Facility space (incl. furniture and equipment)	100
	No	8.2 Vehicles <sup>[1]</sup>	100
	No	8.3 Equipment	100
9. Electrical Power Services	Ineligible	9.1 Electrical substations	0
	Ineligible	9.2 Electrical distribution system	0
	Ineligible	9.3 Electrical system rolling stock	0

<sup>[1]</sup> with 7+ year life-time





Categories of Municipal Services	Eligibility for Inclusion in the D.C. Calculation	Service Components	Maximum Potential D.C. Recovery %
10. Provision of Cultural, Entertainment and Tourism Facilities and Convention Centres	Ineligible	10.1 Cultural space (e.g., art galleries, museums and theatres)	0
	Ineligible	10.2 Tourism facilities and convention centres	0
11. Wastewater Services	Yes	11.1 Treatment plants	100
	Yes	11.2 Sewage trunks	100
	n/a	11.3 Local systems	0
	Yes	11.4 Vehicles and equipment <sup>[1]</sup>	100
12. Water Supply Services	Yes	12.1 Treatment plants	100
	Yes	12.2 Distribution systems	100
	n/a	12.3 Local systems	0
	Yes	12.4 Vehicles and equipment <sup>[1]</sup>	100
13. Waste Management Services	Ineligible	13.1 Landfill collection, transfer vehicles and equipment	0
	Ineligible	13.2 Landfills and other disposal facilities	0
	Yes	13.3 Waste diversion facilities	100
	Yes	13.4 Waste diversion vehicles and equipment <sup>[1]</sup>	100
14. Policing Services	Yes	14.1 Policing detachments	100
	Yes	14.2 Policing rolling stock <sup>[1]</sup>	100
	Yes	14.3 Small equipment and gear	100
15. Long-term Care	Yes	15.1 Homes for the aged space	100
	No	15.2 Vehicles <sup>[1]</sup>	100
16. Child Care and Early Years	Yes	16.1 Child care space	100
	No	16.2 Vehicles <sup>[1]</sup>	100
17. Public Health	Yes	17.1 Health department space	100
	Yes	17.2 Health department vehicles <sup>[1]</sup>	100
18. Housing Services	Ineligible	18.1 Housing services space	0
	Ineligible	18.2 Vehicles <sup>[1]</sup>	0

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<sup>[1]</sup> with 7+ year life-time



Categories of Municipal Services	Eligibility for Inclusion in the D.C. Calculation	Service Components	Maximum Potential D.C. Recovery %
19. Provincial Offences Act (P.O.A.) Services	Yes	19.1 P.O.A. services including by-law enforcement space	100
	Yes	19.2 P.O.A. services including by-law enforcement vehicles and equipment <sup>[1]</sup>	100
20. Social Services	Ineligible	20.1 Social service space	0
21. Ambulance Services	Yes	21.1 Ambulance station space	100
	Yes	21.2 Vehicles <sup>[1]</sup>	100
22. Hospital Provision	Ineligible	22.1 Hospital capital contributions	0
23. Provision of Headquarters for the General Administration of Municipalities and Area Municipal Boards	Ineligible	23.1 Office space	0
	Ineligible	23.2 Office furniture	0
	Ineligible	23.3 Computer equipment	0
24. Other Services	Ineligible	24.1 Studies in connection with acquiring buildings, rolling stock, materials and equipment, and improving land <sup>[2]</sup> and facilities, including the D.C. background study cost	0
	Yes	24.2 Interest on money borrowed to pay for growth-related capital	0-100

<sup>[1]</sup> with a 7+ year life-time

<sup>[2]</sup> same percentage as service component to which it pertains

## 4.4 Local Service Policy

Some of the need for services generated by additional development consists of local services related to a plan of subdivision. As such, they will be required as a condition of



subdivision agreements or consent conditions. The City's detailed Local Service Policy is provided in Appendix E.

## 4.5 Capital Forecast

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Paragraph 7 of subsection 5 (1) of the D.C.A. requires that “the capital costs necessary to provide the increased services must be estimated.” The Act goes on to require two potential cost reductions and the regulation sets out the way in which such costs are to be presented. These requirements are outlined below.

These estimates involve capital costing of the increased services discussed above. This entails costing actual projects or the provision of service units, depending on how each service has been addressed.

The capital costs include:

- a) costs to acquire land or an interest therein (including a leasehold interest);
- b) costs to improve land;
- c) costs to acquire, lease, construct or improve buildings and structures;
- d) costs to acquire, lease or improve facilities, including rolling stock (with a useful life of seven or more years), furniture and equipment (other than computer equipment), materials acquired for library circulation, reference, or information purposes; and
- e) interest on money borrowed to pay for the above-referenced costs.

In order for an increase in need for service to be included in the D.C. calculation, City Council must indicate “that it intends to ensure that such an increase in need will be met” (subsection 5 (1) 3). This can be done if the increase in service forms part of a Council-approved Official Plan, capital forecast, or similar expression of the intention of Council (Ontario Regulation (O. Reg.) 82/98 section 3). The capital program contained herein reflects the City's approved and proposed capital budgets and master servicing/needs studies.

## 4.6 Treatment of Credits

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Section 8, paragraph 5, of O. Reg. 82/98 indicates that a D.C. background study must set out “the estimated value of credits that are being carried forward relating to the



service.” Subsection 17, paragraph 4, of the same regulation indicates that “the value of the credit cannot be recovered from future development charges,” if the credit pertains to an ineligible service. This implies that a credit for eligible services can be recovered from future D.C.s. As a result, this provision should be made in the calculation, in order to avoid a funding shortfall with respect to future service needs. Outstanding credit obligations have been included in the D.C. calculations.

## 4.7 Classes of Services

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Section 7 of the D.C.A. states that a D.C. by-law may provide for any D.C.-eligible service or the capital costs with respect to those services. Furthermore, a class may be composed of any number or combination of services and may include parts or portions of each D.C.-eligible service.

These provisions allow for services to be grouped together to create a class for the purposes of the D.C. by-law and D.C. reserve funds. The D.C. calculations and by-law provided herein include a class of service for public works. This class comprises the following services:

- Water services;
- Wastewater services;
- Stormwater services;
- Services related to a highway;
- Fire protection services;
- Policing services;
- Transit services;
- Parks and recreation services;
- Library services;
- Long-term care services;
- Child care and early years programs;
- Public health services;
- P.O.A. services including by-law enforcement;
- Ambulance services; and
- Waste diversion.



## 4.8 Existing Reserve Funds

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Section 35 of the D.C.A. states that:

“The money in a reserve fund established for a service may be spent only for capital costs determined under paragraphs 2 to 7 of subsection 5 (1).”

There is no explicit requirement under the D.C.A. calculation method set out in subsection 5 (1) to net the outstanding reserve fund balance as part of making the D.C. calculation; however, section 35 does restrict the way in which the funds are used in future.

For services that are subject to a per capita based, service level “cap,” the reserve fund balance should be applied against the development-related costs for which the charge was imposed once the project is constructed (i.e., the needs of recent growth). This cost component is distinct from the development-related costs for the future forecast periods, which underlie the D.C. calculation herein.

The alternative would involve the City spending all reserve fund monies prior to renewing each by-law, which would not be a sound basis for capital budgeting. Thus, the City will use these reserve funds for the City’s cost share of applicable development-related projects, which are required but have not yet been undertaken, as a way of directing the funds to the benefit of the development that contributed them (rather than to future development, which will generate the need for additional facilities directly proportionate to future growth).

The City’s D.C. reserve fund balances by service at December 31, 2022, are shown below:



Table 4-2  
Summary of Development Charges Reserve Fund Balances  
As of December 31, 2022

Service	December 31, 2022 Balance	Add: Funding for projects in 2024 D.C. study that have already received D.C. reserve funding	Less: Funding for projects that are not in the 2024 D.C. study and have yet to be funded	Less: D.C. debt funding for projects in progress that are not in the 2024 D.C. study and have yet to be D.C. funded	Add: Funding of D.C. exemptions	Adjusted December 31, 2022 Balance
Services Related to a Highway	\$81,748,784	\$8,313,253	(\$21,567,770)	(\$50,532,996)	\$35,257,820	\$53,219,090
Transit	\$12,854,963	\$1,175,756	(\$4,736)	(\$37,998,000)	\$2,268,652	(\$21,703,366)
Public Works	\$8,468,954	\$708,861	\$0	\$0	\$1,411,656	\$10,589,471
Fire Protection Services	\$5,036,704	\$95,399	\$0	\$0	\$1,476,983	\$6,609,086
Policing Services	\$4,496,500	\$0	(\$585,485)	\$0	\$1,576,355	\$5,487,370
Parks Services	\$2,622,877	\$2,994,583	(\$2,513,562)	(\$5,988,000)	\$2,181,309	(\$702,793)
Indoor Recreation Services	\$30,443,173	\$330,647	(\$9,969,847)	\$0	\$3,279,728	\$24,083,701



Service	December 31, 2022 Balance	Add: Funding for projects in 2024 D.C. study that have already received D.C. reserve funding	Less: Funding for projects that are not in the 2024 D.C. study and have yet to be funded	Less: D.C. debt funding for projects in progress that are not in the 2024 D.C. study and have yet to be D.C. funded	Add: Funding of D.C. exemptions	Adjusted December 31, 2022 Balance
Library Services	\$7,096,161	\$1,570,000	\$0	\$0	\$926,516	\$9,592,677
Long-term Care Services	\$7,230,884	\$22,707	\$0	\$0	\$418,167	\$7,671,757
Child Care and Early Years Programs	\$987,787	\$0	\$0	\$0	\$42,215	\$1,030,002
Provincial Offences Act including By-law Enforcement	(\$191,091)	\$0	\$0	\$0	\$71,070	(\$120,021)
Public Health Services	\$886,660	\$0	\$0	\$0	\$37,844	\$924,504
Ambulance	(\$87,042)	\$570,000	\$0	\$0	\$131,567	\$614,525
Waste Diversion	\$5,102,391	\$527,435	(\$71,066)	\$0	\$52,447	\$5,611,207
Stormwater – Combined System	\$9,422,105	\$0	(\$11,457,409)	(\$11,230,000)	\$1,449,097	(\$11,816,207)



Service	December 31, 2022 Balance	Add: Funding for projects in 2024 D.C. study that have already received D.C. reserve funding	Less: Funding for projects that are not in the 2024 D.C. study and have yet to be funded	Less: D.C. debt funding for projects in progress that are not in the 2024 D.C. study and have yet to be D.C. funded	Add: Funding of D.C. exemptions	Adjusted December 31, 2022 Balance
Stormwater – Separated System	\$47,729,411	\$0	(\$20,515,877)	(\$26,110,000)	\$1,475,206	\$2,578,740
Wastewater Facilities	\$114,475,939	\$18,941,138	\$0	\$0	\$1,148,623	\$134,565,699
Wastewater Linear Services	\$49,727,665	\$463,298	(\$9,730,210)	(\$5,330,000)	\$1,019,485	\$36,150,238
Water Services	\$74,939,322	\$10,305,374	(\$5,178,567)	(\$150,090,000)	\$2,086,335	\$67,062,464
<b>Subtotal</b>	<b>\$462,992,147</b>	<b>\$46,018,449</b>	<b>(\$81,594,528)</b>	<b>(\$152,278,996)</b>	<b>\$56,311,074</b>	<b>\$331,448,147</b>
Area Specific: Dundas Waterdown Special Area Charge	(\$5,151,554)					(\$5,151,554)
<b>Total</b>	<b>\$457,840,593</b>	<b>\$46,018,449</b>	<b>(\$81,594,528)</b>	<b>(\$152,278,996)</b>	<b>\$56,311,074</b>	<b>\$326,296,593</b>

Note: Amounts in brackets are deficit balances.





## 4.9 Deductions

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The D.C.A. potentially requires that four deductions be made to the increase in the need for service. These relate to:

- The level of service ceiling;
- Uncommitted excess capacity;
- Benefit to existing development; and
- Anticipated grants, subsidies, and other contributions.

The requirements behind each of these reductions are addressed below.

### ***4.9.1 Reduction Required by Level of Service Ceiling***

This is designed to ensure that the increase in need included in section 4.3 does “not include an increase that would result in the level of service [for the additional development increment] exceeding the average level of the service provided in the municipality over the 15-year period immediately preceding the preparation of the background study” (D.C.A., subsection 5 (1) 4). O. Reg. 82/98 (section 4) goes further to indicate that “both the quantity and quality of a service shall be taken into account in determining the level of service and the average level of service.”

In many cases, this can be done by establishing a quantity measure in terms of units as floor area, land area, or road length per capita and a quality measure, in terms of the average cost of providing such units based on replacement costs, engineering standards, or recognized performance measurement systems, depending on circumstances. When the quantity and quality factors are multiplied together, they produce a measure of the level of service, which meets the requirements of the Act, i.e., cost per unit.

With respect to transit services, the changes to the Act introduced in 2015 have provided for an alternative method for calculating the service standard ceiling. Transit services must now utilize a forward-looking service standard analysis, described later in this section.

The average service level calculation sheets for each service component in the D.C. calculation are set out in Appendix B.



### **4.9.2 Reduction for Uncommitted Excess Capacity**

Paragraph 5 of subsection 5 (1) requires a deduction from the increase in the need for service attributable to the anticipated development that can be met using the City's "excess capacity," other than excess capacity which is "committed."

"Excess capacity" is undefined, but in this case must be able to meet some or all of the increase in need for service, in order to potentially represent a deduction. The deduction of uncommitted excess capacity from the future increase in the need for service would normally occur as part of the conceptual planning and feasibility work associated with justifying and sizing new facilities, e.g., if a road widening to accommodate increased traffic is not required because sufficient excess capacity is already available, then widening would not be included as an increase in need, in the first instance.

### **4.9.3 Reduction for Benefit to Existing Development**

Section 5 (1) 6 of the D.C.A. provides that, "The increase in the need for service must be reduced by the extent to which an increase in service to meet the increased need would benefit existing development." The general guidelines used to consider benefit to existing development included:

- The repair or unexpanded replacement of existing assets that are in need of repair;
- An increase in average service level of quantity or quality (compare water as an example);
- The elimination of a chronic servicing problem not created by growth; and
- Providing services where none previously existed (generally considered for water or wastewater services).

This step involves a further reduction in the need, by the extent to which such an increase in service would benefit existing development. The level of service cap in section 4.9.1 is related but is not the identical requirement. Sanitary, storm, and water trunks are highly localized to growth areas and can be more readily allocated in this regard than other services such as services related to a highway, which do not have a fixed service area.



Where existing development has an adequate service level which will not be tangibly increased by an increase in service, no benefit would appear to be involved. For example, where expanding existing library facilities simply replicates what existing residents are receiving, they receive very limited (or no) benefit as a result. On the other hand, where a clear existing service problem is to be remedied, a deduction should be made accordingly.

In the case of services such as recreation facilities, community parks, libraries, etc., the service is typically provided on a City-wide system basis. For example, facilities of the same type may provide different services (i.e., leisure pool versus competitive pool), different programs (i.e., hockey versus figure skating), and different time availability for the same service (i.e., leisure skating available on Wednesdays in one arena and Thursdays in another). As a result, residents will travel to different facilities to access the services they want at the times they wish to use them, and facility location generally does not correlate directly with residence location. Even where it does, displacing users from an existing facility to a new facility frees up capacity for use by others and generally results in only a very limited benefit to existing development. Furthermore, where an increase in demand is not met for a number of years, a negative service impact to existing development is involved for a portion of the planning period.

#### ***4.9.4 Reduction for Anticipated Grants, Subsidies and Other Contributions***

This step involves reducing the capital costs necessary to provide the increased services by capital grants, subsidies, and other contributions (including direct developer contributions required due to the local service policy) made or anticipated by Council and in accordance with various rules such as the attribution between the share related to new versus existing development. That is, some grants and contributions may not specifically be applicable to growth or where Council targets fundraising as a measure to offset impacts on taxes (O. Reg. 82/98, section 6).

### **4.10 Municipal-wide versus Area Rating**

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This step involves determining whether all of the subject costs are to be recovered on a uniform municipal-wide basis or whether some or all are to be recovered on an area-specific basis. Under the amended D.C.A., it is now mandatory to “consider” area rating

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of services (providing charges for specific areas and services); however, it is not mandatory to implement area rating. Further discussion is provided in section 7.4.4.

## 4.11 Allocation of Development

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This step involves relating the costs involved to anticipated development for each period under consideration and using allocations between residential and non-residential development and between one type of development and another, to arrive at a schedule of charges.

## 4.12 Asset Management

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The new legislation now requires that a D.C. background study must include an asset management plan (A.M.P.) (subsection 10 (2) c. 2). The A.M.P. must deal with all assets that are proposed to be funded, in whole or in part, by D.C.s. The current regulations provide very extensive and specific requirements for the A.M.P. related to transit services (as noted in the subsequent subsection); however, they are silent with respect to how the A.M.P. is to be provided for all other services. As part of any A.M.P., the examination should be consistent with the municipality's existing assumptions, approaches, and policies on asset management planning. This examination has been included in Appendix I.

## 4.13 Transit

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The Act prescribes the following related to the transit services calculations:

- A. Transit no longer requires the statutory 10% mandatory deduction from the net capital cost (subsection 5.2 (i) of the D.C.A.).
- B. The background study requires the following in regard to transit costs (as per subsection 8 (2) of the regulations):
  1. The calculations that were used to prepare the estimate for the planned level of service for transit services, as mentioned in subsection 5.2 (3) of the Act.
  2. An identification of the portion of the total estimated capital cost relating to the transit services that would benefit,



- i. the anticipated development over the 10-year period immediately following the preparation of the background study, or
    - ii. the anticipated development after the 10-year period immediately following the preparation of the background study.
  3. An identification of the anticipated excess capacity that would exist at the end of the 10-year period immediately following the preparation of the background study.
  4. An assessment of ridership forecasts for all modes of transit services proposed to be funded by the D.C. over the 10-year period immediately following the preparation of the background study, categorized by development types, and whether the forecast ridership will be from existing or planned development.
  5. An assessment of the ridership capacity for all modes of transit services proposed to be funded by the D.C. over the 10-year period immediately following the preparation of the background study.
- C. A new forward-looking service standard (as per subsection 6.1 (2) of the regulations) requires the following:
1. The service is a discrete service.
  2. No portion of the service that is intended to benefit anticipated development after the 10-year period immediately following the preparation of the background study may be included in the estimate.
  3. No portion of the service that is anticipated to exist as excess capacity at the end of the 10-year period immediately following the preparation of the background study may be included in the estimate.
- D. A very detailed asset management strategy and reporting requirements (subsection 6.1 (3) of the regulation) that includes lifecycle costs, action plans that will enable the assets to be sustainable, a summary of how to achieve the proposed level of service, discussion on procurement measures and risk are required.



To meet the requirements noted above, Arcadis Canada Inc. was retained to undertake the above calculations, which are provided in Appendix H of this study (note: the asset management requirements are addressed in Appendix I).

## **4.14 Mandatory Phase-in of a D.C.**

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For all D.C. by-laws passed after January 1, 2022, the charge must be phased-in relative to the maximum charge that could be imposed under the by-law. The phase-in for the first five years that the by-law is in force, is as follows:

- Year 1 – 80% of the maximum charge;
- Year 2 – 85% of the maximum charge;
- Year 3 – 90% of the maximum charge;
- Year 4 – 95% of the maximum charge; and
- Year 5 to expiry – 100% of the maximum charge.



# Chapter 5

## D.C.-Eligible Cost Analysis by Service



## 5. D.C.-Eligible Cost Analysis by Service

### 5.1 Introduction

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This chapter outlines the basis for calculating eligible costs for the D.C.s to be applied on a uniform basis. In each case, the required calculation process set out in subsection 5 (1) paragraphs 2 to 7 in the D.C.A. and described in Chapter 4 was followed in determining D.C.-eligible costs.

The nature of the capital projects and the timing identified in the chapter reflects Council's current intention. Over time, however, City projects and Council priorities change; accordingly, Council's intentions may alter, and different capital projects (and timing) may be necessary to meet the need for services required by new growth.

It is noted that the costs and calculations undertaken herein are based on 2023 dollars.

### 5.2 Service Levels and 10-Year Capital Costs for D.C. Calculations

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This section evaluates the development-related capital requirements for public works, fire protection services, policing services, transit services, parks and recreation services, library services, long-term care services, child care and early years programs, public health services, P.O.A. services including by-law enforcement, ambulance services, and waste diversion services over a 10-year planning period. Note: the growth forecast included in Chapter 3 refers to late 2023 to late 2033. This reflects 10 full calendar years of growth. As is noted in Section 3.3, item 5, the growth forecast assumes a minimum six month lag between building permit and occupancy. As such, the capital needs identified in this section reflect 10 full calendar years beginning in 2023.

The service component is evaluated on two format sheets: the average historical 15-year level of service calculation (see Appendix B), which "caps" the D.C. amounts; and, the infrastructure cost calculation, which determines the potential D.C. recoverable cost.





### **5.2.1 Policing Services**

The Hamilton Police Service operates from several facilities, some of which are owned while others are leased. These facilities, combined, provide 379,845 sq.ft. of building area, providing for an average level of service of 0.61 sq.ft. per capita or an investment of \$695 per capita over the past 15 years. This level of service provides the City with a maximum D.C.-eligible amount for recovery over the forecast period of approximately \$43.16 million.

The police service has a fleet of 309 vehicles with an equivalent useful life of at least seven years. Over the historical 15-year period, the average level of service provided equates to 0.50 vehicles per 1,000 population, or an investment of \$42 per capita, providing for a D.C.-eligible amount over the forecast period of \$2.59 million.

In addition to the above, the police service currently provides equipment and gear for 1,037 members, including 855 equipped officers, 121 special constables, 43 auxiliary officers, and 18 cadets. Over the past 15 years, this level of investment provides for a calculated average level of service of \$29 per capita. This provides for a D.C.-eligible amount over the forecast period of approximately \$1.78 million.

In total, the City is eligible to collect approximately \$47.53 million in D.C.s related to growth-related policing services capital.

To service growth over the forecast period, a number of projects have been identified for inclusion in the D.C. With respect to facilities, the following has been identified as required for growth:

- Marine Unit facility expansion and replacement (\$7.18 million);
- Station 40 (Waterdown) (\$13.39 million); and
- Station 50 (\$13.39 million).

A deduction of \$3.59 million has been made to the Marine Unit facility to account for the portion of the costs related to replacing the existing facility. In addition, a deduction of \$8.83 million has been made to Station 50 to account for the benefit to growth beyond the forecast period.

The City has identified the need for debenture financing on the Marine Unit facility and Station 40 which has been estimated using a 15-year term and 4.5% interest rate,



resulting in the inclusion of \$7.11 million (discounted) of interest in the D.C. calculation. Existing debt for the Divisional 30 Headquarters including principal and interest (discounted) of \$1.15 million and anticipated debt for the Investigative Services Division facility of \$3.59 (including principal and discounted interest) have been included in the D.C. calculations for recovery.

In addition to the above costs, approximately \$7.80 million has been identified in capital related to additional vehicles and equipment. A deduction of \$293,700 has been made to this amount to account for the benefit to growth beyond the forecast period.

An adjustment of approximately \$5.49 million has been made to account for the balance in the D.C. reserve fund, resulting in a net growth-related amount of \$35.38 million for inclusion in the D.C. calculations.

The costs for the Hamilton Police Service are shared 73%/27% between residential and non-residential development, based on the ratio of growth in population to employment over the forecast period.



Table 5-1  
City of Hamilton  
Infrastructure Cost Included in the Development Charges Calculation  
Policing Services Capital Sheet

Prj .No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
	<b>2023-2032</b>										
	<b>Facilities</b>										
1	Marine Facility Expansion & Replacement	2025-2026	7,175,000	-		7,175,000	3,587,500		3,587,500	2,618,875	968,625
2	Growth Related Component of Marine Facility Interest (Discounted)	2024-2038	1,209,308	-		1,209,308	-		1,209,308	882,795	326,513
3	Additional Police Facility Requirements - Station 40 (Waterdown)	2023-2025	13,385,000	-		13,385,000	-		13,385,000	9,771,050	3,613,950
4	Growth Related Component of Station 40 Debt Interest (Discounted)	2024-2038	5,896,735	-		5,896,735	-		5,896,735	4,304,616	1,592,118
5	Station 50 (New)	2029-2032	13,385,000	8,834,100		4,550,900	-		4,550,900	3,322,157	1,228,743
6	Investigative Services Division (I.S.D.) Forensics Headquarters - Debt Principal	2024-2038	3,000,000	-		3,000,000	-		3,000,000	2,190,000	810,000
7	Growth Related Component of I.S.D. Forensics Headquarters Debt Interest (Discounted)	2024-2038	589,332	-		589,332	-		589,332	430,212	159,120
	<b>Vehicles &amp; Equipment</b>										
8	Station 40 Equipment	2025	445,000	-		445,000	-		445,000	324,850	120,150
9	Station 40 Vehicles	2025	1,450,000	-		1,450,000	-		1,450,000	1,058,500	391,500
10	Station 50 Equipment	2029-2032	445,000	293,700		151,300	-		151,300	110,449	40,851
11	Equipment for Officers (132)	2029-2032	2,415,600	-		2,415,600	-		2,415,600	1,763,388	652,212
12	Equipment for Auxiliary Officers (7)	2029-2032	22,400	-		22,400	-		22,400	16,352	6,048
13	Equipment for Special Constables (3)	2029-2032	8,700	-		8,700	-		8,700	6,351	2,349
14	Equipment for Cadets (1)	2029-2032	3,500	-		3,500	-		3,500	2,555	945
15	Front Line Vehicles (15)	2023-2032	1,695,000	-		1,695,000	-		1,695,000	1,237,350	457,650
16	Non-Front Line Vehicles (23)	2023-2032	966,000	-		966,000	-		966,000	705,180	260,820
17	Marine Vessel (new)	2025	346,100	-		346,100	-		346,100	252,653	93,447
	<b>Other</b>										
18	Debt Principal (Discounted) - Shared Training Facility	2023-2027	1,101,777	-		1,101,777	-		1,101,777	804,297	297,480
19	Debt Interest (Discounted) - Shared Training Facility	2023-2027	44,426	-		44,426	-		44,426	32,431	11,995
20	Reserve Fund Adjustment	Reserve					5,487,370		(5,487,370)	(4,005,780)	(1,481,590)
	<b>Total</b>		<b>53,583,878</b>	<b>9,127,800</b>	<b>-</b>	<b>44,456,078</b>	<b>9,074,870</b>	<b>-</b>	<b>35,381,208</b>	<b>25,828,282</b>	<b>9,552,926</b>



## **5.2.2 Fire Protection Services**

Hamilton currently operates its fire services from 263,661 sq.ft. of facility space, providing for a 15-year historical average level of service of approximately 0.48 sq.ft. per capita, or an average level of investment of \$370 per capita. This level of service provides the City with a maximum D.C.-eligible amount of approximately \$23.00 million for recovery over the forecast period.

The fire department has a current inventory of 118 vehicles. The inventory provided over the previous 15-year period results in a calculated average level of service of 0.20 vehicles per 1,000 population, and an average level of investment of \$177 per capita. This level of service provides for a D.C.-eligible amount of approximately \$10.98 million over the forecast period.

In addition to the vehicles, the City also owns 5,318 items of small equipment and gear for use in fire services, with a total value of approximately \$27.66 million. This results in a calculated average level of service for the historical 15-year period of \$43 per capita, providing for a D.C.-eligible amount over the forecast period of approximately \$2.69 million.

Based on the above, the maximum D.C.-eligible amount for recovery over the forecast period for fire services is approximately \$36.66 million.

The City has identified future capital needs totalling approximately \$86.88 million. The following listing summarizes the gross capital costs included in the calculations:

- Facilities (total gross cost \$70.74 million):
  - New Waterdown Station: \$16.70 million
  - New Elfrida/Upper Stoney Creek Station: \$25.00 million
  - Mechanical/Stores Relocation/Expansion: \$14.50 million
  - Station 6 Expansion: \$6.50 million
  - Station 19 Expansion: \$6.50 million
  - Station 10 Enhancements: \$1.54 million
- New Vehicles (pumpers, engines, etc.): \$8.80 million
- New Equipment (air compressors, fire hoses, protective gear, defibrillators, etc.): \$1.93 million



- Future Financing Costs (assumed term of 15 years at a rate of 4.5%): \$3.28 million
- Outstanding Debt (discounted principal and interest): \$2.13 million.

Of this amount, deductions of approximately \$30.99 million and \$9.27 million have been made for the share of the projects that benefit growth outside of the forecast period and for the amount that benefits existing development, respectively. Additionally, the existing reserve fund balance of approximately \$6.61 million has been deducted from the calculations. In total, the net D.C.-recoverable amount included in the D.C. calculation is approximately \$40.01 million.

These costs are shared between residential and non-residential development based on the population to employment growth ratio over the forecast period, resulting in 73% being allocated to residential development and 27% being allocated to non-residential development.



**Table 5-2**  
**City of Hamilton**  
**Infrastructure Cost Included in the Development Charges Calculation**  
**Fire Protection Services Capital Sheet**

Prj.No	Increased Service Needs Attributable to Anticipated Development  2023-2032	Timing (year)	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share  73%	Non- Residential Share  27%
	<b>Fire Facilities</b>										
1	New Station Waterdown Growth Area - Station 29	2023-2025	16,700,000	-		16,700,000	-		16,700,000	12,191,000	4,509,000
2	Waterdown Station - Growth Related Interest (Discounted)	2024-2038	3,106,524	-		3,106,524	-		3,106,524	2,267,762	838,761
3	New Station Elfrida/Upper Stoney Creek Growth Area	2025-2028	25,000,000	16,500,000		8,500,000	-		8,500,000	6,205,000	2,295,000
4	Mechanical/Stores Relocation/Expansion	2028-2032	14,500,000	5,229,500		9,270,500	9,270,500		-	-	-
5	Facility Expansion - Wentworth/Barton Station 6	2028-2031	6,500,000	1,170,000		5,330,000	-		5,330,000	3,890,900	1,439,100
6	Facility Expansion - Mount Hope Airport Lands and Residential Area - Station 19	2028-2033	6,500,000	6,500,000		-	-		-	-	-
7	West End Urban Intensification Station 10 - Facility Enhancements	2025-2027	1,540,800	-		1,540,800	-		1,540,800	1,124,784	416,016
8	Outstanding Debt - Principal	2023	104,680	-		104,680	-		104,680	76,417	28,264
9	Outstanding Debt - Interest (Discounted)	2023	2,475	-		2,475	-		2,475	1,806	668
10	Outstanding Debt- Shared Training Facility - Principal (Discounted)	2023-2027	1,934,382	-		1,934,382	-		1,934,382	1,412,099	522,283
11	Outstanding Debt- Shared Training Facility - Interest (Discounted)	2023-2027	77,998	-		77,998	-		77,998	56,939	21,060



Table 5-2 (Cont'd)  
City of Hamilton  
Infrastructure Cost Included in the Development Charges Calculation  
Fire Protection Services Capital Sheet

Prj .No	Increased Service Needs Attributable to Anticipated Development  2023-2032	Timing (year)	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share  73%	Non- Residential Share  27%
	<b>Fire Vehicles</b>										
12	New Vehicles for Waterdown Station	2023-2025	1,549,000	-		1,549,000	-		1,549,000	1,130,770	418,230
13	Rural Pumper for Upper Stoney Creek Growth Area (New Station)	2025-2028	1,450,000	-		1,450,000	-		1,450,000	1,058,500	391,500
14	Engine for Upper Stoney Creek Growth Area(New Station)	2025-2028	1,450,000	957,000		493,000	-		493,000	359,890	133,110
15	New Vehicle due to Urban Core Intensification	2028-2031	1,450,000			1,450,000	-		1,450,000	1,058,500	391,500
16	New Vehicle due to West End Intensification	2030-2033	1,450,000			1,450,000	-		1,450,000	1,058,500	391,500
17	New Engine for Station 19	2028-2033	1,450,000			1,450,000	-		1,450,000	1,058,500	391,500
18	Outstanding Debt on Stn 20 Vehicle - Principal	2023	9,900	-		9,900	-		9,900	7,227	2,673
19	Outstanding Debt on Stn 20 Vehicle - Interest (Discounted)	2023	234	-		234	-		234	171	63
	<b>Fire Equipment</b>										
	<b>Station #31 Waterdown</b>										
20	New Equipment for Waterdown	2023-2025	375,000	-		375,000	-		375,000	273,750	101,250
	<b>New Station Elfrida/Stoney Creek Growth Area</b>										
21	Air Compressor	2025-2028	3,900	2,600		1,300	-		1,300	949	351
22	Washer Extractor	2025-2028	15,000	9,900		5,100	-		5,100	3,723	1,377
23	Portable Radios, Chargers & Batteries	2025-2028	89,000	58,700		30,300	-		30,300	22,119	8,181



Table 5-2 (Cont'd)  
City of Hamilton  
Infrastructure Cost Included in the Development Charges Calculation  
Fire Protection Services Capital Sheet

Prj .No	Increased Service Needs Attributable to Anticipated Development  2023-2032	Timing (year)	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share  73%	Non- Residential Share  27%
24	S.C.B.A.'s	2025-2028	49,000	32,300		16,700	-		16,700	12,191	4,509
25	Portable Pumps	2025-2028	19,500	12,900		6,600	-		6,600	4,818	1,782
26	Multi Gas Detectors	2025-2028	8,800	5,800		3,000	-		3,000	2,190	810
27	Defibrillators	2025-2028	7,000	4,600		2,400	-		2,400	1,752	648
28	Thermal Imaging Camera	2025-2028	16,300	10,800		5,500	-		5,500	4,015	1,485
29	Auto Extrication Equipment	2025-2028	31,000	20,500		10,500	-		10,500	7,665	2,835
30	Air Bags	2025-2028	14,700	9,700		5,000	-		5,000	3,650	1,350
31	Fire Hose	2025-2028	16,700	11,000		5,700	-		5,700	4,161	1,539
32	Bunker Gear	2025-2028	150,000	99,000		51,000	-		51,000	37,230	13,770
33	Station Exhaust System	2025-2028	65,700	43,400		22,300	-		22,300	16,279	6,021
34	Protective Gear & Uniform Clothing	2025-2028	168,000	110,900		57,100	-		57,100	41,683	15,417
35	Washer/Dryer & R42 Kit	2025-2028	45,000	-		45,000	-		45,000	32,850	12,150
36	Cascade System	2025-2028	160,300	-		160,300	-		160,300	117,019	43,281
	<b>West End Urban Intensification - Station 10</b>										
38	Additional Firefighting Equipment at West End Station 10	2025-2027	200,000	-		200,000	-		200,000	146,000	54,000
	<b>Wentworth/Barton Urban Core Intensification - Station 6</b>										
39	Additional Firefighting Equipment at Urban Station 6	2028-2033	200,000	-		200,000	-		200,000	146,000	54,000
	<b>Waterdown Volunteer Station</b>										
40	Additional Firefighting Equipment at Waterdown Volunteer Station	2023-2025	100,000	-		100,000	-		100,000	73,000	27,000





Table 5-2 (Cont'd)  
City of Hamilton  
Infrastructure Cost Included in the Development Charges Calculation  
Fire Protection Services Capital Sheet

Prj .No	Increased Service Needs Attributable to Anticipated Development  2023-2032	Timing (year)	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share  73%	Non- Residential Share  27%
	<b>Station 19</b>										
41	Additional Firefighting Equipment at Station 19	2028-2033	200,000	200,000		-	-		-	-	-
	<b>Other</b>										
42	Future Financing Costs (Discounted)	2028-2041	169,791	-		169,791	-		169,791	123,947	45,843
43	Reserve Fund Adjustment	Reserve					6,609,086		(6,609,086)	(4,824,633)	(1,784,453)
	<b>Total</b>		<b>86,880,684</b>	<b>30,988,600</b>	<b>-</b>	<b>55,892,084</b>	<b>15,879,586</b>	<b>-</b>	<b>40,012,498</b>	<b>29,209,123</b>	<b>10,803,374</b>



### 5.2.3 Public Works Services

The D.C.A. permits the creation of a class of service, as discussed in section 4.7. The City's public works service is established as a class of service which applies to all D.C.-eligible services.

The City operates their public works services out of a number of facilities and shipping containers. The facilities provide over 742,000 sq.ft. of building space, as well as 4.06 acres of land for the Old Rheem Property Snow Dump, providing for an average level of service of approximately 1.57 sq.ft. of facility space per capita. The average level of investment provided over the historical 15-year period was \$841 which results in a D.C.-eligible amount of approximately \$52.23 million.

The Public Works Department has 1,307 vehicles and major equipment totalling approximately \$138.84 million in value. The inventory over the past 15 years provides for an average investment of \$242 per capita. Over the forecast period, the D.C.-eligible amount for vehicles and equipment is approximately \$15.05 million.

In total, the City is eligible to collect approximately \$67.28 million from D.C.s related to public works.

With respect to capital needs to accommodate growth over the forecast period, the City has identified the need for additional facility space and vehicles/equipment; however, specific projects have not been identified. As such, provisions have been estimated on the following bases:

- **Facility Space** – in reviewing the average level of service over the historical 15-year period, the lowest sq.ft. per capita standard was used to provide for a conservative estimate (i.e., 1.283 sq.ft. per capita). Applying this standard to the anticipated growth of 62,136 people equates to the need for approximately 79,710 additional sq.ft. of building space over the forecast period. Multiplying this by the average quality standard of \$536 per sq.ft. provides for a total estimated provision of \$42.70 million.
- **Vehicles and Equipment** – similar to the estimation of the facilities provision, the lowest vehicles and equipment per capita standard over the 15-year historical period was used (i.e., 0.0021 vehicles per capita). Applying this standard to the anticipated growth of 62,136 people equates to the need for approximately 130 new vehicles and equipment over the forecast period. Multiplying this by the



average quality standard of \$110,000 per vehicle provides for a total estimated provision of \$14.30 million.

As a result of the above, provisions totalling \$57.00 million for additional facility space and vehicles and equipment have been included in the calculations. Of this amount, approximately \$10.59 has been deducted to account for the balance in the D.C. reserve fund. The total amount included in the D.C. calculations is approximately \$46.41 million.

The residential/non-residential capital cost allocation for public works services is based on the ratio of the anticipated population and employment growth over the forecast period. This results in 73% being allocated to residential development and 27% to non-residential development.



Table 5-3  
City of Hamilton  
Infrastructure Cost Included in the Development Charges Calculation  
Public Works Services Capital Sheet

Prj. No	Increased Service Needs Attributable to Anticipated Development  2023-2032	Timing (year)	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
	<b>Facilities</b>										
1	Provision for Additional Facility Space	2023-2032	42,700,000	-		42,700,000	-		42,700,000	31,171,000	11,529,000
	<b>Vehicles &amp; Equipment</b>										
2	Provision for Additional Vehicles & Equipment	2023-2032	14,300,000	-		14,300,000	-		14,300,000	10,439,000	3,861,000
	Reserve Fund Adjustment	Reserve	-	-		-	10,589,471		(10,589,471)	(7,730,314)	(2,859,157)
	<b>Total</b>		<b>57,000,000</b>	<b>-</b>	<b>-</b>	<b>57,000,000</b>	<b>10,589,471</b>	<b>-</b>	<b>46,410,529</b>	<b>33,879,686</b>	<b>12,530,843</b>



## **5.2.4 Transit Services**

Arcadis Canada Inc. (Arcadis) have undertaken the detailed transit calculations that are required under the D.C.A. Based on the information provided in Arcadis's technical report in Appendix H, which explains the transit forecast in detail, 128 new buses, four specialized transit vehicles and nine operations vehicles have been included in the transit capital forecast. The gross cost of these buses and vehicles is \$100.73 million with a deduction of \$23.72 million to recognize the benefit to growth beyond the 10-year forecast period. A deduction of \$66.78 million has been made in order to recognize the benefit to existing development. This results in a D.C.-eligible cost of \$10.24 million for transit buses and vehicles in the 2023 to 2032 forecast period.

In addition to the vehicles, a new transit facility has been identified in the forecast, at a total gross cost of \$396.00 million. The City has identified the need for growth-related financing for this facility, which is anticipated to be approximately \$6.07 million (discounted), based on a debenture term of 15 years at an interest rate of 4.5%. In addition, a deduction of \$183.00 million has been applied against this facility as a result of an anticipated grant from Public Transit Infrastructure Fund (P.T.I.F.). An attribution to recognize the benefit to growth beyond the 10-year forecast period has been identified in the amount of \$30.02 million. Accounting for existing buses being moved to the new facility and the projected modal increase with respect to transit use, an attribution to reflect the benefit to existing development has been made in the amount of \$165.35 million, resulting in a D.C.-eligible cost of \$23.71 million for the facility and related financing costs.

The total gross cost for transit vehicles and the new transit facility (including financing) is \$502.80 million. In addition to the adjustments noted above, an adjustment of \$21.70 million has been made to reflect the existing reserve fund deficit. In total, the net growth-related cost of \$55.65 million that has been included in the D.C. calculations.

The growth costs have been allocated 73% to residential development and 27% to non-residential development, based on the incremental growth in population to employment for the forecast period.



**Table 5-4**  
**City of Hamilton**  
**Infrastructure Cost Included in the Development Charges Calculation**  
**Transit Services Capital Sheet**

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share  73%	Non- Residential Share  27%
1	New Peak Hour 30' Bus (2)	2033-2035	1,329,500	1,329,500		-	-		-	-	-
2	New Peak Hour 40' Bus (48)	2033-2032	45,852,100	1,031,700		44,820,400	38,928,400		5,892,000	4,301,160	1,590,840
3	New Peak Hour 40' Bus (16)	2033-2035	15,284,000	15,284,000		-	-		-	-	-
4	New Peak Hour 60' Bus (8)	2033-2032	9,863,600	221,900		9,641,700	8,374,200		1,267,500	925,275	342,225
5	New Peak Hour 60' Bus (2)	2033-2035	2,465,900	2,465,900		-	-		-	-	-
6	New Spare 40' Bus (12)	2033-2032	11,463,000	257,900		11,205,100	9,732,100		1,473,000	1,075,290	397,710
7	New Spare 40' Bus (3)	2033-2035	2,865,800	2,865,800		-	-		-	-	-
8	New 40' to 60' Upgrades (37)	2023-2032	10,274,900	231,200		10,043,700	8,723,400		1,320,300	963,819	356,481
9	Facility Related Vehicles: Service Truck	2023-2032	130,000	-		130,000	100,900		29,100	21,243	7,857
10	Facility Related Vehicles: Stock Room Vehicle	2023-2032	65,000	-		65,000	50,500		14,500	10,585	3,915
11	Facility Related Vehicles: Garage Equipment Repair Walk Behind Forklift	2023-2032	184,200	12,300		171,900	143,000		28,900	21,097	7,803
12	Facility Related Vehicles: Garage Forklift	2023-2032	106,700	7,100		99,600	82,800		16,800	12,264	4,536
13	Facility Related Vehicles: Garage Tow Mobile	2023-2032	62,100	4,200		57,900	48,200		9,700	7,081	2,619
14	Facility Related Vehicles: Garage Equipment Repair Express Van Vehicles	2023-2032	173,000	-		173,000	134,300		38,700	28,251	10,449
15	Accessible Supervisory Vehicles (Specialized Transit)	2023-2032	612,000	-		612,000	462,100		149,900	109,427	40,473
16	Transit & Maintenance Storage Facility	2023-2026	396,000,000	26,625,000		369,375,000	165,349,200	183,000,000	21,025,800	15,348,834	5,676,966
17	Transit & Maintenance Storage Facility Growth Related Debt Interest (Discounted)	2027-2042	6,072,416	3,392,980		2,679,436	-		2,679,436	1,955,988	723,448
18	Reserve Fund Adjustment	Reserve	21,703,366	-		21,703,366	-		21,703,366	15,843,457	5,859,909
	<b>Total</b>		<b>524,507,582</b>	<b>53,729,480</b>	<b>-</b>	<b>470,778,102</b>	<b>232,129,100</b>	<b>183,000,000</b>	<b>55,649,002</b>	<b>40,623,771</b>	<b>15,025,231</b>



### **5.2.5 Provincial Offences Act (P.O.A.) Services Including By-law Enforcement**

The City currently provides facility space totalling 57,915 sq.ft. for P.O.A services. The space provided over the previous 15 years equates to an average level of service of 57.70 sq.ft. of space per 1,000 residents or \$43 per capita. This level of investment provides the City with approximately \$2.68 million for eligible future D.C. funding over the 10-year forecast period.

The capital costs include recovery of outstanding debt and discounted interest related to the P.O.A. services facility at 50 Main Street East, in the amount of \$1.68 million. A reserve fund adjustment of \$120,021 has been included based on previous projects related to growth, resulting in a D.C.-recoverable amount of approximately \$1.80 million.

The growth-related costs for P.O.A. services have been allocated based on the incremental growth in population to employment over the forecast period, resulting in 73% being allocated to residential development and 27% to non-residential development.



**Table 5-5**  
**City of Hamilton**  
**Infrastructure Cost Included in the Development Charges Calculation**  
**Provincial Offences Act Services Including By-law Enforcement – Facilities Capital Sheet**

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share	Non-Residential Share
	2023-2032									73%	27%
1	Growth related Debt Principal (Discounted) - Initial Construction for New POA Facility	2023-2033	1,526,114	-		1,526,114	-		1,526,114	1,114,063	412,051
2	Growth related Debt Interest (Discounted) - Initial Construction for New POA Facility	2023-2033	156,054	-		156,054	-		156,054	113,919	42,135
	Reserve Fund Adjustment	Reserve	120,021	-		120,021	-		120,021	87,615	32,406
	<b>Total</b>		<b>1,802,189</b>	<b>-</b>	<b>-</b>	<b>1,802,189</b>	<b>-</b>	<b>-</b>	<b>1,802,189</b>	<b>1,315,598</b>	<b>486,591</b>





## **5.2.6 Parks and Recreation Services**

### **Parks Level of Service**

The City currently has 6,116 acres of parkland within its jurisdiction. This parkland consists of various sized parkettes, neighbourhood/community parks, natural open spaces, etc. Based on the inventory of parkland provided over the historical 15-year period (2008 to 2022), the average level of service is 11.3 acres of parkland per 1,000 population. This average level of service equates to an investment of \$568 per capita. When applied to growth anticipated over the forecast period, this provides for a D.C.-eligible amount of \$35.29 million.

In addition, the City provides various parkland amenities (e.g., ball diamonds, playground equipment, soccer fields, basketball and volleyball courts, running tracks, etc.), and buildings (e.g., sun shelters, pavilions, etc.). On average, over the past 15 years, the City has provided 33.5 parkland amenity items and 109.80 sq.ft. of parkland amenity building space per 1,000 population. This equates to an average level of investment of \$645 per capita for all parkland amenities. This level of service provides the City with a D.C.-eligible amount of \$40.06 million related to parkland amenities.

Furthermore, the City currently owns and maintains 67.37 linear kilometres of trails. Over the past 15 years, the City has provided an average of 0.10 linear kilometres of trails per 1,000 population. This equates to a D.C.-eligible amount of \$1.86 million related to trail infrastructure.

The City also owns and operates 21 park-related pieces of equipment, such as fertilizer spreaders, aerators, and rototillers. The City provides for 0.1 park-related vehicles and equipment per 1,000 population, or an average level of investment of \$0.33 per capita. The total D.C.-eligible amount over the 15-year period related to parks equipment is \$20,505.

### **Indoor Recreation Level of Service**

With respect to indoor recreation facilities, there are numerous facilities provided throughout the City, located in Hamilton, Stoney Creek, Ancaster, Dundas, Glanbrook, and Flamborough, amounting to a total of approximately 2.51 million sq.ft. of space. The City also provides 242,469 sq.ft. of indoor recreation-related buildings within parks



(e.g., washrooms, concessions, storage, etc.). Based on the inventory of space over the historical 15-year period (2008 to 2022), the City has provided an average of 4.52 sq.ft. of space per capita or an investment of \$3,749 per capita. Based on this service standard, the City would be eligible to collect approximately \$232.96 million from D.C.s for facility space.

The City also owns and utilizes 68 pieces of equipment to service the above-mentioned recreation facilities (e.g., ice edgers, scrubbers, snow blowers, etc.). Over the historical 15-year period, the City has provided an average level of service of 0.10 vehicles per 1,000 population. This level of service translates to an average investment of \$0.69 per capita. Over the forecast period, the City would be eligible to collect \$42,874 from D.C.s for vehicles and equipment.

### **Total Eligible Amount for Parks and Recreation Services**

In total, the D.C.-eligible amount for parks and recreation services is \$310.23 million.

### **Capital Needs Summary**

Based on the projected growth over the forecast period, the City has identified future growth capital needs totalling \$468.26 million. These costs are categorized as follows:

- Recreation facility space: \$259.29 million
- Parkland development projects: \$102.44 million
- West harbour projects: \$38.43 million
- Confederation park projects: \$33.95 million
- Trails: \$16.99 million
- Future financing costs (based on a term of 15 years at 4.5%): \$17.68 million.

Deductions of approximately \$77.16 million have been made to recognize the benefit to growth beyond the forecast period. Further deductions have been made totalling \$72.78 million to account for the benefit to existing development. Additionally, \$23.38 million has been deducted from the calculations to reflect the existing balance in the D.C. reserve fund. This results in a net growth-related amount of \$295.47 million to be included in the D.C. calculations.



As the predominant users of parks and recreation tend to be residents of the City, the forecast growth-related costs have been allocated 95% to residential development and 5% to non-residential development.



**Table 5-6**  
**City of Hamilton**  
**Infrastructure Cost Included in the Development Charges Calculation**  
**Parks and Recreation Services Capital Sheet**

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share	Non-Residential Share
	2023-2032									95%	5%
	<b>Indoor Recreation:</b>										
1	Norman Pinky Lewis Recreation Centre Gymnasium Expansion	2029-2032	15,000,000	-		15,000,000	7,500,000		7,500,000	7,125,000	375,000
2	Fruitland/Winona New Recreation Centre	2028-2031	36,930,000	-		36,930,000	-		36,930,000	35,083,500	1,846,500
3	Winona Recreation Centre Expansion	2024-2027	25,000,000	-		25,000,000	18,750,000		6,250,000	5,937,500	312,500
4	Elfrida Community Centre	2041	38,300,000	38,300,000		-	-		-	-	-
5	Binbrook Community Centre	2028-2031	38,326,200	-		38,326,200	-		38,326,200	36,409,890	1,916,310
6	Sackville Hill Senior Centre Expansion	2026-2028	14,300,000	-		14,300,000	6,166,000		8,134,000	7,727,300	406,700
7	Waterdown Community Centre & Pool	2025-2027	30,000,000	-		30,000,000	-		30,000,000	28,500,000	1,500,000
8	Riverdale Community Hub & Domenic Agostino Riverdale Community Centre Expansion	2026-2027	15,330,500	-		15,330,500	-		15,330,500	14,563,975	766,525
9	Riverdale Community Hub & Domenic Agostino Riverdale Community Centre Expansion - Growth Related Debt Interest (Discounted)	2024-2038	71,604	-		71,604	-		71,604	68,024	3,580
10	Mt. Hope new Rec Centre	2025-2028	4,500,000	-		4,500,000	-		4,500,000	4,275,000	225,000
11	William Connell Ward 8 Ice Loop - Facility Space	2028	4,875,000	-		4,875,000	-		4,875,000	4,631,250	243,750



Table 5-6 (Cont'd)  
City of Hamilton  
Infrastructure Cost Included in the Development Charges Calculation  
Parks and Recreation Services Capital Sheet

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share	Non- Residential Share
2023-2032									95%	5%	
12	Stoney Creek Recreation Centre Gymnasium Expansion	2029-2031	15,000,000	-		15,000,000	-		15,000,000	14,250,000	750,000
13	Ancaster Senior Achievement Centre Expansion	2027-2029	8,650,000	-		8,650,000	2,162,500		6,487,500	6,163,125	324,375
14	Gage Park Ice Loop - Facility Space	2023-2027	4,875,000	-		4,875,000	-		4,875,000	4,631,250	243,750
12	Brightside Park Fieldhouses	2024-2027	8,200,000	-		8,200,000	-		8,200,000	7,790,000	410,000
13	Brightside Park Fieldhouses - Growth Related Debt Interest (Discounted)	2024-2038	1,198,308	-		1,198,308	-		1,198,308	1,138,392	59,915
<b>Confederation Park Projects:</b>											
14	Confederation Park - Ice skating rink/loop, field house & zamboni	2027-2036	5,000,000	-		5,000,000	-		5,000,000	4,750,000	250,000
15	Confederation Buildings - Growth Related Debt Interest (Discounted)	2024-2038	1,150,179	-		1,150,179	-		1,150,179	1,092,670	57,509
<b>West Harbour Projects:</b>											
16	West Harbour Washroom/Concession	2024-2032	1,393,700	-		1,393,700	696,900		696,800	661,960	34,840
<b>Parks:</b>											
17	John St. N. & Rebecca St. Park - Master Plan Implementation	2030	5,400,000	-		5,400,000	4,644,000		756,000	718,200	37,800



Table 5-6 (Cont'd)  
City of Hamilton  
Infrastructure Cost Included in the Development Charges Calculation  
Parks and Recreation Services Capital Sheet

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share	Non- Residential Share
2023-2032									95%	5%	
18	Nash Orchard Park	2026	950,000	-		950,000	-		950,000	902,500	47,500
19	Highbury Meadows North Park	2023	800,300	-		800,300	-		800,300	760,285	40,015
20	Cherry Beach Lakefront Park	2024	1,280,000	-		1,280,000	-		1,280,000	1,216,000	64,000
21	The Crossings Park	2025	1,200,000	-		1,200,000	-		1,200,000	1,140,000	60,000
22	Brooks at Rymal Park	2024	1,230,000	-		1,230,000	-		1,230,000	1,168,500	61,500
23	Lancaster Heights Park	2027	1,000,000	-		1,000,000	-		1,000,000	950,000	50,000
24	Fletcher Road Parkette	2026	267,000	-		267,000	-		267,000	253,650	13,350
25	Parkside Hills Park	2024	820,000	-		820,000	-		820,000	779,000	41,000
26	Clear Skies proposed park	2024-2029	1,360,000	680,000		680,000	-		680,000	646,000	34,000
27	Alexander Park - Upgrade for new skate park	2023	2,600,000	-		2,600,000	-		2,600,000	2,470,000	130,000
28	Chedoke Falls - New Access to Upper and Lower Falls	2027	8,400,000	-		8,400,000	4,200,000		4,200,000	3,990,000	210,000
29	Skateboard Study Implementation at Various Locations Throughout the City	2030	7,800,000	2,574,000		5,226,000	-		5,226,000	4,964,700	261,300
30	Billy Sherring - Class C Field Replace & Upgrade to Class A Artificial	2027	4,100,000	1,947,500		2,152,500	205,000		1,947,500	1,850,125	97,375
31	William Connell Play Structure, Parking Lot, Landscaping, and Servicing	2024-2026	1,625,000	-		1,625,000	-		1,625,000	1,543,750	81,250
32	Provision for Future Parkland Developments (8 neighbourhood parks & 1 community park)	2023-2032	10,700,000	7,062,000		3,638,000	-		3,638,000	3,456,100	181,900



**Table 5-6 (Cont'd)**  
**City of Hamilton**  
**Infrastructure Cost Included in the Development Charges Calculation**  
**Parks and Recreation Services Capital Sheet**

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share	Non-Residential Share
	2023-2032									95%	5%
33	Waterdown South Smoky Hollow Park (Asset ID 72)	2023-2024	940,000	-		940,000	-		940,000	893,000	47,000
34	Waterdown South Parkette 3 (Asset ID 71)	2023	114,300	-		114,300	-		114,300	108,585	5,715
35	Heritage Green Community Sports Park - Future Phases	2024-2026	5,320,000	-		5,320,000	-		5,320,000	5,054,000	266,000
36	Brian Timmis Field Redevelopment and Brightside Park Development	2023-2024	19,000,000	-		19,000,000	10,857,100		8,142,900	7,735,755	407,145
37	Fruitland/Winona Parkland Development - Community Park	2026-2027	1,700,000	-		1,700,000	-		1,700,000	1,615,000	85,000
38	Lewis Road Park (Winona)	2027	900,000	-		900,000	-		900,000	855,000	45,000
39	Miles Estates Park	2034	600,000	600,000		-	-		-	-	-
40	Rennie Street Park	2032-2033	1,000,000	600,000		400,000	-		400,000	380,000	20,000
41	Mountain Drive Park Spray Pad	2023	533,600	-		533,600	-		533,600	506,920	26,680
42	Sam Lawrence Park bridge over Jolley Cut	2026-2028	8,013,000	-		8,013,000	2,003,300		6,009,700	5,709,215	300,485
43	Gage Park Ice Loop	2023-2027	1,625,000	-		1,625,000	-		1,625,000	1,543,750	81,250
44	Meadowlands Community Park Sun Shelter and Drinking Fountain	2023	133,400	-		133,400	-		133,400	126,730	6,670
45	Lake Avenue School Redevelopment for Additional Parkland Space	2025-2026	565,600	-		565,600	141,400		424,200	402,990	21,210



Table 5-6 (Cont'd)  
City of Hamilton  
Infrastructure Cost Included in the Development Charges Calculation  
Parks and Recreation Services Capital Sheet

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share	Non- Residential Share
	2023-2032									95%	5%
46	Turner Park Path Upgrades	2025-2030	426,800	-		426,800	81,100		345,700	328,415	17,285
47	Olympic Park Hockey Rink	2025-2026	4,802,000	-		4,802,000	-		4,802,000	4,561,900	240,100
48	Chedoke Browlands Improvement	2024-2026	640,300	-		640,300	53,400		586,900	557,555	29,345
49	Red Hill Park - Ward 5	2025-2026	896,400	-		896,400	448,200		448,200	425,790	22,410
50	Hunter Estates Sun Shelter	2026	107,800	-		107,800	-		107,800	102,410	5,390
51	Inch Park inclusive playground	2024-2025	1,067,100	-		1,067,100	106,700		960,400	912,380	48,020
52	Fruitland Winona Neighbourhood parkland development	2028-2031	4,001,700	-		4,001,700	-		4,001,700	3,801,615	200,085
53	Woodlands Park Spray Pad - Growth Component	2024	426,800	-		426,800	-		426,800	405,460	21,340
	Lake Vista Park Multi-Purpose Court	2025	95,000	-		95,000	-		95,000	90,250	4,750
	<b>Confederation Park Projects:</b>										
54	Confederation Park - Little Squirt Works & Area Redevelopment	2025-2026	2,132,300	-		2,132,300	1,066,200		1,066,100	1,012,795	53,305
55	Confederation Park - Central Village - Pkg. Lot & Roadways, Phase 1	2033-2036	3,521,500	3,521,500		-	-		-	-	-
56	Confederation Park - Central Village - Public Realm & Square	2033-2036	2,934,600	2,934,600		-	-		-	-	-





Table 5-6 (Cont'd)  
City of Hamilton  
Infrastructure Cost Included in the Development Charges Calculation  
Parks and Recreation Services Capital Sheet

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share	Non- Residential Share
	2023-2032									95%	5%
57	Confederation Park - West Entrance and Naturalizing the Go Karts Site	2024-2026	1,050,000	-		1,050,000	-		1,050,000	997,500	52,500
58	Confederation Park - Internal Trail Between Central Village and Beaches Grill	2033-2036	213,400	213,400		-	-		-	-	-
59	Confederation Park - Boardwalk to Beach	2025-2026	960,400	-		960,400	-		960,400	912,380	48,020
60	Confederation Park - General Trail Upgrades	2025-2026	480,200	-		480,200	240,100		240,100	228,095	12,005
61	Confederation Park - Group Picnic Area	2029	586,900	-		586,900	293,500		293,400	278,730	14,670
62	Confederation Park - Central Parking Lot & Volleyball Centre Area	2029	373,500	-		373,500	-		373,500	354,825	18,675
63	Confederation Park Soccer Field Area	2032	71,100	-		71,100	7,100		64,000	60,800	3,200
64	Confederation Park - Wild Waterworks Property Upgrades	2023-2026	569,000	-		569,000	284,500		284,500	270,275	14,225
65	Confederation Park - Woodland Restoration - Phase 1	2025-2026	800,300	-		800,300	400,200		400,100	380,095	20,005



Table 5-6 (Cont'd)  
City of Hamilton  
Infrastructure Cost Included in the Development Charges Calculation  
Parks and Recreation Services Capital Sheet

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share	Non- Residential Share
2023-2032									95%	5%	
66	Confederation Park - Woodland Restoration - Phase 2	2025-2026	640,300	-		640,300	320,200		320,100	304,095	16,005
67	Confederation Park - Van Wagners Marsh Upgrades	2026-2036	1,227,200	-		1,227,200	613,600		613,600	582,920	30,680
68	Confederation Park - Signage - Phase 2	2026	426,800	-		426,800	-		426,800	405,460	21,340
69	Confederation Park - Park Corridor Upgrades along Van Wagners Beach Road	2027-2034	905,000	705,000		200,000	-		200,000	190,000	10,000
70	Confederation Park - Lighting along Strip	2033	930,500	930,500		-	-		-	-	-
71	Confederation Park - Pumping station, sanitary forcemain, and electrical servicing for Lakeland area	2033	1,432,100	1,432,100		-	-		-	-	-
72	Confederation Park - Public Art & Site Work - Centennial Pkwy Entrance	2033	640,300	640,300		-	-		-	-	-
73	Confederation Park - Centennial Intersection & Entrance	2023-2033	6,600,000	3,505,000		3,095,000	-		3,095,000	2,940,250	154,750
74	Confederation Park - Primary infrastructure for servicing the central village and ice skating facility	2033	2,294,300	2,294,300		-	-		-	-	-



Table 5-6 (Cont'd)  
City of Hamilton  
Infrastructure Cost Included in the Development Charges Calculation  
Parks and Recreation Services Capital Sheet

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share	Non- Residential Share
	2023-2032									95%	5%
75	Confederation Park - Services for Adventure Village Expansion	2033	160,100	160,100		-	-		-	-	-
	<b>West Harbour Projects:</b>			-		-	-		-	-	-
76	West Harbour Pier 6 Artisan Village (HWT)	2023-2024	5,811,600	-		5,811,600	2,905,800		2,905,800	2,760,510	145,290
77	West Harbour Macassa Bay - Shoreline Improvements	2023-2025	7,393,500	-		7,393,500	1,848,400		5,545,100	5,267,845	277,255
78	West Harbour Macassa Bay Boardwalk and Trail	2023-2025	9,755,800	-		9,755,800	2,439,000		7,316,800	6,950,960	365,840
79	West Harbour Pier 8 Greenway	2023-2028	1,721,200	-		1,721,200	688,500		1,032,700	981,065	51,635
80	West Harbour Bayfront Park Upgrades Phase 3 (Entrance Fountain)	2023-2028	1,087,100	-		1,087,100	815,300		271,800	258,210	13,590
81	West Harbour - Bayview Park Remediation and Redevelopment	2023-2028	3,170,600	-		3,170,600	1,585,300		1,585,300	1,506,035	79,265
82	Growth-Related Debt Principal - Pier 8	2024-2038	8,100,000	-		8,100,000	-		8,100,000	7,695,000	405,000
83	Growth-Related Debt Interest (Discounted) - Pier 8	2024-2038	1,591,195	-		1,591,195	-		1,591,195	1,511,635	79,560
	<b>Trails</b>										
84	Ancaster Creek Trail	2023	1,282,900	-		1,282,900	-		1,282,900	1,218,755	64,145
85	Chedoke Rail Trail Extension	2029-2030	334,900	-		334,900	-		334,900	318,155	16,745



Table 5-6 (Cont'd)  
City of Hamilton  
Infrastructure Cost Included in the Development Charges Calculation  
Parks and Recreation Services Capital Sheet

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share	Non- Residential Share
2023-2032									95%	5%	
86	Chedoke Rail Trail, Claremont Link	2029-2030	341,700	-		341,700	-		341,700	324,615	17,085
87	Glenburn Court - Battlefield Creek Trail	2024	330,000	-		330,000	-		330,000	313,500	16,500
88	Sam Manson Park Trail	2027	150,000	-		150,000	-		150,000	142,500	7,500
89	Park Trail Connections - Upper James St. to Limeridge Mall Hydro Corridor Trail	2027-2031	1,400,000	-		1,400,000	700,000		700,000	665,000	35,000
90	First Road West Link	2025	524,000	-		524,000	-		524,000	497,800	26,200
91	Summerlea West Park - Fletcher Road Parkette Link	2027	960,000	480,000		480,000	-		480,000	456,000	24,000
92	Filman Road Link - North Segment	2027	380,000	-		380,000	-		380,000	361,000	19,000
93	Filman Road Link - South Segment	2027	750,000	-		750,000	-		750,000	712,500	37,500
94	Tollgate Drive Link	2033	361,500	361,500		-	-		-	-	-
95	Spencer Creek, Main Street and Thorpe Street Link	2031	5,200,000	5,200,000		-	-		-	-	-
96	Spencer Creek, Mercer Street and Governor's Road Lin	2033	989,900	989,900		-	-		-	-	-
97	Cascade Trail Link	2033	436,900	436,900		-	-		-	-	-
98	Dundas Valley Link	2033	1,590,000	1,590,000		-	-		-	-	-



Table 5-6 (Cont'd)  
City of Hamilton  
Infrastructure Cost Included in the Development Charges Calculation  
Parks and Recreation Services Capital Sheet

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share	Non- Residential Share
	2023-2032									95%	5%
99	Borer's Creek Trail Link	2027	1,100,000	-		1,100,000	-		1,100,000	1,045,000	55,000
100	Waterdown Pipeline Trail Link	2026	590,000	-		590,000	295,000		295,000	280,250	14,750
101	East Mountain Trail Loop	2024	273,000	-		273,000	259,400		13,600	12,920	680
	<b>Debt Financing</b>										
102	Confederation Park - Growth Related Debt Interest (Discounted)	2024-2038	39,289	-		39,289	-		39,289	37,324	1,964
103	Alexander Park Skate Park - Growth Related Debt Interest (Discounted)	2024-2038	414,300	-		414,300	-		414,300	393,585	20,715
104	Brian Timmis Field - Growth Related Debt Interest (Discounted)	2024-2038	946,031	-		946,031	-		946,031	898,730	47,302
105	Future Financing Costs (Discounted)	2024-2043	12,265,925	-		12,265,925	-		12,265,925	11,652,629	613,296
106	Reserve Fund Adjustment	Reserve		-		-	23,380,908		(23,380,908)	(22,211,863)	(1,169,045)
	<b>Total</b>		<b>468,782,730</b>	<b>77,158,600</b>	<b>-</b>	<b>391,624,130</b>	<b>96,158,608</b>	<b>-</b>	<b>295,465,522</b>	<b>280,692,246</b>	<b>14,773,276</b>



### **5.2.7 Library Services**

The City currently provides library services from 23 facilities, totalling 405,424 sq.ft. of space. Over the past 15 years, the average level of service equates to approximately 0.71 sq.ft. of space per capita, or an investment of \$732 per capita. Over the forecast period, the D.C.-eligible amount for recovery related to library facilities is \$45.49 million.

The City has a current inventory of 1,074,889 library collection items. These collection items include various materials including books, CDs, DVDs, video games, e-resources etc., all of which have a total value of approximately \$53.62 million. Over the past 15 years, the average level of service was 2.02 collection items per capita, or an investment of \$88 per capita. Based on this service standard, the City would be eligible to collect approximately \$5.47 million from D.C.s for library collection items.

In addition, the City has eight vehicles which are utilized for library services. These include two bookmobiles, two half-tonne vans, two Ford E-450 trucks, one Genie Boom, and one skyjack. The City provides 0.01 vehicles/equipment per 1,000 population, or \$3 per capita. The total D.C.-eligible amount over the 15-year period is \$203,806.

In total, the City would be eligible to collect approximately \$51.16 million from D.C.s for library services.

With respect to capital needs to accommodate growth over the forecast period, the City has identified new library facilities, expansions to current facilities, new and expanded furnishings, and new vehicles for inclusion in the D.C. calculation. The gross capital cost identified is \$126.96 million, which is provided as follows:

- New facilities/expansions of existing facilities: \$113.02 million
- Vehicles: \$1.05 million
- Collection materials: \$3.52 million
- Existing/approved debt (principal and discounted interest): \$6.62 million
- Future financing costs (discounted interest): \$2.75 million.

Deductions in the amount of \$42.64 million have been made to account for the portion of the costs benefiting existing development. Furthermore, deductions totalling \$19.68 million have been made to account for the benefit to growth outside of the forecast period. A further adjustment of \$9.59 million has been made to account for the existing



balance in the D.C. reserve fund. As a result of the above deductions, the total net-recoverable amount included in the D.C. calculations is \$55.05 million.

While library usage is predominately residential based, there is some use of the facilities by non-residential users for the purpose of research. To acknowledge this use, the growth-related capital costs have been allocated 95% to residential development and 5% to non-residential development.



Table 5-7  
City of Hamilton  
Infrastructure Cost Included in the Development Charges Calculation  
Library Services Capital Sheet

Prj. No.	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share	Non-Residential Share
	2023-2032									95%	5%
	<b>Facilities:</b>										
1	South Mountain Complex - Turner Park - Debt Principal	2023	137,496	-		137,496	-		137,496	130,621	6,875
2	South Mountain Complex - Turner Park - Debt Interest (Discounted)	2023	3,250	-		3,250	-		3,250	3,088	163
3	Valley Park Library - Debt Principal	2023-2037	2,392,000	-		2,392,000	-		2,392,000	2,272,400	119,600
4	Valley Park Library - Debt Interest (Discounted)	2023-2037	527,132	-		527,132	-		527,132	500,775	26,357
5	Greensville Library - Debt Principal	2023-2037	902,000	-		902,000	-		902,000	856,900	45,100
6	Greensville - Debt Interest (Discounted)	2023-2037	198,776	-		198,776	-		198,776	188,837	9,939
7	Binbrook Library - Debt Principal	2023-2037	2,016,500	-		2,016,500	-		2,016,500	1,915,675	100,825
8	Binbrook Library - Debt Interest (Discounted)	2023-2037	444,382	-		444,382	-		444,382	422,163	22,219
9	Winona/Stoney Creek - New - Furnishings for New Facility	2030	250,000	-		250,000	-		250,000	237,500	12,500
10	Winona/Stoney Creek - New - Construction (Estimated 9,000 sq.ft.)	2030	11,000,000	-		11,000,000	-		11,000,000	10,450,000	550,000





Table 5-7 (Cont'd)  
City of Hamilton  
Infrastructure Cost Included in the Development Charges Calculation  
Library Services Capital Sheet

Prj. No.	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share	Non-Residential Share
	2023-2032								95%	5%	
11	Mount Hope - Replacement & Expansion - Construction (Estimated 5,000 sq.ft.)	2024	5,314,000	-		5,314,000	3,618,000		1,696,000	1,611,200	84,800
12	Mount Hope - New - Furnishings for Expansion	2024	750,000	-		750,000	510,600		239,400	227,430	11,970
13	Ancaster - Expansion - Construction (estimated 20,000 sq.ft.)	2031	11,000,000	3,200,900		7,799,100	7,234,200		564,900	536,655	28,245
14	Ancaster Furnishings for Expansion	2031	500,000	145,500		354,500	328,800		25,700	24,415	1,285
15	Lower City New/Expanded Library (Estimated 8,000 sq.ft.)	2030	10,360,000	3,781,400		6,578,600	-		6,578,600	6,249,670	328,930
16	Elfrida - New Branch (Estimated 12,000 sq.ft.)	2032	11,940,000	11,940,000		-	-		-	-	-
17	Central Library - Phase IV - Local History & Archives - Renovations	2026	5,000,000	-		5,000,000	5,000,000		-	-	-
18	New Permanent Location For Red Hill (Estimated 15,000 sq.ft.)	2028	14,000,000	-		14,000,000	10,976,000		3,024,000	2,872,800	151,200
19	Saltfleet Move to Stoney Creek (Estimated 15,000 sq.ft.)	2028	19,400,000	-		19,400,000	14,967,700		4,432,300	4,210,685	221,615



Table 5-7 (Cont'd)  
City of Hamilton  
Infrastructure Cost Included in the Development Charges Calculation  
Library Services Capital Sheet

Prj. No.	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share	Non-Residential Share
	<b>2023-2032</b>									95%	5%
20	New West Mountain Branch	2028	8,500,000	-		8,500,000	-		8,500,000	8,075,000	425,000
21	New North End Branch - Discovery Centre (Estimated 19,000 sq.ft.)	2026	15,000,000	-		15,000,000	-		15,000,000	14,250,000	750,000
	<b>Vehicles:</b>										
22	Bookmobile - Electronic	2029	1,000,000	-		1,000,000	-		1,000,000	950,000	50,000
23	Maintenance Van	2025	48,900	-		48,900	-		48,900	46,455	2,445
	<b>Collection Materials:</b>										
24	Winona/Stoney Creek - New - Materials	2030	250,000	-		250,000	-		250,000	237,500	12,500
25	Mount Hope Materials	2024	250,000	-		250,000	-		250,000	237,500	12,500
26	Ancaster Materials	2031	500,000	425,000		75,000	-		75,000	71,250	3,750
27	Expanded Lower City Branch Materials	2030	520,000	189,800		330,200	-		330,200	313,690	16,510
28	Red Hill Permanent Location Materials	2028	500,000	-		500,000	-		500,000	475,000	25,000
29	Saltfleet - Expansion - Materials	2028	500,000	-		500,000	-		500,000	475,000	25,000
30	New North End Branch Materials	2026	1,000,000	-		1,000,000	-		1,000,000	950,000	50,000



Table 5-7 (Cont'd)  
City of Hamilton  
Infrastructure Cost Included in the Development Charges Calculation  
Library Services Capital Sheet

Prj. No.	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share	Non-Residential Share
	2023-2032									95%	5%
	<b>Other</b>										
31	Future Financing Costs (Discounted)	2026-2044	2,751,497	-		2,751,497	-		2,751,497	2,613,923	137,575
32	Reserve Fund Adjustment	Reserve	-	-		-	9,592,677		(9,592,677)	(9,113,043)	(479,634)
	<b>Total</b>		<b>126,955,933</b>	<b>19,682,600</b>	<b>-</b>	<b>107,273,333</b>	<b>52,227,977</b>	<b>-</b>	<b>55,045,356</b>	<b>52,293,089</b>	<b>2,752,268</b>



### **5.2.8 Long-Term Care Facilities**

With respect to long-term care facilities, there are currently two facilities provided by the City, Wentworth Lodge and Macassa Lodge, which total 347,278 sq.ft. of building space. Over the previous 15-year period, the facilities provided residents with an average space equating to approximately 0.65 sq.ft. per capita or an investment of \$578 per capita. This level of investment provides the City with \$35.89 million for eligible future D.C. funding over the forecast period.

The City has a planned expansion to the B Wing at Macassa Lodge, as well as the renovation and replacement of A Wing and S Wing (note, these are not growth-related and are not included in the calculations (i.e., the total cost has been allocated to existing development)). The total cost of these projects is \$81.00 million; however, a deduction of \$62.09 million has been made for the renovation and replacement of A Wing and S Wing and the portion of costs related to the replacement of beds in B Wing. A further deduction of \$4.74 million has been made to account for a grant from the Ministry of Health and Long-Term Care. A deduction in the amount of \$7.67 million has also been made to account for the balance in the D.C. reserve fund. After these deductions, the total amount included in the D.C. calculation is approximately \$6.50 million.

An allocation of 90% to residential development and 10% to non-residential development has been attributed to services related to long-term care facilities to acknowledge there is some use of the service by non-residential users.



Table 5-8  
City of Hamilton  
Infrastructure Cost Included in the Development Charges Calculation  
Long-term Care Facilities Capital Sheet

Prj. No.	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share	Non-Residential Share
2023-2032									90%	10%	
1	Macassa-B Wing Expansion	2023-2025	50,100,000	-		50,100,000	31,190,000	4,740,000	14,170,000	12,753,000	1,417,000
2	Macassa-A Wing / S Wing Renovation/Replacement (69,136 sq.ft.)	2025-2030	30,900,000	-		30,900,000	30,900,000		-	-	-
	Reserve Fund Adjustment	Reserve					7,671,757		(7,671,757)	(6,904,582)	(767,176)
	<b>Total</b>		<b>81,000,000</b>	<b>-</b>	<b>-</b>	<b>81,000,000</b>	<b>69,761,757</b>	<b>4,740,000</b>	<b>6,498,243</b>	<b>5,848,418</b>	<b>649,824</b>



### **5.2.9 Public Health Services**

Health services are currently provided from six facilities located throughout the City with a total of 97,411 sq.ft. of facility space. Over the past 15 years, the City has provided an average level of service of 0.19 sq.ft. per capita, or an investment of \$106 per capita. In addition to the facilities, the City also has two buses, one health bus and one dental bus, which are used in the provision of health services throughout the City. Based on the level of service provided over the past 15 years, the City would be eligible to collect approximately \$6.68 million from D.C.s for public health services.

The City has identified the need for additional space over the forecast period. A specific location has not yet been identified; therefore, the City has identified a provision in the amount of \$2.10 million. An adjustment of \$924,504 has been made to account for the existing balance in the D.C. reserve fund. As a result of the above, the total amount included in the D.C. calculations is approximately \$1.18 million.

While health services are predominately residential based, there is some use of the service by non-residential users. To acknowledge this use, the growth-related capital costs have been allocated 90% to residential development and 10% to non-residential development.



Table 5-9  
City of Hamilton  
Infrastructure Cost Included in the Development Charges Calculation  
Public Health Facilities Capital Sheet

Prj. No.	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share	Non-Residential Share
2023-2032									90%	10%	
1	Provision for Additional Space	2023-2026	2,100,000	-		2,100,000	-		2,100,000	1,890,000	210,000
	Reserve Fund Adjustment	Reserve					924,504		(924,504)	(832,054)	(92,450)
	<b>Total</b>		<b>2,100,000</b>	<b>-</b>	<b>-</b>	<b>2,100,000</b>	<b>924,504</b>	<b>-</b>	<b>1,175,496</b>	<b>1,057,946</b>	<b>117,550</b>



### **5.2.10 Child Care and Early Years Programs**

Child care and early years programs are currently provided within two facilities, totalling 38,465 sq.ft. of building space. These facilities provide for a 15-year average level of service of 0.06 sq.ft. per capita, or an investment of \$48 per capita. This level of service provides the City with approximately \$3 million for eligible future D.C. funding over the forecast period.

Growth-related capital needs for child care and early years programs have not been identified for the 10-year forecast period at this time.





## **5.2.11 Ambulance Services**

The City currently provides ambulance services out of 18 facilities and one training facility (shared with fire and police services). These facilities provide a total of 62,602 sq.ft. of space. Over the previous 15 years, the average level of service has been approximately 0.11 sq.ft. of space per capita, which equates to an investment of \$90 per capita. Over the forecast period, the D.C.-eligible amount for recovery is approximately \$5.62 million.

In addition to facility space, the City owns ambulances, emergency response vehicles, vans, and various pieces of equipment and gear. The average level of service over the past 15 years equates to an investment of \$41 per capita. This level of service provides for a D.C.-eligible amount for recovery of \$2.53 million.

In total, the City would be eligible to collect \$8.15 million from D.C.s for ambulance services.

With respect to growth-related capital needs, a new facility in the amount of \$13.50 million has been identified. A deduction in the amount of \$9.00 million has been made to account for the benefit to existing development. In addition, the City has identified the need for additional facility space; however, specific projects are not yet identified. The City's will be undertaking an ambulance service facilities' review in 2024 to identify specific projects and locations of new facilities. A provision of \$12.00 million has been identified; however, \$11.88 million has been deducted to account for the benefit to growth beyond the forecast period. The City has also identified the need for new ambulances and additional gear at a capital cost of \$3.79 million. Outstanding principal and discounted interest in the amount of \$321,000 has been included in the D.C. calculation for the shared training facility (note, debt is related to ambulance share of the costs only). Future financing costs of \$1.05 million have also been included in the calculations, based on an assumed term of 15 years at a rate of 4.5%. Approximately \$614,000 has been deducted from the calculations to reflect the balance in the D.C. reserve fund, resulting in a net growth-related amount of approximately \$9.16 million. This amount has been included in the D.C. calculation for recovery from future growth.

The growth costs have been allocated 90% to residential development and 10% to non-residential development, to acknowledge that while paramedics services are



predominately residential based, there is some use of the service by non-residential users.



Table 5-10  
City of Hamilton  
Infrastructure Cost Included in the Development Charges Calculation  
Ambulance Services Capital Sheet

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share  90%	Non- Residential Share  10%
	2023-2032										
	<b>Facilities:</b>										
1	Outstanding Debt on Shared Training Facility - Principal	2023-2027	309,948	-		309,948	-		309,948	278,953	30,995
2	Outstanding Debt on Shared Training Facility - Interest (discounted)	2023-2027	12,017	-		12,017	-		12,017	10,815	1,202
3	Additional Facility Space	2023-2032	12,000,000	11,880,000		120,000	-		120,000	108,000	12,000
4	New Facility (approximately 17,000 sq.ft.)	2024	13,500,000	-		13,500,000	9,000,000		4,500,000	4,050,000	450,000
5	Growth Related Interest (Discounted) - Facility Space	2023-2037	991,677	-		991,677			991,677	892,510	99,168
	<b>Vehicles &amp; Equipment:</b>										
6	Ambulance (10)	2023-2032	3,580,000	-		3,580,000	-		3,580,000	3,222,000	358,000
7	Additional Gear (100)	2023-2032	210,000	-		210,000	-		210,000	189,000	21,000
8	Growth Related Interest (Discounted) - Additional Ambulances	2023-2037	53,551	-		53,551	-		53,551	48,196	5,355
9	Reserve Fund Adjustment	Reserve	-	-		-	614,525		(614,525)	(553,073)	(61,453)
	<b>Total</b>		<b>30,657,193</b>	<b>11,880,000</b>	<b>-</b>	<b>18,777,193</b>	<b>9,614,525</b>	<b>-</b>	<b>9,162,668</b>	<b>8,246,401</b>	<b>916,267</b>



## **5.2.12 Waste Diversion Services**

The City provides a total of 457,639 sq.ft. of eligible waste diversion space, with the ineligible space related to landfill being excluded. Over the previous 15 years, the average level of service was approximately 0.78 sq.ft. of space per capita, or an investment of \$465 per capita. Over the forecast period, the D.C.-eligible amount for recovery is approximately \$28.90 million.

The City owns/leases/contracts approximately 237 vehicles/pieces of equipment related to waste diversion (note, this amount excludes any vehicles or shares of vehicles that are related to landfill). These items include forklifts, transfer trucks, freightliners, and other various equipment, all of which have a total value of \$57.96 million. Over the past 15 years, the average level of service was 0.4 items per 1,000 population or an investment of \$104 per capita. Based on this service standard, the City would be eligible to collect approximately \$6.44 million from D.C.s for waste diversion vehicles and equipment.

In addition to the facilities, vehicles, and equipment, the City has other eligible waste diversion items such as carts, boxes, barrels, etc., totalling 1,214,238 items. Over the past 15 years, the average level of service was 1.47 items per capita, or an investment of \$21 per capita. Based on this service standard, the City would be eligible to collect approximately \$1.30 million from D.C.s for other waste diversion equipment.

In total, the City is eligible to collect approximately \$36.64 million from D.C.s related to waste diversion services.

Based on the projected growth over the forecast period, the City has identified future growth capital needs totalling approximately \$39.87 million. These capital needs include expansions of existing facilities, relocation of the leaf and yard waste composting facility, new equipment and vehicles, etc. Of this amount, a deduction of \$14.01 million has been made to account for the portion of the works that are related to landfill (i.e., D.C. ineligible). A further deduction of \$11.01 million was made to recognize the benefit to existing development. An adjustment of \$5.61 million was made to account for the existing balance in the D.C. reserve fund. This results in a net growth-related amount of \$9.24 million being included in the D.C. calculations.



The growth costs have been allocated 95% to residential development and 5% to non-residential development to acknowledge that the predominant users of waste diversion services tend to be residents of the City; however, there is some use by non-residential as well.



**Table 5-11**  
**City of Hamilton**  
**Infrastructure Cost Included in the Development Charges Calculation**  
**Waste Diversion Services Capital Sheet**

Prj .No	Increased Service Needs Attributable to Anticipated Development  2023-2032	Timing (year)	Gross Capital Cost Estimate (2023\$)	Other Deductions	Gross Capital Cost Estimate (2023\$) Waste Diversion Related	Post Period Benefit	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
								Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 95%	Non-Residential Share 5%
1	Diversion Container Replacement and Expansion Program	2023-2032	6,800,000	-	6,800,000	-	6,800,000	6,120,000		680,000	646,000	34,000
2	Growth-Related Interest (Discounted)	2023-2037	39,447		39,447	-	39,447	-		39,447	37,474	1,972
3	Public Space & Special Event Containers Replacement & Expansion	2023-2032	2,410,000	1,928,000	482,000	-	482,000	241,000		241,000	228,950	12,050
4	Glanbrook Landfill Capital Improvement Program	2023-2032	3,758,000	3,382,200	375,800	-	375,800	37,600		338,200	321,290	16,910
5	Maintenance & Capital Improvements to the Resource Recovery Centre (RRC) Program	2023-2027	3,249,000	-	3,249,000	-	3,249,000	2,111,900		1,137,100	1,080,245	56,855
6	Leaf & Yard Waste Composting Facility Relocation	2023-2027	5,000,000	-	5,000,000	-	5,000,000	2,500,000		2,500,000	2,375,000	125,000
7	Transfer Station/Community Recycling Centre Expansion & Capital Replacement	2024	14,500,000	8,700,000	5,800,000	-	5,800,000	-		5,800,000	5,510,000	290,000
8	Growth-Related Interest (Discounted) - Transfer Station/Community Recycling Centre Expansion	2023-2037	468,072		468,072	-	468,072	-		468,072	444,668	23,404
9	Provision for additional trucks (1 truck per 1,900 additional low and medium density units)	2023-2032	1,706,000	-	1,706,000	-	1,706,000	-		1,706,000	1,620,700	85,300
10	Waste Collection (Rear Packer) (3)	2028	1,605,000		1,605,000	-	1,605,000	-		1,605,000	1,524,750	80,250
11	Support Pick-up Trucks (4)	2024	332,000		332,000	-	332,000	-		332,000	315,400	16,600
12	Reserve Fund Adjustment	Reserve	-	-	-	-	-	5,611,207		(5,611,207)	(5,330,647)	(280,560)
	<b>Total</b>		<b>39,867,518</b>	<b>14,010,200</b>	<b>25,857,318</b>	<b>-</b>	<b>25,857,318</b>	<b>16,621,707</b>	<b>-</b>	<b>9,235,611</b>	<b>8,773,831</b>	<b>461,781</b>

\*Other deductions are portions attributable to landfill



## 5.3 Service Levels and Capital Costs to Service Growth to Servicing Targets for Hamilton's D.C. Calculations

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This section evaluates the development-related capital requirements for services related to a highway and water, wastewater, and stormwater services over the respective servicing target planning periods.

### 5.3.1 Services Related to a Highway

The City of Hamilton owns and maintains:

- 185 lane km of rural arterial roads;
- 1,197 lane km of rural collector roads;
- 830 lane km of urban collector roads;
- 395 lane km of urban arterial minor roads;
- 981 lane km of urban arterial major roads;
- 133 lane km of expressway;
- 498 lane km as a provision for sidewalks, boulevards, etc.;
- 231 lane km of bicycle lanes on roads;
- 30 lane km of cycle track (barrier);
- 22 lane km of multi-use trails (commuter); and
- 11 lane km of expanded paved shoulders on rural roads for cycling.

The level of service provided over the historical 15-year period translates to an average investment of \$41,962 per capita and a maximum D.C.-eligible amount of approximately \$1.77 billion for recovery over the forecast period.

The City also has 166 bridges, 117 culverts and four roundabouts throughout the City which equates to a level of investment of \$4,185 per capita and a D.C.-recoverable amount of approximately \$176.45 million over the forecast period. Furthermore, the City supplies 663 traffic signals, which provides an average level of investment of \$343 per capita, and a D.C.-recoverable amount of approximately \$14.48 million over the forecast period.

In total, the City is eligible to collect approximately \$1.96 billion for roads and related services.



With respect to future needs, the services related to a highway program was reviewed by Arcadis (see Appendix H). The total gross capital needs identified is \$1.74 billion. The capital projects include various works related to adding capacity to the highway system, including road improvements/expansions, intersection improvements, additional active transportation corridors and complete street additions and modifications. In addition to capital projects, existing principal and interest (discounted) has been included in the calculations at a total amount of \$20.48 million. Future financing costs have also been included at an assumed term of 15 years and a rate of 4.5%. The total interest costs included is \$22.39 million. Deductions of approximately \$872.08 million have been made for the share of the projects that benefit growth outside the forecast period. This includes a provisional post-period benefit deduction of \$140.00 million to account for the differences in population and employment that were utilized for the transportation review relative to the D.C. study. Additionally, approximately \$139.25 million has been deducted from the calculations to account for the portion of works that would be considered direct developer responsibility or costs that would be shared with the Ministry of Transportation. Furthermore, deductions totalling \$237.78 million have been made to account for the benefit to existing development. An adjustment in the amount of \$53.22 million has been made to account for the balance in the D.C. reserve fund, resulting in a net growth-related amount of \$477.83 million for inclusion in the D.C. calculations.

The residential/non-residential allocation for services related to a highway projects of 73%/27% is based on the growth in population to employment over the service target forecast period. A few projects are allocated between residential and non-residential growth in a different manner, including:

- 1) The existing debt for the Expressway was maintained from the past D.C. studies at 73.3% residential and 26.7% non-residential; and
- 2) Existing debt for previously completed growth-related road projects, as identified in the preceding D.C. study have been maintained at 14% residential and 86% non-residential in order to maintain consistency.





**Table 5-12**  
**Infrastructure Cost Included in the Development Charges Calculation**  
**Services Related to a Highway – Roads and Related Capital Sheet**

Prj. No.	Increased Service Needs Attributable to Anticipated Development  City-Wide Service Target for Services Related to a Highway	Timing (year)	Length (km)	Capital Improvement	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost			
									Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%	
	<b>AEGD</b>													
1	Airport Road - Terminal Access Road to Provident Way/East Cargo Road	2023-2031	0.32	2r-4u	3,789,000	-	-	3,789,000	1,516,000		2,273,000	1,659,290	613,710	
2	Book Road - Southcote Road to Highway 6	2023-2031	1.05	2r-5u	11,524,000	-	-	11,524,000	1,729,000		9,795,000	7,150,350	2,644,650	
3	Collector 1E - Collector 6N to Dickenson Road	2032-2041	0.67	3u	6,558,000	6,558,000	-	-	-		-	-	-	
4	Arterial 1N - Collector 2N to Dickenson Road/Garth Street Extension	2023-2031	2.97	5u	34,917,000	-	-	34,917,000	-		34,917,000	25,489,410	9,427,590	
5	Collector 2N - Collector 5W to Arterial 1N	2032-2041	0.42	3u	4,105,000	4,105,000	-	-	-		-	-	-	
6	Collector 6N - Upper James Street to Collector 6E	2032-2041	0.95	4u	10,307,000	10,307,000	-	-	-		-	-	-	
7	Collector 6N - Collector 6E to Garth Street	2032-2041	0.41	4u	4,524,000	4,524,000	-	-	-		-	-	-	
8	Collector 6N - Garth Street to Glancaster Road	2032-2041	1.54	4u	16,775,000	16,775,000	-	-	-		-	-	-	
9	Collector 6E - Collector 6N to Dickenson Road	2023-2031	0.64	3u	6,342,000	-	-	6,342,000	-		6,342,000	4,629,660	1,712,340	
10	Collector 7N - Collector 5W to Collector 2W	2032-2041	1.19	3u	11,757,000	11,757,000	-	-	-		-	-	-	
11	Collector 8W - Garner Road to Collector 5N	2032-2041	1.07	2u	8,302,000	8,302,000	-	-	-		-	-	-	
12	Dickenson Road - Glancaster Road to Garth Street Extension	2032-2041	1.53	2r-5u	18,044,000	18,044,000	-	-	-		-	-	-	
13	Dickenson Road - Garth Street Extension to Upper James Street	2023-2031	1.36	2r-5u	16,039,000	-	-	16,039,000	2,406,000		13,633,000	9,952,090	3,680,910	
14	Dickenson Road Extension - Glancaster Road to Smith Road	2032-2041	0.83	5u	9,447,000	9,447,000	-	-	-		-	-	-	
15	Book Road - Smith Road to Southcote Road	2023-2031	0.45	2r-5u	5,344,000	-	-	5,344,000	802,000		4,542,000	3,315,660	1,226,340	
16	Garth Street Extension - Twenty Road to Collector 6N	2032-2041	0.81	5u	9,478,000	9,478,000	-	-	-		-	-	-	
17	Garth Street Extension - Collector 6N to Dickenson Road	2032-2041	0.66	5u	7,709,000	7,709,000	-	-	-		-	-	-	
18	Glancaster Road - Garner Road to Dickenson Road	2023-2031	2.67	2r-3u	23,144,000	-	-	23,144,000	3,472,000		19,672,000	14,360,560	5,311,440	
19	Glancaster Road - Dickenson Road to Arterial 1N	2032-2041	0.39	3u-5u	4,606,000	4,606,000	-	-	-		-	-	-	
20	Garner Road - Glancaster Road to Highway 6 South	2023-2031	3.12	2r-5u	31,492,000	-	-	31,492,000	4,724,000		26,768,000	19,540,640	7,227,360	
21	Smith Road - Garner Road to Hydro Corridor	2023-2031	0.88	3u	8,635,000	-	-	8,635,000	-		8,635,000	6,303,550	2,331,450	



**Table 5-12 (Cont'd)**  
**Infrastructure Cost Included in the Development Charges Calculation**  
**Services Related to a Highway – Roads and Related Capital Sheet**

Prj. No.	Increased Service Needs Attributable to Anticipated Development  City-Wide Service Target for Services Related to a Highway	Timing (year)	Length (km)	Capital Improvement	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
									Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
22	Smith Road - Hydro Corridor to Book Road	2032-2041	1.01	3u	9,946,000	9,946,000	-	-	-	-	-	-	-
23	Smith Road - Book Road to Arterial 1N	2032-2041	0.63	3u	6,167,000	6,167,000	-	-	-	-	-	-	-
24	Southcote Road - Garner Road to Book Road	2032-2041	1.95	2r-5u	23,003,000	23,003,000	-	-	-	-	-	-	-
25	Upper James Street - Rymal Road to Highway 6 South	2032-2041	7.22	4r-6u	96,459,000	96,459,000	-	-	-	-	-	-	-
26	Glancaster Road - Arterial 1N to Airport Boundary	2032-2041	0.48	2u	3,513,000	3,513,000	-	-	-	-	-	-	-
27	Collector 9W - Garner Road to Collector 11N	2032-2041	0.33	2u	2,537,000	2,537,000	-	-	-	-	-	-	-
28	Smith Road - Arterial 1N to Airport Boundary	2032-2041	0.21	3u	2,079,000	2,079,000	-	-	-	-	-	-	-
29	Airport Road - East Cargo Road to Upper James Street	2023-2031	1.08	2r-3u	8,463,000	-	-	8,463,000	3,385,000	-	5,078,000	3,706,940	1,371,060
30	Book Road East - Collector 2W to Glancaster Road	2032-2041	0.85	2r-3u	6,510,000	6,510,000	-	-	-	-	-	-	-
31	Collector 10N - Garner Road to Smith Road	2023-2031	1.17	3u	11,488,000	-	-	11,488,000	-	-	11,488,000	8,386,240	3,101,760
32	Twenty Road - Glancaster Road to Upper James Street	2032-2041	2.90	2r-4u	32,145,000	32,145,000	-	-	-	-	-	-	-
33	Airport Road - Glancaster Road to Terminal Access Road	2023-2031	1.71	2r-2u	15,971,000	-	-	15,971,000	6,389,000	-	9,582,000	6,994,860	2,587,140
34	Collector 11N - Fiddler's Green Road to Collector 9W	2032-2041	0.35	2u	2,725,000	2,725,000	-	-	-	-	-	-	-
35	Collector 1W - Collector 10N to Garner Road	2032-2041	0.39	3u	3,820,000	3,820,000	-	-	-	-	-	-	-
<b>Ancaster</b>													
36	Garner Road - Highway 6 South to Wilson Street	2023-2031	4.86	2r-5u	49,311,000	-	-	49,311,000	7,397,000	-	41,914,000	30,597,220	11,316,780
37	Jerseyville Road - Wilson Street to Lloyminn Avenue	2032-2041	0.79	2r-3u	6,367,000	6,367,000	-	-	-	-	-	-	-
38	Shaver Road - Trustwood to Garner Road	2032-2041	0.74	2r-2i	6,304,000	6,304,000	-	-	-	-	-	-	-
39	McNiven Road - Rousseaux Street/Mohawk Road to Golf Links Road	2023-2031	0.62	2r-3u	4,895,000	-	-	4,895,000	3,916,000	-	979,000	714,670	264,330
40	Jerseyville Road - Lloyminn Avenue to Meadowbrook Drive	2032-2041	1.25	2r-2u	10,165,000	10,165,000	-	-	-	-	-	-	-
<b>Fruitland-Winona</b>													
41	Barton Street - Fruitland Road to Fifty Road	2023-2031	5.11	2r-5u	53,873,000	-	-	53,873,000	21,549,000	-	32,324,000	23,596,520	8,727,480
42	Fifty Road - Barton Street to South Service Road	2023-2031	0.55	2r-4u	5,178,000	-	-	5,178,000	777,000	-	4,401,000	3,212,730	1,188,270



**Table 5-12 (Cont'd)**  
**Infrastructure Cost Included in the Development Charges Calculation**  
**Services Related to a Highway – Roads and Related Capital Sheet**

Prj. No.	Increased Service Needs Attributable to Anticipated Development  City-Wide Service Target for Services Related to a Highway	Timing (year)	Length (km)	Capital Improvement	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
									Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
43	Fifty Road - Barton Street to Highway 8	2032-2041	0.24	2r-3u	1,834,000	1,834,000	-	-	-	-	-	-	-
44	Gordon Dean Avenue - Barton Street to Highway 8	2023-2031	1.08	4u	11,552,000	-	-	11,552,000	-	-	11,552,000	8,432,960	3,119,040
45	Trinity Road/Highway 52 - Highway 403 Interchange to Cormorant Road	2023-2031	1.79	2r-4u	17,793,000	-	-	17,793,000	2,669,000	-	15,124,000	11,040,520	4,083,480
46	Highway 8 - Dewitt Road to Jones Road	2023-2031	1.73	2r-4u	16,332,000	-	-	16,332,000	6,533,000	-	9,799,000	7,153,270	2,645,730
47	Highway 8 - Jones Road to McNeilly Road	2032-2041	1.73	2r-4u	17,716,000	17,716,000	-	-	-	-	-	-	-
48	Highway 8 - McNeilly Road to Fifty Road	2032-2041	2.67	2r-3u	20,604,000	20,604,000	-	-	-	-	-	-	-
49	Collector B (Block 1) - Fruitland Road to Jones Road	2032-2041	0.89	2u	6,780,000	6,780,000	-	-	-	-	-	-	-
50	Collector C (Block 2) - Barton Street to Highway 8	2023-2031	0.74	2u	5,642,000	-	-	5,642,000	-	-	5,642,000	4,118,660	1,523,340
51	Collector D (Block 3) - McNeilly Road to Collector F	2032-2041	1.25	2u	9,537,000	9,537,000	-	-	-	-	-	-	-
52	Collector E (Block 3) - Barton Street to Highway 8	2023-2031	0.66	2u	5,060,000	-	-	5,060,000	-	-	5,060,000	3,693,800	1,366,200
53	Collector F (Block 3) - Barton Street to Collector D	2023-2031	0.22	2u	1,714,000	-	-	1,714,000	-	-	1,714,000	1,251,220	462,780
54	Fruitland Road - Highway 8 to Barton Street	2023-2031	1.05	2r-3u	8,937,000	-	-	8,937,000	1,341,000	-	7,596,000	5,545,080	2,050,920
55	Fruitland Road - Arvin Avenue to Barton Street	2023-2031	0.36	2u-5u	4,339,000	-	-	4,339,000	651,000	-	3,688,000	2,692,240	995,760
	<b>MTO</b>												
56	Highway 403 - Mohawk Road/Lincoln M. Alexander Parkway to Highway 6 south interchange	2023-2031	0.00	Truck Climbing Lane	4,879,000	-	2,439,000	2,440,000	366,000	-	2,074,000	1,514,020	559,980
	<b>Red Hill Business Park</b>												
57	Dartnall Road - Twenty Road to Dickenson Road	2023-2031	1.55	4u	17,002,000	-	-	17,002,000	-	-	17,002,000	12,411,460	4,590,540
58	Twenty Road Extension - Glover Road to Upper Redhill Valley Parkway	2023-2031	0.35	2i	3,186,000	-	-	3,186,000	-	-	3,186,000	2,325,780	860,220
59	Upper Red Hill Valley Parkway - Rymal Road to Twenty Road	2032-2041	1.22	4u	13,103,000	13,103,000	-	-	-	-	-	-	-
60	Dickenson Road - 350 meters west of Nebo to 330m west of Glover Road	2032-2041	1.20	2r-2i	11,285,000	11,285,000	-	-	-	-	-	-	-
61	Glover Road - Twenty Road to Rymal Road	2023-2031	1.31	2r-2i	11,485,000	-	-	11,485,000	1,723,000	-	9,762,000	7,126,260	2,635,740
62	Nebo Road - Twenty Road to Dickenson Road/Dartnall Road	2023-2031	0.74	2r-2i	6,302,000	-	-	6,302,000	945,000	-	5,357,000	3,910,610	1,446,390



**Table 5-12 (Cont'd)**  
**Infrastructure Cost Included in the Development Charges Calculation**  
**Services Related to a Highway – Roads and Related Capital Sheet**

Prj. No.	Increased Service Needs Attributable to Anticipated Development  City-Wide Service Target for Services Related to a Highway	Timing (year)	Length (km)	Capital Improvement	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
									Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
63	Nebo Road - Rymal Road to Twenty Road East	2023-2031	1.30	2r-2i	11,086,000	-	-	11,086,000	1,663,000		9,423,000	6,878,790	2,544,210
<b>South Mountain Area</b>													
64	Rymal Road - Dartnall Road to Upper James Street	2023-2031	5.17	2r-5u	56,632,000	-	-	56,632,000	8,495,000		48,137,000	35,140,010	12,996,990
65	Upper Wellington Street - Limeridge Road to Stone Church Road	2023-2031	1.04	2r-3u	12,405,000	-	-	12,405,000	4,962,000		7,443,000	5,433,390	2,009,610
66	Garth Street - Rymal Road to Twenty Road West	2032-2041	1.41	2r-5u	15,963,000	15,963,000	-	-	-		-	-	-
67	Rymal Road - Glanaster Road to Upper Paradise Street	2023-2031	0.55	2r-5u	5,595,000	-	-	5,595,000	839,000		4,756,000	3,471,880	1,284,120
68	West 5th Street - Rymal Road to Stone Church Road	2023-2031	1.01	2r-3u	7,729,000	-	-	7,729,000	3,092,000		4,637,000	3,385,010	1,251,990
<b>Stoney Creek</b>													
69	Arvin Avenue - McNeilly Road to Lewis Road	2023-2031	0.85	2i	7,737,000	-	-	7,737,000	-		7,737,000	5,648,010	2,088,990
70	South Service Road - Lewis Road to Fifty Road	2023-2031	1.79	2r-4r	13,701,000	-	-	13,701,000	2,055,000		11,646,000	8,501,580	3,144,420
71	McNeilly Road - Highway 8 to Barton Street	2023-2031	0.90	2r-2u	7,157,000	-	-	7,157,000	1,074,000		6,083,000	4,440,590	1,642,410
72	Lewis Road - Highway 8 to Barton Street	2023-2031	0.49	2r-2u	3,908,000	-	-	3,908,000	586,000		3,322,000	2,425,060	896,940
73	Glover Road - Highway 8 to Barton Street	2032-2041	0.81	2r-2u	6,259,000	6,259,000	-	-	-		-	-	-
74	Jones Road - Highway 8 to Barton Street	2023-2031	0.92	2r-2u	7,293,000	-	-	7,293,000	1,094,000		6,199,000	4,525,270	1,673,730
75	Jones Road - Barton Street to South Service Road	2023-2031	0.92	2r-2i	8,036,000	-	-	8,036,000	4,018,000		4,018,000	2,933,140	1,084,860
76	Lewis Road - Barton Street to South Service Road	2023-2031	0.87	2r-2i	7,872,000	-	-	7,872,000	3,936,000		3,936,000	2,873,280	1,062,720
77	Millen Road - Barton Street to South Service Road	2023-2031	1.07	2r-2i	9,092,000	-	-	9,092,000	3,637,000		5,455,000	3,982,150	1,472,850
78	South Service Road - Millen Road to Gray Road	2032-2041	1.55	2r-2u	12,006,000	12,006,000	-	-	-		-	-	-
<b>Twenty Road East</b>													
79	Upper Ottawa Street - End to Twenty Road	2032-2041	0.95	4u	10,216,000	10,216,000	-	-	-		-	-	-
<b>Waterdown</b>													
80	North Waterdown Drive - Centre Road to Parkside Drive	2023-2031	1.28	3u	12,465,000	-	-	12,465,000	-		12,465,000	9,099,450	3,365,550
81	Parkside Drive - North Waterdown Drive to Avonsyde Boulevard	2023-2031	1.47	2r-3u	32,320,000	-	-	32,320,000	4,848,000		27,472,000	20,054,560	7,417,440



**Table 5-12 (Cont'd)**  
**Infrastructure Cost Included in the Development Charges Calculation**  
**Services Related to a Highway – Roads and Related Capital Sheet**

Prj. No.	Increased Service Needs Attributable to Anticipated Development  City-Wide Service Target for Services Related to a Highway	Timing (year)	Length (km)	Capital Improvement	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
									Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
82	North Waterdown Drive - Clappison Avenue Extension to Mosaic Drive	2023-2031	0.59	3u	5,727,000	-	-	5,727,000	-		5,727,000	4,180,710	1,546,290
83	Clappison Avenue Extension - Parkside Drive to North Waterdown Drive	2023-2031	0.54	2u	4,133,000	-	-	4,133,000	-		4,133,000	3,017,090	1,115,910
84	Parkside Drive - Hollybush Drive to Highway 6	2023-2031	1.07	2r-4u	10,267,000	-	-	10,267,000	4,107,000		6,160,000	4,496,800	1,663,200
85	Parkside Drive - Main Street to North Waterdown Drive	2032-2041	0.59	2r-3u	4,533,000	4,533,000	-	-	-	-	-	-	-
<b>Other</b>													
86	Binbrook Road - Fletcher Road to Binhaven Road	2023-2031	0.91	2r-2u	7,297,000	-	-	7,297,000	1,095,000		6,202,000	4,527,460	1,674,540
87	LRT corridor - Centennial Parkway/Main Street/King Street to McMaster University	2023-2031	13.77	Public Realm Improvements	9,990,000	-	-	9,990,000	1,499,000		8,491,000	6,198,430	2,292,570
88	Longwood Road - Aberdeen Avenue to Main Street	2023-2031	0.64	4u	8,193,000	-	-	8,193,000	4,096,000		4,097,000	2,990,810	1,106,190
89	Lincoln M. Alexander Parkway-Red Hill Valley Parkway - Highway 403 to Queen Elizabeth Way	2032-2041	17.30	4r-6u	135,000,000	135,000,000	-	-	-	-	-	-	-
<b>Local Share Deductions</b>													
90	Provision for Local Share of Urbanization (Urbanization Rate)					-	4,685,000	(4,685,000)	-		(4,685,000)	(3,420,050)	(1,264,950)
91	Local Share Deductions					-	64,082,002	(64,082,002)	-		(64,082,002)	(46,779,861)	(17,302,140)
<b>Major Structures</b>													
92	Highway 5/6 Interchange	2023-2031	-	Structure	60,500,000	-	45,500,000	15,000,000	-		15,000,000	10,950,000	4,050,000
93	Mohawk Road - Highway 403 Interchange Ramp	2023-2031	-	Structure	4,042,000	-	-	4,042,000	2,021,000		2,021,000	1,475,330	545,670
94	Centennial Parkway at QEW	2023-2031	-	Interchange Reconfiguration	8,500,000	-	-	8,500,000	4,250,000		4,250,000	3,102,500	1,147,500
95	QEW Off-Ramps at Fifty Road	2023-2031	-	Signalization and Ramp Reconfiguration	4,000,000	-	-	4,000,000	600,000		3,400,000	2,482,000	918,000
96	Strathcona Pedestrian Bridge	2032-2041	-	Structure	31,500,000	31,500,000	-	-	-		-	-	-
97	Limeridge Mall Pedestrian Bridge	2023-2031	-	Structure	6,500,000	-	3,500,000	3,000,000	2,430,000		570,000	416,100	153,900
98	Henderson Lift Pedestrian and Cyclist Bridge	2032-2041	-	Structure	20,000,000	20,000,000	-	-	-		-	-	-
99	Hamilton Centre Pedestrian and Cyclist Bridge	2032-2041	-	Structure	9,500,000	9,500,000	-	-	-		-	-	-
100	Red Hill Pedestrian and Cyclist Bridge	2023-2031	-	Structure	19,000,000	-	-	19,000,000	15,390,000		3,610,000	2,635,300	974,700
101	Dundas Pedestrian and Cyclist Bridge	2032-2041	-	Structure	3,125,000	3,125,000	-	-	-		-	-	-



**Table 5-12 (Cont'd)**  
**Infrastructure Cost Included in the Development Charges Calculation**  
**Services Related to a Highway – Roads and Related Capital Sheet**

Prj. No.	Increased Service Needs Attributable to Anticipated Development  City-Wide Service Target for Services Related to a Highway	Timing (year)	Length (km)	Capital Improvement	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
									Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
102	Margaret St. Park Active Transportation Bridge	2032-2041	0.00	Structure	5,900,000	5,900,000	-	-	-	-	-	-	-
103	Sealey Park Active Transportation Bridge	2023-2031	0.00	Structure	7,500,000	-	-	7,500,000	6,075,000	-	1,425,000	1,040,250	384,750
104	Grade Separation	2023-2031	-	Grade Separation	71,828,000	26,935,000	-	44,893,000	17,957,000	-	26,936,000	19,663,280	7,272,720
	<b>Programs</b>												
105	New Signals (Pedestrian and/or Regular)	2024-2031	-	City-Wide Program	32,000,000	-	-	32,000,000	1,600,000	-	30,400,000	22,192,000	8,208,000
106	Development Road Urbanization	2024-2031	-	City-Wide Program	6,500,000	-	-	6,500,000	325,000	-	6,175,000	4,507,750	1,667,250
107	Street Lighting Enhancement Program	2024-2031	-	City-Wide Program	3,250,000	-	-	3,250,000	2,633,000	-	617,000	450,410	166,590
108	Pedestrian Crossovers	2024-2031	-	City-Wide Program	1,680,000	-	-	1,680,000	1,361,000	-	319,000	232,870	86,130
109	Advanced Traffic Management Systems	2024-2031	-	City-Wide Program	6,000,000	-	-	6,000,000	4,500,000	-	1,500,000	1,095,000	405,000
110	Transit Shelter Expansion Program	2024-2031	-	City-Wide Program	1,200,000	-	-	1,200,000	600,000	-	600,000	438,000	162,000
111	Bus Stop Shelter Rehabilitation Program	2024-2031	-	City-Wide Program	1,000,000	-	-	1,000,000	850,000	-	150,000	109,500	40,500
112	New Sidewalk Program	2024-2031	-	City-Wide Program	6,500,000	-	-	6,500,000	-	-	6,500,000	4,745,000	1,755,000
113	New Traffic Signals	2024-2031	-	City-Wide Program	12,000,000	-	-	12,000,000	600,000	-	11,400,000	8,322,000	3,078,000
114	New Traffic Signal - Drakes Drive at North Service Road	2024-2031	-	Traffic Signal	350,000	-	-	350,000	18,000	-	332,000	242,360	89,640
115	New Traffic Signal - Regional Road 20 at Westbrook Road	2024-2031	-	Traffic Signal	350,000	-	-	350,000	18,000	-	332,000	242,360	89,640
116	New Traffic Signal - Regional Road 56 at Kirk Road	2024-2031	-	Traffic Signal	350,000	-	-	350,000	18,000	-	332,000	242,360	89,640
117	New Traffic Signal - Fifty Road at North Service Road	2024-2031	-	Traffic Signal	350,000	-	-	350,000	18,000	-	332,000	242,360	89,640
118	New Traffic Signal - Fruitland Road at North Service Road	2024-2031	-	Traffic Signal	350,000	-	-	350,000	18,000	-	332,000	242,360	89,640
119	Unidentified intersection improvements (excluding Traffic Signals)	2024-2031	-	City-Wide Program	3,250,000	-	-	3,250,000	2,633,000	-	617,000	450,410	166,590
120	Annual Bike Parking at B/A Line Stops	2024-2031	-	City-Wide Program	46,000	-	-	46,000	37,000	-	9,000	6,570	2,430
121	Annual Enhanced Bike Parking at Express Bus/Rapid Transit Stops	2024-2031	-	City-Wide Program	275,000	-	-	275,000	223,000	-	52,000	37,960	14,040
122	Transportation Demand Management	2024-2031	-	City-Wide Program	4,400,000	-	-	4,400,000	3,564,000	-	836,000	610,280	225,720
123	Durable Pavement Markings – New Installations	2024-2031	-	City-Wide Program	1,600,000	-	-	1,600,000	240,000	-	1,360,000	992,800	367,200
124	Traffic Controller Cabinet Replacements (Capacity Related)	2024-2031	-	City-Wide Program	3,200,000	-	-	3,200,000	160,000	-	3,040,000	2,219,200	820,800
125	Traffic Signal Upgrades	2024-2031	-	City-Wide Program	2,400,000	-	-	2,400,000	120,000	-	2,280,000	1,664,400	615,600
126	Traffic Signal LED Replacement Program	2024-2031	-	City-Wide Program	1,760,000	-	-	1,760,000	1,760,000	-	-	-	-
127	Sidewalk Missing Link Program	2024-2031	-	City-Wide Program	2,000,000	-	-	2,000,000	1,620,000	-	380,000	277,400	102,600
128	Bike Parking	2024-2031	-	City-Wide Program	720,000	-	-	720,000	583,200	-	136,800	99,864	36,936



**Table 5-12 (Cont'd)**  
**Infrastructure Cost Included in the Development Charges Calculation**  
**Services Related to a Highway – Roads and Related Capital Sheet**

Prj. No.	Increased Service Needs Attributable to Anticipated Development  City-Wide Service Target for Services Related to a Highway	Timing (year)	Length (km)	Capital Improvement	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
									Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
129	Micromobility	2024-2031	-	City-Wide Program	1,200,000	-	-	1,200,000	972,000		228,000	166,440	61,560
130	Miscellaneous Land Acquisitions	2024-2031	-	City-Wide Program	6,969,500	-	-	6,969,500	348,500		6,621,000	4,833,330	1,787,670
<b>Active Transportation Projects</b>													
131	Barton - Brockley to Fruitland	2024-2031	3.95	Multi-Use Trail	171,400	9,800	-	161,600	138,900		22,700	16,571	6,129
132	Barton - Red Hill Valley to Lake	2024-2031	1.61	Cycle track	326,200	18,600	-	307,600	264,200		43,400	31,682	11,718
133	Baseline/ Lockport - Winona Road to Niagara border	2024-2031	1.15	Bike Lane	32,100	1,800	-	30,300	26,000		4,300	3,139	1,161
134	Battlefield Park - Bruce Trail Link - Greenhill to Bruce Trail to Glover Mtn	2024-2031	0.75	Multi-Use Trail	742,900	42,300	-	700,600	601,800		98,800	72,124	26,676
135	Beach Bike Lane - under QEW	2024-2031	0.24	Bike Lane	9,800	600	-	9,200	7,900		1,300	949	351
136	Beach Boulevard - lift bridge to Woodward/Eastport	2024-2031	4.52	Bike Lane	131,000	7,500	-	123,500	106,100		17,400	12,702	4,698
137	Beddoe Drive Link	2024-2031	0.91	Multi-Use Trail	723,400	41,200	-	682,200	586,000		96,200	70,226	25,974
138	Binbrook Road - Regional Road 56 to Southbrook	2024-2031	0.28	Bike Lane	9,800	600	-	9,200	7,900		1,300	949	351
139	Binbrook Road - Trinity Church to Royal Winter/Binhaven	2024-2031	2.16	Multi-Use Trail	342,900	59,100	146,000	137,800	-		137,800	100,594	37,206
140	Birch/ Holton - Burlington St to Cannon/ King/ Delaware	2024-2031	1.40	Bike Lane	43,200	2,500	-	40,700	35,000		5,700	4,161	1,539
141	Burlington Street East Boulevard Trail - Ottawa to Parkdale to Glow	2024-2031	2.30	Multi-Use Trail	1,463,600	83,400	-	1,380,200	1,185,500		194,700	142,131	52,569
142	Burlington Street Link - Ferguson/ Dock Service Road to Sherman	2024-2031	1.88	Multi-Use Trail	145,000	8,300	-	136,700	117,400		19,300	14,089	5,211
143	Burlington/ Industrial - Sherman to Gage	2024-2031	0.86	Cycle track	138,000	7,900	-	130,100	111,800		18,300	13,359	4,941
144	Centennial Parkway - North Service to GO station/ Kenora	2024-2031	1.20	Multi-Use Trail	217,400	12,400	-	205,000	176,100		28,900	21,097	7,803
145	Centre - Concession 8 E to Concession 7 E	2024-2031	1.80	Paved Shoulder	489,300	124,800	-	364,500	73,400		291,100	212,503	78,597
146	Centre - Grindstone Creek to Concession 5 E	2024-2031	0.45	Paved Shoulder	122,700	31,300	-	91,400	18,400		73,000	53,290	19,710
147	Centre - Warren/ Carlisle Road to Progreston	2024-2031	0.78	Paved Shoulder	210,500	53,700	-	156,800	31,600		125,200	91,396	33,804
148	Charlton/ John - James to Ferguson & St Joseph's Dr	2024-2031	0.80	Bike Lane	117,100	6,700	-	110,400	94,800		15,600	11,388	4,212
149	Chedmac - Southridge to Rice	2024-2031	0.53	Bike Lane	32,100	1,800	-	30,300	26,000		4,300	3,139	1,161
150	Chedoke Rail Trail - Highway 403 to Dundurn	2024-2031	4.68	Multi-Use Trail	2,072,700	118,100	-	1,954,600	1,678,900		275,700	201,261	74,439
151	Cherry Beach Road Link - Millen to Dewitt	2024-2031	0.91	Multi-Use Trail	326,200	18,600	-	307,600	264,200		43,400	31,682	11,718
152	Christie-Tews - Christie C.A. to Harvest	2024-2031	2.75	Multi-Use Trail	1,566,700	399,500	-	1,167,200	235,000		932,200	680,506	251,694
153	Delawana - Kenora to Lake	2024-2031	1.02	Bike Lane	12,500	700	-	11,800	10,200		1,600	1,168	432
154	Devil's Punchbowl Link - Mountain Ave/ Lake Ave to Ridge Road/ Devil's	2024-2031	0.42	Multi-Use Trail	209,100	11,900	-	197,200	169,400		27,800	20,294	7,506
155	Dewitt - Barton to Dundee	2024-2031	0.90	Bike Lane	29,300	1,700	-	27,600	23,700		3,900	2,847	1,053
156	Dewitt - Dundee to Ridge	2024-2031	0.50	Bike Lane	1,045,400	59,600	-	985,800	846,800		139,000	101,470	37,530



**Table 5-12 (Cont'd)**  
**Infrastructure Cost Included in the Development Charges Calculation**  
**Services Related to a Highway – Roads and Related Capital Sheet**

Prj. No.	Increased Service Needs Attributable to Anticipated Development  City-Wide Service Target for Services Related to a Highway	Timing (year)	Length (km)	Capital Improvement	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
									Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
157	Dundas St - Main to Cootes	2024-2031	0.68	Bike Lane	22,300	1,300	-	21,000	18,100		2,900	2,117	783
158	Dundas St in Waterdown - Highway 6 to Kearns (border)	2024-2031	6.03	Multi-Use Trail	179,800	10,200	-	169,600	145,600		24,000	17,520	6,480
159	East Townline - Mud to Highland	2024-2031	1.10	Bike Lane	18,100	4,600	-	13,500	2,700		10,800	7,884	2,916
160	Eastport Drive Lift Bridge Link	2024-2031	0.60	Multi-Use Trail	2,439,300	139,000	-	2,300,300	1,975,900		324,400	236,812	87,588
161	Edgewood - Safari to Highway 6	2024-2031	0.90	Bike Lane	15,300	4,600	-	10,700	-		10,700	7,811	2,889
162	Emperor - Brigade to Acadia	2024-2031	0.44	Bike Lane	22,300	1,300	-	21,000	18,100		2,900	2,117	783
163	Existing Pipeline Trail - Main to Strathearne	2024-2031	2.20	Multi-Use Trail	6,522,100	371,800	-	6,150,300	5,282,900		867,400	633,202	234,198
164	Fallsview - Sydenham to Rock Chapel Road	2024-2031	1.40	Multi-Use Trail	487,900	146,400	-	341,500	-		341,500	249,295	92,205
165	Fennell Avenue Boulevard Trail - Garth/ West 18th to West 5th	2024-2031	1.20	Multi-Use Trail	574,300	32,700	-	541,600	465,200		76,400	55,772	20,628
166	Ferguson - Young to Charlton	2024-2031	0.21	Bike Lane	2,790	160	-	2,630	2,260		370	270	100
167	Fiddler's Green - Amberly to Carl Luke	2024-2031	6.77	Bike Lane	29,300	6,200	9,000	14,100	-		14,100	10,293	3,807
168	Fiddler's Green - Jerseyville to Wilson	2024-2031	0.25	Bike Lane	8,400	500	-	7,900	6,800		1,100	803	297
169	First Rd W/Whitedeer/Terryberry & Picardy/ Highbury - Glover Mtn Road/ Ridgeview Dr to Rymal/ Bellagio	2024-2031	4.08	Bike Lane	66,900	3,800	-	63,100	54,200		8,900	6,497	2,403
170	Frances - Grays to Southshore	2024-2031	1.15	Bike Lane	217,400	12,400	-	205,000	176,100		28,900	21,097	7,803
171	Frid/Chatham - Longwood to Dundurn	2024-2031	1.00	Bike Lane	8,400	500	-	7,900	6,800		1,100	803	297
172	Golf Links/ Halson - Wilson to Southcote	2024-2031	1.19	Bike Lane	39,000	2,200	-	36,800	31,600		5,200	3,796	1,404
173	Governor's - Wainwright to Lynden	2032-2041	13.06	Paved Shoulder	908,800	908,800	-	-	-		-	-	-
174	Governor's - Oglivie to Main	2024-2031	0.24	Bike Lane	59,900	3,400	-	56,500	48,500		8,000	5,840	2,160
175	Grays/ Gray - Confederation Park gate to King	2024-2031	3.00	Multi-Use Trail	163,100	9,300	-	153,800	132,100		21,700	15,841	5,859
176	Greenhill - Harrisford to Summercrest	2024-2031	1.94	Bike Lane	105,900	6,000	-	99,900	85,800		14,100	10,293	3,807
177	Greenhill - Summercrest to King	2024-2031	1.20	Bike Lane	65,500	3,700	-	61,800	53,100		8,700	6,351	2,349
178	Hamilton Drive Link	2024-2031	-	Multi-Use Trail	2,759,900	157,300	-	2,602,600	2,235,500		367,100	267,983	99,117
179	Hamilton in Waterdown - Centre/Main to Highway 5/Dundas	2024-2031	1.00	Multi-Use Trail	86,400	4,900	-	81,500	70,000		11,500	8,395	3,105
180	Hamilton-Brantford Rail Trail - Bridlewood Dr to Ewen	2024-2031	4.00	Multi-Use Trail	565,900	32,300	-	533,600	458,400		75,200	54,896	20,304
181	Hatt - Peel to John	2024-2031	0.65	Cycle track	40,400	2,300	-	38,100	32,700		5,400	3,942	1,458
182	Hollybush - Parkside to Dundas St	2024-2031	1.10	Bike Lane	22,300	1,300	-	21,000	18,100		2,900	2,117	783
183	Hydro Corridor - Barton to Lawrence	2024-2031	1.90	Multi-Use Trail	1,743,800	99,400	-	1,644,400	1,412,500		231,900	169,287	62,613
184	Hydro Corridor - Lawrence Avenue to Greenhill Avenue	2024-2031	1.15	Multi-Use Trail	599,400	34,200	-	565,200	485,500		79,700	58,181	21,519





**Table 5-12 (Cont'd)**  
**Infrastructure Cost Included in the Development Charges Calculation**  
**Services Related to a Highway – Roads and Related Capital Sheet**

Prj. No.	Increased Service Needs Attributable to Anticipated Development  City-Wide Service Target for Services Related to a Highway	Timing (year)	Length (km)	Capital Improvement	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
									Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
185	Hydro Corridor - Wilson/Highway 52 to Regional Road 56	2024-2031	12.70	Multi-Use Trail	10,617,300	-	10,617,300	-	-	-	-	-	-
186	Iroquois Heights to Old Mohawk - Chedoke Rail Trail to Old Mohawk Road	2024-2031	0.85	Multi-Use Trail	443,300	25,300	-	418,000	359,000		59,000	43,070	15,930
187	Jones Road Link	2024-2031	2.67	Multi-Use Trail	309,400	25,600	224,000	59,800	-		59,800	43,654	16,146
188	Karst Escarpment Loop - Pritchard to Mount Albion/Winterberry	2024-2031	0.70	Multi-use Trail	543,600	31,000	-	512,600	440,300		72,300	52,779	19,521
189	Kenora/ Greenford/ Owen - Bancroft to King	2024-2031	2.60	Bike Lane	239,800	13,700	-	226,100	194,200		31,900	23,287	8,613
190	Kentley - Eugene to Kenora	2024-2031	0.40	Signed Bike Route	5,580	320	-	5,260	4,520		740	540	200
191	Kerns Road, Waterdown South Link	2024-2031	-	Multi-Use Trail	1,334,000	76,000	-	1,258,000	1,080,500		177,500	129,575	47,925
192	King in Dundas - Bond to Peel	2024-2031	0.80	Bike Lane	43,200	2,500	-	40,700	35,000		5,700	4,161	1,539
193	King over Red Hill Valley Parkway - Lawrence to Pottruff	2024-2031	0.60	Cycle track	37,600	2,100	-	35,500	30,500		5,000	3,650	1,350
194	Kitty Murray - Garner to Golf Links	2024-2031	2.26	Bike Lane	73,900	4,200	-	69,700	59,800		9,900	7,227	2,673
195	Limeridge - Birchview to Mtn Brow	2024-2031	1.98	Bike Lane	97,600	5,600	-	92,000	79,000		13,000	9,490	3,510
196	Limeridge - Garth/ Bonaventure to West 5th/ Hawkridge	2024-2031	1.37	Bike Lane	73,900	4,200	-	69,700	59,800		9,900	7,227	2,673
197	Limeridge Mall Hydro Corridor Trail - Mohawk Road to South of Rymal	2024-2031	3.80	Multi-Use Trail	1,957,000	-	1,957,000	-	-		-	-	-
198	Lovers Lane - Sulpher Springs to Jerseyville	2024-2031	0.90	Bike Lane	29,300	1,700	-	27,600	23,700		3,900	2,847	1,053
199	Marston - Paramount to Gordon Drummond	2024-2031	0.40	Bike Lane	19,500	1,100	-	18,400	15,800		2,600	1,898	702
200	Meadowbrook	2024-2031	1.00	Bike Lane	22,300	1,300	-	21,000	18,100		2,900	2,117	783
201	Meadowlands/ Raymond - Golf Links to Garner	2024-2031	2.10	Bike Lane	68,300	3,900	-	64,400	55,300		9,100	6,643	2,457
202	Millen - Shoreview to Millen/ Seaman	2024-2031	0.50	Bike Lane	43,200	1,300	20,500	21,400	18,400		3,000	2,190	810
203	Mohawk - Old Mohawk to Upper Paradise	2024-2031	1.83	Bike Lane	65,500	3,700	-	61,800	53,100		8,700	6,351	2,349
204	Montclair/ Central/ Graham/ Frederick	2024-2031	3.80	Signed Bike Route	26,500	1,500	-	25,000	21,500		3,500	2,555	945
205	Mountain Brow Boulevard Trail - Mohawk to Arbour	2024-2031	1.81	Multi-Use Trail	521,300	29,700	-	491,600	422,300		69,300	50,589	18,711
206	Mountain Brow East Path - Rendell to Oakcrest	2024-2031	0.81	Multi-Use Trail	2,174,500	123,900	-	2,050,600	1,761,300		289,300	211,189	78,111
207	Mountain Brow in Waterdown - Mill to Burke to King Road	2024-2031	1.20	Multi-Use Trail	920,000	52,400	-	867,600	745,200		122,400	89,352	33,048
208	Museum of Steam and Tech Link - Woodward to Red Hill Valley Trail	2024-2031	0.75	Multi-Use Trail	846,100	48,200	-	797,900	685,300		112,600	82,198	30,402
209	Nash - Bancroft to King	2024-2031	2.58	Cycle track	140,800	8,000	-	132,800	114,000		18,800	13,724	5,076
210	North Service Road - Bellavista to Baseline	2024-2031	0.98	Bike Lane	32,100	1,800	-	30,300	26,000		4,300	3,139	1,161
211	North Service Road - Dewitt to Lakeview	2024-2031	0.73	Bike Lane	22,300	1,300	-	21,000	18,100		2,900	2,117	783



**Table 5-12 (Cont'd)**  
**Infrastructure Cost Included in the Development Charges Calculation**  
**Services Related to a Highway – Roads and Related Capital Sheet**

Prj. No.	Increased Service Needs Attributable to Anticipated Development  City-Wide Service Target for Services Related to a Highway	Timing (year)	Length (km)	Capital Improvement	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
									Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
212	Northlawn Avenue Link	2024-2031	1.10	Multi-Use Trail	557,600	142,900	81,000	333,700	-		333,700	243,601	90,099
213	Ogilvie/ Old Ancaster - Hatt/ King to Hamilton-Brantford Rail Trail	2024-2031	0.80	Bike Lane	19,500	1,100	-	18,400	15,800		2,600	1,898	702
214	Old Guelph Road - Paterson to York Bike Lane	2024-2031	3.53	Paved Shoulder	1,264,300	322,400	-	941,900	189,600		752,300	549,179	203,121
215	Old Mud - Mt Albion to Winterberry	2024-2031	0.40	Bike Lane	12,500	700	-	11,800	10,200		1,600	1,168	432
216	Osler/ Main - Hatt/ King to Main + 125m of Main	2024-2031	2.00	Bike Lane	122,700	7,000	-	115,700	99,400		16,300	11,899	4,401
217	Ottawa Street South - Bruce Trail Link	2024-2031	0.39	Multi-Use Trail	956,200	54,500	-	901,700	774,500		127,200	92,856	34,344
218	Proposed Pipeline Trail - Museum of Steam and Technology to Mahoney	2024-2031	2.40	Multi-Use Trail	720,600	41,100	-	679,500	583,700		95,800	69,934	25,866
219	Queensdale - Upper Sherman to Upper Ottawa	2024-2031	1.56	Bike Lane	50,200	2,900	-	47,300	40,600		6,700	4,891	1,809
220	Queensdale - Upper Wellington to Skyland	2024-2031	0.39	Bike Lane	54,400	3,100	-	51,300	44,000		7,300	5,329	1,971
221	Queenston/ Highway 8 - King to Dewitt	2024-2031	1.37	Bike Lane	342,900	19,500	-	323,400	277,700		45,700	33,361	12,339
222	Regional Road 56 - Swayze Road to Cemetery	2024-2031	4.60	Multi-Use Trail	4,347,600	880,000	1,414,200	2,053,400	-		2,053,400	1,498,982	554,418
223	Regional Road 56 south of Kirk - Windwood to Kirk	2024-2031	1.14	Multi-Use Trail	1,087,200	277,200	-	810,000	163,100		646,900	472,237	174,663
224	Ridge Road - Devil Punch Bowl to Dewitt	2024-2031	2.91	Multi-Use Trail	1,087,200	62,000	-	1,025,200	880,700		144,500	105,485	39,015
225	Rousseau/ Mohawk - Wilson to Filman	2024-2031	1.60	Bike Lane	313,600	17,900	-	295,700	254,000		41,700	30,441	11,259
226	Scenic - Chedoke Rail Trail to Upper Paradise	2024-2031	2.27	Bike Lane	37,600	2,100	-	35,500	30,500		5,000	3,650	1,350
227	Scenic/ Denlow - Upper Paradise to Garth	2024-2031	0.95	Bike Lane	15,300	900	-	14,400	12,400		2,000	1,460	540
228	Shaver - Wilson to Garner	2024-2031	0.52	Multi-Use Trail	16,700	1,000	-	15,700	13,500		2,200	1,606	594
229	Stuart Street Rail Link	2024-2031	0.94	Multi-Use Trail	354,100	20,200	-	333,900	286,800		47,100	34,383	12,717
230	Upper James - William Connell Park	2024-2031	0.38	Multi-Use Trail	313,600	17,900	-	295,700	254,000		41,700	30,441	11,259
231	Upper Sherman - Stone Church to Rymal to Miles	2024-2031	1.00	Bike Lane	249,500	-	249,500	-	-		-	-	-
232	Upper Wentworth - Concession to Fennell	2024-2031	1.03	Bike Lane	55,800	3,200	-	52,600	45,200		7,400	5,402	1,998
233	Upper Wentworth - Fennell to East 24th	2024-2031	1.03	Bike Lane	55,800	3,200	-	52,600	45,200		7,400	5,402	1,998
234	Valley Road - Rock Chapel to York Road	2024-2031	1.40	Paved Shoulder	434,900	110,900	-	324,000	65,200		258,800	188,924	69,876
235	Van Wagner's - Beach Bike Lane to Centennial Parkway	2024-2031	2.50	Bike Lane	108,700	6,200	-	102,500	88,100		14,400	10,512	3,888
236	Victoria - Young to Burlington	2024-2031	2.53	Bike Lane	55,800	3,200	-	52,600	45,200		7,400	5,402	1,998
237	Walnut Grove & Sanctuary Park - Walnut Grove/ Ogilvie to Highland Park Dr	2024-2031	0.40	Multi-Use Trail	510,200	29,100	-	481,100	413,200		67,900	49,567	18,333



**Table 5-12 (Cont'd)**  
**Infrastructure Cost Included in the Development Charges Calculation**  
**Services Related to a Highway – Roads and Related Capital Sheet**

Prj. No.	Increased Service Needs Attributable to Anticipated Development  City-Wide Service Target for Services Related to a Highway	Timing (year)	Length (km)	Capital Improvement	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
									Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
238	Warrington/ South Service/ Lake - Centennial Parkway to Maple	2024-2031	3.86	Multi-Use Trail	108,700	6,200	-	102,500	88,100		14,400	10,512	3,888
239	White Church Road West Airport Link	2024-2031	-	Multi-Use Trail	938,100	281,400	-	656,700	-		656,700	479,391	177,309
240	White Church Road West Link	2024-2031	6.55	Multi-Use Trail	1,833,000	310,300	799,000	723,700	-		723,700	528,301	195,399
241	Wilson in Ancaster - Rousseaux to Halson	2024-2031	0.85	Bike Lane	27,900	1,600	-	26,300	22,600		3,700	2,701	999
242	Winona - Lido/ shore to Peachtree (Helena)	2024-2031	1.97	Multi-Use Trail	64,100	3,700	-	60,400	51,900		8,500	6,205	2,295
243	York Road - Olympic to Valley Road	2024-2031	1.70	Paved Shoulder	609,100	155,300	-	453,800	91,400		362,400	264,552	97,848
244	York Road & York Road at Old Guelph - Valley Road to Highway 6	2024-2031	2.50	Multi-Use Trail	1,997,500	599,200	-	1,398,300	-		1,398,300	1,020,759	377,541
245	Acadia - Emperor to End	2024-2031	0.54	Signed Bike Route	21,700	1,200	-	20,500	17,600		2,900	2,117	783
246	Airport Road - Butter to Miles	2024-2031	6.66	Bike Lane	933,000	36,200	812,000	84,800	-		84,800	61,904	22,896
247	Alma - Sydenham to Queen	2024-2031	0.09	Bike Lane	12,300	700	-	11,600	10,000		1,600	1,168	432
248	Aguasanta - Diconzo to Ascoli	2024-2031	0.09	Signed Bike Route	3,600	200	-	3,400	2,900		500	365	135
249	Baker - Breadalbane to Dundurn	2024-2031	0.14	Signed Bike Route	5,700	300	-	5,400	4,600		800	584	216
250	Winston - Hunter to 413m west of Kelson Ave N	2024-2031	2.06	Bike Lane	289,000	73,700	-	215,300	43,300		172,000	125,560	46,440
251	Bedrock - First Rd W to 300m West of First Rd W	2024-2031	0.33	Bike Lane	45,800	2,600	-	43,200	37,100		6,100	4,453	1,647
252	Bellagio - Fletcher to Terryberry	2024-2031	1.64	Bike Lane	229,400	13,100	-	216,300	185,800		30,500	22,265	8,235
253	Binbrook Road - Southbrook to Boundary	2024-2031	6.02	Paved Shoulder	1,805,400	460,400	-	1,345,000	270,800		1,074,200	784,166	290,034
254	Book Road - Shaver to Fiddler's Green	2032-2041	2.50	Paved Shoulder	751,100	751,100	-	-	-		-	-	-
255	Book Road - Fiddler's Green to Glancaster	2024-2031	3.42	Bike Lane	478,300	3,500	417,500	57,300	49,300		8,000	5,840	2,160
256	Brantdale - West Fifth Street to Upper James	2024-2031	0.42	Signed Bike Route	16,900	1,000	-	15,900	13,700		2,200	1,606	594
257	Bridlewood - Governor's to Highland Park Drive	2024-2031	0.59	Signed Bike Route	23,400	1,300	-	22,100	19,000		3,100	2,263	837
258	Brigade - Upper Wellington to Emperor	2024-2031	0.82	Signed Bike Route	32,700	1,900	-	30,800	26,500		4,300	3,139	1,161
259	Brock - Harvest Road to Highway 8	2024-2031	0.55	Paved Shoulder	164,400	41,900	-	122,500	24,700		97,800	71,394	26,406
260	Brock - Safari to Freerton	2024-2031	4.50	Paved Shoulder	1,351,300	405,400	-	945,900	-		945,900	690,507	255,393
261	Burke - Great Falls Blvd to McKnight Ave E	2024-2031	0.51	Bike Lane	71,700	4,100	-	67,600	58,100		9,500	6,935	2,565
262	Butter - Glancaster to Fiddler's Green	2024-2031	2.21	Bike Lane	309,200	92,700	-	216,500	-		216,500	158,045	58,455
263	Canada - Locke to Queen	2024-2031	0.41	Signed Bike Route	16,400	900	-	15,500	13,300		2,200	1,606	594
264	Carlisle Trail Loop - Centre Road to Border	2024-2031	3.35	Paved Shoulder	1,006,200	256,600	-	749,600	150,900		598,700	437,051	161,649
265	Carlson Street - Highland Road to End	2024-2031	0.11	Signed Bike Route	4,400	300	-	4,100	3,600		500	365	135
266	Carlisle - Glancaster to Shaver	2032-2041	3.53	Paved Shoulder	1,058,200	1,058,200	-	-	-		-	-	-
267	Central - Edgemont to Cochrane	2024-2031	1.54	Signed Bike Route	61,400	3,500	-	57,900	49,800		8,100	5,913	2,187
268	Concession 10 West - Foreman to Freerton	2024-2031	9.28	Signed Bike Route	371,300	111,400	-	259,900	-		259,900	189,727	70,173
269	Concession 11 E - Centre Road to Freerton	2024-2031	2.65	Paved Shoulder	794,400	238,300	-	556,100	-		556,100	405,953	150,147
270	Concession 4 West - Millgrove Sideroad to Highway 6	2032-2041	1.78	Paved Shoulder	532,600	532,600	-	-	-		-	-	-
271	Concession 6 East - Highway 6 to Centre Road	2032-2041	2.79	Paved Shoulder	836,800	836,800	-	-	-		-	-	-
272	Concession 7 West - Boundary to Edgewood Road	2024-2031	18.80	Paved Shoulder	5,640,600	1,692,200	-	3,948,400	-		3,948,400	2,882,332	1,066,068



**Table 5-12 (Cont'd)**  
**Infrastructure Cost Included in the Development Charges Calculation**  
**Services Related to a Highway – Roads and Related Capital Sheet**

Prj. No.	Increased Service Needs Attributable to Anticipated Development  City-Wide Service Target for Services Related to a Highway	Timing (year)	Length (km)	Capital Improvement	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
									Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
273	Concession 8 West - Middletown to Middletown	2024-2031	0.14	Signed Bike Route	5,800	1,500	-	4,300	900		3,400	2,482	918
274	Concession Street - Mountain Park Ave to Mountain Brow Boulevard	2024-2031	0.51	Bike Lane	71,100	4,100	-	67,000	57,600		9,400	6,862	2,538
275	Confederation Beach Park - Centennial Parkway to West of Gray	2024-2031	1.98	Signed Bike Route	79,300	4,500	-	74,800	64,200		10,600	7,738	2,862
276	Cormorant - Trinity to Shaver	2024-2031	2.46	Bike Lane	344,700	19,600	-	325,100	279,200		45,900	33,507	12,393
277	Culotta - Perrelli to Chudleigh	2024-2031	0.14	Signed Bike Route	5,600	300	-	5,300	4,500		800	584	216
278	Dicenzo Dr - Aquasanta Crescent to South Turn on Dicenzo Drive	2024-2031	0.36	Signed Bike Route	14,200	800	-	13,400	11,500		1,900	1,387	513
279	Dicenzo Dr - Upper Wellington to Trieste	2024-2031	0.20	Signed Bike Route	8,200	500	-	7,700	6,600		1,100	803	297
280	Dundurn - Main to King	2024-2031	0.28	Bike Lane	39,100	2,200	-	36,900	31,700		5,200	3,796	1,404
281	Edgemont - Montclair to Central	2024-2031	0.18	Signed Bike Route	7,200	400	-	6,800	5,800		1,000	730	270
282	Eighth Road Link - Ridge to Boundary	2032-2041	5.51	Paved Shoulder	1,651,600	1,651,600	-	-	-		-	-	-
283	Eleventh - Mud to Green Mountain Road	2024-2031	1.11	Signed Bike Route	44,400	13,300	-	31,100	-		31,100	22,703	8,397
284	Emerson - Whitney to Main	2024-2031	0.65	Bike Lane	91,300	5,200	-	86,100	74,000		12,100	8,833	3,267
285	Empress - Upper James to East Sixth Street	2024-2031	0.71	Signed Bike Route	28,600	1,600	-	27,000	23,100		3,900	2,847	1,053
286	Eugene - Pottruff to Nugent	2024-2031	0.18	Signed Bike Route	7,000	400	-	6,600	5,700		900	657	243
287	Fallsview - Harvest Road to Sydenham	2024-2031	2.47	Signed Bike Route	98,800	29,600	-	69,200	-		69,200	50,516	18,684
288	Ferguson - Dock Service Road to Burlington	2024-2031	0.28	Signed Bike Route	11,100	600	-	10,500	9,000		1,500	1,095	405
289	Ferguson - Young to North of Young	2024-2031	0.05	Bike Lane	7,200	400	-	6,800	5,900		900	657	243
290	Field - Jerseyville Rd W to Governor's Rd	2032-2031	3.88	Paved Shoulder	1,162,700	1,162,700	-	-	-		-	-	-
291	Fifty - Ridge to Cokers	2024-2031	1.51	Paved Shoulder	452,400	115,400	-	337,000	67,900		269,100	196,443	72,657
292	Fifty - Coke to North Service Road	2024-2031	2.24	Bike Lane	314,000	11,600	110,700	191,700	164,600		27,100	19,783	7,317
293	Filman - Wilson St E to End	2024-2031	0.40	Signed Bike Route	16,000	4,800	-	11,200	-		11,200	8,176	3,024
294	First Road East - Highland Road to Ridge Road	2032-2041	3.83	Paved Shoulder	1,149,000	1,149,000	-	-	-		-	-	-
295	First Road West - North End to Highbury Drive	2024-2031	0.10	Bike Lane	14,200	800	-	13,400	11,500		1,900	1,387	513
296	Flamborough Puslinch Tlin - Maddaugh Road to Centre	2032-2041	1.81	Paved Shoulder	542,600	542,600	-	-	-		-	-	-
297	Fleming - North End to York	2024-2031	0.26	Signed Bike Route	10,300	3,100	-	7,200	-		7,200	5,256	1,944
298	Fletcher - Rymal to Pinehill	2024-2031	0.32	Paved Shoulder	96,800	5,500	-	91,300	78,400		12,900	9,417	3,483
299	Foreman - Boundary to Regional Road 97	2024-2031	3.08	Signed Bike Route	123,300	37,000	-	86,300	-		86,300	62,999	23,301
300	Franklin - Parkview to Longwood	2024-2031	0.20	Signed Bike Route	8,000	500	-	7,500	6,500		1,000	730	270



**Table 5-12 (Cont'd)**  
**Infrastructure Cost Included in the Development Charges Calculation**  
**Services Related to a Highway – Roads and Related Capital Sheet**

Prj. No.	Increased Service Needs Attributable to Anticipated Development  City-Wide Service Target for Services Related to a Highway	Timing (year)	Length (km)	Capital Improvement	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
									Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
301	Frederick - Barton to Roxborough	2024-2031	0.62	Signed Bike Route	24,900	1,400	-	23,500	20,100		3,400	2,482	918
302	Freelton - Concession 11 E to South of Highway 6	2024-2031	0.38	Bike Lane	53,500	16,100	-	37,400	-		37,400	27,302	10,098
303	Fruitland - Highway 8 to North Service Road	2024-2031	2.42	Bike Lane	339,500	8,100	196,900	134,500	115,500		19,000	13,870	5,130
304	Galbraith - Lake Avenue to Galbraith Three-way Intersection	2024-2031	0.52	Signed Bike Route	20,800	1,200	-	19,600	16,900		2,700	1,971	729
305	Garth - Denlow to Fennell	2024-2031	0.14	Paved Multi-Use Recreational Trail	106,700	6,100	-	100,600	86,400		14,200	10,366	3,834
306	Garth St Extension - 20 Rd W to Dickenson Rd W	2024-2031	1.38	Bike Lane	192,800	9,100	32,500	151,200	129,800		21,400	15,622	5,778
307	Glancaster - Carluke to Airport	2024-2031	1.45	Bike Lane	202,900	51,700	-	151,200	30,400		120,800	88,184	32,616
308	Glenfern - Kent to Kent	2024-2031	0.04	Signed Bike Route	1,400	100	-	1,300	1,100		200	146	54
309	Glover - Watercrest to End	2024-2031	0.11	Bike Lane	14,800	800	-	14,000	12,000		2,000	1,460	540
310	Glow - Parkdale to East of Tate	2024-2031	0.63	Signed Bike Route	25,300	1,400	-	23,900	20,500		3,400	2,482	918
311	Golf Club - Woodburn to Westbrook	2024-2031	2.07	Signed Bike Route	82,700	24,800	-	57,900	-		57,900	42,267	15,633
312	Golf Links - Stone Church to Kitty Murray	2024-2031	1.30	Bike Lane	182,300	10,400	-	171,900	147,700		24,200	17,666	6,534
313	Gordon Drummond - Marston to Nordale	2024-2031	0.04	Signed Bike Route	1,700	100	-	1,600	1,400		200	146	54
314	Graham Ave North - Central to Roxborough	2024-2031	0.78	Signed Bike Route	31,200	1,800	-	29,400	25,200		4,200	3,066	1,134
315	Guise - Leander to Catharine	2024-2031	0.54	Bike Lane	76,100	4,300	-	71,800	61,700		10,100	7,373	2,727
316	Gunby - Sadielou to Painter	2024-2031	0.50	Bike Lane	69,500	4,000	-	65,500	56,300		9,200	6,716	2,484
317	Harrison - Kirk to Binbrook Conservation Area Road	2024-2031	1.30	Paved Multi-Use Recreational Trail	975,100	248,700	-	726,400	146,300		580,100	423,473	156,627
318	Harvest - Sydenham to Brock	2024-2031	3.40	Paved Shoulder	1,020,100	260,100	-	760,000	153,000		607,000	443,110	163,890
319	Highland Rd E - Upper Red Hill Valley Pkwy to Winterberry	2024-2031	0.94	Bike Lane	131,500	7,500	-	124,000	106,500		17,500	12,775	4,725
320	Highland Rd E - Upper Centennial Pkwy to E Town Line	2032-2041	10.17	Paved Shoulder	3,051,100	3,051,100	-	-	-		-	-	-
321	Highway 5 West - Dundas St E to Sydenham	2024-2031	3.02	Paved Shoulder	905,700	271,700	-	634,000	-		634,000	462,820	171,180
322	Highway 8 (Flam) - Boundary to Brock	2032-2041	22.30	Paved Shoulder	6,691,300	6,691,300	-	-	-		-	-	-
323	Highway 8 (Sc) - Fifty to Boundary	2032-2041	0.81	Bike Lane	113,400	113,400	-	-	-		-	-	-
324	Holton - King to Delaware	2024-2031	0.57	Signed Bike Route	22,800	1,300	-	21,500	18,500		3,000	2,190	810
325	Holton - King to Wilson	2024-2031	0.18	Bike Lane	25,700	1,500	-	24,200	20,800		3,400	2,482	918
326	Homestead Dr Path - Upper James to 1200m East of Upper James	2024-2031	1.24	Bike Lane	173,400	9,900	-	163,500	140,400		23,100	16,863	6,237
327	Hughson - Cannon to Hunter	2024-2031	0.81	Bike Lane	113,900	6,500	-	107,400	92,300		15,100	11,023	4,077
328	Hunt - Christ the King Elementary School Road to Breadalbane	2024-2031	0.57	Signed Bike Route	22,800	1,300	-	21,500	18,500		3,000	2,190	810
329	Hunter - Locke to Queen	2024-2031	0.41	Signed Bike Route	16,400	900	-	15,500	13,300		2,200	1,606	594
330	Inverness - Tanner to East 8th	2024-2031	0.77	Bike Lane	107,800	6,100	-	101,700	87,300		14,400	10,512	3,888



**Table 5-12 (Cont'd)**  
**Infrastructure Cost Included in the Development Charges Calculation**  
**Services Related to a Highway – Roads and Related Capital Sheet**

Prj. No.	Increased Service Needs Attributable to Anticipated Development  City-Wide Service Target for Services Related to a Highway	Timing (year)	Length (km)	Capital Improvement	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
									Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
331	Jackson St W - End to Locke St S	2024-2031	0.38	Signed Bike Route	15,200	900	-	14,300	12,300		2,000	1,460	540
332	Jerseyville Rd W - Boundary to East of Paddy Greens	2032-2041	18.45	Paved Shoulder	5,534,000	5,534,000	-	-	-		-	-	-
333	Jerseyville Rd W - West of Shaver to Wilson	2024-2031	3.49	Paved Shoulder	1,046,200	23,300	637,200	385,700	331,300		54,400	39,712	14,688
334	John - Guise to Burlington	2024-2031	0.29	Bike Lane	41,200	2,400	-	38,800	33,400		5,400	3,942	1,458
335	Kay Drage Park Link - Hunt to End	2024-2031	0.55	Signed Bike Route	21,900	1,200	-	20,700	17,700		3,000	2,190	810
336	Kay Drage Park Link - Macklin to End	2024-2031	0.14	Signed Bike Route	5,700	300	-	5,400	4,600		800	584	216
337	King William - James St N to Catharine St N	2024-2031	0.34	Signed Bike Route	13,500	800	-	12,700	10,900		1,800	1,314	486
338	Kirk - Harrison to Highway 56	2024-2031	0.98	Paved Multi-Use Recreational Trail	731,500	186,500	-	545,000	109,700		435,300	317,769	117,531
339	Kirkwall - Regional Road 97 to South of Concession 8 W	2024-2031	2.51	Signed Bike Route	100,300	30,100	-	70,200	-		70,200	51,246	18,954
340	Kirkwall - South of Concession 8 W to Woodhill Rd	2024-2031	5.78	Paved Shoulder	1,735,200	520,600	-	1,214,600	-		1,214,600	886,658	327,942
341	Lafarge 2000 (Middletown Rd) - Concession 6 W to Highway 8	2024-2031	7.91	Signed Bike Route	316,600	80,700	-	235,900	47,500		188,400	137,532	50,868
342	Lafarge 2000 (Middletown Rd/Binkley Rd) - Highway 8 to Mineral Springs Rd	2024-2031	3.57	Paved Shoulder	1,071,000	321,300	-	749,700	-		749,700	547,281	202,419
343	Lamoreaux - Dundurn t N to Strathcona Ave N	2024-2031	0.23	Signed Bike Route	9,100	500	-	8,600	7,400		1,200	876	324
344	Leland - Main to North of Ward	2024-2031	0.29	Signed Bike Route	11,800	700	-	11,100	9,600		1,500	1,095	405
345	Lido - Riviera to Winona	2024-2031	0.39	Signed Bike Route	15,600	900	-	14,700	12,600		2,100	1,533	567
346	Livingstone - Sydenham to Queen	2024-2031	0.11	Bike Lane	15,800	900	-	14,900	12,800		2,100	1,533	567
347	Locke - York Blvd to Barton	2024-2031	0.26	Bike Lane	35,800	2,000	-	33,800	29,000		4,800	3,504	1,296
348	Longwood - Main St W to Frid St	2024-2031	0.40	Bike Lane	55,700	3,200	-	52,500	45,100		7,400	5,402	1,998
349	Macklin St S - King St W to Main St W	2024-2031	0.24	Signed Bike Route	9,500	500	-	9,000	7,700		1,300	949	351
350	Maddaugh Road - Gore to Highway 6	2024-2031	0.95	Signed Bike Route	37,800	11,400	-	26,400	-		26,400	19,272	7,128
351	Maddaugh Road - Highway 6 to Flamborough Puslinch Tlin	2032-2041	1.11	Paved Shoulder	334,400	334,400	-	-	-		-	-	-
352	Maggie Johnson - Tanglewood to Highway 56	2024-2031	0.23	Bike Lane	32,100	1,800	-	30,300	26,000		4,300	3,139	1,161
353	Main St W - Frid to Dundurn St S	2024-2031	0.27	Bike Lane	37,200	2,100	-	35,100	30,100		5,000	3,650	1,350
354	Malton - Christine to Upper James	2024-2031	0.34	Signed Bike Route	13,700	800	-	12,900	11,100		1,800	1,314	486
355	Maple/Mountain Ave Extension - Lake Ave S to Mountain Ave S	2024-2031	0.13	Signed Bike Route	5,300	300	-	5,000	4,300		700	511	189
356	Marion - Dromore to King St W	2024-2031	0.34	Signed Bike Route	13,600	800	-	12,800	11,000		1,800	1,314	486
357	Market - Hatt to MacNab	2024-2031	0.09	Bike Lane	13,000	700	-	12,300	10,500		1,800	1,314	486
358	Market - MacNab to Creighton	2024-2031	0.09	Signed Bike Route	3,600	200	-	3,400	2,900		500	365	135
359	Mayfair - Creighton to Tally Ho	2024-2031	0.31	Signed Bike Route	12,400	700	-	11,700	10,000		1,700	1,241	459
360	McNeilly/8th Road E - Highway 8 to Ridge Road	2024-2031	1.55	Signed Bike Route	62,100	18,600	-	43,500	-		43,500	31,755	11,745



**Table 5-12 (Cont'd)**  
**Infrastructure Cost Included in the Development Charges Calculation**  
**Services Related to a Highway – Roads and Related Capital Sheet**

Prj. No.	Increased Service Needs Attributable to Anticipated Development  City-Wide Service Target for Services Related to a Highway	Timing (year)	Length (km)	Capital Improvement	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
									Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
361	Middleton Rd - North of Regional Road 97 to Regional Road 97	2024-2031	0.44	Signed Bike Route	17,700	4,500	-	13,200	2,700		10,500	7,665	2,835
362	Middleton Rd - North of Concession 8 W to Safari	2024-2031	2.32	Signed Bike Route	92,600	23,600	-	69,000	13,900		55,100	40,223	14,877
363	Miles - Rymal Rd E to Boundary	2032-2041	10.88	Paved Shoulder	3,265,300	3,265,300	-	-	-		-	-	-
364	Milgrove Sr - Highway 6 N to Highway 5 W	2024-2031	0.71	Paved Shoulder	214,000	54,600	-	159,400	32,100		127,300	92,929	34,371
365	Mineral Springs - Binkley to Sulphur Springs	2032-2041	1.27	Paved Shoulder	381,800	381,800	-	-	-		-	-	-
366	Mount Albion - Lawrence to South of Glen Castle	2024-2031	1.39	Bike Lane	194,300	11,100	-	183,200	157,400		25,800	18,834	6,966
367	Mountain Brow - Concession Street to Rendell	2024-2031	0.27	Bike Lane	37,700	2,100	-	35,600	30,500		5,100	3,723	1,377
368	Mud - Eleventh Road E to Boundary	2032-2041	0.89	Paved Shoulder	266,600	266,600	-	-	-		-	-	-
369	Napier - Queen St N to Bay St N	2024-2031	0.55	Signed Bike Route	22,100	1,300	-	20,800	17,900		2,900	2,117	783
370	Nisbet - Centre Road to Wimberly	2024-2031	0.97	Bike Lane	136,400	7,800	-	128,600	110,500		18,100	13,213	4,887
371	Nordale - Gordon Drummond to End	2024-2031	0.39	Signed Bike Route	15,400	900	-	14,500	12,500		2,000	1,460	540
372	Nugent - Kentley to Eugene	2024-2031	0.13	Signed Bike Route	5,200	300	-	4,900	4,200		700	511	189
373	Old Mud - Upper Mount Albion to Cedarville	2024-2031	0.28	Bike Lane	39,500	2,300	-	37,200	32,000		5,200	3,796	1,404
374	Ottawa - Main to Montclair	2024-2031	0.49	Bike Lane	68,000	3,900	-	64,100	55,100		9,000	6,570	2,430
375	Parkdale Ave - Nikola Tesla Blvd to Glow	2024-2031	0.18	Paved Multi-Use Recreational Trail	138,300	7,900	-	130,400	112,100		18,300	13,359	4,941
376	Pearl - Hunter to Tuckett	2024-2031	0.23	Signed Bike Route	9,400	500	-	8,900	7,600		1,300	949	351
377	Peel St S - King St W to Hatt	2024-2031	0.14	Signed Bike Route	5,800	300	-	5,500	4,700		800	584	216
378	Perrelli - Culotta to Dundas St E	2024-2031	0.11	Signed Bike Route	4,300	200	-	4,100	3,500		600	438	162
379	Picton - Bay St n to Hughson St N	2024-2031	0.39	Signed Bike Route	15,600	900	-	14,700	12,600		2,100	1,533	567
380	Picton - John St N to Ferguson Ave N	2024-2031	0.42	Signed Bike Route	16,800	1,000	-	15,800	13,600		2,200	1,606	594
381	Queen - Alma to Livingstone	2024-2031	0.16	Bike Lane	21,900	1,200	-	20,700	17,700		3,000	2,190	810
382	Queen St S - Hunter to Canada	2024-2031	0.08	Signed Bike Route	3,100	200	-	2,900	2,500		400	292	108
383	Redmond - Rushdale to Stone Church Rd E	2024-2031	0.20	Signed Bike Route	8,000	500	-	7,500	6,500		1,000	730	270
384	Regional Road 20 (Highway 20) - Tapleytown to Woodburn	2024-2031	0.28	Signed Bike Route	11,400	2,900	-	8,500	1,700		6,800	4,964	1,836
385	Regional Road 97 - Kirkwall to Foreman	2024-2031	0.16	Paved Shoulder	47,100	14,100	-	33,000	-		33,000	24,090	8,910
386	Ridge - Dewitt to Boundary	2024-2031	7.05	Paved Shoulder	2,116,200	539,600	-	1,576,600	317,400		1,259,200	919,216	339,984
387	Riley - West of Chudleigh to Braeheid	2024-2031	0.21	Signed Bike Route	8,200	500	-	7,700	6,700		1,000	730	270
388	Riviera Ridge - Bellavista to Lido	2024-2031	0.12	Undefined	58,400	3,300	-	55,100	47,300		7,800	5,694	2,106
389	Rock Chapel - Highway 5 W to Service Road East of Sydenham	2024-2031	1.91	Signed Bike Route	76,400	19,500	-	56,900	11,500		45,400	33,142	12,258
390	Roxborough - Frederick to Graham Ave N	2024-2031	0.05	Signed Bike Route	2,000	100	-	1,900	1,600		300	219	81
391	Rushdale - Southpark to Redmond	2024-2031	0.08	Signed Bike Route	3,100	200	-	2,900	2,600		300	219	81



**Table 5-12 (Cont'd)**  
**Infrastructure Cost Included in the Development Charges Calculation**  
**Services Related to a Highway – Roads and Related Capital Sheet**

Prj. No.	Increased Service Needs Attributable to Anticipated Development  City-Wide Service Target for Services Related to a Highway	Timing (year)	Length (km)	Capital Improvement	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
									Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
392	Rymal - Upper Paradise to Spadara	2024-2031	0.44	Bike Lane	61,800	3,500	-	58,300	50,000		8,300	6,059	2,241
393	Rymal - Hazelton to West Fifth St	2024-2031	0.77	Bike Lane	108,500	6,200	-	102,300	87,800		14,500	10,585	3,915
394	Sadielou - Hollybush to End	2024-2031	0.42	Bike Lane	59,400	3,400	-	56,000	48,100		7,900	5,767	2,133
395	Santorium - Scenic to Redfern	2024-2031	0.11	Bike Lane	15,400	900	-	14,500	12,400		2,100	1,533	567
396	Scenic - Scenic Dr to Garth St	2024-2031	0.23	Bike Lane	32,600	1,900	-	30,700	26,400		4,300	3,139	1,161
397	Second St N - King St W to North of Brandow	2024-2031	0.14	Signed Bike Route	5,700	300	-	5,400	4,600		800	584	216
398	Shaver - Wilson to Jerseyville Rd W	2024-2031	1.47	Bike Lane	205,200	11,700	-	193,500	166,200		27,300	19,929	7,371
399	Shaver - Garner to Carluke	2032-2041	6.11	Paved Shoulder	1,832,600	1,832,600	-	-	-		-	-	-
400	Sheppard - Sovereign to Fleming	2024-2031	0.10	Signed Bike Route	4,000	1,200	-	2,800	-		2,800	2,044	756
401	Sherman - Delaware to CP Rail Line	2024-2031	0.33	Signed Bike Route	13,200	800	-	12,400	10,700		1,700	1,241	459
402	Skinner - Dundas St E to East of McKnight Ave E	2024-2031	1.39	Bike Lane	195,100	11,100	-	184,000	158,000		26,000	18,980	7,020
403	South Bend - W Second St to Terrace	2024-2031	0.42	Signed Bike Route	16,600	900	-	15,700	13,500		2,200	1,606	594
404	South St W - Oglivie to Osler	2024-2031	0.70	Signed Bike Route	28,100	1,600	-	26,500	22,800		3,700	2,701	999
405	Southcote - Garner to Airport	2032-2041	2.80	Bike Lane	392,400	392,400	-	-	-		-	-	-
406	Southpark - Rushdale Park Trail to Rushdale Dr	2024-2031	0.25	Signed Bike Route	10,000	600	-	9,400	8,100		1,300	949	351
407	St Joseph's - John St S to End	2024-2031	0.29	Signed Bike Route	11,500	700	-	10,800	9,300		1,500	1,095	405
408	Sulphur Springs - Lover's to Mineral Springs Rd	2032-2041	1.47	Paved Shoulder	439,800	439,800	-	-	-		-	-	-
409	Sulphur Springs - Lover's to Wilson St E	2024-2031	1.05	Signed Bike Route	42,100	2,400	-	39,700	34,100		5,600	4,088	1,512
410	Sunnyridge - Wilson St W to Jerseyville Rd W	2024-2031	2.83	Paved Shoulder	850,200	255,100	-	595,100	-		595,100	434,423	160,677
411	Sydenham/Queen/Livingstone/Alma - Hatt to Romar Dr	2024-2031	1.86	Bike Lane	261,000	66,600	-	194,400	39,200		155,200	113,296	41,904
412	Talbot - Melvin to Barton St E	2024-2031	0.19	Signed Bike Route	7,600	400	-	7,200	6,200		1,000	730	270
413	Tally Ho - Mayfair to Overfield	2024-2031	0.22	Signed Bike Route	8,600	500	-	8,100	7,000		1,100	803	297
414	Tanner - Iverness to End	2024-2031	0.05	Signed Bike Route	1,900	100	-	1,800	1,600		200	146	54
415	Tapleytown Rd - Highway 20 E to Highland Rd E	2024-2031	0.83	Signed Bike Route	33,300	8,500	-	24,800	5,000		19,800	14,454	5,346
416	Tradewind - Wilson St W to Cormorant	2024-2031	0.70	Bike Lane	98,600	5,600	-	93,000	79,900		13,100	9,563	3,537
417	Twenty Rd - Southcote to West of Nebo	2024-2031	9.36	Bike Lane	1,310,600	7,700	1,174,700	128,200	110,100		18,100	13,213	4,887
418	Upper Ottawa - Killbride to Mountain Brow Boulevard	2024-2031	5.22	Bike Lane	731,400	41,700	-	689,700	592,500		97,200	70,956	26,244
419	Upper Sherman - Macassa to Limeridge Rd E	2024-2031	1.65	Bike Lane	231,600	13,200	-	218,400	187,600		30,800	22,484	8,316
420	Upper Wellington - S Bend Rd E to Stone Church Rd E	2024-2031	2.40	Bike Lane	336,200	10,900	145,200	180,100	154,700		25,400	18,542	6,858
421	W 18th St - Bendamere to End	2024-2031	0.17	Signed Bike Route	6,700	400	-	6,300	5,500		800	584	216
422	W 5th St - Brantdale to Governors Blvd	2024-2031	0.62	Multi-Use Trail	466,000	26,600	-	439,400	377,400		62,000	45,260	16,740
423	W 5th St - Governors Blvd to Marlowe	2024-2031	1.13	Bike Lane	158,200	9,000	-	149,200	128,100		21,100	15,403	5,697





**Table 5-12 (Cont'd)**  
**Infrastructure Cost Included in the Development Charges Calculation**  
**Services Related to a Highway – Roads and Related Capital Sheet**

Prj. No.	Increased Service Needs Attributable to Anticipated Development  City-Wide Service Target for Services Related to a Highway	Timing (year)	Length (km)	Capital Improvement	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
									Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
424	Westbrook - End to Golf Club Rd	2024-2031	0.86	Signed Bike Route	34,400	10,300	-	24,100	-		24,100	17,593	6,507
425	Wilson in Ancaster - Fiddler's Green to Boundary	2024-2031	10.77	Cycle Track	5,385,100	1,615,500	-	3,769,600	-		3,769,600	2,751,808	1,017,792
426	Wimberly - Parkside to Nisbet	2024-2031	0.33	Bike Lane	46,000	2,600	-	43,400	37,200		6,200	4,526	1,674
427	Windwood Dr - Bradley to Southbrook Dr	2024-2031	0.70	Bike Lane	97,500	5,600	-	91,900	79,000		12,900	9,417	3,483
428	Woodbine Crescent - Jones to Dundurn St N	2024-2031	0.22	Signed Bike Route	8,900	500	-	8,400	7,200		1,200	876	324
429	Woodburn - Binbrook Rd E to Highway 20 E	2024-2031	7.56	Signed Bike Route	302,200	77,100	-	225,100	45,300		179,800	131,254	48,546
430	Woodhill Rd - Governor's to 800m south of Highway 8	2024-2031	7.05	Signed Bike Route	282,100	84,600	-	197,500	-		197,500	144,175	53,325
431	Woodhill Rd - Highway 8 to 800m south of Highway 8	2024-2031	1.04	Paved Shoulder	313,000	93,900	-	219,100	-		219,100	159,943	59,157
432	Woodward Ave - Beach Blvd to 100m south of Beach Blvd	2024-2031	0.10	Bike Lane	14,100	800	-	13,300	11,400		1,900	1,387	513
433	York - Olympic to Baldwin	2024-2031	2.33	Bike Lane	326,200	18,600	-	307,600	264,200		43,400	31,682	11,718
434	Highway 6 - Concession 10 W to Freelon	2024-2031	0.39	Paved Multi-Use Recreational Trail	293,100	87,900	-	205,200	-		205,200	149,796	55,404
435	Highway 6 N - Carlisle to Edgewood Road	2024-2031	0.55	Paved Multi-Use Recreational Trail	414,100	124,200	-	289,900	-		289,900	211,627	78,273
436	Carlisle Road - Highway 6 to Milborough Townline	2024-2031	5.85	Paved Shoulder	1,756,300	447,800	-	1,308,500	263,400		1,045,100	762,923	282,177
437	Concession 5 West - Highway 6N to Moffatt Road	2024-2031	3.01	Paved Shoulder	904,300	230,600	-	673,700	135,600		538,100	392,813	145,287
438	Mosaic Dr - Parkside Dr to Highway 6	2024-2031	1.90	Multi-Use Trail	1,425,000	81,200	-	1,343,800	1,154,300		189,500	138,335	51,165
	<b>Existing Debt</b>												
439	Debt on Expressway - Principal (discounted) <sup>1</sup>	2023-2025			4,884,212	-		4,884,212	-		4,884,212	3,580,128	1,304,085
440	Debt on Expressway - Interest (discounted) <sup>1</sup>	2023-2025			254,771	-		254,771	-		254,771	186,747	68,024
441	Debt on Various Growth-Related Road Projects - Principal (discounted) <sup>2</sup>	2023-2033			14,204,269	-		14,204,269	-		14,204,269	1,945,985	12,258,285
442	Debt on Various Growth-Related Road Projects - Interest (discounted) <sup>2</sup>	2023-2033			1,141,489	-		1,141,489	-		1,141,489	156,384	985,105



**Table 5-12 (Cont'd)**  
**Infrastructure Cost Included in the Development Charges Calculation**  
**Services Related to a Highway – Roads and Related Capital Sheet**

Prj. No.	Increased Service Needs Attributable to Anticipated Development  City-Wide Service Target for Services Related to a Highway	Timing (year)	Length (km)	Capital Improvement	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
									Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
	<b>Other</b>												
443	Provisional Post Period Benefit Deduction					140,000,000		(140,000,000)	-		(140,000,000)	(102,200,000)	(37,800,000)
444	Future Financing Costs - Growth-Related Interest (discounted)	2023-2046			22,388,624	-		22,388,624	-		22,388,624	16,343,696	6,044,929
445	Reserve Fund Adjustment	Reserve			-	-		-	53,219,090		(53,219,090)	(38,849,936)	(14,369,154)
	<b>Total</b>				<b>1,780,156,236</b>	<b>872,076,680</b>	<b>139,250,202</b>	<b>768,829,354</b>	<b>291,002,370</b>	<b>-</b>	<b>477,826,984</b>	<b>339,729,080</b>	<b>138,097,903</b>

<sup>1</sup> Debt on Expressway Issued for 73% Residential portion and 27% Non-Residential portion

<sup>2</sup> Debt on Various Growth-Related Road Projects Issued for 13.7% Residential portion and 86.3% Non-Residential portion



### **5.3.2 Water and Wastewater Services**

GM BluePlan undertook a detailed review of the water and wastewater services required to service growth over the service target forecast period. Details of their work are provided in Appendix F. Table 5-13 provides a high-level summary of GM BluePlan's assessment by area throughout the City. In addition to the capital costs provided, debt obligations and the balance in the City's D.C. reserve funds for water and wastewater services have been included in the summary.

For water services, a total gross cost of \$385.10 million has been identified. Deductions to this amount include \$52.27 million, which has been identified as benefiting existing development, and \$9.54 million, which has been identified as costs that are the direct responsibility of developers as per the City's local service policy. A deduction of \$84.33 million has been made to account for the benefit of these works to growth beyond the forecast period. The surplus in the water D.C. reserve fund of \$67.06 million has also been deducted from the D.C. calculations. The result of these deductions is a net growth-related cost of \$171.90 million, which has been included in the D.C. calculations.

The total program for linear wastewater services, including debt obligations, provides for a gross total of \$369.40 million. From this amount, deductions have been made to recognize works that will benefit growth in the post-service target period of \$32.68 million, works that provide a benefit to existing of \$23.87 million, and direct developer contributions totalling \$10.16 million. A further deduction of \$36.15 million has been made to account for the balance in the D.C. reserve fund. The net growth-related cost for inclusion in the D.C. calculation is \$266.54 million.

For wastewater facilities, as summarized in Table 5-14, the upgrades and expansion to the Woodward Wastewater Treatment Plant include works related to water quality, a plant expansion and a biosolids management facility. The cost of these works totals \$1.06 billion. The City has been successful in receiving \$274.33 million in grant funding from the provincial and federal governments. The capital works will also benefit existing development and, therefore, a deduction of \$367.76 million has been made. The City's wastewater treatment D.C. reserve fund of \$134.57 million has also been deducted from the gross cost of the projects. The net growth-related costs for inclusion in the D.C. calculation is therefore \$178.64 million.



The growth-related costs have been allocated between residential and non-residential development based on the ratio of growth in population to employment in the urban area over the forecast period, which results in a 74% allocation to residential development and a 26% allocation to non-residential development.



**Table 5-13**  
**City of Hamilton**  
**Summary of Linear Water and Wastewater Programs**

Linear Water and Wastewater Programs	Gross Estimated Cost	Post Period Benefit	Existing Benefit	Direct Developer Contribution	Reserve Fund Balance	Net Growth Related Cost
<b>Water:</b>						
Ancaster Water Distribution System	43,983,000	2,027,000	11,158,000	-		30,798,000
Waterdown Water Distribution System	46,859,000	2,972,000	9,031,000	592,000		34,264,000
Binbrook Water Distribution System	21,400,000	-	3,480,000	718,000		17,202,000
A.E.G.D./Mount Hope Water Distribution System	26,207,000	-	-	5,501,000		20,706,000
Hamilton Mountain Water Distribution System	73,311,000	17,568,000	-	2,010,000		53,733,000
Stoney Creek Upper Water Distribution System	92,629,000	30,759,000	7,273,000	723,000		53,874,000
Stoney Creek Lower Water Distribution System	14,801,000	-	-	-		14,801,000
City Wide Water Distribution System	61,549,500	-	21,325,250	-		40,224,250
Reduction in Development Charges for Local Servicing Cost (Non-Trunk)	(8,000,000)	-	-	-	-	(8,000,000)
Existing Debt (Discounted)	304,338	-	-	-		304,338
New Growth Related Financing (Discounted)	12,053,452	-	-	-		12,053,452
Provisional Post Period Benefit Deduction		31,000,000				(31,000,000)
Reserve Fund Balance					67,062,464	(67,062,464)
<b>Total Water</b>	<b>385,097,290</b>	<b>84,326,000</b>	<b>52,267,250</b>	<b>9,544,000</b>	<b>67,062,464</b>	<b>171,897,576</b>
<b>Wastewater:</b>						-
Ancaster Sanitary Sewage System	1,351,000	-	-	-		1,351,000
Waterdown Sanitary Sewage System	485,000	-	-	359,000		126,000
Binbrook Sanitary Sewage System	2,217,000	-	-	898,000		1,319,000
A.E.G.D./Mount Hope Sanitary Sewage System	48,816,000	-	-	7,598,000		41,218,000
Hamilton Mountain Sanitary Sewage System	119,952,000	11,680,000	-	771,000		107,501,000
Stoney Creek Lower Sanitary Sewage System	86,313,000	8,000,000	235,700	532,000		77,545,300
City Wide Sanitary Sewage System	79,394,000	-	23,632,000	-		55,762,000
Reduction in Development Charges for Local Servicing Cost (Non-Trunk)	(10,000,000)	-	-	-		(10,000,000)
Existing Debt (Discounted)	1,401,961	-	-	-		1,401,961
New Growth Related Financing (Discounted)	39,466,332	-	-	-		39,466,332
Provisional Post Period Benefit Deduction		13,000,000				(13,000,000)
Reserve Fund Balance					36,150,238	(36,150,238)
<b>Total Wastewater</b>	<b>369,396,294</b>	<b>32,680,000</b>	<b>23,867,700</b>	<b>10,158,000</b>	<b>36,150,238</b>	<b>266,540,356</b>
<b>Total Water &amp; Wastewater</b>	<b>754,493,583</b>	<b>117,006,000</b>	<b>76,134,950</b>	<b>19,702,000</b>	<b>103,212,702</b>	<b>438,437,931</b>



Table 5-14  
City of Hamilton  
Summary of Wastewater Facilities Capital Costs

Wastewater Facilities	Gross Capital Cost	Grants	Post Period Benefit	Existing Benefit	Reserve Fund Balance	Net Growth Related Cost
Water Quality	577,342,000	260,026,000	14,997,000	257,329,700		44,989,300
Plant Expansion	321,524,000	-	76,225,000	16,626,800		228,672,200
Biosolids Management Facility	157,838,000	14,300,000	10,187,000	93,807,600		39,543,400
Reserve Fund Balance					134,565,699	(134,565,699)
<b>Total Capital Costs</b>	<b>1,056,704,000</b>	<b>274,326,000</b>	<b>101,409,000</b>	<b>367,764,100</b>	<b>134,565,699</b>	<b>178,639,201</b>





**Table 5-16**  
**City of Hamilton**  
**Infrastructure Cost Included in the Development Charges Calculation**  
**Wastewater Linear Services**

Prj.No	Increased Service Needs Attributable to Anticipated Development  Urban Service Area Forecast Target	Timing (year)	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 74%	Non-Residential Share 26%
1	Waterdown Sanitary Sewage System	2023-2027	485,000	-		485,000	-	359,000	126,000	93,240	32,760
2	Ancaster Sanitary Sewage System	2023-2027	1,351,000	-		1,351,000	-	-	1,351,000	999,740	351,260
3	AEGD/Mt. Hope Sanitary Sewage System	2023-2027	25,070,000	-		25,070,000	-	-	25,070,000	18,551,800	6,518,200
4	AEGD/Mt. Hope Sanitary Sewage System	2028-2031	23,746,000	-		23,746,000	-	7,598,000	16,148,000	11,949,520	4,198,480
5	Binbrook Sanitary Sewage System	2023-2027	2,217,000	-		2,217,000	-	898,000	1,319,000	976,060	342,940
6	Hamilton Mountain Sanitary Sewage System	2023-2027	119,848,000	11,680,000		108,168,000	-	771,000	107,397,000	79,473,780	27,923,220
7	Hamilton Mountain Sanitary Sewage System	2028-2031	104,000	-		104,000	-	-	104,000	76,960	27,040
8	Stoney Creek Lower Sanitary Sewage System	2023-2027	86,313,000	8,000,000		78,313,000	235,700	532,000	77,545,300	57,383,522	20,161,778
9	City Wide Sanitary System	2023-2027	42,563,000	-		42,563,000	13,177,000	-	29,386,000	21,745,640	7,640,360
10	City Wide Sanitary System	2028-2031	36,831,000	-		36,831,000	10,455,000	-	26,376,000	19,518,240	6,857,760
11	Reduction in Development Charges for Local Servicing Cost (Non-Trunk)		(10,000,000)	-		(10,000,000)	-	-	(10,000,000)	(7,400,000)	(2,600,000)
12	Existing Debt Principal	2023	1,283,545	-		1,283,545	-		1,283,545	949,823	333,722
13	Existing Debt Interest (Discounted)	2023	118,416	-		118,416	-		118,416	87,628	30,788
14	Financing (Linear) (Interest Discounted)	2023-2051	39,466,332	-		39,466,332	-		39,466,332	29,205,086	10,261,246
15	Provisional Post Period Benefit Deduction		-	13,000,000		(13,000,000)	-		(13,000,000)	(9,620,000)	(3,380,000)
16	Reserve Fund Adjustment	Reserve	-	-		-	36,150,238		(36,150,238)	(26,751,176)	(9,399,062)
	<b>Total</b>		<b>369,396,294</b>	<b>32,680,000</b>	<b>-</b>	<b>336,716,294</b>	<b>60,017,938</b>	<b>10,158,000</b>	<b>266,540,356</b>	<b>197,239,863</b>	<b>69,300,492</b>





**Table 5-17**  
**City of Hamilton**  
**Infrastructure Cost Included in the Development Charges Calculation**  
**Wastewater Facilities**

Prj.No	Increased Service Needs Attributable to Anticipated Development  Urban Service Area Forecast Target	Timing (year)	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share  74%	Non- Residential Share  26%
	<b>Water Quality:</b>										
1	Wastewater Pumping Station	2023-2031	93,179,000	1,461,000		91,718,000	25,175,700	62,159,000	4,383,300	3,243,642	1,139,658
2a	Primary Clarifier - Primary Treatment (Phase 1) - Engineering Included	2023-2031	16,256,000	521,000		15,735,000	8,977,000	5,195,000	1,563,000	1,156,620	406,380
2b	Primary Clarifier - Primary Treatment (Phase 2 - Tanks) - Engineering Included	2023-2031	52,247,000	820,000		51,427,000	14,134,700	34,831,000	2,461,300	1,821,362	639,938
2c	Primary Clarifier - Other Costs (includes New/Expanded Laboratory/Admin Building)	2023-2031	11,858,000	1,569,000		10,289,000	5,582,700	-	4,706,300	3,482,662	1,223,638
4a	Tertiary Upgrades - New Secondary/Tertiary Treatment Plant (Phase 1)	2023-2031	159,170,000	2,257,000		156,913,000	85,410,300	64,732,000	6,770,700	5,010,318	1,760,382
5a	Chlorine Contact Tank and Outfall - Railway Re-Alignment	2023-2031	11,620,000	2,905,000		8,715,000	-	-	8,715,000	6,449,100	2,265,900
5b	Chlorine Contact Tank and Outfall - Secondary/Tertiary Chlorine contact Tank, Outfall and Red Hill Creek Upgrades	2023-2031	51,110,000	1,262,000		49,848,000	20,335,400	25,728,000	3,784,600	2,800,604	983,996
8a	Clean Harbour Project - Actual Costs of Engineering (Projects 1, 4a, 4b, 5, 13) Phase 1	2023-2031	47,542,000	1,751,000		45,791,000	40,539,100	-	5,251,900	3,886,406	1,365,494
8b	Clean Harbour Project - O/S Commitments of Engineering (Projects 1, 4a, 4b, 5, 13) Phase 1	2023-2031	6,789,000	250,000		6,539,000	5,789,000	-	750,000	555,000	195,000
8d	Plant Expansion - Engineering - Other Costs (includes Modular Office Building)	2023-2031	10,701,000	394,000		10,307,000	9,124,700	-	1,182,300	874,902	307,398



Table 5-17 (Cont'd)  
City of Hamilton  
Infrastructure Cost Included in the Development Charges Calculation  
Wastewater Facilities

Prj.No	Increased Service Needs Attributable to Anticipated Development  Urban Service Area Forecast Target	Timing (year)	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share  74%	Non- Residential Share  26%
11a	Biogas Digester - Biogas Upgrades	2023-2031	45,006,000	806,000		44,200,000	21,783,000	20,000,000	2,417,000	1,788,580	628,420
13a	Electrical System Upgrades - New Electrical and power systems - Phase 1	2023-2031	61,448,000	1,001,000		60,447,000	16,846,100	40,597,000	3,003,900	2,222,886	781,014
14	Collection System Upgrades	2023-2031	10,416,000	-		10,416,000	3,632,000	6,784,000	-	-	-
	<b>Plant Expansion:</b>										
4b-1	Tertiary Upgrades - Tertiary Treatment Plant & 3rd Plant (Phase 2)	2023-2031	230,877,000	57,719,000		173,158,000	-	-	173,158,000	128,136,920	45,021,080
4b-2	Tertiary Upgrades - Primary Effluent PS (Phase 2)	2023-2031	13,742,000	3,436,000		10,306,000	-	-	10,306,000	7,626,440	2,679,560
4b-3	Tertiary Upgrades - WUP Office Relocation (Phase 2)	2023-2031	5,193,000	1,298,000		3,895,000	-	-	3,895,000	2,882,300	1,012,700
4b-4	Tertiary Upgrades - Gas Sphere Relocation / Biogas (Phase 2)	2023-2031	3,939,000	985,000		2,954,000	-	-	2,954,000	2,185,960	768,040
8c	Plant Expansion - Future Engineering (Projects 4b, 5a, 6, 11b, 13b) Phase 2	2023-2031	62,478,000	11,463,000		51,015,000	16,626,800	-	34,388,200	25,447,268	8,940,932
13b	Electrical System Upgrades - New Electrical and power systems - Phase 2	2023-2031	5,295,000	1,324,000		3,971,000	-	-	3,971,000	2,938,540	1,032,460
	<b>Biosolids Management Facility:</b>										
6	Biogas Digester - New Waste Activated Sludge Thickening Facility (forms part of the Digester Upgrades)	2023-2031	8,981,000	-		8,981,000	-	-	8,981,000	6,645,940	2,335,060
11b	Biogas Digester - Digesters Upgrades	2023-2031	49,417,000	6,177,000		43,240,000	24,708,500	-	18,531,500	13,713,310	4,818,190



Table 5-17 (Cont'd)  
City of Hamilton  
Infrastructure Cost Included in the Development Charges Calculation  
Wastewater Facilities

Prj.No	Increased Service Needs Attributable to Anticipated Development  Urban Service Area Forecast Target	Timing (year)	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share  74%	Non- Residential Share  26%
12	Biosolids Management Facility - Biosolids Thermal Reduction Disposal Facility	2023-2031	99,440,000	4,010,000		95,430,000	69,099,100	14,300,000	12,030,900	8,902,866	3,128,034
15	Reserve Fund Adjustment	Reserve	-	-		-	134,565,699		(134,565,699)	(99,578,617)	(34,987,082)
	<b>Total</b>		<b>1,056,704,000</b>	<b>101,409,000</b>	<b>-</b>	<b>955,295,000</b>	<b>502,329,799</b>	<b>274,326,000</b>	<b>178,639,201</b>	<b>132,193,009</b>	<b>46,446,192</b>



## **5.4 Stormwater Capital Costs to Service Growth to the Servicing Target in the Combined and Separate Sewer System Areas**

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### **5.4.1 Stormwater Drainage and Control Services**

WSP Inc. (WSP) and Scheckenberger & Associates Ltd. (S&A) undertook an assessment of the needs for stormwater management within the serviced areas of the City. Appendix G provides the detailed assessment and allocation of works between existing benefit and growth.

The stormwater D.C. calculation is undertaken on an area-specific basis for the combined sewer system versus the separate sewer system. Certain stormwater works, such as on-site controls are only required in the combined sewer system, given that development of stormwater management ponds is not possible in these areas. This is in contrast to stormwater works in the separate sewer system area where stormwater management ponds are required for development to proceed. As such, the associated stormwater D.C. calculations for these two areas is undertaken on an area-specific basis.

Within the separate sewer system, WSP and S&A have identified \$567.65 million in works required. In addition, outstanding credits in the amount of \$34.90 million have been included in the calculation. Outstanding debt owed to the Ontario Land Corporation is included in the D.C. at an amount of \$1.68 million related to the separated sewer system. Existing debt in the amount of \$1.83 million, in addition to future financing costs of \$19.11 million have also been included in the calculations. The resulting gross cost within the separated sewer system area is \$625.17 million. Of this amount \$38.34 million has been identified as benefiting existing development and \$39.19 million is a benefit to growth beyond the service target forecast period. Furthermore, a deduction of \$150.16 million has been made related to works that are direct developer responsibility. In addition, an adjustment of \$2.58 million has been made to account for the existing reserve fund balance. These deductions result in a net amount of \$394.90 million attributable to growth over the forecast period.

Within the combined sewer system area, WSP and S&A have identified \$13.07 million in future capital works. In addition, \$820,000 of debt owed to the Ontario Land



Corporation has also been identified in the D.C. recoverable costs. Furthermore, future financing costs in the amount of \$560,000 have been included in the D.C. calculations. In addition, \$11.82 million has been included in the D.C. calculations in order to reflect the reserve fund deficit, resulting in a net D.C. recoverable cost of \$26.26 million.

The following is a summary of the gross and net recoverable costs for the separate versus combined system based on WSP and S&A's assessment and all other adjustments.

Table 5-18  
City of Hamilton  
Summary of Capital Costs for the Separate Sewer System Area

Separated Sewer System	Gross Cost (\$)	Net D.C. Recoverable Cost (\$)
Future Capital Works	567,646,990	339,957,490
Reserve Fund Adjustment	-	(2,578,740)
Provision for Stormwater Credits	34,900,003	34,900,003
Outstanding Debt to Ontario Land Corp.	1,676,719	1,676,719
Existing Debt	1,834,711	1,834,711
Future Financing Costs	19,113,145	19,113,145
<b>Total</b>	<b>625,171,568</b>	<b>394,903,328</b>

Table 5-19  
City of Hamilton  
Summary of Capital Costs for the Combined Sewer System Area

Combined Sewer System	Gross Cost (\$)	Net D.C. Recoverable Cost (\$)
Future Capital Works	13,067,900	13,067,900
Reserve Fund Adjustment	11,816,207	11,816,207
Outstanding Debt to Ontario Land Corp.	819,860	819,860
Future Financing Costs	555,277	555,277
<b>Total</b>	<b>26,259,244</b>	<b>26,259,244</b>

The costs for all stormwater services in the separated sewer system area except facilities are shared 73%/27% between residential and non-residential development, based on the benefiting lands associated with the stormwater management works over the service target forecast period.



on the benefiting lands associated with the stormwater management works over the service target forecast period.

For stormwater facilities within the separated system, the costs identified are attributable 100% to residential development. Non-residential development is required to provide facilities as part of the local service policy.

The costs for stormwater in the combined system are 100% attributed to residential development.





**Table 5-21**  
**City of Hamilton**  
**Infrastructure Cost Included in the Development Charges Calculation**  
**Stormwater Works (Excluding Facilities) – Separated Sewer System Area**

Prj. No.	Increased Service Needs Attributable to Anticipated Development  Separate Sewer System Service Area Forecast Target	Timing (year)	Gross Capital Cost Estimate (2023\$) - Without Allowance	Gross Capital Cost Estimate (2023\$) - With 15% Allowance	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
								Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 73%	Non-Residential Share 27%
1	Open Watercourses - Channel System Improvements - Residential (Category A)	2023-2031	27,831,290	32,005,990	7,594,600		24,411,390	-		24,411,390	17,820,315	6,591,075
2	Open Watercourses - Channel System Improvements - Non-Residential (Category A)	2023-2031	31,069,000	35,729,400	-		35,729,400	4,908,400		30,821,000	22,499,330	8,321,670
3	Off-Site Erosion Works (Category B)	2023-2031	36,516,000	41,993,400	-		41,993,400	20,106,600		21,886,800	15,977,364	5,909,436
4	Oversizing of Trunk Sewers and Culverts (Category D)	2023-2031	21,356,800	24,560,300	-		24,560,300	-	3,162,500	21,397,800	15,620,394	5,777,406
5	Culverts and Bridges not Previously Identified (Category E)	2023-2031	11,750,600	13,513,200	-		13,513,200	2,398,600		11,114,600	8,113,658	3,000,942
6	GRIDS-Related Open Watercourses	2023-2031	27,477,200	31,598,800	31,598,800		-	-		-	-	-
7	Existing Debt on Growth-Related Projects - Principal (Discounted)	2023-2033		1,417,604	-		1,417,604	-		1,417,604	1,034,851	382,753
8	Existing Debt on Growth-Related Projects - Interest (Discounted)	2023-2033		417,106	-		417,106	-		417,106	304,488	112,619
9	Outstanding Debt to Ontario Land Corporation	2023-2031		1,676,719	-		1,676,719	-		1,676,719	1,224,005	452,714
10	Future Financing Costs (Discounted)	2024-2044		19,113,145	-		19,113,145	-		19,113,145	13,952,596	5,160,549
11	Reserve Fund Adjustment	Reserve		-	-		-	876,973		(876,973)	(640,190)	(236,783)
	<b>Total</b>		<b>156,000,890</b>	<b>202,025,665</b>	<b>39,193,400</b>	<b>-</b>	<b>162,832,265</b>	<b>28,290,573</b>	<b>3,162,500</b>	<b>131,379,192</b>	<b>95,906,810</b>	<b>35,472,382</b>







## 5.5 Special Area Charge – Dundas/Waterdown

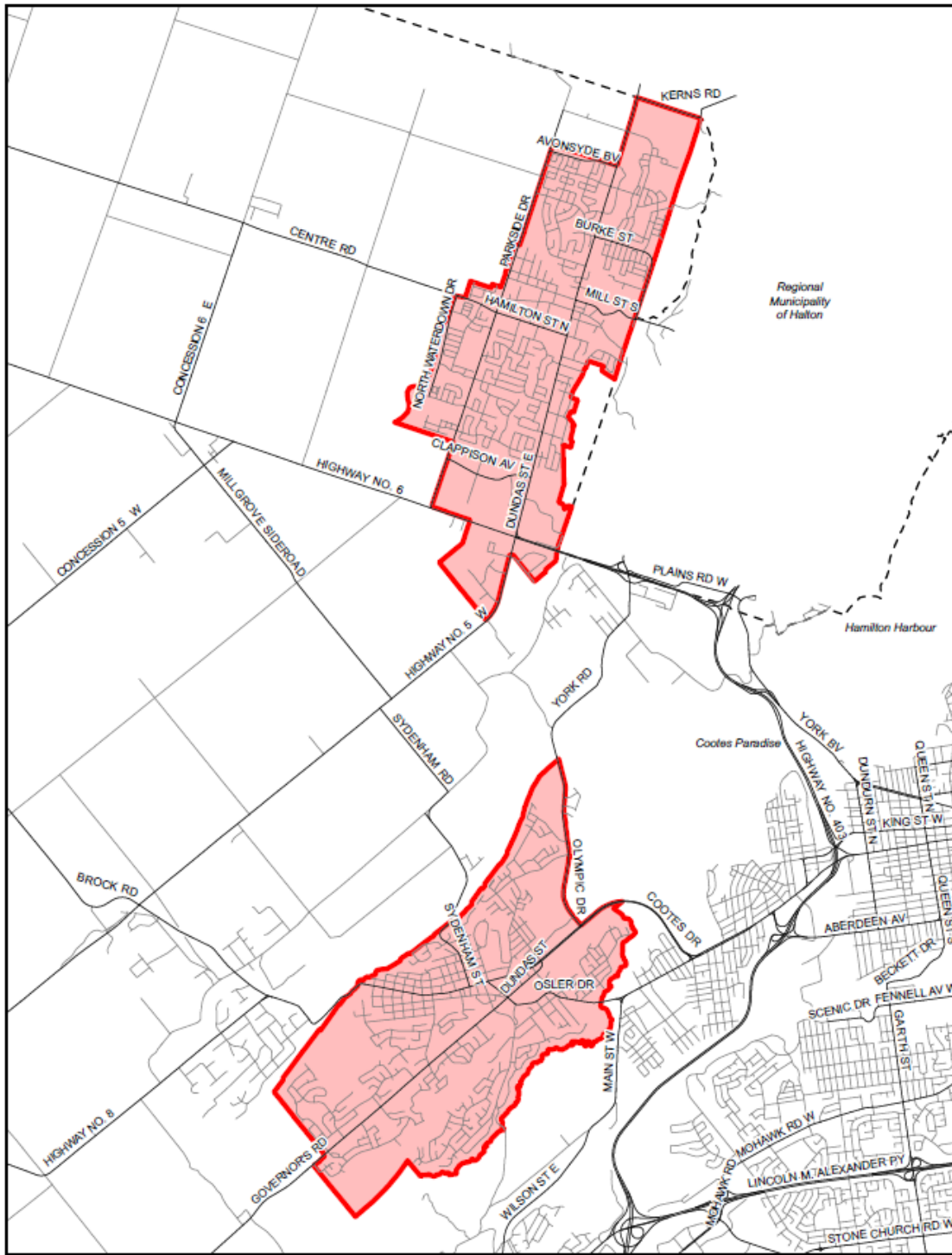
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There is currently one special area charge in effect for the Dundas/Waterdown area which provides for the specific recovery of works that were built by landowners and require recovery from development within the area. The agreement between the landowners and the City provides for interest to be calculated and recovered in conjunction with the original principal amount. The provisions of this agreement, along with the recalculation of the charge, is provided herein.

A financial agreement was entered into with landowners for the construction of wastewater services (Equalization Tank, diversion forcemain and sanitary sewers) which would benefit both Waterdown and Dundas (map of area is provided in Map 5-1). The total recoverable cost of the work was \$8,150,147. The interest rate calculation as provided for in the agreement was based on the prime commercial rate plus one percent (7.65% at the time of signing). The calculation was based on a 15-year term. In 2018, the City paid off the outstanding balance and has been cash-flowing this amount internally at a rate of 4%. It is anticipated the developments related to this charge will not be fully complete until 2031. As such, the calculations have been updated to include the outstanding balance and interest anticipated.



Map 5-1  
City of Hamilton  
Dundas/Waterdown Special Area Charge Map





The original calculation was based on 6,100 single detached equivalent (S.D.E.) units, of which collections have occurred for 4,755 S.D.E.s. Therefore, the remaining balance will be recovered from the remaining 1,345 S.D.E. units. Furthermore, the non-residential portion will be allocated on the same basis as the original charge, based on the projected non-residential growth remaining of 2.96 million sq.ft.

Based on information and calculations provided by City staff, the recalculated outstanding balance and interest owing is \$5.77 million. Utilizing these current figures, the special area charge is \$1,931 per S.D.E. and \$1.07 per sq.ft. of non-residential development, as presented in the following table:

Table 5-23  
City of Hamilton  
Dundas/Waterdown Special Area Charge Calculation

Description	Total	Residential	Non-Residential
Current Outstanding Balance	\$5,151,554	\$2,320,406	\$2,831,148
Interest to 2031	\$616,738	\$277,796	\$338,942
Total	\$5,768,292	\$2,598,202	\$3,170,090
Remaining SDE/sq.ft.		1,345	2,963,981
<b>Special Area Charge (as of 2023)</b>		<b>\$1,931</b>	<b>\$1.07</b>

As the residential charge is based on a single detached unit, the following charges for all unit types are provided based upon the P.P.U. relationship discussed in Appendix A.

Table 5-24  
City of Hamilton  
Summary of Special Area Charge for Dundas/Waterdown

Type of Development	Single Detached Equivalent based on P.P.U.	D.C. per Unit
Single/Semi-detached units	1.00	\$1,931
Other Multiples	0.75	\$1,441
Apartments - 2 bedrooms or more	0.61	\$1,184
Apartments - less than 2 bedrooms	0.38	\$734
Residential Facility Dwelling Units	0.31	\$601



# Chapter 6

## D.C. Calculations



## 6. D.C. Calculations

Table 6-1 calculates the proposed area-specific D.C.s to be imposed for stormwater within the combined sewer system area, and Table 6-2 calculates the area-specific stormwater charge within the separated sewer system area, both based on an urban service target horizon. Table 6-3 calculates the proposed D.C.s to be imposed for water and wastewater services, based on an urban service target forecast period. Table 6-4 calculates the proposed uniform D.C. to be imposed on anticipated development in the City for city-wide services over a service target planning horizon. Table 6-5 calculates the proposed uniform D.C.s to be imposed on anticipated development in the City for city-wide services over a 10-year planning horizon.

The calculation for residential development is generated on a per capita basis and is based upon five forms of housing types (singles and semi-detached, apartments – 2 bedrooms+, apartments – bachelor and 1 bedroom, all other multiples, and residential facilities). The non-residential D.C. has been calculated on a per sq.ft. of G.F.A. basis for all types of non-residential development (i.e., industrial, commercial, and institutional).

The D.C.-eligible costs for each service component were developed in Chapter 5 for all City services, based on their proposed capital programs.

For the residential calculations, the total cost is divided by the “gross” (new resident) population to determine the per capita amount. The D.C.-eligible cost calculations set out in Chapter 5 are based on the net anticipated population increase (i.e., the forecast new unit population less the anticipated decline in existing units). The cost per capita is then multiplied by the average occupancy of the new units (see Appendix A, Schedule 7) to calculate the charge in Tables 6-1 to 6-5.

With respect to non-residential development, the total costs in the uniform charge allocated to non-residential development, based on need for service, have been divided by the anticipated development over the planning period to calculate a cost per sq.ft. of G.F.A.

Table 6-6 summarizes the total D.C. that is applicable for all municipal services and Table 6-7 summarizes the gross capital expenditures and sources of revenue for works to be undertaken during the life of the by-laws.



The area-specific D.C. calculations for Dundas/Waterdown have been provided in Chapter 5, section 5.5.



Table 6-1  
 City of Hamilton  
 Development Charge Calculation  
 Area-Specific Services – Stormwater Services (Combined Sewer System Area)  
 Service Target Forecast (Combined Sewer System Area)

SERVICE/CLASS	2023\$ D.C.-Eligible Cost		2023\$ D.C.-Eligible Cost	
	Residential	Non-Residential	S.D.U.	per sq.ft.
	\$	\$	\$	\$
1. <u>Stormwater Drainage and Control Services</u>				
1.1 Stormwater Facilities	26,259,244	-	9,553	-
<b>TOTAL</b>	<b>\$26,259,244</b>	<b>\$0</b>	<b>\$9,553</b>	<b>-</b>
D.C.-Eligible Capital Cost	\$26,259,244	\$0		
Service Target Forecast (Combined Sewer Area) Gross Population/G.F.A. Growth (sq.ft.)	9,711	2,788,200		
<b>Cost Per Capita/Non-Residential GFA (sq.ft.)</b>	<b>\$2,704.07</b>	<b>\$0.00</b>		
<b><u>By Residential Unit Type</u></b>				
	<b><u>P.P.U.</u></b>			
Single and Semi-Detached Dwelling	3.533	\$9,553		
Other Multiples	2.637	\$7,131		
Apartments - 2 Bedrooms+	2.166	\$5,857		
Apartments - Bachelor and 1 Bedroom	1.342	\$3,629		
Residential Facility	1.100	\$2,974		





Table 6-2  
City of Hamilton  
Area-Specific Services – Stormwater Services (Separated Sewer System Area)  
Service Target Forecast (Separated Sewer System Area)

SERVICE/CLASS	2023\$ D.C.-Eligible Cost		2023\$ D.C.-Eligible Cost	
	Residential	Non-Residential	S.D.U.	per sq.ft.
	\$	\$	\$	\$
2. <u>Stormwater Drainage and Control Services</u>				
2.1 Channels and drainage	95,906,810	35,472,382	6,068	4.75
2.2 Residential ponds	276,175,187	-	17,473	-
	372,081,997	35,472,382	23,541	4.75
<b>TOTAL</b>	<b>\$372,081,997</b>	<b>35,472,382</b>	<b>\$23,541</b>	<b>4.75</b>
D.C.-Eligible Capital Cost	\$372,081,997	\$35,472,382		
Service Target Forecast (Separated Sewer Area) Gross Population/G.F.A. Growth (sq.ft.)	55,841	7,470,100		
<b>Cost Per Capita/Non-Residential GFA (sq.ft.)</b>	<b>\$6,663.24</b>	<b>\$4.75</b>		
<b><u>By Residential Unit Type</u></b>				
	<b><u>P.P.U.</u></b>			
Single and Semi-Detached Dwelling	3.533	\$23,541		
Other Multiples	2.637	\$17,571		
Apartments - 2 Bedrooms+	2.166	\$14,433		
Apartments - Bachelor and 1 Bedroom	1.342	\$8,942		
Residential Facility	1.100	\$7,330		



Table 6-3  
City of Hamilton  
Development Charge Calculation  
Area-Specific Services – Water and Wastewater Services (Urban Areas)  
Service Target Forecast (Urban Areas)

SERVICE/CLASS	2023\$ D.C.-Eligible Cost		2023\$ D.C.-Eligible Cost	
	Residential	Non-Residential	S.D.U.	per sq.ft.
3. <u>Wastewater Services</u>				
3.1 Wastewater facilities	132,193,009	46,446,192	7,125	4.53
3.2 Wastewater linear services	197,239,863	69,300,492	10,630	6.75
	329,432,872	115,746,685	17,755	11.28
4. <u>Water Services</u>				
4.1 Facilities, storage, and distribution systems	127,204,206	44,693,370	6,856	4.36
	127,204,206	44,693,370	6,856	4.36
<b>TOTAL</b>	<b>\$456,637,078</b>	<b>\$160,440,054</b>	<b>\$24,611</b>	<b>\$15.64</b>
D.C.-Eligible Capital Cost	\$456,637,078	\$160,440,054		
Service Target Forecast (Urban) Gross Population/G.F.A. Growth (sq.ft.)	65,552	10,258,200		
<b>Cost Per Capita/Non-Residential GFA (sq.ft.)</b>	<b>\$6,966.03</b>	<b>\$15.64</b>		
<b><u>By Residential Unit Type</u></b>	<b><u>P.P.U.</u></b>			
Single and Semi-Detached Dwelling	3.533	\$24,611		
Other Multiples	2.637	\$18,369		
Apartments - 2 Bedrooms+	2.166	\$15,088		
Apartments - Bachelor and 1 Bedroom	1.342	\$9,348		
Residential Facility	1.100	\$7,663		



Table 6-4  
City of Hamilton  
Development Charge Calculation  
City-Wide Services  
Service Target Forecast

SERVICE/CLASS	2023\$ D.C.-Eligible Cost		2023\$ D.C.-Eligible Cost	
	Residential	Non-Residential	S.D.U.	per sq.ft.
5. <u>Services Related to a Highway</u>	\$	\$	\$	\$
5.1 Roads and Related	339,729,080	138,097,903	18,103	13.31
	339,729,080	138,097,903	18,103	13.31
<b>TOTAL</b>	<b>\$339,729,080</b>	<b>\$138,097,903</b>	<b>\$18,103</b>	<b>\$13.31</b>
D.C.-Eligible Capital Cost	\$339,729,080	\$138,097,903		
Service Target Forecast Gross Population/G.F.A. Growth (sq.ft.)	66,301	10,375,800		
<b>Cost Per Capita/Non-Residential G.F.A. (sq.ft.)</b>	<b>\$5,124.04</b>	<b>\$13.31</b>		
<b><u>By Residential Unit Type</u></b>	<b><u>P.P.U.</u></b>			
Single and Semi-Detached Dwelling	3.533	\$18,103		
Other Multiples	2.637	\$13,512		
Apartments - 2 Bedrooms+	2.166	\$11,099		
Apartments - Bachelor and 1 Bedroom	1.342	\$6,876		
Residential Facility	1.100	\$5,636		



Table 6-5  
City of Hamilton  
Development Charge Calculation  
City-Wide Services  
2023 to 2032

SERVICE/CLASS	2023\$ D.C.-Eligible Cost		2023\$ D.C.-Eligible Cost	
	Residential	Non-Residential	S.D.U.	per sq.ft.
	\$	\$	\$	\$
6. <u>Public Works (Facilities and Fleet)</u>				
6.1 Facilities, vehicles and equipment	33,879,686	12,530,843	1,335	0.80
7. <u>Fire Protection Services</u>				
7.1 Fire facilities, vehicles and equipment	29,209,123	10,803,374	1,151	0.69
8. <u>Policing Services</u>				
8.1 Facilities, vehicles and equipment, small equipment and gear	25,828,282	9,552,926	1,018	0.61
9. <u>Transit Services</u>				
9.1 Transit facilities, vehicles and other infrastructure	40,623,771	15,025,231	1,601	0.96
10. <u>Parks and Recreation</u>				
10.1 Park development, amenities, trails, equipment and recreation facilities	280,692,246	14,773,276	11,065	0.95
11. <u>Library Services</u>				
11.1 Library facilities, materials and vehicles	52,293,089	2,752,268	2,061	0.18
12. <u>Long-term Care Services</u>				
12.1 Facilities	5,848,418	649,824	231	0.04



Table 6-5 (Cont'd)  
City of Hamilton  
Development Charge Calculation  
City-Wide Services  
2023 to 2032

SERVICE/CLASS	2023\$ D.C.-Eligible Cost		2023\$ D.C.-Eligible Cost	
	Residential	Non-Residential	S.D.U.	per sq.ft.
13. <u>Child Care and Early Years Programs</u>				
13.1 Facilities	-	-	-	-
14. <u>Public Health Services</u>				
14.1 Facilities, vehicles and equipment	1,057,946	117,550	42	0.01
15. <u>Provincial Offences Act Services including By-Law Enforcement</u>				
15.1 Facilities	1,315,598	486,591	52	0.03
16. <u>Ambulance</u>				
16.1 Ambulance facilities, vehicles and equipment	8,246,401	916,267	325	0.06
17. <u>Waste Diversion</u>				
17.1 Waste diversion facilities, vehicles, equipment and other	8,773,831	461,781	346	0.03
<b>TOTAL</b>	<b>\$487,768,391</b>	<b>\$68,069,930</b>	<b>\$19,227</b>	<b>\$4.36</b>
D.C.-Eligible Capital Cost	\$487,768,391	\$68,069,930		
10-Year Gross Population/G.F.A. Growth (sq.ft.)	89,627	15,617,600		
<b>Cost Per Capita/Non-Residential G.F.A. (sq.ft.)</b>	<b>\$5,442.20</b>	<b>\$4.36</b>		
<b>By Residential Unit Type</b>				
	<b>P.P.U.</b>			
Single and Semi-Detached Dwelling	3.533	\$19,227		
Other Multiples	2.637	\$14,351		
Apartments - 2 Bedrooms+	2.166	\$11,788		
Apartments - Bachelor and 1 Bedroom	1.342	\$7,303		
Residential Facility	1.100	\$5,986		



Table 6-6  
City of Hamilton  
Development Charge Calculation  
Total All Services

	2023\$ D.C.-Eligible Cost		2023\$ D.C.-Eligible Cost	
	Residential	Non-Residential	S.D.U.	per sq.ft.
	\$	\$	\$	\$
<b>Combined Sewer System Area Services/Classes - Service Target Forecast</b>	26,259,244	-	9,553	-
<b>Separated Sewer System Area Services/Classes - Service Target Forecast</b>	359,430,946	35,472,382	22,741	4.75
<b>Urban-wide Services/Classes - Service Target Forecast</b>	456,637,078	160,440,054	24,611	15.64
<b>City-wide Services/Classes - Service Target Forecast</b>	339,729,080	138,097,903	18,103	\$13.31
<b>City-wide Services/Classes 10 Year</b>	487,768,391	68,069,930	19,227	\$4.36
<b>TOTAL COMBINED SEWER SYSTEM AREA</b>	<b>\$1,310,393,794</b>	<b>\$366,607,888</b>	<b>\$71,494</b>	<b>\$33.31</b>
<b>TOTAL SEPARATED SEWER SYSTEM AREA</b>	<b>\$1,643,565,496</b>	<b>\$402,080,269</b>	<b>\$84,682</b>	<b>\$38.06</b>



**Table 6-7**  
**City of Hamilton**  
**Gross Expenditures and Sources of Revenue Summary for Costs to be Incurred over the Life of the By-laws**

Service/Class	Total Gross Cost	Sources of Financing					
		Tax Base or Other Non-D.C. Source			Post D.C. Period Benefit	D.C. Reserve Fund	
		Other Deductions	Benefit to Existing	Other Funding		Residential	Non-Residential
	\$	\$	\$	\$	\$	\$	
1. Stormwater Drainage and Control Services (Combined Sewer System)							
1.1 Stormwater Facilities	13,067,900	0	0	0	0	13,067,900	0
2. Stormwater Drainage and Control Services (Separated Sewer System)							
2.1 Channels and drainage	179,401,090	0	27,413,600	3,162,500	39,193,400	80,031,061	29,600,529
2.2 Residential ponds	388,245,900	0	10,921,600	146,998,400	0	230,325,900	0
3. Wastewater Services							
3.1 Wastewater facilities	1,056,704,000	0	367,764,100	274,326,000	101,409,000	231,771,626	81,433,274
3.2 Wastewater linear services	338,528,000	0	23,867,700	10,158,000	19,680,000	210,768,502	74,053,798
4. Water Services							
4.1 Facilities, storage, and distribution systems	380,739,500	0	52,267,250	9,544,000	53,326,000	196,545,665	69,056,585
5. Services Related to a Highway							
5.1 Roads and Related	1,050,006,370	139,250,202	237,783,280	0	44,800,180	458,566,077	169,606,631
6. Public Works (Facilities and Fleet)							
6.1 Facilities, vehicles and equipment	57,000,000	0	0	0	0	41,610,000	15,390,000
7. Fire Protection Services							
7.1 Fire facilities, vehicles and equipment	79,720,533	0	9,270,500	0	29,871,933	29,622,013	10,956,087
8. Policing Services							
8.1 Facilities, vehicles and equipment, small equipment and gear	41,742,300	0	3,587,500	0	9,127,800	21,189,710	7,837,290
9. Transit Services							
9.1 Transit facilities, vehicles and other infrastructure	474,786,600	0	232,129,100	183,000,000	28,391,300	22,824,326	8,441,874



Table 6-7 (Cont'd)  
City of Hamilton

Gross Expenditure and Sources of Revenue Summary for Costs to be Incurred over the Life of the By-laws

Service/Class	Total Gross Cost	Sources of Financing					
		Tax Base or Other Non-D.C. Source			Post D.C. Period Benefit	D.C. Reserve Fund	
		Other Deductions	Benefit to Existing	Other Funding		Residential	Non-Residential
10. Parks and Recreation 10.1 Park development, amenities, trails, equipment and recreation facilities	384,828,295	0	72,554,573	0	21,958,614	275,799,354	14,515,755
11. Library Services 11.1 Library facilities, materials and vehicles	117,582,900	0	42,635,300	0	19,682,600	52,501,750	2,763,250
12. Long-term Care Services 12.1 Facilities	81,000,000	0	62,090,000	4,740,000	0	12,753,000	1,417,000
13. Child Care and Early Years Programs 13.1 Facilities	0	0	0	0	0	0	0
14. Public Health Services 14.1 Facilities, vehicles and equipment	2,100,000	0	0	0	0	1,890,000	210,000
15. Provincial Offences Act Services including By-Law Enforcement 15.1 Facilities	0	0	0	0	0	0	0
16. Ambulance 16.1 Ambulance facilities, vehicles and equipment	29,290,000	0	9,000,000	0	11,880,000	7,569,000	841,000
17. Waste Diversion 17.1 Waste diversion facilities, vehicles, equipment and other	39,028,000	14,010,200	11,010,500	0	0	13,306,935	700,365
<b>Total Expenditures &amp; Revenues</b>	<b>\$4,713,771,389</b>	<b>\$153,260,402</b>	<b>\$1,162,295,003</b>	<b>\$631,928,900</b>	<b>\$379,320,827</b>	<b>\$1,900,142,818</b>	<b>\$486,823,439</b>





# Chapter 7

## D.C. Policy Recommendations and D.C. By-law Rules



## 7. D.C. Policy Recommendations and D.C. By-law Rules

### 7.1 Introduction

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Subsection 5 (1) 9 of the D.C.A. states that rules must be developed:

“to determine if a development charge is payable in any particular case and to determine the amount of the charge, subject to the limitations set out in subsection (6).”

Paragraph 10 of the section goes on to state that the rules may provide for exemptions, phasing in and/or indexing of D.C.s.

Subsection 5 (6) of the D.C.A. establishes the following restrictions on the rules:

- the total of all D.C.s that would be imposed on anticipated development must not exceed the capital costs determined under subsection 5 (1) 2-7 for all services involved;
- if the rules expressly identify a type of development, they must not provide for it to pay D.C.s that exceed the capital costs that arise from the increase in the need for service for that type of development; however, this requirement does not relate to any particular development; and
- if the rules provide for a type of development to have a lower D.C. than is allowed, the rules for determining D.C.s may not provide for any resulting shortfall to be made up via other development.

With respect to “the rules,” section 6 states that a D.C. by-law must expressly address the matters referred to above re subsection 5 (1) paragraphs 9 and 10, as well as how the rules apply to the redevelopment of land.

The rules provided are based on the City’s existing policies; with some modifications and consideration for the changes to the D.C.A. resulting from Bills 108, 197, 213 and 23.



## 7.2 D.C. By-law Structure

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### It is recommended that:

- The City use a uniform City-wide D.C. calculation for all municipal-wide services, except water, wastewater, and stormwater services and the works included in the Dundas/Waterdown special area charge;
- D.C.s for water and wastewater services be imposed on the urban service areas of the City;
- D.C.s for stormwater services be imposed on an area-specific basis for the combined sewer system area versus the separated sewer system area;
- D.C.s for wastewater facilities be imposed on developments outside the urban service areas connecting to the municipal wastewater system;
- The Dundas/Waterdown area-specific D.C.s continue; and
- Separate D.C. by-laws be used for each service.

## 7.3 D.C. By-law Rules

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The following subsections set out the recommended rules governing the calculation, payment and collection of D.C.s in accordance with section 6 of the D.C.A.

### It is recommended that the following sections provide the basis for the D.C.s.:

#### ***7.3.1 Payment in any Particular Case***

In accordance with the D.C.A., subsection 2 (2), a D.C. be calculated, payable, and collected where the development requires one or more of the following:

- “(a) the passing of a zoning by-law (or of an amendment to a zoning by-law under section 34 of the *Planning Act*,
- (b) the approval of a minor variance under section 45 of the *Planning Act*,
- (c) a conveyance of land to which a by-law passed under subsection 50 (7) of the *Planning Act* applies;
- (d) the approval of a plan of subdivision under section 51 of the *Planning Act*



- (e) a consent under section 53 of the *Planning Act*;
- (f) the approval of a description under section 9 of the *Condominium Act, 1998*; or
- (g) the issuing of a permit under the *Building Code Act, 1992* in relation to a building or structure.”

### **7.3.2 Determination of the Amount of the Charge**

The following conventions be adopted:

- 1) Costs allocated to residential uses will be assigned to different types of residential units based on the average occupancy for each housing type constructed during the previous decade. Costs allocated to non-residential uses will be assigned based on the amount of square feet of G.F.A. constructed for eligible uses (i.e., industrial, commercial, and institutional).
- 2) Costs allocated to residential and non-residential uses are based upon a number of conventions, as may be suited to each municipal circumstance, e.g.
  - For parks and recreation, library, and waste diversion services a 5% non-residential attribution has been made to recognize use by the non-residential sector;
  - For public works, policing, fire protection, transit, and P.O.A. services including by-law enforcement, a 73% residential/27% non-residential attribution has been made based on a population versus employment growth ratio over the 10-year forecast period;
  - For long-term care, public health, and ambulance services, a 90% residential/10% non-residential allocation has been made to recognize use by the non-residential sector;
  - For services related to a highway, a 73% residential/27% non-residential attribution has been made based on the population versus employment growth ratio over the service target forecast period;
  - For stormwater (excluding facilities) within the separated sewer system, a 73% residential/27% non-residential allocation has been made based on benefiting lands associated with the stormwater management works over the service target forecast period;



- For stormwater facilities within the separated and combined sewer system areas, the costs identified are 100% attributable to residential development since non-residential development is required to provide facilities as part of the local service policy; and
- For water and wastewater services, a 74% residential/26% non-residential allocation has been made based on population versus employment growth over the service target forecast period in the urban area.

### **7.3.3 Application to Redevelopment of Land (Demolition and Conversion)**

If a development involves the demolition and replacement of a building or structure on the same site (within five years prior to the date of payment of D.C.s in regard to such redevelopment was, or is to be demolished, in whole or in part) or the conversion from one principal use to another, the developer shall be allowed a credit equivalent to:

- 1) the number of dwelling units demolished/converted multiplied by the applicable residential D.C. in place at the time the D.C. is payable; and/or
- 2) the G.F.A. of the building demolished/converted multiplied by the current non-residential D.C. in place at the time the D.C. is payable;

provided that such amounts shall not exceed, in total, the amount of the D.C.s otherwise payable with respect to the redevelopment.

### **7.3.4 Exemptions (full or partial)**

1. Statutory exemptions:
  - Industrial building additions of up to and including 50% of the existing G.F.A. (defined in O. Reg. 82/98, section 1) of the building; for industrial building additions that exceed 50% of the existing G.F.A., only the portion of the addition in excess of 50% is subject to D.C.s (subsection 4 (3) of the D.C.A.);
  - Buildings or structures owned by and used for the purposes of any municipality, local board, or Board of Education (section 3);
  - The addition of up to 2 apartments in an existing or new detached, semi-detached, or rowhouse (including in an ancillary structure);



- One additional unit or 1% of existing units in an existing rental residential building;
- A university in Ontario that receives direct, regular, and ongoing operating funding from the Government of Ontario;
- Affordable units and attainable units (to be in force at a later date);
- Affordable inclusionary zoning units;
- Non-profit housing; and
- Discount for rental housing units based on bedroom size (i.e., three or more bedrooms – 25% reduction, two bedrooms – 20% reduction, and all others – 15% reduction).

The following non-statutory exemption recommendations were developed through Exemptions and Policies – 2024 Development Charges Background Study and By-law Update (FCS23103). These exemption policies are based on the recommendations approved by the Development Charges Stakeholders Sub-Committee on November 9, 2023:

## 2. Recommended Non-statutory exemptions:

- Adaptive reuse of a protected heritage property;
- Agricultural uses;
- Places of worship;
- A building, or part thereof, used for parking but excluding a building or part thereof used for commercial parking; and
- Temporary buildings or structures.

## 3. Recommended Partial non-statutory exemptions

- A 40% downtown CIPA exemption for all non-residential development (standalone and mixed-use) and 70% downtown CIPA exemption for standalone major office developments (Class A) greater than 20,000 sq.ft. G.F.A. This exemption is limited to building height restrictions set by Council. Note, this partial exemption shall only apply if the amount of the exemption is greater than the exemption/reduction provided through any other non-statutory exemptions;
- A 37% discount for Production Studios and Artist Studios;



- Non-industrial developments within a CIPA or BIA and for office development (excluding medical clinics) is to be phased as follows:
  - First 5,000 sq.ft.: 50% of charge
  - Second 5,000 sq.ft.: 75% of charge
  - 10,000+ sq.ft.: 100% of charge
- The initial 5,000 sq.ft. of G.F.A. of an office development expansion (medical clinics excluded) are D.C. exempt;
- Redevelopment of an existing residential development for the purposes of creating residential facilities within the existing building envelope is exempt from 50% of the D.C.

Subsequent to Council's approval of these recommendations, public open houses were undertaken where feedback was received from the development community related to the industrial and downtown C.I.P.A. exemptions. Based on further review of the proforma/market feasibility analyses, the following revisions are recommended to the proposed discretionary exemptions:

- Downtown C.I.P.A. Exemption:
  - Maintain 40% C.I.P.A. exemption for all non-residential development (standalone and mixed-use) and 70% C.I.P.A. exemption for standalone major office developments (Class A) greater than 20,000 sq.ft. gross floor area; and
  - Reduce D.C. exemption of 40% for residential development to 20%. Thereafter, reduce exemption amount by 5% every year until phased out entirely in five years.
- Industrial Reduced Rate:
  - 37% discount to apply only to industrial developments with primary economic activity identified as manufacturing (employment North American Industry Classification System (N.A.I.C.S.) code 31-33) as well as for production and artist studios.
- Industrial Building Expansion (Detached Building):
  - Modify the exemption so that it applies only to industrial businesses with primary economic activity identified as manufacturing (employment N.A.I.C.S. code 31-33).



Further exemptions and/or discounts are being considered by Council through the public process.

### **7.3.5 Phasing in**

As required by Bill 23, the calculated D.C. will be phased-in over a five-year period as follows:

- Year 1 – 80% of the maximum charge;
- Year 2 – 85% of the maximum charge;
- Year 3 – 90% of the maximum charge;
- Year 4 – 95% of the maximum charge; and
- Year 5 to expiry – 100% of the maximum charge.

### **7.3.6 Transition Policy**

Where Section 26.2 of the D.C.A. does not apply, the D.C. rates payable are the rates in effect on the date a complete building permit application is received and accepted by the City's Chief Building Official, provided that the permit is issued within six months of the effective date of the first D.C. rate increase following said building permit application.

### **7.3.7 Deferral Policies**

The following deferral policies are proposed to continue:

- Environmental, Remediation, and Site Enhancement (ERASE) Deferral Agreement Policy: if a development has been approved for an ERASE Redevelopment Grant, the General Manager of Finance and Corporate Services may authorize a D.C. deferral agreement, without interest up to the date on which the final payment of the grant will be made;
- Public Hospitals Deferral Policy: Council may enter into an agreement with a hospital to allow the payment of D.C.s over a term of up to 10 years, including the payment of interest;
- Post-Secondary Deferral Policy: Council may enter into an agreement with a university or post-secondary school for the payment of D.C.s over a term of up to 30 years, including the payment of interest; and





- Non-Residential Development, Mixed Use Development, Residential Facility, Lodging House or Apartment Dwelling Deferral Policy: an agreement may be entered into for the payment of D.C.s for an initial term of up to five years, including the payment of interest. This initial term may be extended by up to two years.

### **7.3.8 Timing of Collection**

The D.C.s for all services and classes are payable upon issuance of a building permit for each dwelling unit, building, or structure, subject to early or late payment agreements entered into by the City and an owner under section 27 of the D.C.A.

Rental housing and institutional developments pay D.C.s in six equal annual payments commencing at occupancy. Moreover, the D.C. amount for all developments occurring within two years of a Site Plan or Zoning By-law Amendment planning approval (for applications submitted after January 1, 2020), shall be determined based on the D.C. in effect on the day of the applicable Site Plan or Zoning By-law Amendment application.

Instalment payments and payments determined at the time of Site Plan or Zoning By-law Amendment application are subject to annual interest charges. The maximum interest rate the City can impose is the average prime rate plus 1%.

### **7.3.9 Indexing**

Indexing of the D.C.s shall be implemented on a mandatory basis annually commencing on June 1, 2024, and each June 1<sup>st</sup> thereafter, in accordance with the Statistics Canada Quarterly, Non-Residential Building Construction Price Index (Table 18-10-0276-02)<sup>[1]</sup> for the most recent year-over-year period.

### **7.3.10 The Applicable Areas**

The charges developed herein provide for varying charges within the City, as follows:

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[1] O. Reg. 82/98 referenced “The Statistics Canada Quarterly, Construction Price Statistics, catalogue number 62-007” as the index source. Since implementation, Statistics Canada has modified this index twice and the above-noted index is the most current. The draft by-law provided herein refers to O. Reg. 82/98 to ensure traceability should this index continue to be modified over time.



- All municipal-wide services – the full residential and non-residential charge will be imposed on all lands within the City;
- Wastewater treatment – the full residential and non-residential charge will be imposed anywhere municipal services are provided or have been required to be provided through the local service policy;
- Water distribution and wastewater linear – the full residential and non-residential charge will be imposed based on lands within the Urban area and includes any lands added to the Urban Area as a result of any amendment to the Urban Hamilton Official Plan expanding the Urban Area;
- Stormwater – urban area-specific charges will be imposed based on the combined sewer system and the separated sewer system areas; and
- Dundas/Waterdown – area-specific charges are applicable in addition to City-wide and urban services.

## 7.4 Other D.C. By-law Provisions

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It is recommended that:

### 7.4.1 *Categories of Services for Reserve Fund and Credit Purposes*

The City's D.C. collections are reserved in 20 separate reserve funds:

- Services related to a highway;
- Transit services;
- Public works services;
- Fire protection services;
- Policing services;
- Outdoor recreation services;
- Indoor recreation services;
- Library services;
- Long-term care services;
- Child care and early years programs;
- P.O.A. services including by-law enforcement;
- Public health services;
- Ambulance services;
- Waste diversion services;



- Water services;
- Wastewater facilities;
- Wastewater linear services;
- Stormwater combined system;
- Stormwater separated system; and
- Dundas/Waterdown special area charge.

It is recommended that the City combine the reserve funds for indoor and outdoor recreation into one reserve fund for parks and recreation.

Appendix D outlines the reserve fund policies that the City is required to follow as per the D.C.A.

#### ***7.4.2 By-law In-force Date***

A by-law under the D.C.A. comes into force on the day after which the by-law is passed by Council or the day specified in the by-law, whichever is later. The recommended in-force date of the by-laws is June 1, 2024.

#### ***7.4.3 Minimum Interest Rate Paid on Refunds and Charged for Inter-Reserve Fund Borrowing***

The minimum interest rate is the Bank of Canada rate on the day on which the by-law comes into force (as per section 11 of O. Reg. 82/98).

#### ***7.4.4 Area Rating***

The D.C.A. required that Council must consider the use of area-specific charges:

1. Section 2 (9) of the D.C.A. now requires a municipality to implement area-specific D.C.s for either specific services which are prescribed and/or for specific municipalities which are to be regulated (note that at this time, no municipalities or services are prescribed by the regulations).
2. Section 10 (2) c.1 of the D.C.A. requires that “the development charges background study shall include consideration of the use of more than one development charge by-law to reflect different needs for services in different areas.”



In regard to the first item, there are no services or specific municipalities identified in the regulations which must be area rated. The second item requires Council to consider the use of area rating.

At present, the City's by-law provides for water and wastewater services on an urban area basis and stormwater services on a combined versus separated sewer system area basis. All other City services are recovered based on a uniform, City-wide basis. There have been several reasons why area rating has not been imposed on these services, including:

1. All City services, with the exception of water, wastewater, stormwater, and transit, require that the average historical 15-year service standard be calculated. This average service standard, multiplied by growth in the City, establishes an upper ceiling on the amount of funds that can be collected from all developing landowners. Section 4 (4) of O. Reg. 82/98 provides that "if a development charge by-law applies to a part of the municipality, the level of service and average level of service cannot exceed that which would be determined if the by-law applied to the whole municipality." Put in layperson's terms, the average service standard multiplied by the growth within the specific area would establish an area-specific ceiling that would significantly reduce the total revenue recoverable for the City, hence potentially resulting in D.C. revenue shortfalls and impacts on property taxes.
2. Extending on item 1, attempting to impose an area charge potentially causes equity issues in transitioning from a City-wide approach to an area-specific approach. For example, if all services were now built (and funded) within Area A (which is 75% built out) and this was funded with some revenues from Areas B and C, moving to an area-rating approach would see Area A contribute no funds to the costs of services in Areas B and C. The D.C.s would be lower in Area A (as all services are now funded) and higher in Areas B and C. As well, funding shortfalls may then potentially encourage the municipality to provide less services to Areas B and C due to reduced revenue.
3. Many services provided (roads, parks, recreation facilities, library, etc.) are not restricted to one specific area and are often used by all residents. For example, arenas located in different parts of the City will be used by residents from all areas depending on the programming of the facility (i.e., a public skate is



available each night, but at a different arena; hence usage of any one facility at any given time is based on programming availability).

For the reasons noted above, it is recommended that Council calculate the charges on a uniform City-wide basis for all services/classes of services other than water, wastewater and stormwater. It is recommended that the charges for water and wastewater services be imposed on an urban area basis, whereas the stormwater charge be imposed on an area-specific basis for the combined versus separated sewer system areas.

It is recommended that the City continue the special area charge for the Dundas/Waterdown area that has been in effect since amalgamation.

## 7.5 Other Recommendations

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### **It is recommended that Council:**

“Whenever appropriate, request that grants, subsidies and other contributions be clearly designated by the donor as being to the benefit of existing development or new development, as applicable;”

“Adopt the assumptions contained herein as an ‘anticipation’ with respect to capital grants, subsidies and other contributions;”

“Continue the D.C. approach to calculate the charges on a uniform City-wide basis for all services, except water, wastewater and stormwater and on an urban-area basis for water and wastewater and on an area-specific basis for the combined versus separated sewer system areas for stormwater services;”

“Impose the D.C. for wastewater treatment services on developments outside the urban service areas which connect to the municipal wastewater system;”

“Continue the area-specific D.C. for Dundas/Waterdown;”

“Approve the capital project listing set out in Chapter 5 of the D.C. Background Study dated December 21, 2023, subject to further annual review during the capital budget process;”



“Approve the D.C. Background Study dated December 21, 2023, as amended (with Addendum #1 dated March 28, 2024);”

“Determine that no further public meeting is required;” and

“Approve the D.C. By-laws as set out in Appendix J.”



# Chapter 8

## By-law Implementation



## 8. By-law Implementation

### 8.1 Public Consultation Process

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#### **8.1.1 Introduction**

This chapter addresses the mandatory, formal public consultation process (section 8.1.2), as well as the optional, informal consultation process (section 8.1.3). The latter is designed to seek the co-operation and participation of those involved, in order to produce the most suitable policy. Section 8.1.4 addresses the anticipated impact of the D.C. on development from a generic viewpoint.

#### **8.1.2 Public Meeting of Council**

Section 12 of the D.C.A. indicates that before passing a D.C. by-law, Council must hold at least one public meeting, giving at least 20 clear days' notice thereof, in accordance with the regulation. Council must also ensure that the proposed by-law(s) and background report are made available to the public at least two weeks prior to the (first) meeting.

Any person who attends such a meeting may make representations related to the proposed by-law(s).

If a proposed by-law(s) is changed following such a meeting, Council must determine whether a further meeting (under this section) is necessary (i.e., if the proposed by-law(s) which is proposed for adoption has been changed in any respect, Council should formally consider whether an additional public meeting is required, incorporating this determination as part of the final by-law(s) or associated resolution. It is noted that Council's decision, once made, is final and not subject to review by a Court or the Ontario Land Tribunal (OLT) (formerly the Local Planning Appeal Tribunal).

#### **8.1.3 Other Consultation Activity**

There are three broad groupings of the public who are generally the most concerned with City D.C. policy:

1. The first grouping is the residential development community, consisting of land developers and builders, who are typically responsible for generating most of the





D.C. revenues. Others, such as realtors, are directly impacted by D.C. policy. They are, therefore, potentially interested in all aspects of the charge, particularly the quantum by unit type, projects to be funded by the D.C. and the timing thereof, and City policy with respect to development agreements, D.C. credits, and front-ending requirements.

2. The second public grouping embraces the public at large and includes taxpayer coalition groups and others interested in public policy.
3. The third grouping is the industrial/commercial/institutional development sector, consisting of land developers and major owners or organizations with significant construction plans, such as hotels, entertainment complexes, shopping centres, offices, industrial buildings, and institutions. Also involved are organizations such as Industry Associations, the Chamber of Commerce, the Board of Trade, and the Economic Development Agencies, who are all potentially interested in City D.C. policy. Their primary concern is frequently with the quantum of the charge, G.F.A. exclusions such as basements, mechanical or indoor parking areas, or exemptions and phase-in or capping provisions in order to moderate the impact.

## **8.2 Anticipated Impact of the Charge on Development**

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The establishment of sound D.C. policy often requires the achievement of an acceptable balance between two competing realities. The first is that high non-residential D.C.s can, to some degree, represent a barrier to increased economic activity and sustained industrial/commercial growth, particularly for capital intensive uses.

On the other hand, D.C.s or other City capital funding sources need to be obtained in order to help ensure that the necessary infrastructure and amenities are installed. The timely installation of such works is a key initiative in providing adequate service levels and in facilitating strong economic growth and investment.



## 8.3 Implementation Requirements

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### 8.3.1 Introduction

Once the City has calculated the charge, prepared the complete background study, carried out the public process, and passed new by-laws, the emphasis shifts to implementation matters. These include notices, potential appeals and complaints, credits, front-ending agreements, subdivision agreement conditions, and finally the collection of revenues and funding of projects.

The sections that follow provide an overview of the requirements in each case.

### 8.3.2 Notice of Passage

In accordance with section 13 of the D.C.A., when a D.C. by-law(s) is passed, the City clerk shall give written notice of the passing and of the last day for appealing the by-law(s) (the day that is 40 days after the day it was passed). Such notice must be given no later than 20 days after the day the by-law(s) are passed (i.e., as of the day of newspaper publication or the mailing of the notice).

Section 10 of O. Reg. 82/98 further defines the notice requirements which are summarized as follows:

- Notice may be given by publication in a newspaper which is (in the clerk's opinion) of sufficient circulation to give the public reasonable notice, or by personal service, fax or mail to every owner of land in the area to which the by-law relates;
- Subsection 10 (4) lists the persons/organizations who must be given notice; and
- Subsection 10 (5) lists the eight items that the notice must cover.

### 8.3.3 By-law Pamphlet

In addition to the “notice” information, the City must prepare a “pamphlet” explaining each D.C. by-law in force, setting out:

- A description of the general purpose of the D.C.s;
- The “rules” for determining if a charge is payable in a particular case and for determining the amount of the charge;



- The services to which the D.C.s relate; and
- A description of the general purpose of the Treasurer's statement and where it may be received by the public.

Where a by-law is not appealed to the OLT, the pamphlet must be readied within 60 days after the by-laws come into force. Later dates apply to appealed by-laws.

The City must give one copy of the most recent pamphlet, without charge, to any person who requests one.

### **8.3.4 Appeals**

Sections 13 to 19 of the D.C.A. set out the requirements relative to making and processing a D.C. by-law appeal and OLT hearing in response to an appeal. Any person or organization may appeal a D.C. by-law to the OLT by filing a notice of appeal with the City clerk, setting out the objection to the by-law and the reasons supporting the objection. This must be done by the last day for appealing the by-law, which is 40 days after the by-law is passed.

The City is carrying out a public consultation process, in order to address the issues that come forward as part of that process, thereby avoiding or reducing the need for an appeal to be made.

### **8.3.5 Complaints**

A person required to pay a D.C., or their agent, may complain to the City Council imposing the charge that:

- The amount of the charge was incorrectly determined;
- The credit to be used against the D.C. was incorrectly determined; or
- There was an error in the application of the D.C. by-law(s).

Sections 20 to 25 of the D.C.A. set out the requirements that exist, including the fact that a complaint may not be made later than 90 days after a D.C. (or any part of it) is payable. A complainant may appeal the decision of City Council to the OLT.



### **8.3.6 Credits**

Sections 38 to 41 of the D.C.A. set out a number of credit requirements, which apply where a City agrees to allow a person to perform work in the future that relates to a service in the D.C. by-law.

These credits would be used to reduce the amount of D.C.s to be paid. The value of the credit is limited to the reasonable cost of the work which does not exceed the average level of service. The credit applies only to the service to which the work relates unless the City agrees to expand the credit to other services for which a D.C. is payable.

### **8.3.7 Front-Ending Agreements**

The City and one or more landowners may enter into a front-ending agreement that provides for the costs of a project which will benefit an area in the City to which the D.C. by-law applies. Such an agreement can provide for the costs to be borne by one or more parties to the agreement who are, in turn, reimbursed in future by persons who develop land defined in the agreement.

Part III of the D.C.A. (sections 44 to 58) addresses front-ending agreements and removes some of the obstacles to their use which were contained in the D.C.A., 1989. Accordingly, the City assesses whether this mechanism is appropriate for its use, as part of funding projects prior to City funds being available.

### **8.3.8 Severance and Subdivision Agreement Conditions**

Section 59 of the D.C.A. prevents a municipality from imposing, directly or indirectly, a charge related to development or a requirement to construct a service related to development, by way of a condition or agreement under section 51 or section 53 of the *Planning Act*, except for:

- (a) “local services, related to a plan of subdivision or within the area to which the plan relates, to be installed or paid for by the owner as a condition of approval under section 51 of the *Planning Act*,” and
- (b) “local services to be installed or paid for by the owner as a condition of approval under section 53 of the *Planning Act*.”

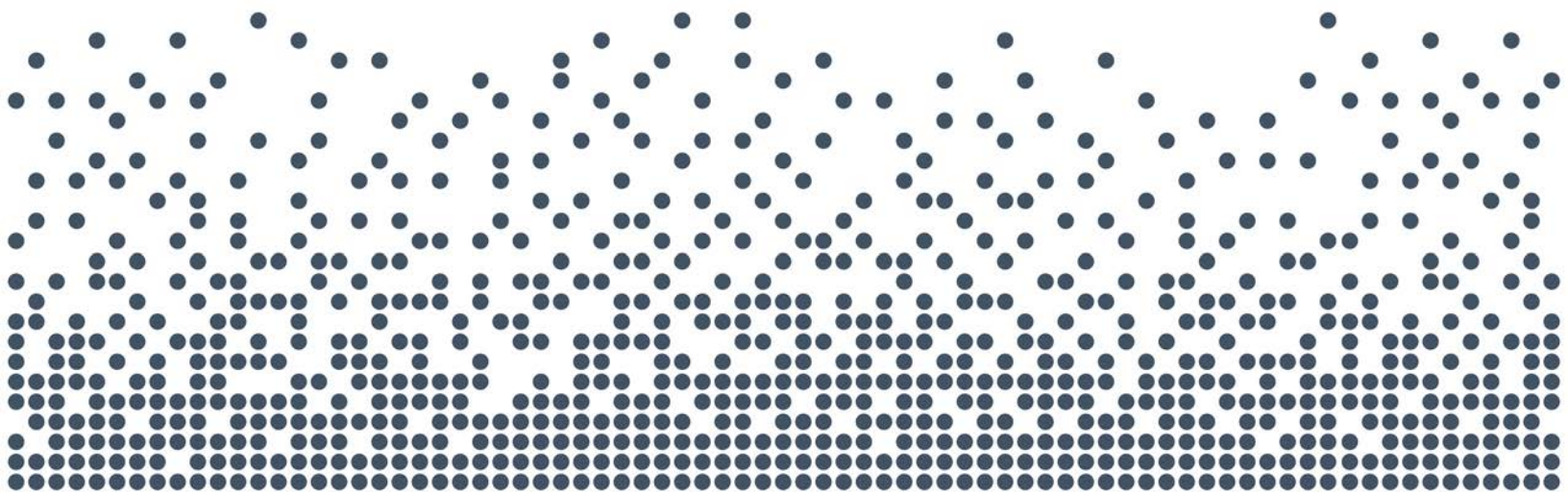


It is also noted that subsection 59 (4) of the D.C.A. requires that the municipal approval authority for a draft plan of subdivision under subsection 51 (31) of the *Planning Act*, use its power to impose conditions to ensure that the first purchaser of newly subdivided land is informed of all the D.C.s related to the development, at the time the land is transferred.

In this regard, if the City in question is a commenting agency, in order to comply with subsection 59 (4) of the D.C.A. it would need to provide to the approval authority, information regarding the applicable City D.C.s related to the site.

If the City is an approval authority for the purposes of section 51 of the *Planning Act*, it would be responsible to ensure that it collects information from all entities that can impose a D.C.

The most effective way to ensure that purchasers are aware of this condition would be to require it as a provision in a registered subdivision agreement, so that any purchaser of the property would be aware of the charges at the time the title was searched prior to closing a transaction conveying the lands.



# Appendices



# Appendix A

## Background Information on Residential and Non- Residential Growth Forecast



## Schedule 1 City of Hamilton Residential Growth Forecast Summary

Year	Population (Including Census Undercount) <sup>[1]</sup>	Excluding Census Undercount			Housing Units						Persons Per Unit (P.P.U.): Total Population/ Total Households	
		Population	Institutional Population	Population Excluding Institutional Population	Singles & Semi-Detached	Multiple Dwellings <sup>[2]</sup>	Apartments <sup>[3]</sup>	Other	Total Households	Equivalent Institutional Households		
Historical	Mid 2011	534,820	519,949	10,309	509,640	124,433	27,760	50,800	813	203,806	9,372	2.551
	Mid 2016	552,270	536,917	8,982	527,935	127,705	31,405	51,680	810	211,600	8,165	2.537
	Mid 2021	585,640	569,353	8,438	560,915	131,900	34,835	55,510	560	222,805	7,671	2.555
Forecast	Late 2023	608,640	591,714	8,675	583,039	133,641	38,018	59,930	560	232,149	7,886	2.549
	Late 2033	672,550	653,850	9,651	644,199	143,468	49,172	74,175	560	267,375	8,774	2.445
Incremental	<b>Mid 2011 - Mid 2016</b>	<b>17,450</b>	<b>16,968</b>	<b>-1,327</b>	<b>18,295</b>	<b>3,272</b>	<b>3,645</b>	<b>880</b>	<b>-3</b>	<b>7,794</b>	<b>-1,207</b>	
	<b>Mid 2016 - Mid 2021</b>	<b>33,370</b>	<b>32,436</b>	<b>-544</b>	<b>32,980</b>	<b>4,195</b>	<b>3,430</b>	<b>3,830</b>	<b>-250</b>	<b>11,205</b>	<b>-494</b>	
	<b>Mid 2021 - Late 2023</b>	<b>23,000</b>	<b>22,361</b>	<b>237</b>	<b>22,124</b>	<b>1,741</b>	<b>3,183</b>	<b>4,420</b>	<b>0</b>	<b>9,344</b>	<b>215</b>	
	<b>Late 2023 - Late 2033</b>	<b>63,910</b>	<b>62,136</b>	<b>976</b>	<b>61,160</b>	<b>9,827</b>	<b>11,154</b>	<b>14,245</b>	<b>0</b>	<b>35,226</b>	<b>888</b>	

<sup>[1]</sup> Population includes the Census undercount estimated at approximately 2.9% and has been rounded.

<sup>[2]</sup> Includes townhouses and apartments in duplexes.

<sup>[3]</sup> Includes bachelor, 1-bedroom, and 2-bedroom+ apartment units.

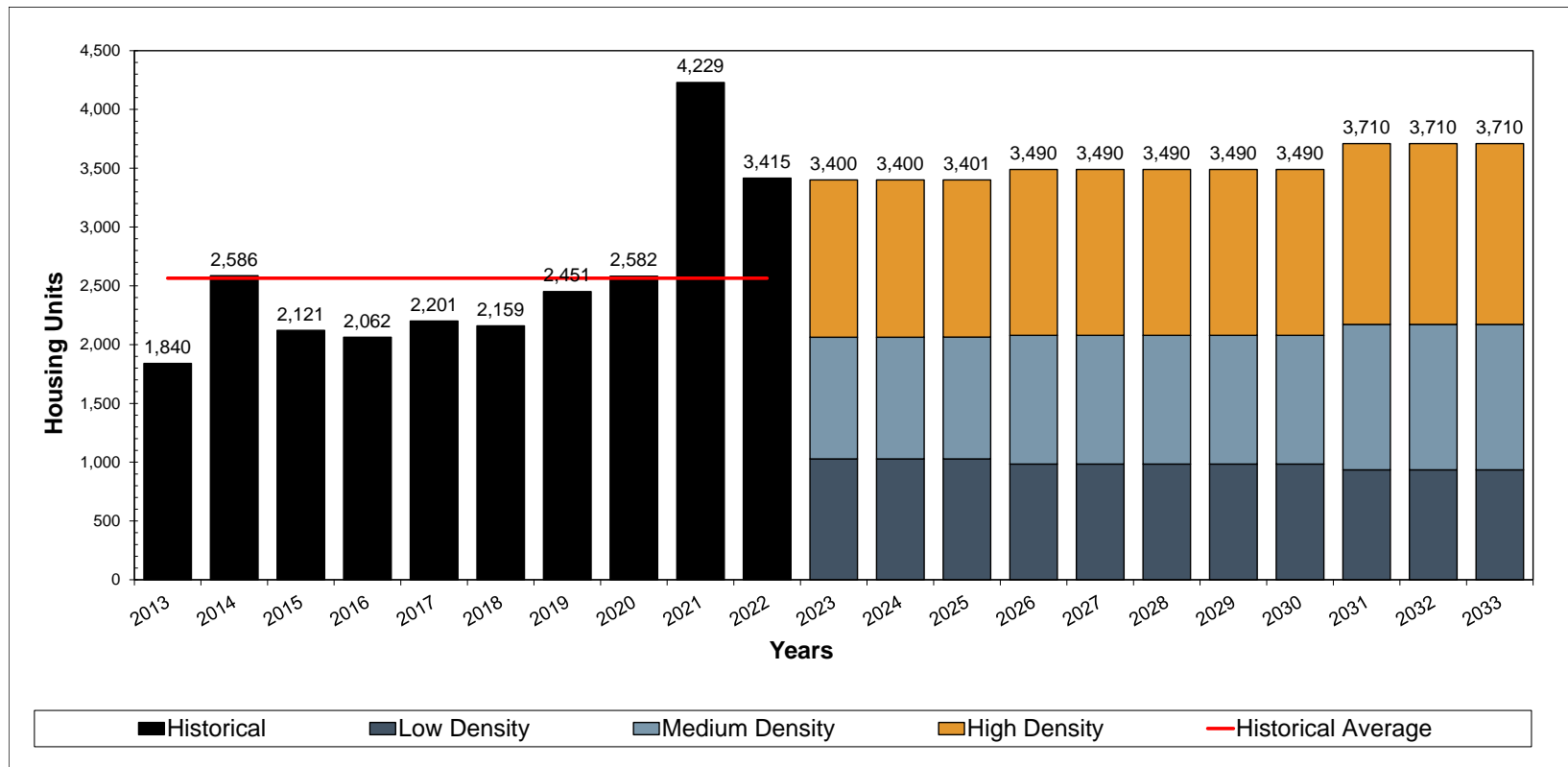
Note: Numbers may not add due to rounding.

Source: Derived from City of Hamilton Official Plan Amendment No. 167 to the Urban Hamilton Official Plan Respecting Municipal Comprehensive Review – Phase 1 (City-Wide), by Watson & Associates Economists Ltd.





Figure 1  
City of Hamilton  
Annual Housing Forecast<sup>[1]</sup>



<sup>[1]</sup> Growth forecast represents calendar year.

Source: Historical housing activity derived from City of Hamilton building permit data, 2013 to 2022.



**Schedule 2**  
**City of Hamilton**  
**Estimate of the Anticipated Amount, Type and Location of**  
**Residential Development for Which Development Charges can be Imposed**

Development Location	Timing	Single & Semi-Detached	Multiples <sup>[1]</sup>	Apartments <sup>[2]</sup>	Total Residential Units	Gross Population In New Units	Existing Unit Population Change	Net Population Increase, Excluding Institutional	Institutional Population	Net Population Including Institutional
Combined Sewer System	2023 - 2033	92	932	6,109	7,133	13,297	-10,123	3,174	50	3,224
Separate Sewer System - Other Built Boundary	2023 - 2033	949	1,909	6,052	8,910	18,803	-13,067	5,736	90	5,827
Separate Sewer System - Greenfield	2023 - 2033	8,503	8,313	2,084	18,900	55,551	-2,375	53,176	836	54,011
Urban Total	2023 - 2033	9,544	11,154	14,245	34,943	87,651	-25,565	62,086	976	63,062
Rural Total	2023 - 2033	283	0	0	283	1,000.0	-1,926	(926)	0	(926)
<b>City of Hamilton</b>	<b>2023 - 2033</b>	<b>9,827</b>	<b>11,154</b>	<b>14,245</b>	<b>35,226</b>	<b>88,651</b>	<b>-27,491</b>	<b>61,160</b>	<b>976</b>	<b>62,136</b>

<sup>[1]</sup> Includes townhouses and apartments in duplexes.

<sup>[2]</sup> Includes bachelor, 1-bedroom, and 2-bedroom+ apartment units.

Source: Watson & Associates Economists Ltd.



Schedule 3  
City of Hamilton  
Current Year Growth Forecast  
Mid-2021 to Late 2023

		Population
Mid 2021 Population		569,353
Occupants of New Housing Units, Mid 2021 to Late 2023	<i>Units (2)</i>	9,344
	<i>multiplied by P.P.U. (3)</i>	2,316
	<i>gross population increase</i>	21,639
Occupants of New Equivalent Institutional Units, Mid 2021 to Late 2023	<i>Units</i>	215
	<i>multiplied by P.P.U. (3)</i>	1,100
	<i>gross population increase</i>	236
Decline in Housing Unit Occupancy, Mid 2021 to Late 2023	<i>Units (4)</i>	222,805
	<i>multiplied by P.P.U. decline rate (5)</i>	0.002
	<i>total decline in population</i>	486
Population Estimate to Late 2023		591,714
<i>Net Population Increase, Mid 2021 to Late 2023</i>		22,361

- (1) 2021 population based on Statistics Canada Census unadjusted for Census undercount.
- (2) Estimated residential units constructed, Mid-2021 to the beginning of the growth period assuming a six-month lag between construction and occupancy.
- (3) Average number of persons per unit (P.P.U.) is assumed to be:

Structural Type	Persons Per Unit <sup>1</sup> (P.P.U.)	% Distribution of Estimated Units <sup>2</sup>	Weighted Persons Per Unit Average
<i>Singles &amp; Semi Detached</i>	3.403	19%	0.634
<i>Multiples (6)</i>	2.625	34%	0.894
<i>Apartments (7)</i>	1.665	47%	0.788
<b>Total</b>		100%	2.316

<sup>1</sup> Based on 2021 Census custom database

<sup>2</sup> Based on Building permit/completion activity

- (4) 2021 households taken from Statistics Canada Census.
- (5) Decline occurs due to aging of the population and family life cycle changes, lower fertility rates and changing economic conditions.
- (6) Includes townhouses and apartments in duplexes.
- (7) Includes bachelor, 1-bedroom and 2-bedroom+ apartments.

Note: Numbers may not add to totals due to rounding.



**Schedule 4a**  
**City of Hamilton**  
**Short-Term Growth Forecast**  
**Service Target Forecast (Services Related to a Highway)**

			Population
<b>Late 2023 Population</b>			<b>591,714</b>
Occupants of New Housing Units, Service Target Forecast (Services Related to a Highway)	<i>Units (2)</i>	25,951	
	<i>multiplied by P.P.U. (3)</i>	2.529	
	<i>gross population increase</i>	65,620	65,620
Occupants of New Equivalent Institutional Units, Service Target Forecast (Services Related to a Highway)	<i>Units</i>	620	
	<i>multiplied by P.P.U. (3)</i>	1.100	
	<i>gross population increase</i>	682	682
Decline in Housing Unit Occupancy, Service Target Forecast (Services Related to a Highway)	<i>Units (4)</i>	232,149	
	<i>multiplied by P.P.U. decline rate (5)</i>	-0.104	
	<i>total decline in population</i>	-24,145	-24,145
<b>Population Estimate, Service Target Forecast (Services Related to a Highway)</b>			<b>633,871</b>
<b>Net Population Increase, Service Target Forecast (Services Related to a Highway)</b>			<b>42,157</b>

(1) Late 2023 Population based on:

2021 Population (569,353) + Mid 2016 to Late 2023 estimated housing units to beginning of forecast period (9,344 x 2.316 = 21,639) + (215 x 1.1 = 236) + (222,805 x 0.002 = 486) = 591,714

(2) Based upon forecast building permits/completions assuming a lag between construction and occupancy.

(3) Average number of persons per unit (P.P.U.) is assumed to be:

Structural Type	Persons Per Unit <sup>1</sup> (P.P.U.)	% Distribution of Estimated Units <sup>2</sup>	Weighted Persons Per Unit Average
<i>Singles &amp; Semi Detached</i>	3.533	29%	1.020
<i>Multiples (6)</i>	2.637	31%	0.819
<i>Apartments (7)</i>	1.721	40%	0.690
<i>one bedroom or less</i>	1.342		
<i>two bedrooms or more</i>	2.166		
<b>Total</b>		<b>100%</b>	<b>2.529</b>

<sup>1</sup> Persons per unit based on adjusted Statistics Canada Custom 2021 Census database.

<sup>2</sup> Forecast unit mix based upon historical trends and housing units in the development process.

(4) Late 2023 households based upon 2016 Census (222,805 units) + Mid 2016 to Late 2023 unit estimate (9,344 units) = 232,149 units.

(5) Decline occurs due to aging of the population and family life cycle changes, lower fertility rates and changing economic conditions.

(6) Includes townhouses and apartments in duplexes.

(7) Includes bachelor, 1-bedroom and 2-bedroom+ apartments.

Note: Numbers may not add to totals due to rounding.



**Schedule 4b**  
**City of Hamilton**  
**Short-Term Growth Forecast**  
**Service Target Forecast (Stormwater – Combined Sewer System Area)**

		Population
Occupants of New Housing Units, Service Target Forecast (Stormwater: Combined Sewer System)	<i>Units (1)</i>	5,203
	<i>multiplied by P.P.U. (2)</i>	1,864
	<i>gross population increase</i>	9,698
		9,698
Occupants of New Equivalent Institutional Units, Service Target Forecast (Stormwater: Combined Sewer System)	<i>Units</i>	12
	<i>multiplied by P.P.U. (2)</i>	1,100
	<i>gross population increase</i>	13
		13
Decline in Housing Unit Occupancy, Service Target Forecast (Stormwater: Combined Sewer System)		
	<i>total decline in population (3)</i>	-8,891
		-8,891
<i>Net Population Increase, Service Target Forecast (Stormwater: Combined Sewer System)</i>		<i>821</i>

(1) Based upon forecast building permits/completions assuming a lag between construction and occupancy.

(2) Average number of persons per unit (P.P.U.) is assumed to be:

Structural Type	Persons Per Unit <sup>1</sup> (P.P.U.)	% Distribution of Estimated Units <sup>2</sup>	Weighted Persons Per Unit Average
<i>Singles &amp; Semi Detached</i>	3.533	1%	0.048
<i>Multiples (4)</i>	2.637	13%	0.341
<i>Apartments (5)</i>	1.721	86%	1.475
<i>one bedroom or less</i>	1.342		
<i>two bedrooms or more</i>	2.166		
<b>Total</b>		100%	1.864

<sup>1</sup> Persons per unit based on Statistics Canada Custom 2016 Census database.

<sup>2</sup> Forecast unit mix based upon historical trends and housing units in the development process.

(3) Decline occurs due to aging of the population and family life cycle changes, lower fertility rates and changing economic conditions.

(4) Includes townhouses and apartments in duplexes.

(5) Includes bachelor, 1-bedroom and 2-bedroom+ apartments.

Note: Numbers may not add to totals due to rounding.



**Schedule 4c**  
**City of Hamilton**  
**Short-Term Growth Forecast**  
**Service Target Forecast (Stormwater – Separated Sewer System Area)**

		Population
Occupants of New Housing Units, Service Target Forecast (Stormwater: Separated Sewer System)	<i>Units (1)</i>	20,536
	<i>multiplied by P.P.U. (2)</i>	2.687
	<i>gross population increase</i>	55,173
Occupants of New Equivalent Institutional Units, Service Target Forecast (Stormwater: Separated Sewer System)	<i>Units</i>	607
	<i>multiplied by P.P.U. (2)</i>	1.100
	<i>gross population increase</i>	668
Decline in Housing Unit Occupancy, Service Target Forecast (Stormwater: Separated Sewer System)	<i>total decline in population (3)</i>	-13,562
		-13,562
<i>Net Population Increase, Service Target Forecast (Stormwater: Separated Sewer System)</i>		<i>42,279</i>

(1) Based upon forecast building permits/completions assuming a lag between construction and occupancy.

(2) Average number of persons per unit (P.P.U.) is assumed to be:

Structural Type	Persons Per Unit <sup>1</sup> (P.P.U.)	% Distribution of Estimated Units <sup>2</sup>	Weighted Persons Per Unit Average
<i>Singles &amp; Semi Detached</i>	3.533	35%	1.240
<i>Multiples (4)</i>	2.637	36%	0.949
<i>Apartments (5)</i>	1.721	29%	0.498
<i>one bedroom or less</i>	1.342		
<i>two bedrooms or more</i>	2.166		
<b>Total</b>		100%	2.687

<sup>1</sup> Persons per unit based on Statistics Canada Custom 2016 Census database.

<sup>2</sup> Forecast unit mix based upon historical trends and housing units in the development process.

(3) Decline occurs due to aging of the population and family life cycle changes, lower fertility rates and changing economic conditions.

(4) Includes townhouses and apartments in duplexes.

(5) Includes bachelor, 1-bedroom and 2-bedroom+ apartments.

Note: Numbers may not add to totals due to rounding.



Schedule 4d  
City of Hamilton  
Short-Term Growth Forecast  
Service Target Forecast (Water and Wastewater)

		Population
Occupants of New Housing Units, Service Target Forecast (Water and Wastewater)	<i>Units (1)</i>	25,739
	<i>multiplied by P.P.U. (2)</i>	2,520
	<i>gross population increase</i>	64,871
Occupants of New Equivalent Institutional Units, Service Target Forecast (Water and Wastewater)	<i>Units</i>	619
	<i>multiplied by P.P.U. (2)</i>	1,100
	<i>gross population increase</i>	681
Decline in Housing Unit Occupancy, Service Target Forecast (Water and Wastewater)		
	<i>total decline in population (3)</i>	-22,453
<i>Net Population Increase, Service Target Forecast (Water and Wastewater)</i>		43,099

(1) Based upon forecast building permits/completions assuming a lag between construction and occupancy.

(2) Average number of persons per unit (P.P.U.) is assumed to be:

Structural Type	Persons Per Unit <sup>1</sup> (P.P.U.)	% Distribution of Estimated Units <sup>2</sup>	Weighted Persons Per Unit Average
<i>Singles &amp; Semi Detached</i>	3.533	28%	0.999
<i>Multiples (4)</i>	2.637	31%	0.826
<i>Apartments (5)</i>	1.721	40%	0.695
	<i>one bedroom or less</i> 1.342		
	<i>two bedrooms or more</i> 2.166		
Total		100%	2.520

<sup>1</sup> Persons per unit based on Statistics Canada Custom 2016 Census database.

<sup>2</sup> Forecast unit mix based upon historical trends and housing units in the development process.

(3) Decline occurs due to aging of the population and family life cycle changes, lower fertility rates and changing economic conditions.

(4) Includes townhouses and apartments in duplexes.

(5) Includes bachelor, 1-bedroom and 2-bedroom+ apartments.

Note: Numbers may not add to totals due to rounding.



**Schedule 5  
City of Hamilton  
10-Year Growth Forecast  
Late 2023 to Late 2033**

		Population
<b>Late 2023 Population</b>		<b>591,714</b>
Occupants of New Housing Units, Late 2023 to Late 2033	<i>Units (2)</i>	35,226
	<i>multiplied by P.P.U. (3)</i>	2,517
	<i>gross population increase</i>	88,651
Occupants of New Equivalent Institutional Units, Late 2023 to Late 2033	<i>Units</i>	888
	<i>multiplied by P.P.U. (3)</i>	1,100
	<i>gross population increase</i>	976
Decline in Housing Unit Occupancy, Late 2023 to Late 2033	<i>Units (4)</i>	232,149
	<i>multiplied by P.P.U. decline rate (5)</i>	-0.118
	<i>total decline in population</i>	-27,491
<b>Population Estimate to Late 2033</b>		<b>653,850</b>
<i>Net Population Increase, Late 2023 to Late 2033</i>		<b>62,136</b>

(1) Late 2023 Population based on:

2021 Population (569,353) + Mid 2016 to Late 2023 estimated housing units to beginning of forecast period (9,344 x 2.316 = 21,639) + (215 x 1.1 = 236) + (222,805 x 0.002 = 486) = 591,714

(2) Based upon forecast building permits/completions assuming a lag between construction and occupancy.

(3) Average number of persons per unit (P.P.U.) is assumed to be:

Structural Type	Persons Per Unit <sup>1</sup> (P.P.U.)	% Distribution of Estimated Units <sup>2</sup>	Weighted Persons Per Unit Average
<i>Singles &amp; Semi Detached</i>	3.533	28%	0.986
<i>Multiples (6)</i>	2.637	32%	0.835
<i>Apartments (7)</i>	1.721	40%	0.696
<i>one bedroom or less</i>	1.342		
<i>two bedrooms or more</i>	2.166		
<b>Total</b>		100%	2.517

<sup>1</sup> Persons per unit based on adjusted Statistics Canada Custom 2021 Census database.

<sup>2</sup> Forecast unit mix based upon historical trends and housing units in the development process.

(4) Late 2023 households based upon 2016 Census (222,805 units) + Mid 2016 to Late 2023 unit estimate (9,344 units) = 232,149 units.

(5) Decline occurs due to aging of the population and family life cycle changes, lower fertility rates and changing economic conditions.

(6) Includes townhouses and apartments in duplexes.

(7) Includes bachelor, 1-bedroom and 2-bedroom+ apartments.

Note: Numbers may not add to totals due to rounding.





Schedule 6  
City of Hamilton  
Historical Residential Building Permits  
Years 2013 to 2022

Year	Residential Building Permits			
	Singles & Semi Detached	Multiples <sup>[1]</sup>	Apartments <sup>[2]</sup>	Total
2013	1,102	532	206	1,840
2014	933	767	886	2,586
2015	1,037	548	536	2,121
2016	1,113	681	268	2,062
2017	773	724	704	2,201
Sub-total	4,958	3,252	2,600	10,810
<b>Average (2013 - 2017)</b>	<b>992</b>	<b>650</b>	<b>520</b>	<b>2,162</b>
% Breakdown	45.9%	30.1%	24.1%	100.0%
2018	641	644	874	2,159
2019	899	703	849	2,451
2020	769	678	1,135	2,582
2021	533	1,403	2,293	4,229
2022	694	1,262	1,459	3,415
Sub-total	3,536	4,690	6,610	14,836
<b>Average (2018 - 2022)</b>	<b>707</b>	<b>938</b>	<b>1,322</b>	<b>2,967</b>
% Breakdown	23.8%	31.6%	44.6%	100.0%
2013 - 2022				
Total	8,494	7,942	9,210	25,646
<b>Average</b>	<b>849</b>	<b>794</b>	<b>921</b>	<b>2,565</b>
% Breakdown	33.1%	31.0%	35.9%	100.0%

<sup>[1]</sup> Includes townhouses and apartments in duplexes.

<sup>[2]</sup> Includes bachelor, 1-bedroom, and 2-bedroom+ apartment units.

Source: Historical housing activity derived from City of Hamilton data, by Watson & Associates Economists Ltd.



Schedule 7  
City of Hamilton  
Persons Per Unit by Age and Type of Dwelling  
(2021 Census)

Age of Dwelling	Singles and Semi-Detached						15 Year Average	15 Year Average Adjusted <sup>[3]</sup>
	< 1 BR	1 BR	2 BR	3/4 BR	5+ BR	Total		
1-5	-	2.550	2.435	3.367	4.857	<b>3.403</b>		
6-10	-	-	2.236	3.557	4.973	<b>3.625</b>		
11-15	-	-	2.014	3.474	4.681	<b>3.518</b>	3.515	3.533
16-20	-	2.158	2.012	3.312	4.294	<b>3.329</b>		
20-25	-	1.917	1.825	3.191	4.373	<b>3.215</b>		
25-30	-	2.077	1.917	3.084	4.278	<b>3.147</b>		
30+	2.692	1.641	1.917	2.705	3.831	<b>2.654</b>		
<b>Total</b>	<b>2.729</b>	<b>1.749</b>	<b>1.936</b>	<b>2.882</b>	<b>4.068</b>	<b>2.845</b>		

Age of Dwelling	Multiples <sup>[1]</sup>						15 Year Average	15 Year Average Adjusted <sup>[3]</sup>
	< 1 BR	1 BR	2 BR	3/4 BR	5+ BR	Total		
1-5	1.571	1.434	2.055	2.942	-	<b>2.625</b>		
6-10	-	1.324	2.008	2.850	3.727	<b>2.619</b>		
11-15	-	1.438	1.950	2.708	3.273	<b>2.563</b>	2.602	2.637
16-20	-	1.682	1.748	2.673	-	<b>2.413</b>		
20-25	-	1.571	1.752	2.687	-	<b>2.409</b>		
25-30	-	1.694	2.051	2.938	-	<b>2.642</b>		
30+	-	1.407	1.970	2.872	3.629	<b>2.550</b>		
<b>Total</b>	<b>2.156</b>	<b>1.442</b>	<b>1.948</b>	<b>2.837</b>	<b>3.588</b>	<b>2.551</b>		

Age of Dwelling	Apartments <sup>[2]</sup>						15 Year Average	15 Year Average Adjusted <sup>[3]</sup>
	< 1 BR	1 BR	2 BR	3/4 BR	5+ BR	Total		
1-5	-	1.314	2.026	2.615	-	<b>1.665</b>		
6-10	-	1.337	2.112	3.714	-	<b>1.811</b>		
11-15	-	1.443	1.785	3.250	-	<b>1.723</b>	1.733	1.721
16-20	-	1.490	1.810	3.400	-	<b>1.808</b>		
20-25	-	1.417	2.240	3.760	-	<b>1.944</b>		
25-30	1.909	1.405	2.194	3.793	-	<b>1.902</b>		
30+	1.186	1.295	2.000	2.765	2.906	<b>1.701</b>		
<b>Total</b>	<b>1.229</b>	<b>1.311</b>	<b>2.011</b>	<b>2.861</b>	<b>3.031</b>	<b>1.720</b>		

Age of Dwelling	All Density Types					
	< 1 BR	1 BR	2 BR	3/4 BR	5+ BR	Total
1-5	1.875	1.401	2.117	3.203	4.780	<b>2.751</b>
6-10	2.250	1.424	2.077	3.333	4.792	<b>3.122</b>
11-15	1.600	1.569	1.925	3.222	4.577	<b>3.057</b>
16-20	2.800	1.592	1.845	3.158	4.290	<b>2.922</b>
20-25	-	1.478	1.982	3.070	4.245	<b>2.814</b>
25-30	2.400	1.466	2.104	3.064	4.140	<b>2.758</b>
30+	1.371	1.330	1.965	2.730	3.803	<b>2.370</b>
<b>Total</b>	<b>1.534</b>	<b>1.356</b>	<b>1.975</b>	<b>2.873</b>	<b>4.011</b>	<b>2.517</b>

[1] Includes townhouses and apartments in duplexes.

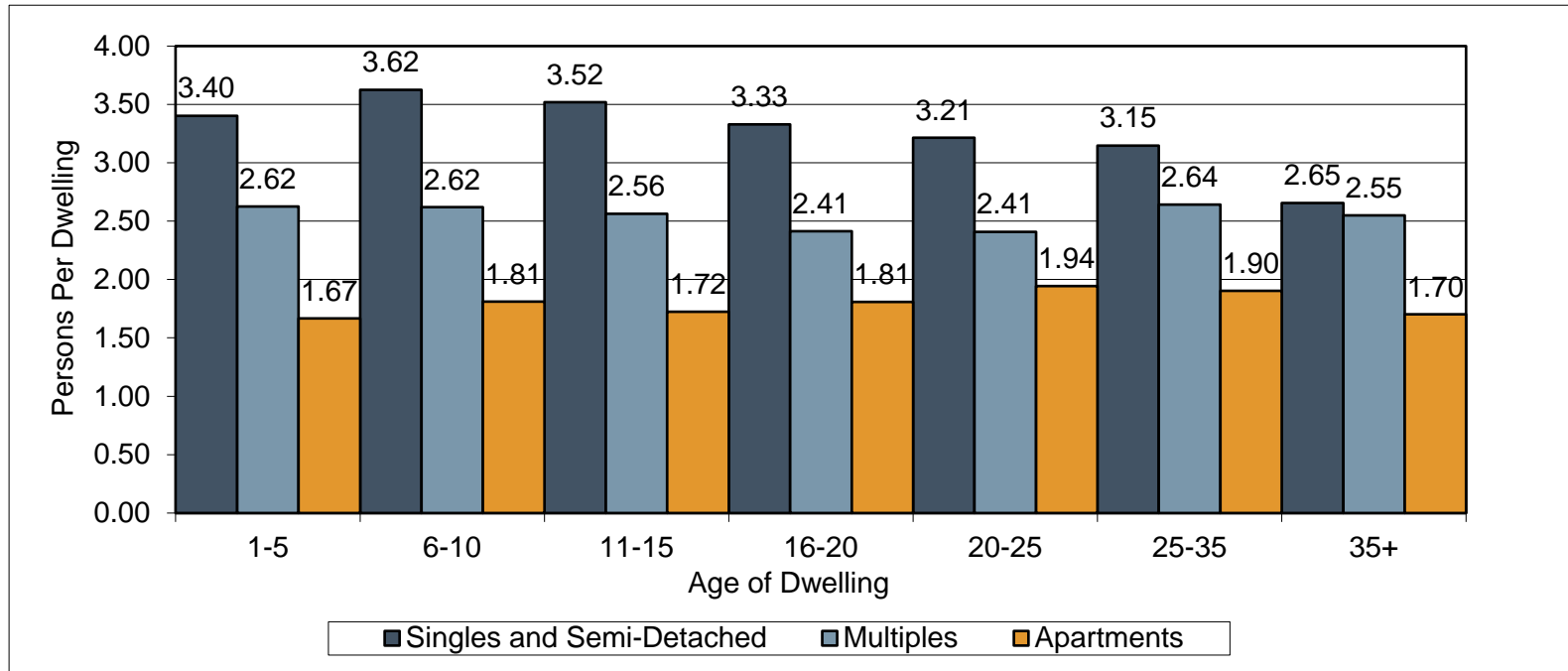
[2] Includes bachelor, 1-bedroom and 2-bedroom+ apartments.

[3] Adjusted based on historical trends.

Notes: Does not include Statistics Canada data classified as "Other." P.P.U. not calculated for samples less than or equal to 50 dwelling units and does not include institutional population.



Schedule 8  
City of Hamilton  
Persons Per Unit Structural Type and Age of Dwelling  
(2021 Census)





## Schedule 9a City of Hamilton Employment Forecast, 2023 to 2033

Period	Population	Activity Rate								Employment								
		Primary	Work at Home	Industrial	Commercial/Population Related	Institutional	Total	N.F.P.O.W. <sup>[1]</sup>	Total Including N.F.P.O.W.	Primary	Work at Home	Industrial	Commercial/Population Related	Institutional	Total	N.F.P.O.W. <sup>[1]</sup>	Total Employment (Including N.F.P.O.W.)	Total (Excluding Work at Home and N.F.P.O.W.)
Mid 2011	519,949	0.3%	2.7%	8.5%	13.5%	12.0%	37.1%	5.1%	42.2%	1,780	14,010	44,408	70,258	62,395	192,850	26,345	219,195	178,840
Mid 2016	536,917	0.3%	2.9%	8.9%	13.8%	11.9%	37.9%	5.4%	43.3%	1,845	15,805	47,760	74,260	63,665	203,335	29,160	232,495	187,530
Late 2023	591,714	0.3%	3.5%	8.6%	12.9%	11.7%	37.1%	5.4%	42.6%	1,850	20,875	51,169	76,450	69,440	219,784	32,056	251,840	198,909
Late 2033	653,850	0.3%	3.4%	8.7%	13.6%	11.5%	37.1%	5.4%	42.8%	1,873	22,476	57,158	88,814	75,019	245,340	35,422	280,762	222,864
<b>Incremental Change</b>																		
Mid 2011 - Mid 2016	16,968	0.000	0.002	0.004	0.003	-0.001	0.008	0.004	0.011	65	1,795	3,353	4,003	1,270	10,485	2,815	13,300	8,690
Mid 2016 - Mid 2021	32,436	0.000	0.000	-0.004	-0.007	-0.006	-0.018	0.003	-0.015	0	985	473	426	384	2,268	3,237	5,505	1,283
Mid 2016 - Late 2023	54,797	0.0%	0.6%	-0.2%	-0.9%	-0.1%	-0.7%	0.0%	-0.7%	5	5,070	3,409	2,190	5,775	16,449	2,896	19,345	11,379
Late 2023 - Late 2033	62,136	0.0%	-0.1%	0.1%	0.7%	-0.3%	-0.1%	0.0%	0.2%	23	1,601	5,989	12,364	5,579	25,556	3,366	28,922	23,955
<b>Annual Average</b>																		
Mid 2011 - Mid 2016	3,394	0.000	0.000	0.001	0.001	0.000	0.002	0.001	0.002	13	359	671	801	254	2,097	563	2,660	1,738
Mid 2016 - Late 2023	7,306	0.0%	0.1%	0.0%	-0.1%	0.0%	-0.1%	0.0%	-0.1%	1	676	455	292	770	2,193	386	2,579	1,517
Late 2023 - Late 2033	6,214	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	2	160	599	1,236	558	2,556	337	2,892	2,396

<sup>[1]</sup> Statistics Canada defines no fixed place of work (N.F.P.O.W.) employees as "persons who do not go from home to the same workplace location at the beginning of each shift. Such persons include building and landscape contractors, travelling salespersons, independent truck drivers, etc."

Note: Statistics Canada 2021 Census place of work employment data has been reviewed. The 2021 Census employment results have not been utilized due to a significant increase in work at home employment captured due to Census enumeration occurring during the provincial COVID-19 lockdown from April 1, 2021, to June 14, 2021.

Source: Derived from City of Hamilton Official Plan Amendment No. 167 to the Urban Hamilton Official Plan Respecting Municipal Comprehensive Review – Phase 1 (City-Wide), by Watson & Associates Economists Ltd.



Schedule 9b  
City of Hamilton  
Employment and Gross Floor Area (G.F.A.) Forecast, 2023 to 2033

Period	Population	Employment					Gross Floor Area in Square Feet (Estimated) <sup>[1]</sup>			
		Primary	Industrial	Commercial/ Population Related	Institutional <sup>[2]</sup>	Total	Industrial	Commercial/ Population Related	Institutional	Total
Mid 2011	519,949	1,780	44,408	70,258	62,395	178,840				
Mid 2016	536,917	1,845	47,760	74,260	63,665	187,530				
Late 2023	591,714	1,850	51,169	76,450	69,440	198,909				
Late 2033	653,850	1,873	57,158	88,814	74,564	222,409				
<b>Incremental Change</b>										
Mid 2011 - Mid 2016	16,968	65	3,353	4,003	1,270	8,690				
Mid 2016 - Late 2023	54,797	5	3,409	2,190	5,775	11,379				
Late 2023 - Late 2033	62,136	23	5,989	12,364	5,124	23,500	7,186,800	4,945,600	3,485,200	15,617,600
<b>Annual Average</b>										
Mid 2011 - Mid 2016	3,394	13	671	801	254	1,738				
Mid 2016 - Late 2023	7,306	1	455	292	770	1,517				
Late 2023 - Late 2033	6,214	2	599	1,236	512	2,350	718,680	494,560	348,520	1,561,760

<sup>[1]</sup> Square Foot Per Employee Assumptions:

Industrial	1,200
Commercial/Population-Related	400
Institutional	680

<sup>[2]</sup> Forecast institutional employment and gross floor area has been adjusted downward to account for employment associated with special care units.

Note: Reflects Late 2023 to Late 2033 forecast period.

Note: Numbers may not add up precisely due to rounding.

Source: Watson & Associates Economists Ltd.



Schedule 9c  
City of Hamilton  
Estimate of the Anticipated Amount, Type and Location of  
Non-Residential Development for Which Development Charges Can Be Imposed

Development Location	Timing	Industrial G.F.A. S.F. <sup>[1]</sup>	Commercial G.F.A. S.F. <sup>[1]</sup>	Institutional G.F.A. S.F. <sup>[1],[2]</sup>	Total Non-Residential G.F.A. S.F.	Employment Increase <sup>[3]</sup>
Combined Sewer System	2023 - 2033	92,500	2,929,900	1,166,700	4,189,100	9,117
Separate Sewer System - Other Built Boundary	2023 - 2033	2,589,400	363,800	502,900	3,456,100	3,807
Separate Sewer System - Greenfield	2023 - 2033	4,395,900	1,612,300	1,787,400	7,795,600	10,322
Urban Total	2023 - 2033	7,077,800	4,905,900	3,457,000	15,440,700	23,246
Rural Total	2023 - 2033	109,000	39,600	28,200	176,800	254
<b>City of Hamilton</b>	<b>2023 - 2033</b>	<b>7,186,800</b>	<b>4,945,600</b>	<b>3,485,200</b>	<b>15,617,600</b>	<b>23,500</b>

<sup>[1]</sup> Square Foot Per Employee Assumptions:

Industrial	1,200
Commercial/Population-Related	400
Institutional	680

<sup>[2]</sup> Forecast institutional employment and gross floor area has been adjusted downward to account for employment associated with special care units.

<sup>[3]</sup> Employment increase does not include no fixed place of work.

Note: Reflects Late 2023 to Late 2033 forecast period.

Note: Numbers may not add precisely due to rounding.

Source: Watson & Associates Economists Ltd.



Schedule 9d  
 City of Hamilton  
 Service Target Forecast  
 Estimate of the Anticipated Amount, Type and Location of  
 Non-Residential Development for Which Development Charges Can Be Imposed

Development Location	Timing	Industrial	Commercial	Institutional	Total Non-Residential	Employment Increase <sup>[3]</sup>
		G.F.A. S.F. <sup>[1]</sup>	G.F.A. S.F. <sup>[1]</sup>	G.F.A. S.F. <sup>[1],[2]</sup>		
Services Related to a Highway	Service Target Forecast	4,782,000	3,315,200	2,278,600	10,375,800	15,641
Stormwater: Combined Sewer System	Service Target Forecast	61,500	5,892,000	1,345,700	7,299,300	6,083
Stormwater: Separated Sewer System	Service Target Forecast	4,648,000	1,324,600	1,497,500	7,470,100	9,386
Water and Wastewater	Service Target Forecast	4,709,500	3,288,600	2,260,100	10,258,200	15,469

<sup>[1]</sup> Square Foot Per Employee Assumptions:

Industrial	1,200
Commercial/Population-Related	400
Institutional	680

<sup>[2]</sup> Forecast institutional employment and gross floor area has been adjusted downward to account for employment associated with special care units.

<sup>[3]</sup> Employment increase does not include no fixed place of work.

Note: Reflects service target forecast period.

Note: Numbers may not add precisely due to rounding.

Source: Watson & Associates Economists Ltd.



Schedule 10  
City of Hamilton  
Employment Categories by Major Employment Sector

NAICS		Comments
<b>Employment Category by Industry</b>		
	<b><u>Primary Industry Employment</u></b>	Categories which relate to local land-based resources
11	<i>Agriculture, forestry, fishing and hunting</i>	
21	<i>Mining and oil and gas extraction</i>	
	<b><u>Industrial and Other Employment</u></b>	Categories which relate primarily to industrial land supply and demand
22	<i>Utilities</i>	
23	<i>Construction</i>	
31-33	<i>Manufacturing</i>	
41	<i>Wholesale trade</i>	
48-49	<i>Transportation and warehousing</i>	
56	<i>Administrative and support</i>	
	<b><u>Population Related Employment</u></b>	Categories which relate primarily to population growth within the municipality
44-45	<i>Retail trade</i>	
51	<i>Information and cultural industries</i>	
52	<i>Finance and insurance</i>	
53	<i>Real estate and rental and leasing</i>	
54	<i>Professional, scientific and technical services</i>	
55	<i>Management of companies and enterprises</i>	
56	<i>Administrative and support</i>	
71	<i>Arts, entertainment and recreation</i>	
72	<i>Accommodation and food services</i>	
81	<i>Other services (except public administration)</i>	
	<b><u>Institutional</u></b>	
61	<i>Educational services</i>	
62	<i>Health care and social assistance</i>	
91	<i>Public administration</i>	

Note: Employment is classified by North American Industry Classification System (NAICS) Code.  
Source: Watson & Associates Economists Ltd.





# Appendix B

## Level of Service



## Appendix B: Level of Service

SUMMARY OF SERVICE STANDARDS AS PER DEVELOPMENT CHARGES ACT, 1997, AS AMENDED							
Service Category	Sub-Component	15 Year Average Service Standard					Maximum Ceiling LOS
		Cost (per capita)	Quantity (per capita)		Quality (per capita)		
Service Related to a Highway	Services Related to a Highway - Roads	\$41,962.40	0.0081	lane km of roadways	5,180,543	per km	1,769,008,897
	Services Related to a Highway - Bridges, Culverts & Structures	\$4,185.47	0.0006	Number of Bridges, Culverts & Structures	6,975,783	per item	176,446,859
	Services Related to a Highway - Traffic Signals	\$343.47	0.0010	No. of Traffic Signals	343,470	per signal	14,479,665
Public Works	Public Works - Facilities	\$840.56	1.5673	sq.ft. of building area	536	per sq.ft.	52,229,036
	Public Works - Vehicles & Equipment	\$242.15	0.0022	No. of vehicles and equipment	110,068	per vehicle	15,046,232
Fire Protection	Fire Protection Services - Facilities	\$370.08	0.4759	sq.ft. of building area	778	per sq.ft.	22,995,291
	Fire Protection Services - Vehicles & Equipment	\$176.77	0.0002	No. of vehicles	883,850	per vehicle	10,983,781
	Fire Protection Services - Small Equipment and Gear	\$43.22	0.0086	No. of equipment and gear	5,026	per item	2,685,518
Policing	Policing Services - Facilities	\$694.60	0.6125	sq.ft. of building area	1,134	per sq.ft.	43,159,666
	Policing Services - Vehicles	\$41.71	0.0005	No. of vehicles and equipment	83,420	per vehicle	2,591,693
	Policing Services - Small Equipment and Gear	\$28.60	0.0018	No. of equipment and gear	15,889	per item	1,777,090
Parks & Recreation	Parkland Development	\$567.87	0.0113	Acres of Parkland	50,254	per acre	35,285,170
	Parkland Amenities	\$629.45	0.0335	No. of parkland amenities	18,790	per amenity	39,111,505
	Parkland Amenities - Buildings	\$15.20	0.1098	sq.ft. of building area	138	per sq.ft.	944,467



**SUMMARY OF SERVICE STANDARDS AS PER DEVELOPMENT CHARGES ACT, 1997, AS AMENDED**

Service Category	Sub-Component	15 Year Average Service Standard					Maximum Ceiling LOS
		Cost (per capita)		Quantity (per capita)	Quality (per capita)		
Parks & Recreation	Parkland Trails	\$29.99	0.0001	Linear Kilometres of Paths and Trails	299,900	per linear m	1,863,459
	Parks Equipment	\$0.33	0.0001	No. of equipment	6,600	per vehicle	20,505
	Recreation Facilities	\$3,634.39	4.0864	sq.ft. of building area	889	per sq.ft.	225,826,457
	Indoor Recreation Facilities - Buildings Withing Parks	\$114.74	0.4287	sq.ft. of building area	268	per sq.ft.	7,129,485
	Recreation Equipment	\$0.69	0.0001	No. of equipment	6,900	per vehicle	42,874
Library	Library Services - Facilities	\$732.17	0.7107	sq.ft. of building area	1,030	per sq.ft.	45,494,115
	Library Services - Collection Materials	\$87.99	2.0247	No. of library collection items	43	per collection item	5,467,347
	Library Services - Vehicles	\$3.28	0.0000	No. of equipment	328,000	per vehicle	203,806
Ambulance	Ambulance Facilities	\$90.41	0.1108	sq.ft. of building area	816	per sq.ft.	5,617,716
	Ambulance Vehicles	\$40.76	0.0006	No. of vehicles and equipment	67,933	per vehicle	2,532,663
Long-term Care	Long-term Care Facilities	\$577.53	0.6464	sq.ft. of building area	893	per sq.ft.	35,885,404
Childcare	Child Care and Early Years Programs - Facilities	\$47.78	0.0638	sq.ft. of building area	749	per sq.ft.	2,968,858
Provincial Offences Act	POA Facilities	\$43.07	0.0577	sq.ft. of building area	746.4471	per sq.ft.	2,676,198
Public Health	Public Health - Facilities	\$106.33	0.1913	sq.ft. of building area	556	per sq.ft.	6,606,921
	Public Health - Vehicles & Equipment	\$1.21	0.000002	No. of Vehicles and Equipment	605,000	per vehicle	75,185
Waste Diversion	Waste Diversion - Facilities	\$465.14	0.7840	sq.ft. of building area	593	per sq.ft.	28,901,939
	Waste Diversion - Vehicles & Equipment	\$103.57	0.0004	No. of vehicles and equipment	258,925	per vehicle	6,435,426
	Waste Diversion - Carts & Containers	\$20.95	1.4724	No. of items	14	per item	1,301,749



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Services Related to a Highway - Roads  
Unit Measure: lane km of roadways

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/lane km)
<b>Roads (lane km):</b>																
Rural Arterial	167	166	165	164	164	164	173	183	180	180	180	180	182	185	185	\$2,540,000
Rural Collector	1,193	1,193	1,193	1,193	1,193	1,193	1,193	1,193	1,193	1,193	1,193	1,197	1,197	1,197	1,197	\$5,360,000
Urban Collector	786	800	814	829	819	819	819	810	816	819	826	830	830	830	830	\$6,933,000
Urban Arterial Minor	421	412	403	395	393	393	393	393	393	393	393	394	394	394	395	\$4,992,000
Urban Arterial Major	955	958	962	965	965	965	976	987	952	961	963	974	974	974	981	\$4,616,000
Expressway	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	\$15,291,000
Provision for Sidewalks/Signalization/Boulevards/ etc. 20% of Urban and Industrial	475	488	489	491	491	491	491	491	486	488	490	498	498	498	498	\$2,645,000
<b>Active Transportation:</b>																
Bicycle Lanes (on road)	55	63	74	85	98	117	129	142	156	170	196	208	217	224	231	\$1,360,094
Cycle Track (Barrier)	-	-	-	-	-	-	-	2	10	10	10	21	25	29	30	\$500,000
Multi-use Trails (Commuter)	15	15	15	16	16	16	17	18	18	19	19	20	20	22	22	\$750,000
Expanded Paved Shoulders on Rural Roads for Cycling	10	10	11	11	11	11	11	11	11	11	11	11	11	11	11	\$3,683,617
<b>Total</b>	<b>4,210</b>	<b>4,238</b>	<b>4,259</b>	<b>4,282</b>	<b>4,283</b>	<b>4,302</b>	<b>4,335</b>	<b>4,363</b>	<b>4,349</b>	<b>4,378</b>	<b>4,415</b>	<b>4,465</b>	<b>4,480</b>	<b>4,496</b>	<b>4,513</b>	

Population	511,412	514,740	515,591	519,949	522,611	526,896	529,744	533,698	536,918	543,294	549,623	555,599	562,453	569,353	578,957
Per Capita Standard	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008

15 Year Average	2008-2022
Quantity Standard	0.0081
Quality Standard	\$5,180,543
Service Standard	\$41,962

D.C. Amount (before deductions)	Service Target
Forecast Population	42,157
\$ per Capita	\$41,962
Eligible Amount	\$1,769,008,897



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Services Related to a Highway - Bridges, Culverts & Structures  
Unit Measure: Number of Bridges, Culverts & Structures

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/item)
Bridges	253	259	265	270	276	270	276	282	193	162	167	166	166	166	166	\$9,570,000
Culverts	123	122	121	119	118	119	118	117	117	117	117	117	117	117	117	\$822,000
Wilson at Meadowbrook (Ancaster) Roundabout	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$1,350,000
Wilson at Shaver (Ancaster) Roundabout	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$3,380,000
Binbrook at Fall Fair Way (Binbrook) Roundabout	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$845,000
Binbrook at Pumpkin Pass (Binbrook) Roundabout	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$1,350,000
<b>Total</b>	<b>380</b>	<b>385</b>	<b>389</b>	<b>394</b>	<b>398</b>	<b>394</b>	<b>398</b>	<b>403</b>	<b>314</b>	<b>283</b>	<b>288</b>	<b>287</b>	<b>287</b>	<b>287</b>	<b>287</b>	

Population	511,412	514,740	515,591	519,949	522,611	526,896	529,744	533,698	536,918	543,294	549,623	555,599	562,453	569,353	578,957
Per Capita Standard	0.0007	0.0007	0.0008	0.0008	0.0008	0.0007	0.0008	0.0008	0.0006	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005

15 Year Average	2008-2022
Quantity Standard	0.0006
Quality Standard	\$6,975,783
Service Standard	\$4,185

D.C. Amount (before deductions)	Service Target
Forecast Population	42,157
\$ per Capita	\$4,185
Eligible Amount	\$176,446,859



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Services Related to a Highway - Traffic Signals  
Unit Measure: No. of Traffic Signals

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/item)
Full Signals (# of units)	413	424	435	446	446	446	457	468	483	491	501	509	524	543	554	\$355,000
Pedestrian Signals (# of units)	45	51	58	64	64	64	70	77	81	85	88	90	98	102	109	\$213,000
<b>Total</b>	<b>458</b>	<b>475</b>	<b>493</b>	<b>510</b>	<b>510</b>	<b>510</b>	<b>527</b>	<b>545</b>	<b>564</b>	<b>576</b>	<b>589</b>	<b>599</b>	<b>622</b>	<b>645</b>	<b>663</b>	

Population	511,412	514,740	515,591	519,949	522,611	526,896	529,744	533,698	536,918	543,294	549,623	555,599	562,453	569,353	578,957
Per Capita Standard	0.0009	0.0009	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0011	0.0011	0.0011	0.0011	0.0011	0.0011	0.0011

15 Year Average	2008-2022
Quantity Standard	0.0010
Quality Standard	\$343,470
Service Standard	\$343

D.C. Amount (before deductions)	Service Target
Forecast Population	42,157
\$ per Capita	\$343
Eligible Amount	\$14,479,665



**City of Hamilton  
Service Standard Calculation Sheet**

Class of Service: Public Works - Facilities  
Unit Measure: sq.ft. of building area

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Bld'g Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
<b>Stoney Creek</b>																	
Operations Centre (349 Jones Rd.)	44,185	44,185	44,185	44,185	44,185	44,185	44,185	44,185	44,185	44,185	44,185	44,186	44,186	44,186	44,186	\$430	\$547
Operations Centre (345 Jones Rd.)	2,773	2,773	2,773	2,773	2,773	2,773	2,773	2,773	2,773	2,773	2,773	2,773	2,773	2,773	2,773	\$589	\$1,281
Animal Control Facility (245 Dartnall Rd.)	-	24,468	24,468	24,468	24,468	24,468	24,468	24,468	24,468	24,468	24,468	24,468	24,468	24,468	24,468	\$430	\$514
Stoney Creek Operations Centre - Salt Building (349 Jones Rd.)	5,549	5,549	5,549	5,549	5,549	5,549	5,549	5,549	7,200	7,200	7,200	7,200	7,200	7,200	7,200	\$395	\$507
Stoney Creek Operations Centre - Sand Building (349 Jones Rd.)	12,600	12,600	12,600	12,600	12,600	12,600	12,600	12,600	12,600	12,600	12,600	12,600	12,600	12,600	12,600	\$395	\$476
Tapleystown, Storage (119 Tapleystown Rd.)	12,366	12,366	12,366	12,366	12,366	12,366	12,366	12,366	12,366	12,366	12,366	12,366	-	-	-	\$273	\$342
Tapleystown, Sand Hut (119 Tapleystown Rd.)	1,027	1,027	1,027	1,027	1,027	1,027	1,027	1,027	1,027	1,027	1,027	1,052	1,052	1,052	1,052	\$273	\$342
Tapleystown, Salt Dome (119 Tapleystown Rd.)	6,913	6,913	6,913	6,913	6,913	6,913	6,913	6,913	6,913	6,913	6,913	6,913	6,913	6,913	6,913	\$395	\$476
Stoney Creek Storage Building & Workshop (77 King St. W.)	5,829	5,829	5,829	5,829	5,829	5,829	5,829	5,829	5,829	5,829	-	-	-	-	-	\$273	\$342
Heritage Green Equipment Storage (355 First Rd. W.)	-	-	-	-	-	-	-	-	-	5,167	5,167	5,167	5,167	5,167	5,167	\$273	\$342
<b>Ancaster</b>																	
Vehicle Storage Garage (334 Wilson St. E)	5,432	5,432	5,432	5,432	5,432	5,432	-	-	-	-	-	-	-	-	-	\$537	\$633
Operations New Garage (501 Shaver Rd.)	21,861	21,861	21,861	21,861	21,861	21,861	21,861	21,861	21,861	21,861	21,861	21,861	21,861	21,861	21,861	\$537	\$633
Operations Old Garage (501 Shaver Rd.)	8,092	8,092	8,092	8,092	8,092	8,092	8,092	8,092	8,092	8,092	8,092	8,092	8,092	8,092	8,092	\$624	\$729
Operations New Offices (501 Shaver Rd.)	3,634	3,634	3,634	3,634	3,634	3,634	3,634	3,634	3,634	3,634	3,634	3,634	3,634	3,634	3,634	\$624	\$729
Ancaster Operations - Sand Hut (501 Shaver Rd.)	4,880	4,880	4,880	4,880	4,880	4,880	4,880	4,880	4,880	4,880	4,880	4,880	4,880	4,880	4,880	\$395	\$476



**City of Hamilton  
Service Standard Calculation Sheet**

Class of Service: Public Works - Facilities  
Unit Measure: sq.ft. of building area

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Bld'g Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
Fiddler's Green Maintenance Yard, Shop/ Garage (1104 Fiddler's Green Rd.)	12,128	12,128	12,128	12,128	12,128	12,128	12,128	12,128	12,128	12,128	-	-	-	-	-	\$537	\$633
Fiddler's Green Maintenance Yard, Sand Hut (1104 Fiddler's Green Rd.)	1,156	1,156	1,156	1,156	1,156	1,156	1,156	1,156	-	-	-	-	-	-	-	\$273	\$342
Fiddler's Green Maintenance Yard, Salt Dome (1104 Fiddler's Green Rd.)	5,806	5,806	5,806	5,806	5,806	5,806	5,806	-	-	-	-	-	-	-	-	\$395	\$476
<b>Dundas</b>																	
Dundas Physical Services - Storage Building - A (135 King St. E.)	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	\$273	\$342
Dundas Physical Services - Storage Building - B (135 King St. E.)	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	\$273	\$342
King St. Public Works Facility (189 King St. E.)	6,874	6,874	6,874	6,874	6,874	6,874	6,874	6,874	6,874	6,874	6,874	6,874	6,874	6,874	6,874	\$747	\$864
Sand Hut (189 King St. E.)	2,546	2,546	2,546	2,546	2,546	2,546	-	-	-	-	-	-	-	-	-	\$110	\$162
Salt Dome (189 King St. E.)	1,661	1,661	1,661	1,661	1,661	1,661	-	-	-	-	-	-	-	-	-	\$110	\$162
New Salt/Salt Quonset, (189 King St. E.)	-	-	-	-	-	-	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	9,600	\$110	\$162
Paint Shop - Dundas Driving Park (Cross St.)	2,808	2,808	2,808	2,808	2,808	2,808	2,808	2,808	2,808	2,808	2,808	2,808	2,808	2,808	2,808	\$551	\$648
Works Bldg - Dundas Driving Park (Cross St.)	3,053	3,053	3,053	3,053	3,053	3,053	3,053	3,053	3,053	3,053	3,053	3,053	3,053	3,053	3,053	\$551	\$648
<b>Glanbrook</b>																	
Airport Road (Building), Yard #2 (7098 Airport Rd.)	5,539	5,539	5,539	5,539	5,539	5,539	5,539	5,539	5,539	5,539	5,539	5,539	5,539	5,539	5,539	\$551	\$649
Airport Road, Mount Hope Rd. Shed, Yard #2 (7098 Airport Rd.)	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	\$395	\$476
Glanbrook Yard #1 (Maintenance Shop/Garage), 2111 Binbrook Dr.	5,509	5,509	5,509	5,509	5,509	5,509	5,509	5,509	5,509	5,509	5,509	5,509	5,509	5,509	5,509	\$551	\$649





**City of Hamilton  
Service Standard Calculation Sheet**

Class of Service: Public Works - Facilities  
Unit Measure: sq.ft. of building area

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Bld'g Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
Glanbrook Yard #1 (Storage Bldg.) (2111 Binbrook Dr.)	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	\$273	\$342
Glanbrook Yard #1 (Sand/Salt) (2111 Binbrook Dr.)	2,539	2,539	2,539	2,539	2,539	2,539	2,539	2,539	2,539	2,539	2,539	2,539	2,539	2,539	2,539	\$110	\$162
<b>Flamborough</b>																	
Centre Road Block (Building) (1255 Centre Rd.)	5,538	5,538	5,538	5,538	5,538	-	-	-	-	-	-	-	-	-	-	\$430	\$640
Centre Road Steel (Building) (1255 Centre Rd.)	1,579	1,579	1,579	1,579	1,579	-	-	-	-	-	-	-	-	-	-	\$430	\$640
Brock Road Shed (Building) (867 4th Concession Rd. W.)	10,925	10,925	10,925	10,925	10,925	10,925	10,925	10,925	10,925	10,925	10,925	10,925	10,925	10,925	10,925	\$346	\$422
Brock Road Steel (Building) (867 4th Concession Rd. W.)	1,549	1,549	1,549	1,549	1,549	1,549	1,549	1,549	1,549	1,549	1,549	1,549	1,549	1,549	-	\$273	\$532
Brock Road (Salt storage building) (867 4th Concession Rd. W.)	-	4,811	4,811	4,811	4,811	4,811	4,811	4,811	4,811	4,811	4,811	4,811	4,811	4,811	4,811	\$110	\$162
Millgrove Yard #1, Maintenance Shop/Garage (594 5th Concession Rd., W.)	11,158	11,158	11,158	11,158	11,158	11,158	11,158	-	-	-	-	-	-	-	-	\$537	\$633
Millgrove Yard #1, Salt Dome (594 5th Concession Rd., W.)	6,361	6,361	6,361	6,361	6,361	6,361	6,361	-	-	-	-	-	-	-	-	\$110	\$162
Rockton Yard #2, Maint. Shop/Garage (810 Woodhill Rd.)	7,176	7,176	7,176	7,176	7,176	7,176	7,176	7,176	7,176	7,176	7,176	7,176	7,176	7,176	7,176	\$551	\$649
Rockton Yard #2, Salt Dome (810 Woodhill Rd.)	6,324	6,324	6,324	6,324	6,324	6,324	6,324	6,324	6,324	6,324	6,324	6,324	6,324	6,324	6,324	\$395	\$476
Joe Sam's Works Yard - Pole Barn Storage for Public Works	-	14,406	14,406	14,406	14,406	14,406	14,406	14,406	14,406	14,406	14,406	14,406	14,406	14,406	14,406	\$407	\$489
Joe Sam's Works Yard - Storage Building	-	14,836	14,836	14,836	14,836	14,836	14,836	14,836	14,836	14,836	14,836	14,836	14,836	14,836	14,836	\$407	\$489
<b>Hamilton</b>																	
CN Building (Storage) (241 Stuart St.)	75,390	75,390	-	-	-	-	-	-	-	-	-	-	-	-	-	\$273	\$342



**City of Hamilton  
Service Standard Calculation Sheet**

Class of Service: Public Works - Facilities  
Unit Measure: sq.ft. of building area

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Bld'g Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
Arvin Yard (Water) (911 Arvin Ave.)	7,355	7,355	7,355	7,355	7,355	7,355	7,355	7,355	7,355	7,355	7,355	7,355	-	-	-	\$273	\$342
Arvin Yard Cold Storage (911 Arvin Ave.)	-	-	-	-	-	4,523	4,523	4,523	4,523	4,523	4,523	4,523	-	-	-	\$537	\$633
Bernie Court Yard, Maintenance Shop/Garage (308 Rymal Rd.)	20,720	20,720	20,720	20,720	20,720	20,720	20,720	20,720	20,720	20,720	20,720	20,720	20,720	20,720	20,720	\$529	\$624
Bernie Court Yard Garage	665	665	665	665	665	665	665	665	665	665	665	665	665	665	665	\$537	\$633
Bernie Court Yard Sand Hut	588	588	588	588	588	4,796	4,796	4,796	4,796	4,796	4,796	4,796	4,796	4,796	4,796	\$110	\$162
Bernie Court Yard, Salt Dome (308 Rymal Rd.)	4,880	4,880	4,880	4,880	4,880	4,880	4,880	4,880	4,880	4,880	4,880	4,880	4,880	4,880	4,880	\$395	\$476
Bernie Court Yard, Large Garage (308 Rymal Rd.)	10,576	10,576	10,576	10,576	10,576	10,576	10,576	10,576	10,576	10,576	10,576	10,576	10,576	10,576	10,576	\$407	\$489
Bernie Court Yard, Storage Barn (308 Rymal Rd.)	8,866	8,866	8,866	8,866	8,866	8,866	8,866	8,866	8,866	8,866	8,866	8,866	8,866	8,866	8,866	\$553	\$651
Bernie Court Yard, Butler Building (308 Rymal Rd.)	-	-	-	-	-	-	-	-	-	-	-	-	665	665	665	\$168	\$226
Brampton Yard, Office (2200 Brampton St.)	3,464	3,464	3,464	3,464	3,464	3,464	3,464	3,464	3,464	3,464	3,464	3,464	3,464	3,464	3,464	\$1,096	\$1,249
Brampton Yard, Quonset (2200 Brampton St.)	1,656	1,656	1,656	1,656	1,656	1,656	1,656	1,656	1,656	1,656	1,656	1,656	1,656	1,656	1,656	\$551	\$649
Brampton Yard, Salt Dome (2200 Brampton St.)	4,796	4,796	4,796	4,796	4,796	4,796	4,796	4,796	4,796	4,796	4,796	4,796	4,796	4,796	4,796	\$395	\$476
Brampton Yard, Storage Building (2200 Brampton St.)	3,464	3,464	3,464	3,464	3,464	3,464	3,464	3,464	3,464	3,464	3,464	3,464	3,464	3,464	-	\$273	\$1,317
Barton Yard, Storage/Office/Shop (125 Barton St. W.)	60,632	60,632	60,632	60,632	60,632	60,632	60,632	60,632	60,632	60,632	60,632	60,632	60,632	60,632	60,632	\$393	\$474
Barton Yard, Carpenter's Shop (125 Barton St. W.)	13,453	13,453	13,453	13,453	13,453	13,453	13,453	13,453	13,453	13,453	13,453	13,453	-	-	-	\$661	\$769
Chedoke Yard, Salt Dome (161 Studholme Rd.)	2,975	2,975	2,975	2,975	2,975	2,975	2,975	2,975	2,975	2,975	2,975	2,975	2,975	2,975	2,975	\$395	\$476
Chedoke Yard, Operations Centre (161 Studholme Rd.)	9,947	9,947	9,947	9,947	9,947	9,947	9,947	9,947	9,947	9,947	9,947	9,947	-	-	-	\$551	\$649
Chedoke Yard, Garage/Fuel Building (161 Studholme Rd.)	15,216	15,216	15,216	15,216	15,216	15,216	15,216	15,216	15,216	15,216	15,216	15,216	15,216	15,216	15,216	\$564	\$663



**City of Hamilton  
Service Standard Calculation Sheet**

Class of Service: Public Works - Facilities  
Unit Measure: sq.ft. of building area

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Bld'g Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
Forestry Depot, Maintenance Shop/Garage (1301 Upper Ottawa)	7,185	7,185	7,185	7,185	7,185	7,185	7,185	7,185	15,382	15,382	15,382	15,382	15,382	15,382	15,382	\$551	\$649
Forestry Depot, Quonset (1301 Upper Ottawa)	3,129	3,129	3,129	3,129	3,129	3,129	3,129	3,129	3,129	3,129	3,129	3,129	-	-	-	\$273	\$342
Forestry Depot, Storage Bldg. (1301 Upper Ottawa)	4,219	4,219	4,219	4,219	4,219	4,219	4,219	4,219	4,219	4,219	4,219	4,219	4,219	4,219	4,219	\$395	\$476
Gage Park Greenhouse #8/Production (1000 Main St. E.)	6,090	6,090	6,090	6,090	6,090	6,090	6,090	6,090	6,090	6,090	6,090	-	-	-	-	\$538	\$634
Gage Park Potting Shed (1000 Main St. E.)	3,120	3,120	3,120	-	-	-	-	-	-	-	-	-	-	-	-	\$273	\$342
Gage Park Boilerhouse (1000 Main St. E.)	-	575	575	575	575	575	575	575	575	575	575	575	575	575	575	\$273	\$342
Traffic Operations Centre (1375 Upper Ottawa)	52,017	52,017	52,017	52,017	52,017	52,017	52,017	52,017	52,017	52,017	52,017	52,017	52,017	52,017	52,017	\$430	\$514
Upper Ottawa Salt Shed (1199 Upper Ottawa)	6,640	6,640	6,640	6,640	6,640	11,187	11,187	11,187	11,187	11,187	11,187	11,187	11,187	11,187	11,187	\$395	\$476
WSOC - Wentworth Street Operation Centre (330 Wentworth St. N)	263,488	263,488	263,488	263,488	263,488	263,488	263,488	263,488	263,488	263,488	263,488	263,488	263,488	263,488	263,488	\$479	\$569
330 Wentworth St. perations Centre - Salt/Sand Dome	-	11,263	11,263	11,263	11,263	11,263	11,263	11,263	11,263	11,263	11,263	11,263	11,263	11,263	11,263	\$110	\$162
Hamilton City Centre (77 James St. N., Suite 400)	-	37,603	37,603	37,603	37,603	37,603	37,603	37,603	37,603	37,603	37,603	37,603	37,603	37,603	37,603	\$273	\$342
<b>Shipping Containers:</b>																	
Hamilton - Mohawk Sports Park (Bernie Arbour Stadium) (685 Upper Kenilworth Avenue)	-	-	160	160	160	320	320	320	320	320	320	320	320	320	320	\$56	\$102
Heritage Green Sports Park, Stoney Creek (341 First Road W.)	-	160	160	160	160	160	160	160	160	160	160	160	160	160	160	\$56	\$102
Jones Road Yard, Stoney Creek (345 Jones Rd.)	-	-	-	-	-	-	-	-	160	160	160	160	160	160	160	\$56	\$102
Gage Park, Hamilton (1000 Main St. E.)	-	-	-	160	160	320	320	320	320	320	320	320	320	320	320	\$56	\$102



**City of Hamilton  
Service Standard Calculation Sheet**

Class of Service: Public Works - Facilities  
Unit Measure: sq.ft. of building area

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Bld'g Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
Wentworth Street Operations Centre, Hamilton (330 Wenworth St. N.)	-	160	160	160	160	160	160	160	480	480	480	480	480	480	480	\$56	\$102
Bernie Court Yard, Hamilton (308 Rymal Road East)	-	-	-	-	-	-	-	-	320	320	320	320	320	320	320	\$56	\$102
Chedoke Yard, Hamilton (161 Studholme Road)	-	640	640	640	800	800	800	800	800	800	800	800	800	800	800	\$56	\$102
Dundas Yard, Dundas (189 King St E)	-	-	-	-	-	-	-	-	640	640	640	640	640	640	640	\$56	\$102
Shaver Yard, Ancaster (501 Shaver Rd.)	-	-	-	-	-	-	-	-	320	320	320	320	320	320	320	\$56	\$102
<b>Land Only:</b>																	
Old Rheem Property Snow Dump (128 Barton St.) (land only, 4.06 acres)	-	-	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06		\$509,000
<b>Total</b>	<b>829,773</b>	<b>938,696</b>	<b>863,470</b>	<b>860,510</b>	<b>860,670</b>	<b>867,151</b>	<b>867,112</b>	<b>843,787</b>	<b>854,239</b>	<b>859,405</b>	<b>841,448</b>	<b>811,983</b>	<b>785,276</b>	<b>785,276</b>	<b>742,659</b>		

Population	511,412	514,740	515,591	519,949	522,611	526,896	529,744	533,698	536,918	543,294	549,623	555,599	562,453	569,353	578,957
Per Capita Standard	1.6225	1.8236	1.6747	1.6550	1.6469	1.6458	1.6369	1.5810	1.5910	1.5818	1.5310	1.4615	1.3962	1.3792	1.2828

15 Year Average	2008-2022
Quantity Standard	1.5673
Quality Standard	\$536
Service Standard	\$841

D.C. Amount (before deductions)	10 Year
Forecast Population	62,136
\$ per Capita	\$841
Eligible Amount	\$52,229,036



**City of Hamilton  
Service Standard Calculation Sheet**

Class of Service: Public Works - Vehicles & Equipment  
Unit Measure: No. of vehicles and equipment

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/Vehicle)
<b>Shared Vehicles: Water Services, Wastewater Services, Stormwater Services and Services Related to a Highway</b>																
021-1/2 T PICK UP	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	\$40,800
124-SUV 4X4	-	-	-	-	-	1	1	1	1	-	-	-	-	5	5	\$53,600
012-TRAILER SINGLE AXLE	-	-	-	-	-	-	-	-	-	-	-	2	2	1	1	\$9,400
015C-POST HOLE DIGGER - 3 PT	-	-	-	-	-	1	1	1	1	1	1	-	-	-	-	\$13,400
017X - EXT.USE HYBRID VEHICLES	-	-	-	-	-	-	-	-	-	-	-	1	1	1	2	\$44,200
018-CARS COMPACT	-	-	-	-	-	2	1	1	1	1	1	1	1	-	-	\$33,500
018X-EXT USE CAR COMPACT	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	\$36,200
019-CARS FULL SIZE	-	-	-	-	-	-	-	1	-	1	1	-	-	-	-	\$42,900
020-PICKUP TRUCK COMPACT	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	\$35,700
021-1/2 T PICK UP	-	-	-	-	-	-	-	-	-	-	-	-	-	6	7	\$40,800
021X-EXT. USE PICKUP 1/2 T	-	-	-	-	-	2	2	2	2	-	-	-	-	3	2	\$33,400
022-VAN 1/2 T	-	-	-	-	-	12	11	11	8	14	14	30	30	11	11	\$56,100
023-VAN 3/4 T	-	-	-	-	-	2	2	1	1	1	1	9	9	6	8	\$54,100
026C-CUBE VAN 1T	-	-	-	-	-	1	1	1	1	2	2	1	1	1	1	\$84,400
026-VAN 1 T	-	-	-	-	-	16	16	16	16	16	16	9	9	6	6	\$84,400
074-PICKUP TRUCK 1 T	-	-	-	-	-	1	1	1	1	1	1	-	-	-	-	\$67,000
084-TURF UTILITY VEH LESS \$20K VALUE	-	-	-	-	-	2	2	2	2	2	2	2	2	2	2	\$26,800
110-MOWER 7 GANG	-	-	-	-	-	1	-	-	-	1	1	-	-	-	-	\$53,600
121A-DMP 1T STD CAB W PLOW	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	\$73,800
122 - HOIST TRUCK FORESTRY	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	\$40,200
125-SWEEPER SIDEWALK	-	-	-	-	-	2	3	3	3	3	3	3	3	3	3	\$77,700
152H-ALUM. DUMP-HIGH MILEAGE	-	-	-	-	-	1	1	1	1	1	1	-	-	-	-	\$93,800
160-RAKE POWER RIDING SAND TRA	-	-	-	-	-	2	2	2	2	2	2	-	-	-	-	\$134,000
203-SCISSOR MANLIFT	-	-	-	-	-	4	3	3	2	3	3	5	5	5	5	\$26,800
090-AERIAL TRUCK FORESTRY	-	-	-	-	-	4	4	4	4	4	4	5	5	5	5	\$375,300



**City of Hamilton  
Service Standard Calculation Sheet**

Class of Service: Public Works - Vehicles & Equipment  
Unit Measure: No. of vehicles and equipment

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/Vehicle)
<b>Shared Vehicles: Water Services, Wastewater Services, Stormwater Services and Services Related to a Highway</b>																
017X-EXT.USE HYBRID VEHICLES	-	-	-	-	-	1	-	-	1	1	1	3	-	-	-	\$51,400
020X-EXT. USE PICKUP COMPACT	-	-	-	-	-	1	-	-	-	1	1	-	-	-	-	\$33,400
017-HYBRID VEHICLES	-	-	-	-	-	8	8	8	8	8	8	6	6	-	-	\$46,900
124C-2WD SUV	-	-	-	-	-	3	3	3	3	3	3	5	5	6	6	\$40,200
21 - 1/2 T PICK UP	-	-	-	-	-	-	-	-	-	1	1	1	2	2	2	\$45,600
124-SUV 4X4	-	-	-	-	-	-	-	-	-	-	-	-	-	10	10	\$35,700
021-1/2 T PICK UP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	\$37,500
150-ATT MISCELLANEOUS	-	-	-	-	-	4	2	2	2	5	5	-	-	1	1	\$13,400
015-POST POUNDERS	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	\$10,800
020-PICKUP TRUCK COMPACT	-	-	-	-	-	2	4	4	13	10	10	10	10	-	-	\$34,900
024-PICKUP TRUCK CREW CAB	-	-	-	-	-	1	1	1	1	1	1	1	1	-	-	\$57,600
026B-VAN 1TON WITH SHELIVING	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	\$84,400
026X-EXT. USE VAN 1 T	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	\$52,200
029-1.5T DUMP W/SPRAYER	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	\$95,600
031-DUMP MEDIUM W WATER TANK	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	\$130,400
043A-TRACTOR FARM TYPE-SMALL	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	\$73,700
043B-TRACTOR FARM TYPE - MED	-	-	-	-	-	1	2	1	3	8	8	6	6	-	-	\$73,700
043C-TRACTOR FARM TYPE - LRG	-	-	-	-	-	-	-	-	-	3	3	-	-	-	-	\$73,700
043D-TRACTOR FARM TYPE - XLRG	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	\$94,200
049-STEAM GENERATORS	-	-	-	-	-	8	8	8	5	4	4	5	5	-	-	\$15,300
065-RODDING MACHINE SEWER	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	\$14,400
067-WELDERS	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	\$21,800



**City of Hamilton  
Service Standard Calculation Sheet**

Class of Service: Public Works - Vehicles & Equipment  
Unit Measure: No. of vehicles and equipment

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/Vehicle)
<b>Shared Vehicles: Water Services, Wastewater Services, Stormwater Services and Services Related to a Highway</b>																
073B-3/4TPU PLOW TGATE DUMP	-	-	-	-	-	1	1	1	1	1	1	-	-	-	-	\$51,000
074A-1 T PICKUP W/PLOW	-	-	-	-	-	2	2	2	2	2	2	1	1	1	1	\$67,000
153X-EXT. USE MINI VAN	-	-	-	-	-	2	-	-	-	-	-	-	-	-	1	\$93,800
022X-EXT.USE VAN 1/2 T	-	-	-	-	-	-	-	-	-	1	1	1	1	2	1	\$55,000
124 - SUV 4X4	-	-	-	-	-	-	-	-	-	-	-	3	3	3	3	\$37,900
074X-EXT. USE PICK UP 1 T	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	\$55,000
202R-RECYCLE FORKLIFT RENTAL	-	-	-	-	-	-	-	-	-	1	1	1	1	-	-	\$91,100
205-PLATFORM LADDER	-	-	-	-	-	-	-	-	-	2	2	2	2	2	2	\$26,800
022-VAN 1/2 T	-	-	-	-	-	-	-	-	-	-	-	-	-	19	19	\$56,100
124C-2WD SUV	-	-	-	-	-	-	-	-	-	-	-	5	5	4	5	\$40,200
153-VAN MINI	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	\$33,700
<b>Emergency Preparedness</b>																
153-VAN MINI	-	-	-	-	-	5	4	4	4	4	4	5	5	2	2	\$40,600
124X-EXT.USE SUV 4X4	-	-	-	-	-	1	-	-	-	-	-	-	-	2	1	\$0
017X-EXT.USE HYBRID VEHICLES	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	\$35,700
020X-EXT. USE PICKUP COMPACT	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	\$26,500
073AX - Service Body-Utility Extended	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	\$82,100



**City of Hamilton  
Service Standard Calculation Sheet**

Class of Service: Public Works - Vehicles & Equipment  
Unit Measure: No. of vehicles and equipment

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/Vehicle)
<b>Shared Vehicles: Parks Services and Services Related to a Highway</b>						-	-	-	-	-	-	-	-	-	-	\$0
017X - EXT.USE HYBRID VEHICLES	-	-	-	-	-	60	61	61	57	45	45	12	12	-	1	\$44,200
005-ANTI-ICE TANDEM TRUCK	-	-	-	-	-	1	1	1	1	1	1	1	-	-	-	\$241,300
012A-TRAILER,SINGLE AXLE, SMALL	-	-	-	-	-	1	1	1	1	1	1	-	-	-	-	\$9,400
017-HYBRID VEHICLES	-	-	-	-	-	-	2	3	3	3	3	1	1	1	1	\$46,900
017X - EXT.USE HYBRID VEHICLES	-	-	-	-	-	-	-	-	-	-	-	1	1	1	2	\$44,200
018-CARS COMPACT	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	\$33,500
020-PICKUP TRUCK COMPACT	-	-	-	-	-	-	-	1	4	4	4	2	2	2	2	\$34,900
021-1/2 T PICK UP	-	-	-	-	-	-	13	13	13	14	14	16	16	15	15	\$40,800
021X-EXT. USE PICKUP 1/2 T	-	-	-	-	-	-	-	-	-	2	2	-	-	-	2	\$30,800
023-VAN 3/4 T	-	-	-	-	-	-	-	1	1	1	1	1	1	-	-	\$54,100
023X-EXT.USE VAN 3/4 T	-	-	-	-	-	-	-	-	-	1	1	1	1	1	-	\$71,000
034-LOADER FRONT END 1 CU YD	-	-	-	-	-	-	1	1	-	1	1	-	-	1	1	\$124,700
034A-LOADER FRT END 1YD 4WD	-	-	-	-	-	1	1	1	1	1	1	1	2	2	2	\$124,700
035-LOADER FRNT END LG ARTIC	-	-	-	-	-	1	1	1	1	1	1	1	1	1	1	\$274,800
035X - EXT LOADER FRNT END	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	\$315,800
043B-TRACTOR FARM TYPE - MED	-	-	-	-	-	-	-	1	-	1	1	-	-	-	-	\$73,700
072-AERIAL TRUCK TRAFFIC	-	-	-	-	-	-	-	-	-	1	1	1	1	2	2	\$375,000
073-PICKUP TRUCK 3/4 T	-	-	-	-	-	-	-	-	1	-	-	-	-	1	1	\$71,400
084-TURF UTILTY VEH LESS \$20K VALUE	-	-	-	-	-	-	1	1	1	1	1	2	2	2	2	\$26,800
088-CHIPPER WOOD	-	-	-	-	-	15	15	15	15	14	14	14	13	14	14	\$120,600
089-STUMPER TREE	-	-	-	-	-	1	1	1	2	3	3	3	2	2	2	\$81,600
090A-AERIAL TRUCK FORESTRY	-	-	-	-	-	1	1	1	1	1	1	6	6	6	6	\$375,300





**City of Hamilton  
Service Standard Calculation Sheet**

Class of Service: Public Works - Vehicles & Equipment  
Unit Measure: No. of vehicles and equipment

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/Vehicle)
<b>Shared Vehicles: Parks Services and Services Related to a Highway</b>						-	-	-	-	-	-	-	-	-	-	\$0
090-AERIAL TRUCK FORESTRY	-	-	-	-	-	-	1	1	1	1	1	1	1	-	-	\$375,300
090B-AERIAL TRUCK CHIPPER BOD	-	-	-	-	-	2	1	1	1	1	1	-	-	-	-	\$375,300
090C - Aerial Truck - Super Duty	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	\$757,900
098-MOWER FRONT MNT RIDING ROT	-	-	-	-	-	-	1	1	1	1	1	1	1	1	1	\$60,300
103-TRAILER TANDEM AXLE	-	-	-	-	-	1	5	5	5	5	5	5	5	5	5	\$16,100
103X - EXT.USE TANDEM TRAILER	-	-	-	-	-	-	-	-	-	-	-	2	2	-	-	\$12,600
122-HOIST TRUCK FORESTRY	-	-	-	-	-	2	2	2	5	5	5	5	5	5	5	\$306,000
124C-2WD SUV	-	-	-	-	-	-	-	-	1	2	2	2	3	3	3	\$40,200
126 - WATER TANK TRUCK MTD	-	-	-	-	-	-	-	-	-	-	-	2	2	2	2	\$176,900
126X - Water Tank Truck MTD Extended Service	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	\$176,900
137-TRAILER DUMP BOX	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	\$15,300
151A-ALU.DUMP PLOW&TCSIGN 1.5T	-	-	-	-	-	-	1	1	1	1	1	1	1	1	1	\$100,500
152A-ALUMINUM DUMP/CREW	-	-	-	-	-	-	5	7	6	2	2	2	2	4	4	\$93,800
152AR-ALUMINUM DUMP/CREW	-	-	-	-	-	-	-	-	-	3	3	3	3	2	2	\$93,800
152ARA-ALU.DUMP PLOW&TCSIGN 1.5T - ROADS	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	\$93,800
152ARR-ALUMINUM DUMP/CREW	-	-	-	-	-	-	-	-	-	2	2	2	2	1	1	\$93,800
155-DUMP STAKE CREW 1 T	-	-	-	-	-	-	4	8	8	3	3	-	-	-	-	\$93,800
155P-DUMP STAKE CREW 1 T	-	-	-	-	-	-	-	-	-	3	3	3	3	3	3	\$93,800
158-ARROW BOARDS	-	-	-	-	-	1	1	1	1	1	1	1	1	1	1	\$317,700
159A-CHIPPER TRUCK TANDEM	-	-	-	-	-	1	1	1	1	1	1	1	1	1	1	\$183,600
159C-CHIPPER TRUCK COMPACT	-	-	-	-	-	1	1	1	1	1	1	1	1	1	1	\$241,300
159-CHIPPER TRUCK	-	-	-	-	-	5	5	5	5	5	5	5	5	5	5	\$153,000
162 - DUMP STEEL CREW 1T	-	-	-	-	-	-	-	-	-	-	-	3	3	3	3	\$88,400
164-LOADER FRONT END 3/4 CU YD	-	-	-	-	-	1	1	1	1	1	1	1	1	-	-	\$150,100



**City of Hamilton  
Service Standard Calculation Sheet**

Class of Service: Public Works - Vehicles & Equipment  
Unit Measure: No. of vehicles and equipment

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/Vehicle)
<b>Shared Vehicles: Parks Services and Services Related to a Highway</b>						-	-	-	-	-	-	-	-	-	-	\$0
202-FORKLIFTS-SKID STEERS	-	-	-	-	-	-	1	1	1	1	1	1	1	1	1	\$91,100
202R-RECYCLE FORKLIFT RENTAL	-	-	-	-	-	-	-	-	-	1	1	1	1	-	-	\$91,100
202L - FORKLIFT LARGE	-	-	-	-	-	-	-	-	-	-	-	2	2	-	-	\$69,400
024X-EXT.USE P/U CREW CAB	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	\$43,900
074X-EXT. USE PICK UP 1 T	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	\$51,000
124CX - 2WD SUV Extended Service	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	\$30,600
150B-ATT DROP-IN SANDER	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	\$10,200
089AX-Stumper Tree Small Extended Service	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	\$81,600
<b>Parks &amp; Recreation Services</b>																\$0
161B-MOWER RIDING	-	-	-	-	-	7	7	7	6	5	5	4	3	5	5	\$134,000
161-MOWER ROTARY GANG RIDING	-	-	-	-	-	14	12	13	12	14	14	16	16	14	14	\$107,100
140X-EXT. USE ICE RESURFACER	-	-	-	-	-	-	-	-	-	3	3	3	3	4	4	\$126,300
140-ICE RESURFACER	-	-	-	-	-	24	24	23	23	24	24	24	24	24	24	\$127,300
161B-MOWER RIDING	-	-	-	-	-	-	-	-	1	1	1	2	2	-	-	\$56,100
124C-2WD SUV	-	-	-	-	-	1	1	1	1	1	1	1	1	1	1	\$40,200
073B-3/4TPU PLOW TGATE DUMP	-	-	-	-	-	1	1	1	1	1	1	-	-	-	-	\$67,000
074A-1 T PICKUP W/PLOW	-	-	-	-	-	2	2	2	2	2	2	1	1	1	1	\$67,000
124-SUV 4X4	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	\$53,600
073-PICKUP TRUCK 3/4 T	-	-	-	-	-	-	-	1	1	2	2	2	2	2	2	\$71,400
150-ATT MISCELLANEOUS	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	\$13,400
007C-MOWER WALK BEHIND GREENS	-	-	-	-	-	-	-	-	-	-	-	3	2	2	2	\$9,200
017-HYBRID VEHICLES	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	\$44,200
017X - EXT.USE HYBRID VEHICLES	-	-	-	-	-	-	-	-	-	-	-	3	-	3	-	\$44,200
021-1/2 T PICK UP	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	\$40,800



**City of Hamilton  
Service Standard Calculation Sheet**

Class of Service: Public Works - Vehicles & Equipment  
Unit Measure: No. of vehicles and equipment

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/Vehicle)
<b>Shared Vehicles: Parks Services and Services Related to a Highway</b>						-	-	-	-	-	-	-	-	-	-	\$0
022- VAN 1/2 T	-	-	-	-	-	4	4	4	3	3	3	1	4	1	1	\$41,200
023-VAN 3/4 T	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	\$67,000
025-TRUCK W/HYD TAILGATE	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	\$72,400
026-VAN 1 T	-	-	-	-	-	1	1	1	1	-	-	-	-	-	-	\$84,400
043A-TRACTOR FARM TYPE-SMALL	-	-	-	-	-	-	-	-	-	-	-	5	5	3	3	\$79,600
043C-TRACTOR FARM TYPE - LRG	-	-	-	-	-	-	-	-	-	-	-	2	2	1	1	\$73,700
066-MOWER RIDING FAIRWAY	-	-	-	-	-	-	-	-	-	-	-	-	1	11	11	\$60,300
074-PICKUP TRUCK 1 T	-	-	-	-	-	-	-	-	-	-	-	2	2	-	-	\$67,000
076-VACUUM LEAF	-	-	-	-	-	2	2	1	1	1	1	-	-	2	2	\$13,400
079-MOWER TRIPLEX	-	-	-	-	-	-	-	-	-	-	-	-	2	5	5	\$60,300
083-TURF UTILITY VEH OVER \$20K	-	-	-	-	-	-	-	-	-	-	-	5	5	6	6	\$40,800
97 - MOWER ROTARY TRIM	-	-	-	-	-	-	-	-	-	-	-	6	6	5	5	\$44,200
098-MOWER FRONT MNT RIDING ROT	-	-	-	-	-	-	-	-	-	-	-	5	6	-	-	\$60,300
103-TRAILER TANDEM AXLE	-	-	-	-	-	-	-	-	-	-	-	2	2	-	-	\$16,100
106-AERIFIER	-	-	-	-	-	-	-	-	-	-	-	2	2	3	3	\$26,800
106B-AERIFIER LARGE	-	-	-	-	-	-	-	-	-	-	-	3	3	1	1	\$53,600
124C - 2WD SUV	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	\$34,100
135-BLOWER LEAF LG PTO	-	-	-	-	-	-	-	-	-	-	-	1	1	3	3	\$13,400
137-TRAILER DUMP BOX	-	-	-	-	-	-	-	-	-	-	-	3	3	2	2	\$15,300
152-ALUMINUM DUMP/REG CAB	-	-	-	-	-	-	-	-	-	-	-	2	2	-	-	\$93,800
152PP-ALUM.DUMP CREW&PLOW - PARKS	-	-	-	-	-	-	-	-	-	-	-	1	2	-	-	\$93,800
027 - GOLF CART	-	-	-	-	-	-	-	-	-	-	-	-	-	5	5	\$10,200
102G-RIDE-ON WEED SPRAYER	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	\$40,800
105 - TOP DRESSER	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	\$20,400
153 - VAN MINI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	\$33,700
160 - RAKE POWER RIDING SAND TRA	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	\$40,800



**City of Hamilton  
Service Standard Calculation Sheet**

Class of Service: Public Works - Vehicles & Equipment  
Unit Measure: No. of vehicles and equipment

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/Vehicle)
<b>Shared Vehicles: Parks Services and Services Related to a Highway</b>						-	-	-	-	-	-	-	-	-	-	\$0
007A - MOWERS STAND-ON	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	\$8,900
007C-MOWER WALK BEHIND GREENS	-	-	-	-	-	6	5	5	5	8	8	8	8	3	4	\$9,400
017-HYBRID VEHICLES	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	\$46,900
017X - EXT.USE HYBRID VEHICLES	-	-	-	-	-	-	-	-	-	-	-	1	1	1	2	\$44,200
020-PICKUP TRUCK COMPACT	-	-	-	-	-	10	7	6	2	2	2	2	2	8	8	\$35,700
021-1/2 T PICK UP	-	-	-	-	-	-	-	-	-	-	-	-	-	18	18	\$40,800
021X-EXT. USE PICKUP 1/2 T	-	-	-	-	-	2	2	2	2	-	-	-	-	3	2	\$33,400
032-BEACH RAKE	-	-	-	-	-	1	1	1	1	1	1	1	1	1	1	\$120,600
043C-TRACTOR FARM TYPE - LRG	-	-	-	-	-	17	17	17	17	17	17	18	18	18	18	\$73,700
066-MOWER RIDING FAIRWAY	-	-	-	-	-	14	14	14	14	15	15	2	4	2	2	\$60,300
070 - Trailer/Boat/Motor	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	\$12,600
073A-SERVICE BODY-UTILITY	-	-	-	-	-	9	8	8	8	8	8	3	5	5	5	\$87,100
081A-LAWN MOWER SM ROT TOW BEH	-	-	-	-	-	5	5	5	5	5	5	5	5	5	5	\$13,400
081-MOWER TOW BEHIND ROTARY	-	-	-	-	-	1	1	1	1	1	1	5	5	5	5	\$26,800
083A-UTILITY VEH LARGE	-	-	-	-	-	1	1	1	1	-	-	1	1	1	1	\$134,000
083-TURF UTILITY VEH OVER \$20K VALUE	-	-	-	-	-	10	8	8	8	8	8	7	7	7	7	\$26,800
084-TURF UTILITY VEH LESS \$20K VALUE	-	-	-	-	-	16	16	16	16	16	16	16	16	17	17	\$26,800
098-MOWER FRONT MNT RIDING ROT	-	-	-	-	-	48	42	42	42	42	42	55	55	55	55	\$60,300
098X-EXT. USE MOWER FRONT MNT	-	-	-	-	-	1	-	-	-	2	2	2	2	2	2	\$27,600
102G-RIDE-ON WEED SPRAYER	-	-	-	-	-	2	2	2	2	2	2	-	-	1	1	\$53,600



**City of Hamilton  
Service Standard Calculation Sheet**

Class of Service: Public Works - Vehicles & Equipment  
Unit Measure: No. of vehicles and equipment

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/Vehicle)
<b>Shared Vehicles: Parks Services and Services Related to a Highway</b>						-	-	-	-	-	-	-	-	-	-	\$0
103B-TRAILER TANDEM ENCLOSED	-	-	-	-	-	2	2	2	2	2	2	2	2	2	2	\$16,100
103-TRAILER TANDEM AXLE	-	-	-	-	-	26	24	22	22	23	23	11	11	28	28	\$16,100
104-OVERSEEDER/RENOVATOR	-	-	-	-	-	4	4	4	4	4	4	4	4	3	3	\$26,800
105A-TOP DRESSER-LARGE	-	-	-	-	-	1	1	1	1	1	1	2	4	4	4	\$53,600
106A-AERIFIER, SMALL	-	-	-	-	-	7	6	7	7	8	8	8	8	9	9	\$13,400
106B-AERIFIER LARGE	-	-	-	-	-	2	2	2	2	2	2	1	1	1	1	\$53,600
109-TRAILER TRI-AXLE	-	-	-	-	-	2	2	2	2	2	2	2	2	2	2	\$16,100
135-BLOWER LEAF LG PTO	-	-	-	-	-	1	1	1	1	1	1	1	1	1	1	\$13,400
150B - ATT DROP-IN SANDER	-	-	-	-	-	-	-	-	-	-	-	5	10	10	10	\$12,600
151A-ALU.DUMP PLOW&TCSIGN 1.5T	-	-	-	-	-	2	1	1	1	1	1	1	1	1	1	\$100,500
152A-ALUMINUM DUMP/CREW	-	-	-	-	-	8	3	1	2	6	6	3	3	5	5	\$93,800
152-ALUMINUM DUMP/REG CAB	-	-	-	-	-	1	1	1	1	1	1	-	-	1	1	\$93,800
152PP-ALUM.DUMP CREW&PLOW - PARKS	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	\$60,300
155A-DUMP STAKE CREW 1T W/PLOW	-	-	-	-	-	1	-	-	-	-	-	-	-	1	1	\$93,800
155-DUMP STAKE CREW 1 T	-	-	-	-	-	15	8	7	7	10	10	11	11	11	11	\$71,400
155X-EXT. USE DUMP STAKE CREW	-	-	-	-	-	1	-	-	-	1	1	-	-	-	-	\$222,500
157A-TRUCK, PACKER 3500 CHAS	-	-	-	-	-	4	4	5	5	3	3	4	4	7	7	\$169,300
038-GROOMER BALL DIAMOND 3PT	-	-	-	-	-	-	-	-	-	-	-	-	-	9	9	\$10,200
202L-FORKLIFT LARGE	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	\$69,400
125B-SWEEPER SIDEWK ARTICULATE	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	\$168,300
125A-SWEEPER VAC SMALL	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	\$10,200
152PRX-Alum. Dump Crew&Plow – Extended Use	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	\$81,600



**City of Hamilton  
Service Standard Calculation Sheet**

Class of Service: Public Works - Vehicles & Equipment  
Unit Measure: No. of vehicles and equipment

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/Vehicle)
<b>Shared Vehicles: Parks Services and Services Related to a Highway</b>						-	-	-	-	-	-	-	-	-	-	\$0
124CX - 2WD SUV Extended Service	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	\$27,500
157AX-Ext. Use Truck, packer 3500 Chas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	\$306,000
043AX-Ext. Tractor Farm Type-small	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	\$56,100
048R-PRESSURE WASHER - ROADS	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	\$13,400
083AR-UTILITY VEH LARGE - ROADS	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	\$134,000
150-ATT MISCELLANEOUS	-	-	-	-	-	4	2	2	2	5	5	-	-	3	3	\$13,400
152ARRX - ALUMINUM DUMP/CREW	-	-	-	-	-	-	-	-	-	-	-	1	1	1	2	\$71,400
080W-TRACTOR/LOADER/BACKHOE	-	-	-	-	-	-	-	-	-	2	2	3	3	3	3	\$201,000
088 - CHIPPER WOOD	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	\$141,500
088X-EXT.USE CHIPPER WOOD	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	\$136,600
152AR-ALUMINUM DUMP/CREW	-	-	-	-	-	-	-	-	-	5	5	3	3	2	2	\$93,800
155AA-DUMP STAKE CREW 1T W/PLOW	-	-	-	-	-	-	-	-	-	3	3	3	3	3	3	\$93,800
097-MOWER ROTARY TRIM	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	\$60,300
162-DUMP STEEL CREW 1T	-	-	-	-	-	4	3	3	3	3	3	3	3	3	3	\$281,500
073AX - Service Body-Utility Extended	-	-	-	-	-	-	-	-	-	-	-	2	2	2	1	\$82,100
106-AERIFIER	-	-	-	-	-	7	7	7	7	7	7	4	4	5	5	\$26,800
202-FORKLIFTS-SKID STEERS	-	-	-	-	-	7	6	6	6	6	6	6	6	6	6	\$76,500
043A-TRACTOR FARM TYPE-SMALL	-	-	-	-	-	8	8	8	8	8	8	6	6	6	6	\$73,700
103A-TRAILER TANDEM 12T FLOAT	-	-	-	-	-	1	1	1	1	-	-	1	1	1	1	\$26,800



**City of Hamilton  
Service Standard Calculation Sheet**

Class of Service: Public Works - Vehicles & Equipment  
Unit Measure: No. of vehicles and equipment

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/Vehicle)
<b>Shared Vehicles: Parks Services and Services Related to a Highway</b>						-	-	-	-	-	-	-	-	-	-	\$0
152P-ALUM.DUMP CREW&PLOW	-	-	-	-	-	-	-	-	-	-	-	-	-	7	7	\$93,800
043B-TRACTOR FARM TYPE - MED	-	-	-	-	-	1	1	1	1	1	1	2	2	4	4	\$73,700
025-TRUCK W/HYD TAILGATE	-	-	-	-	-	2	2	2	2	2	2	5	5	5	5	\$67,000
074A-1 T PICKUP W/PLOW	-	-	-	-	-	1	1	1	1	1	1	1	1	1	1	\$67,000
124C-2WD SUV	-	-	-	-	-	4	4	3	1	1	1	5	5	4	4	\$40,200
073X-EXT. USE PICKUP 3/4 T	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	\$59,400
<b>POA, including by-law enforcement services</b>																
020B-COMPACT 4X4 PICKUP	-	-	-	-	-	1	1	1	-	-	-	-	-	1	1	\$35,700
124C-2WD SUV	-	-	-	-	-	-	-	-	1	1	1	1	1	18	18	\$40,200
124-SUV 4X4	-	-	-	-	-	-	-	-	1	1	1	1	1	10	10	\$53,600
021-1/2 T PICK UP	-	-	-	-	-	1	1	1	1	1	1	1	1	4	4	\$40,800
022-VAN 1/2 T	-	-	-	-	-	-	-	-	-	-	-	3	3	3	3	\$63,100
017-HYBRID VEHICLES	-	-	-	-	-	-	-	-	-	-	-	-	-	10	10	\$35,700
017X - EXT.USE HYBRID VEHICLES	-	-	-	-	-	-	-	-	-	-	-	-	-	2	6	\$35,700
020-PICKUP TRUCK COMPACT	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	\$35,700
124A-SUV ELECTRIC	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	\$51,000
153X - EXT. USE MINI VAN	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	\$35,700
020B - COMPACT 4X4 PICKUP	-	-	-	-	-	12	13	13	4	3	3	1	2	-	-	\$32,900
153-VAN MINI	-	-	-	-	-	1	1	1	1	1	1	2	4	4	4	\$60,300
<b>Services Related to a Highway:</b>																
162-DUMP STEEL CREW 1T	-	-	-	-	-	4	3	3	3	3	3	13	13	13	13	\$281,500
202-FORKLIFTS-SKID STEERS	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	\$76,500



**City of Hamilton  
Service Standard Calculation Sheet**

Class of Service: Public Works - Vehicles & Equipment  
Unit Measure: No. of vehicles and equipment

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/Vehicle)
043A-TRACTOR FARM TYPE-SMALL	-	-	-	-	-	1	1	1	1	1	1	1	1	1	1	\$73,700
103A-TRAILER TANDEM 12T FLOAT	-	-	-	-	-	1	1	1	1	-	-	1	1	1	1	\$26,800
124 - SUV 4X4	-	-	-	-	-	-	-	-	-	-	-	3	7	7	7	\$37,900
152P-ALUM.DUMP CREW&PLOW	-	-	-	-	-	6	6	6	6	6	6	4	4	12	12	\$93,800
043B-TRACTOR FARM TYPE - MED	-	-	-	-	-	4	3	2	2	2	2	2	2	6	6	\$73,700
026X-EXT. USE VAN 1 T	-	-	-	-	-	1	1	1	1	1	1	4	4	2	3	\$52,200
073-PICKUP TRUCK 3/4 T	-	-	-	-	-	2	2	2	1	2	2	9	8	8	8	\$71,400
074X-EXT. USE PICK UP 1 T	-	-	-	-	-	1	-	-	-	2	2	2	2	2	2	\$55,000
080L-Large Tractor/Backhoe/	-	-	-	-	-	-	-	-	-	1	1	2	2	2	2	\$246,100
158-ARROW BOARDS	-	-	-	-	-	12	9	9	9	10	10	9	9	9	9	\$13,400
017-HYBRID VEHICLES	-	-	-	-	-	52	52	52	49	36	36	13	13	1	1	\$46,900
017X - EXT.USE HYBRID VEHICLES	-	-	-	-	-	-	-	-	-	-	-	4	4	4	4	\$44,200
020X-EXT. USE PICKUP COMPACT	-	-	-	-	-	1	1	1	1	3	3	1	1	2	1	\$33,400
021-1/2 T PICK UP	-	-	-	-	-	30	16	17	16	16	16	-	-	40	40	\$40,800
021X-EXT. USE PICKUP 1/2 T	-	-	-	-	-	2	2	2	2	-	-	-	-	1	1	\$33,400
026B-VAN 1TON WITH SHELIVING	-	-	-	-	-	1	1	1	1	1	1	-	-	-	-	\$84,400
034-LOADER FRONT END 1 CU YD	-	-	-	-	-	2	1	1	2	1	1	1	1	-	-	\$124,700
048-PRESSURE WASHER	-	-	-	-	-	1	1	1	1	1	1	1	-	-	-	\$13,400
049-STEAM GENERATORS	-	-	-	-	-	1	1	1	1	1	1	1	-	5	5	\$15,300
076-VACUUM LEAF	-	-	-	-	-	3	3	3	3	3	3	-	-	-	-	\$13,400
079-MOWER TRIPLEX	-	-	-	-	-	7	7	7	7	7	7	-	-	-	-	\$60,300
080-TRACTOR/LOADER/BACKHOE	-	-	-	-	-	5	-	-	-	2	2	-	-	7	7	\$150,100
098X-EXT. USE MOWER FRONT MNT	-	-	-	-	-	1	-	-	-	-	-	1	1	1	1	\$27,600
103B-TRAILER TANDEM ENCLOSED	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	\$16,100
103-TRAILER TANDEM AXLE	-	-	-	-	-	26	24	22	22	23	23	11	11	8	8	\$16,100





**City of Hamilton  
Service Standard Calculation Sheet**

Class of Service: Public Works - Vehicles & Equipment  
Unit Measure: No. of vehicles and equipment

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/Vehicle)
105-TOP DRESSER	-	-	-	-	-	5	5	5	5	5	5	-	-	-	-	\$26,800
137-TRAILER DUMP BOX	-	-	-	-	-	1	1	1	1	2	2	-	-	-	-	\$15,300
150G-ATT RAM HOW	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	\$13,400
150BX - ATT Drop-in Sander Extended	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	\$12,600
151-ALUM. DUMP W/ PLOW 1.5 T	-	-	-	-	-	2	-	-	-	-	-	-	-	1	1	\$100,500
152A-ALUMINUM DUMP/CREW	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	\$93,800
152B-ALUM DUMP CREW/CRANE	-	-	-	-	-	1	1	1	1	1	1	-	-	1	1	\$93,800
152C-ALUM.DUMP CREW&PLOW&CRANE	-	-	-	-	-	1	1	1	1	1	1	4	4	1	1	\$93,800
202RX - Recycle Forklift Rental	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	\$85,900
152CX-EXT. USE Alum Dump Crew&Plow&Crane	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	\$71,400
103X - EXT.USE TANDEM TRAILER	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	\$7,700
041-STRIPER PAINT LG CENTRE	-	-	-	-	-	1	1	1	1	1	1	1	1	1	1	\$643,000
012C-TRAILER CABLE	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	\$9,400
103WWW-TRAILER TANDEM AXLE (WATER)	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	\$16,100
127TT-TRUCK WITH AUGER - TRAFFIC	-	-	-	-	-	-	-	-	-	2	2	1	1	3	3	\$222,900
072T-AERIAL TRUCK TRAFFIC (BOOM)	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	\$375,000
123-PLATFORM W/PORT. CEMENT MI	-	-	-	-	-	1	1	1	1	1	1	1	1	1	1	\$288,600
153R-VAN MINI - ROADS	-	-	-	-	-	-	-	-	-	1	1	1	1	-	-	\$60,300
026BT-VAN 1TON WITH SHELIVING (TRAFFIC)	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	\$84,400
119-STRIPER PAINT CROSSWALK/BE	-	-	-	-	-	4	3	4	4	4	4	4	4	4	4	\$13,400
156-SIGN TRUCK TRAFFIC	-	-	-	-	-	6	6	6	6	4	4	4	7	7	7	\$183,600
156TT-SIGN TRUCK TRAFFIC	-	-	-	-	-	-	-	-	-	2	2	2	-	-	-	\$128,700
156T-SIGN TRUCK TRAFFIC	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	\$128,700
202B-FORKLIFT WALK BEHIND	-	-	-	-	-	1	1	1	1	1	1	1	1	1	1	\$91,100
025-TRUCK W/HYD TAILGATE	-	-	-	-	-	3	3	3	3	3	3	3	3	3	3	\$67,000



**City of Hamilton  
Service Standard Calculation Sheet**

Class of Service: Public Works - Vehicles & Equipment  
Unit Measure: No. of vehicles and equipment

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/Vehicle)
072-AERIAL TRUCK TRAFFIC	-	-	-	-	-	1	1	1	1	1	1	1	1	1	1	\$375,000
023-VAN 3/4 T	-	-	-	-	-	1	1	1	1	1	1	1	1	1	1	\$54,100
021-1/2 T PICK UP	-	-	-	-	-	9	9	9	9	9	9	9	9	9	9	\$37,500
202X - Forklifts-Skid Steers Extended	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	\$85,900
022-VAN 1/2 T	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	\$56,100
090A-AERIAL TRUCK FORESTRY	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	\$255,000
090-AERIAL TRUCK FORESTRY	-	-	-	-	-	1	-	1	1	1	1	1	1	-	-	\$375,300
072-AERIAL TRUCK TRAFFIC	-	-	-	-	-	5	5	5	5	3	3	1	1	-	-	\$375,000
049R-STEAM GENERATORS (ROADS)	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	\$13,400
103R-TRAILER TANDEM AXLE - ROADS	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	\$16,100
001-SANDER W/WING & FRNT 5.5	-	-	-	-	-	7	6	3	3	-	-	-	-	-	-	\$295,100
001X-EXT.USE SANDER	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	\$318,600
002A-ALUM.SANDER PREW BEL PLOW	-	-	-	-	-	5	5	5	5	5	5	5	5	3	3	\$295,100
005-ANTI-ICE TANDEM TRUCK	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	\$241,300
012A-TRAILER,SINGLE AXLE,SMALL	-	-	-	-	-	5	5	5	6	7	7	7	7	6	6	\$9,400
035-LOADER FRNT END LG ARTIC	-	-	-	-	-	14	14	14	14	14	14	13	13	12	12	\$260,100
037-GRADER	-	-	-	-	-	5	5	5	5	5	5	5	5	5	5	\$335,000
045A-SWEEPER LRG MOBILE PM10	-	-	-	-	-	18	18	17	17	18	18	18	19	19	19	\$429,100
060-BLOWER SNOW ATTACHMENT	-	-	-	-	-	5	5	5	5	5	5	5	5	5	5	\$240,900
064-FLUSHER STREET	-	-	-	-	-	4	4	4	4	4	4	3	4	4	4	\$335,000
064X-EXT.USE FLUSHER	-	-	-	-	-	1	-	-	-	1	1	1	1	1	1	\$289,800
080-TRACTOR/LOADER/BACKHOE	-	-	-	-	-	8	12	12	12	8	8	8	8	-	-	\$150,800
093A-ASPHALT RECYCLER	-	-	-	-	-	1	1	1	1	1	1	1	1	1	1	\$240,900
094-HOTPOT TRANSPORTER	-	-	-	-	-	18	14	10	11	10	10	10	10	8	8	\$53,600



**City of Hamilton**  
**Service Standard Calculation Sheet**

Class of Service: Public Works - Vehicles & Equipment  
 Unit Measure: No. of vehicles and equipment

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/Vehicle)
095A-ROLLER ASPHALT-SMALL	-	-	-	-	-	2	2	2	2	2	2	2	2	2	2	\$20,400
095-ROLLER ASPHALT	-	-	-	-	-	5	5	5	5	4	4	5	5	5	5	\$26,800
098-MOWER FRONT MNT RIDING ROT	-	-	-	-	-	2	7	6	12	12	12	-	-	-	-	\$60,300
109-TRAILER TRI-AXLE	-	-	-	-	-	1	1	-	1	-	-	-	-	-	-	\$12,200
121-DUMP STAKE 1 T STD CAB	-	-	-	-	-	-	1	1	1	1	1	1	1	-	-	\$93,800
124A-SUV 4X4 SMALL	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	\$58,000
126-WATER TANK TRUCK MTD	-	-	-	-	-	2	2	2	2	4	4	-	-	-	-	\$142,800
127-TRUCK WITH AUGER	-	-	-	-	-	3	3	3	3	-	-	-	-	-	-	\$222,500
128A-ROLLER ASHPALT LG STEEL	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	\$173,800
150-ATT MISCELLANEOUS	-	-	-	-	-	-	2	2	2	5	5	4	4	-	-	\$10,200
150H-ATT FLAIL MOWER	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	\$10,200
151A-ALU.DUMP PLOW&TCSIGN 1.5T	-	-	-	-	-	1	1	1	1	-	-	-	-	-	-	\$100,500
151-ALUM. DUMP W/ PLOW 1.5 T	-	-	-	-	-	1	3	3	3	3	3	3	3	-	-	\$100,500
152A-ALUMINUM DUMP/CREW	-	-	-	-	-	8	8	14	14	-	-	-	-	-	-	\$93,800
152B-ALUM DUMP CREW/CRANE	-	-	-	-	-	7	7	10	10	-	-	-	-	-	-	\$93,800
152C-ALUM.DUMP CREW&PLOW&CRANE	-	-	-	-	-	6	6	9	9	12	12	4	4	-	-	\$93,800
152H-ALUM. DUMP-HIGH MILEAGE	-	-	-	-	-	6	6	6	6	6	6	1	1	-	-	\$93,800
152P-ALUM.DUMP CREW&PLOW	-	-	-	-	-	6	6	8	8	-	-	-	-	-	-	\$93,800
153E-VAN MINI ELECTRIC	-	-	-	-	-	1	1	1	1	-	-	-	-	-	-	\$109,100
155A-DUMP STAKE CREW 1T W/PLOW	-	-	-	-	-	1	2	7	7	4	4	4	4	-	-	\$93,800
155-DUMP STAKE CREW 1 T	-	-	-	-	-	4	8	5	5	4	4	-	-	-	-	\$93,800
158X - Arrow Boards Extended Service	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	\$12,600
162A-DMP STL CREW CRANE/PLOW	-	-	-	-	-	4	4	-	-	-	-	-	-	-	-	\$76,800
162-DUMP STEEL CREW 1T	-	-	-	-	-	5	6	-	-	-	-	-	-	-	-	\$93,800
172-SNDRRADIUSDUMPW/2WAYFRONT&	-	-	-	-	-	4	4	1	-	-	-	-	-	-	-	\$333,200



**City of Hamilton  
Service Standard Calculation Sheet**

Class of Service: Public Works - Vehicles & Equipment  
Unit Measure: No. of vehicles and equipment

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/Vehicle)
172X-SNDRRADIUSDUMPW/2WAY	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	\$333,200
173-SANDER PRE-WET 2WAY W/WING	-	-	-	-	-	10	10	4	7	3	3	3	3	3	3	\$362,100
174-TRACKLESS	-	-	-	-	-	5	5	5	5	5	5	6	6	7	7	\$214,200
185-GRADAL	-	-	-	-	-	3	3	3	3	3	3	3	3	3	3	\$431,600
187A-ALUM.SAND PREW FR&WG PLOW	-	-	-	-	-	12	12	12	12	12	12	11	11	3	3	\$295,100
187-SANDER 1 AXL PREWET PL/WG	-	-	-	-	-	9	9	9	9	14	14	22	22	26	26	\$295,100
188A-ALUM.SAND PREW FR&WG PLOW	-	-	-	-	-	32	32	41	32	33	33	27	27	20	20	\$362,100
188-SANDER TAND PREWET PL/WG	-	-	-	-	-	10	10	10	22	26	26	34	34	41	41	\$362,100
189-SANDER 1 AXL PREWET PLOW	-	-	-	-	-	8	8	8	8	4	4	-	-	6	6	\$295,100
193-SANDER TAND PREWET PLOW	-	-	-	-	-	4	4	4	4	1	1	-	-	-	-	\$362,100
200-CRASH ATTENUATORS	-	-	-	-	-	2	2	2	2	1	1	1	2	2	2	\$51,000
024X-EXT.USE P/U CREW CAB	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	\$57,600
093-PAVER ASPHALT	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-	\$504,500
025X-EXT. USE TRUCK W/HYD TAIL	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-	\$76,400
080X-EXT.USE TRACTOR/LOAD/BHOE	-	-	-	-	-	-	-	-	-	1	1	1	1	1	-	\$150,800
084X-EXT.USE TURF LESS \$20K	-	-	-	-	-	-	-	-	-	2	2	2	2	2	2	\$26,800
095R-ROLLER ASPHALT	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	\$26,800
095XR-EXT.USE ROLLER ASPHALT	-	-	-	-	-	-	-	-	-	1	1	1	1	1	-	\$26,800
095X - EXT.USE ROLLER ASPHALT	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	\$50,500
12-TRAILER SINGLE AXLE	-	-	-	-	-	-	-	-	-	3	3	2	2	-	-	\$9,400



**City of Hamilton  
Service Standard Calculation Sheet**

Class of Service: Public Works - Vehicles & Equipment  
Unit Measure: No. of vehicles and equipment

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/Vehicle)
13-GENERATORS	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	\$26,800
150C-ATT SNOW BLW SKID STEER	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	\$13,400
151ARA-ALU.DUMP PLOW&TCSIGN 1.5T - ROADS	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	\$100,500
152ARA-ALU.DUMP PLOW&TCSIGN 1.5T - ROADS	-	-	-	-	-	-	-	-	-	11	11	11	9	4	4	\$93,800
152AR-ALUMINUM DUMP/CREW	-	-	-	-	-	-	-	-	-	2	2	1	1	1	1	\$93,800
152ARR-ALUMINUM DUMP/CREW	-	-	-	-	-	-	-	-	-	4	4	3	3	1	1	\$93,800
152CR-ALUM.DUMP CREW&PLOW&CRANE	-	-	-	-	-	-	-	-	-	3	3	3	3	3	3	\$93,800
152PR-ALUM.DUMP CREW&PLOW	-	-	-	-	-	-	-	-	-	1	1	1	1	-	-	\$93,800
157AR-TRUCK, PACKER 3500 CHAS	-	-	-	-	-	-	-	-	-	1	1	1	1	-	-	\$222,900
173X-SANDER PRE-WET 2WAY W/WING	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	\$362,100
187X-Ext use Sander 1AXL prewet PL/WG	-	-	-	-	-	-	-	-	-	2	2	1	1	1	5	\$295,100
188R-SANDER TAND PREWET PL/WG	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	\$368,500
188X-Ext use Sander Tand Prewet PL/WG	-	-	-	-	-	-	-	-	-	6	6	7	7	7	7	\$368,500
189X-Ext use Sander 1axl prewet plow	-	-	-	-	-	-	-	-	-	2	2	1	1	1	-	\$295,100
193X-Ext use Sander Tand prewet plow	-	-	-	-	-	-	-	-	-	3	3	1	1	1	-	\$362,100
1-SANDER W/WING & FRNT 5.5	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-	\$295,100
200R-CRASH ATTENUATORS	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	\$67,000
020B-COMPACT 4X4 PICKUP	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	\$35,700
073X-EXT. USE PICKUP 3/4 T	-	-	-	-	-	1	-	-	-	-	-	2	2	2	2	\$59,400
<b>Water Services</b>																
080L-Large Tractor/Backhoe/	-	-	-	-	-	1	1	1	1	2	2	2	2	3	3	\$246,100



**City of Hamilton  
Service Standard Calculation Sheet**

Class of Service: Public Works - Vehicles & Equipment  
Unit Measure: No. of vehicles and equipment

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/Vehicle)
158-ARROW BOARDS	-	-	-	-	-	2	2	4	3	4	4	4	4	4	4	\$13,400
017-HYBRID VEHICLES	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	\$46,900
030-DUMP MEDIUM DUTY	-	-	-	-	-	2	2	1	1	1	1	1	1	-	-	\$150,100
025-TRUCK W/HYD TAILGATE	-	-	-	-	-	4	5	5	3	1	1	-	-	1	1	\$67,000
023-VAN 3/4 T	-	-	-	-	-	5	4	5	5	7	7	-	-	4	4	\$42,900
021-1/2 T PICK UP	-	-	-	-	-	49	55	52	55	65	65	71	92	21	21	\$37,500
012A-TRAILER,SINGLE AXLE, SMALL	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	\$9,400
012-TRAILER SINGLE AXLE	-	-	-	-	-	5	5	5	4	-	-	-	-	2	2	\$9,400
013A-LARGE GENERATOR	-	-	-	-	-	5	-	-	-	5	5	5	5	5	5	\$8,000
026A-CUBE VANS	-	-	-	-	-	8	8	8	8	-	-	-	-	3	3	\$96,500
026-VAN 1 T	-	-	-	-	-	19	13	19	19	2	2	-	-	3	3	\$84,400
030A-TANDEM DUMP	-	-	-	-	-	4	4	4	4	-	-	-	-	1	1	\$241,300
030B-DUMP MEDIUM DUTY w/PLOW	-	-	-	-	-	1	1	1	1	1	1	1	1	1	1	\$295,100
030C-TRIAxLE DUMP	-	-	-	-	-	-	2	2	2	-	-	-	-	2	2	\$255,100
030-DUMP MEDIUM DUTY	-	-	-	-	-	2	4	4	3	-	-	-	-	1	1	\$150,800
034-LOADER FRONT END 1 CU YD	-	-	-	-	-	1	1	1	-	1	1	1	1	1	1	\$94,900
040-VALVE MAINTENANCE TRAILER	-	-	-	-	-	-	-	-	2	-	-	2	2	2	2	\$134,000
058-VACTOR TRUCK	-	-	-	-	-	2	2	2	2	2	2	2	2	2	2	\$617,200
062-COMPRESSOR	-	-	-	-	-	5	5	5	5	1	1	2	2	2	2	\$25,500
073A-SERVICE BODY-UTILITY	-	-	-	-	-	5	3	6	5	5	5	7	5	10	10	\$87,100
073C-SERVICE BODY-VALVE TRUCK	-	-	-	-	-	2	2	2	5	4	4	3	6	6	6	\$87,100
073-PICKUP TRUCK 3/4 T	-	-	-	-	-	5	6	5	6	7	7	-	-	6	5	\$71,400
083-TURF UTILITY VEH OVER \$20K	-	-	-	-	-	5	7	7	7	7	7	7	7	2	2	\$40,800
103-TRAILER TANDEM AXLE	-	-	-	-	-	18	16	17	22	18	18	29	29	9	12	\$16,100
150G-ATT RAM HOE	-	-	-	-	-	9	6	6	7	9	9	10	10	8	8	\$13,400



**City of Hamilton  
Service Standard Calculation Sheet**

Class of Service: Public Works - Vehicles & Equipment  
Unit Measure: No. of vehicles and equipment

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/Vehicle)
152D-ALUM.DUMP CAB OVER	-	-	-	-	-	2	2	2	2	1	1	1	1	1	1	\$87,100
200-CRASH ATTENUATORS	-	-	-	-	-	1	1	1	1	1	1	1	1	1	1	\$51,000
202-FORKLIFTS-SKID STEERS	-	-	-	-	-	4	4	3	3	2	2	3	5	3	3	\$91,100
021W-1/2 T PICK UP (WATER)	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	\$45,600
080W-TRACTOR/LOADER/BACKHOE	-	-	-	-	-	-	-	-	-	2	2	3	3	3	3	\$201,000
124-SUV 4X4	-	-	-	-	-	-	-	-	-	1	1	1	1	16	16	\$46,900
152DW-ALUM.DUMP CAB OVER	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	\$87,100
012S-TRAILER SHORING (WATER)	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	\$9,400
017SUV-HYBRID VEHICLES (WATER - SUV)	-	-	-	-	-	-	-	-	-	4	4	4	4	1	1	\$46,900
017W-HYBRID VEHICLES (WATER)	-	-	-	-	-	-	-	-	-	9	9	3	3	2	2	\$46,900
020W-PICKUP TRUCK COMPACT (WATER)	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	\$40,200
020WW-PICKUP TRUCK COMPACT (WATER MAINT)	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	\$40,200
022W-VAN 1/2 T (WATER)	-	-	-	-	-	-	-	-	-	3	3	3	2	2	2	\$55,000
023W-VAN 3/4 T (WATER)	-	-	-	-	-	-	-	-	-	2	2	1	1	-	-	\$71,000
026AW-VAN 1 T (WATER)	-	-	-	-	-	-	-	-	-	7	7	7	7	4	4	\$96,500
026AWW-VAN 1 T (WATER)	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	\$96,500
026WW-VAN 1 T - WATER	-	-	-	-	-	-	-	-	-	8	8	1	1	1	1	\$84,400
030AW-TANDEM DUMP (WATER)	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	\$240,900
030WT-DUMP MEDIUM DUTY (WATER TNDM)	-	-	-	-	-	-	-	-	-	1	1	1	1	-	-	\$150,800
030WW-DUMP MEDIUM DUTY (WATER)	-	-	-	-	-	-	-	-	-	7	7	7	7	6	6	\$150,800
035W-LOADER FRNT END LG ARTIC - WATER	-	-	-	-	-	-	-	-	-	1	1	1	4	3	3	\$335,000
049W-STEAM GENERATORS (WATER)	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	\$13,400
062W-COMPRESSOR (WATER)	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-	\$26,800
073AW-SERVICE BODY-UTILITY (WATER)	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	\$87,100



**City of Hamilton  
Service Standard Calculation Sheet**

Class of Service: Public Works - Vehicles & Equipment  
Unit Measure: No. of vehicles and equipment

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/Vehicle)
103W-TRAILER TANDEM AXLE (WATER)	-	-	-	-	-	-	-	-	-	7	7	6	6	5	5	\$16,100
103WW-TRAILER TANDEM AXLE (WATER)	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-	\$16,100
202X - Forklifts-Skid Steers Extended	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	\$85,900
202W-FORKLIFTS-SKID STEERS - WATER	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	\$91,100
030X-EXT.USE MED. DUMP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	\$114,200
103B-TRAILER TANDEM ENCLOSED	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	\$12,200
122-HOIST TRUCK FORESTRY	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	\$306,000
124C-2WD SUV	-	-	-	-	-	-	-	-	-	-	-	-	-	6	6	\$30,600
153X-EXT. USE MINI VAN	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	\$30,600
202L - FORKLIFT LARGE	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	\$69,400
020B-COMPACT 4X4 PICKUP	-	-	-	-	-	3	2	2	2	1	1	1	1	4	4	\$35,700
103A-TRAILER TANDEM 12T FLOAT	-	-	-	-	-	6	6	6	4	4	4	4	4	2	2	\$26,800
153-VAN MINI	-	-	-	-	-	5	5	5	8	5	5	-	-	8	8	\$33,700
2008 Vehicles & Equipment*	1,169															\$109,700
2009 Vehicles & Equipment*	-	1,135	-	-	-	-	-	-	-	-	-	-	-	-	-	\$114,100
2010 Vehicles & Equipment*	-	-	1,185	-	-	-	-	-	-	-	-	-	-	-	-	\$113,100
2011 Vehicles & Equipment*	-	-	-	1,185	-	-	-	-	-	-	-	-	-	-	-	\$115,400
2012 Vehicles & Equipment*	-	-	-	-	1,158	-	-	-	-	-	-	-	-	-	-	\$115,100
<b>Total</b>	<b>1,169</b>	<b>1,135</b>	<b>1,185</b>	<b>1,185</b>	<b>1,158</b>	<b>1,180</b>	<b>1,130</b>	<b>1,133</b>	<b>1,150</b>	<b>1,241</b>	<b>1,241</b>	<b>1,159</b>	<b>1,204</b>	<b>1,283</b>	<b>1,307</b>	

\*Based on previous D.C. Studies

Population	511,412	514,740	515,591	519,949	522,611	526,896	529,744	533,698	536,918	543,294	549,623	555,599	562,453	569,353	578,957
Per Capita Standard	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002

15 Year Average	2008-2022
Quantity Standard	0.0022
Quality Standard	\$110,068
Service Standard	\$242

D.C. Amount (before deductions)	10 Year
Forecast Population	62,136
\$ per Capita	\$242
Eligible Amount	\$15,046,232





**City of Hamilton  
Service Standard Calculation Sheet**

Service: Fire Protection Services - Facilities  
Unit Measure: sq.ft. of building area

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Bld'g Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
Station 1 - 35 - 43 John Street North	16,873	16,873	16,873	16,873	16,873	16,873	16,873	16,873	16,873	16,873	16,873	16,873	16,873	16,873	16,873	\$602	\$705
Station 2 - 1400 Upper Wellington Street	7,503	7,503	7,503	7,503	7,503	7,503	7,503	7,503	7,503	7,503	7,503	7,503	7,503	7,503	7,503	\$747	\$864
Station 3 - 965 Garth Street	5,948	5,948	5,948	5,948	5,948	5,948	5,948	5,948	5,948	5,948	5,948	5,948	5,948	5,948	5,948	\$747	\$864
Station 4 - 729 Upper Sherman Avenue	22,074	22,074	22,074	22,074	22,074	22,074	22,074	22,074	22,074	22,074	22,074	22,074	22,074	22,074	22,074	\$602	\$705
Station 5 - 1000 Limeridge Road East (EMS as of 2011)	7,060	7,060	7,060	-	-	-	-	-	-	-	-	-	-	-	-	\$670	\$779
Station 5 - 1227 Stone Church Road Building A	-	-	-	9,494	9,494	9,494	9,494	9,494	9,494	9,494	9,494	9,494	9,494	9,494	9,494	\$670	\$779
Station 6 - 246 Wentworth Street North	12,864	12,864	12,864	12,864	12,864	12,864	12,864	12,864	12,864	12,864	12,864	12,864	12,864	12,864	12,864	\$602	\$705
Station 7 - 225 Quigley Road	6,022	6,022	6,022	6,022	6,022	6,022	6,022	6,022	6,022	6,022	6,022	6,022	6,022	6,022	6,022	\$747	\$864
Station 8 - 400 Melvin Avenue	5,674	5,674	5,674	5,674	5,674	5,674	5,674	5,674	5,674	5,674	5,674	5,674	5,674	5,674	5,674	\$747	\$864
Station 9 - 125 Kenilworth Avenue North	7,098	7,098	7,098	7,098	7,098	7,098	7,098	7,098	7,098	7,098	7,098	7,098	7,098	7,098	7,098	\$747	\$864
Station 10 - 1455 Main Street West	7,504	7,504	7,504	7,504	7,504	7,504	7,504	7,504	7,504	7,504	7,504	7,504	7,504	7,504	7,504	\$747	\$864
Station 11 - 24 Ray Street South	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	\$747	\$864
Station 12 - 199 Highway #8, Stoney Creek	8,973	8,973	8,973	8,973	8,973	8,973	8,973	8,973	8,973	8,973	8,973	8,973	8,973	8,973	8,973	\$602	\$705
Station 13 - 177 Bay Street North (Mechanical Division)	14,856	14,856	14,856	14,856	14,856	14,856	14,856	14,856	14,856	14,856	14,856	14,856	14,856	14,856	14,856	\$602	\$705
Station 14 - 595 Chapel Hill Road, Elfrida	3,977	3,977	3,977	3,977	3,977	3,977	3,977	3,977	3,977	3,977	3,977	3,977	3,977	3,977	3,977	\$602	\$675
Station 15 - 415 Arvin Avenue, Stoney Creek	4,152	4,152	4,152	4,152	4,152	4,152	4,152	4,152	4,152	4,152	4,152	4,152	4,152	4,152	4,152	\$747	\$864
Station 16 - 939 Barton Street, Stoney Creek	6,671	6,671	6,671	6,671	6,671	6,671	6,671	6,671	6,671	6,671	6,671	6,671	6,671	6,671	6,671	\$747	\$864
Station 17 - 363 Isaac Brock Drive, Stoney Creek	5,435	5,435	5,435	5,435	5,435	5,435	5,435	5,435	5,435	5,435	5,435	5,435	5,435	5,435	5,435	\$747	\$834
Station 18 - 2636 Highway #56, Binbrook	9,030	9,030	9,030	9,030	9,030	9,030	9,030	9,030	9,030	9,030	9,030	9,030	9,030	9,030	9,030	\$785	\$876
Station 19 - 3303 Homestead Drive, Mount Hope	5,740	5,740	5,740	5,740	5,740	5,740	5,740	5,740	5,740	5,740	5,740	5,740	5,740	5,740	5,740	\$602	\$705
Station 20 - Garner and Kitty Murray	-	5,484	5,484	5,484	5,484	5,484	5,484	5,484	5,484	5,484	5,484	5,484	5,484	5,484	5,484	\$747	\$864
Station 21 - 365 Wilson Street, Ancaster	10,557	10,557	10,557	10,557	10,557	10,557	10,557	10,557	10,557	10,557	10,557	10,557	10,557	10,557	10,557	\$602	\$705
Station 22 - 1227 Stone Church Road East (Training)	6,396	6,396	-	-	-	-	-	-	-	-	-	-	-	-	-	\$747	\$865
Station 23 - Memorial Square, Dundas	7,189	7,189	7,189	7,189	7,189	7,189	7,189	7,189	7,189	7,189	7,189	7,189	7,189	7,189	7,189	\$602	\$705
Station 24 - 256 Parkside Drive, Waterdown	8,250	8,250	8,250	8,250	8,250	8,250	8,250	8,250	8,250	8,250	8,250	8,250	8,250	8,250	8,250	\$602	\$705
Station 25 - 361 Old Brock Road, Greensville	1,717	1,717	1,717	1,717	1,717	1,717	1,717	1,717	1,717	1,717	1,717	1,717	1,717	1,717	1,717	\$747	\$834
Station 26 - 119 Lynden Road, Lynden	4,824	4,824	4,824	4,824	4,824	4,824	4,824	4,824	4,824	4,824	4,824	4,824	4,824	4,824	4,824	\$602	\$705
Station 27 - 795 Old Highway #8, Rockton	4,825	4,825	4,825	4,825	4,825	4,825	4,825	4,825	4,825	4,825	4,825	4,825	4,825	4,825	4,825	\$602	\$675
Station 28 - 1801 Brock Road, Freelon	4,402	4,402	4,402	4,402	4,402	4,402	4,402	4,402	4,402	4,402	4,402	4,402	4,402	4,402	4,402	\$602	\$675
Station 29 - 189 King Street East, Dundas (Fire Prevention)	4,035	4,035	4,035	4,035	4,035	4,035	-	-	-	-	-	-	-	-	-	\$602	\$705



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Fire Protection Services - Facilities  
Unit Measure: sq.ft. of building area

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Bld'g Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
55 King William Street (includes Fire Prevention)	6,857	6,857	6,857	6,857	6,857	6,857	6,857	6,857	6,857	6,857	6,857	6,857	6,857	6,857	6,857	\$907	\$1,041
Station 30 - 489 Victoria Avenue North (Stores)	3,685	3,685	3,685	3,685	3,685	3,685	3,685	3,685	3,685	3,685	3,685	3,685	3,685	3,685	3,685	\$747	\$864
Building 'B' Administration - 1227 Stone Church Road East (MATC)	-	-	-	15,946	15,946	15,946	15,946	15,946	15,946	15,946	15,946	15,946	15,946	15,946	15,946	\$750	\$868
Building 'C' Training - 1227 Stone Church Road East (MATC)	-	-	-	21,030	21,030	21,030	21,030	21,030	21,030	21,030	21,030	21,030	21,030	21,030	21,030	\$747	\$865
Building 'D' Training - 1227 Stone Church Road East (MATC)	-	-	-	-	-	5,522	5,522	5,522	5,522	5,522	5,522	5,522	5,522	5,522	5,522	\$273	\$342
<b>Total</b>	<b>223,675</b>	<b>229,160</b>	<b>222,764</b>	<b>262,174</b>	<b>262,174</b>	<b>267,696</b>	<b>263,661</b>	<b>263,661</b>	<b>263,661</b>	<b>263,661</b>	<b>263,661</b>	<b>263,661</b>	<b>263,661</b>	<b>263,661</b>	<b>263,661</b>		
Population	511,412	514,740	515,591	519,949	522,611	526,896	529,744	533,698	536,918	543,294	549,623	555,599	562,453	569,353	578,957		
Per Capita Standard	0.4374	0.4452	0.4321	0.5042	0.5017	0.5081	0.4977	0.4940	0.4911	0.4853	0.4797	0.4746	0.4688	0.4631	0.4554		

15 Year Average	2008-2022
Quantity Standard	0.4759
Quality Standard	\$778
Service Standard	\$370

D.C. Amount (before deductions)	10 Year
Forecast Population	62,136
\$ per Capita	\$370
Eligible Amount	\$22,995,291



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Fire Protection Services - Vehicles & Equipment  
Unit Measure: No. of vehicles

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/Vehicle)
Urban Rescue Pumps/Engine	20	20	20	20	20	20	20	20	20	20	20	20	20	21	21	\$1,450,000
Urban Rescue	3	3	3	3	3	3	3	3	3	3	3	3	3	-	-	\$949,000
Urban Heavy Rescue	3	3	3	3	4	3	4	4	4	4	4	4	4	-	-	\$1,030,000
Fire Prevention Trailer	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$142,000
Decon Truck	1	-	1	1	1	1	1	1	1	1	1	1	1	1	1	\$320,000
Hazmat Support	-	-	-	1	1	1	1	1	1	1	1	1	1	1	1	\$1,810,000
RIT Training Trailer	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$277,000
Towers	1	1	1	1	1	1	1	1	1	1	1	1	-	-	-	\$1,980,000
Command Staff - SUV	8	8	8	9	9	9	9	9	9	8	8	8	8	5	5	\$91,000
Support Units	7	7	7	7	7	7	7	7	5	5	5	5	5	6	6	\$139,000
Sedans (Command + Support Division)	7	7	7	7	7	7	7	7	9	9	9	9	9	6	6	\$71,000
Rural Heavy Rescue	2	2	2	2	2	2	2	2	2	2	2	2	2	5	5	\$960,000
Rural Tanker/Pumper	12	12	12	12	12	12	12	12	12	12	12	12	7	7	6	\$1,450,000
Rural Rescue Pumpers	9	9	9	9	9	9	9	9	9	9	9	9	8	9	9	\$1,281,000
Rural Tankers	-	-	-	-	-	-	-	-	-	-	-	-	6	6	6	\$1,067,000
Quints	8	8	9	9	9	9	9	9	9	9	9	9	9	9	9	\$1,980,000
Platform Ladder	-	-	-	-	1	-	1	1	1	1	1	1	1	1	1	\$2,080,000
Pumper/Tankers (Bush Truck)	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	\$1,108,000
Brush Truck (Small)	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	\$555,000
Urban Interface Truck	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	\$1,030,000
Mobil Command Van	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$772,000
Light Trucks and Vans	8	8	8	8	8	8	11	11	12	12	12	12	10	11	11	\$107,000
Hybrid Fuel Cars/SUV	8	8	8	8	8	8	8	8	7	1	1	-	-	-	-	\$69,000
Compact Cars	12	12	12	12	6	6	6	6	6	13	13	13	13	14	14	\$49,000
Logistic Trailer	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	\$13,000
Portable Pump Test Trailer	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	\$141,000
New - Command Staff Pick-up Trucks	-	-	-	-	-	-	-	-	-	-	-	-	-	5	5	\$160,000
New - Foam Unit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	\$1,450,000
New - UTV Trailer	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	\$14,000



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Fire Protection Services - Vehicles & Equipment  
Unit Measure: No. of vehicles

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/Vehicle)
New - UTV Unit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	\$61,000
Rural Rescue Squads	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	\$300,000
<b>Total</b>	<b>113</b>	<b>112</b>	<b>114</b>	<b>116</b>	<b>112</b>	<b>110</b>	<b>115</b>	<b>116</b>	<b>117</b>	<b>118</b>	<b>118</b>	<b>117</b>	<b>114</b>	<b>116</b>	<b>118</b>	

Population	511,412	514,740	515,591	519,949	522,611	526,896	529,744	533,698	536,918	543,294	549,623	555,599	562,453	569,353	578,957
Per Capita Standard	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002

15 Year Average	2008-2022
Quantity Standard	0.0002
Quality Standard	\$883,850
Service Standard	\$177

D.C. Amount (before deductions)	10 Year
Forecast Population	62,136
\$ per Capita	\$177
Eligible Amount	\$10,983,781



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Fire Protection Services - Small Equipment and Gear  
Unit Measure: No. of equipment and gear

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/item)	
Hurst Auto Extractors	51	51	51	57	57	57	57	57	57	57	57	57	57	57	57	\$31,000	
Station Air Compressors	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	\$3,900	
Cascade Systems	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	\$167,700	
S.C.B.A.'s packs	363	363	363	363	363	363	363	363	363	363	363	363	363	425	425	\$7,000	
Washer Extractors	16	16	16	18	18	18	21	21	23	23	23	23	23	23	23	\$15,000	
Defibrillators-Fire	41	45	53	53	53	53	53	57	57	57	57	57	57	57	76	\$3,500	
Defibrillators-Fire Training Units	41	8	8	8	8	8	8	9	9	9	9	9	9	9	-	\$3,500	
Bunker Gear & Protective Clothing	825	825	825	825	825	825	825	825	825	825	1,650	1,650	1,650	1,650	1,650	\$5,000	
Portable Trunk Radios	470	470	470	470	470	470	470	470	470	525	525	525	525	525	525	\$8,900	
Portable Pumps	15	15	15	15	15	15	15	16	16	16	16	16	16	16	16	\$6,500	
Ram Kits	38	38	38	40	40	40	40	40	40	40	40	40	40	40	40	\$15,300	
AirBags	62	62	62	64	64	64	64	64	64	64	64	64	64	64	64	\$14,700	
TMX Gas Detectors	32	32	32	32	32	32	32	-	-	-	-	-	-	-	-	\$9,300	
Ventis MX4 Gas Detectors	-	-	-	-	-	-	-	47	47	47	47	47	47	47	47	44	\$4,400
Ventis MX6 Gas Detectors	-	-	-	-	-	-	-	2	2	2	2	2	2	2	13	\$8,400	
Thermal Imaging Cameras	13	13	13	13	13	13	13	19	19	19	30	30	35	35	35	\$16,300	
Highrise Packs (parachute kits)	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	\$5,000	
Hazmat Detection Equipment	2	2	2	2	2	2	2	2	2	2	2	2	4	4	4	\$83,600	
S.C.B.A.'s face pieces	825	825	825	825	825	825	825	825	825	825	825	825	825	825	825	\$600	
S.C.B.A. Cylinders	1,400	1400	1400	1400	1400	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400	\$1,400	
Station Exhaust Systems	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	\$65,700	
Confined Space	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$35,000	
Hazmat P.P.E. & Response Equipment	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$511,800	
High Angle Rope Rescue	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	\$42,600	
RPAS Response Equipment	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	\$209,000	



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Fire Protection Services - Small Equipment and Gear  
Unit Measure: No. of equipment and gear

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/item)
Commercial Washers & Dryers	-	-	-	-	-	-	-	-	-	-	-	-	-	26	26	\$1,900
Ice Water Rescue	-	-	-	-	-	-	-	-	-	-	-	-	5	5	5	\$43,400
<b>Total</b>	<b>4,283</b>	<b>4,254</b>	<b>4,262</b>	<b>4,274</b>	<b>4,274</b>	<b>4,274</b>	<b>4,277</b>	<b>4,306</b>	<b>4,308</b>	<b>4,363</b>	<b>5,199</b>	<b>5,199</b>	<b>5,211</b>	<b>5,300</b>	<b>5,318</b>	

Population	511,412	514,740	515,591	519,949	522,611	526,896	529,744	533,698	536,918	543,294	549,623	555,599	562,453	569,353	578,957
Per Capita Standard	0.0084	0.0083	0.0083	0.0082	0.0082	0.0081	0.0081	0.0081	0.0080	0.0080	0.0095	0.0094	0.0093	0.0093	0.0092

15 Year Average	2008-2022
Quantity Standard	0.0086
Quality Standard	\$5,026
Service Standard	\$43

D.C. Amount (before deductions)	10 Year
Forecast Population	62,136
\$ per Capita	\$43
Eligible Amount	\$2,685,518



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Policing Services - Facilities  
Unit Measure: sq.ft. of building area

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Bld'g Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
<b>City Owned</b>																	
Central Station (155 King William) - Station 10	132,000	132,000	132,000	132,000	132,000	132,000	132,000	132,000	132,000	132,000	132,000	132,000	132,000	132,000	132,000	\$1,133	\$1,318
East End Station (2825 King St E) - Station 20	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	\$1,039	\$1,246
Mountain Station (488 Upper Wellington)	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	-	-	\$1,039	\$1,221
Marine Facility (Guise St)	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	-	-	-	-	\$1,039	\$1,227
Marine Facility (110 HARBOURFRONT DRIVE) - Temporary Facility	-	-	-	-	-	-	-	-	-	-	-	2,650	2,650	2,650	2,650	\$1,096	\$1,214
Divisional 30 Headquarters (Rymal Rd)	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	\$1,039	\$1,252
Station #19, Police, 3302 Homestead Rd.	285	285	285	285	285	285	285	285	-	-	-	-	-	-	-	\$1,039	\$1,217
Station #18, Police, 2636 Hwy 56, Binbrook	334	334	334	334	334	334	334	334	-	-	-	-	-	-	-	\$1,039	\$1,219
ISD Facility, 100 Wilson Street	-	-	-	-	-	-	-	-	-	-	-	-	62,754	62,754	62,754	\$1,133	\$1,350
<b>City Leased</b>																	
Dundas Station (2 King St W)	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	\$350	\$427
601 Burlington Street	2,852	2,852	2,852	2,852	2,852	2,852	2,852	2,852	2,852	2,852	-	-	-	-	-	\$350	\$446
Holly Oakes Farms (3517 Powerline Road)	23,090	23,090	23,090	23,090	23,090	23,090	23,090	23,090	23,090	23,090	23,090	23,090	23,090	23,090	23,090	\$350	\$445
Goodwill - 3rd floor (229 King William Street)	-	-	-	-	-	-	-	-	-	-	-	-	3,661	4,296	4,296	\$350	\$445
Goodwill - 4th floor (229 King William Street)	-	-	-	-	-	-	-	-	-	-	-	6,871	6,871	6,871	6,871	\$350	\$445
<b>Community Policing Centres and Other</b>																	
Professional Standards Branch	1,400	1,400	1,400	-	-	-	-	-	-	-	-	-	-	-	-	\$350	\$445
Jackson Square	750	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$350	\$404



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Policing Services - Facilities  
Unit Measure: sq.ft. of building area

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Bld'g Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
Landsdale-Stinson	800	800	800	800	800	800	800	800	-	-	-	-	-	-	-	\$350	\$445
Centre Mall	850	850	850	850	850	850	850	-	-	-	-	-	-	-	-	\$350	\$445
Ancaster Municipal Office	400	400	400	400	-	400	-	-	-	-	-	-	-	-	-	\$350	\$445
Spartan Plaza	400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$350	\$445
Concession Street	850	850	850	850	850	850	850	850	850	-	-	-	-	-	-	\$350	\$445
Flamborough Municipal Office	750	750	750	750	-	750	-	-	-	-	-	-	-	-	-	\$350	\$445
Lime Ridge Mall	750	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$350	\$445
Innovation Drive-Flamborough	-	-	-	-	984	-	984	984	984	984	278	278	278	378	378	\$350	\$445
Tisdale House 312 Wilson Street Ancaster	-	-	-	-	940	-	940	940	940	940	940	940	940	940	940	\$350	\$445
460 Barton Street	-	-	-	-	-	-	-	3,072	3,072	3,072	-	-	-	-	-	\$350	\$445
Blacks Stables	-	-	4,800	4,800	4,800	4,800	4,800	-	-	-	-	-	-	-	-	\$350	\$445
Ancaster Fairgrounds Stables	-	-	-	-	-	-	-	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	\$350	\$415
John Sopinka Courthouse (45 Main St. E.)	12,570	12,570	12,570	12,570	12,570	12,570	12,570	12,570	12,570	12,570	12,570	12,570	12,570	12,570	12,570	\$641	\$781
Superior Courthouse (55 Main St. W.)	1,599	1,599	1,599	1,599	1,599	1,599	1,599	1,599	1,599	1,599	1,599	1,599	1,599	1,599	1,599	\$350	\$445
POA Courthouse (50 Main St. E.)	-	-	-	-	-	-	-	-	-	-	-	-	16,736	16,736	16,736	\$641	\$781
Centre Road Block (Building), 1255 Centre Rd.	-	-	-	-	-	-	-	2,147	2,147	2,147	2,147	2,147	2,147	2,147	-	\$430	\$643
Building 'B' Administration - 1227 Stone Church Road East (MATC)	-	-	-	13,286	13,286	13,286	13,286	13,286	13,286	13,286	13,286	13,286	13,286	13,286	13,286	\$750	\$888
Building 'C' Training - 1227 Stone Church Road East (MATC)	-	-	-	16,625	16,625	16,625	16,625	16,625	16,625	16,625	16,625	16,625	16,625	16,625	16,625	\$747	\$885
<b>Total</b>	<b>290,729</b>	<b>288,829</b>	<b>293,629</b>	<b>322,140</b>	<b>322,914</b>	<b>322,140</b>	<b>322,914</b>	<b>327,483</b>	<b>326,064</b>	<b>325,214</b>	<b>318,584</b>	<b>323,105</b>	<b>406,256</b>	<b>381,991</b>	<b>379,845</b>		
Population	511,412	514,740	515,591	519,949	522,611	526,896	529,744	533,698	536,918	543,294	549,623	555,599	562,453	569,353	578,957		
Per Capita Standard	0.5685	0.5611	0.5695	0.6196	0.6179	0.6114	0.6096	0.6136	0.6073	0.5986	0.5796	0.5815	0.7223	0.6709	0.6561		





**City of Hamilton**  
**Service Standard Calculation Sheet**

Service: Policing Services - Facilities  
Unit Measure: sq.ft. of building area

15 Year Average	2008-2022
Quantity Standard	0.6125
Quality Standard	1,134
Service Standard	\$695

D.C. Amount (before deductions)	10 Year
Forecast Population	62,136
\$ per Capita	\$695
Eligible Amount	\$43,159,666



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Policing Services - Vehicles  
Unit Measure: No. of vehicles and equipment

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/Vehicle)
Patrol Vehicles	117	117	117	117	120	123	123	122	122	124	122	105	93	107	102	\$113,000
Non-Patrol Vehicles	33	78	79	81	156	174	164	169	172	170	170	173	167	170	193	\$42,000
Marine Vessel - Hike 941	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$1,112,200
Marine Vessel - Zodiac 942	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$346,100
Marine Vessel - Argo 944	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$52,900
Marine Vessel - Zodiac 943	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$24,100
Explosive Disposal Unit - Bomb Truck 962	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$292,300
Court Security - Prisoner Van 197,198	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	\$160,000
ATV Team 920	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$31,800
ATVs 828,829	-	-	-	-	-	-	-	2	2	2	2	2	2	2	2	\$19,100
ATV Trailer 615	-	-	-	-	-	1	1	1	1	1	1	1	1	1	1	\$10,600
Emergency Response Unit - Utility Rescue 960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$439,700
Specialties Unit - Traditional Organized Crime 961	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$292,700
Emergency Response Unit Vehicle 964	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$443,200
<b>Total</b>	<b>161</b>	<b>206</b>	<b>207</b>	<b>209</b>	<b>287</b>	<b>309</b>	<b>299</b>	<b>305</b>	<b>308</b>	<b>308</b>	<b>306</b>	<b>292</b>	<b>274</b>	<b>291</b>	<b>309</b>	

Population	511,412	514,740	515,591	519,949	522,611	526,896	529,744	533,698	536,918	543,294	549,623	555,599	562,453	569,353	578,957
Per Capita Standard	0.0003	0.0004	0.0004	0.0004	0.0005	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0005	0.0005	0.0005	0.0005

15 Year Average	2008-2022
Quantity Standard	0.0005
Quality Standard	\$83,420
Service Standard	\$42

D.C. Amount (before deductions)	10 Year
Forecast Population	62,136
\$ per Capita	\$42
Eligible Amount	\$2,591,693



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Policing Services - Small Equipment and Gear  
Unit Measure: No. of equipment and gear

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/item)
Equipped Officers	787	787	793	797	797	797	797	812	812	812	812	813	855	855	855	\$18,300
Special Constables	98	95	104	103	103	103	109	85	85	85	85	88	88	88	121	\$2,900
Auxiliary	65	50	63	70	82	70	82	78	78	78	78	76	76	76	43	\$3,200
Cadets	-	-	-	-	-	-	-	4	4	4	4	4	12	12	18	\$3,500
<b>Total</b>	<b>950</b>	<b>932</b>	<b>960</b>	<b>970</b>	<b>982</b>	<b>970</b>	<b>988</b>	<b>979</b>	<b>979</b>	<b>979</b>	<b>979</b>	<b>981</b>	<b>1,031</b>	<b>1,031</b>	<b>1,037</b>	

Population	511,412	514,740	515,591	519,949	522,611	526,896	529,744	533,698	536,918	543,294	549,623	555,599	562,453	569,353	578,957
Per Capita Standard	0.0019	0.0018	0.0019	0.0019	0.0019	0.0018	0.0019	0.0018	0.0018	0.0018	0.0018	0.0018	0.0018	0.0018	0.0018

15 Year Average	2008-2022
Quantity Standard	0.0018
Quality Standard	\$15,889
Service Standard	\$29

D.C. Amount (before deductions)	10 Year
Forecast Population	62,136
\$ per Capita	\$29
Eligible Amount	\$1,777,090



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Parkland Development  
Unit Measure: Acres of Parkland

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/Acre)
City Wide	1,098	1,117	1,117	1,117	1,117	1,148	1,110	1,110	1,110	1,110	1,110	1,098	1,098	1,097	1,101	\$82,000
Neighbourhood	653	671	671	686	688	689	732	735	744	751	757	764	767	772	782	\$67,000
Parkette	68	68	68	73	74	74	66	66	67	67	67	67	69	69	69	\$145,000
Community	799	837	839	851	889	889	826	826	826	826	801	803	803	798	798	\$82,000
Heritage Parkland	409	409	409	409	409	409	404	404	404	404	404	404	404	404	404	\$47,400
Natural Open Space	2,114	2,114	2,114	2,137	2,137	2,052	1,948	1,948	1,948	1,948	1,943	1,956	1,956	1,972	1,972	\$14,800
General Open Space	191	191	191	185	195	231	253	253	253	253	253	251	251	251	253	\$47,400
Parks on Utility Lands	77	75	75	72	72	72	99	99	99	99	99	99	99	99	99	\$14,800
Leased Land	55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$15,400
Other Utility Lands	118	118	118	119	119	119	81	81	81	81	81	81	81	81	81	\$14,800
School Lands	395	395	395	395	381	356	314	314	314	314	314	370	426	425	425	\$50,000
Non-City-Owned Lands (not including School Lands, Royal Botanical Garden lands or Conservation Authority Lands that the City maintains as parkland)	169	169	169	159	129	130	88	127	127	127	127	128	128	128	132	\$47,400
<b>Total</b>	<b>6,146</b>	<b>6,164</b>	<b>6,166</b>	<b>6,203</b>	<b>6,210</b>	<b>6,169</b>	<b>5,921</b>	<b>5,965</b>	<b>5,974</b>	<b>5,982</b>	<b>5,957</b>	<b>6,021</b>	<b>6,083</b>	<b>6,097</b>	<b>6,116</b>	

Population	511,412	514,740	515,591	519,949	522,611	526,896	529,744	533,698	536,918	543,294	549,623	555,599	562,453	569,353	578,957
Per Capita Standard	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01

15 Year Average	2008-2022
Quantity Standard	0.0113
Quality Standard	\$50,254
Service Standard	\$568

D.C. Amount (before deductions)	10 Year
Forecast Population	62,136
\$ per Capita	\$568
Eligible Amount	\$35,285,170



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Parkland Amenities  
Unit Measure: No. of parkland amenities

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/item)
Tennis Club Lit	44	46	46	46	46	46	48	48	48	48	48	48	48	48	48	\$108,100
Tennis Public Lit	24	25	25	25	25	25	22	22	22	22	22	22	20	20	20	\$108,100
Tennis Public Unlit	17	17	17	17	18	23	20	20	20	20	21	20	17	19	17	\$70,500
Soccer Class A+ (Lit) - Artificial Turf	-	-	-	1	1	1	1	1	1	1	1	1	1	1	1	\$4,000,000
Soccer Class A+ (Lit)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$860,200
Soccer Class A Lit	10	17	17	17	15	15	15	15	15	15	15	15	15	16	1	\$398,000
Soccer Class B Lit	9	9	9	9	9	9	8	8	8	8	8	8	9	9	9	\$329,000
Soccer Class B Unlit	3	6	6	6	6	8	11	11	11	11	11	11	12	12	13	\$277,300
Soccer Class C Unlit	129	160	160	160	161	162	201	201	201	201	201	201	201	202	202	\$117,500
Soccer Class D Unlit	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$85,200
Lit Football Fields	5	3	3	3	3	3	4	4	4	5	6	6	6	6	6	\$220,900
Unlit Football Fields	6	2	2	2	2	2	2	2	2	2	2	2	2	2	2	\$106,500
Hardball Lit (premier diamond)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$506,000
Hardball Lit	12	14	14	15	15	15	15	15	15	15	15	15	15	15	15	\$285,100
Hardball Unlit	25	22	22	22	22	21	21	21	21	21	21	21	21	21	21	\$123,800
Softball Lit	32	33	33	36	39	40	37	37	37	39	41	41	41	40	40	\$285,100
Softball Unlit	153	139	139	139	127	126	121	116	111	106	101	101	101	98	97	\$123,800
Tball	38	38	38	39	43	43	42	41	40	39	38	38	38	36	35	\$51,700
Batting Cages	16	12	12	12	12	12	12	12	13	16	16	16	16	16	18	\$27,900
Lit Bocce Courts	32	32	32	32	32	32	35	35	29	29	29	29	29	29	29	\$20,300
Regulation Bocce Courts Lit (min. 2 lanes)	10	10	10	10	10	10	8	8	8	8	8	8	8	8	8	\$175,500
Unlit Bocce Courts	9	7	7	7	7	5	2	2	2	2	2	2	2	2	2	\$11,000
Basketball Full-court	93	93	93	93	93	93	91	90	89	88	87	82	79	78	75	\$72,100
Basketball Half-court	-	-	-	-	-	-	159	159	159	160	160	162	160	164	164	\$36,000
Multi-Purpose Court	6	7	7	8	11	13	15	18	21	24	27	36	41	43	46	\$89,300
Spray Pads - Community/City Wide	16	16	16	17	17	20	20	21	21	22	26	27	27	28	28	\$459,900
Spray Pads - Neighbourhood/Parkette	35	35	35	35	37	38	38	38	37	39	41	42	42	42	42	\$348,400
Wading Pools	16	16	16	16	16	15	14	13	11	9	8	8	8	7	7	\$226,900
Play Structure - Neighbourhood/Parkette Parks	157	157	157	163	187	190	205	213	221	229	237	258	261	272	279	\$146,300



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Parkland Amenities  
Unit Measure: No. of parkland amenities

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/item)
Play Structure - Community/City-wide Parks	59	59	59	62	67	69	71	74	77	80	83	92	92	96	101	\$283,500
Play Structure - Other Parks (School, Historical, Open Space)	38	38	39	27	26	27	29	30	31	32	33	34	35	36	36	\$119,000
Play Equipment - Community Parks/City-wide Parks	160	160	160	157	157	160	158	158	158	158	158	179	180	174	200	\$34,400
Play Equipment - Neighbourhood/Parkette Parks	367	367	367	402	420	436	432	427	422	417	412	430	436	441	456	\$25,100
Play Equipment - Other Parks (School, Historical, Open Space)	-	108	108	81	86	83	72	73	74	75	76	85	87	89	89	\$15,600
Natural Playground	-	-	-	-	-	-	4	5	6	7	7	7	7	8	8	\$174,200
Accessible Swing Seats	49	53	53	52	74	80	83	90	95	100	108	115	117	126	127	\$3,100
Swing Sets, 4 seats	10	157	159	161	163	165	167	169	171	173	175	181	182	181	182	\$54,600
Swing Sets, 6 seats	-	50	52	54	56	58	60	61	62	63	64	64	65	67	69	\$71,100
Swing Sets, 8 seats	3	40	41	42	43	44	45	46	47	48	49	50	50	48	49	\$87,500
Exercise Stations (per fitness station)	33	33	33	33	33	33	33	33	41	46	46	46	46	63	70	\$12,800
Skateboard Parks	4	5	5	5	5	5	5	5	5	5	6	6	6	6	7	\$1,212,500
Lawn bowling Greens	10	10	10	10	10	10	4	4	4	4	4	4	4	4	4	\$15,600
Volleyball Courts	5	5	5	5	5	5	20	20	20	20	20	20	20	20	20	\$20,300
Running Tracks	5	5	5	5	6	6	10	10	10	11	11	11	11	11	11	\$109,700
Public Beaches within Parks/along Trails	3	3	3	3	3	3	5	5	5	5	5	5	5	5	5	\$3,100
Public Boat Launches within Parks	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	\$20,300
<b>Track and Field Amenities:</b>																
High Jump Area	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	\$11,000
Discus Area	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	\$11,000
Long Jump pits	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	\$11,000
Hop Skip Jump area	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$11,000



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Parkland Amenities  
Unit Measure: No. of parkland amenities

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/item)
Shot-put/discus	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$11,000
Steeplechase waterpit	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$15,600
Javelin runway	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$11,000
Benches	2545	2545	2545	2550	2555	2,560	2,610	2,660	2,710	2,760	2,810	2,860	2,910	2,960	3,010	\$1,500
Bleachers	279	277	277	274	274	273	277	281	285	289	293	293	298	301	301	\$11,000
Display Fountains	5	5	6	7	8	9	11	11	11	11	11	11	11	11	11	\$25,100
Drinking Fountains	81	79	76	74	71	68	70	72	74	76	78	84	85	90	94	\$69,700
Trash Receptacles	1296	1302	1307	1314	1320	1,327	1,377	1,427	1,477	1,527	1,577	1,602	1,627	1,652	1,677	\$1,500
Lighting Standards	1827	1968	2109	2250	2391	2,532	2,557	2,582	2,607	2,632	2,657	2,694	2,700	2,737	2,823	\$6,300
Bridges - Pedestrian	20	24	28	33	38	42	38	38	38	38	38	38	38	38	38	\$86,100
Bridges - Vehicle	9	11	12	15	17	18	13	13	13	13	13	13	13	13	13	\$148,800
Gates - Vehicle	112	112	112	113	114	115	117	119	121	123	125	125	127	127	127	\$14,900
Gates - Pedestrian	167	167	167	163	161	159	162	165	168	171	174	178	178	178	196	\$11,100
Irrigation Systems	55	55	55	55	58	58	60	62	62	64	64	67	72	72	72	\$11,000
Band shell (Battlefield Park)	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$477,900
Cricket Pitch - Class A (natural turf, irrigated, unlit)	-					-	-	-	-	-	-	-	1	1	1	\$936,900
Cricket Pitch	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	\$123,800
Cricket Practice Pitch	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$62,700
Australian Football Field	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$106,500
Viewing Platform	1	1	1	1	1	2	8	8	8	8	8	8	8	8	8	\$490,400
Escarpment Stairs	6	6	6	6	6	6	12	12	12	12	12	12	12	12	12	\$2,513,200
Outdoor Ice Rink - Naturally Cooled	66	66	66	66	66	66	66	66	66	67	67	67	67	68	67	\$136,600
Outdoor Ice Rink - Artificially Cooled	1	1	1	2	2	2	3	3	3	3	3	4	4	4	4	\$1,265,500



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Parkland Amenities  
Unit Measure: No. of parkland amenities

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/item)
Park Signs - Community	87	87	87	87	87	87	88	89	90	91	92	92	93	93	93	\$13,200
Park Signs - Internal	609	609	609	609	609	609	614	619	624	629	634	635	637	637	638	\$12,800
Park Signs - Neighbourhood	237	237	237	239	240	243	245	245	246	250	250	252	253	254	283	\$9,100
Parking - Asphalt - lit (per stall)	9	9	9	9	9	9	1,533	1,583	1,633	1,683	1,733	1,760	1,900	1,927	2,077	\$7,800
Parking - Asphalt - unlit (per stall)	3,427	3,427	3,428	3,428	3,428	3,428	1,824	1,874	1,924	1,974	2,024	2,024	2,024	2,015	2,018	\$4,500
Parking - Granular - unlit (per stall)	3,931	3,931	3,932	3,932	3,932	3,932	3,194	3,244	3,294	3,344	3,444	3,444	3,444	3,402	3,402	\$1,500
Parking - Pervious Concrete - unlit (per stall)	-	-	-	-	22	22	22	22	22	22	22	22	22	22	22	\$25,100
Parking - Grasspave - unlit (per stall)	-	-	-	-	140	140	-	-	-	-	-	-	-	-	-	\$1,800
Pump Track (BMX/Bike Track) - Gage Park	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	\$155,800
Bob Mackenzie Ball Hockey Court (Roxborough ave)	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	\$206,800
Leash Free Dog Areas - Fenced	2	2	2	3	3	4	5	6	7	8	8	8	8	9	10	\$115,000
Leash Free Dog Areas - Unfenced	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	\$4,500
Pickleball Courts	-	-	-	-	-	-	-	-	6	6	6	6	24	24	24	\$4,200
<b>Total</b>	<b>16,447</b>	<b>16,960</b>	<b>17,117</b>	<b>17,289</b>	<b>17,690</b>	<b>17,892</b>	<b>17,298</b>	<b>17,611</b>	<b>17,925</b>	<b>18,253</b>	<b>18,617</b>	<b>18,877</b>	<b>19,149</b>	<b>19,295</b>	<b>19,712</b>	

Population	511,412	514,740	515,591	519,949	522,611	526,896	529,744	533,698	536,918	543,294	549,623	555,599	562,453	569,353	578,957
Per Capita Standard	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03

15 Year Average	2008-2022
Quantity Standard	0.0335
Quality Standard	\$18,790
Service Standard	\$629

D.C. Amount (before deductions)	10 Year
Forecast Population	62,136
\$ per Capita	\$629
Eligible Amount	\$39,111,505





**City of Hamilton  
Service Standard Calculation Sheet**

Service: Parkland Amenities - Buildings  
Unit Measure: sq.ft. of building area

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/sq.ft.)
<b>Park Amenities (sq.ft.)</b>																
Agro Park - Sun Shelter	-	-	-	-	-	-	-	-	-	400	400	400	400	400	400	\$126
Agro Park - Trellis	-	-	-	-	-	-	-	-	-	192	192	192	192	192	192	\$126
Alexander Park - Trellis	-	-	-	-	-	-	-	-	-	-	242	242	242	242	242	\$126
Allison Neighbourhood Park - Sun Shelter	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	\$126
Beasley Park - Sun Shelter	-	-	-	-	-	-	-	-	-	-	290	290	290	290	290	\$273
Redhill Summit East Park - Sun Shelter	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	\$126
Beverly Park - Pavilion	1,332	1,332	1,332	1,332	1,332	1,332	1,332	1,332	1,332	1,332	1,332	1,332	1,332	1,332	1,332	\$126
Birch Avenue Leash-Free Area - Shelter #1	-	-	-	45	45	45	45	45	45	45	45	45	45	45	45	\$126
Birch Avenue Leash-Free Area - Shelter #2	-	-	-	45	45	45	45	45	45	45	45	45	45	45	45	\$126
Bookjans Park	-	-	-	-	-	-	-	-	-	-	-	210	210	210	210	\$126
Broughton Park West - Sun Shelter	-	-	-	-	360	360	360	360	360	360	360	360	360	360	360	\$126
Buchanan Park - Sun Shelter	-	-	-	-	-	-	-	200	200	200	200	200	200	200	200	\$126
Burkholder Park - Sun Shelter	-	-	-	-	400	400	400	400	400	400	400	400	400	400	400	\$126
Carpenter Park - Sun Shelter	-	-	-	-	-	-	-	-	-	383	383	383	383	383	383	\$126
Carter Park - Sun Shelter	-	-	-	-	-	-	332	332	332	332	332	332	332	332	332	\$126
Caterini Park - Sun Shelter	-	-	-	-	-	-	-	-	-	400	400	400	400	400	400	\$126
Centennial Heights Park - Pavilion	1,313	1,313	1,313	1,313	1,313	1,313	1,313	1,313	1,313	1,313	1,313	1,313	1,313	1,313	1,313	\$126
Central Park - Sun Shelter	-	-	-	-	-	-	-	-	-	-	-	-	-	-	400	\$126
Chappel Estates Park - Sun Shelter	-	-	-	-	-	388	388	388	388	388	388	388	388	388	388	\$126
Churchill Park - Sun Shelters	1,526	1,526	1,526	1,526	1,526	1,526	1,526	1,526	1,526	1,526	1,526	1,526	1,526	1,526	1,526	\$72
Cline Park - Sun Shelter	-	-	-	-	-	-	-	-	-	-	-	-	-	374	374	\$126
Confederation Beach Park - Edgewater Pavilion	5,756	5,756	5,756	5,756	5,756	5,756	5,756	5,756	5,756	5,756	5,756	5,756	5,756	5,756	5,756	\$126
Confederation Beach Park - Willow Cove Pavilion	2,594	2,594	2,594	2,594	2,594	2,594	2,594	2,594	2,594	2,594	2,594	2,594	2,594	2,594	2,594	\$126
Confederation Beach Park Sports Park - Plaza (Drop-off area) Shade Structure	-	-	-	-	-	-	-	-	-	-	-	-	-	-	878	\$126



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Parkland Amenities - Buildings  
Unit Measure: sq.ft. of building area

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/sq.ft.)
<b>Park Amenities (sq.ft.)</b>																
Confederation Beach Park Sports Park - Playground Shade Structure #1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	270	\$126
Confederation Beach Park Sports Park - Playground Shade Structure #2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	270	\$126
Confederation Beach Park Sports Park - Picnic Shelter #1 (NORTH) (unlit)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	665	\$126
Confederation Beach Park Sports Park - Picnic Shelter #2 (WEST) (unlit)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	665	\$126
Confederation Beach Park Sports Park - Picnic Shelter #3 (EAST) (unlit)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	665	\$126
Copetown Lions Park - Pavilion	1,304	1,304	1,304	1,304	1,304	1,304	1,304	1,304	1,304	1,304	1,304	1,304	1,304	1,304	1,304	\$126
Courtcliffe Park - Picnic Shelter	1,485	1,485	1,485	1,485	1,485	1,485	1,485	1,485	1,485	1,485	1,485	1,485	1,485	1,485	1,485	\$126
Cranberry Hill Park - Sun Shelter	-	-	-	-	-	-	-	-	-	282	282	282	282	282	282	\$126
Creekside Park - Sun Shelter	-	-	-	-	-	-	-	-	488	488	488	488	488	488	488	\$126
Dundas Driving Park - Pavilion - 159080	1,097	1,097	1,097	1,097	1,097	1,097	1,097	1,097	1,097	1,097	1,097	1,097	1,097	1,097	1,097	\$273
Dundas Driving Park - Pavilion - 159665	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	2,058	\$273
Dundas Driving Park - Trellis	665	665	665	665	665	665	665	665	665	665	665	665	665	665	665	\$126
Dundurn Park - Picnic Pavilion	1,336	1,336	1,336	1,336	1,336	1,336	1,336	1,336	1,336	1,336	1,336	1,336	1,336	1,336	1,336	\$126
Durand Park - Sun Shelter	-	-	-	-	-	-	-	366	366	366	366	366	366	366	366	\$126
Durand Park - Trellis	-	-	-	-	-	-	-	180	180	180	180	180	180	180	180	\$126
Elmar Park - Sun Shelter	-	-	-	-	-	-	373	373	373	373	373	373	373	373	373	\$126
Eringate Park - Sun Shelter	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	\$126
Fair Park (Meadowlands Ph IIX & X) Sun Shelter	-	-	-	-	-	-	-	-	400	400	400	400	400	400	400	\$126



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Parkland Amenities - Buildings  
Unit Measure: sq.ft. of building area

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/sq.ft.)
<b>Park Amenities (sq.ft.)</b>																
Fairfield Park - Sun Shelter	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	\$273
Fairgrounds Community Park - Picnic Pavilion	1,816	1,816	1,816	1,816	1,816	1,816	1,816	1,816	1,816	1,816	1,816	1,816	1,816	1,816	1,816	\$126
Fairgrounds Community Park - Sun Shelter	-	-	334	334	334	334	334	334	334	334	334	334	334	334	334	\$126
Father Sean O'Sullivan Park - Sun Shelter	-	-	-	-	-	-	380	380	380	380	380	380	380	380	380	\$126
Freelton Community Park - Picnic Pavilion	1,220	1,220	1,220	1,220	1,220	1,220	1,220	1,220	1,220	1,220	1,220	1,220	1,220	1,220	1,220	\$126
Gage Park - Archway (Near Main St)	602	602	602	602	602	602	602	602	602	602	602	602	602	602	602	\$126
Gage Park - Band Shell	980	980	980	980	980	980	980	980	980	980	980	980	980	980	980	\$273
Gatesbury Sun Shelter	-	-	-	-	-	-	-	-	250	250	250	250	250	250	250	\$126
Glanbrook Hills Park - Sun Shelter	-	-	-	-	-	-	-	-	-	-	450	450	450	450	450	\$126
Globe Park - Sun Shelter	380	380	380	380	380	380	380	380	380	380	380	-	-	-	-	\$126
Hampton Park - Sun Shelter	-	-	400	400	400	400	400	400	400	400	400	400	400	400	400	\$126
Heritage Green Dog Park - Sun Shelter	-	-	-	-	-	-	-	-	-	-	-	150	150	150	150	\$273
Highland Road Park - Sun Shelter	-	-	-	-	-	-	-	-	-	-	-	-	-	-	374	\$126
Hill Street Dog Park - Sun Shelter	-	-	-	-	-	-	-	-	-	-	-	100	100	100	100	\$126
Honourable Bob McKenzie Park - Sun Shelter	-	-	-	-	-	-	272	272	272	272	272	272	272	272	272	\$126
Huntington Park - Sun Shelter	380	380	380	380	380	380	380	380	380	380	380	380	380	380	380	\$273
Inch Park - Sun Shelter	-	-	-	-	-	-	-	-	-	-	-	780	780	780	780	\$126
Jackson Heights Neighbourhood Park - Sun Shelter	-	-	-	388	388	388	388	388	388	388	388	388	388	388	388	\$126
Jerome Neighbourhood Park - Sun Shelter	-	-	-	-	590	590	590	590	590	590	590	590	590	590	590	\$126
Joe Sam's Leisure Park - Sun Shelter	-	-	-	-	-	-	-	-	-	-	1,130	1,130	1,130	1,130	1,130	\$168
John Rebecca Park - Custom Sun Shelter/Pergola	-	-	-	-	-	-	-	-	-	-	-	800	800	800	800	\$126



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Parkland Amenities - Buildings  
Unit Measure: sq.ft. of building area

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/sq.ft.)
<b>Park Amenities (sq.ft.)</b>																
Johnson Tew Park - Sun Shelter	-	-	-	-	-	-	-	-	470	470	470	470	470	470	470	\$126
Kennedy East Park - Sun Shelter	380	380	380	380	380	380	380	380	380	380	380	380	380	380	380	\$126
Kings Forest Golf Club - Pavilion A	199	199	199	199	199	199	199	199	199	199	199	199	199	199	199	\$126
Kings Forest Golf Club - Sun Shelter	315	315	315	315	315	315	315	315	315	315	315	-	-	-	-	\$126
Kinsmen Park - Picnic Shelter	-	-	-	-	-	-	747	747	747	747	747	747	747	747	747	\$126
Kopperfield Park - Sun Shelter	-	-	-	-	-	-	-	400	400	400	400	400	400	400	400	\$126
Laidman Park - Sun Shelter	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	\$126
Lake Pointe Park - Sun Shelter	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	\$126
Lake Vista Park - Sun Shelter	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	\$126
Lynden Legion Park - Picnic Pavilion	337	337	337	337	337	337	337	337	337	337	337	337	337	337	337	\$126
Lynden Lions South Park - Picnic Pavilion	-	-	-	-	-	-	864	864	864	864	864	864	864	864	864	\$126
McClaren Park - Shade Structure	-	-	-	-	-	-	-	-	225	225	225	225	225	225	225	\$138
Mohawk Sports Park Sun Shelter	-	-	-	-	-	-	-	-	-	-	-	-	-	-	780	\$126
Mohawk Sports Park - First Base Dugout	212	212	212	212	212	212	212	212	212	212	212	212	212	212	212	\$126
Mohawk Sports Park - Third Base Dugout	212	212	212	212	212	212	212	212	212	212	212	212	212	212	212	\$126
Montgomery Park - Pavilion	336	336	336	336	336	336	336	336	336	336	336	336	336	336	336	\$126
Montgomery Park - Sun Shelter	336	336	336	336	336	336	336	336	336	336	336	336	336	336	336	\$126
Moorland Park - Sun Shelter	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	\$126
Mount Hope Park - Sun Shelter	-	-	-	-	-	-	-	-	-	-	724	724	724	724	724	\$126
Mount Lions Park - Sun Shelter Pavilion	380	380	380	380	380	380	380	380	380	380	380	380	380	380	380	\$273
Newlands Park - Sun Shelter	274	274	274	274	274	274	274	274	274	274	274	274	274	274	274	\$126
North Central Community Park - Sun Shelter	416	416	416	416	416	416	416	416	416	416	416	416	416	416	416	\$126
Peace Memorial Park - Trellis	1,314	1,314	1,314	1,314	1,314	1,314	1,314	1,314	1,314	1,314	1,314	1,314	1,314	1,314	1,314	\$126



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Parkland Amenities - Buildings  
Unit Measure: sq.ft. of building area

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/sq.ft.)
<b>Park Amenities (sq.ft.)</b>																
Perth Park - Sun Shelter	-	-	-	-	-	-	-	232	232	232	232	232	232	232	232	\$126
Pier 4 Park - Pavilion/Sun Shelter At Water's Edge	-	-	-	-	-	-	795	795	795	795	795	795	795	795	795	\$126
Pine Ridge Park - Sun Shelter	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	\$126
Pipeline (Geraldine Copps) Parkette - Shade Structure	-	-	-	-	-	-	-	-	-	180	180	180	180	180	180	\$126
Powell Park - Sun Shelter	380	380	380	380	380	380	380	380	380	380	380	380	380	380	380	\$126
Red Hill Park - Sun Shelter	-	-	-	-	-	-	-	-	-	-	-	-	-	400	400	\$126
Richwill Park - Sun Shelter	354	354	354	354	354	354	354	354	354	354	354	354	354	354	354	\$126
Robert E. Wade Ancaster Community Park - Sun Shelter	-	-	-	784	784	784	784	784	784	784	784	784	784	784	784	\$126
Sackville Park - Bocce Sun Shelter	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	\$126
Sam Lawrence Park - Pavilion	1,675	1,675	1,675	1,675	1,675	1,675	1,675	1,675	1,675	1,675	1,675	1,675	1,675	1,675	1,675	\$126
Sam Manson Park - Sun Shelter	-	-	-	-	-	405	405	405	405	405	405	405	405	405	405	\$126
Seabreeze Park - Sun Shelter	-	-	-	-	400	400	400	400	400	400	400	400	400	400	400	\$126
Sheffield Ball Park - Pavilion	580	580	580	580	580	580	580	580	580	580	580	580	580	580	580	\$126
Skinner Park - Sun Shelter (unlit)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	185	\$126
Southampton Estates Park - Sun Shelter	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	\$126
Southbrook Park - Sun Shelter	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	\$126
Strabane Community Park - Pavilion	880	880	880	880	880	880	880	880	880	880	880	880	880	880	880	\$126
Summerlea West Park - Sun Shelter	-	-	-	-	278	278	278	278	278	278	278	278	278	278	278	\$126
Summit Park - Sun Shelter	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	\$126
Summit Parkette - Sun Shelter	-	-	-	-	-	-	-	-	-	-	-	256	256	256	256	\$126
Templemead Park - Sun Shelter	560	560	560	560	560	560	560	560	560	560	560	560	560	560	560	\$126
Tiffany Hills (Ancaster Meadows) Park - Sun Shelter	-	-	-	-	-	-	-	-	-	-	-	256	256	256	256	\$126
Trenholme Park - Pavilion	394	394	394	394	394	394	394	394	394	394	394	394	394	394	394	\$126
Valens Park - Picnic Pavilion	1,230	1,230	1,230	1,230	1,230	1,230	1,230	1,230	1,230	1,230	1,230	1,230	1,230	1,230	1,360	\$126
Valley Community Centre Park - Picnic Pavilion	-	-	-	-	-	-	-	-	-	-	500	500	500	500	500	\$126



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Parkland Amenities - Buildings  
Unit Measure: sq.ft. of building area

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/sq.ft.)
<b>Park Amenities (sq.ft.)</b>																
Valley Park - Pavilion	1,644	1,644	1,644	1,644	1,644	1,644	1,644	1,644	1,644	1,644	1,644	1,644	1,644	1,644	1,644	\$126
Valley Park - Skate Park Sun Shelter	-	-	-	-	-	-	-	-	-	-	-	-	-	-	500	\$126
Vincent Massey - Sun Shelter	-	-	-	-	-	-	-	-	400	400	400	400	400	400	400	\$126
Waterdown Memorial Park - Picnic Pavilion	1,342	1,342	1,342	1,342	1,342	1,342	1,342	1,342	1,342	1,342	1,342	1,342	1,342	1,342	1,342	\$126
Waterford Park - Sun Shelter	-	-	-	-	-	-	-	-	-	-	-	-	400	400	400	\$126
Westover Community Park - Picnic Pavilion	-	-	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	\$126
William Connell Park - Trellis	-	-	-	-	-	-	-	-	-	-	660	660	660	660	660	\$126
William Mcculloch - Pavilion	-	-	-	365	365	365	365	365	365	365	365	365	365	365	365	\$126
William Schwenger Park - Sun Shelter	-	-	-	-	278	278	278	278	278	278	278	278	278	278	278	\$126
Winona Park - Picnic Pavilion	1,750	1,750	1,750	1,750	1,750	1,750	1,750	1,750	1,750	1,750	1,750	1,750	1,750	1,750	1,750	\$126
Winona Park - Trellis	-	-	-	-	300	300	300	300	300	300	300	300	300	300	300	\$126
Woolverton Park - Pavilion	-	-	-	-	-	-	366	366	366	366	366	366	366	366	366	\$126
York Road Parkette (Kaga Corner) - Sun Shelter	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	\$126
<b>Total</b>	<b>46,279</b>	<b>46,279</b>	<b>48,513</b>	<b>50,140</b>	<b>52,746</b>	<b>53,539</b>	<b>57,667</b>	<b>59,045</b>	<b>61,278</b>	<b>63,115</b>	<b>67,111</b>	<b>68,968</b>	<b>69,368</b>	<b>70,142</b>	<b>75,924</b>	

Population	511,412	514,740	515,591	519,949	522,611	526,896	529,744	533,698	536,918	543,294	549,623	555,599	562,453	569,353	578,957
Per Capita Standard	0.09	0.09	0.09	0.10	0.10	0.10	0.11	0.11	0.11	0.12	0.12	0.12	0.12	0.12	0.13

15 Year Average	2008-2022
Quantity Standard	0.1098
Quality Standard	\$138
Service Standard	\$15

D.C. Amount (before deductions)	10 Year
Forecast Population	62,136
\$ per Capita	\$15
Eligible Amount	\$944,467



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Parkland Trails  
Unit Measure: Linear Kilometres of Paths and Trails

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/km)
<b>Recreational Trails (km):</b>																
Bayfront Park Pathway (asphalt - lit)	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	\$338,000
Borer's Creek Trail (Initiative 15-1 Recreational Trails Plan)	-	-	-	-	-	-	-	-	-	0.40	0.40	0.40	0.40	0.40	0.40	\$1,480,000
Chedoke Radial Trail (part asphalt - part gravel)	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	\$135,000
Confederation Park - Stoney Creek Pond Trail	-	-	-	-	-	-	-	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	\$692,000
Cootes Drive Path (asphalt - unlit)	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	\$180,000
Desjardins Recreational Trail (gravel - unlit)	3.40	3.40	3.40	3.40	3.40	3.40	3.40	3.40	3.40	3.40	3.40	3.40	3.40	3.40	3.40	\$338,000
East Hamilton Trail and Waterfront Link (asphalt - unlit)	-	-	-	3.50	3.50	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80	\$215,000
East Mountain Trail Loop (asphalt - unlit)	-	-	-	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	\$164,000
East Mountain Trail Loop (EMTL) Central Park Portion (2m wide asphalt, unlit)	-	-	-	-	-	-	-	-	-	-	-	-	-	0.43	0.43	\$151,000
Escarpment Rail Trail (Tar & Chip - unlit)	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	\$317,000
Escarpment Rail Trail Extension (asphalt - unlit)	1.50	1.5	1.5	1.5	1.5	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	\$237,000
Gage Park Walkways (asphalt, lit)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.97	\$368,000
Green Millen Shore Estates Shoreline Trail (1.8m wide boardwalk)	-	-	-	-	-	-	-	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	\$3,690,000
Green Millen Shore Estates Shoreline Trail (2m wide limestone screening)	-	-	-	-	-	-	-	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	\$109,500
Green Millen Shore Estates Shoreline Trail (3m wide asphalt)	-	-	-	-	-	-	-	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	\$250,000
Green Millen Shore Estates Shoreline Trail (4m wide asphalt)	-	-	-	-	-	-	-	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	\$320,000
Green Millen Shore Estates Shoreline Trail (4m wide limestone screening)	-	-	-	-	-	-	-	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	\$271,000



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Parkland Trails  
Unit Measure: Linear Kilometres of Paths and Trails

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/km)
<b>Recreational Trails (km):</b>																
Hamilton Beach Recreational Trail (asphalt - lit - extra wide)	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	\$338,000
Hamilton Harbour Waterfront Trail (asphalt - lit - extra wide)	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	\$338,000
Hamilton Harbour Waterfront Trail Extension (asphalt - lit - extra wide)	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	\$193,000
Heritage Green Trail (3m wide limestone screenings - unlit)	-	-	-	-	-	-	-	-	-	-	-	-	0.58	0.58	0.58	\$726,000
Joe Sams Leisure Park Walkway (3m wide limestone screenings - unlit)	-	-	-	-	-	-	-	-	-	-	-	-	-	0.33	0.33	\$471,000
Kay Drage Park Trail	-	-	-	-	-	-	-	-	-	-	0.30	0.30	0.30	0.30	0.30	\$117,500
Macassa Bay Walkway (asphalt - lit)	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	\$241,000
Mountain Brow Road Link (HRTMP Initiative 15-12) (asphalt - unlit)	-	-	-	-	-	-	-	-	-	-	-	-	-	0.83	0.83	\$928,000
Olmsted Trail	-	-	-	-	-	-	-	-	0.37	0.37	0.37	0.37	0.37	0.37	0.37	\$344,000
Pier 4 Park Pathway (asphalt - lit)	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	\$166,000
Pine Ridge Trail	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	\$259,000
Red Hill Valley Recreational Trails (tar & chip - unlit)	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	\$125,000
Red Hill Valley Trail, (granular - unlit)	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	\$237,000
Ryckman Parks Trail	-	-	-	-	-	-	-	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	\$305,000
Shaver Estates Trail	-	-	-	-	-	-	-	-	-	-	0.38	0.38	0.38	0.38	0.38	\$1,660,000
Shrewsbury Trail	-	-	-	-	-	-	-	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	\$344,000
Waterdown Wetlands Recreational Trail (asphalt & boardwalk - unlit)	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	\$102,200
Waterdown Wetlands Secondary Trails (screenings - until)	4.20	4.20	4.20	4.20	4.20	4.20	4.20	4.20	4.20	4.20	4.20	4.20	4.20	4.20	4.20	\$317,000





**City of Hamilton  
Service Standard Calculation Sheet**

Service: Parkland Trails  
Unit Measure: Linear Kilometres of Paths and Trails

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/km)
<b>Recreational Multi-Use Pathways (km):</b>																
Park Corridor (asphalt & gravel - unlit)	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	\$238,000
Ancaster Radial Right of Way (gravel unlit)	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	\$237,000
Stoney Creek Multi-Use Path (asphalt unlit)	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	\$66,600
Spencer Creek Trail (natural footpath unlit)	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	\$145,000
Pipeline Walkway (asphalt - lit)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	\$3,310,000
Pier 7 & 8 Boardwalk	-	-	-	-	-	-	-	-	0.18	0.18	0.18	0.18	0.18	0.18	0.18	\$6,490,000
<b>Total</b>	<b>45.63</b>	<b>45.63</b>	<b>45.63</b>	<b>58.13</b>	<b>58.13</b>	<b>59.43</b>	<b>59.43</b>	<b>61.61</b>	<b>62.16</b>	<b>62.56</b>	<b>63.24</b>	<b>63.24</b>	<b>63.82</b>	<b>65.40</b>	<b>67.37</b>	

Population	511,412	514,740	515,591	519,949	522,611	526,896	529,744	533,698	536,918	543,294	549,623	555,599	562,453	569,353	578,957
Per Capita Standard	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

15 Year Average	2008-2022
Quantity Standard	0.0001
Quality Standard	\$299,900
Service Standard	\$30

D.C. Amount (before deductions)	10 Year
Forecast Population	62,136
\$ per Capita	\$30
Eligible Amount	\$1,863,459



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Parks Equipment  
Unit Measure: No. of equipment

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/Vehicle)
Fertilizer Spreader	-	6	6	6	6	6	6	6	6	6	6	6	6	6	5	\$7,200
Aerator	-	5	5	5	5	5	5	5	5	5	5	5	5	5	6	\$10,200
Topdresser/box scraper	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	\$5,900
Rototiller	-	9	9	9	9	9	9	9	9	9	9	9	9	9	3	\$5,900
<b>Total</b>	<b>7</b>	<b>27</b>	<b>27</b>	<b>27</b>	<b>27</b>	<b>27</b>	<b>27</b>	<b>27</b>	<b>27</b>	<b>27</b>	<b>27</b>	<b>27</b>	<b>27</b>	<b>27</b>	<b>21</b>	

Population	511,412	514,740	515,591	519,949	522,611	526,896	529,744	533,698	536,918	543,294	549,623	555,599	562,453	569,353	578,957
Per Capita Standard	0.00001	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00004

15 Year Average	2008-2022
Quantity Standard	0.0001
Quality Standard	\$6,600
Service Standard	\$0.33

D.C. Amount (before deductions)	10 Year
Forecast Population	62,136
\$ per Capita	\$0.33
Eligible Amount	\$20,505



Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Bld'g Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
<b>City of Hamilton</b>																	
Simone Hall (Formerly Old Beasley Community Centre) - 133 Wilson St	2,456	2,456	2,456	2,456	2,456	2,456	2,456	2,456	2,456	2,456	2,456	2,456	2,456	2,456	2,456	\$790	\$912
Beasley Community Centre - 145 Wilson St. - in partnership w/ HWDSB and retained ownership of old Beasley Community Centre	-	-	6,157	6,157	6,157	6,157	6,157	6,157	6,157	6,157	6,157	6,157	6,157	6,157	6,157	\$790	\$912
Bennetto Recreation Centre - 450 Hughson St. N.	30,436	30,436	30,436	30,436	30,436	30,436	30,436	30,436	30,436	30,436	30,436	30,436	30,436	30,436	30,436	\$1,144	\$1,302
Central Memorial Recreation Centre - 93 West Ave. S.	22,559	22,559	22,559	22,559	22,559	22,559	22,559	22,559	22,559	22,559	22,559	22,559	22,559	22,559	22,559	\$971	\$1,111
Dalewood Recreation Centre - 1152 Main St. W.	11,601	11,601	11,601	11,601	11,601	11,601	11,601	11,601	11,601	11,601	11,601	11,601	11,601	11,601	11,601	\$971	\$1,111
Kiwanis Boys and Girls Club - 45 Ellis St.	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	18,000	\$1,144	\$1,302
Hill Park Recreation Centre - 305 South Bend Road	16,685	16,685	16,685	16,685	16,685	16,685	16,685	16,685	16,685	16,685	16,685	16,685	16,685	16,685	16,685	\$1,144	\$1,302
Huntington Park Recreation Centre - 87 Brentwood Dr.	29,681	29,681	29,681	29,681	29,681	29,681	29,681	29,681	29,681	29,681	29,681	29,681	29,681	29,681	29,681	\$971	\$1,111
Norman Pinky Lewis Recreation Centre - 192 Wentworth St. N.	35,074	35,074	35,074	35,074	35,074	35,074	35,074	35,074	35,074	35,074	35,074	35,074	35,074	35,074	35,074	\$971	\$1,111
Kanétskare Recreation Centre - 247 Duke St.	27,847	27,847	27,847	27,847	27,847	27,847	27,847	27,847	27,847	27,847	27,847	27,847	27,847	27,847	27,847	\$1,144	\$1,302
Sir Allan MacNab - 145 Magnolia Dr.	20,871	20,871	20,871	20,871	20,871	20,871	20,871	20,871	20,871	20,871	20,871	20,871	20,871	20,871	20,871	\$1,144	\$1,302
Sir Wilfrid Laurier Recreation Centre - 60 Albright Rd.	16,617	16,617	16,617	16,617	16,617	16,617	16,617	16,617	16,617	16,617	16,617	16,617	16,617	16,617	16,617	\$1,144	\$1,302
Sir Winston Churchill Recreation Centre - 1715 Main St. E.	12,414	12,414	12,414	12,414	12,414	12,414	12,414	12,414	12,414	12,414	12,414	12,414	12,414	12,414	12,414	\$1,144	\$1,302
Westmount Community Centre (Demolished)	12,175	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$790	\$912
Westmount Recreation Centre (New) - 35 Lynbrook Dr.	-	-	-	-	36,813	36,813	36,813	36,813	36,813	36,813	36,813	36,813	36,813	36,813	36,813	\$971	\$1,111
Riverdale Community Centre (new) - 150 Violet Dr.	16,401	16,401	16,401	16,401	16,401	16,401	16,401	16,401	16,401	16,401	16,401	16,401	16,401	16,401	24,860	\$1,144	\$1,302
Jimmy Thompson Pool - 1099 King St. E.	23,129	23,129	23,129	23,129	23,129	23,129	23,129	23,129	23,129	23,129	23,129	23,129	23,129	23,129	23,129	\$971	\$1,302



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Recreation Facilities  
Unit Measure: sq.ft. of building area

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Bld'g Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
<b>City of Hamilton</b>																	
Eastwood Arena - 111 Burlington St. E.	26,323	26,323	26,323	26,323	26,323	26,323	26,323	26,323	26,323	26,323	26,323	26,323	26,323	26,323	26,323	\$790	\$912
Scott Park Arena - 876 Cannon St. E.	23,950	23,950	23,950	23,950	23,950	23,950	23,950	-	-	-	-	-	-	-	-	\$790	\$912
Bill Friday Lawfield Arena - 150 Folkstone Rd. (formerly Lawfield Arena).	31,183	31,183	31,183	31,183	31,183	31,183	31,183	31,183	31,183	31,183	31,183	31,183	31,183	31,183	31,183	\$917	\$1,052
Coronation Arena - 81 Macklin St. N.	27,098	27,098	27,098	27,098	27,098	27,098	27,098	27,098	27,098	27,098	27,098	27,098	27,098	27,098	27,098	\$790	\$912
Chedoke Twin Pad - 91 Chedmac Dr.	89,421	89,421	89,421	89,421	89,421	89,421	89,421	89,421	89,421	89,421	89,421	89,421	89,421	89,421	89,421	\$664	\$773
Parkdale Arena (Pat Quinn) - 1770 Main St. E.	34,018	34,018	34,018	34,018	34,018	34,018	34,018	34,018	34,018	34,018	34,018	34,018	34,018	34,018	34,018	\$790	\$912
Inch Park Arena - 400 Queensdale Ave.	33,995	33,995	33,995	33,995	33,995	33,995	33,995	33,995	33,995	33,995	33,995	33,995	33,995	33,995	33,995	\$790	\$912
Mountain Arena and Skating Arena (Twin Pad - Dave Anderchck) - 25-55 Hester St.	76,286	76,286	76,286	76,286	76,286	76,286	76,286	76,286	76,286	76,286	76,286	76,286	76,286	76,286	76,286	\$664	\$773
Rosedale Arena - 100 Greenhill Ave.	38,072	38,072	38,072	38,072	38,072	38,072	38,072	38,072	38,072	38,072	38,072	38,072	38,072	38,072	38,072	\$917	\$1,052
Mohawk 4 Arena - 710 Mountain Brow Blvd.	136,000	136,000	136,000	136,000	136,000	136,000	136,000	136,000	136,000	136,000	136,000	136,000	136,000	136,000	136,000	\$664	\$773
Birge Outdoor Pool - 167 Birge St.	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	\$398	\$479
Parkdale Outdoor Pool - 1770 Main St. E.	4,700	4,700	4,700	4,700	4,700	4,700	4,700	4,700	4,700	4,700	4,700	4,700	4,700	4,700	4,700	\$398	\$479
Rosedale Outdoor Pool - 30 Greenhill Ave.	-	-	-	-	-	-	596	596	596	596	596	596	596	596	596	\$8,980	\$9,941
Victoria Outdoor Pool - 100 Strathcona	7,470	7,470	7,470	7,470	7,470	7,470	7,470	7,470	7,470	7,470	7,470	7,470	7,470	7,470	7,470	\$398	\$479
Chedoke Outdoor Pool - 500 Bendamere	7,834	7,834	7,834	7,834	7,834	7,834	7,834	7,834	7,834	7,834	7,834	7,834	7,834	7,834	7,834	\$398	\$479
Walker Outdoor Pool - 60 Dicenzo Dr.	-	10,764	10,764	10,764	10,764	10,764	10,764	10,764	10,764	10,764	10,764	10,764	10,764	10,764	10,764	\$398	\$479
Inch Park Outdoor Pool - 400 Queensdale Ave.	-	-	-	2,755	2,755	2,755	2,755	2,755	2,755	2,755	2,755	2,755	2,755	2,755	2,755	\$2,286	\$2,560
Coronation Outdoor Pool - 80 Macklin St. N.	-	-	-	-	-	-	-	27,087	27,087	27,087	27,087	27,087	27,087	27,087	27,087	\$398	\$479
Chedoke Golf, Club House - 565 Aberdeen Ave.	12,420	12,420	12,420	12,420	12,420	11,443	11,443	11,443	11,443	11,443	11,443	11,443	11,443	11,443	11,443	\$260	\$327
Chedoke Golf, Pro Shop - 565 Aberdeen Ave.	2,974	2,974	2,974	2,974	2,974	2,974	2,974	2,974	2,974	2,974	2,974	2,974	2,974	2,974	2,974	\$260	\$327
Kings Forest Golf Clubhouse - 100 Greenhill Ave.	13,454	13,454	13,454	13,454	13,454	13,454	13,454	13,454	13,454	13,454	13,454	13,454	13,454	13,454	13,454	\$260	\$327
Ivor Wynne Stadium, Grandstands & Press Box - 75 Balsam Ave. N.	128,675	128,675	128,675	128,675	128,675	-	-	-	-	-	-	-	-	-	-	\$756	\$874
Tim Horton's Field	-	-	-	-	-	-	-	327,148	327,148	327,148	327,148	327,148	327,148	327,148	327,148	\$756	\$874



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Recreation Facilities  
Unit Measure: sq.ft. of building area

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Bld'g Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
<b>City of Hamilton</b>																	
Churchill Fields Lawn Bowling (167 Cline N) - 167 Cline N.	4,568	4,568	4,568	4,568	4,568	4,568	4,568	4,568	4,568	4,568	4,568	4,568	4,568	4,568	4,568	\$260	\$327
Hamilton Tennis Club (257 Duke at HAAA Park)	7,064	7,064	7,064	7,064	7,064	7,064	7,064	7,064	7,064	7,064	7,064	7,064	7,064	7,064	7,064	\$553	\$651
Rosedale Tennis Club (Within Gage Park)	4,018	4,018	4,018	4,018	4,018	2,210	2,210	2,210	2,210	2,210	2,210	2,210	2,210	2,210	2,210	\$855	\$984
Rosedale Lawn Bowling (Within Gage Park) - 1000 Main St. E.	3,757	3,757	3,757	3,757	3,757	4,018	4,018	4,018	4,018	4,018	4,018	4,018	4,018	4,018	4,018	\$260	\$327
Gage Park Greenhouse #1/Tropical - 1000 Main St. E.	-	3,363	3,363	3,363	3,363	3,363	3,363	3,363	3,363	3,363	14,068	37,868	37,868	37,868	37,868	\$260	\$295
Gage Park Horticulture/Staff Bldg. - 1000 Main St. E.	-	7,389	7,389	7,389	7,389	6,271	6,271	6,271	6,271	6,271	6,271	6,271	6,271	6,271	6,271	\$260	\$1,016
Sackville Hill Senior Centre (780 Upper Wentworth)	24,452	24,452	24,452	24,452	24,452	24,452	24,452	24,452	24,452	24,452	24,452	24,452	24,452	24,452	24,452	\$597	\$699
Turner Park YMCA (Community Centre, Pool)	59,490	59,490	59,490	59,490	59,490	59,490	59,490	59,490	59,490	59,490	59,490	59,490	59,490	59,490	59,490	\$971	\$1,111
YWCA - Hamilton Seniors' Active Living Centre (75 MacNab St. S. - basement level)	7,529	7,529	7,529	7,529	7,529	7,529	7,529	7,529	7,529	7,529	7,529	7,529	7,529	7,529	7,529	\$589	\$690
YWCA - Ottawa St. Seniors Leisure Centre - 52 & 66 Ottawa St. N. (In two Buildings)	5,220	5,220	5,220	5,220	5,220	5,220	5,220	5,220	5,220	5,220	5,220	-	-	-	-	\$589	\$690
Main Hess Senior Centre (181 Main St. W. - 3rd Floor)	10,930	10,930	10,930	10,930	10,930	10,930	10,930	10,930	10,930	10,930	10,930	10,930	10,930	10,930	10,930	\$589	\$690
Lister Block	-	-	-	16,285	16,285	16,285	16,285	16,285	16,285	16,285	16,285	16,285	16,285	16,285	16,285	\$790	\$912
Barton Community Hall (Formerly Barton Yard, Carpenter's Shop (125 Barton St. W.))	-	-	-	-	-	-	-	-	-	-	-	13,453	13,453	13,453	13,453	\$790	\$912
Bernie Morelli Recreation Centre (& Senior's Centre) & outdoor rink/splashpad	-	-	-	-	-	-	-	-	-	-	54,895	54,895	54,895	54,895	54,895	\$896	\$1,028



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Recreation Facilities  
Unit Measure: sq.ft. of building area

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Bld'g Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
<b>Stoney Creek</b>																	
H.G./Brewster Pool - 200 Dewitt Rd.	10,654	10,654	10,654	10,654	10,654	10,654	10,654	10,654	10,654	10,654	10,654	10,654	10,654	10,654	10,654	\$1,144	\$1,302
Green Acres Outdoor Pool - 50 Randall Ave	15,414	15,414	15,414	15,414	15,414	15,414	15,414	15,414	15,414	15,414	15,414	15,414	15,414	15,414	15,414	\$398	\$479
Stoney Creek Arena - 37 King St. W.	28,278	28,278	28,278	28,278	28,278	28,278	28,278	28,278	28,278	28,278	28,278	28,278	28,278	28,278	28,278	\$790	\$912
Saltfleet Arena - 24 Sherwood Park Rd.	24,980	24,980	24,980	24,980	24,980	24,980	24,980	24,980	24,980	24,980	24,980	24,980	24,980	24,980	24,980	\$790	\$912
Optimist Club Community Centre - 890 Queenston	4,772	4,772	4,772	4,772	4,772	4,772	4,772	4,772	4,772	4,772	4,772	4,772	4,772	4,772	4,772	\$790	\$912
Stoney Creek Tennis Club (at Little League Park) - 880 Queenston Rd.	2,357	2,357	2,357	2,357	2,357	2,357	2,357	2,357	2,357	2,357	2,357	2,357	2,357	2,357	2,357	\$553	\$651
Valley Park Community Centre/Aquatic Centre - 970 Paramount Dr	35,587	35,587	35,587	35,587	35,587	35,587	35,587	35,587	35,587	35,587	35,587	35,587	35,587	35,587	38,117	\$790	\$912
Valley Park Tennis Club - 970 Paramount Dr.	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	\$553	\$651
Valley Park Arena - 970 Paramount Dr.	35,587	35,587	35,587	35,587	35,587	35,587	35,587	35,587	35,587	35,587	35,587	35,587	35,587	35,587	35,587	\$790	\$912
Fruitland Community Centre (Lion's Club) (14 Sherwood Park Rd)	5,047	5,047	5,047	5,047	5,047	5,047	5,047	5,047	5,047	5,047	5,047	5,047	5,047	5,047	5,047	\$790	\$912
Winona Scout Hall (Ward 11)	1,807	2,142	2,142	2,142	2,142	2,142	2,142	2,142	2,142	2,142	2,142	2,142	2,142	2,142	2,142	\$790	\$912
Winona Public School purchased for temporary community centre (facilities data)	-	-	-	-	-	-	-	-	33,480	33,480	33,480	33,480	33,480	33,480	33,480	\$790	\$912
Stoney Creek Scout Hall (37 King St. W.)	2,763	2,763	2,763	-	-	-	-	-	-	-	-	-	-	-	-	\$790	\$912
Stoney Creek Recreation Centre (New) - 45 King St. W.	-	-	-	-	27,992	27,992	27,992	27,992	27,992	27,992	27,992	27,992	27,992	27,992	27,992	\$971	\$1,111
Winona Seniors - 1239 Highway 8 (Ward 11)	3,911	3,911	3,911	3,911	3,911	3,911	3,911	3,911	3,911	3,911	3,911	3,911	3,911	3,911	3,911	\$855	\$984
Club 60 - 4-6 King St. W.	3,568	3,568	3,568	3,568	3,568	3,568	3,568	3,568	3,568	3,568	3,568	3,568	3,568	3,568	3,568	\$589	\$690
<b>Ancaster</b>																	
Ancaster Community Centre (Morgan Firestone Arena) - 385 Jerseyville Rd.	56,972	56,972	56,972	56,972	56,972	92,570	92,570	92,570	92,570	92,570	92,570	92,570	92,570	92,570	92,570	\$618	\$722
Ancaster Community & Rotary Centre - 385 Jerseyville Rd.	41,236	41,236	41,236	41,236	41,236	44,317	44,317	44,317	44,317	44,317	44,317	44,317	44,317	44,317	44,317	\$790	\$912



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Recreation Facilities  
Unit Measure: sq.ft. of building area

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Bld'g Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
Ancaster Senior Achievement Centre - 622 Alberton Rd.	14,377	14,377	14,377	14,377	14,377	14,377	14,377	14,377	14,377	14,377	14,377	14,377	14,377	14,377	14,377	\$589	\$690
Lawn Bowling Club House - 291 Lodor St.	847	847	847	847	847	847	1,948	1,948	1,948	1,948	1,948	1,948	1,948	1,948	1,948	\$553	\$651
Community Centre (Old Town Hall) - 310 Wilson St.	3,780	3,780	3,780	3,780	3,780	3,780	3,780	3,780	3,780	-	-	-	-	-	-	\$790	\$912
Tennis Club House - 291 Lodor St.	1,076	1,076	1,076	1,076	1,076	1,076	791	791	791	791	791	791	791	791	791	\$553	\$651
Carluke Community Centre - Carluke Rd.	2,553	2,553	2,553	2,553	2,553	2,553	2,553	2,553	2,553	-	-	-	-	-	-	\$790	\$912
Optimist Youth Centre - 237 Manitou Way	3,819	3,819	3,819	3,819	3,819	3,819	3,819	3,819	3,819	3,819	3,819	3,819	3,819	3,819	3,819	\$790	\$912
Lions (South) Club Building Lynden Park - 4070 Governors Rd.	1,968	2,280	2,280	2,280	2,280	2,280	2,280	2,280	2,280	2,280	2,280	2,280	2,280	2,280	2,280	\$790	\$912
Copetown & District Lions Community Centre - 1950 Governors Rd.	8,190	8,190	8,190	8,190	8,190	8,190	8,190	8,190	8,190	8,190	8,190	8,190	8,190	8,190	8,190	\$790	\$912
Ancaster Lions Outdoor Pool - 236 Jerseyville Rd.	10,526	10,526	10,526	10,526	10,526	10,526	10,526	10,526	10,526	10,526	10,526	10,526	10,526	10,526	10,526	\$398	\$479
Spring Valley Arena - 29 Orchard Drive	29,628	29,628	29,628	29,628	29,628	29,628	29,628	29,628	29,628	29,628	29,628	29,628	29,628	29,628	29,628	\$790	\$912
Aquatic Centre - 47 Meadowbrook Dr.	19,067	19,067	19,067	19,067	19,067	19,067	19,067	19,067	19,067	19,067	19,067	19,067	19,067	19,067	19,067	\$971	\$1,111
<b>Dundas</b>																	
Dundas Outdoor Community Pool - 39 Market St. S.	11,457	11,457	11,457	11,457	-	-	-	-	-	-	-	-	-	-	-	\$1,144	\$1,302
Dundas Community Pool	10,364	10,364	10,364	10,364	10,364	10,364	10,364	10,364	10,364	10,364	10,364	10,364	10,364	10,364	10,364	\$398	\$479
Dundas Market Street Arena - Grighmire - 35 Market St. S.	41,416	41,416	41,416	41,416	41,416	104,578	104,578	104,578	104,578	104,578	104,578	124,578	124,578	124,578	124,578	\$790	\$912
Olympic Arena - Westoby - 88 Olympic Dr.	27,086	27,086	27,086	27,086	27,086	27,086	27,086	27,086	27,086	27,086	27,086	27,086	27,086	27,086	27,086	\$790	\$912
Dundas Memorial Community Centre - 10 Market St. S.	13,600	13,600	13,600	13,600	13,600	13,600	13,600	13,600	13,600	13,600	13,600	13,600	13,600	13,600	13,600	\$793	\$915
Valleyfield Community Centre (Nigel Charlton Community Centre) - 287 Old Guelph Rd.	3,780	3,780	3,780	3,780	3,780	3,780	3,780	3,780	3,780	-	-	-	-	-	-	\$790	\$912
Dundas Driving Park Outdoor Rink Building - 71 Cross St. (Concession / Washroom / Ice Plant)	-	206	206	206	206	206	206	206	206	206	206	206	206	206	206	\$273	\$342
Tennis Club Building (Cross St.)	1,745	1,745	1,745	1,745	1,745	1,745	1,745	1,745	1,745	1,745	1,745	1,745	1,745	1,745	1,745	\$553	\$651
Lawn Bowling Club House (Cross St.)	1,728	1,728	1,728	1,728	1,728	1,728	1,728	1,728	1,728	1,728	1,728	1,728	1,728	1,728	1,728	\$553	\$651



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Recreation Facilities  
Unit Measure: sq.ft. of building area

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Bld'g Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
<b>Glanbrook</b>																	
Mt. Hope Hall - 3027 Homestead	6,400	7,492	7,492	7,492	7,492	7,492	7,492	7,492	7,492	7,492	7,492	7,492	7,492	7,492	7,492	\$790	\$882
Glanbrook Auditorium - 4300 Binbrook Rd	4,810	4,810	4,810	4,810	4,810	4,810	4,810	4,810	4,810	4,810	4,810	4,810	4,810	4,810	4,810	\$720	\$805
Glanbrook Arena - 4300 Binbrook Road	36,353	36,353	36,353	36,353	36,353	36,353	36,353	36,353	36,353	36,353	36,353	36,353	36,353	36,353	36,353	\$720	\$805
Binbrook Memorial Hall - 2600 Hwy 56	7,596	7,596	7,596	7,596	7,596	7,596	7,596	7,596	7,596	7,596	7,596	7,596	7,596	7,596	7,596	\$790	\$912
Woodburn Centennial Hall - 1062 Golf Club Road	2,974	2,974	2,974	2,974	2,974	2,974	2,974	2,974	2,974	2,974	2,974	2,974	2,974	2,974	2,974	\$790	\$912
Lions Youth Centre - 3027 Homestead Dr.	6,035	6,035	6,035	6,035	6,035	6,035	6,035	6,035	6,035	6,035	6,035	6,035	6,035	6,035	6,035	\$790	\$882
<b>Flamborough</b>																	
Beverly Arena - 680 Highway 8	32,969	32,969	32,969	32,969	32,969	32,969	32,969	32,969	32,969	32,969	32,969	32,969	32,969	32,969	32,969	\$790	\$882
Beverly Community Centre - 680 Highway 8	4,630	4,630	4,630	4,630	4,630	4,630	4,630	4,630	4,630	4,630	4,630	4,630	4,630	4,630	4,630	\$790	\$882
Carlisle Arena - 1496 Centre Rd.	33,062	33,062	33,062	33,062	33,062	33,062	33,062	33,062	33,062	33,062	33,062	33,062	33,062	33,062	33,062	\$790	\$882
Carlisle Community Centre - 1496 Centre Rd. (Includes Storage / Washroom)	4,900	4,900	4,900	4,900	4,900	4,900	4,900	4,900	4,900	4,900	4,900	4,900	4,900	4,900	4,900	\$790	\$882
North Wentworth Arena	27,888	27,888	27,888	27,888	-	-	-	-	-	-	-	-	-	-	-	\$790	\$912
North Wentworth Community Centre	3,900	3,900	3,900	-	-	-	-	-	-	-	-	-	-	-	-	\$790	\$912
Harry Howell Arena (Formerly North Wentworth Twin Pad) - 27 Highway 5 W.	-	-	-	-	92,641	92,641	92,641	92,641	92,641	92,641	92,641	92,641	92,641	92,641	92,641	\$618	\$722
Beverly Township Hall - 795 Old Highway 8	2,422	2,422	2,422	2,422	2,422	3,995	3,995	3,995	3,995	3,995	3,995	3,995	3,995	3,995	3,995	\$790	\$882
Carlisle Memorial Hall - 273 Carlisle Rd.	4,513	4,513	4,513	4,513	4,513	4,513	4,513	4,513	4,513	4,513	4,513	4,513	4,513	4,513	4,513	\$790	\$882
Lynden Legion Park - 204 Lynden Rd.	8,400	8,400	8,400	8,400	8,400	8,400	8,400	8,400	8,400	8,400	8,400	8,400	8,400	8,400	8,400	\$395	\$447
Waterdown Memorial Hall - 317 Dundas St. E.	3,003	3,003	3,003	3,003	3,003	3,003	3,003	3,003	3,003	3,003	3,003	3,003	3,003	3,003	3,003	\$790	\$912
Millgrove Community Centre - 855 Millgrove Side. Rd.	4,811	4,811	4,811	4,811	4,811	4,811	4,811	4,811	4,811	4,811	4,811	4,811	4,811	4,811	4,811	\$790	\$882
Mountsberg Hall - 2133 Centre Rd.	1,432	1,432	1,432	1,432	1,432	1,432	1,432	1,432	1,432	1,432	1,432	1,432	1,432	1,432	1,432	\$790	\$882
Sealy Park Scout Hall - 115 Main St. S.	3,016	3,016	3,016	3,016	3,016	3,016	3,016	3,016	3,016	3,016	3,016	3,016	3,016	3,016	3,016	\$790	\$912
Sheffield Community Centre - 2339 5th Concession Rd. W.	2,836	2,836	2,836	2,836	2,836	4,267	4,267	4,267	4,267	4,267	4,267	4,267	4,267	4,267	4,267	\$790	\$912
Greenville Hall - 283 Brock Rd.	2,867	2,867	2,867	2,867	2,867	2,867	2,867	2,867	2,867	2,867	2,867	2,867	2,867	2,867	2,867	\$790	\$882
Valens Community Centre - 1818 Valens Rd.	3,180	3,180	3,180	3,180	3,180	3,180	3,180	3,180	3,180	3,180	3,180	3,180	3,180	3,180	3,180	\$790	\$882
Flamborough YMCA (207 Parkside Dr.) (50% City Benefit)	31,425	31,425	31,425	31,425	31,425	31,425	31,425	31,425	31,425	31,425	31,425	31,425	31,425	31,425	31,425	\$971	\$1,111





**City of Hamilton  
Service Standard Calculation Sheet**

Service: Recreation Facilities  
Unit Measure: sq.ft. of building area

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Bld'g Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
Flamborough Seniors Centre 163 Dundas St. E.	-	-	-	-	-	-	-	-	5,560	5,560	5,560	5,560	5,560	5,560	5,560	\$589	\$690
Confederation Beach Park & Wild Water Works (10 Facilities)	24,710	24,710	24,710	24,710	24,710	24,710	24,710	24,710	24,710	24,710	24,710	24,710	24,710	24,710	24,710	\$260	\$327
Confederation Beach Park & Wild Water Works - Park Sheds (13 Facilities)	9,395	9,395	9,395	9,395	9,395	9,395	9,395	9,395	9,395	9,395	9,395	9,395	9,395	9,395	9,395	\$260	\$327
Confederation Beach Park & Wild Water Works - Admin Building & Main Kiosk	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	\$260	\$327
Confederation Beach Park & Wild Water Works - Workshop	1,290	1,290	1,290	1,290	1,290	1,290	1,290	1,290	1,290	1,290	1,290	1,290	1,290	1,290	1,290	\$260	\$327
Chedoke Yard, Storage Bldg., 565 Aberdeen Ave.	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	\$260	\$489
Greensville Community Centre	-	-	-	-	-	-	-	-	-	-	-	-	-	8,602	8,602	\$790	\$912
Beverly Community Centre	-	-	-	-	-	-	-	-	-	-	-	-	-	10,822	10,822	\$790	\$912
<b>Total</b>	<b>1,879,994</b>	<b>1,891,281</b>	<b>1,897,438</b>	<b>1,909,815</b>	<b>2,027,916</b>	<b>2,000,444</b>	<b>2,001,856</b>	<b>2,332,141</b>	<b>2,371,181</b>	<b>2,361,068</b>	<b>2,426,668</b>	<b>2,478,701</b>	<b>2,478,701</b>	<b>2,498,125</b>	<b>2,509,114</b>		

Population	511,412	514,740	515,591	519,949	522,611	526,896	529,744	533,698	536,918	543,294	549,623	555,599	562,453	569,353	578,957
Per Capita Standard	3.6761	3.6742	3.6801	3.6731	3.8804	3.7967	3.7789	4.3698	4.4163	4.3458	4.4151	4.4613	4.4069	4.3877	4.3339

15 Year Average	2008-2022
Quantity Standard	4.0864
Quality Standard	\$889
Service Standard	\$3,634

D.C. Amount (before deductions)	10 Year
Forecast Population	62,136
\$ per Capita	\$3,634
Eligible Amount	\$225,826,457



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Indoor Recreation Facilities - Buildings Withing Parks  
Unit Measure: sq.ft. of building area

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/sq.ft.)
<b>Buildings within parks (sq.ft.)</b>																
Alexander Park - Washroom / Concession / Storage	1,954	1,954	1,954	1,954	1,954	1,954	1,954	1,954	1,954	1,954	1,954	1,954	1,954	1,954	1,954	\$273
Cathedral Park - Field House / Washrooms / Storage	1,475	1,475	1,475	1,475	1,475	1,475	1,475	1,475	1,475	1,475	1,475	1,475	1,475	1,475	1,475	\$273
Highland Gardens Park - Block Storage Hut	124	124	124	124	124	124	124	124	124	124	124	-	-	-	-	\$168
Escarpment Ward 1 - Utility Structure Associated With C.S.O. Tank Above Chedoke	282	282	282	282	282	282	282	282	282	282	282	282	282	282	282	\$273
Bayfront Park - Concession	693	693	693	693	693	693	693	693	693	693	693	693	693	693	693	\$273
Bayfront Park - Public Works Storage Building	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	\$168
Bayfront Park - Storage Building West Of Yacht Club	455	455	455	455	455	455	455	455	455	455	455	455	455	455	455	\$273
Bayfront Park - Washroom At Parking Lot With Roof Top Lookout	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	\$273
Bayfront Park - Yacht Club Building	3,813	3,813	3,813	3,813	3,813	3,813	3,813	3,813	3,813	3,813	3,813	3,813	3,813	3,813	3,813	\$260
Broughton Park East - Sunshelter With Storage Building	671	671	671	671	671	671	671	671	671	671	671	671	671	671	671	\$168
Jack C. Beemer Park Washroom & Concession	-	-	-	-	-	-	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	\$273
Carter Park - Washrooms / Storage	333	333	333	333	333	333	333	333	333	333	333	333	333	333	333	\$273
Central Park - Block Building With Concession Area & Shelter	695	695	695	695	695	695	695	695	695	695	695	695	695	695	695	\$273
Corktown Park - Washrooms / Storage	1,546	1,546	1,546	1,546	1,546	1,546	1,546	1,546	1,546	1,546	1,546	1,546	1,546	1,546	1,546	\$273
Eastwood Park- Concession	2,777	2,777	2,777	2,777	2,777	2,777	2,777	2,777	2,777	2,777	2,777	2,777	2,777	2,777	2,777	\$273
Ferguson Ave Shelter - Pavilion	4,205	4,205	4,205	4,205	4,205	4,205	4,205	4,205	4,205	4,205	4,205	4,205	4,205	4,205	4,205	\$273
Jackie Washington Rotary Park - Washrooms / Concession	678	678	678	678	678	678	678	678	678	678	678	678	678	678	678	\$273
Pier 4 Park - Gartshore - Thomson Building	1,975	1,975	1,975	1,975	1,975	1,975	1,975	1,975	1,975	1,975	1,975	1,975	1,975	1,975	1,975	\$395



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Indoor Recreation Facilities - Buildings Withing Parks  
Unit Measure: sq.ft. of building area

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/sq.ft.)
<b>Buildings within parks (sq.ft.)</b>																
Shamrock Park - Storage	156	156	156	156	156	156	156	156	156	156	156	156	156	156	156	\$273
Belview Park - Utility Building For Spray Pad And Supie	365	365	365	365	365	365	365	365	365	365	365	365	365	365	365	\$273
Lucy Day Park - Storage/Utility/Washroom	351	351	351	351	351	351	351	351	351	351	351	351	351	351	351	\$273
Myrtle Park - Pavilion/Storage	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160	\$273
Powell Park - Washrooms, Small Meeting Space, Storage	4,305	4,305	4,305	4,305	4,305	4,305	4,305	4,305	4,305	4,305	4,305	4,305	4,305	4,305	4,305	\$273
Woodlands Park - Concession / Washrooms	2,495	2,495	2,495	2,495	2,495	2,495	2,495	2,495	2,495	2,495	2,495	2,495	2,495	2,495	2,495	\$273
Andrew Warburton Memorial Park - Storage/Utility Building With Sun Shelter	688	688	688	688	688	688	688	688	688	688	688	688	688	688	688	\$273
Globe Park - Storages	424	424	424	424	424	424	424	424	424	424	424	-	-	-	-	\$168
Globe Park - Washrooms / Changerooms	1,765	1,765	1,765	1,765	1,765	1,765	1,765	1,765	1,765	1,765	1,765	-	-	-	-	\$168
Mahony Park - Storage For Batting Cage	139	139	139	139	139	139	139	139	139	139	139	-	-	-	-	\$168
Mahony Park - Washrooms	2,941	2,941	2,941	2,941	2,941	2,941	2,941	2,941	2,941	6,370	6,370	6,370	6,370	6,370	6,370	\$273
Montgomery Park - Washroom / Storage / Concession	2,788	2,788	2,788	2,788	2,788	2,788	2,788	2,788	2,788	2,788	2,788	2,788	2,788	2,788	2,788	\$273
Normanhurst Community Centre	2,885	2,885	2,885	2,885	2,885	2,885	2,885	2,885	2,885	2,885	-	-	-	-	-	\$168
Roxborough Park - Washroom / Storage / Concession	1,184	1,184	1,184	1,184	1,184	1,184	1,184	1,184	1,184	1,184	1,184	1,184	1,184	1,184	1,184	\$273
St. Christopher's Park - Storage With Sunshelter	652	652	652	652	652	652	652	652	652	652	652	652	652	652	652	\$273
Woodward Park - Washroom / Sun Shelter	667	667	667	667	667	667	667	667	667	667	667	667	667	667	667	\$273
Buchanan Park - Storage	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	\$273



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Indoor Recreation Facilities - Buildings Withing Parks  
Unit Measure: sq.ft. of building area

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/sq.ft.)
<b>Buildings within parks (sq.ft.)</b>																
Buchanan Park - Washroom And Changeroom Facility	-	-	-	1,959	1,959	1,959	1,959	1,959	1,959	1,959	1,959	1,959	1,959	1,959	1,959	\$273
Gilkson Park - Small Storage Next To Playground	274	274	274	274	274	274	274	274	274	274	274	274	274	274	274	\$168
Gilkson Park - Small Utility Shed Next To Ball Diamond At Street	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	\$168
Gilkson Park - Washrooms And Utility For Spray Pad	1,234	1,234	1,234	1,234	1,234	1,234	1,234	1,234	1,234	1,234	1,234	1,234	1,234	1,234	1,234	\$273
Gourley Park - Washroom / Storage / Concession	1,377	1,377	1,377	1,377	1,377	1,377	1,377	1,377	1,377	1,377	1,377	1,377	1,377	1,377	1,377	\$273
Mountview Park - Storage / Pavilion	557	557	557	557	557	557	557	557	557	557	557	557	557	557	557	\$273
Scenic Parkette - Storage	1,129	1,129	1,129	1,129	1,129	1,129	1,129	1,129	1,129	1,129	1,129	1,129	1,129	1,129	1,129	\$168
Shawinigan Park - Storage And Sunshelter	684	684	684	684	684	684	684	684	684	684	684	684	684	684	684	\$273
William Mcculloch Park - Change / Washroom	372	372	372	372	372	372	372	372	372	372	372	372	372	372	372	\$273
William Mcculloch Park - Storage	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224	\$168
Veevers Park - Sunshelter With Storage Building	671	671	671	671	671	671	671	671	671	671	671	671	671	671	671	\$273
Sam Manson Park - Washroom / Storage Building	3,250	3,250	3,250	3,250	3,250	3,250	3,250	3,250	3,250	3,250	3,250	3,250	3,250	3,250	3,250	\$273
Rosedale Park - Bocce / Small Building / Baseball Storage And Field House	-	-	-	-	-	-	5,489	5,489	5,489	5,489	5,489	5,489	5,489	5,489	5,489	\$260
Rosedale Park - Utility Bldg For Cso Tank	990	990	990	990	990	990	990	990	990	990	990	990	990	990	990	\$273
Rosedale Park - Utility Bldg For New Cso Tank Behind Arena	-	-	-	-	-	-	879	879	879	879	879	879	879	879	879	\$273
Father Sean O'Sullivan Park - Bocce Storage Shed	-	-	-	-	-	-	100	100	100	100	100	100	100	100	100	\$168



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Indoor Recreation Facilities - Buildings Withing Parks  
Unit Measure: sq.ft. of building area

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/sq.ft.)
<b>Buildings within parks (sq.ft.)</b>																
Father Sean O'Sullivan Park - Water Chamber Structure	-	-	-	-	-	-	72	72	72	72	72	72	72	72	72	\$273
Glendale Park - Spray Pad Utility Building / Storage	683	683	683	683	683	683	683	683	683	683	683	683	683	683	683	\$273
Beach Strip Open Space - Washroom Utility Building For Trail System	1,827	1,827	1,827	1,827	1,827	1,827	1,827	1,827	1,827	1,827	1,827	1,827	1,827	1,827	1,827	\$273
Billy Sherring Park - Sunshelter Washroom Building	1,405	1,405	1,405	1,405	1,405	1,405	1,405	1,405	1,405	1,405	1,405	1,405	1,405	1,405	1,405	\$273
Bruce Park - Washrooms / Changerooms	1,903	1,903	1,903	1,903	1,903	1,903	1,903	1,903	1,903	1,903	1,903	1,903	1,903	1,903	1,903	\$273
Eastmount Community Centre	2,413	2,413	2,413	2,413	2,413	2,413	2,413	2,413	2,413	2,413	2,413	2,413	2,413	2,413	2,413	\$168
Eleanor Park - Washroom / Storage / Utility	688	688	688	688	688	688	688	688	688	688	688	688	688	688	688	\$273
Elmar Park - Park Water Chamber Bldg	-	-	-	-	-	-	72	72	72	72	72	72	72	72	72	\$273
Macassa Park - Washroom / Storage	4,075	4,075	4,075	4,075	4,075	4,075	4,075	4,075	4,075	4,075	4,075	4,075	4,075	4,075	4,075	\$273
Sackville Hill Memorial Park - Bocce Storage Shed	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	\$168
Sackville Hill Memorial Park - Changeroom / Washrooms / Parks Staff Area	-	-	-	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	\$273
Sackville Hill Memorial Park - Garbage Storage (Associated with Facility & Park Services)	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	\$126
Sackville Hill Memorial Park - Storage Garage Used By Parks	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	\$273
T.B. Mcquesten Park - Storage / Washroom / Utility	4,336	4,336	4,336	4,336	4,336	4,336	4,336	4,336	4,336	4,336	4,336	4,336	4,336	4,336	4,336	\$273
William Schwenger Washroom	-	-	-	-	-	-	-	-	-	-	852	852	852	852	852	\$168
Trieste Bocce Club - Bocce Court	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	\$273



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Indoor Recreation Facilities - Buildings Withing Parks  
Unit Measure: sq.ft. of building area

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/sq.ft.)
<b>Buildings within parks (sq.ft.)</b>																
Trieste Bocce Club - Clubhouse	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	\$273
William Connell Park Buildings (2: 1 public washroom & 1 fieldhouse building with showers & changerooms)	-	-	-	-	-	-	-	-	-	-	2,860	2,860	2,860	2,860	2,860	\$273
Mohawk Sports Park - Bernie Arbour Stadium / Changerooms / Concessions / Washrooms	5,095	5,095	5,095	5,095	5,095	5,095	5,095	5,095	5,095	5,095	5,095	5,095	5,095	5,095	5,095	\$273
Mohawk Sports Park - Building B - Rugby Field House / Changerooms / Washrooms	2,784	2,784	2,784	2,784	2,784	2,784	2,784	2,784	2,784	2,784	2,784	2,784	2,784	2,784	2,784	\$273
Mohawk Sports Park - Building C - Small Parks Utility Building Behind The Soccer Field House	1,711	1,711	1,711	1,711	1,711	1,711	1,711	1,711	1,711	1,711	1,711	1,711	1,711	1,711	1,711	\$273
Mohawk Sports Park - Building D - Track And Field Entrance Building	6,545	6,545	6,545	6,545	6,545	6,545	6,545	6,545	6,545	6,545	6,545	6,545	6,545	6,545	6,545	\$273
Mohawk Sports Park - Small Storage Structure Adjacent To Scorer's Booth	143	143	143	143	143	143	143	143	143	143	143	143	143	143	143	\$273
Mohawk Sports Park - Small Structure Next To Rugby Building	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	\$168
Mohawk Sports Park - Soccer Field House Building / Storage For Parks	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	\$395
Mohawk Sports Park - Storage - Most Southerly Building Between 2 Ball Diamonds	243	243	243	243	243	243	243	243	243	243	243	243	243	243	243	\$168
Mohawk Sports Park - Storage / Office Space	1,565	1,565	1,565	1,565	1,565	1,565	1,565	1,565	1,565	1,565	1,565	1,565	1,565	1,565	1,565	\$273
Berrisfield Park - Utility Building For Spray Pad And Supie	688	688	688	688	688	688	688	688	688	688	688	688	688	688	688	\$273
Bobby Kerr Park - Storage - 3 Structures Side By Side	383	383	383	383	383	383	383	383	383	383	383	383	383	383	383	\$273



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Indoor Recreation Facilities - Buildings Withing Parks  
Unit Measure: sq.ft. of building area

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/sq.ft.)
<b>Buildings within parks (sq.ft.)</b>																
New Bobby Kerr Washroom Building	-	-	-	-	-	-	-	-	-	900	900	900	900	900	900	\$168
Highview Park - Storage Shed	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	\$168
Lisgar Park - Bocce Building	-	-	-	-	-	-	765	765	765	765	765	765	765	765	765	\$273
Lisgar Park - Sun Shelter / Storage / Utility / Washrooms	690	690	690	690	690	690	690	690	690	690	690	690	690	690	690	\$273
Mountain Drive Park - Washrooms / Storage	2,152	2,152	2,152	2,152	2,152	2,152	2,152	2,152	2,152	2,152	2,152	2,152	2,152	2,152	2,152	\$273
Templemead Park - Storage	138	138	138	138	138	138	138	138	138	138	138	138	138	138	138	\$168
Trenholme - Splashpad Equipment Building	-	-	-	-	50	50	50	50	50	50	50	50	50	50	50	\$273
Trenholme Park - Bocce Storage Shed	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	\$168
Trenholme Park - Public Washrooms	-	-	-	-	-	-	-	-	-	852	852	852	852	852	852	\$273
Victoria Park - Washroom / Concession At South End Of Park (Also secondary storage building near baseball diamond)	1,982	1,982	1,982	1,982	1,982	1,982	1,982	1,982	1,982	1,982	1,982	1,982	1,982	1,982	1,982	\$273
Chedoke Golf - Golf Shelter - 113753	198	198	198	198	198	198	198	198	198	198	198	198	198	198	198	\$168
Chedoke Golf - Storage - 110526	1,217	1,217	1,217	1,217	1,217	1,217	1,217	1,217	1,217	1,217	1,217	1,217	1,217	1,217	1,217	\$168
Chedoke Golf - Storage - 111373	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	\$168
Chedoke Golf - Storage - 111427	771	771	771	771	771	771	771	771	771	771	771	771	771	771	771	\$168
Chedoke Golf - Storage - 121640	195	195	195	195	195	195	195	195	195	195	195	195	195	195	195	\$168
Chedoke Golf - Storage - 124650	435	435	435	435	435	435	435	435	435	435	435	435	435	435	435	\$168
Chedoke Golf - Washrooms - 114305	548	548	548	548	548	548	548	548	548	548	548	548	548	548	548	\$168
Chedoke Golf - Washrooms - 126793	724	724	724	724	724	724	724	724	724	724	724	724	724	724	724	\$168



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Indoor Recreation Facilities - Buildings Withing Parks  
Unit Measure: sq.ft. of building area

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/sq.ft.)
<b>Buildings within parks (sq.ft.)</b>																
Chedoke Golf - Washrooms / Storage - 125141	396	396	396	396	396	396	396	396	396	396	396	396	396	396	396	\$168
Kings Forest Golf Club - Maintenance Building	6,474	6,474	6,474	6,474	6,474	6,474	6,474	6,474	6,474	6,474	6,474	6,474	6,474	6,474	6,474	\$168
Kings Forest Golf Club - Storage / Office	1,211	1,211	1,211	1,211	1,211	1,211	1,211	1,211	1,211	1,211	1,211	1,211	1,211	1,211	1,211	\$168
Kings Forest Golf Club - Storage Quonset	2,084	2,084	2,084	2,084	2,084	2,084	2,084	2,084	2,084	2,084	2,084	2,084	2,084	2,084	2,084	\$168
Churchill Park - Cricket Club's Storage Buildings (2)	271	271	271	271	271	271	271	271	271	271	271	271	271	271	271	\$273
Churchill Park - Garden Shed	138	138	138	138	138	138	138	138	138	138	138	138	138	138	138	\$273
Churchill Park - Small Storage Shed To East Of Main Building	182	182	182	182	182	182	182	182	182	182	182	182	182	182	182	\$273
Churchill Park - Storage Shed	110	110	110	110	110	110	110	110	110	110	110	-	-	-	-	\$168
Churchill Park - Washroom / Changeroom	857	857	857	857	857	857	857	857	857	857	857	857	857	857	857	\$273
HAAA - Field House/Changeroom/Washrooms	5,356	5,356	5,356	5,356	5,356	5,356	5,356	5,356	5,356	5,356	5,356	5,356	5,356	5,356	5,356	\$273
HAAA - Shelter For Tennis Court Area	265	265	265	265	265	265	265	265	265	265	265	265	265	265	265	\$168
Rosedale Tennis - Small Entrance Structure Attached To Tennis Bubble	205	205	205	205	205	205	205	205	205	205	205	-	-	-	-	\$168
Rosedale Tennis Club Bubble Structure	23,065	23,065	23,065	23,065	23,065	23,065	23,065	23,065	23,065	23,065	23,065	23,065	23,065	23,065	23,065	\$291
Gage Park - 2 Storage Bldgs, 1 Concrete Stucco And 1 Block	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202	\$273
Gage Park - New Baseball Changeroom Building By Parking Lot	867	867	867	867	867	867	867	867	867	867	867	867	867	867	867	\$273





**City of Hamilton  
Service Standard Calculation Sheet**

Service: Indoor Recreation Facilities - Buildings Withing Parks  
Unit Measure: sq.ft. of building area

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/sq.ft.)
<b>Buildings within parks (sq.ft.)</b>																
Gage Park - Small Building South Of Baseball Change Rooms	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	\$168
Gage Park - Small Storage Shed Next To Lawn Bowling Club House	194	194	194	194	194	194	194	194	194	194	194	194	194	194	194	\$168
Gage Park - Small Structure North Of Tennis Courts	342	342	342	342	342	342	342	342	342	342	342	342	342	342	342	\$273
Gage Park - Washroom, Utility Building For Wading Pool And Spray Pad	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	\$273
Gage Park - Band Shell Washrooms / Storage	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800	\$273
Turner Park - Washrooms	-	-	-	-	-	2,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250	\$395
Sam Manson Park - Bocce Storage Building	-	-	-	-	-	-	-	-	-	100	100	100	100	100	100	\$168
Sam Manson Park - Bocce Club House Building	-	-	-	-	-	-	-	-	-	1,700	1,700	1,700	1,700	1,700	1,700	\$260
Riverdale East Park Bocce Storage Building - 135 Vittorito Ave. (St. Agnes Bocce Storage Bldg)	312	312	312	312	312	312	312	312	312	312	312	310	310	310	310	\$168
Glen Castle Park Bocce Storage Building - 30 Glen Castle Dr.	100	100	100	100	100	100	100	100	100	100	100	126	126	126	126	\$260
Dave Andreychuk Mountain Arena Bocce Storage Building - 25 Hester St.	190	190	190	190	190	190	190	190	190	190	190	190	190	190	190	\$168
Winona Park - Storage	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	\$273
Battlefield Park - Washroom / Concession	3,350	3,350	3,350	3,350	3,350	3,350	3,350	3,350	3,350	3,350	3,350	3,350	3,350	3,350	3,350	\$273



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Indoor Recreation Facilities - Buildings Withing Parks  
Unit Measure: sq.ft. of building area

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/sq.ft.)
<b>Buildings within parks (sq.ft.)</b>																
Eastdale Park - Bocce / Washroom / Storage	-	-	-	-	-	-	580	580	580	580	580	580	580	580	580	\$273
Ferris Park - Bocce Club Bldg	-	-	-	-	-	-	592	592	592	592	592	592	592	592	592	\$273
Heritage Green Community Sports Park - Parks Works Building	5,600	5,600	5,600	5,600	5,600	5,600	5,600	5,600	5,600	5,600	5,600	5,600	5,600	5,600	5,600	\$395
Heritage Green Community Sports Park - Washrooms / Storage / Utilities	-	-	-	-	-	-	5,213	5,213	5,213	5,213	5,213	5,213	5,213	5,213	5,213	\$273
Little League Park - Storage	499	499	499	499	499	499	499	499	499	499	499	499	499	499	499	\$273
Little League Park - Tennis Club House (Stoney Creek) Stoney Creek Tennis Club House	2,274	2,274	2,274	2,274	2,274	2,274	2,274	2,274	2,274	2,274	2,274	2,274	2,274	2,274	2,274	\$273
Maplewood Park - Storage/Washroom	355	355	355	355	355	355	355	355	355	355	355	355	355	355	355	\$273
Memorial Park - Bocce Building (87 Glen Cannon Dr.)	-	-	-	-	-	-	560	560	560	560	560	560	560	560	560	\$273
Stoney Creek Storage Building & Workshop (77 King St. West at Battlefield Park)	875	875	875	875	875	875	875	875	875	875	875	875	875	875	875	\$551
Valley Park - Washroom / Changeroom	1,075	1,075	1,075	1,075	1,075	1,075	1,075	1,075	1,075	1,075	1,075	1,075	1,075	1,075	1,075	\$273
Ancaster Little League Park Fieldhouse (Washroom / Storage / Concession)	1,099	1,099	1,099	1,099	1,099	1,099	1,099	1,099	1,099	1,099	1,099	1,099	1,099	1,099	1,099	\$273
Ancaster Community Centre Park Fieldhouse (Washroom / Maintenance / Storage / Concession)	1,112	1,112	1,112	1,112	1,112	1,112	1,112	1,112	1,112	1,112	1,112	1,112	1,112	1,112	1,112	\$273



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Indoor Recreation Facilities - Buildings Withing Parks  
Unit Measure: sq.ft. of building area

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/sq.ft.)
<b>Buildings within parks (sq.ft.)</b>																
Small Storage (Village Green) - 291 Lodor St.	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118	\$168
Dundas Driving Park - Baseball Washroom/Concession	1,279	1,279	1,279	1,279	1,279	1,279	1,279	1,279	1,279	1,279	1,279	1,279	1,279	1,279	1,279	\$273
Dundas Driving Park - Pavilion - 160003	1,225	1,225	1,225	1,225	1,225	1,225	1,225	1,225	1,225	1,225	1,225	1,225	1,225	1,225	1,225	\$273
Dundas Driving Park - Splash Pad Utility	-	-	-	-	206	206	206	206	206	206	206	206	206	206	206	\$168
Dundas Driving Park - Washroom Small Storage Structure	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	\$273
Edwards Park - Storage / Concession	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	\$273
Martino Memorial Park - Washrooms And Changerooms	930	930	930	930	930	930	930	930	930	930	930	930	930	930	930	\$168
Martino Memorial Park - Washrooms And Concession Booth	1,832	1,832	1,832	1,832	1,832	1,832	1,832	1,832	1,832	1,832	1,832	1,832	1,832	1,832	1,832	\$273
Sanctuary Park - Washrooms (may possibly be closed most seasons)	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	\$168
Veterans Park - Storage / Concession	1,205	1,205	1,205	1,205	1,205	1,205	1,205	1,205	1,205	1,205	1,205	1,205	1,205	1,205	1,205	\$273
Binbrook Park - Ball Park Washroom	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	\$273
Glanbrook Sports Park - Concession / Washrooms	505	505	505	505	505	505	505	505	505	505	505	505	505	505	505	\$273
Woodburn Ball Park - Concession / Washroom	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	\$273
Flamborough Centre Park - Garage / Washroom / Concession	436	436	436	436	436	436	436	436	436	436	436	-	-	-	-	\$168
Freelton Community Park - Outdoor rink / Washrooms	-	-	-	-	-	-	-	-	3,240	3,240	3,240	3,240	3,240	3,240	3,240	\$168



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Indoor Recreation Facilities - Buildings Withing Parks  
Unit Measure: sq.ft. of building area

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/sq.ft.)
<b>Buildings within parks (sq.ft.)</b>																
Freelton Community Park - Storage	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	\$168
Freelton Community Park - Storage Building #2	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	\$273
Gatesbury Park - Washrooms (operationally closed)	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	\$273
Joe Sam's Leisure Park - Washroom And Storage / Snack Bar	1,795	1,795	1,795	1,795	1,795	1,795	1,795	1,795	1,795	1,795	1,795	1,795	1,795	1,795	1,795	\$273
Lynden Lions South Park - Lions Community Hall	2,280	2,280	2,280	2,280	2,280	2,280	2,280	2,280	2,280	2,280	2,280	2,280	2,280	2,280	2,280	\$168
Lynden Lions South Park - Washroom/Concession North End Of Park	1,167	1,167	1,167	1,167	1,167	1,167	1,167	1,167	1,167	1,167	1,167	1,167	1,167	1,167	1,167	\$273
Millgrove Park - Pavilion / Concession	1,680	1,680	1,680	1,680	1,680	1,680	1,680	1,680	1,680	1,680	1,680	1,680	1,680	1,680	1,680	\$126
Millgrove Park - Small Storage / Washroom Between The Diamonds	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	\$168
Millgrove Park - Washrooms	436	436	436	436	436	436	436	436	436	436	436	436	436	436	436	\$273
Sheffield Ball Park - Concession / Shelter	1,161	1,161	1,161	1,161	1,161	1,161	1,161	1,161	1,161	1,161	1,161	1,161	1,161	1,161	1,161	\$273
Strabane Community Park - Washroom / Concession / Storage	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	\$273
Tower Park - Storage	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	\$273
Waterdown Memorial Park - Storage Shed	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	\$168
Waterdown Memorial Park & Ice Loop- Washroom / Storage / Utility For Ice Plant and Spraypad	-	-	-	-	-	-	1,610	1,610	1,610	1,610	1,610	1,610	1,610	1,610	1,610	\$273



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Indoor Recreation Facilities - Buildings Withing Parks  
Unit Measure: sq.ft. of building area

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/sq.ft.)
<b>Buildings within parks (sq.ft.)</b>																
Carlisle Memorial Park - Storage For Grass Cutting Equipment	632	632	632	632	632	632	632	632	632	632	632	632	632	632	632	\$273
Carlisle Memorial Park - Washroom Building East Of The Storage Garage	155	155	155	155	155	155	155	155	155	155	155	155	155	155	155	\$168
Centennial Heights Park - 2nd. Flr Concession Booth / Lower Level Washrooms / Utility Room	528	528	528	528	528	528	528	528	528	528	528	528	528	528	528	\$260
Bullocks Corner Park - Storage / Concession	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	\$273
Bullocks Corner Park - Washroom / Storage And Utility Building	1,367	1,367	1,367	1,367	1,367	1,367	1,367	1,367	1,367	1,367	1,367	1,367	1,367	1,367	1,367	\$273
Beverly Park - Concession - Located South West Corner Of Parking Lot	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	\$273
Beverly Park - Football Portable Changeroom North Building	817	817	817	817	817	817	817	817	817	817	817	-	-	-	-	\$168
Beverly Park - Football Portable Changeroom South Building	831	831	831	831	831	831	831	831	831	831	831	-	-	-	-	\$168
Beverly Park - Storage Garage At Entrance To Park	2,664	2,664	2,664	2,664	2,664	2,664	2,664	2,664	2,664	2,664	2,664	2,664	2,664	2,664	2,664	\$273
Beverly Park - Tennis Clubhouse	605	605	605	605	605	605	605	605	605	605	605	-	-	-	-	\$168
Beverly Park - Washrooms - Located North West Corner Of Parking Lot	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	\$273
<b>Total</b>	<b>210,456</b>	<b>210,456</b>	<b>210,456</b>	<b>216,415</b>	<b>216,671</b>	<b>218,921</b>	<b>236,853</b>	<b>236,853</b>	<b>240,093</b>	<b>247,074</b>	<b>247,901</b>	<b>242,469</b>	<b>242,469</b>	<b>242,469</b>	<b>242,469</b>	

Population	511,412	514,740	515,591	519,949	522,611	526,896	529,744	533,698	536,918	543,294	549,623	555,599	562,453	569,353	578,957
Per Capita Standard	0.41	0.41	0.41	0.42	0.41	0.42	0.45	0.44	0.45	0.45	0.45	0.44	0.43	0.43	0.42

15 Year Average	2008-2022
Quantity Standard	0.4287
Quality Standard	\$268
Service Standard	\$115

D.C. Amount (before deductions)	10 Year
Forecast Population	62,136
\$ per Capita	\$115
Eligible Amount	\$7,129,485



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Recreation Equipment  
Unit Measure: No. of equipment

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/Vehicle)
140A - Ice Edger	23	9	14	15	17	19	20	20	21	21	21	23	23	23	23	\$5,200
Snow Blower	-	12	13	13	13	15	15	15	16	18	18	18	18	18	18	\$1,700
Clark Focus 11	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	\$11,700
Clark Focus L20	-	-	-	-	-	-	1	1	3	3	3	3	3	3	3	\$11,700
Micro Mag 20-D	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	\$11,700
Magnum 34-D Scrubber	-	-	-	-	1	1	1	1	1	1	1	2	2	2	2	\$11,700
Magnum 26-D Scrubber	-	-	-	-	1	1	1	1	1	1	1	1	1	1	1	\$11,700
Nobles	-	-	-	-	-	-	1	1	1	1	1	1	1	1	1	\$11,700
Nobles Speed Scrub	-	-	-	-	-	1	2	2	3	3	3	3	3	3	3	\$11,700
Nobles SS3	-	-	-	-	-	-	1	1	1	1	1	1	1	1	1	\$11,700
Numatic International	-	-	-	-	-	-	1	1	1	1	1	1	1	1	1	\$11,700
Speed Scrubber 1701 Plus	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$11,700
Tomcat 2000	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	\$11,700
Tomcat 2300 Version 3.0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$11,700
Tomcat 20-D	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$11,700
Tomcat 26-D	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$11,700
Tomcat Mini Mag 21-2500	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$11,700
Tomcat Mini Mag 26-D	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	\$11,700
Tomcat Magnum 34D	-	-	-	-	1	1	1	1	1	1	1	1	1	1	1	\$11,700
Viper	-	-	-	-	-	-	1	1	1	1	1	1	1	1	1	\$11,700
<b>Total</b>	<b>35</b>	<b>33</b>	<b>39</b>	<b>40</b>	<b>45</b>	<b>52</b>	<b>59</b>	<b>59</b>	<b>64</b>	<b>66</b>	<b>66</b>	<b>68</b>	<b>68</b>	<b>68</b>	<b>68</b>	

Population	511,412	514,740	515,591	519,949	522,611	526,896	529,744	533,698	536,918	543,294	549,623	555,599	562,453	569,353	578,957
Per Capita Standard	0.00007	0.00006	0.00008	0.00008	0.00009	0.00010	0.00011	0.00011	0.00012	0.00012	0.00012	0.00012	0.00012	0.00012	0.00012

15 Year Average	2008-2022
Quantity Standard	0.0001
Quality Standard	\$6,900
Service Standard	\$0.69

D.C. Amount (before deductions)	10 Year
Forecast Population	62,136
\$ per Capita	\$0.69
Eligible Amount	\$42,874



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Library Services - Facilities  
Unit Measure: sq.ft. of building area

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Bid'g Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
<b>Hamilton</b>																	
Central - 55 York Blvd.	146,131	146,131	185,978	185,978	185,978	185,978	185,978	185,978	185,978	185,978	185,978	185,978	185,978	185,978	185,978	\$742	\$937
Barton - 571 Barton St. E.	7,612	7,612	7,612	7,612	7,612	7,612	7,612	7,612	7,612	7,612	7,612	7,612	7,612	7,612	7,612	\$1,038	\$1,295
Concession - 565 Concession St.	8,316	8,316	8,316	8,316	8,316	8,316	8,316	8,316	8,316	8,316	8,316	8,316	8,316	8,316	8,316	\$1,014	\$1,265
Kenilworth - 103 Kenilworth Ave.	7,960	7,960	7,960	7,960	7,960	7,960	7,960	7,960	7,960	7,960	7,960	7,960	7,960	7,960	7,960	\$1,014	\$1,265
Locke - 285 Locke St. S.	1,486	1,486	1,486	1,486	1,486	1,486	1,486	1,486	1,486	1,486	1,700	1,700	1,700	1,700	1,700	\$1,038	\$1,295
Picton (CLOSED)	3,172	3,172	-	-	-	-	-	-	-	-	-	-	-	-	-	\$790	\$995
Red Hill - 695 Queenston Rd.	11,100	11,760	11,760	11,760	11,760	11,760	11,760	11,760	11,760	11,760	11,760	11,760	11,760	11,760	11,760	\$790	\$995
Sherwood - 467 Upper Ottawa	19,195	20,400	20,400	20,400	20,400	20,400	20,400	20,400	20,400	20,400	20,400	20,400	20,400	20,400	20,400	\$790	\$995
Terryberry - 100 Mohawk Rd. E.	28,109	28,109	28,109	28,109	28,109	28,109	28,109	28,109	28,109	28,109	28,109	28,109	28,109	28,109	28,109	\$790	\$995
Westdale - 955 King St. W.	10,277	10,277	10,277	10,277	10,277	10,277	10,277	10,277	10,277	10,277	10,277	10,277	10,277	10,277	10,277	\$1,038	\$1,295
Turner Park Library - 352 Rymal Rd. E.	-	24,116	24,116	24,116	24,116	24,116	24,116	24,116	24,116	24,116	24,116	24,116	24,116	24,116	24,116	\$896	\$1,122
Parkdale - 256 Parkdale Avenue N	-	-	-	-	-	-	-	-	-	-	-	-	-	1,500	1,500	\$1,014	\$1,265
<b>Stoney Creek</b>																	
Stoney Creek Town Hall Library - 777 Highway 8	15,675	15,739	15,739	15,739	11,365	11,365	11,365	11,365	11,365	11,365	11,365	11,365	11,365	11,365	11,365	\$790	\$995
Saltfleet Library - 131 Gray Rd.	15,645	15,645	15,645	15,645	15,645	11,573	11,573	11,573	11,573	11,573	11,573	11,573	11,573	11,573	11,573	\$790	\$995
Valley Park Library - 970 Paramount Dr.	2,976	2,976	2,976	2,976	2,976	2,976	2,976	2,976	2,976	2,976	2,976	2,976	2,976	2,976	11,500	\$1,038	\$1,295
<b>Ancaster</b>																	
Library (300 Wilson St. East)	13,153	13,153	13,153	13,153	13,153	13,153	13,153	13,153	13,153	13,153	13,153	13,153	13,153	13,153	13,153	\$914	\$1,144
<b>Dundas</b>																	
Dundas Public Library (Ogilvie St.)	13,181	13,181	13,181	13,181	13,181	13,181	13,181	13,181	13,181	13,181	13,181	13,181	13,181	13,181	13,181	\$1,038	\$1,295
<b>Glanbrook</b>																	
Mount Hope - 3027 Homestead Dr.	1,600	1,600	1,600	1,600	1,600	1,600	1,600	1,600	1,600	1,600	1,600	1,600	1,600	1,600	1,600	\$1,038	\$1,265
Binbrook - 2641 Highway 56	2,958	2,958	2,958	2,958	2,958	2,958	2,958	2,958	2,958	2,958	6,000	6,000	6,000	6,000	6,000	\$1,038	\$1,265
<b>Flamborough</b>																	
Waterdown - 25 Mill St. N.	3,637	3,637	3,637	3,637	3,637	3,637	3,637	-	-	-	-	-	-	-	-	\$790	\$995
Waterdown - 163 Dundas St E	-	-	-	-	-	-	-	17,813	17,813	17,813	17,813	17,813	17,813	17,813	17,813	\$914	\$1,144



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Library Services - Facilities  
Unit Measure: sq.ft. of building area

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Bld'g Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
Greenville - 59 Kirby Ave.	2,332	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	-	-	\$790	\$965
Greenville - 625 Harvest Rd.	-	-	-	-	-	-	-	-	-	-	-	-	-	3,400	3,400	\$1,038	\$1,265
Freelton - 1803 Brock Rd.	1,946	1,946	1,946	1,946	1,946	1,946	1,946	1,946	1,946	1,946	1,946	1,946	1,946	1,946	1,946	\$1,038	\$1,265
Carlisle - 1496 Centre Rd.	2,379	2,379	2,379	2,379	2,379	2,379	2,379	2,379	2,379	2,379	2,379	2,379	2,379	2,379	2,379	\$790	\$965
Carlisle - 277 Carlisle Rd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,350	\$273	\$341
Rockton - 795 Old Highway 8	778	778	778	778	778	-	-	-	-	-	-	-	-	-	-	\$790	\$965
Millgrove - 857 Millgrove Side Rd.	1,672	1,672	1,672	1,672	1,672	1,672	1,672	-	-	-	-	-	-	-	-	\$790	\$965
Lynden - 79 Lynden Rd.	900	900	900	900	900	900	-	-	-	-	-	-	-	-	-	\$790	\$965
Lynden - 110 Lynden Rd.	-	-	-	-	-	-	3,815	3,815	3,815	3,815	3,815	3,815	3,815	3,815	3,815	\$1,038	\$1,265
<b>Total</b>	<b>322,189</b>	<b>348,402</b>	<b>385,078</b>	<b>385,078</b>	<b>380,704</b>	<b>375,854</b>	<b>378,769</b>	<b>391,273</b>	<b>391,273</b>	<b>391,273</b>	<b>394,529</b>	<b>394,529</b>	<b>394,529</b>	<b>396,929</b>	<b>405,424</b>		

Population	511,412	514,740	515,591	519,949	522,611	526,896	529,744	533,698	536,918	543,294	549,623	555,599	562,453	569,353	578,957
Per Capita Standard	0.6300	0.6769	0.7469	0.7406	0.7285	0.7133	0.7150	0.7331	0.7287	0.7202	0.7178	0.7101	0.7014	0.6972	0.7003

15 Year Average	2008-2022
Quantity Standard	0.7107
Quality Standard	\$1,030
Service Standard	\$732

D.C. Amount (before deductions)	10 Year
Forecast Population	62,136
\$ per Capita	\$732
Eligible Amount	\$45,494,115





**City of Hamilton  
Service Standard Calculation Sheet**

Service: Library Services - Collection Materials  
Unit Measure: No. of library collection items

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/item)
Books - Adult	568,509	531,736	501,456	478,540	441,166	440,537	399,516	409,508	370,450	389,122	407,794	408,066	427,528	404,754	388,496	\$47
Books - Teen	34,907	43,324	42,292	41,992	38,728	41,458	29,140	22,201	19,147	20,770	22,393	35,821	37,215	36,281	37,299	\$31
Books - Children	323,269	322,052	151,664	141,740	258,520	254,288	238,459	234,284	213,686	154,283	213,686	246,235	252,936	232,725	219,688	\$29
Audio Books - Adult	12,490	13,516	9,889	10,953	8,084	7,606	17,348	10,133	12,949	15,765	18,581	18,515	18,759	17,203	15,249	\$63
Audio Books - Children	3,453	3,465	2,276	2,328	3,289	3,493	817	814	616	551	486	3,605	3,592	3,088	2,711	\$45
Accessible Materials	8,580	8,574	8,427	6,249	15,482	12,405	19,729	19,231	20,211	15,459	17,835	19,707	21,113	21,641	21,064	\$50
Periodicals	81,200	72,554	72,852	74,517	72,706	78,389	83,696	83,735	67,651	61,948	56,245	66,125	65,187	25,025	20,109	\$14
CDs	46,469	48,487	48,724	53,012	55,817	58,621	57,455	71,204	64,666	63,104	61,542	46,120	46,440	41,387	36,693	\$22
DVDs	79,580	95,061	90,344	110,511	134,895	143,434	134,335	133,975	124,457	130,293	136,129	137,995	132,933	124,446	115,575	\$41
Blurays	-	2,367	2,737	4,368	8,888	12,806	15,336	15,349	16,175	17,779	19,383	19,341	18,639	18,449	18,161	\$57
Video Game - Adult & Teen	-	458	741	1,023	1,968	2,413	2,266	2,179	2,344	1,909	1,474	1,177	1,047	800	649	\$72
Video Game - Children	-	929	692	455	1,566	2,143	2,308	2,245	2,284	2,169	2,054	1,703	1,605	1,377	1,210	\$61
eBooks	510	581	1,997	6,254	18,342	60,316	63,636	96,733	102,128	102,790	103,452	109,268	115,889	133,654	139,976	\$58
eAudiobook	3,039	3,892	3,589	4,116	5,871	6,621	10,066	15,301	16,154	16,259	16,364	20,231	29,265	43,893	45,240	\$190
eMagazines	-	-	-	-	-	5,733	19,535	20,568	21,601	22,454	23,307	25,203	26,999	12,234	12,597	\$25
Databases	61	73	71	27	21	51	50	45	24	24	24	23	23	26	30	\$47,000
Portable Laptop	-	-	-	-	-	-	-	-	-	-	-	-	-	16	12	\$830
Portable Tablet	-	-	-	-	-	-	-	-	-	-	-	-	-	134	128	\$720
Online Catalogue (Bibliocommons)	-	-	-	-	-	1	1	1	1	1	1	1	1	1	1	\$94,000
Integrated Library System (Polaris)	-	-	-	-	-	1	1	1	1	1	1	1	1	1	1	\$78,000
<b>Total</b>	<b>1,162,067</b>	<b>1,147,069</b>	<b>937,751</b>	<b>936,085</b>	<b>1,065,343</b>	<b>1,130,316</b>	<b>1,093,694</b>	<b>1,137,507</b>	<b>1,054,545</b>	<b>1,014,681</b>	<b>1,100,751</b>	<b>1,159,137</b>	<b>1,199,172</b>	<b>1,117,135</b>	<b>1,074,889</b>	

Population	511,412	514,740	515,591	519,949	522,611	526,896	529,744	533,698	536,918	543,294	549,623	555,599	562,453	569,353	578,957
Per Capita Standard	2.27	2.23	1.82	1.80	2.04	2.15	2.06	2.13	1.96	1.87	2.00	2.09	2.13	1.96	1.86

15 Year Average	2008-2022
Quantity Standard	2.0247
Quality Standard	\$43
Service Standard	\$88

D.C. Amount (before deductions)	10 Year
Forecast Population	62,136
\$ per Capita	\$88
Eligible Amount	\$5,467,347



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Library Services - Vehicles  
Unit Measure: No. of library collection items

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/item)
Bookmobile	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	\$766,500
022-VAN 1/2 T	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	\$58,300
023-VAN 3/4 T	1	1	1	1	1	1	1	1	1	1	-	-	-	-	-	\$58,300
Ford E-450 Style Truck & Body	-	-	-	-	-	-	-	-	-	-	2	2	2	2	2	\$76,700
Genie Boom	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	\$28,400
Skyjack	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	\$28,400
<b>Total</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>7</b>	<b>7</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	

Population	511,412	514,740	515,591	519,949	522,611	526,896	529,744	533,698	536,918	543,294	549,623	555,599	562,453	569,353	578,957
Per Capita Standard	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001

15 Year Average	2008-2022
Quantity Standard	0.00001
Quality Standard	\$328,000
Service Standard	\$3

D.C. Amount (before deductions)	10 Year
Forecast Population	62,136
\$ per Capita	\$3
Eligible Amount	\$203,806



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Ambulance Facilities  
Unit Measure: sq.ft. of building area

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Bld'g Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
Station #1 - 35 - 43 John Street North	2,853	2,853	2,853	2,853	2,853	2,853	2,853	2,853	2,853	2,853	2,853	2,853	2,853	2,853	2,853	\$602	\$705
Station #3 Ambulance, 965 Garth St.	1,554	1,554	1,554	1,554	1,554	1,554	1,554	1,554	1,554	1,554	1,554	1,554	1,554	1,554	1,554	\$747	\$864
Station #4 Ambulance, 729 Upper Sherman	1,145	1,145	1,145	1,145	1,145	1,145	1,145	1,145	1,145	1,145	1,145	1,145	1,145	1,145	1,145	\$602	\$705
Station #7 Ambulance, 225 Quigley Rd.	1,038	1,038	1,038	1,038	1,038	1,038	1,038	1,038	1,038	1,038	1,038	1,038	1,038	1,038	1,038	\$747	\$864
Station #9 Ambulance, 125 Kenilworth Ave. N.	1,435	1,435	1,435	1,435	1,435	1,435	1,435	1,435	1,435	1,435	1,435	1,435	1,435	1,435	1,435	\$747	\$864
Station #10 Ambulance, Norfolk Ave.	1,364	1,364	1,364	1,364	1,364	1,364	1,364	1,364	1,364	1,364	1,364	1,364	1,364	1,364	1,364	\$747	\$864
Station #12 Ambulance, 199 Highway 8 Stoney Creek	-	-	2,983	2,983	2,983	2,983	2,983	2,983	2,983	2,983	2,983	2,983	2,983	2,983	2,983	\$602	\$705
Station #15 Ambulance, 415 Arvin Ave.	2,519	2,519	2,519	2,519	2,519	2,519	2,519	2,519	2,519	2,519	2,519	2,519	2,519	2,519	2,519	\$747	\$864
Station #17 Ambulance, 363 Isaac Brock St.	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	\$747	\$864
Station #18 Ambulance, 2636 (2640) Highway 56 Binbrook	-	-	1,938	1,938	1,938	1,938	1,938	1,938	1,938	1,938	1,938	1,938	1,938	1,938	1,938	\$785	\$906
Station #19 Ambulance, 3302 Homestead Rd.	1,483	1,483	1,483	1,483	1,483	1,483	1,483	1,483	1,483	1,483	1,483	1,483	1,483	1,483	1,483	\$602	\$675
Station #20 Ambulance, 365 Wilson St. W.	1,996	1,996	1,996	1,996	1,996	1,996	1,996	1,996	1,996	1,996	1,996	1,996	1,996	1,996	1,996	\$747	\$864
Station #21 Ambulance, Garner Rd., Ancaster	1,963	1,963	1,963	1,963	1,963	1,963	1,963	1,963	1,963	1,963	1,963	1,963	1,963	1,963	1,963	\$602	\$705
Station #23 Ambulance, Memorial Square	2,836	2,836	2,836	2,836	2,836	2,836	2,836	2,836	2,836	2,836	2,836	2,836	2,836	2,836	2,836	\$602	\$705
Station #24 Ambulance, 265 Parkside Dr.	1,656	1,656	1,656	1,656	1,656	1,656	1,656	1,656	1,656	1,656	1,656	1,656	1,656	1,656	1,656	\$602	\$705
Station #25 Ambulance, 361 Old Brock Rd.	-	-	1,802	1,802	1,802	1,802	1,802	1,802	1,802	1,802	1,802	1,802	1,802	1,802	1,802	\$747	\$864
Station #26 Ambulance, Lynden	-	-	1,204	1,204	1,204	1,204	1,204	1,204	1,204	1,204	1,204	1,204	1,204	-	-	\$602	\$705



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Ambulance Facilities  
Unit Measure: sq.ft. of building area

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Bld'g Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
Station #30 Ambulance, 489 Victoria Ave. N.	18,558	18,558	18,558	18,558	18,558	18,558	18,558	18,558	18,558	18,558	18,558	18,558	18,558	18,558	18,558	\$747	\$864
Station #32 Ambulance, 1000 Limeridge Rd.	-	-	-	7,060	7,060	7,060	7,060	7,060	7,060	7,060	7,060	7,060	7,060	7,060	7,060	\$670	\$779
Stoney Creek Mountain Training Facility (Shared Building B)	-	-	-	7,280	7,280	7,280	7,280	7,280	7,280	7,280	7,280	7,280	7,280	7,280	7,280	\$750	\$868
<b>Total</b>	<b>41,539</b>	<b>41,539</b>	<b>49,466</b>	<b>63,806</b>	<b>63,806</b>	<b>63,806</b>	<b>63,806</b>	<b>63,806</b>	<b>63,806</b>	<b>63,806</b>	<b>63,806</b>	<b>63,806</b>	<b>63,806</b>	<b>62,602</b>	<b>62,602</b>		

Population	511,412	514,740	515,591	519,949	522,611	526,896	529,744	533,698	536,918	543,294	549,623	555,599	562,453	569,353	578,957
Per Capita Standard	0.0812	0.0807	0.0959	0.1227	0.1221	0.1211	0.1204	0.1196	0.1188	0.1174	0.1161	0.1148	0.1134	0.1100	0.1081

15 Year Average	2008-2022
Quantity Standard	0.1108
Quality Standard	\$816
Service Standard	\$90

D.C. Amount (before deductions)	10 Year
Forecast Population	62,136
\$ per Capita	\$90
Eligible Amount	\$5,617,716



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Ambulance Vehicles  
Unit Measure: No. of vehicles and equipment

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/Vehicle)
Emergency Support Unit	1	1	2	2	2	2	2	2	2	2	2	2	1	1	1	\$122,900
Emergency Support Unit 2	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	\$273,300
Defibrillators	52	52	52	52	52	65	65	65	65	65	65	66	67	67	67	\$47,800
Vehicle Equipment	93	93	93	93	93	93	93	93	93	93	93	93	94	94	94	\$8,500
Ambulances	30	30	30	31	31	32	36	37	41	41	41	41	42	42	42	\$358,000
Stryker Power Stretchers	-	-	-	-	-	-	-	2	50	50	50	51	52	52	52	\$31,200
Emergency Response Vehicles	16	16	16	16	17	19	19	16	17	17	17	17	17	17	17	\$157,100
Transport Van	-	-	-	-	-	-	-	3	3	3	3	3	3	3	3	\$88,800
Stryker Power Load Systems	-	-	-	-	-	-	-	2	40	40	40	41	42	42	42	\$36,900
Specialized Training Simulator Equipment	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	\$136,600
Paramedic Gear	22	22	16	12	18	21	30	34	13	21	37	50	55	55	55	\$2,100
Mobile Integrated Health Vans	-	-	-	-	-	-	-	-	-	-	-	-	4	4	6	\$51,800
Autopulse	-	-	-	-	-	-	-	-	-	-	-	-	-	35	36	\$16,700
Supervisor Pickups	1	1	1	1	1	1	1	1	1	1	1	1	2	3	3	\$62,800
Stair Chairs	30	30	30	31	32	32	36	37	41	41	41	43	44	45	46	\$5,500
<b>Total</b>	<b>247</b>	<b>247</b>	<b>242</b>	<b>240</b>	<b>248</b>	<b>267</b>	<b>284</b>	<b>294</b>	<b>368</b>	<b>376</b>	<b>392</b>	<b>410</b>	<b>426</b>	<b>463</b>	<b>467</b>	

Population	511,412	514,740	515,591	519,949	522,611	526,896	529,744	533,698	536,918	543,294	549,623	555,599	562,453	569,353	578,957
Per Capita Standard	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0006	0.0007	0.0007	0.0007	0.0007	0.0008	0.0008	0.0008

15 Year Average	2008-2022
Quantity Standard	0.0006
Quality Standard	\$67,933
Service Standard	\$41

D.C. Amount (before deductions)	10 Year
Forecast Population	62,136
\$ per Capita	\$41
Eligible Amount	\$2,532,663



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Long-term Care Facilities  
Unit Measure: sq.ft. of building area

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Bld'g Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
Wentworth Lodge	111,092	111,092	111,092	111,092	111,092	111,092	111,092	111,092	111,092	111,092	111,092	111,092	111,092	111,092	111,092	\$964	\$1,103
Macassa Lodge	236,186	236,186	236,186	236,186	236,186	236,186	236,186	236,186	236,186	236,186	236,186	236,186	236,186	236,186	236,186	\$685	\$795
<b>Total</b>	<b>347,278</b>	<b>347,278</b>	<b>347,278</b>	<b>347,278</b>	<b>347,278</b>	<b>347,278</b>	<b>347,278</b>	<b>347,278</b>	<b>347,278</b>	<b>347,278</b>	<b>347,278</b>	<b>347,278</b>	<b>347,278</b>	<b>347,278</b>	<b>347,278</b>		

Population	511,412	514,740	515,591	519,949	522,611	526,896	529,744	533,698	536,918	543,294	549,623	555,599	562,453	569,353	578,957
Per Capita Standard	0.6791	0.6747	0.6736	0.6679	0.6645	0.6591	0.6556	0.6507	0.6468	0.6392	0.6318	0.6251	0.6174	0.6100	0.5998

15 Year Average	2008-2022
Quantity Standard	0.6464
Quality Standard	\$893
Service Standard	\$578

D.C. Amount (before deductions)	10 Year
Forecast Population	62,136
\$ per Capita	\$578
Eligible Amount	\$35,885,404



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Child Care and Early Years Programs - Facilities  
Unit Measure: sq.ft. of building area

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Bld'g Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
Red Hill Day Care Centre	16,782	16,782	16,782	16,782	16,782	14,265	14,265	14,265	14,265	14,265	14,265	14,265	14,265	14,265	14,265	\$456	\$543
Lister Block	-	-	-	24,200	24,200	24,200	24,200	24,200	24,200	24,200	24,200	24,200	24,200	24,200	24,200	\$790	\$912
<b>Total</b>	<b>16,782</b>	<b>16,782</b>	<b>16,782</b>	<b>40,982</b>	<b>40,982</b>	<b>38,465</b>	<b>38,465</b>	<b>38,465</b>	<b>38,465</b>	<b>38,465</b>	<b>38,465</b>	<b>38,465</b>	<b>38,465</b>	<b>38,465</b>	<b>38,465</b>		

Population	511,412	514,740	515,591	519,949	522,611	526,896	529,744	533,698	536,918	543,294	549,623	555,599	562,453	569,353	578,957
Per Capita Standard	0.0328	0.0326	0.0325	0.0788	0.0784	0.0730	0.0726	0.0721	0.0716	0.0708	0.0700	0.0692	0.0684	0.0676	0.0664

15 Year Average	2008-2022
Quantity Standard	0.0638
Quality Standard	\$749
Service Standard	\$48

D.C. Amount (before deductions)	10 Year
Forecast Population	62,136
\$ per Capita	\$48
Eligible Amount	\$2,968,858



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Provincial Offences Act including By-law Enforcement - Facilities  
Unit Measure: sq.ft. of building area

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Bld'g Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
45 Main Street East - Dedicated Space	16,034	16,034	16,034	16,034	16,034	16,034	16,034	16,034	16,034	16,034	-	-	-	-	-	\$641	\$747
45 Main Street East - Shared Space	2,375	2,375	2,375	2,375	2,375	2,375	2,375	2,375	2,375	2,375	-	-	-	-	-	\$641	\$747
50 Main Street East -Dedicated Space	-	-	-	-	-	-	-	-	-	-	53,287	53,287	53,287	53,287	53,287	\$641	\$747
50 Main Street East - Shared Space	-	-	-	-	-	-	-	-	-	-	4,628	4,628	4,628	4,628	4,628	\$641	\$747
<b>Total</b>	<b>18,409</b>	<b>18,409</b>	<b>18,409</b>	<b>18,409</b>	<b>18,409</b>	<b>18,409</b>	<b>18,409</b>	<b>18,409</b>	<b>18,409</b>	<b>18,409</b>	<b>57,915</b>	<b>57,915</b>	<b>57,915</b>	<b>57,915</b>	<b>57,915</b>		

Population	511,412	514,740	515,591	519,949	522,611	526,896	529,744	533,698	536,918	543,294	549,623	555,599	562,453	569,353	578,957
Per Capita Standard	0.0360	0.0358	0.0357	0.0354	0.0352	0.0349	0.0348	0.0345	0.0343	0.0339	0.1054	0.1042	0.1030	0.1017	0.1000

15 Year Average	2008-2022
Quantity Standard	0.0577
Quality Standard	\$746
Service Standard	\$43

D.C. Amount (before deductions)	10 Year
Forecast Population	62,136
\$ per Capita	\$43
Eligible Amount	\$2,676,198





**City of Hamilton  
Service Standard Calculation Sheet**

Service: Public Health - Facilities  
Unit Measure: sq.ft. of building area

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Bld'g Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
100 Main St. E., suite 220	11,392	11,392	11,392	11,392	11,392	11,392	11,392	11,392	11,392	11,392	11,392	11,392	11,392	11,392	11,392	\$392	\$473
2255 Barton St - Unit 3/4	6,773	6,773	6,773	6,773	6,773	6,773	-	-	-	-	-	-	-	-	-	\$392	\$473
2255 Barton St - Unit 8	1,200	1,200	1,200	-	-	-	-	-	-	-	-	-	-	-	-	\$392	\$473
1447 Upper Ottawa (owned)	15,143	15,143	15,143	15,143	15,143	15,143	15,143	15,143	15,143	-	-	-	-	-	-	\$431	\$516
2 King St W., (DUN)	10,825	10,825	10,825	10,825	10,825	10,825	10,825	3,635	-	-	-	-	-	-	-	\$350	\$427
21 Hunter St. E.	5,324	5,324	5,324	5,324	5,324	5,324	5,324	5,324	5,324	5,324	5,324	5,324	5,324	5,324	5,324	\$392	\$473
1 Hughson St. N.	33,015	33,015	33,015	33,015	33,015	33,015	33,015	-	-	-	-	-	-	-	-	\$392	\$473
4 Hughson St. S.	2,790	2,790	2,790	-	-	-	-	-	-	-	-	-	-	-	-	\$392	\$473
1439 Upper Ottawa	1,227	1,227	1,227	1,227	1,227	1,227	1,227	-	-	-	-	-	-	-	-	\$392	\$473
1447 Upper Ottawa (leased)	4,892	4,892	4,892	4,892	4,892	4,892	4,892	4,892	-	-	-	-	-	-	-	\$431	\$516
125 Barton - West Nile	-	-	892	892	892	892	892	-	-	-	-	-	-	-	-	\$393	\$474
1 James St.	-	-	5,626	5,626	5,626	5,626	5,626	-	-	-	-	-	-	-	-	\$431	\$516
247 Centennial Unit 8	-	-	2,114	2,114	2,114	2,114	2,114	2,114	2,114	2,114	2,114	2,114	2,114	2,114	2,114	\$392	\$473
100 Main St. West - McMaster Health Campus (leased)	-	-	-	-	-	-	-	24,122	24,122	24,122	24,122	24,122	24,122	24,122	24,122	\$654	\$762
110 King Street West (Robert Thompson)	-	-	-	-	-	-	52,300	52,300	52,300	52,300	52,300	52,300	52,300	52,300	52,300	\$527	\$622
891 Upper James (leased)	-	-	-	-	-	-	2,159	2,159	2,159	2,159	2,159	2,159	2,159	2,159	2,159	\$389	\$470
<b>Total</b>	<b>92,581</b>	<b>92,581</b>	<b>101,213</b>	<b>97,223</b>	<b>97,223</b>	<b>97,223</b>	<b>144,909</b>	<b>121,081</b>	<b>112,554</b>	<b>97,411</b>	<b>97,411</b>	<b>97,411</b>	<b>97,411</b>	<b>97,411</b>	<b>97,411</b>		

Population	511,412	514,740	515,591	519,949	522,611	526,896	529,744	533,698	536,918	543,294	549,623	555,599	562,453	569,353	578,957
Per Capita Standard	0.1810	0.1799	0.1963	0.1870	0.1860	0.1845	0.2735	0.2269	0.2096	0.1793	0.1772	0.1753	0.1732	0.1711	0.1683

15 Year Average	2008-2022
Quantity Standard	0.1913
Quality Standard	\$556
Service Standard	\$106

D.C. Amount (before deductions)	10 Year
Forecast Population	62,136
\$ per Capita	\$106
Eligible Amount	\$6,606,921



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Public Health - Vehicles & Equipment  
Unit Measure: No. of Vehicles and Equipment

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/Vehicle)
Health Bus	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$500,000
Dental Bus	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	\$800,000
<b>Total</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>	

Population	511,412	514,740	515,591	519,949	522,611	526,896	529,744	533,698	536,918	543,294	549,623	555,599	562,453	569,353	578,957
Per Capita Standard	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000004	0.000004	0.000003

15 Year Average	2008-2022
Quantity Standard	0.000002
Quality Standard	\$605,000
Service Standard	\$1

D.C. Amount (before deductions)	10 Year
Forecast Population	62,136
\$ per Capita	\$1
Eligible Amount	\$75,185



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Waste Diversion - Facilities  
Unit Measure: sq.ft. of building area

Description	Percentage Attributable to Diversion	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Bld'g Value (\$/sq.ft.)	Value/sq.ft. with land, site works, etc.
77 James St.	100%	1,526	1,526	1,526	1,526	1,526	1,526	1,526	1,526	1,526	1,526	1,526	1,526	-	-	-	\$417	\$500
Transfer Stations / Community Recycling Centres:																		
Dundas - Olympic Drive - Main Building	15%	1,473	1,473	1,473	1,473	1,473	1,473	1,473	1,473	1,473	1,473	1,473	1,473	1,473	1,473	1,473	\$1,268	\$1,438
- HHW Trailer	100%	930	930	930	930	930	930	930	930	930	930	930	930	930	930	930	\$507	\$600
- HHW Office (portable)	100%	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	\$403	\$485
- TS Scalehouse	15%	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	\$198	\$259
Kenora - Kenora Avenue - Main Building	15%	2,726	2,726	2,726	2,726	2,726	2,726	2,726	2,726	2,726	2,726	2,726	2,726	2,726	2,726	2,726	\$1,268	\$1,439
- HHW Trailer	100%	731	731	731	731	731	731	731	731	731	731	731	731	731	731	731	\$1,268	\$1,438
- HHW Office	100%	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	\$580	\$680
- TS Scalehouse	15%	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	\$233	\$298
Mountain - 37 Kilbride Road - Main Building (Transfer Station)	15%	1,904	1,904	1,904	1,904	1,904	1,904	1,904	1,904	1,904	1,904	1,904	1,904	1,904	1,904	1,904	\$1,268	\$1,439
- Kilbride Yard, 37 Kilbride Rd. - Reuse Store	100%	3,561	3,561	3,561	3,561	3,561	3,561	3,561	3,561	3,561	3,561	3,561	3,561	3,561	3,561	3,561	\$559	\$657
- Mountain Community Recycling Centre - Reuse Store & HHW Depot (YRD032)	100%	12,419	12,419	12,419	12,419	12,419	12,419	12,419	12,419	12,419	12,419	12,419	12,419	12,419	12,419	12,419	\$1,268	\$1,439
- TS Scalehouse	15%	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	\$198	\$1,439
Glanbrook Landfill Site (Diversion portion only)	2%	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129	\$1,268	\$259
Hamilton Materials Recycling Facility	100%	273,195	273,195	273,195	273,195	273,195	273,195	273,195	273,195	273,195	273,195	273,195	273,195	273,195	273,195	273,195	\$344	\$420
Hamilton Central Composting Facility - main processing facility & curing building (YRD076)	100%	118,457	107,387	105,125	106,504	105,734	102,894	102,196	102,058	102,288	89,465	89,465	149,109	149,109	149,109	149,109	\$737	\$853
Contracted Local Yard - 560 Seaman St. Stoney Creek	61%	-	-	-	-	-	11,162	11,162	11,162	11,162	11,162	11,162	11,162	11,162	11,162	11,162	\$403	\$768
Contracted Local Yard	61%	1,937	1,937	1,937	1,937	1,937	-	-	-	-	-	-	-	-	-	-	\$403	\$485
<b>Total Eligible Portion of Facilities</b>		<b>419,288</b>	<b>408,218</b>	<b>405,956</b>	<b>407,335</b>	<b>406,565</b>	<b>412,950</b>	<b>412,252</b>	<b>412,114</b>	<b>412,344</b>	<b>399,522</b>	<b>399,522</b>	<b>459,165</b>	<b>457,639</b>	<b>457,639</b>	<b>457,639</b>		

Population	511,412	514,740	515,591	519,949	522,611	526,896	529,744	533,698	536,918	543,294	549,623	555,599	562,453	569,353	578,957
Per Capita Standard	0.8199	0.7931	0.7874	0.7834	0.7779	0.7837	0.7782	0.7722	0.7680	0.7354	0.7269	0.8264	0.8136	0.8038	0.7905

15 Year Average	2008-2022
Quantity Standard	0.7840
Quality Standard	\$593
Service Standard	\$465

D.C. Amount (before deductions)	10 Year
Forecast Population	62,136
\$ per Capita	\$465
Eligible Amount	\$28,901,939



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Waste Diversion - Vehicles & Equipment  
Unit Measure: No. of vehicles and equipment

Description	Percentage Attributable to Diversion	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/Vehicle)
<b>City Owned</b>																	
20 cyd single stream rear packer	48%	1.44	1.44	1.44	1.44	1.44	-	-	-	-	-	-	-	-	-	-	\$355,000
32 cyd single stream rear packer	48%	1.44	1.44	1.44	1.44	1.44	-	-	-	-	-	-	-	-	-	-	\$426,000
Compact pickup	48%	-	1.92	1.92	1.44	-	-	-	-	-	-	-	0.48	0.48	1.44	1.44	\$35,000
SUV 2wd	48%	0.48	0.48	1.44	-	-	0.48	0.48	1.44	1.44	1.44	1.44	0.96	0.96	0.96	0.96	\$49,800
Pick up 2wd	48%	3.84	3.84	3.36	3.84	4.32	3.84	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80	\$48,400
Pickup 4x4	48%	0.48	0.48	0.48	0.48	0.48	0.48	0.48	1.44	1.44	1.44	1.44	1.92	1.92	1.92	1.92	\$71,100
Pickup 3/4 ton	48%	-	-	-	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	\$70,000
Dump truck 5 ton	48%	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	-	-	-	-	\$159,200
25 cyd single stream rear packer	48%	2.40	1.92	1.92	2.88	2.40	8.16	8.16	7.68	7.68	7.68	7.68	7.68	7.68	7.68	6.72	\$250,000
25 cyd dual stream rear packer	48%	8.64	8.64	8.64	8.64	8.64	5.28	5.28	5.28	5.28	5.28	5.28	4.32	4.32	4.32	5.28	\$400,800
31 cyd single stream sideloader	48%	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	\$426,500
31 cyd dual stream side loader	48%	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80	\$426,500
<b>Contracted (GFL Environmental Inc.)</b>																	
Curbside/Roadside																	
<b>Recycling</b>																	
Mack with UHE Body - 32 yd rear packer dual stream - diesel	100%	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	-	-	\$355,400
Freightliner with Heil Body - 25 yd rear packer dual stream - CNG	100%	33.00	33.00	33.00	33.00	33.00	33.00	33.00	33.00	33.00	33.00	33.00	33.00	33.00	-	-	\$482,900
Peterbuilt with McNeilus Body - 32yd dual stream - diesel	100%	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-	-	-	-	\$426,500
Freightliner with Heil Body - 30 yd rear packer dual stream CNG	100%	-	-	-	-	-	-	-	-	-	-	-	-	-	28.00	28.00	\$482,900
Freightliner with Heil Body - 25 yd rear packer dual stream CNG	100%	-	-	-	-	-	-	-	-	-	-	-	-	-	10.00	10.00	\$482,900
<b>Organics/Garbage</b>																	
Freightliner with UHE Body - 32 yd rear packer dual stream CNG	48%	10.08	10.08	10.08	10.08	10.08	10.08	10.08	10.08	10.08	10.08	10.08	10.08	10.08	-	-	\$575,700
Freightliner with McNeilus Body - 32 yd rear packer dual stream CNG	48%	-	-	-	-	-	-	-	-	-	-	-	-	-	12.48	12.48	\$575,700



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Waste Diversion - Vehicles & Equipment  
Unit Measure: No. of vehicles and equipment

Description	Percentage Attributable to Diversion	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/Vehicle)
<b>Leaf &amp; Yard Waste/ Bulk</b>																	
Peterbilt with McNeilus Body - 25 yd rear packer ss diesel	48%	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.40	2.40	-	-	\$344,000
Peterbilt with McNeilus Body - 30yd dual stream - diesel	48%	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	-	-	\$355,400
Freightliner with UHE Body - 32 yd ss rear packer - diesel	48%	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	-	-	\$344,000
Freightliner with Labrie McNeilus Body - 37 25 yd single stream sideloader - diesel	48%	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.96	0.96	-	-	\$300,000
Freightliner with McNeilus Body - 32 yd rear packer single stream CNG	48%	-	-	-	-	-	-	-	-	-	-	-	-	-	3.84	3.84	\$488,400
<b>Front Load Bin Waste and Fibre Collection</b>																	
Mack with McNeilus Body - 40 yd single stream	48%	5.28	5.28	5.28	5.28	5.28	5.28	5.28	5.28	5.28	5.28	5.28	4.80	4.80	-	-	\$426,500
Mack with Labrie Body - 40 yd single stream	48%	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	-	-	\$426,500
Mack with Fanotech Body - 40 yd single stream	48%	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	-	-	\$426,500
Mack with Capital Body - 40 yd single stream	48%	0.48	0.48	0.48	0.48	0.48	-	-	-	-	-	-	0.48	0.48	-	-	\$426,500
Freightliner with McNeilus Body - 37 yd single stream	48%	-	-	-	-	-	-	-	-	-	-	-	-	-	2.40	2.40	\$250,000
<b>Side-loader Fully Automated Recycling Cart Collection</b>																	
Freightliner with Labrie Body - 33 yd dual stream	100%	4	4	4	4	4	4	4	4	4	4	4	4	4	-	-	\$575,700
Freightliner with Labrie Body - 33 yd dual stream CNG	100%	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	\$575,700
<b>Fork Truck (front load bin)</b>																	
Freightliner Spike Truck (Pull Out Truck)	48%	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	\$106,600
Pickup Trucks	48%	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	2.88	2.88	2.88	2.88	\$64,000



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Waste Diversion - Vehicles & Equipment  
Unit Measure: No. of vehicles and equipment

Description	Percentage Attributable to Diversion	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/Vehicle)
<b>Spares</b>																	
Freightliner with Labrie Body - 33 yd Sideload dual stream - Recycling	100%	-	-	-	-	-	-	-	-	-	-	-	-	-	2.00	2.00	\$575,700
Freightliner with UHE Body - 30 yd rear load single stream	48%	-	-	-	-	-	-	-	-	-	-	-	-	-	0.48	0.48	\$426,500
<b>RECYCLING &amp; WASTE DISPOSAL</b>																	
<b>CENTRAL COMPOSTING FACILITY</b>																	
<b>City Owned</b>																	
Main fans	100%	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	\$65,400
Curing Building Fan	100%	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$56,900
Tunnel Fans	100%	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	\$385,400
Make Up Air Units	100%	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	\$85,300
Grinder	100%	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$995,100
Shredder	100%	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$1,189,800
Stationary Screening Plant	100%	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$28,800
PLC Units	100%	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	\$142,200
SCADA System	100%	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$710,800
Tube Conveyor	100%	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$142,200
Fixed Conveyors	100%	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	\$85,300
Stack Jet Fans	100%	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	\$56,900
Loaders Volvo L150 or Equivalent	100%	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	\$568,600
CAT 242 Skidsteer	100%	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$53,400
Ramrod Mini Skidsteer	100%	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$22,600
Genie Boom 40ft Manlift	100%	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$58,700
Grove 54ft Manlift	100%	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$17,000
Generator	100%	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$142,200
Overhead Filling Cassette	100%	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$514,500
Central Exhaust Fans	100%	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	\$167,800
Mag Conveyor	100%	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$68,300
Hydraulic Door Wagon	100%	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$7,100
<b>Contracted (Harbourside Organix)</b>																	
Volvo L110 Loader	100%	-	-	-	-	1	1	1	1	1	1	1	1	1	1	1	\$568,600



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Waste Diversion - Vehicles & Equipment  
Unit Measure: No. of vehicles and equipment

Description	Percentage Attributable to Diversion	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/Vehicle)
<b>TRANSFER STATIONS / COMMUNITY RECYCLING CENTRES</b>																	
<b>Contracted (Waste Connections)</b>																	
Transfer Trailers	11%	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	1.06	1.06	\$177,700
Transfer Trucks	11%	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.74	0.74	\$191,900
<b>Roll-off Bins</b>																	
- 20 yard	100%	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	\$11,400
- 30 yard	100%	15	15	15	15	15	15	15	15	15	15	15	15	15	18	18	\$14,200
- 40 yard	100%	28	28	28	28	28	28	28	28	28	28	28	28	28	44	44	\$17,000
Roll-off Trucks	15%	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	\$248,800
<b>Scales</b>																	
- 80' above ground	15%	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	\$139,400
- 80' pit scale	15%	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	\$86,700
Front End Loaders	15%	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	\$568,600
<b>LEAF &amp; YARD COMPOSTING FACILITY</b>																	
<b>Contracted (Waste Management Canada)</b>																	
Screener	100%	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$355,400
Tub Grinder	100%	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$1,137,200
Excavator	100%	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$355,400
Conveyor	100%	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	\$136,600
<b>MATERIAL RECYCLING FACILITY</b>																	
<b>City Owned</b>																	
Forklift	100%	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	\$71,100



**City of Hamilton  
Service Standard Calculation Sheet**

Service: Waste Diversion - Vehicles & Equipment  
Unit Measure: No. of vehicles and equipment

Description	Percentage Attributable to Diversion	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/Vehicle)
<b>Contracted (GFL Environmental Inc.)</b>																	
Forklift	100%	1	1	1	1	1	1	1	1	1	1	1	1	1	3	3	\$71,100
Loaders Volvo L150 or Equivalent	100%	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	\$476,900
Skidsteer	100%	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	\$44,800
Transfer Trucks	100%	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	\$161,000
Transfer Trailers	100%	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	\$149,000
<b>Total Eligible Portion of Vehicles &amp; Equipment</b>		<b>204.72</b>	<b>206.16</b>	<b>206.64</b>	<b>206.64</b>	<b>206.20</b>	<b>205.24</b>	<b>206.20</b>	<b>207.16</b>	<b>207.16</b>	<b>207.16</b>	<b>207.16</b>	<b>206.16</b>	<b>207.16</b>	<b>236.89</b>	<b>236.89</b>	

Population	511,412	514,740	515,591	519,949	522,611	526,896	529,744	533,698	536,918	543,294	549,623	555,599	562,453	569,353	578,957
Per Capita Standard	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004

15 Year Average	2008-2022
Quantity Standard	0.0004
Quality Standard	\$258,925
Service Standard	\$104

D.C. Amount (before deductions)	10 Year
Forecast Population	62,136
\$ per Capita	\$104
Eligible Amount	\$6,435,426





**City of Hamilton  
Service Standard Calculation Sheet**

Service: Waste Diversion - Carts & Containers  
Unit Measure: No. of items

Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 Value (\$/item)
Blue Boxes	28,000	42,000	75,000	108,000	139,000	183,000	228,000	271,000	319,000	362,000	403,472	416,432	452,720	481,564	523,538	\$9
Blue Carts	300	800	1,600	2,400	3,200	3,600	4,000	4,400	5,800	6,300	6,885	7,479	9,243	10,588	11,572	\$70
Small Green Carts	-	18,000	18,000	18,000	18,000	18,000	18,000	18,000	20,100	23,100	28,482	37,842	42,834	49,928	54,165	\$18
Large Green Carts	149,800	154,800	162,800	169,800	177,300	186,300	198,300	211,300	220,300	229,300	240,068	242,067	247,607	253,671	259,333	\$34
Mini Bins/Kitchen Organics Containers	176,000	182,000	198,000	214,000	230,000	233,000	237,200	244,200	250,200	256,200	262,536	262,536	266,496	271,138	276,185	\$4
Blue Bags	11,000	12,000	24,000	36,000	46,000	50,000	56,000	62,000	68,000	74,000	74,000	74,000	80,000	81,500	83,000	\$1
Gold Boxes	-	-	-	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	3,592	5,149	6,114	\$10
Blue Barrels	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	\$35
Public Space Litter Container - Jubilees	-	-	-	-	-	-	-	-	200	200	200	200	200	212	231	\$1,068
Public Space Litter Container - Fluted	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	\$142
<b>Total</b>	<b>365,200</b>	<b>409,700</b>	<b>479,500</b>	<b>549,300</b>	<b>614,600</b>	<b>675,000</b>	<b>742,600</b>	<b>812,000</b>	<b>884,700</b>	<b>952,200</b>	<b>1,016,743</b>	<b>1,041,656</b>	<b>1,102,792</b>	<b>1,153,850</b>	<b>1,214,238</b>	
Percentage attributable to Eligible Portion	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
<b>Total Eligible Portion</b>	<b>365,200</b>	<b>409,700</b>	<b>479,500</b>	<b>549,300</b>	<b>614,600</b>	<b>675,000</b>	<b>742,600</b>	<b>812,000</b>	<b>884,700</b>	<b>952,200</b>	<b>1,016,743</b>	<b>1,041,656</b>	<b>1,102,792</b>	<b>1,153,850</b>	<b>1,214,238</b>	

Population	511,412	514,740	515,591	519,949	522,611	526,896	529,744	533,698	536,918	543,294	549,623	555,599	562,453	569,353	578,957
Per Capita Standard	0.71	0.80	0.93	1.06	1.18	1.28	1.40	1.52	1.65	1.75	1.85	1.87	1.96	2.03	2.10

15 Year Average	2008-2022
Quantity Standard	1.4724
Quality Standard	\$14
Service Standard	\$21

D.C. Amount (before deductions)	10 Year
Forecast Population	62,136
\$ per Capita	\$21
Eligible Amount	\$1,301,749



# Appendix C

## Long-Term Capital and Operating Cost Examination



# Appendix C: Long-Term Capital and Operating Cost Examination

## City of Hamilton Annual Capital and Operating Cost Impact

As a requirement of the *Development Charges Act, 1997*, as amended, under subsection 10 (2) (c), an analysis must be undertaken to assess the long-term capital and operating cost impacts for the capital infrastructure projects identified within the development charge. As part of this analysis, it was deemed necessary to isolate the incremental operating expenditures directly associated with these capital projects, factor in cost savings attributable to economies of scale or cost sharing where applicable and prorate the cost on a per unit basis (i.e., sq.ft. of building space, per vehicle, etc.). This was undertaken through a review of the City's approved 2022 Financial Information Return.

In addition to the operational impacts, over time the initial capital projects will require replacement. This replacement of capital is often referred to as lifecycle cost. By definition, lifecycle costs are all the costs that are incurred during the life of a physical asset, from the time its acquisition is first considered, to the time it is taken out of service for disposal or redeployment. The method selected for lifecycle costing is the sinking fund method which provides that money will be contributed annually and invested, so that those funds will grow over time to equal the amount required for future replacement. The factors shown in Table C-1 were utilized to calculate the annual replacement cost of the capital projects (annual contribution = factor X capital asset cost) and are based on an annual growth rate of 2% (net of inflation) over the average useful life of the asset.



Table C-1  
City of Hamilton  
Lifecycle Cost Factors and Average Useful Lives

Asset	Lifecycle Cost Factors	
	Average Useful Life	Factor
Stormwater Facilities, Channels & Drainage	100	0.003203
Stormwater Ponds	40	0.016556
Wastewater Facilities	55	0.010143
Wastewater Collection	100	0.003203
Water Distribution	80	0.005161
Services Related to a Highway	20	0.041157
Vehicles (Excluding Fire, Police & Transit)	10	0.091327
Transit, Police & Fire Vehicles	15	0.057825
Police and Fire Equipment	10	0.091327
Parkland	30	0.024650
Facilities	50	0.011823
Library Materials	7	0.134512

Table C-2 depicts the annual operating impact resulting from the proposed gross capital projects at the time they are all in place. It is important to note that, while City program expenditures will increase with growth in population, the costs associated with the new infrastructure (i.e., facilities) would be delayed until the time these works are in place.



**Table C-2**  
**City of Hamilton**  
**Operating and Capital Expenditure Impacts for Future Capital Expenditures**

SERVICE/CLASS OF SERVICE	GROSS COST LESS BENEFIT TO EXISTING	ANNUAL LIFECYCLE EXPENDITURES	ANNUAL OPERATING EXPENDITURES	TOTAL ANNUAL EXPENDITURES
	\$	\$	\$	\$
<b>1. Stormwater Drainage and Control Services (Combined Sewer System)</b>				
1.1 Stormwater Facilities	26,259,244	303,210	1,613	304,823
<b>2. Stormwater Drainage and Control Services (Separated Sewer System)</b>				
2.1 Channels and drainage	173,735,092	2,793,339	549,685	3,343,024
2.2 Residential ponds	410,522,536	8,754,957	1,298,862	10,053,819
<b>3. Wastewater Services</b>				
3.1 Wastewater facilities	554,374,201	22,819,401	2,798,740	25,618,141
3.2 Wastewater linear services	309,378,356	7,917,074	4,060,007	11,977,081
<b>4. Water Services</b>				
4.1 Facilities, storage, and distribution systems	265,767,576	8,264,601	7,104,740	15,369,341
<b>5. Services Related to a Highway</b>				
5.1 Roads and Related	1,489,153,865	47,448,814	7,884,376	55,333,190
<b>6. Public Works (Facilities and Fleet)</b>				
6.1 Facilities, vehicles and equipment	46,410,529	2,950,820	254,604	3,205,424
<b>7. Fire Protection Services</b>				
7.1 Fire facilities, vehicles and equipment	71,001,098	2,677,260	12,029,062	14,706,322
<b>8. Policing Services</b>				
8.1 Facilities, vehicles and equipment, small equipment and gear	44,509,008	1,780,619	21,051,918	22,832,537
<b>9. Transit Services</b>				
9.1 Transit facilities, vehicles and other infrastructure	292,378,482	10,558,251	16,589,296	27,147,547
<b>10. Parks and Recreation</b>				
10.1 Park development, amenities, trails, equipment and recreation facilities	372,624,122	15,026,643	13,868,467	28,895,110
<b>11. Library Services</b>				
11.1 Library facilities, materials and vehicles	74,727,956	2,915,071	3,714,253	6,629,324
<b>12. Long-term Care Services</b>				
12.1 Facilities	11,238,243	844,329	7,233,969	8,078,298
<b>13. Child Care and Early Years Programs</b>				
13.1 Facilities	-	-	-	-
<b>14. Public Health Services</b>				
14.1 Facilities, vehicles and equipment	1,175,496	66,828	8,021,326	8,088,154
<b>15. Provincial Offences Act Services including By-Law Enforcement</b>				
15.1 Facilities	1,802,189	-	-	-
<b>16. Ambulance</b>				
16.1 Ambulance facilities, vehicles and equipment	21,042,668	967,480	7,538,684	8,506,164
<b>17. Waste Diversion</b>				
17.1 Waste diversion facilities, vehicles, equipment and other	23,245,811	2,307,763	4,257,367	6,565,130
<b>Total</b>	<b>\$4,189,346,471</b>	<b>\$138,396,460</b>	<b>\$118,256,969</b>	<b>\$256,653,429</b>



# Appendix D

## D.C. Reserve Fund Policy



# Appendix D: D.C. Reserve Fund Policy

## D.1 Legislative Requirements

The *Development Charges Act, 1997*, as amended (D.C.A.) requires development charge (D.C.) collections (and associated interest) to be placed in separate reserve funds. Sections 33 through 36 of the D.C.A. provide the following regarding reserve fund establishment and use:

- A municipality shall establish a reserve fund for each service to which the D.C. by-law relates; subsection 7 (1), however, allows services to be grouped into categories of services for reserve fund (and credit) purposes and for classes of services to be established.
- The municipality shall pay each D.C. it collects into a reserve fund or funds to which the charge relates.
- The money in a reserve fund shall be spent only for the “capital costs” determined through the legislated calculation process (as per subsection 5 (1) 2-8).
- Money may be borrowed from the fund but must be paid back with interest (O. Reg. 82/98, subsection 11 (1) defines this as Bank of Canada rate either on the day the by-law(s) come into force or, if specified in the by-law, the first business day of each quarter).
- D.C. reserve funds may not be consolidated with other municipal reserve funds for investment purposes and may only be used as an interim financing source for capital undertakings for which D.C.s may be spent (section 37).

Annually, the Treasurer of the municipality is required to provide Council with a financial statement related to the D.C. by-law(s) and reserve funds. This statement must be made available to the public and may be requested to be forwarded to the Minister of Municipal Affairs and Housing.

Subsection 43 (2) and O. Reg. 82/98 prescribe the information that must be included in the Treasurer’s statement, as follows:

- Opening balance;
- Closing balance;



- Description of each service and/or service category for which the reserve fund was established (including a list of services within a service category);
- Transactions for the year (e.g., collections, draws) including each asset's capital costs to be funded from the D.C. reserve fund and the manner for funding the capital costs not funded under the D.C. by-laws (i.e., non-D.C. recoverable cost share and post-period D.C. recoverable cost share);
- For projects financed by D.C.s, the amount spent on the project from the D.C. reserve fund and the amount and source of any other monies spent on the project;
- Amounts borrowed, purpose of the borrowing, and interest accrued during the previous year;
- Amount and source of money used by the municipality to repay municipal obligations to the D.C. reserve fund;
- A list of credits by service or service category (outstanding at the beginning of the year, given in the year, and outstanding at the end of the year by the holder);
- For credits granted under section 14 of the previous D.C.A., a schedule identifying the value of credits recognized by the municipality, the service to which it applies and the source of funding used to finance the credit; and
- A statement as to compliance with subsection 59 (1) of the D.C.A., whereby the municipality shall not impose, directly or indirectly, a charge related to a development or a requirement to construct a service related to a development, except as permitted by the D.C.A. or another Act.

Recent changes arising from Bill 109 (*More Homes for Everyone Act, 2022*) provide that the Council shall make the statement available to the public by posting the statement on the website or, if there is no such website, in the municipal office. In addition, Bill 109 introduced the following requirements which shall be included in the Treasurer's statement:

- For each service for which a D.C. is collected during the year:
  - i. whether, as of the end of the year, the municipality expects to incur the amount of capital costs that were estimated, in the relevant D.C. background study, to be incurred during the term of the applicable D.C. by-laws, and
  - ii. if the answer to subparagraph i is no, the amount the municipality now expects to incur and a statement as to why this amount is expected;





- For any service for which a D.C. was collected during the year but in respect of which no money from a reserve fund was spent during the year, a statement as to why there was no spending during the year.

Additionally, as per subsection 35 (3) of the D.C.A.:

35 (3) If a service is prescribed for the purposes of this subsection, beginning in the first calendar year that commences after the service is prescribed and in each calendar year thereafter, a municipality shall spend or allocate at least 60 per cent of the monies that are in a reserve fund for the prescribed service at the beginning of the year.

The services currently prescribed are water and wastewater, and services related to a highway. Therefore, as of 2023, a municipality shall spend or allocate at least 60 percent of the monies in the reserve fund at the beginning of the year. There are generally two ways in which a municipality may approach this requirement.

1. Include a schedule as part of the annual Treasurer's statement; or
2. Incorporate the information into the annual budgeting process.

Based upon the above, Figure D-1 and Attachments 1 and 2, set out the format for which annual reporting to Council should be provided. Figure D-4 provides the schedule for allocating reserve fund balances to projects.

## **D.2 D.C. Reserve Fund Application**

Section 35 of the D.C.A. states that:

“The money in a reserve fund established for a service may be spent only for capital costs determined under paragraphs 2 to 7 of subsection 5 (1).”

This provision clearly establishes that reserve funds collected for a specific service are only to be used for that service, or to be used as a source of interim financing of capital undertakings for which a D.C. may be spent.



Figure D-1  
City of Hamilton  
Annual Treasurer's Statement of Development Charge Reserve Funds

Description	Services to which the Development Charge Relates								
	Services Related to a Highway	Public Works (Facilities and Fleet)	Water Services	Wastewater Facilities	Stormwater - Combined Sewer System	Stormwater - Separated Sewer System	Policing Services	Fire Protection Services	Transit Services
<b>Opening Balance, January 1, _____</b>									
<b>Plus:</b>									
Development Charge Collections									
Accrued Interest									
Repayment of Monies Borrowed from Fund and Associated Interest <sup>1</sup>									
<b>Sub-Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Less:</b>									
Amount Transferred to Capital (or Other) Funds <sup>2</sup>									
Amounts Refunded									
Amounts Loaned to Other D.C. Service Category for Interim Financing Credits <sup>3</sup>									
<b>Sub-Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Closing Balance, December 31, _____</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

<sup>1</sup> Source of funds used to repay the D.C. reserve fund

<sup>2</sup> See Attachment 1 for details

<sup>3</sup> See Attachment 2 for details

The Municipality is compliant with s.s. 59.1 (1) of the *Development Charges Act*, whereby charges are not directly or indirectly imposed on development nor has a requirement to construct a service related to development been imposed, except as permitted by the *Development Charges Act* or another Act.



Figure D-1 (Cont'd)

Description	Services to which the Development Charge Relates								Total
	Parks and Recreation	Library Services	Long-term Care Services	Child Care and Early Years Programs	Provincial Offences Act including By-Law Enforcement	Public Health Services	Ambulance	Waste Diversion	
<b>Opening Balance, January 1, _____</b>									<b>0</b>
<b>Plus:</b>									
Development Charge Collections									0
Accrued Interest									0
Repayment of Monies Borrowed from Fund and Associated Interest <sup>1</sup>									0
<b>Sub-Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Less:</b>									
Amount Transferred to Capital (or Other) Funds <sup>2</sup>									0
Amounts Refunded									0
Amounts Loaned to Other D.C. Service Category for Interim Financing									0
Credits <sup>3</sup>									0
<b>Sub-Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Closing Balance, December 31, _____</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

<sup>1</sup> Source of funds used to repay the D.C. reserve fund

<sup>2</sup> See Attachment 1 for details

<sup>3</sup> See Attachment 2 for details

The Municipality is compliant with s.s. 59.1 (1) of the *Development Charges Act*, whereby charges are not directly or indirectly imposed on development nor has a requirement to construct a service related to development been imposed, except as permitted by the *Development Charges Act* or another Act.



**Figure D-2a**  
**City of Hamilton**  
**Attachment 1**  
**Annual Treasurer's Statement of Development Charge Reserve Funds**  
**Amount Transferred to Capital (or Other) Funds – Capital Fund Transactions**

Capital Fund Transactions	Gross Capital Cost	D.C. Recoverable Cost Share					Non-D.C. Recoverable Cost Share				
		D.C. Forecast Period			Post D.C. Forecast Period		Other Reserve/Reserve Fund Draws	Tax Supported Operating Fund Contributions	Rate Supported Operating Fund Contributions	Debt Financing	Grants, Subsidies Other Contributions
		D.C. Reserve Fund Draw	D.C. Debt Financing	Grants, Subsidies Other Contributions	Post-Period Benefit/ Capacity Interim Financing	Grants, Subsidies Other Contributions					
<b>Services Related to a Highway</b>											
Capital Cost A											
Capital Cost B											
Capital Cost C											
<b>Sub-Total - Services Related to Highways</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Water Services</b>											
Capital Cost D											
Capital Cost E											
Capital Cost F											
<b>Sub-Total - Water</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Wastewater Facilities</b>											
Capital Cost G											
Capital Cost H											
Capital Cost I											
<b>Sub-Total - Wastewater</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>



**Figure D-2b**  
**City of Hamilton**  
**Attachment 1**  
**Annual Treasurer's Statement of Development Charge Reserve Funds**  
**Amount Transferred to Capital (or Other) Funds – Operating Fund Transactions**

Operating Fund Transactions	Annual Debt Repayment Amount	Amount Transferred to Operating (or Other) Funds - Operating Fund Transactions								
		D.C. Reserve Fund Draw		Post D.C. Forecast Period			Non-D.C. Recoverable Cost Share			
		Principal	Interest	Principal	Interest	Source	Principal	Interest	Source	
<u>Services Related to a Highway</u>										
Capital Cost J										
Capital Cost K										
Capital Cost L										
<b>Sub-Total - Services Related to a Highway</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Water Services</u>										
Capital Cost M										
Capital Cost N										
Capital Cost O										
<b>Sub-Total - Water</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Wastewater Facilities</u>										
Capital Cost P										
Capital Cost Q										
Capital Cost R										
<b>Sub-Total - Wastewater</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>



Figure D-3  
City of Hamilton  
Attachment 2  
Annual Treasurer's Statement of Development Charge Reserve Funds  
Statement of Credit Holder Transactions

Credit Holder	Applicable D.C. Reserve Fund	Credit Balance Outstanding Beginning of Year _____	Additional Credits Granted During Year	Credits Used by Holder During Year	Credit Balance Outstanding End of Year _____
Credit Holder A					
Credit Holder B					
Credit Holder C					
Credit Holder D					
Credit Holder E					
Credit Holder F					



**Figure D-4**  
**City of Hamilton**  
**Annual Treasurer's Statement of Development Charge Reserve Funds**  
**Statement of Reserve Fund Balance Allocations**

Service:	Water
Balance in Reserve Fund at Beginning of Year:	
60% of Balance to be Allocated (at a minimum):	

**Projects to Which Funds Will be Allocated**

Project Description	Project Number	Total Growth-related Capital Cost Remaining to be Funded	Share of Growth-related Cost Allocated to Date	Share of Growth-related Cost Allocated - Current Year
<b>Total</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

Service:	Wastewater
Balance in Reserve Fund at Beginning of Year:	
60% of Balance to be Allocated (at a minimum):	

**Projects to Which Funds Will be Allocated**

Project Description	Project Number	Total Growth-related Capital Cost Remaining to be Funded	Share of Growth-related Cost Allocated to Date	Share of Growth-related Cost Allocated - Current Year
<b>Total</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

Service:	Services Related to a Highway
Balance in Reserve Fund at Beginning of Year:	
60% of Balance to be Allocated (at a minimum):	

**Projects to Which Funds Will be Allocated**

Project Description	Project Number	Total Growth-related Capital Cost Remaining to be Funded	Share of Growth-related Cost Allocated to Date	Share of Growth-related Cost Allocated - Current Year
<b>Total</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>



# Appendix E

## Local Service Policy





# Appendix E: Local Service Policy

## Introduction

### *Definitions:*

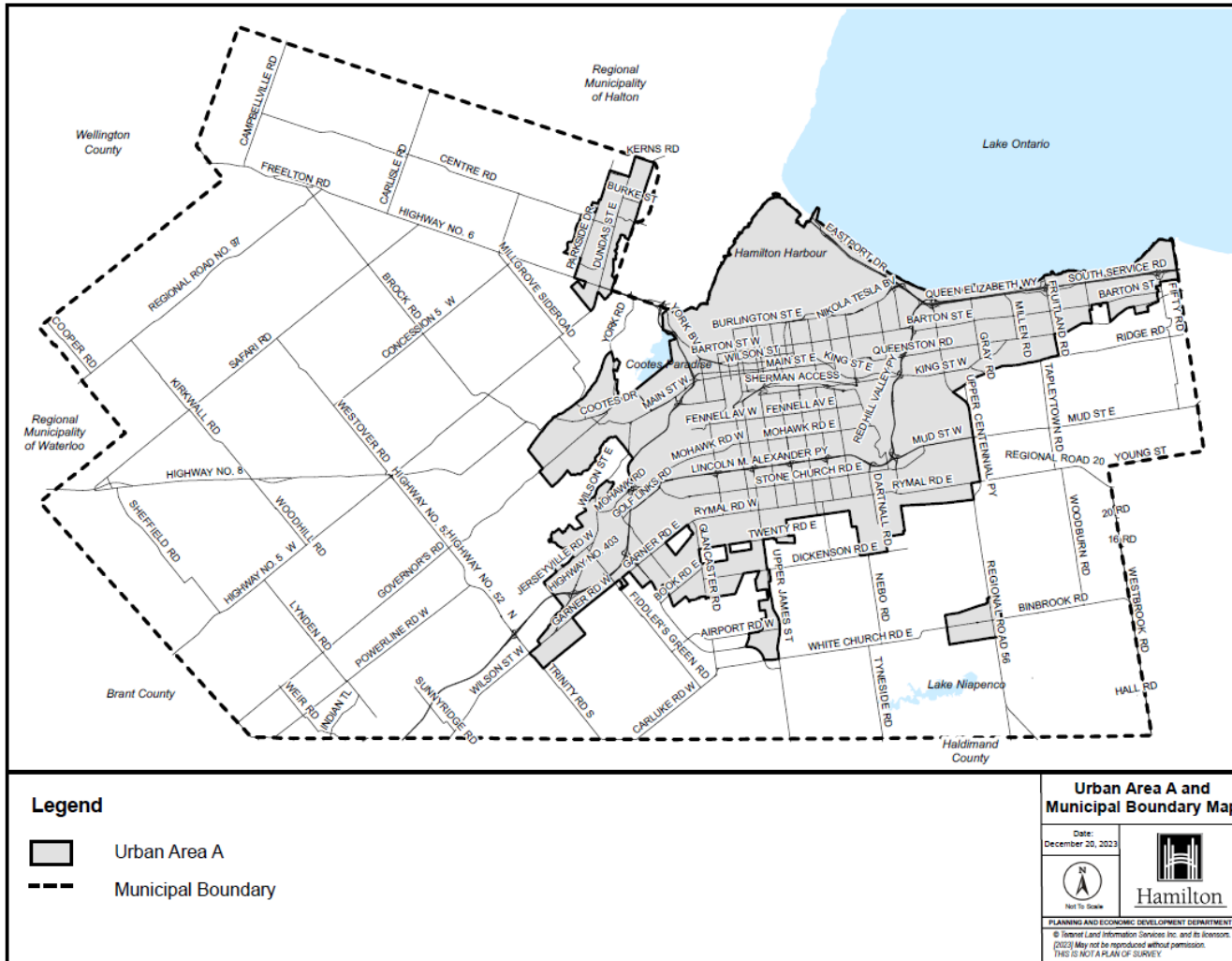
*“Urban Area” means the area within the City that is identified as the urban area in Schedule E of the Urban Hamilton Official Plan, as amended.*

*“Urban Area A” means the lands within the Urban Area, identified in Map E-1 and which are not subject to any expansion resulting from an amendment to the urban boundary in the Urban Hamilton Official Plan.*

*“Urban Area B” means any lands added to the Urban Area as a result of any amendment to the Urban Hamilton Official Plan expanding the Urban area beyond Urban Area A.*



# Map E-1 Map of Urban Area A and Municipal Boundary





For development within Urban Area A, the local service policy set out herein would apply.

For development within Urban Area B, the following would be a direct developer responsibility:

- All costs required to service the development and/or to connect the development area with existing infrastructure, including without limitation all water, wastewater, stormwater, transit, transportation works (in accordance with the Complete Street definition), any utility relocation/conversion costs, and land acquisition costs to meet City standards will be a developer responsibility, unless otherwise provided herein.
- In conjunction with the above bullet, the scope to service the development and/or connect the development area would be identified within approval authority accepted studies to support development areas.
- For projects occurring within Urban Area A, with an oversizing component, that are required to service development within Urban Area B, the oversizing component is a direct developer responsibility.
- Downstream and/or upstream water and wastewater infrastructure located within Urban Area A required to support development within Urban Area B would be a direct developer responsibility.
- Section E.3 of the local service policy applies to development within Urban Area B.

Based on the above, and to be clear, developments occurring within Urban Area B will be required to pay the City-wide development charges (D.C.s) for all services except for stormwater, water linear, and wastewater linear.

If the development within Urban Area B will be serviced with municipal water and/or wastewater, the water and/or wastewater treatment D.C. will apply. If the development within Urban Area B will not be serviced with municipal water or wastewater, the water or wastewater treatment D.C. will not apply, as set out in Table E-1.



Table E-1

Service	Inside Urban Area A	Within Urban Area B – Connecting to Municipal Water/Wastewater*	Within Urban Area B – Not Connecting to Municipal Water/Wastewater
Services Related to a Highway	✓	✓	✓
Public Works	✓	✓	✓
Transit Services	✓	✓	✓
Fire Protection Services	✓	✓	✓
Policing Services	✓	✓	✓
Parks and Recreation	✓	✓	✓
Library Services	✓	✓	✓
Long-Term Care Services	✓	✓	✓
Child Care and Early Years Programs	✓	✓	✓
Provincial Offences Act Services including By-law Enforcement	✓	✓	✓
Public Health Services	✓	✓	✓
Ambulance	✓	✓	✓
Waste Diversion	✓	✓	✓
Wastewater Facilities	✓	✓	
Wastewater Linear Services	✓		
Water Supply and Treatment	✓	✓	
Water Linear Services	✓		
Stormwater Services	✓		



\* Certain projects may be oversized for developments within Urban Area B and may need to be directly funded by the developer as set out in the local service policy.

## **E.1 Local Service Policy for Stormwater Drainage Systems**

Stormwater runoff “minor” systems are designed and implemented to accommodate drainage to avoid property damage and flooding and to minimize inconvenience to the public from 1-in-5-year rainfall events. Minor systems typically comprise underground piping, maintenance holes, catch basins, and outfall structures in addition to a rural type of drainage system consisting of ditches and culverts.

Stormwater runoff “major” systems are designed and implemented for flood control to avoid loss of life, injuries, and significant damage to property from events greater than a 1-in-5-year return period, producing unusual high-intensity rainfall and/or a large volume of run-off. Major systems can be large diameter underground piping, open channels, road overland flow route, stormwater facilities, natural streams, or any combination thereof, capable of conveying run-off, from events up to and including a 1-in-100-year return period, to the ultimate receiving stream or water body.

In addition to the City’s Major/Minor systems there are also class of works related to source water management and use of natural systems. These have been articulated in the City’s Green Standards and Guidelines (2023). The definitions of these practices per the Green Standards and Guidelines are as follows:

### **Low Impact Development (LID):**

- Stormwater management approach that seeks to manage precipitation at source through better site design and use of LID practices.
- Typically includes a suite of site design strategies to mimic the area’s natural hydrology through stormwater infiltration, evapotranspiration, rainwater harvesting, filtration, and detention.
- LID practices can include those such as bio-swales, permeable pavement, rain gardens, green roofs, and exfiltration systems, etc. LID practices often employ vegetation and soil in their design, however not always, and the specific form may vary considering local conditions and community character.



### **Green Infrastructure (GI):**

- Natural and human-made elements that provide ecological and hydrological functions and processes. GI can include components such as natural heritage features and systems, parklands, stormwater management systems, street trees, urban forests, natural channels, permeable surfaces, and green roofs.

### **Natural Infrastructure/Assets:**

- The term “natural infrastructure” refers to naturally occurring landscape features and/or nature-based solutions that promote, use, restore or emulate natural ecological processes.

In summary, LID practices are human-made measures to off-set the impacts of development, while Natural infrastructure considers the water management services provided by natural features or nature-based solutions. Green Infrastructure considers both concepts and embodies these into a more holistic term.

The following should be read in conjunction with the City's Comprehensive Development Guidelines and Financial Policies and Storm Drainage Policy, as amended.

#### **E.1.1 Storm Sewers**

1. The developer is responsible for the full cost of all storm sewer mains up to and including 1,200 mm diameter in size (the local service component).
2. Storm sewers larger than 1,200 mm diameter in size are considered trunk sewers for the purposes of oversizing and are eligible for D.C. contribution-based flat rates outlined in the City's Financial Policies for Development.

Storm sewer sizing to be designed to City standard criteria for minimum velocity (0.8 m/s) and slope (0.2 %), to convey the 5-year event assuming a 5-year downstream boundary water level, without surcharging. Elliptical pipes are to be converted to equivalent circular diameter for oversizing calculation. Oversizing as a result of lower than standard velocity/slope/hydraulic grade line due to site design conditions is the responsibility of the local development and is not D.C.



eligible (excluding industrial lands as per the City's *Comprehensive Development Guidelines and Financial Policies Manual*).

3. Storm sewers conveying an event larger than a 5-year return period (i.e., major system flows) are not eligible for D.C. contributions unless required to do so by the City. In some areas, a storm sewer system may not be viable, and the major overland system may not be able to safely convey the runoff resulting from a 1-in-100-year design storm event. In this case a relief sewer or alternate conveyance mechanism may provide the additional capacity required and be funded through D.C.s.
4. The construction of storm sewers deemed to be temporary are not eligible for D.C. contributions.
5. Installation of private drain connections or private systems is considered a local service component and is the developer's responsibility.
6. The construction of on-site open watercourse and overland flow routes for conveyance internal to a development is considered a local service component and is not eligible for D.C. contributions. The construction of downstream off-site outlets to service more than one development, including open watercourses and/or culverts and storm sewers, identified through the City's Stormwater Master Plan, a Master Plan, a Master Drainage Plan, a Watershed/ Subwatershed Study or a Block Plan or Neighbourhood Plan, has been included in the D.C. Background Study and is eligible for D.C. contributions.

#### E.1.2 Stormwater Management Facilities

1. Stormwater Management Facilities (S.W.M.) in Series: If the stormwater management plan for local development involves two or more S.W.M. facilities in series, conveyance of the controlled 100-year peak flow between facilities in series is not D.C. eligible for oversizing (the connecting works are not considered to be part of the S.W.M. facility and outlet structure and appurtenances). If, however, local five-year flows are added to the storm sewer between the facilities in series, then the potential oversizing (compared to the sewer without any local inflow) is D.C. eligible.



2. Centralized stormwater management facilities (e.g., wet ponds and dry ponds) identified through the City's Stormwater Master Plan, a Master Plan, a Master Drainage Plan, or a Watershed/Subwatershed Study have been included in the D.C. Background Study and are eligible for D.C. contributions.
3. A stormwater management facility not identified in an approved City Stormwater Master Plan, a Master Plan, a Master Drainage Plan, or a Watershed/Subwatershed Study is deemed a local service. Notwithstanding this, an unidentified stormwater management facility may be eligible for D.C. contributions provided it can be demonstrated that it is a centralized public facility servicing a catchment area through an approved neighbourhood stormwater study.
4. Stormwater quality treatment by mechanical means (i.e., oil/grit separators) is not eligible for D.C. contributions.
5. LID practices and GI are not eligible for D.C. contributions.
6. Stormwater management facilities serving only non-residential areas (i.e., industrial, commercial, institutional) are not eligible for D.C. contributions.
7. For stormwater facilities which benefit both residential and non-residential lands, only the residential portion will be eligible for D.C. contributions. The portion servicing the non-residential land uses shall be the financial responsibility of the developer.
8. Where a centralized (communal) facility serves both residential and non-residential parcels, the cost is established based on the ratio of the areas served and factored by the respective runoff coefficients. Note that the non-residential area, if commercial, may also be required to provide lot-level quality controls, depending on location; however, this component (LID and/or GI) would not be eligible for D.C. contributions.
9. The construction of stormwater facilities deemed by the City to be temporary as part of the phasing of development is not eligible for D.C. contributions. Such a facility may be considered for D.C. contribution in the future if it is subsequently





determined to be a permanent municipal facility forming part of the City's centralized system.

10. The developer is responsible to acquire lands for stormwater management facilities External to a Development. The City will not act as a third-party agent in the negotiation and acquisition of lands for stormwater management facilities on behalf of private interest, unless otherwise approved by Council.
11. Oversizing – Downstream Constraints: If local development improves an existing downstream constraint to conveyance, e.g., mitigation or removal of historically observed/recorded surface or subsurface flooding due to inadequate capacity of existing culverts and/or sewers downstream, then a portion of this work may be D.C. eligible subject to a detailed study that the developer shall provide at their cost.
12. 100-Year Control: City policy dictates that the controlled 100-year outlet flow from a stormwater management facility is required to be conveyed in an enclosure to the development outlet, and potentially also beyond the development limit, to the receiving watercourse. This is considered by the City to be part of the outlet works, which are the responsibility of the development. (Note: current City practice is to request the development to enclose the 100-year peak flow between the S.W.M. block and the outlet, and not spill onto City roads). If the S.W.M. facility outlet pipe size exceeds 1,200 mm in diameter to convey the controlled 5-year flow, then there may be a City share in accordance with the oversizing policy.
13. Rural Settlement Areas (R.S.A.): For Rural Settlement Areas, and other areas outside the Urban Boundary, the stormwater management system is deemed a local service component, and stormwater management infrastructure is not eligible for D.C. contributions.
14. Airport Employment Growth District (A.E.G.D.) lands:
  - The neighbourhood dry ponds serving roads with 26 m or greater right-of-way (R.O.W.), are partially D.C. eligible on account of also controlling runoff from subject public roads. The City estimates the share to be 5% of the total area



- of road R.O.W. contributing. Notwithstanding, non-residential stormwater management facilities are currently excluded from the City stormwater D.C.
15. City Standard: Proposed stormwater management facilities not to serve drainage areas exceeding 40 ha (based on limits associated with overland runoff conveyance in road R.O.W.s).
  16. Public Roads/Single Applicants: In the case of a public road draining to a non-centralized facility under single applicant, the developer would construct the stormwater management facility, and the City assumes and maintains the facility; notwithstanding this, it would not be D.C. eligible.
  17. Underground Tanks: Underground storage tanks are not D.C. eligible.
  18. Mixed Use Buildings: In mixed use buildings, where the residential square foot area is equal to or more than the non-residential area, the facility is assigned to the residential section of the D.C.
  19. Commercial Lands: When a commercial parcel or parcels is nested within a predominantly residential area, and serviced by a residential S.W.M. facility, the commercial parcels are required to manage their own runoff (i.e., quality control) and are assigned a zero share of the centralized/communal quantity control volume.

### E.1.3 Land for Stormwater Management Facilities

1. Calculation of Land Area: The footprint (area of land) for stormwater management facilities in the D.C. Background Study is the larger of the footprint required by:
  - a. 6% of the drainage area for a wet pond (quality and quantity) facility; or
  - b. 4% of the total contributing drainage area for a dry pond (quantity only) facility or a footprint area determined by a supporting study. An exception to this is lands within the Fruitland-Winona Secondary Plan (i.e., Stoney Creek Urban Boundary Expansion (S.C.U.B.E.)) where 10% of the drainage area was used to establish the footprint.



2. Valuation of Land: The value of land for stormwater management facilities in the D.C. Background Study have been established as follows:
  - a. Land designated in the Official Plan for development in Ancaster and Waterdown – \$1,074,300/acre (\$2,654,600/ha);
  - b. Land designated in the Official Plan for development in Hamilton, Stoney Creek, Dundas, Glanbrook – \$953,900/acre (\$2,357,100/ha);
  - c. Land located outside the Urban Boundary shall be based on Open Space value established by an independent real estate appraisal to be obtained at the cost of the developer.
3. D.C. contributions allocated to land costs for stormwater management facilities shall be limited to lands within an approved block net of any identified setbacks and buffers (e.g., Ministry of Transportation (M.T.O.), the City’s Natural Heritage System).
4. Land Footprint Contingency: Land cost will be based on actual stormwater management footprint size at the established land value as outlined in Clause 1.3.2. The Land Footprint Contingency will be used to compensate for facilities with a footprint size larger than identified on the individual project.
5. Engineering fees are not eligible for D.C. contributions for land acquisition costs.
6. Tailwater Impacts on Land: If local downstream grades beyond the development limits create tailwater conditions at a S.W.M. facility outlet (e.g., flat topography), the land area requirements to achieve the required stormwater volumes will be more and, therefore, will increase the cost of the facility above the average cost for a facility using the unitary relationships. Detailed studies are required to identify potential candidate facilities to which this condition applies, in order to be able to include this higher cost in the D.C. In the absence of studies, the City has estimated that S.W.M. facilities for which this is potentially a condition, and for sizing allocated 10% of the contributing drainage area (e.g., S.C.U.B.E. facilities) versus 6% per the current standard size.
7. Land costs are adjusted annually for inflation using the Statistics Canada Quarterly, Non-Residential Construction Price Index (Table 18-10-0135-01) for



the most recent year-over-year period as set out in the *Development Charges Act, 1997* (D.C.A.) and reviewed with every D.C. study.

#### E.1.4 Capital Costs of Stormwater Management Facilities

1. Capital costs assigned to the individual projects are based on \$112/m<sup>3</sup> of total volume for the first 6,500 m<sup>3</sup>, and \$56/m<sup>3</sup> of total volume for the balance of storage volume in excess of 6,500 m<sup>3</sup>. The costs are adjusted annually for inflation using the Statistics Canada Quarterly, Non-Residential Construction Price Index (Table 18-10-0135-01) for the most recent year-over-year period as set out in the D.C.A. and reviewed with every D.C. study.
2. Bedrock Impacts: If local conditions dictate that part of a facility excavation is required to be in rock, this will increase the cost of the facility above the average cost for a facility. An allowance has been made to increase the unit cost for rock excavation for these facilities, based on actual costs, up to a maximum of \$112/m<sup>3</sup>.
3. Frontage Calculation: Facility frontage calculation has been updated using historical actual costs. Pond frontage costs will be limited to a maximum of 120 m at \$2,090/m (aboveground and underground works).
4. Capital costs will be paid based on tendered prices in accordance with the City's Financial Policies, to an upset limit established based on the required total storage at the unit cost as outlined in Clause E.1.4.1.
5. Stormwater Management features eligible for D.C. contribution include the following:
  - a. Erosion and Sediment control;
  - b. Excavation (excludes cost to haul surplus material off site and/or placement and compaction of surplus material within subdivision);
  - c. Fine grading;
  - d. Decanting areas;
  - e. Forebay structures, pond liner, cooling trenches, equalization pipes etc.;



- f. Outlet control structures within the facility block excluding the headwall;
  - g. Inlet control structures (e.g., flow splitter maintenance hole and headwall) excluding the inlet conveyance pipe upstream of the forebay headwall and main cell;
  - h. Emergency spillways;
  - i. Maintenance access roads;
  - j. Landscaping and pond signage; and
  - k. Bollards
6. Engineering fees (design engineering and soft costs) to a maximum of 10% and construction costs are included in the capital cost assigned to individual projects in the D.C. Background Study.
  7. Performance monitoring or development impact monitoring of S.W.M. facilities are not eligible for D.C. contributions.
  8. Facility Volume Contingency: Eligible capital cost will be based on the required total storage volume at the established capital cost rate as outlined in Clause E1.4.1. The Facility Volume Contingency will be used to compensate for facilities larger in size than identified on the individual project.
  9. Stormwater management facilities eligible for D.C. contributions must be publicly tendered in accordance with the City's Financial Policies for Development.
  10. D.C. contribution for land value and capital cost are independent.

#### E.1.5 Culverts and Bridges

1. Culverts and Bridges (as related to road infrastructure): The responsibility for the cost of stormwater conveyance infrastructure associated with road infrastructure, as part of new development or redevelopment, is to be determined as follows:
  - a. The costs of stormwater infrastructure items (excluding land) shall be direct developer responsibilities as a local service for:



- i. all crossings (new or extended or replacement) up to the 20 m local cross-section width for roads that are required to service the development.
- b. The costs of stormwater infrastructure items shall be eligible for inclusion in a stormwater D.C. for:
  - i. new crossings (e.g. culverts/bridges) for roads greater than 20 m, where the D.C.-eligible portion is the fraction calculated by the length in excess of the width of 13.0 m (defined by the standard 8.0 m width of pavement, plus 2 x 0.5 m curbs, and plus 2 x 2.0 m sidewalks required for a local road), divided by the total length (i.e., the City cost share is 13 m divided by the total length of the proposed crossing in m).
  - ii. Extensions to culverts/bridges for road R.O.W.s greater than a 20 m R.O.W., and length of crossings greater than 13 m, 100% D.C. eligible.



### Summary of D.C. Eligibility for Culverts/Bridges

Road Type	Road Right-of-Way Width	Culvert/Bridges <sup>[1]</sup>	Oversizing of Storm Sewers and Ditches for Conveyance and/or Treatment (A.E.G.D.) <sup>[2]</sup>	Contributing to Neighbourhood S.W.M. (A.E.G.D.)	Existing Culvert/Bridge Upgrades to meet City Design Standards <sup>[3]</sup>
Urban Local	20 m				
Urban Collector	26 m	Length greater than 13 m is D.C. eligible, costed as a fraction of the total length	In A.E.G.D., a 26 m road is 100% developer responsibility; not D.C. eligible	Not D.C. eligible	A portion is D.C. eligible
Urban Arterial Minor	32 m	Length greater than 13 m is D.C. eligible, costed as a fraction of the total length	Subject to study, oversizing of stormwater conveyance elements greater than 26 m may be D.C. eligible	5% of road R.O.W. assumed to contribute to facility, D.C. eligible	A portion is D.C. eligible
Urban Arterial Major	40 m	Length greater than 13 m is D.C. eligible, costed as a fraction of the total length	Subject to study, oversizing of stormwater conveyance elements greater than 26 m may be D.C. eligible	5% of road R.O.W. assumed to contribute to facility, D.C. eligible	A portion is D.C. eligible



Road Type	Road Right-of-Way Width	Culvert/Bridges <sup>[1]</sup>	Oversizing of Storm Sewers and Ditches for Conveyance and/or Treatment (A.E.G.D.) <sup>[2]</sup>	Contributing to Neighbourhood S.W.M. (A.E.G.D.)	Existing Culvert/Bridge Upgrades to meet City Design Standards <sup>[3]</sup>
Rural Local	20 m	N/A			A portion is D.C. eligible
Rural Collector	20 m	N/A			A portion is D.C. eligible
Road Widening for Development	varies				Extensions to existing culverts bridges beyond the minimum 13 m length are D.C. eligible

Notes:

<sup>[1]</sup> slopes on culvert ends are assumed common for urban roads hence the weighting is proposed to use pavement/curb/sidewalk width only.

<sup>[2]</sup> For A.E.G.D. only, road-specific Low Impact Development (LID) Best Management Practices will require an update to City Standards. Notwithstanding this, non-residential stormwater management facilities are currently exempted from the City's stormwater D.C.

<sup>[3]</sup> Existing culvert/bridge upgrades will be subject to study to determine remaining service life of existing culvert/bridge and D.C. eligible portion.





### E.1.6 Watercourses

1. Watercourses: Local development is responsible for any watercourse realignment and/or enclosures within its development limits. Local development is responsible for conveyance of upstream external flows through its development. Watercourse works to accommodate runoff from the development, external to the development, identified in City Master Drainage Plans and/or other related studies are D.C. eligible, proportionate to growth serviced by the watercourse.
2. Watercourse Enclosures: Watercourses enclosed by the development are not subsequently eligible for storm sewer oversizing under the D.C.

### E.1.7 Combined Sewer Watershed

1. Current City practice is to control the future land use 100-year peak flow to pre-development land use 2-year levels, and required storage is the responsibility of development and not D.C. eligible. Potential for D.C.-eligible projects has been added as provisional items. Future studies will define locations for these provisional items.
2. New stormwater outlets potentially created through studies will be D.C. eligible where new development may be serviced by new separate storm sewers and a new suitable outlet. Stormwater costs will be shared 50/50 between the City (existing) and new development. The City will identify candidate locations subject to future study.

### E.1.8 Miscellaneous

1. Off-site System Monitoring (holistic):
  - Local monitoring of stormwater infrastructure built within the local development is the responsibility of the local developer. In addition, any off-site system monitoring required by a specific development as a condition of Site Plan/Draft Plan Approval is the responsibility of the local developer.
  - Holistic monitoring of more than one development (i.e., typically based on guidance/recommendations in a Secondary Plan or Tertiary Plan Area) is D.C. eligible (included in list of D.C.-eligible studies) and is currently proposed



as a minimum for Greenville, S.C.U.B.E., and the A.E.G.D. lands. Estimated costs for a seven- to 10-year duration of multi-disciplinary monitoring is \$2 M per study area, based on recent similar studies in the Greater Golden Horseshoe area.

## E.2 Local Service Policy for Water and Wastewater

Utilizing the City's development assumptions, the water and wastewater infrastructure required to service these areas was identified. To determine if a project is a D.C.-related project, the following two categories were considered:

**Category 1 – Projects External to Proposed Development Lands** (i.e., on existing road allowance and servicing more than one development)

The following project descriptions fall into Category 1 and will be fully or partially allocated to D.C.s:

- New infrastructure or upgrades to existing City infrastructure required to service more than one potential proposed development and/or development property, whether in a Greenfield area or Intensification area. This includes upgrades to infrastructure that is upstream (water) or downstream (wastewater) of multiple developments.
  - For the purposes of allocating costs, If an upgrade is triggered by growth (single or multiple potential development) and that planned growth is less than or equal to the approved Traffic Survey Zone growth, the upgrade will be all or partially allocated to D.C.s.
  - In the case that a development plans to have more growth than is planned for (by approved Traffic Survey Zones and system capacity) and if the infrastructure upgrade is as a result of growth over and above what is approved, that additional oversizing shall be the responsibility of the developer triggering the update (direct developer).
    - This may include watermains for transmission, distribution and looping.
- New infrastructure projects that physically lie outside of a proposed development, but only service a single development – refer to **Category 2** (for the direct developers responsibilities) whereby the cost to extend the service is a 100% direct developer responsibility (net of any D.C. contribution based on minimum



size). For example, a new sewer on an existing road right of way (external to development) to service a new building on land not already serviced, with no additional developments potentially draining to the new sewer.

- For Category 1 projects there will always be a local Direct Developer cost contribution based on the development's frontage in accordance with the Financial Policies for Development and authority through the Planning Act whether or not the development is able to or needs to take benefit of the service (e.g. reverse frontage development). Local cost recoveries will be made on a site-specific basis based on frontage and/or drainage area.

**Category 2 – Projects Within Proposed Development Lands** – The following project descriptions fall into Category 2:

- Water and sewer infrastructure that is required to directly service the proposed development lands.
- Water and sewer infrastructure that is required to directly service the proposed development lands *and* potentially “oversized” in consideration (capacity, looping or fire protection) of additional proposed developable lands that are normally serviced via proposed development property.

In regard to Category 2 projects, the developer is required to pay for the full cost of the installation of sanitary sewers and watermains up to and including the sizes listed below. This is described as the Direct Developer Contribution.

Note: projects external to the proposed development lands that service only one property are considered Category 2.

The minimum sizes are provided from the City's Development Policies:

<b>Sanitary Sewer</b>	450 mm diameter
<b>Watermain</b>	300 mm diameter

**Facilities (Water Pumping Station, Water Reservoir or Elevated Tank, Wastewater Pumping Station)**

- No minimum size/capacity.
- Facilities to service single proposed development lands will be Direct Developer Contribution.



- Facilities servicing multiple developments/service areas will be allocated to D.C. categories only (D.C., Benefit to Existing and Post Period Benefit).

**Water Treatment/Wastewater Treatment** – Treatment upgrades to be included in D.C. categories only (D.C., Benefit to Existing and Post Period Benefit).

Should the size of the local infrastructure be required to be greater than the minimum local servicing sizes (i.e., to support external development), D.C. contributions shall be made. The City shall contribute, through the D.C. fund, towards the cost to install the infrastructure on a “Flat Rate” basis. “Flat Rate” is defined as the cost difference between the size required for external development and the minimum size, noted above in the City’s Development Policies.

Projects identified are sized based on the City’s engineering guidelines for design and to accommodate the future population and employment demand/flow within the proposed drainage/service areas.

The D.C. capital program identified in this document demonstrates the calculated cost splits on a project-by-project basis.

#### E.2.1 Funding for Municipal Extensions

In cases where a new watermain or sewer is installed by a developer that benefits and enables a new connection to an existing, unserviced property, a flat rate contribution is made back to the developer. Additional details of this funding methodology related to Direct Developer (or “Developer Initiated”) projects including projects external to the development lands are found in the 2007 City Report:

*TOE02005b/FCS02026b/PED07248 - Funding Methodology for Municipal Infrastructure Extensions Review and Update*

#### E.2.2 Capacity Allocation

As growth and re-development progresses over time, the City requires a means to determine the amount of spare capacity within the water distribution and wastewater collection systems that are to be allocated to any potential development application. Additionally, the City must also determine a reasonable period of time in which this allocated capacity is to be made available prior to development.



The capacity will be allocated to projects in the order in which the Construction Plans are approved. In the event that multiple projects are approved at the same time, the identification, selection and prioritization of the project given in the City's Infrastructure Staging of Development Program will prevail.

This policy is intended to be used as a guide for conveyance only (not treatment) and is subject to review and update by the City moving forward.

### E.2.3 Co-ordinated Projects with Transportation Requirements

Water and wastewater projects external to proposed development lands (i.e., on existing road allowances and/or existing roads) that fall into Category 1 and that are initiated as a result of identified transportation requirements are eligible for inclusion in the D.C. at the same D.C.-eligible percentage as the associated road.

Service connections (water and/or wastewater connections – public portion) will be constructed to each land parcel when an existing dwelling unit exists. Property owners that require more than one service connection will be required to pay for the cost of the additional service connections prior to construction. Benefitting property owners shall contribute towards the cost to install the infrastructure on a “flat rate” basis. The “flat rate” will be established by the City at the beginning of each year.

## **E.3 Local Service Policy for Parkland Development**

The developer's responsibilities related to parkland are generally described in Option 1 (sections 3.3 and 4.3) of the *Park and Open Space Development Guide*, latest version. Whether the developer chooses to develop under Option 1 or 2 of this guide is at the discretion of the developer and the City and requires entering into agreements as detailed in the *Park and Open Space Development Guide*. The direct developer responsibilities are the same regardless of which option is followed; the generality of the guide does not restrict the requirements as detailed in the local service policy below.

All parkland construction must adhere to the City of Hamilton's *Construction and Material Specifications Manual*, latest edition. This includes but is not limited to all soil testing, soil compaction, asphalt, concrete, and granular requirements.



### E.3.1 Recreational Trails

1. Recreational trails (trails, multi-use trails, pathways, sidewalks) that are external to development and that do not form part of the municipality's active transportation network, and their associated infrastructure (landscaping, bridges, trail surface, etc.), are included in parkland D.C.s.
2. Recreational trails (trails, multi-use trails, pathways, sidewalks) that are internal to development and that do not form part of the municipality's active transportation network, and their associated infrastructure up to base condition, are a direct developer responsibility as a local service provision under section 59 of the D.C.A.
3. Recreational trails outside of road allowances, including granular base and surfacing are a direct developer responsibility as a local service provision under section 59 of the D.C.A. and include the following:
  - a. Recreational trails that are part of the City's Recreational Trails Master Plan which fall in the subdivision area, with materials as indicated in the Plan.
  - b. Recreational trails that are part of the City's Pipeline Trail Master Plan which fall in the subdivision area, with materials as indicated in the Plan.
  - c. Recreational trails around stormwater management ponds that may link to maintenance truck access or other trails/pathways to provide additional recreation opportunities for residents.
  - d. The base condition works for the open space areas that contain trails shall be the same as the works required for parkland in section 2.a).

### E.3.2 Parks (City-Wide Parks, Community Parks, Neighbourhood Parks & Parkettes)

1. Park development to base condition is a direct developer responsibility as a local service provision under section 59 of the D.C.A. and includes the following:
  - a. Clearing and grubbing; tree removals as per the subdivision's tree preservation and removals plan.



- b. Topsoil stripping, screening, and stockpiling.
- c. Rough grading (pre-grading) to allow for positive drainage of the park, with minimum slopes of 2%. If necessary, this may include some minor drainage tile work and grading as per the overall subdivision grading design, complete with any required swales or catch basins. Runoff from the development property shall not drain into the park unless approved by the Manager, Environment Services, Public Works.
- d. Spreading of topsoil to a 150 mm depth (import topsoil if existing on-site is insufficient to reach required depth).
- e. Seeding of site with City-approved seed mix; maintenance of seed until acceptance by City.
- f. Parks shall be free of any contaminated soil or subsoil.
- g. Parks shall not be mined for fill.
- h. Parks shall be conveyed free and clear of all encumbrances.
- i. 100% of 1.5 m chain link perimeter fencing to the City standards to separate the development lands from the City lands or lands to be dedicated to the City, unless the perimeter fencing is on land that will be dedicated to the City to fulfil the requirement of parkland dedication under the *Planning Act*, in which case the cost shall be shared 50/50.
- j. When park parcels cannot be developed in a timely manner, they shall be graded to ensure positive drainage and seeded to minimize erosion and dust. These shall be maintained by the developer until construction commences thereon.
- k. The park block shall not be used for topsoil or other construction material, equipment storage, or sales pavilions.
- l. Required heritage features within the park, as set out within the Planning approval conditions.



2. Sports facilities, creative play structures/equipment, sun shelters, multi-purpose courts, walkways, plantings, site furnishings, and other amenities (including associated utilities) within parks are included in the parkland D.C.s.
3. Servicing stubs to parkland are not required under the local service policy for parkland; however, they are included in the transportation D.C.s and local service policy. All park-servicing calculations shall follow the criteria outlined in the City of Hamilton's *Engineering Guidelines for Servicing Land under Development Applications*, latest edition (<https://www.hamilton.ca/build-invest-grow/planning-development/planning-policies-guidelines/comprehensive-development>).
4. Where parkland ownership is fragmented (one park block owned by multiple developers), only the final developer shall have the option to fully develop the park (i.e., Option 2 in the *Park and Open Space Development Guide* (<https://www.hamilton.ca/build-invest-grow/planning-development/planning-policies-guidelines/park-and-open-space-development>) will not be permitted by the City). All developers, however, will still be required to complete all direct developer responsibilities to base condition (i.e., Option 1 of the *Park and Open Space Development Guide* will be required for the park block fragment that they own).

### E.3.3 Open Space (General Open Space & Natural Open Space)

#### *General Open Space*

1. General Open Space shall include golf courses, community gardens, picnic areas, beaches, remnant parcels of open space lands, and urban plazas, squares and core spaces. These areas do not function as parks but are used for both active and passive recreational activities.
2. General Open Space to base condition is a direct developer responsibility as a local service provision under section 59 of the D.C.A. and includes the following:
  - a. Clearing and grubbing; tree removals as per the subdivision's tree preservation and removals plan.
  - b. Topsoil stripping, screening, and stockpiling.





- c. Rough grading (pre-grading) to allow for positive drainage of the General Open Space, with minimum slopes of 2%. If necessary, this may include some minor drainage tile work and grading as per the overall subdivision grading design, complete with any required swales or catch basins. Runoff from the development property shall not drain into the park unless approved by the Manager, Environment Services, Public Works.
  - d. Spreading of topsoil to 150 mm depth (import topsoil if existing on-site is insufficient to reach required depth).
  - e. Seeding of site with City-approved seed mix; maintenance of seed until acceptance by City.
  - f. General Open Space shall be free of any contaminated soil or subsoil.
  - g. Parkland shall not be mined for engineering fill and replaced with fill or topsoil.
  - h. General Open Space shall be conveyed free and clear of all encumbrances.
  - i. 100% of 1.5 m chain-link perimeter fencing of General Open Space to the City standard located on the public property side of the property line as required by the City.
  - j. When General Open Space parcels cannot be developed in a timely manner, they shall be graded to ensure positive drainage and seeded to minimize erosion and dust. These shall be maintained by the developer until construction commences thereon.
  - k. The General Open Space block shall not be used for topsoil or other construction material, equipment storage, or sales pavilions.
  - l. Required heritage features within the General Open Space as set out within the Planning approval conditions.
3. Sun shelters, walkways, plantings, site furnishings, and other amenities (including associated utilities) within General Open Space are included in the parkland D.C.s.



## *Natural Open Space*

1. Natural Open Space shall include lands with significant natural features and landscapes such as woodlots, hazard lands, forested slopes, creek/ravine corridors, the Niagara Escarpment, environmentally sensitive areas (of natural and scientific interest), and areas of wildlife habitat. These areas perform important biological and ecological functions and provide passive recreational opportunities.
2. Where Natural Open Space is to be left as existing in the plan of subdivision, Natural Open Space to base condition is a direct developer responsibility as a local service provision under section 59 of the D.C.A. and includes the following:
  - a. Ensure that the area is not damaged or removed, and that the space is kept free of construction debris and garbage during construction.
  - b. The Natural Open Space block shall not be used for topsoil or other construction material, equipment storage, or sales pavilions.
  - c. Required heritage features within the Natural Open Space as set out within the Planning approval conditions.
  - d. Where naturalization or restoration works are required, only native plants shall be utilized.
  - e. Where private lots back onto channels, 100% of 1.5 m chain-link perimeter fencing to the City standard shall be located on the public property side of the property line as required by the City.
3. For Natural Heritage Systems, refer to section E.4 of this local service policy.

### **E.4 Local Service Policy for Natural Heritage System (N.H.S.)**

The City contains many natural areas and features that contribute to the municipality's beauty, unique character and quality of life. A systems approach has been used to develop a Natural Heritage System (N.H.S.) within the City, which consists of Core Areas, Linkages, the Greenbelt Plan N.H.S. and the Niagara Escarpment Plan Area (as per the City's Official Plan).



Core Areas are the most important components of the N.H.S. in terms of biodiversity, productivity, and ecological and hydrological functions and comprise key natural heritage features, key hydrologic features and local natural areas, as follows:

- Key hydrologic features:
  - Permanent and intermittent streams
  - Lakes (and their littoral zones)
  - Seepage areas and springs
  - Wetlands
- Key natural heritage features:
  - Significant habitat of endangered and threatened species
  - Fish habitat
  - Wetlands
  - Life Science Areas of Natural and Scientific Interest
  - Significant valley lands
  - Significant wildlife habitat
  - Sand barrens, savannahs, and tallgrass prairies
  - Alvars
- Local Natural Areas
  - Environmentally significant areas
  - Unevaluated wetlands
  - Earth Science Areas of Natural and Scientific Interest.

Linkages are natural areas such as old fields, meadows, thickets, successional habitat, hedgerows, riparian vegetation and woodlands that ecologically connect Core Areas.

Developer responsibility as a local service provision would include but not be limited to:

- a) Planting internal to the development as required by the City as part of the creation of a vegetation protection zone that protects the features and functions of the N.H.S. and achieves the goal of natural, self-sustaining vegetation.
- b) Implementation of mitigation measures as outlined within approved Environmental Impact Statements, Linkage Assessments, other studies (i.e., subwatershed studies, Secondary Plans) or as required by the City, Conservation Authorities or other authorities having jurisdiction (i.e., Niagara Escarpment Commission, Ministry of Natural Resources and Forestry). These



measures may be located internal or external to the development and would include but not be limited to plant salvage, habitat restoration and management, plantings, monitoring, invasive species control, stewardship/education, and species at risk requirements.

- c) Fencing internal to the development at the boundary of the approved vegetation protection zone associated with the N.H.S. features. This fencing is to be to the City's standards.
- d) Non-traditional fencing, such as dense plantings and bollards, to delineate the boundaries of the protected areas and prevent encroachment.
- e) Compensation planting requirements for tree removal according to the City's standards.

## **E.5 Local Service Policy for Services Related to a Highway**

### E.5.1 Overview

This appendix sets out the municipality's general policy guidelines on D.C.s and local service funding for services related to a highway. The guidelines outline in general terms, the size and nature of the engineered infrastructure that is included in the study as a D.C. project, versus infrastructure that is considered as a local service, to be emplaced separately by landowners, pursuant to a development agreement.

The following policy guidelines are general principles by which staff will be guided in considering development applications. Each application, however, will be considered in the context of these policy guidelines on its own merits and having regard to, among other factors, the context of the surrounding area and the location and type of services required as well as their relationship to the proposed development and to the existing and proposed development in the area as per subsection 59 (2) of the D.C.A.

### E.5.2 Services Related to a Highway

A highway and services related to a highway are intended for the transportation of people and goods via many different modes including, but not limited to, passenger automobiles, commercial vehicles, transit vehicles, cycling, and walking. A highway shall consist of all land, services, and infrastructure built to support this movement of



people and goods regardless of the mode of transportation in pursuit of a complete street.

The transportation planning paradigm across North America has shifted over the last decade or more. The design and layout, density, and mix of uses within a neighbourhood have become a critical consideration. This new consideration and need to grow the City along regional, sub-regional and community nodes and corridors characterized by denser and more mixed development is supported by highways that accommodate and promote walking, cycling and transit use over auto use and has been identified by the 2017 City of Hamilton Transportation Master Plan (H.T.M.P.), area specific Transportation Master Plans, and the City of Hamilton Official Plan. The overall vision is to create a City which is highly walkable and in which it is easy and convenient to walk, cycle or take transit. The H.T.M.P. has set clear targets to reduce overall vehicle kilometres, reduce trips made by single occupant vehicles, increase trips made by transit, and encourage cycling and walking.

The City of Hamilton Official Plan and the H.T.M.P. put a heavy emphasis on designing corridors, streets and paths with full consideration given to transit, cyclists and pedestrians. Consequently, the design elements of a highway as well as its role and function must change to embrace all categories of the transportation system users and needs to provide a *complete street*. The concept of complete streets defines a highway as a transportation facility that provides safe and comfortable travel for a wide variety of users, regardless of mode, level of ability, and age. Complete streets allow safe travel for:

- Pedestrians of all ages and levels of ability;
- Cyclists;
- Automobiles;
- Transit vehicles; and
- Delivery vehicles.

The main premise of complete streets is the recognition that the function of a street (or a highway) goes beyond simply moving vehicles. Rather, streets play an important role in moving people, connecting the community, accommodating pedestrians and cyclists, enabling goods movement, providing a space for public interaction and civic engagement, and providing access for local stores and businesses. A complete street concept has been fully embraced by the City of Hamilton and is fundamental to



transportation policy in the City identified through the key planning documents mentioned earlier. It also translates to the planned capital projects and therefore the local service policy and the D.C. process.

Under this premise, the design of a street is approached with the objective of optimizing the R.O.W. to balance mobility needs and enhance connectivity for all users. Traffic management is a range of measures and infrastructure that help achieve that balance (e.g., traffic signals, roundabouts). Travel Demand Management on the other hand refers to strategies that attempt to reduce or more efficiently manage the demand for travel within the existing transportation network and reduce capital expenditure without further expanding the supply of the network. Examples of Travel Demand Management strategies with impact on highway design, role, and function include:

- Carpooling to increase the occupancy of vehicles. High-occupancy vehicle lanes provided within the road platform are needed to promote better utilization of existing assets by increased auto occupancy.
- Active transportation (walking or cycling) to reduce demand for vehicle travel by shifting commuter travel demand to cycling and walking. This measure is supported by on-road and off-road cycling trails, sidewalks, and multi-use pathways.
- Park and ride facilities at transit stations are designed to “capture” auto users at some critical gateway points and divert them to transit or active transportation modes.

The H.T.M.P. includes the identification of rapid transit initiatives and the implementation of Light Rail Transit corridors which will have effects on the design of these highways as either main Light Rail Transit corridors or the so called “feeder” routes. Several transit priority measures will be required to “prepare” a highway for serving transit effectively. These features will include but will not be limited to:

- High-occupancy vehicle or shared lanes for the exclusive or semi-exclusive use of transit vehicles and private automobiles with more than one occupant. They allow high-occupancy vehicles to have faster travel times than general purpose lanes, encouraging transit use and carpooling. Lanes may be designated as shared lanes only during peak periods.
- Provision of dedicated transit lanes along transit priority routes.



- Transit signals and transit priority signals that use real-time information to either extend a green light or shorten a red light when a bus is approaching to help the bus pass through the intersection without stopping, thus giving priority to transit vehicles at intersections.
- Queue jump lanes with signal priority allow buses to bypass queues at intersections. Transit vehicles have an advanced green and can enter the intersection before other vehicles.
- Architecturally distinctive passenger amenities, bus bays, bus stop infrastructures and terminals located within the road allowance and provided to improve safety and comfort for transit users.

The concept of services related to a highway has evolved and expanded to fully embrace the transportation of people and goods via many different modes including, but not limited to, passenger cars, commercial vehicles, transit vehicles, bicycles and pedestrians. The highway therefore consists of all land and associated infrastructure built to support (or service) this movement of people and goods regardless of the classification of the road (i.e., local, collector or arterial) or the mode of transportation employed, thereby meeting their primary role and function of providing transportation “space” and opportunity for all users. The associated infrastructure to achieve this concept shall include, but is not limited to:

- road pavement, sub-structure and curbs;
- new sidewalks, sidewalks to fill in network gaps, sidewalks associated with the urbanization of roads or sidewalk enhancements and widenings;
- roundabouts, traffic calming features, left and right turn lanes, medians, lay-bys, pedestrian cross-overs;
- grade separation/bridge structures (for any vehicles, railways and/or pedestrians and cyclists);
- grading, drainage and retaining wall features;
- culvert structures;
- storm water drainage systems;
- traffic control systems, signals and related technologies;
- active transportation facilities (e.g., sidewalks, bike lanes, multi-use trails, trails, pathways, cycle tracks, bike share facilities and services, other cycling amenities, etc.);
- sustainable mobility programs;



- transit lanes, queue jump lanes, bus bays, stops and amenities;
- curb extensions between queue jump lanes and bus bays;
- roadway illumination systems;
- boulevard and median surfaces (e.g., sod & topsoil, paving, etc.);
- street trees, streetscaping and landscaping;
- parking lanes and driveway entrances;
- noise attenuation systems;
- signage;
- railings, safety barriers;
- related utilities; and
- temporary works to facilitate the implementation of any of the above.

For road classification information, refer to the City of Hamilton Official Plan and the *Comprehensive Development Guidelines and Financial Policies Manual, 2017*, or as may be amended from time to time (<https://www.hamilton.ca/build-invest-grow/planning-development/planning-policies-guidelines/comprehensive-development>).

### E.5.3 Infrastructure

#### *E.5.3.1 Local and Collector Roads (including land)*

1. All local roads are considered to be the developer's financial responsibility. For the purposes of D.C. eligibility, the following criteria are applied for Local Roads:
  - Local Residential – up to 8m width of asphalt driving surface and up to 26m road allowance.
  - Local Non-Residential – up to 11m of asphalt driving surface and up to 32m of road allowance.
2. Collector roads, internal to a development, inclusive of approvals, all land and associated infrastructure, including temporary works, are a direct developer responsibility under section 59 of the D.C.A. as the local service component, net of applicable oversizing per the *Financial Policies for Development* and the *Comprehensive Development Guidelines and Financial Policies Manual, 2017*, or as may be amended from time to time (<https://www.hamilton.ca/build-invest-grow/planning-development/planning-policies-guidelines/comprehensive-development>).





In the Airport Employment Growth District (A.E.G.D.) Transportation Master Plan, certain collector roads internal to the development were listed as Schedule C improvements in the implementation plan. These are listed incorrectly and are a direct developer responsibility as outlined in this local service policy.

3. Collector roads, external to development, inclusive of all land and associated infrastructure, including temporary works, needed to support a specific development or required to link with the area to which the plan relates, are a direct developer responsibility under section 59 of the D.C.A. (local service component) net of applicable oversizing per the *Financial Policies for Development* and the *Comprehensive Development Guidelines and Financial Policies Manual, 2017*, or as may be amended from time to time.

#### E.5.3.2 Arterial Roads

1. New, widened, extended or upgraded arterial roads, inclusive of all associated infrastructure, including temporary works, is included as part of highway costing funded through D.C.s net of direct developer responsibility (local service component) as per the *Financial Policies for Development* and the *Comprehensive Development Guidelines and Financial Policies Manual, 2017*, or as may be amended from time to time.
2. Land acquisition for arterial roads on existing R.O.W. to achieve a complete street: dedication under *Planning Act* provisions (sections 41, 51 and 53) through development lands per the *Financial Policies for Development* and the *Comprehensive Development Guidelines and Financial Policies Manual, 2017*, or as may be amended from time to time. In areas with limited development, this is included as part of highway costing funded through D.C.s.
3. Land acquisition for arterial roads on new R.O.W. to achieve a complete street: dedication, where possible, under *Planning Act* provisions (sections 51 and 53) through development for lands up to the collector standard per the *Financial Policies for Development* and the *Comprehensive Development Guidelines and Financial Policies Manual, 2017*, or as may be amended from time to time. Land acquisitions for road widenings and/or oversizing beyond the collector standard, or where located in an area with limited development, are included as part of highway costing funded through D.C.s.



4. Land acquisition beyond normal dedication requirements to achieve transportation corridors as services related to highways, including grade separations and infrastructure for the movement of pedestrians, cyclists, public transit and/or railway vehicles, are included as part of highway costing funded through D.C.s.

#### *E.5.3.3 Traffic and Transit Control Systems, Signals and Intersection Improvements on Area Municipal Highways*

1. New, widened, extended or upgraded arterial roads, including temporary works, unrelated to a specific development are included as part of highway costing funded through D.C.s net of developer responsibility (local service component) per the *Financial Policies for Development* and the *Comprehensive Development Guidelines and Financial Policies Manual, 2017*, or as may be amended from time to time.
2. Arterial and non-arterial road improvements related to any private site entrances or entrances to a specific development, including any temporary works, are a direct developer responsibility under section 59 of the D.C.A. (local service component), net of applicable oversizing per the *Financial Policies for Development* and the *Comprehensive Development Guidelines and Financial Policies Manual, 2017*, or as may be amended from time to time.
3. Intersection improvements, new or modified signalization, signal timing and optimization plans, area traffic studies for highways attributed to growth and unrelated to a specific development are included as part of highway costing funded through D.C.s as permitted under subsection 5 (1) of the D.C.A.

#### *E.5.3.4 Streetlights*

1. Streetlights on new arterial roads and arterial road improvements are considered part of the complete street and included as part of highway costing funded through D.C.s net of direct developer responsibility (local service component).
2. Streetlights on non-arterial roads external to development needed to support a specific development or required to link with the area to which the plan relates are considered part of the complete street and included as a direct developer responsibility under section 59 of the D.C.A. (local service component).



3. Streetlights on non-arterial roads internal to development are considered part of the complete street and included as a direct developer responsibility under section 59 of the D.C.A. (local service component).

#### *E.5.3.5 Transportation-Related Pedestrian and Cycling Facilities*

1. Sidewalks, multi-use trails, trails, pathways, cycle tracks and bike lanes, inclusive of all required land and infrastructure, including related temporary works and grade separations, located within City arterial road and provincial highway corridors are considered part of the complete street and included as part of highway costing funded through D.C.s, net of direct developer responsibility (local service component) per the *Financial Policies for Development* and the *Comprehensive Development Guidelines and Financial Policies Manual, 2017*, or as may be amended from time to time.
2. Sidewalks deemed to be temporary are considered direct developer responsibility (local service component).
3. Sidewalks, trails, pathways, multi-use trails, cycle tracks and bike lanes, inclusive of all required land and infrastructure, including related temporary works and grade separations that are located within or linking to non-arterial road corridors internal to development are considered part of the complete street and are a direct developer responsibility under section 59 of the D.C.A. (local service component) per the *Financial Policies for Development* and the *Comprehensive Development Guidelines and Financial Policies Manual, 2017*, or as may be amended from time to time.
4. Other sidewalks, trails, pathways, multi-use trails, cycle tracks and bike lanes, inclusive of all required land and infrastructure, including related temporary works and grade separations, that are located within non-arterial road corridors external to development and needed to support a specific development or required to link with the area to which the plan relates are a direct developer responsibility under section 59 of the D.C.A. (local service component) per the *Financial Policies for Development* and the *Comprehensive Development Guidelines and Financial Policies Manual, 2017*, or as may be amended from time to time.
5. Multi-use trails (not associated with a road), inclusive of all land and required infrastructure and including related temporary works and grade separations, that



go beyond the function of a (parkland) recreational trail and form part of the City's active transportation network for cycling and/or walking are included in the D.C. calculations as permitted under subsection 5 (1) of the D.C.A.

#### *E.5.3.6 Sustainable Modes Programs including Transportation Demand Management*

1. Bike share expansions within existing service areas and in new service areas; cycling amenities including bike racks, lockers, shelters and fix-it stations; pedestrian amenities (e.g., benches); and sustainable mobility programs (e.g., Smart Commute, Travel Demand Management for higher-density developments) are considered part of the complete street and included as part of highway costing funded through D.C.s net of direct developer responsibility (local service component) per the *Financial Policies for Development* and the *Comprehensive Development Guidelines and Financial Policies Manual, 2017*, or as may be amended from time to time.

#### *E.5.3.7 Noise Abatement Measures*

1. Noise abatement measures external and internal to development where it is related to, or a requirement of a specific development are a direct developer responsibility under section 59 of the D.C.A. (local service component).
2. Noise abatement measures on new arterial roads and arterial road improvements abutting an existing community and unrelated to a specific development are included in the D.C. calculations as permitted under subsection 5 (1) of the D.C.A.

#### *E.5.3.8 Transit Nodes, Terminals, Lanes and Bus Stop Infrastructure*

1. Transit node, transit priority measures (e.g., queue jump lanes, transit signal priority) and bus stop infrastructure and amenities (including bus pads and shelters) located within arterial road corridors, and including transit stations or terminals located on lands to serve these road corridors are considered part of the complete street and included in the D.C. calculations as permitted under subsection 5 (1) of the D.C.A., net of direct developer responsibility under section 59 of the D.C.A. (local service component) per the *Financial Policies for Development* and the *Comprehensive Development Guidelines and Financial Policies Manual, 2017*, or as may be amended from time to time.



2. Transit node, transit priority measures (e.g., queue jump lanes, transit signal priority) and bus stop infrastructure and amenities located within non-arterial road corridors internal to development are considered part of the complete street and direct developer responsibility under section 59 of the D.C.A. (local service component).
3. Transit node, transit priority measures (e.g., queue jump lanes, transit signal priority) and bus stop infrastructure and amenities located within non-arterial road corridors external to development and needed to support a specific development or required to link with the area to which the plan relates are a direct developer responsibility under section 59 of the D.C.A. (local service component).

#### *E.5.3.9 Infrastructure Assets Constructed by Developers*

1. All infrastructure assets constructed by developers must be designed in accordance with the City's engineering standards and policies, including the Comprehensive Development Guidelines and Financial Policies Manual (2019), the Complete Streets Guidelines and the AEGD Eco-Industrial Guidelines.
2. All infrastructure assets shall be conveyed in accordance with the City's engineering standards and policies.



# Appendix F

## Water and Wastewater Servicing Needs – GM BluePlan Engineering Consultants Limited



# Appendix F: Water and Wastewater Servicing Needs – GM BluePlan Engineering Consultants Limited

See separate technical appendix.



# Appendix G

## Stormwater Management Servicing Needs – WSP Inc. and Scheckenberger & Associates Ltd.





# Appendix G: Stormwater Management Servicing Needs – WSP Inc. and Scheckenberger & Associates Ltd.

See separate technical appendix.



# Appendix H

## Services Related to a Highway and Transit Servicing Needs – Arcadis Canada Inc.



# Appendix H: Services Related to a Highway and Transit Servicing Needs – Arcadis Canada Inc.

See separate technical appendix.



# Appendix I

## Asset Management Plan



# Appendix I: Asset Management Plan

The recent changes to the Development Charges Act, 1997, as amended (D.C.A.) (new subsection 10 (2) (c.2)) require that the background study must include an asset management plan (A.M.P.) related to new infrastructure. Section 10 (3) of the D.C.A. provides:

“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 the prescribed manner.”

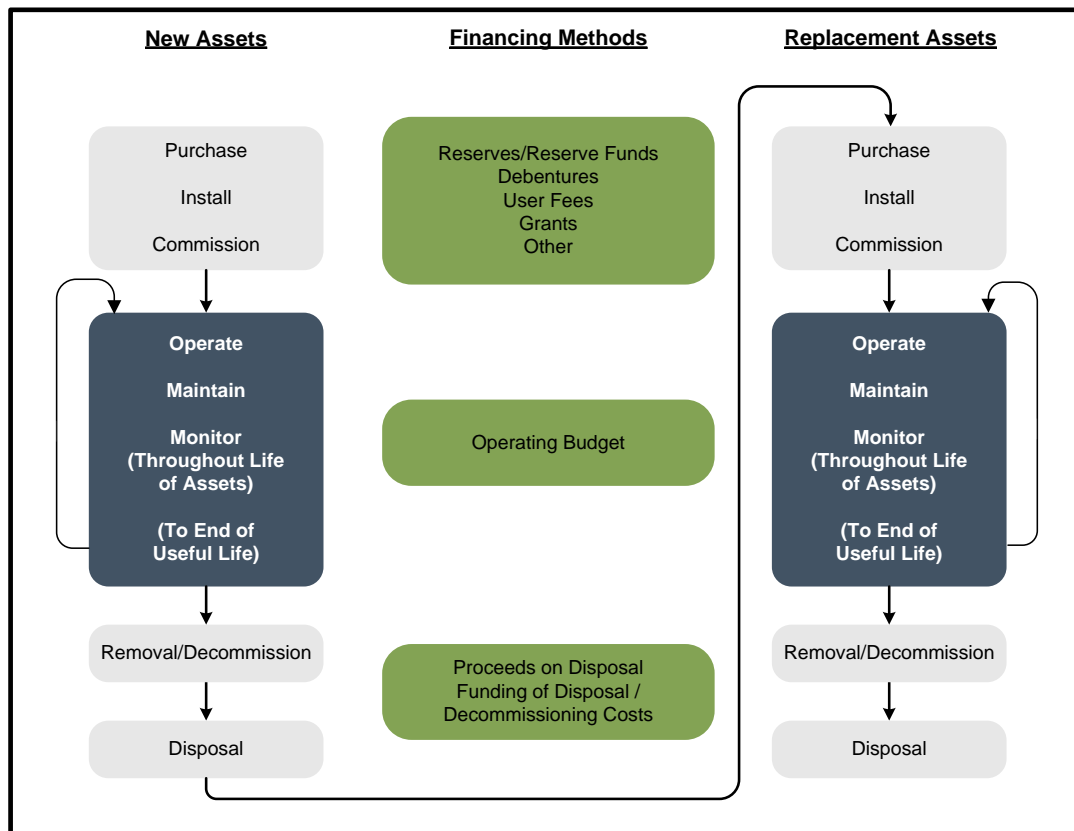
In regard to the above, section 8 of the regulations was amended to include subsections (2), (3), and (4) which set out specific detailed requirements for transit (only). For all services except transit, there are no prescribed requirements at this time, thus requiring the municipality to define the approach to include in the background study.

At a broad level, the A.M.P. provides for the long-term investment in an asset over its entire useful life along with the funding. The schematic below identifies the costs for an asset through its entire life cycle. For growth-related works, most capital costs will be funded by the development charge (D.C.). Non-growth-related expenditures will then be funded from non-D.C. revenues as noted below. During the useful life of the asset, there will be minor maintenance costs to extend the life of the asset along with additional program-related expenditures to provide the full services to the residents. At the end of the life of the asset, it will be replaced by non-D.C. financing sources.

It should be noted that with the recent passing of the *Infrastructure for Jobs and Prosperity Act*, municipalities are now required to complete A.M.P.s, based on certain criteria, which were to be completed by 2022 for core municipal services and 2024 for all other services. The amendments to the D.C.A. do not require municipalities to complete these A.M.P.s (required under *Infrastructure for Jobs and Prosperity Act*) for the D.C. background study, rather the D.C.A. requires that the D.C. background study



include information to show the assets to be funded by the D.C. are sustainable over their full life cycle.



In 2012, the Province developed Building together – Guide for municipal asset management plans, which outlines the key elements for an A.M.P., as follows:

- **State of local infrastructure:** asset types, quantities, age, condition, financial accounting valuation and replacement cost valuation.
- **Desired levels of service:** defines levels of service through performance measures and discusses any external trends or issues that may affect expected levels of service or the municipality's ability to meet them (for example, new accessibility standards, climate change impacts).
- **Asset management strategy:** the asset management strategy is the set of planned actions that will seek to generate the desired levels of service in a sustainable way, while managing risk, at the lowest lifecycle cost.
- **Financing strategy:** having a financial plan is critical for putting an A.M.P. into action. By having a strong financial plan, municipalities can also demonstrate



that they have made a concerted effort to integrate the A.M.P. with financial planning and municipal budgeting and are making full use of all available infrastructure financing tools.

Commensurate with the above, the City prepared an A.M.P. for its existing assets; however, it did not take into account the financial planning for all future growth-related assets. As a result, the asset management requirement for the D.C. must be undertaken in the absence of this information. It is noted that the City has started work on the Long-Term Financial Plan to align financial sustainability with asset management practices. Future D.C. updates will align the growth-related A.M.P. with the City's Long-Term Financial Plan.

In recognition to the schematic above, the following table (presented in 2023 \$) has been developed to provide the annualized expenditures and revenues associated with new growth. Note that the D.C.A. does not require an analysis of the non-D.C. capital needs or their associated operating costs so these are omitted from the table below. In addition, as all capital costs included in the D.C.-eligible capital costs are not included in the City's A.M.P., the present infrastructure gap and associated funding plan have not been considered at this time. Hence, the following does not represent a fiscal impact assessment (including future tax/rate increases) but provides insight into the potential affordability of the new assets:

1. The non-D.C. recoverable portion of the projects that will require financing from municipal financial resources (i.e., taxation, rates, fees, etc.). This amount has been presented on an annual debt charge amount based on 20-year financing.
2. Lifecycle costs for the D.C. capital works have been presented based on a sinking fund basis. The assets have been considered over their estimated useful lives.
3. Incremental operating costs for the D.C. services (only) have been included.
4. The resultant total annualized expenditures are \$429.45 million.
5. Consideration was given to the potential new taxation and user fee revenues which will be generated as a result of new growth. These revenues will be available to finance the expenditures above. The new operating revenues are



\$123.92 million. This amount, totalled with the existing operating revenues of \$2.20 billion, provide annual revenues of \$2.32 billion by the end of the period.

6. In consideration of the above, the capital plan is deemed to be financially sustainable.

City of Hamilton  
Asset Management – Future Expenditures and Associated Revenues  
2023 \$

Asset Management - Future Expenditures and Associated Revenues	2042 (Total)
<b>Expenditures (Annualized)</b>	
Annual Debt Payment on Non-Growth Related Capital <sup>1</sup>	91,310,282
Annual Debt Payment on Post Period Capital <sup>2</sup>	81,481,515
<b>Lifecycle:</b>	
Annual Lifecycle Costs	<b>\$138,396,460</b>
<b>Incremental Operating Costs (for D.C. Services)</b>	
	\$118,256,969
<b>Total Expenditures</b>	<b>\$429,445,226</b>
<b>Revenue (Annualized)</b>	
Total Existing Revenue <sup>3</sup>	\$2,200,525,250
Incremental Tax and Non-Tax Revenue (User Fees, Fines, Licences, etc.)	\$123,917,846
<b>Total Revenues</b>	<b>\$2,324,443,096</b>

<sup>1</sup> Non-Growth Related component of Projects

<sup>2</sup> Interim Debt Financing for Post Period Benefit

<sup>3</sup> As per Sch. 10 of FIR

Regarding the D.C.A. requirements for asset management for transit services, Ontario Regulation 82/98 (as amended) provides the following:

**8 (3) If a council of a municipality proposes to impose a development charge in respect of transit services, the asset management plan referred to in subsection 10 (2) (c.2) of the Act shall include the following in respect of those services:**





Table I-2, which follows, and the accompanying information provide the individual items prescribed by subsection 8 (3) of the Regulation (as amended) and provides how these items have been addressed for this D.C. Background Study by the City.



**Table I-2**  
**City of Hamilton**  
**Summary of Transit Asset Management Plan Requirements**  
**As per O. Reg. 82/98, as amended**

Ontario Regulation 82/98, as amended subsection 8(3) Requirements	Compliance	Link
1. A section that sets out the state of local infrastructure and that sets out:	See State of the Infrastructure Report (S.O.T.I.), chapters 11 (for transit facilities) and 13 (for fleet vehicles and other associated infrastructure)	<a href="https://d3fpllf1m7bbt3.cloudfront.net/sites/default/files/media/browser/2017-08-24/pw-soti-report-2016.pdf">https://d3fpllf1m7bbt3.cloudfront.net/sites/default/files/media/browser/2017-08-24/pw-soti-report-2016.pdf</a>
i. the types of assets and their quantity or extent,	See S.O.T.I. Table 11.1 & Table 13.1	
ii. the financial accounting valuation and replacement cost valuation for all assets,	The accounting valuation is based on PSAB 3150 reporting requirements for Tangible Capital Assets and is depreciated using a straight-line amortization For the replacement cost valuation, see S.O.T.I. Table 11.2 and 13.2	
iii. the asset age distribution and asset age as a proportion of expected useful life for all assets, and	See S.O.T.I. Table 11.5, 13.5 & 13.6	
iv. the asset condition based on standard engineering practices for all assets.	See S.O.T.I. Table 11.4 & 13.4	
2. A section that sets out the proposed level of service and that:		
i. defines the proposed level of service through timeframes and performance measures,	See Arcadis' Strategic Transportation Network Review Report Appendix D - Transportation Inputs to the 2024 Development Charges Background Study	
ii. discusses any external trends or issues that may affect the proposed level of service or the municipality's ability to meet it, and	See Page 265 of the 2019-2022 Public Works Multi Year Business Plan	<a href="https://d3fpllf1m7bbt3.cloudfront.net/sites/default/files/media/browser/2015-07-19/ts-appendix-q-proposed-service-standards.pdf">https://d3fpllf1m7bbt3.cloudfront.net/sites/default/files/media/browser/2015-07-19/ts-appendix-q-proposed-service-standards.pdf</a> <a href="https://d3fpllf1m7bbt3.cloudfront.net/sites/default/files/media/browser/2018-12-06/2019-2022-pw-multi-year-business-plans-12062018.pdf">https://d3fpllf1m7bbt3.cloudfront.net/sites/default/files/media/browser/2018-12-06/2019-2022-pw-multi-year-business-plans-12062018.pdf</a> <a href="https://www.hamilton.ca/sites/default/files/media/browser/2015-07-19/transit-strategy-report-march-6-2015.pdf">https://www.hamilton.ca/sites/default/files/media/browser/2015-07-19/transit-strategy-report-march-6-2015.pdf</a>
iii. shows current performance relative to the targets set out.	See Page 10 of the Ten Year Local Transit Strategy	



Table I-2 (Cont'd)  
City of Hamilton  
Summary of Transit Asset Management Plan Requirements  
As per O. Reg. 82/98, as amended

Ontario Regulation 82/98, as amended subsection 8(3) Requirements	Compliance	Link
3. An asset management strategy that:		
i. sets out planned actions that will enable the assets to provide the proposed level of service in a sustainable way, while managing risk, at the lowest life cycle cost,	See Table I-3 below	
ii. is based on an assessment of potential options to achieve the proposed level of service, which assessment compares,	See Table I-3 below	
A. life cycle costs,	See pages 147-150 and Page 309 of the City of Hamilton Budget and Multi-Year Outlook (2023-2026).	<a href="https://pub-hamilton.escribemeetings.com/filestream.ashx?DocumentId=350254">https://pub-hamilton.escribemeetings.com/filestream.ashx?DocumentId=350254</a> <a href="https://www.hamilton.ca/sites/default/files/2023-09/Budget_2023-Approved-Operating-Capital-Book.pdf">https://www.hamilton.ca/sites/default/files/2023-09/Budget_2023-Approved-Operating-Capital-Book.pdf</a>
B. all other relevant direct and indirect costs and benefits, and	See pages 147-150 and Page 309 of the City of Hamilton Budget and Multi-Year Outlook (2023-2026).	<a href="https://pub-hamilton.escribemeetings.com/filestream.ashx?DocumentId=350254">https://pub-hamilton.escribemeetings.com/filestream.ashx?DocumentId=350254</a> <a href="https://www.hamilton.ca/sites/default/files/2023-09/Budget_2023-Approved-Operating-Capital-Book.pdf">https://www.hamilton.ca/sites/default/files/2023-09/Budget_2023-Approved-Operating-Capital-Book.pdf</a>
C. the risks associated with the potential options,	The risk of not following this Asset Management Plan may result in: <ul style="list-style-type: none"> <li>• increased lifecycle costs of capital infrastructure and rolling fleet due to unplanned repairs.</li> <li>• increased operating and maintenance costs due to unplanned equipment failure.</li> <li>• risk of violation of Provincial and Federal Regulations including Occupational Health and Safety Act, Ontario Fire Code and Ontario Building Code.</li> <li>• reduced procurement efficiency.</li> <li>• risk of compromised security (vault and fare media).</li> <li>• increased contractual and reputation risks.</li> </ul>	



Table I-2 (Cont'd)  
City of Hamilton  
Summary of Transit Asset Management Plan Requirements  
As per O. Reg. 82/98, as amended

Ontario Regulation 82/98, as amended subsection 8(3) Requirements	Compliance	Link
<p>iii. contains a summary of, in relation to achieving the proposed level of service, (not defined clearly)</p> <p>A. non-infrastructure solutions, B. maintenance activities, C. renewal and rehabilitation activities, D. replacement activities, E. disposal activities, and F. expansion activities,</p>	<p>See pages 147-150 and Page 309 of the City of Hamilton Budget and Multi-Year Outlook (2023-2026).</p>	<p><a href="https://pub-hamilton.escribemeetings.com/filestream.ashx?DocumentId=350254">https://pub-hamilton.escribemeetings.com/filestream.ashx?DocumentId=350254</a> <a href="https://www.hamilton.ca/sites/default/files/2023-09/Budget_2023-Approved-Operating-Capital-Book.pdf">https://www.hamilton.ca/sites/default/files/2023-09/Budget_2023-Approved-Operating-Capital-Book.pdf</a></p> <p><a href="https://www.hamilton.ca/sites/default/files/2022-10/22-255-consolidated-oct2022.pdf">https://www.hamilton.ca/sites/default/files/2022-10/22-255-consolidated-oct2022.pdf</a></p>
<p>iv. discusses the procurement measures that are intended to achieve the proposed level of service, and</p>	<p>See Procurement Policy By-law</p> <p>GOALS AND OBJECTIVES OF THE PROCUREMENT POLICY</p> <ul style="list-style-type: none"> <li>- Procure the necessary quality and quantity of Goods and/or Services in an efficient, timely and cost effective manner, while maintaining the controls necessary for a public agency, in accordance with the Procurement Policy as approved by Council.</li> <li>- Encourage an open and competitive bidding process for the acquisition and disposal of Goods and/or Services, and the objective and equitable treatment of all vendors.</li> <li>- Ensure the best value of an acquisition is obtained. This may include, but not be limited to, the determination of the total cost of performing the intended function over the lifetime of the task, acquisition cost, installation, disposal value, disposal cost, training cost, maintenance cost, quality of performance and environmental impact.</li> <li>- Procure Goods and/or Services with due regard to the preservation of the natural environment and to encourage the use of “environmentally friendly” products and services, as supported by the City’s Strategic Plan.</li> </ul>	<p><a href="https://www.hamilton.ca/sites/default/files/2022-10/22-255-consolidated-oct2022.pdf">https://www.hamilton.ca/sites/default/files/2022-10/22-255-consolidated-oct2022.pdf</a></p>



Table I-2 (Cont'd)  
City of Hamilton  
Summary of Transit Asset Management Plan Requirements  
As per O. Reg. 82/98, as amended

Ontario Regulation 82/98, as amended subsection 8(3) Requirements	Compliance	Link
<p>v. includes an overview of the risks associated with the strategy and any actions that will be taken in response to those risks.</p>	<p><u>Changing technology</u>: Investment in Transit assets are high cost, long term commitments. With rapidly changing technology such as electric vehicles and autonomous vehicles, the City may be required to quickly modify, remove and/or add fleet and facility assets in order to accommodate emerging trends.</p> <p><u>Funding from Senior Government</u>: Senior levels of Government have recognized gridlock costs Canada's economy billions of dollars in lost productivity and damage to the environment. In recent years, the Government of Canada has provided stimulus money (Canada Infrastructure Program) to improve and expand transit service that provided the City with the necessary funds for fleet and facility maintenance. The Federal and Provincial Governments have indicated future long-term funding announcements can be expected which the City will be reliant on for continued asset management. Cancellation of funding programs will result in budget shortfalls.</p> <p><u>Regional Fare Integration</u>: The Big Move, the Greater Toronto and Hamilton Area (GTHA) regional transportation plan, called for the implementation of an integrated regional fare structure. Determining an optimal fare structure is a critical component of developing the overall structure. As the City of Hamilton has the lowest fare in the GTHA there may be impacts to service delivery not contemplated in this plan.</p> <p><u>Skilled Labour</u>: The Canadian Trucking Alliance has reported the growing shortage of attracting and retaining heavy duty mechanics is near "crisis". The impact of retiring baby boomers and changing educational values that allowed the mechanic occupation to seem an unappealing career choice for parents to encourage children has significantly impacted the availability of qualified mechanics. The inability to acquire skilled staff to meet growing fleet needs may have financial and service impacts.</p>	



Table I-2 (Cont'd)  
City of Hamilton  
Summary of Transit Asset Management Plan Requirements  
As per O. Reg. 82/98, as amended

Ontario Regulation 82/98, as amended subsection 8(3) Requirements	Compliance	Link
<p>4. A financial strategy that:</p> <p>i. shows the yearly expenditure forecasts that are proposed to achieve the proposed level of service, categorized by,</p> <p>A. non-infrastructure solutions, B. maintenance activities, C. renewal and rehabilitation activities, D. replacement activities, E. disposal activities, and F. expansion activities,</p>	<p>Capital Costs - see page 453-463 of 2019 Tax Supported Preliminary Capital Budget Book 2</p> <p>Facilities has annual capital programs through the City's Tax Capital Budget for maintaining and upgrading corporate facilities. While the annual amount is not sufficient to fulfill all needs in a given year, facilities prioritizes based on condition and urgency of works. The trend of declining facility condition has been communicated through the 2016 State of the Infrastructure - SOTI report and other facilities reports (Capital Lifecycle Renewal - Strategic Renewal of Facilities -PW18065; dated July 12, 2018). Grant funding will be sought to mitigate any potential decline of facilities.</p>	<p><a href="https://d3fpllf1m7bbt3.cloudfront.net/sites/default/files/media/browser/2018-11-30/2019-preliminary-tax-capital-budget-book-2-v2.pdf">https://d3fpllf1m7bbt3.cloudfront.net/sites/default/files/media/browser/2018-11-30/2019-preliminary-tax-capital-budget-book-2-v2.pdf</a></p> <p><a href="https://www.hamilton.ca/city-initiatives/strategies-actions/asset-management-plan">https://www.hamilton.ca/city-initiatives/strategies-actions/asset-management-plan</a></p> <p><a href="https://pub-hamilton.escribemeetings.com/filestream.ashx?DocumentId=160096">https://pub-hamilton.escribemeetings.com/filestream.ashx?DocumentId=160096</a></p>
<p>ii. provides actual expenditures in respect of the categories set out in sub-subparagraphs i A to F from the previous two years, if available, for comparison purposes,</p>	<p>See pages 505-526 of the City of Hamilton 2023 Tax Supported Capital Budget</p>	<p><a href="https://pub-hamilton.escribemeetings.com/filestream.ashx?DocumentId=351991">https://pub-hamilton.escribemeetings.com/filestream.ashx?DocumentId=351991</a></p> <p><a href="https://pub-hamilton.escribemeetings.com/filestream.ashx?DocumentId=350254">https://pub-hamilton.escribemeetings.com/filestream.ashx?DocumentId=350254</a></p>
<p>iii. gives a breakdown of yearly revenues by source,</p>	<p>See pages 505-526 of the City of Hamilton 2023 Tax Supported Capital Budget</p>	<p><a href="https://pub-hamilton.escribemeetings.com/filestream.ashx?DocumentId=351991">https://pub-hamilton.escribemeetings.com/filestream.ashx?DocumentId=351991</a></p> <p><a href="https://pub-hamilton.escribemeetings.com/filestream.ashx?DocumentId=350254">https://pub-hamilton.escribemeetings.com/filestream.ashx?DocumentId=350254</a></p>
<p>iv. discusses key assumptions and alternative scenarios where appropriate, (see associated text) and</p>	<p>Information to be provided following the completion of the updated SOTI and Transit AMP in early 2024.</p>	
<p>v. identifies any funding shortfall relative to financial requirements that cannot be eliminated by revising service levels, asset management or financing strategies, and discusses the impact of the shortfall and how the impact will be managed.</p>	<p>Information to be provided following the completion of the updated SOTI and Transit AMP in early 2024.</p>	



**Table I-3  
City of Hamilton  
Planned Action Summary – Transit Asset Management Plan**

Planned Action	Current Activity Notes	Opportunity
Non-Infrastructure Solutions	<ul style="list-style-type: none"> <li>- 10 Year Local Transit Strategy</li> <li>- Annual Transit Service Review</li> <li>- City Wide Transportation Master Plan</li> <li>- Automatic Passenger Counters to confirm areas of growth</li> </ul>	<ul style="list-style-type: none"> <li>- Transit network review, (Re)-Envision - review and confirm expansion service areas.</li> </ul>
Maintenance Activities	<ul style="list-style-type: none"> <li>- Maintenance completed as per manufacturer guidelines and Ministry of Transportation Motor Vehicle Inspection Station Standards, recommendations of licenced fleet maintenance staff.</li> <li>- Maintenance tracking via Trapeze and Avantis Asset Management software systems.</li> </ul>	<ul style="list-style-type: none"> <li>- Continued tracking of asset maintenance and renewal.</li> <li>- Funding opportunities from senior levels of Government for capital improvements to supplement municipal funding gaps.</li> </ul>
Replacement Activities	<ul style="list-style-type: none"> <li>- 12 Year Revenue vehicle replacement cycle</li> </ul>	<ul style="list-style-type: none"> <li>- Review annual cycle based on updated cost benefit and technology improvements.</li> </ul>
Renewal/Rehabilitation Activities	<ul style="list-style-type: none"> <li>- Capital rehabilitation occurs as funding from senior levels of Government become available.</li> <li>- Infrastructure renewal plan is contained in Asset Planner software. Identified deficiencies are monitored and addressed through Capital Budget process.</li> </ul>	<ul style="list-style-type: none"> <li>- None identified</li> </ul>
Disposal Activities	<ul style="list-style-type: none"> <li>- Vehicles retired at end of 12 year life cycle and condition evaluated. If unit is undamaged and in fair shape it is auctioned. Non-usable units are sold for scrap value.</li> </ul>	<ul style="list-style-type: none"> <li>- None identified</li> </ul>
Expansion Activities	<ul style="list-style-type: none"> <li>- Expansion vehicles and new Transit Maintenance and Storage Facility identified in 10 Year Local Transit Strategy.</li> <li>- Incorporation of recommendations of Annual Service Reviews</li> </ul>	<ul style="list-style-type: none"> <li>- Service levels and fleet needs derived from 10 Year Local Transit Strategy and approved during Capital budget process. Continue long range forecasting by adopting a 10 Year rolling transit plan.</li> <li>- Construction of additional Maintenance &amp; Storage Facility in lower city dependent on funding from senior levels of Government.</li> </ul>



# Appendix J

## Proposed D.C. By-laws





# Appendix J: Proposed D.C. By-laws

Provided under separate cover.



# Addendum to the December 21, 2023 Development Charges Background Study

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City of Hamilton

March 28, 2024

Watson & Associates Economists Ltd.  
905-272-3600  
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## List of Acronyms and Abbreviations

<b>Acronym</b>	<b>Full Description of Acronym</b>
A.E.G.D.	Airport Employment Growth District
A.T.	Active transportation
B.T.E.	Benefit to existing
C.I.P.A.	Community Improvement Plan Area
D.C.	Development Charges
D.C.A.	Development Charges Act
L.S.P.	Local Service Policy
N.A.I.C.S.	North American Industry Classification System
Sq.ft.	Square foot
S.W.M.	Stormwater management



# 1. Background

Commensurate with the provisions of the Development Charges Act, 1997, as amended (D.C.A.), the City has undertaken a Development Charges (D.C.) Background Study and released the study in accordance with the D.C.A. The following provides a summary of the key dates in the D.C. by-law process:

- April 13, 2023, September 18, 2023, and November 9, 2023 – D.C. Stakeholders Sub-Committee meetings
- December 21, 2023 – Release of the D.C. Background Study and draft by-laws
- January 23 & 24, 2024 – Public engagement sessions
- February 22, 2024 – Public Meeting of Council
- March 28, 2024 – Addendum to December 21, 2023 report released
- April/May 2024 – Council considers adoption of Background Study, as amended and passage of D.C. By-laws

The purpose of this addendum report is to revise the capital costs related to water, wastewater, stormwater, and services related to a highway. In addition, an update to the Local Service Policy (L.S.P.) is being proposed. As a result of these revisions, a recalculation of the D.C. rates has been undertaken. Further details are provided in this addendum report on changes to recommended exemption policies and wording included in the draft D.C. by-laws.

## 2. Updates to the 2024 D.C. Background Study

This section of the addendum report provides an explanation for the above-noted refinements. The refinements have resulted in a decrease to the calculated D.C. rates.

### 2.1 Refinements to Parks and Recreation Services

---

Based on further review of the Background Study, a section of the recreation facilities service standard table was not included in Appendix B in error. The missing page has been included in the amended pages attached to this report. There is no impact on the service standard calculation or D.C. rate.

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## 2.2 Refinements to Water Services

---

Based on further review by City staff, a number of revisions have been made to the water capital project listing. The discussion below provides a summary of the changes that have been made to the details of the water projects (Table 5-15 in the Background Study):

City staff have identified that the following project was missing from the capital project list:

- Light Rail Transit (L.R.T.) Related Water Capital Projects: \$5.25 million

This project is fully growth-related and as such, the full capital cost has been included in the D.C. calculations as part of the City-wide water projects. This project is part of the following project in the D.C. Background Study capital listing (Table 5-15):

Original Project Number	Revised Project Number	Project Name	Change in Net Capital Cost
13	13	City Wide Water Distribution System	+\$5.25 million

Note: original project number in the tables herein refers to the project number in the Background Study released on December 21, 2023. The revised project number refers to the project listing included in the amended pages of this addendum report.

Following additional project review by City staff, two projects have been removed from the City-wide water capital projects as these works are no longer required for the growth identified as part of this D.C. study. These projects are as follows:

- CW1-W-23: Oversizing of Infrastructure-Watermains (oversizing of servicing infrastructure within subdivisions): \$427,000; and
- CW14-W-23: Oversizing of Infrastructure-Watermains (oversizing of servicing infrastructure for subdivisions not identified on draft plans): \$10.12 million.



These costs have been removed from the calculations, resulting in a net decrease of \$10.55 million in D.C.-eligible costs.

The following provides a summary of the changes to Table 5-15 as a result of this removal:

Original Project Number	Revised Project Number	Project Name	Change in Net Capital Cost
12	12	City Wide Water Distribution Network	(\$10.55 million)

A further reduction of \$8.00 million has been applied to the City-wide water project listing for local servicing costs (non-trunk infrastructure) in accordance with the City's Comprehensive Development Guidelines and Financial Policies Manual. This reduction has been applied to the net-D.C. capital costs as follows:

Original Project Number	Revised Project Number	Project Name	Change in Net Capital Cost
N/A	14	Reduction in Development Charges for Local Servicing Cost (Non-Trunk)	(\$8.00 million)

GM BluePlan, the consultant undertaking the D.C. analysis for water and wastewater services, has prepared a memo summarizing the above changes. This memo is provided in Appendix B of this addendum report.

Given the changes to the D.C. capital project listing, the provisional post period benefit deduction has decreased from \$33 million to \$31 million. In addition, given that a portion of the capital costs that were anticipated to be debt-financed have been removed, growth-related financing costs have decreased from \$12.47 million to \$12.05 million.





Original Project Number	Revised Project Number	Project Name	Change in Net Capital Cost
16	17	Growth Related Financing Costs (Discounted)	(\$412,000)
17	18	Provisional Post Period Benefit Deduction	(\$2 million)

As a result of these changes, the net D.C.-related cost for water services has decreased from \$183.61 million to \$171.90 million.

These refinements result in a decrease to the calculated D.C. for water services. For single & semi-detached dwellings the D.C. decreases from \$7,323 per unit to \$6,856 per unit. For non-residential development, the D.C. decreases from \$4.65 per sq.ft. to \$4.36 per sq.ft.

## 2.3 Refinements to Wastewater Linear Services

---

A number of refinements have also been made to wastewater linear services that are similar in nature to the changes made for water services. A summary of the changes is provided herein.

City staff have identified that the following project was missing from the capital project list:

- Light Rail Transit (L.R.T.) Related Wastewater Capital Projects: \$5.25 million

This project is part of the following project in the D.C. background study capital listing:



Original Project Number	Revised Project Number	Project Name	Change in Net Capital Cost
10	10	City Wide Sanitary System	+\$5.25 million

This project is fully growth-related and as such, the full capital cost has been included in the D.C. calculations under the City-wide wastewater project listing.

Similarly, City staff identified that the following two (2) projects are no longer required for the growth identified for this D.C. study:

- CW4-S-23: Oversizing of Infrastructure-Sanitary (oversizing of servicing infrastructure within subdivisions): \$852,000; and
- CW18-S-23: Oversizing of Infrastructure-Sanitary (oversizing of servicing infrastructure for subdivisions not identified on draft plans): \$1.63 million.

These costs have been removed from the calculations, resulting in a net decrease of \$2.48 million in D.C.-eligible costs. These projects form part of the following project in the D.C. Background Study (Table 5-16):

Original Project Number	Revised Project Number	Project Name	Change in Net Capital Cost
9	9	City Wide Sanitary System	(\$2.48 million)

A further reduction of \$10 million has been applied to the City-wide wastewater project listing for local servicing costs (non-trunk infrastructure) in accordance with the City's Comprehensive Development Guidelines and Financial Policies Manual. This reduction has been applied to the net-D.C. capital costs as follows:



Original Project Number	Revised Project Number	Project Name	Change in Net Capital Cost
N/A	11	Reduction in Development Charges for Local Servicing Cost (Non-Trunk)	(\$10.0 million)

Appendix B provides for the memo prepared by GM BluePlan which summarizes the above changes.

Given the changes to the D.C. capital project listing, the provisional post period benefit deduction has decreased from \$14 million to \$13 million. Given the net addition of capital costs related to City-wide wastewater projects, there is an increase in the proportion of the capital costs that are anticipated to be debt-financed. As a result, growth-related financing costs have increased from \$39.45 million to \$39.47 million.

Original Project Number	Revised Project Number	Project Name	Change in Net Capital Cost
13	14	Financing (Linear) (Interest Discounted)	+\$18,000
14	15	Provisional Post Period Benefit Deduction	(\$1 million)

As a result of these changes, the net D.C.-related cost for wastewater services has decreased from \$272.76 million to \$266.54 million.

These refinements result in a decrease to the calculated D.C. for wastewater linear services. For single & semi-detached dwellings the D.C. decreases from \$10,878 per unit to \$10,630 per unit. For non-residential development, the D.C. decreases from \$6.91 per sq.ft. to \$6.75 per sq.ft.



## 2.4 Refinements to Stormwater Drainage and Control Services – Separate Sewer System

---

Upon further review, City staff have determined that two (2) projects on the quality/quantity stormwater management (S.W.M.) listing in the Stoney Creek – Mountain development area have been completed and funded. The following projects have been removed from the capital project listing:

- SCM 18 – Future Planned Residential Development S.W.M. Facility: \$3.63 million
- SCM 2 – Davis Creek Wet Pond: \$5.91 million

With the addition of the 15% allowance, this results in a decrease in the net D.C. capital costs of \$10.98 million. These projects form part of the following line item in Table 5-20 of the Background Study as follows:

Original Project Number	Revised Project Number	Project Name	Change in Net Capital Cost
1	1	Stormwater Management Quality/Quantity Facilities – Residential	(\$10.98 million)

WSP Inc. (in association with Scheckenberger & Associates Ltd.), the consultant undertaking the D.C. analysis for stormwater services has prepared a memo summarizing the above changes. This is provided in Appendix C to this report.

Given the update to the capital project listing, a recalculation of the provision for stormwater credits has been undertaken. As a result, this provision has decreased from \$36.58 million to \$34.90 million.



Original Project Number	Revised Project Number	Project Name	Change in Net Capital Cost
5	5	Provision for Stormwater Credits	(\$1.68 million)

These changes result in a decrease from \$276.18 million to \$263.52 million in the net D.C.-related cost for stormwater facilities within the separate sewer system area.

These refinements result in a decrease to the calculated D.C. for stormwater services in the separate sewer system area. For single & semi-detached dwellings, the D.C. decreases from \$23,541 per unit to \$22,741 per unit. Since the growth-related capital costs for stormwater facilities in the separate sewer system are 100% attributed to the residential sector, there is no impact to the non-residential charge.

## 2.5 Refinements to Services Related to a Highway

---

Based on further review of the capital project listing for services related to a highway, a number of refinements are being made which are discussed in this section. Arcadis Professional Services (Canada) Inc. (Arcadis) is the engineering consultant responsible for the D.C. analysis for services related to a highway. They have prepared a memo summarizing these changes, which is provided in Appendix D to this report. Although high-level details are summarized in the following sections, specific costing changes, listed out by project, can be found in Exhibit 1 of the Arcadis memo.

### 2.5.1 *Non-Growth-Related Road Project*

The following project was determined to be non-growth-related and has been removed from the capital project listing:



Original Project Number	Revised Project Number	Project Name	Change in Net Capital Cost
36	N/A	Golf Links Road – McNiven Road to Kitty Murray Lane	(\$7.78 million)

This results in a net D.C. reduction of \$7.78 million.

### **2.5.2 Road Project Timing Updates**

The timing of certain road projects was updated to support development and better align with updated transportation planning and the phasing of development in the Airport Employment Growth District (A.E.G.D.). The following projects were moved to the 2031-2041 time period:

Original Project Number	Revised Project Number	Project Name	Change in Net Capital Cost
12	12	Dickenson Road – Glancaster Road to Garth Street Extension	(\$26.84 million)*
27	26	Smith Road – Arterial 1N to Airport Boundary	(\$0.60 million)
38	38	Shaver Road – Trustwood to Garner Road	(\$5.36 million)

\*Note: this value includes cumulative impacts with section 2.5.3

Based on the timing of these projects, a 100% post-period benefit deduction was applied, given that these works are no longer anticipated to benefit growth within the current forecast period. As a result, the net growth-related capital cost included in the D.C. calculations has decreased by approximately \$12.5 million.



### **2.5.3 Road Project Segmentation Update**

The following project has been separated into two (2) separate segments/projects:

<b>Original Project Number</b>	<b>Revised Project Number</b>	<b>Project Name</b>	<b>Change in Net Capital Cost</b>
12	12	Dickenson Road – Glancaster Road to Garth Street Extension	(\$26.84 million)*
N/A	13	Dickenson Road – Garth Street Extension to upper James Street	+\$13.63 million

\*Note: this value includes cumulative impacts with section 2.5.2

The timing of the first project is now moved to the 2031-2041 period and is considered to provide a 100% post-period benefit. As a result, this project is not included in the D.C. capital costs, which results in a net capital cost decrease of approximately \$13.2 million.

### **2.5.4 Road Projects Updated Future Pavement Widths**

The future pavement widths for a number of projects have been updated and as a result, the cost estimates have been updated. Based on these changes, the net D.C. capital cost has decreased by approximately \$0.25 million.

### **2.5.5 Road Project Right-of-Way Assumptions and Revised Local Service Policy (L.S.P.) Deductions**

The future right-of-way width assumptions for select projects have been updated to reflect the A.E.G.D. Transportation Master Plan. In general, the future right-of-way road width assumptions have increased for certain A.E.G.D. projects by approximately 6 to 17 metres. In addition, a number of L.S.P. deductions and cost shares have been updated and/or changed and are now reflected as part of the single line-item deduction discussed in Section 2.5.6 of this report. The projects that have been updated are as follows:



Original Project Number	Revised Project Number	Project Name	Change in Net Capital Cost
2	2	Book Road – Southcote Road to Highway 6	+\$0.80 million
3	3	Collector 1E – Collector 6N to Dickenson Road	N/A*
4	4	Arterial 1N – Collector 2N to Dickenson Road/Garth Street Extension:	+\$0.67 million
5	5	Collector 2N – Collector 5W to Arterial 1N	N/A*
9	9	Collector 6E – Collector 6N to Dickenson Road	+4.51 million
10	10	Collector 7N – Collector 5W to Collector 2W	N/A*
14	15	Book Road – Smith Road to Southcote Road	+0.35 million
15	16	Garth Street Extension – Twenty Road to Collector 6N	N/A*
16	17	Garth Street Extension – Collector 6N to Dickenson Road	N/A*
20	21	Smith Road – Garner Road to Hydro Corridor	+\$0.13 million
21	22	Smith Road – Hydro Corridor to Book Road	N/A*
22	23	Smith Road – Book Road to Arterial 1N	N/A*
23	24	Southcote Road – Garner Road to Book Road	(\$22.70 million)
24	25	Upper James Street – Rymal Road to Highway 6 South	N/A*





Original Project Number	Revised Project Number	Project Name	Change in Net Capital Cost
28	29	Airport Road – East Cargo Road to Upper James Street	+\$0.13 million
30	31	Collector 10N – Garner Road to Smith Road	+\$8.17 million
34	35	Collector 1W – Collector 10N to Garner Road	N/A*
50	50	Collector C (Block 2) – Barton Street to Highway 8	+5.64 million
52	52	Collector E (Block 3) – Barton Street to Highway 8	+\$5.06 million
53	53	Collector F (Block 3) – Barton Street to Collector D	+\$1.71 million
64	64	Rymal Road – Dartnall Road to Upper James Street	(\$12.31 million)
65	65	Upper Wellington Street – Limeridge Road to Stone Church Road	(\$0.18 million)
71	71	McNeilly Road – Highway 8 to Barton Street	+\$1,400
72	72	Lewis Road – Highway 8 to Barton Street	+\$750
74	74	Jones Road – Highway 8 to Barton Street	+\$1,400
81	81	Parkside Drive – North Waterdown Drive to Avonsyde Boulevard	(\$4.27 million)

\*Note: no impact on net capital costs as these projects are 100% post-period benefit

The above changes result in a net D.C. capital cost decrease of approximately \$12.26 million.



### **2.5.6 Road Project Updated L.S.P. and Financial Policies**

Through further review of the capital projects included in the D.C. study along with the deductions assumed to be funded by the developers as per the L.S.P., it was determined that further deductions were required. As such, additional deductions totaling \$59 million have been made (inclusive of the L.S.P. deduction revisions noted in section 2.5.5 of this report)

In addition, an amendment to the City's Comprehensive Development Guidelines and Financial Policies has been proposed for Section L.2.4: Value of Land for Road Allowance, as follows:

“Where a Proponent is required to dedicate more than thirteen (13) metres of land to establish a new road allowance width for a residential road, and more than 16m for a non-residential road, measured from the centerline of the road allowance to one side to its ultimate width, the City shall compensate the Proponent for the value of dedicated land beyond 13 metres in width on that side of the road allowance for a residential road, and 16m for a non-residential road, respectively, for the length of the conveyance. For clarity, non-residential roads include those roads that are meant to carry mixed traffic and not solely residential traffic.”

Based on this proposed amendment, additional L.S.P. deductions in the amount of \$4.7 million have been applied to the capital project listing. Note: the associated changes to the L.S.P. are identified in further detail in Section 2.6 of this report.

The above changes result in a total net D.C. capital cost reduction of approximately \$64 million. This is applied to the project listing as a single line-item deduction as follows:

<b>Original Project Number</b>	<b>Revised Project Number</b>	<b>Project Name</b>	<b>Change in Net Capital Cost</b>
N/A	91	Local Share Deduction	(\$64.08 million)

The latter noted amendment to the Financial Policies for Development (and correspondingly the L.S.P.) and the associated D.C. impacts are provided for Council's



consideration. If Council does not approve these changes to the Policies, the associated D.C. rate impacts are provided in Appendix F for further consideration.

### **2.5.7 Additional Major Structures**

Based on the Waterdown Transportation Master Plan, two (2) additional active transportation (A.T.) bridges have been added to the capital list as follows:

<b>Original Project Number</b>	<b>Revised Project Number</b>	<b>Project Name</b>	<b>Change in Net Capital Cost</b>
N/A	102	Margaret Street Active Transportation Bridge	N/A*
N/A	103	Sealey Park Active Transportation Bridge	+\$1.43 million

\*Note: no impact on net capital costs as this project is 100% post-period benefit based on timing

This results in a net capital cost increase of approximately \$1.4 million.

### **2.5.8 Major Structures Timing**

Based on further review by City staff, the timing of the following major structures has been delayed to the 2031 to 2041 period:

<b>Original Project Number</b>	<b>Revised Project Number</b>	<b>Project Name</b>	<b>Change in Net Capital Cost</b>
97	98	Henderson Lift Pedestrian and Cyclist Bridge	(\$3.80 million)
98	99	Hamilton Centre Pedestrian and Cyclist Bridge	(\$1.81 million)
100	101	Dundas Pedestrian and Cyclist Bridge	(\$0.59 million)



Given the updated timing of the projects, a 100% post-period benefit deduction has been applied, resulting in a net D.C. capital cost decrease of approximately \$6.2 million.

### **2.5.9 Updated Major Structures Cost Estimate**

Through further review, an updated cost estimate for the following project has been provided for the Highway 5/6 Interchange from \$49.1 million to \$60.5 million. In addition, the allocation of costs to the Ministry of Transportation has also been updated from \$36.8 million to \$45.5 million:

Original Project Number	Revised Project Number	Project Name	Change in Net Capital Cost
91	92	Highway 5/6 Interchange	+\$2.73 million

These changes have resulted in a net capital cost increase of approximately \$2.7 million.

### **2.5.10 Removal of Duplicate A.T. Projects**

A number of A.T. projects were removed or adjusted to eliminate overlap with road and other A.T. projects. These changes are as follows:

Original Project Number	Revised Project Number	Project Name	Change in Net Capital Cost
136	139	Binbrook Road – Trinity Church to Royal Winter/Binhaven	(\$0.10 million)
219	N/A	Red Hill Pedestrian Crossing – Eugene Street to Glengrove Avenue	N/A*
227	N/A	Strachan Street Trail – James to Ferguson	(\$60,000)



Original Project Number	Revised Project Number	Project Name	Change in Net Capital Cost
249	N/A	Baseline – Lockport to north Service Road	(\$50,000)
252	N/A	Binbrook Road – Fletcher to Binhaven	(\$90,000)
264	N/A	Carlisle – Highway 6 to Wildberry Way	(\$0.5 million)
269	N/A	Chatham Street – Dundurn to Frid	(\$5,000)
282	N/A	Dundas Street East (Highway 5) – Highway 6 to Boundary	(\$0.19 million)
292	289	Ferguson – Charlton to North of Young	(\$3,900)
317	N/A	Governors – Binkley to Lynden	(\$1.79 million)
319	N/A	Greenford – Owen Place to Cromwell	(\$1,100)
320	N/A	Greenford – Cromwell to Kenora	(\$6,600)
323	N/A	Hamilton – Nisbet to Dundas Street East	(\$22,500)
326	N/A	Highbury Drive – Highland Road West to Whitedeer	(\$19,300)
331	N/A	Highway 8 (Stoney Creek) – King Street East to Dewitt	(\$25,700)
344	N/A	John – Charlton Avenue East to St. Josephs	(\$2,900)
359	N/A	Lormont – First Road West to Picardy	(\$10,000)



Original Project Number	Revised Project Number	Project Name	Change in Net Capital Cost
364	N/A	Main – Osler to South of Osler	(\$28,200)
365	N/A	Main – Osler to York	(\$4,600)
368	355	Maple/Mountain Avenue Extension – Lake Avenue South to End	(\$1,400)
377	N/A	Mill – Dundas Street East to Boundary	(\$52,000)
382	N/A	Mountain Brow Boulevard – Mohawk Road East to Mud	(\$11,400)
387	N/A	North Service Road Link (Millen) – North Service Road to Shoreview	(\$3,600)
389	373	Old Mud – Paramount to Cedarville	(\$2,000)
391	N/A	Owen Place – King Street East to Greenford	(\$2,900)
396	N/A	Picardy – Highland Road West to Lormont	(\$9,400)
401	N/A	Queensdale – Skyland to Upper Wellington	(\$2,100)
402	N/A	Raymond – Stonehenge to Garner	(\$24,500)
416	N/A	Scenic – Angela to West of Chateau	(\$34,200)
417	N/A	Scenic – Colquhoun to Garth (via Scenic and Denlow)	(\$3,800)
437	N/A	Terryberry – Private Road to Rymal Road	(\$3,700)



Original Project Number	Revised Project Number	Project Name	Change in Net Capital Cost
447	N/A	White Church Road East – Trinity Church Road to Upper James	N/A*
448	N/A	Whitedeer – Highbury to Rymal Road East	(\$6,500)
458	N/A	York Road Valley Community Centre Park Hydro Corridor Trail – York to Highway 6	(\$1.85 million)
461	N/A	White Church Road West Loop – White Church Road West, East of Carluke to White Church Road West, West of Highway 6	(\$1.18 million)

\*Note: no impact on net capital costs as these projects are 100% post-period benefit

Based on these changes, the net capital cost for services related to a highway has decreased by \$6 million.

### ***2.5.11 A.T. Project Cost Allocation to the L.S.P.***

Further direction was provided by the City on the application of the L.S.P. to A.T. projects. The following projects were impacted:



Original Project Number	Revised Project Number	Project Name	Change in Net Capital Cost
172	175	Grays/Gray – Confederation Park gate to King	+\$22,000
180	183	Hydro Corridor – Barton to Lawrence	+\$0.23 million
182	185	Hydro Corridor – Wilson/Highway 52 to Regional Road 56	(\$1.41 million)
193	196	Limeridge – Garth/Bonaventure to West 5 <sup>th</sup> /Hawkridge	+\$9,800
194	197	Limeridge Mall Hydro Corridor Trail – Mohawk Road to South of Rymal	(\$0.26 million)
230	231	Upper Sherman – Stone Church to Rymal to Miles	(\$33,200)
238	239	White Church Road West Airport Link	+\$0.66 million
245	246	Airport Road – Butter to Miles	+84,600
297	294	First Road East – Highland Road to Ridge Road	N/A*
328	320	Highland Road East – Upper Centennial parkway to East Town Line	N/A*
376	363	Miles – Rymal Road East to Boundary	N/A*
439	417	Twenty Road – Southcote to West of Nebo	N/A*

\*Note 1: no impact on net capital costs as these projects are 100% post-period benefit

This change resulted in a net capital cost decrease of approximately \$0.5 million.





### 2.5.12 A.T. Project Timing Updates

The timing of the following A.T. projects was delayed to the 2031-2041 time period to align with the timing of related road resurfacing projects:

Original Project Number	Revised Project Number	Project Name	Change in Net Capital Cost
170	173	Governor's – Wainwright to Lynden	(\$0.64 million)
254	254	Book Road – Shaver to Fiddler's Green	(\$0.45 million)
267	266	Carluke – Glancaster to Shaver	(\$0.63 million)
272	270	Concession 4 West – Millgrove Sideroad to Highway 6	(\$0.32 million)
273	271	Concession 6 East – Highway 6 to Centre Road	(\$0.50 million)
285	282	Eighth Road Link – Ridge to Boundary	(\$1.16 million)
293	290	Field – Jerseyville Road West to Governor's Road	(\$0.81 million)
297	294	First Road East – Highland Road to Ridge Road	N/A*
299	296	Flamborough Puslinch Townline – Maddaugh Road to Centre	(\$0.38 million)
328	320	Highland Road East – Upper Centennial parkway to East Town Line	N/A*
330	322	Highway 8 (Flamborough) – Boundary to Brock	(\$4.68 million)
332	323	Highway 8 (Stoney Creek) – Fifty to Boundary	(\$0.08 million)



Original Project Number	Revised Project Number	Project Name	Change in Net Capital Cost
341	332	Jerseyville Road West – boundary to East of Paddy Greens	(\$3.29 million)
362	350	Maddaugh Road – Highway 6 to Flamborough Puslinch Townline	(\$0.23 million)
376	363	Miles – Rymal Road East to Boundary	N/A*
379	365	Mineral Springs – Binkley to Sulphur Springs	(\$0.23 million)
383	368	Mud – Eleventh Road East to Boundary	(\$0.19 million)
420	399	Shaver – Garner to Carluke	(\$0.96 million)
426	405	Southcote – Garner to Airport	(\$0.05 million)
429	408	Sulphur Springs – Lovers to Mineral Springs Road	(\$0.26 million)

Note: no impact on D.C. calculation as these projects were considered 100% developer responsibility in the December 21, 2023, Background Study.

Given the updated timing, these projects are now considered to be fully related to growth outside the current forecast period. As a result, these costs of \$14.9 million are no longer included in the net D.C. capital costs.

### **2.5.13 Provisional Post Period Benefit Deduction**

Given the changes to the D.C. capital project listing, the provisional post period benefit deduction has decreased from \$160 million to \$140 million.

### **2.5.14 Summary of Changes**

As a result of these changes, the net D.C.-related cost for services related to a highway has decreased from \$591.87 million to \$477.83 million.



These refinements result in a decrease to the calculated D.C. for services related to a highway. For single & semi-detached dwellings, the D.C. decreases from \$22,539 per unit to \$18,103 per unit. For non-residential development, the D.C. decreases from \$16.28 per sq.ft. to \$13.31 per sq.ft.

## 2.6 Refinements to the Local Service Policy (L.S.P.)

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Based on further staff review of the existing L.S.P., a change has been proposed to the policy. This change is meant to provide additional clarity for D.C. eligible projects and reflect new standards that have been approved by Council such as the Complete Streets Guidelines (2018) and the A.E.G.D. Transportation Master Plan Update (2023). These changes have been summarized by City staff in Appendix E to this report.

The L.S.P. currently identifies land for all local, collector, and arterial roads (net of applicable oversizing) as direct developer responsibility as per the Financial Policies for Development. Recent approval of the Complete Streets Guidelines and the A.E.G.D. Transportation Master Plan Update have resulted in wider road allowances for non-residential roads, relative to residential roads.

The current Financial Policies for Development does not distinguish between residential and non-residential roads. Given that land for road allowances up to the collector designation is a direct developer contribution, the impact on the D.C. is not proportional for non-residential roads. As such, it is recommended that non-residential roads include a larger base width to be considered local service and that the following language be included in Section E.5.3.1 of the L.S.P. (new text in **underline bold**):

### E.5.3.1.1 Local and Collector Roads (including land)

All Local Roads are the developer's financial responsibility. **For the purposes of D.C. eligibility, the following criteria are applied for Local Roads:**

- **Local Residential – up to 8m width of asphalt driving surface and up to 26m road allowance.**
- **Local Non-Residential – up to 11m of asphalt driving surface and up to 32m of road allowance.**



These proposed changes would result in a net D.C. capital cost reduction of \$4.7 million, as noted in Section 2.5 above.

In addition to the above noted change to the L.S.P., there are a number of minor revisions that are meant to provide additional clarity, however, these do not impact the D.C. rate calculation. These changes are summarized in Appendix E.

## 2.7 Updated Exemption Recommendations

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As part of this D.C. Background Study process, a review of the discretionary exemptions provided by the City was undertaken. Initial recommendations on changes to the exemption policies were provided for Council's consideration prior to the release of the Background Study. Subsequent to these initial exemption recommendations, in-person and virtual public open houses were undertaken where feedback was received from the development community related to the industrial and downtown Community Improvement Plan Area (C.I.P.A.) exemptions. Based on further review of the proforma/market feasibility analyses, the following revisions are recommended to the proposed discretionary exemptions:

### **Downtown C.I.P.A. Exemption:**

- **Current Policy:** 40% D.C. discount for all development except for office developments, which are subject to a 70% discount.
- **Initial Recommendation:**
  - a. Maintain 40% C.I.P.A. exemption for all non-residential development (standalone and mixed-use) and 70% C.I.P.A. exemption for standalone major office developments (Class A) greater than 20,000 sq.ft. gross floor area; and
  - b. Remove the 40% exemption for C.I.P.A. residential development.
- **Revised Recommendation:**
  - a. Maintain 40% C.I.P.A. exemption for all non-residential development (standalone and mixed-use) and 70% C.I.P.A. exemption for standalone major office developments (Class A) greater than 20,000 sq.ft. gross floor area; and



- b. Reduce D.C. exemption of 40% for residential development to 20%. Thereafter, reduce exemption amount by 5% every year until phased out entirely in five years.

### **Industrial Reduced Rate:**

- **Current Policy:** City-wide 37% discount of current non-residential rate applicable to all industrial developments.
- **Initial Recommendation:**
  - a. Remove reduced rate exemption (i.e., 37% discount) for industrial development.
  - b. Maintain 37% discount for production and artist studios.
- **Revised Recommendation:**
  - a. 37% discount to apply only to industrial developments with primary economic activity identified as manufacturing (employment North American Industry Classification System (N.A.I.C.S.) code 31-33) as well as for production and artist studios.

### **Industrial Building Expansion (Detached Building)**

- **Current Policy:** D.C.s are not applied on new industrial buildings on the same lot as an existing building(s), up to 50% of the combined gross floor area of the existing building(s).
- **Initial Recommendation:** remove industrial expansion (detached) D.C. exemption for all City-wide industrial developments.
- **Revised Recommendation:** modify the exemption so that it applies only to industrial businesses with primary economic activity identified as manufacturing (employment N.A.I.C.S. code 31-33).

In addition to the above revised recommendations, staff have been directed by Council analyze the following additional exemptions/D.C. rates:

- non-profit daycare centres operating under the *Child Care and Early Years Act, 2014*;
- non-profit long term care facilities operating within the meaning of subsection 2 (1) of the *Fixing Long-Term Care Act, 2021*; and



- the D.C. that would be applicable to buildings constructed on municipally owned lands and operated or managed by TradePort International Corporation (TradePort) under the terms of the Airport Lease between the City and TradePort within the Airport Employment Growth District compared to similar airports such as Kitchener and London.

Council has also directed staff to analyze the following scenarios for the first year of the D.C. by-laws:

- Maintain the current City D.C. rates, adjusted for indexing, along with the 40% exemption for Residential development in the downtown C.I.P.A., the 37% exemption for all industrial development, and the 50% expansion exemption for detached industrial expansions; and
- Update the City D.C. rates but maintain the current 40% exemption for residential development in the downtown C.I.P.A., the 37% exemption for all industrial development, and the 50% expansion exemption for detached industrial expansions.

The final recommendations on the above exemptions and scenarios are provided for Council's consideration through staff report FCS23103(b).

## 2.8 Refinements to Wording in Draft D.C. By-laws

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Based on further discussion with staff and to facilitate interpretation of the D.C. by-laws with respect to the L.S.P., the following refinements are being recommended:

Addition of a definition for Local Service Policies in Section 1 of the by-laws as follows:

***“Local Service Policies”*** means the Local Service Policy attached as Appendix E in the Development Charge Background Study.

Revise Section 18 by capitalizing local service policies to direct the reader back to the definition noted above as follows:

*“Nothing in this By-law prevents Council from requiring, in a condition of an approval or an agreement respecting same under section 51 of the Planning Act or as a condition of consent or an agreement respecting same under section 53*



*of the Planning Act that the owner, at his or her own expense, shall install such local services related to or within a plan of subdivision, as Council may require, in accordance with the City's applicable Local Services Policies in effect at this time."*

These changes will be incorporated into the final draft D.C. by-laws for Council's consideration along with staff recommended exemption policies and clarifying housekeeping edits.

### 3. Overall Changes to the 2024 D.C. Calculations

Based on the changes noted in Section 2, the calculated D.C. (single/semi-detached unit) has decreased as follows:

- City-wide D.C.: decrease from \$41,766 to \$37,330 per unit;
- Urban Area – Combined Sewer System Area D.C.: decrease from \$76,645 to \$71,494 per unit; and
- Urban Area – Separate Sewer System Area D.C.: decrease from \$90,633 to \$84,682 per unit.

With respect to the non-residential charges, the calculated D.C. (per sq.ft. of gross floor area) has decreased as follows:

- City-wide D.C.: decrease from \$20.64 to \$17.67 per sq.ft.
- Urban Area – Combined Sewer System Area D.C.: decrease from \$36.73 to \$33.31 per sq.ft.; and
- Urban Area – Separate Sewer System Area D.C.: decrease from \$41.48 to \$38.06 per sq.ft.

The summary below compares the current charges (as of July 6, 2023), the charges as calculated in the December 21, 2023 D.C. Background Study, and the charges calculated in this addendum report.



Figure 3-1  
City of Hamilton  
D.C. Rate Comparison

Residential (Single Detached) Comparison

Service/Class of Service	Current	Calculated (December 21, 2023 Report)	Calculated (Addendum Report)
<b>Municipal Wide Services/Classes:</b>			
Services Related to a Highway	14,608	22,539	18,103
Public Works	1,092	1,335	1,335
Transit Services	2,600	1,601	1,601
Fire Protection Services	626	1,151	1,151
Policing Services	711	1,018	1,018
Parks and Recreation*	3,518	11,065	11,065
Library Services	1,554	2,061	2,061
Growth Studies**	549	-	-
Long-term Care Services	246	231	231
Child Care and Early Years Programs	21	-	-
Provincial Offences Act Services including By-Law Enforcement	55	52	52
Public Health Services	3	42	42
Ambulance	201	325	325
Waste Diversion	990	346	346
<b>Total Municipal Wide Services/Classes</b>	<b>33,469</b>	<b>41,766</b>	<b>37,330</b>
<b>Water and Wastewater Urban Area Charges</b>			
Wastewater Facilities	5,491	7,125	7,125
Wastewater Linear Services	7,346	10,878	10,630
Water Services	6,466	7,323	6,856
<b>Total Water and Wastewater Urban Area Services</b>	<b>19,303</b>	<b>25,326</b>	<b>24,611</b>
<b>Stormwater Services - Combined Sewer System</b>			
Stormwater Drainage and Control Services	5,355	9,553	9,553
<b>Stormwater Services - Separate Sewer System</b>			
Stormwater Drainage and Control Services	14,192	23,541	22,741
<b>Grand Total - City Wide</b>	<b>33,469</b>	<b>41,766</b>	<b>37,330</b>
<b>Grand Total - Urban Area - Combined Sewer Sytem</b>	<b>58,127</b>	<b>76,645</b>	<b>71,494</b>
<b>Grand Total - Urban Area - Separate Sewer Sytem</b>	<b>66,964</b>	<b>90,633</b>	<b>84,682</b>

\*Parks & Recreation now combined as one D.C. eligible service

\*\*Growth studies are no longer eligible when a new by-law is passed under Bill 23

Note: Rates will be indexed at by-law implementation to 2024\$





Figure 3-2  
City of Hamilton  
D.C. Rate Comparison

Non-Residential (per sq.ft.) Comparison

Service/Class of Service	Current	Calculated (December 21, 2023 Report)	Calculated (Addendum Report)
<b>Municipal Wide Services/Classes:</b>			
Services Related to a Highway	10.92	16.28	13.31
Public Works	0.56	0.80	0.80
Transit Services	1.32	0.96	0.96
Fire Protection Services	0.31	0.69	0.69
Policing Services	0.36	0.61	0.61
Parks and Recreation*	0.16	0.95	0.95
Library Services	0.30	0.18	0.18
Growth Studies**	1.36	-	-
Long-term Care Services	0.28	0.04	0.04
Child Care and Early Years Programs	0.02	-	-
Provincial Offences Act Services including By-Law Enforcement	-	0.03	0.03
Public Health Services	0.02	0.01	0.01
Ambulance	-	0.06	0.06
Waste Diversion	0.02	0.03	0.03
<b>Total Municipal Wide Services/Classes</b>	<b>15.80</b>	<b>20.64</b>	<b>17.67</b>
<b>Water and Wastewater Urban Area Charges</b>			
Wastewater Facilities	2.65	4.53	4.53
Wastewater Linear Services	3.53	6.91	6.75
Water Services	3.10	4.65	4.36
<b>Total Water and Wastewater Urban Area Services</b>	<b>9.28</b>	<b>16.09</b>	<b>15.64</b>
<b>Stormwater Services - Combined Sewer System</b>			
Stormwater Drainage and Control Services	-	-	-
<b>Stormwater Services - Separate Sewer System</b>			
Stormwater Drainage and Control Services	2.93	4.75	4.75
<b>Grand Total - City Wide</b>	<b>15.80</b>	<b>20.64</b>	<b>17.67</b>
<b>Grand Total - Urban Area - Combined Sewer Sytem</b>	<b>25.08</b>	<b>36.73</b>	<b>33.31</b>
<b>Grand Total - Urban Area - Separate Sewer Sytem</b>	<b>28.01</b>	<b>41.48</b>	<b>38.06</b>

\*Parks & Recreation now combined as one D.C. eligible service

\*\*Growth studies are no longer eligible when a new by-law is passed under Bill 23

Note: Rates will be indexed at by-law implementation to 2024\$



## 4. Changes to the Background Study

Based upon the preceding sections, the following revisions are made to the pages within the background study (new pages are appended to this report):

Page Reference	Description of Revisions
ES-v, ES-vi, and ES-viii	Updated the write-up based on the calculated D.C.s, Table ES-2 and Table ES-3.
1-2	Revised Figure 1-1 to include the release of addendum report and update Council consideration of by-law passage date.
5-49 to 5-67	Updated to reflect refinements to the services related to a highway project listing.
5-68, 5-70, 5-72, and 5-73	Updated to reflect refinements to the water and wastewater linear services project listing.
5-77, 5-78, and 5-80	Updated to reflect refinements to stormwater – separate sewer system project listing.
6-4 to 6-6, 6-9 to 6-11	Updated Tables 6-2, 6-3, 6-4, 6-6, and 6-7 to account for the adjustments to the capital needs.
7-5 to 7-12	Updated exemption recommendations and renumbering of pages throughout.
7-13	Updated section 7.5 to reference the addendum report.
Appendix B, page B-59a and B-59b	Updated to include missing page for recreation facilities service standard listing.
Appendix C	Updated the Long-Term Capital and Operating Cost tables.
Appendix E, pages E-19 to E-38	Updates to Local Service Policy and renumbering of pages throughout.
Appendix I	Updated values for the Asset Management Plan calculations and associated table.



It is noted that the draft by-laws (provided under separate cover) will also be revised to reflect the updated D.C. rates, final exemption recommendations, and revised by-law language.

## 5. Process for the Adoption of the Development Charges By-law

Sections 1, 2, 3 & 4 provide a summary of the revisions to the City's D.C. Background Study. If Council are satisfied with the above changes to the Background Study: Addendum Report #1, the recommendations provided in Chapter 7 of the December 21, 2023 report, and the updated by-laws will be considered for approval by Council.



# Appendices



# Appendix A

## Amended Pages (Inserted Throughout Body of Report)



# Appendix B

## Summary of Changes to Water and Wastewater Capital Project Lists



**VIA EMAIL**

March 6, 2024

Watson & Associates Economists Ltd.

West Tower,

2233 Argentia Road Suite 301,

Mississauga, ON

ATTN: **Daryl Abbs, BA, MBE, PLE, Managing Partner**

RE: **Summary of Changes to Water and Wastewater Capital Project List – 2024  
Development Charges (DC) Background Study**

Dear Mr. Abbs,

This memo outlines updates to the Capital Project listing and Development Charges (DC), which was initially finalized in December 2023. The original capital project list and associated development charges for water and wastewater projects have been revised due to recent discussions with City staff. Ongoing evaluations and discussions with the City staff have identified opportunities for enhancements and adjustments to align more closely with the City's evolving priorities and challenges.

**Key Changes Overview**

**1. Integration of Light Rail Transit (LRT) - Related Provisions**

In response to the anticipated impact of the LRT project, City have budgeted for water and wastewater projects which was not included as part of the original water and wastewater DC capital program. The revised capital project list includes a \$5.25M city-wide water project and a \$5.25M city-wide wastewater project.

**2. Development Charges Reduction**

- City-Wide Water Projects: Reflecting a \$8M reduction in DC in accordance with Funding Methodology and Development Financial Policies.
- City-Wide Wastewater Projects: Reflecting a \$10M reduction in DC in accordance with Funding Methodology and Development Financial Policies.

**3. Project Removals**

- City-Wide Water Projects: Following additional project review, two projects have been removed from the city-wide water capital projects list as these projects are no longer required for the growth period of this DC. The projects are **CW1-W-23** and **CW14-W-23**.

- City-Wide Wastewater Projects: Similarly, two projects have been removed from city-wide wastewater capital projects list as these projects are no longer required for the growth period of this DC. The projects are: **CW4-S-23** and **CW18-S-23**.

The updated water and wastewater city-wide project lists are attached in the Appendix.

### **Conclusion**

The updates to the Capital Project Listing, precipitated by recent discussions with City staff, represent a proactive approach to infrastructure planning and development. These changes ensure that the City's capital projects are better aligned with strategic objectives, operational efficiency, and community needs.

Yours truly,

GM BLUEPLAN ENGINEERING LIMITED

Per:

A handwritten signature in blue ink that reads 'Mark Zamojc'.

Mark Zamojc, P.Eng.





PEOPLE | ENGINEERING | ENVIRONMENTS

# APPENDIX

## UPDATED CITY-WIDE W/WW PROJECT LISTS

GUELPH | OWEN SOUND | LISTOWEL | KITCHENER | LONDON | HAMILTON | GTA

ROYAL CENTRE, 3300 HIGHWAY NO. 7, SUITE 402, VAUGHAN, ON L4K 4M3 P: 416-703-0667 F: 416-703-2501 WWW.GMBLUEPLAN.CA

TABLE F-2 - WATER CAPITAL PROGRAM - CITYWIDE

Area	Planning Period	Project ID	Project	Description	2023 Estimated Total Cost	Direct Developer Contribution	City Cost Share	Post Period Benefit	Development Charges (\$2023)	2019-2023 Change Details
City Wide Projects	0 to 5 years	CW2-W-23	Regional Subdivider's Share for Local Improvements		\$ 1,618,318	\$ -	\$ -	\$ -	\$ 1,618,318	Updated cost - inflation only
City Wide Projects	0 to 5 years	CW3-W-23	Intensification Infrastructure Upgrades - Water (0-5 years)	Upgrades to existing infrastructure to accommodate intensification	\$ 20,909,000	\$ -	\$ 10,454,000	\$ -	\$ 10,455,000	Updated cost - inflation only
City Wide Projects	0 to 5 years	CW15-W-23	Large diameter and cut-in valves on existing watermains		\$ 1,958,000	\$ -	\$ -	\$ -	\$ 1,958,000	Updated cost - inflation only
City Wide Projects	0 to 5 years	CW24-W-23	Freelton Well (FDF01) Capacity Increase	Increase the capacity of the Freelton municipal well in order to meet the ultimate water demand of the Freelton Rural Settlement Area	\$ 4,920,467	\$ -	\$ 417,000	\$ -	\$ 4,503,467	Updated cost - inflation only
City Wide Projects	6 years to UBBO	CW4-W-23	Intensification Infrastructure Upgrades - Water	Upgrades to existing infrastructure to accommodate intensification	\$ 20,908,500	\$ -	\$ 10,454,250	\$ -	\$ 10,454,250	Updated cost - inflation only
City Wide Projects	6 years to UBBO	CW11-W-23	Locke St Watermain	Locke St from Barton St to Main St (1500 m; 500 mm)	\$ 5,985,000	\$ -	\$ -	\$ -	\$ 5,985,000	Updated cost - inflation only
City Wide Projects	6 years to UBBO	CW25-W-23	LRT Related	LRT Related W Capital Projects	\$ 5,250,000	\$ -	\$ -	\$ -	\$ 5,250,000	City provided estimate
Sub-Total					\$ 61,549,285	\$ -	\$ 21,325,250	\$ -	\$ 40,224,035	
<b>\$8M Reduction in Development Charges for Local Servicing Cost (Non-Trunk)</b>					\$ -	\$ -	\$ -	\$ -	\$ (8,000,000.00)	\$8M reduction for local servicing cost (non-trunk) in accordance with Funding Methodology and Financial Policies
<b>Total</b>					\$ 61,549,285	\$ -	\$ 21,325,250	\$ -	\$ 32,224,035	

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TABLE F-4 - WASTEWATER CAPITAL I WASTEWATER CAPITAL PROGRAM-CITYWIDE

Area	Planning Period	Project ID	Project	Description	Estimated Total Cost (\$2023)	Capital Budget List	Direct Developer Contribution	City Cost Share	Post Period Benefit	Development Charges (\$2023)	2019-2023 Change Details
City Wide Projects	0 to 5 years	CW1-S-23	Flow Monitoring	Total cost over a period of 2 - 2.5 years. Study being undertaken to know various flow characteristics to calibrate the Sanitary Sewer Model to assist the Master Planning Study	\$ 3,250,000		\$ -	\$ 1,625,000	\$ -	\$ 1,625,000	Updated cost based on rate of \$1.3mil/yr, provided by city
City Wide Projects	0 to 5 years	CW2-S-23	I/I Reduction Program	Program to free up extra capacity within the existing sewers - costs over five years	\$ 2,194,000		\$ -	\$ 1,097,000	\$ -	\$ 1,097,000	Updated cost - inflation only
City Wide Projects	0 to 5 years	CW5-S-23	Land requirement for new sewage pumping stations and easements	Areas for SPS footprints and easements- 5 Ha	\$ 852,000		\$ -	\$ -	\$ -	\$ 852,000	Updated cost - inflation only
City Wide Projects	0 to 5 years	CW6-S-23	Intensification Infrastructure Upgrades - Wastewater (0-5 years)	Upgrades to existing infrastructure to accommodate intensification	\$ 20,909,000	\$ 2,400,000	\$ -	\$ 10,455,000	\$ -	\$ 10,454,000	Updated cost - inflation only
City Wide Projects	0 to 5 years	CW15-S-23	Hwy 403 Trunk sewer twinning - Phase 1	MIP to Main-King	\$ 15,000,000		\$ -	\$ -	\$ -	\$ 15,000,000	Updated cost .using estimate provided by city
City Wide Projects	0 to 5 years	CW19-S-23	Regional Subdivider's Share for Local Improvements		\$ 358,000		\$ -	\$ -	\$ -	\$ 358,000	
City Wide Projects	6 years to UBBO	CW7-S-23	Intensification Infrastructure Upgrades - Wastewater	Upgrades to existing infrastructure to accommodate intensification	\$ 20,909,000	\$ 2,400,000	\$ -	\$ 10,455,000	\$ -	\$ 10,454,000	Updated cost - inflation only
City Wide Projects	6 years to UBBO	CW16-S-23	Hwy 403 Trunk sewer twinning - Phase 2	Royal CSO to MIP	\$ 10,672,000		\$ -	\$ -	\$ -	\$ 10,672,000	awaiting cost, currently inflated from 2019 DC report
City Wide Projects	6 years to UBBO	CW23-S-23	LRT Related	LRT Related WW Capital Projects	\$ 5,250,000		\$ -	\$ -	\$ -	\$ 5,250,000	City provided estimate
Sub-Total					\$ 79,394,000		\$ -	\$ 23,632,000	\$ -	\$ 55,762,000	
<b>\$10M Reduction in Development Charges for Local Servicing Cost (Non-Trunk)</b>					\$ -		\$ -	\$ -	\$ -	\$ (10,000,000)	\$10M reduction for local servicing cost (non-trunk) in accordance with Funding Methodology and Financial Policies
<b>Total</b>					<b>\$ 79,394,000</b>		<b>\$ -</b>	<b>\$ 23,632,000</b>	<b>\$ -</b>	<b>\$ 45,762,000</b>	

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# Appendix C

## Summary of Changes to Stormwater Capital Project Lists



March 6, 2024

Daryl Abbs, BA (Hons), MBE, PLE  
Managing Partner, Watson & Associates Economists Ltd.  
2233 Argentia Rd., Suite 301  
Mississauga, ON L5N 2X7

Dear Mr. Abbs:

**Subject: Summary of Changes to Stormwater Capital Project List – 2024 Development Charges Update, Stormwater Background Study**

This memo outlines updates to the Stormwater Capital Project listing in the 2024 Development Charges (DC) Update, Stormwater (SW) Background Study, which was initially finalized in December 2023. The original capital project list and associated development charges for stormwater management (quality and/or quantity) facilities have been revised due to recent discussions with City staff.

City Finance staff confirmed two (2) projects that have been funded and can be removed from the project listing. These projects are quality / quantity SWM facilities in the Stoney Creek – Mountain (SCM) development area and they are listed below with the net total associated costs that were determined in the original December 2023 version of the 2024 DC Background Study:

- SCM 18, \$3,630,000
- SCM 2, \$5,914,074

These projects have been removed in Appendix G-1: Category C – Stormwater Management (Quality and/or Quantity) Facilities of the Revised March 2024 version of the 2024 DC Update SW Background Study with the revised total costs recalculated in Appendix G.1: Summary of Stormwater Service Costs (GRIDs excluded) and Appendix G.1: Summary of Stormwater Service Costs (GRIDs included) and as summarized in Table G.3 of the revised report. The updated Appendix G-1 tables are attached.

### **Conclusion**

The updates to the Capital Project Listing, precipitated by recent discussions with City staff, represent a proactive approach to infrastructure planning and development. These changes ensure that the City's capital projects listing is accurate and up to date.

Yours sincerely,

Per: Brad Kargus, P.Eng.  
Senior Water Resources Engineer  
WSP Canada Inc.

Per: Ron Scheckenberger, M.Eng., P.Eng.  
President  
Scheckenberger & Associates Ltd.

WSP Canada Inc.  
3450 Harvester Road – Suite 100  
Burlington, ON L7N 3W5

T: +1 905-335-2353  
wsp.com

**APPENDIX G-1: CATEGORY C - STORMWATER MANAGEMENT (QUALITY AND OR QUANTITY) FACILITIES RESIDENTIAL**

Category		Project Title		Year	Drainage Area (ha)	Purpose	Status	SWMF Drainage Work										Growth Related %	Net Growth/Total Associated Cost (\$)	Existing Benefit	Direct Developer Contribution (\$)	Non-Res Area Fraction Cost (\$)	Net Total Associated Cost (\$)	Remarks	Other Changes From 2019 Study		
Primary Dev. Areas	Secondary	SWMF #						Type of Work	Location of Work	Type	Description	Total Volume (m3)	Estimated Footprint 4% (ha)	Estimated Footprint 6% (ha)	Study/Draft Plan Footprint (ha)	Footprint (ha)	Land Cost									Estimated Capital Cost (\$)	Estimated Total Cost Including Land
ANC	C	7	Gamer Neighbourhood Master Drainage Plan - Ancaster	July, 1996 Rev. Nov. 2003	10.4	MDP addressing drainage related issues for existing and future development	Not complete	Proposed Quality Facility #1: Extended detention wetland	Between proposed Highway 6 (new) interchange corridor and the existing development	Quality	Storage Capacity =	910	0.42		0.42	1,104,278	101,476	1,205,754	100	1,205,754	-	-	-	1,205,754		land values updated	
ANC	C	14	Meadowlands Phase IV		6		Not complete		Springbrook at Gamer	Quality / Quantity	Storage Capacity =	2,110		0.36	0.60	1,592,708	235,286	1,827,994	100	1,827,994	-	-	-	1,827,994	increase land to 10% due to known grade constraint	land values updated	
ANC	C	22	Woodland Manor Preliminary SWM Report	Jul-08	15.3	SWM Plan for proposed urban development	Not complete	SWMF	Sulpher Springs Road and Mansfield Drive	Quality / Quantity	Storage Volume =	13,289		0.92		2,436,844	1,103,378	3,540,221	100	3,540,221	-	-	-	3,540,221		land values updated	
ANC	C	24	Miller's pond expansion		5		Not complete	SWMF	Shaver Road and Gamer Road	Quality		3,600	0.20			530,903	401,443	932,346	100	932,346	-	-	-	932,346		land values updated	
ANC	C	25	Golf Stream Manor		36		Not complete			Quality / Quantity		25,920	1.44			3,822,500	1,807,610	5,630,109	100	5,630,109	-	-	-	5,630,109		land values updated	
ANC	R	3	N/A	N/A	31.34	Flood Control	Not complete	Future Retrofit	Galley Crt & Speers Rd	Quality					0.00	-	443,100	443,100	30	132,930	310,170	-	-	-	132,930		
ANC	R	22	N/A	N/A	2.19	Flood Control	Not complete	Future Retrofit	Harrington Place and Lover's Lane	Quality					0.00	-	422,000	422,000	50	211,000	211,000	-	-	-	211,000		
ANC	R	70	Drainage Report - The Meadowlands	N/A	296.9		Not complete	Future Retrofit	Hwy 403 and Golf Links Rd	Quality					0.00	-	4,135,600	4,135,600	40	1,654,240	2,481,360	-	-	-	1,654,240		
ANC	R	71	Drainage Report - The Meadowlands	N/A	42.51		Not complete	Future Retrofit	Golf Links Rd and Meadowlands Blvd	Quality					0.00	-	601,350	601,350	40	240,540	360,810	-	-	-	240,540		
ANC	R	72	Drainage Report - The Meadowlands	N/A	18.03		Not complete	Future Retrofit	Golf Links Rd. and Meadowlands Blvd.	Quality					0.00	-	422,000	422,000	40	168,800	253,200	-	-	-	168,800		
BMH	C	24	Ceterini	2013	15		Not complete	SWMF	Binbrook Rd west of Woodland	Quality / Quantity	Storage Capacity =	9,400		0.90		2,121,383	886,515	3,007,897	100	3,007,897	-	-	-	3,007,897		land values updated	
BMH	C	21	Master Drainage Plan Update Report - Binbrook Settlement Area	Oct. 2006	31	additional facility adjacent to the watercourse	Not complete	SWMF		Quality / Quantity	Storage Capacity =	19,376		1.86		4,384,191	1,442,768	5,826,959	100	5,826,959	-	-	-	5,826,959		land values updated	
BMH	C	20	Binbrook Settlement Area	2013	22.72	MacNeilly facility	Not complete	SWMF	Area draining to the south west near Fletcher Road	Quality / Quantity	Storage Capacity =	19,201		1.36	1.80	4,242,765	1,432,969	5,675,734	100	5,675,734	-	-	-	5,675,734		land values updated	
HAM	C	12	Hannon Creek SHS - North Glanbrook Industrial Business Park MDP	Nov. 2008	10		Not complete	SWMF	Upper Gage/Terrn in tandem with HAM29	Quality / Quantity	Storage volume =	8,817		0.40		942,837	853,992	1,796,829	100	1,796,829	-	-	-	1,796,829		land values updated	
HAM	C	28	305 Stone Church Road West	2011	33.29	SWM Plan for proposed urban development	Not complete	SWMF	NE limit of development	Quality / Quantity	Storage volume =	20,382		2.00		4,708,055	2,056,374	6,764,429	100	6,764,429	-	-	-	6,764,429	estimated 10,000 m3 rock	land values updated	
HAM	C	29	Miles	2011	42	SWM Plan for proposed urban development	Not complete	SWMF	NE limit of development	Quality / Quantity	Storage volume =	30,240		2.52		5,939,871	2,745,425	8,685,297	100	8,685,297	-	-	-	8,685,297	estimated 12500 m3 rock	land values updated	
HAM	C	30	St Elizabeth expansion	2013	50	SWM facility expansion	Not complete	SWMF	expand for new development	Quality / Quantity	Storage volume =	38,000				-	2,481,142	2,481,142	100	2,481,142	-	-	-	2,481,142			
HAM	C	31	Upper Wellington and Stonechurch		14		Not complete	SWMF	SW corner of Upper Wellington and Stonechurch Rd	Quality / Quantity	Extended Detention Pond	11,263		0.84	1.40	3,299,929	1,255,986	4,555,915	100	4,555,915	-	-	-	4,555,915	increase land to 10% due to known grade constraint: estimated 7000 m3 in rock	land values updated	
HAM	R	55	Villages of Glancaster	Jul. 1990	77.63	Flood Control	Not complete	Future Retrofit	Twenty Rd and Garth St	Quality		-	3.11		3.11	7,319,242	1,086,650	8,405,892	80	6,724,713	1,681,178	-	-	-	6,724,713		land values updated
SCL	C	2	SCUBE Subwatershed Study (Phase 3)	May-13	26.4	Stormwater management strategy	Not complete	SWMF	WC6 south of Barton West	Quantity / Quality	wet pond #3	13,216		1.58	2.64	6,222,722	1,099,285	7,322,008	100	7,322,008	-	-	-	7,322,008	increase land to 10% due to known grade constraint	land values updated	
SCL	C	3	SCUBE Subwatershed Study (Phase 3 - Block 2)	Sep-18	16.4	Stormwater management strategy	Not complete	SWMF	WC6.1 south of Barton West	Quantity / Quality	wet pond for 6.0	10,331		0.98	1.64	3,865,631	938,429	4,804,060	100	4,804,060	-	-	-	4,804,060	increase land to 10% due to known grade constraint	land values updated	
SCL	C	31	SCUBE Subwatershed Study (Phase 3 - Block 2)	Sep-18	27.6	Stormwater management strategy	Not complete	SWMF	WC6.1 south of Barton West	Quantity / Quality	wet pond for 6.1	18,115		1.66	2.76	6,505,573	1,372,434	7,878,007	100	7,878,007	-	-	-	7,878,007	increase land to 10% due to known grade constraint	land values updated	
SCL	C	12	SCUBE Subwatershed Study (Phase 3)	May-13	54	Stormwater management strategy	Not complete	SWMF	SCUBE Central	Quantity / Quality	wet pond #9-2	34,060		3.24	5.40	12,728,296	2,261,463	14,989,759	100	14,989,759	-	-	-	14,989,759	increase land to 10% due to known grade constraint	land values updated	
SCL	C	13	SCUBE Subwatershed Study (Phase 3)	May-13	23.1	Stormwater management strategy	Not complete	SWMF	SCUBE Central	Quantity / Quality	wet pond #9-3	14,592		1.39	2.31	5,444,882	1,176,006	6,620,888	100	6,620,888	-	-	-	6,620,888	increase land to 10% due to known grade constraint	land values updated	

ANC: Ancaster  
 BMH: Binbrook / Mount Hope  
 HAM: Hamilton Mountain  
 SCL: Stoney Creek - Lower  
 SCM: Stoney Creek - Mountain  
 WAT: Watford

**APPENDIX G-1: CATEGORY C - STORMWATER MANAGEMENT (QUALITY AND OR QUANTITY) FACILITIES RESIDENTIAL**

Category		SWMF #	Project Title	Year	Drainage Area (ha)	Purpose	Status	SWMF/ Drainage Work											Growth Related %	Net Growth/Total Associated Cost (\$)	Existing Benefit	Direct Developer Contribution (\$)	Non-Res Area Fraction Cost (\$)	Net Total Associated Cost (\$)	Remarks	Other Changes From 2019 Study				
Primary Dev. Areas	Secondary							Type of Work	Location of Work	Type	Description	Total Volume (m3)	Estimated Footprint 4% (ha)	Estimated Footprint 6% (ha)	Study/Draft Plan Footprint (ha)	Footprint (ha)	Land Cost	Estimated Capital Cost (\$)									Estimated Total Cost Including Land			
SCL	C	29	SCUBE Subwatershed Study (Phase 3)	May-13	39.8	Stormwater management strategy	Not complete	SWMF	WCS south of Barton West	SCUBE	Quantity / Quality	wet pond #1	19,417		2.39	3.98	3.98	9,381,226	1,445,028	10,826,254	100	10,826,254	-	-	-	10,826,254	Increase land to 10% due to known grade constraint	land values updated		
SCL	C	30	SCUBE Subwatershed Study (Phase 3)	May-13	24.5	Stormwater management strategy	Not complete	SWMF	WCS 2 south of Barton West	SCUBE	Quantity / Quality	wet pond #2	12,773		1.47	2.45	2.45	5,774,875	1,074,585	6,849,460	100	6,849,460	-	-	-	6,849,460	Increase land to 10% due to known grade constraint	land values updated		
SCL	R	16	Lake Vista			Stormwater quality and associated resource management	Not complete	Storm outfall retrofit	Lake Vista		Quality	OSS					0.00	-	50,000	50,000	100	50,000	-	-	-	50,000				
SCL	R	18	Stormwater Quality Management Strategy Stoney Creek Master Plan	2004	27.2	Stormwater quality and associated resource management	Not complete	Storm outfall retrofit	BFC, Little League Park, Queenston Rd.		Quality	Wetland	2,413				0.00	-	269,078	269,078	100	269,078	-	-	-	269,078				
SCL	R	19	Stormwater Quality Management Strategy Stoney Creek Master Plan	2004	33	Stormwater quality and associated resource management	Not complete	Storm outfall retrofit	BFC, Lake Ave. Park, Huckleberry Dr.		Quality	Wetland	2,582				0.00	-	287,924	287,924	100	287,924	-	-	-	287,924				
SCL	R	20	Stormwater Quality Management Strategy Stoney Creek Master Plan	2004	77	Stormwater quality and associated resource management	Not complete	Storm outfall retrofit	North of Barton St.		Quality	Wetland	6,724				0.00	-	737,317	737,317	100	737,317	-	-	-	737,317				
SCL	R	21	Stormwater Quality Management Strategy Stoney Creek Master Plan	2004	20.5	Stormwater quality and associated resource management	Not complete	Storm outfall retrofit	Lake Avenue, Warrington St.		Quality	Wetland	1,923				0.00	-	214,438	214,438	100	214,438	-	-	-	214,438				
SCM 18 has been funded and is removed from this list with costs updated accordingly.																														
SCM	C	21	Davis CK SWS - Nash Nhd		21		Not complete	SWMF	North limit of First Road W. at west side OH lands		Quantity / Quality	Extended Detention Pond	15,395		1.26	1.26	2,969,936	1,220,770	4,190,706	100	4,190,706	-	-	-	4,190,706		land values updated			
SCM	C	22	Davis CK SWS - Nash Nhd		15		Not complete	SWMF	North limit of First Road W. at east side		Quantity / Quality	Extended Detention Pond	11,425		0.90	0.90	2,121,383	999,421	3,120,803	100	3,120,803	-	-	-	3,120,803		land values updated			
SCM 2 has been funded and is removed from this list with costs updated accordingly.																														
SCM	C	6	Montgomery Creek Nash Orchards		22.49		Not complete				Quality / Quality		17,436	0.90	1.35	1.35	3,182,074	1,334,561	4,516,635	100	4,516,635	-	-	-	4,516,635		land values updated			
SCM	C	17	Montgomery Creek Community Functional SWM	Nov. 2008	30	Functional Service Plan for proposed urban development	Not complete	SWMF	SW corner Mud St. and Upper Centennial PKWY.		Quantity / Quality	Storage volume =	20,300		1.80	1.87	1.87	4,407,762	1,494,250	5,902,011	100	5,902,011	-	-	1,475,503	4,426,509		land values updated		
SCM	R	65	N/A	N/A	15.2		Not complete	Future Retrofit	Hwy 20 and Highland Rd		Quality					0.00	-	422,000	422,000	30	126,600	295,400	-	-	-	126,600				
SCM	R	67	Deerfield Estate Phase 1	Apr. 1991	19.8		Complete?	Future Retrofit	Rymal Rd E and Whitedeer Rd.		Quality					0.00	-	422,000	422,000	50	211,000	211,000	-	-	-	211,000				
SCM	R	69	Heritage Green Valley Park Stage II	Sept. 1990	83.9		Not complete	Future Retrofit	Winter Drive and Paramount Drive		Quality					0.00	-	1,160,500	1,160,500	50	580,250	580,250	-	-	-	580,250				
WAT	C	1	MtView Heights/Waterdown Bay Phase 2	Jul-13	12.43	To guide future development and management of the South Waterdown lands	Not complete	SWMF	Grindstone Creek - East Tributary 58 (Northwest)		Quantity / Quality	Storage Capacity =	13,509				0.00	-		3,400,000	100	3,400,000	-	-	-	3,400,000	cost estimate including land, from developer, 2018			
WAT	C	6	MtView Heights	Jul-13	5.66	To guide future development and management of the South Waterdown lands	Not complete	SWMF	Salem Property		Quantity / Quality	Storage Capacity =	16,754	0.34	0.34	800,468	1,296,550	2,097,018	100	2,097,018	-	-	-	2,097,018		land values updated				
WAT	C	19	Waterdown North Master Drainage Plan	Feb. 2007	9.7	Assess proposed expansion for the urban settlement area of Waterdown	Not complete	SWMF for quality and erosion control	Along Borer's Creek, NW of Centre Road and Parkside Road intersection		Quality/Erosion	Storage Capacity =	5,918		1.75	1.75	4,124,911	659,939	4,784,850	100	4,784,850	-	-	-	4,784,850	footprint estimated June 1, 2011 by Metropolitan/City agreed hazard land impacts price \$175,000/acre	land values updated			
U	C	U1	Unidentified			provisional item for unidentified SWM works	Not complete				Quantity / Quality						-	5,000,000	5,000,000	100	5,000,000	-	-	-	5,000,000					
U	C	U2	Intills			to include provision for LID infrastructure cost recovery	Not complete				Quantity / Quality						-	1,500,000	1,500,000	100	1,500,000	-	-	-	1,500,000					
U	C	U3	Frontage Costs			estimate of road frontage costs for 38 residential SWM facilities (Retrolis and Unidentified facilities excluded)	Not complete				Quantity / Quality	120m * \$2091/m per facility (\$1500 increased by 39.39%)					-	9,534,276	9,534,276	100	9,534,276	-	-	-	9,534,276					
U	C	U4	Land Footprint Contingency			estimate that 10 facilities will exceed the estimated land footprint by 20%	Not complete				Quantity / Quality	Land Cost increased by 25/20 to account for 25% larger footprint instead of 20% and also increased by 39.39% from 2019.					6,098,313		6,098,313	100	6,098,313	-	-	-	6,098,313					
U	C	U5	Facility Unidentified Volume Contingency			estimate that 1/10 facilities will exceed the estimated volume by 10%	Not complete				Quantity / Quality	Estimated Capital Cost increased by 39.39% from 2019.						4,390,785	4,390,785	100	4,390,785	-	-	-	4,390,785					
U	C	U6	Facility Unidentified Volume Contingency			estimate that 1/10 facilities will encounter unanticipated 9000 m3 rock	Not complete				Quantity / Quality	Estimated Capital Cost increased by 39.39% from 2019.						3,813,710	3,813,710	100	3,813,710	-	-	-	3,813,710	per development engineering				
U	C	U7	Unidentified - Within Combined Sewershed			under study - estimate 3 projects will result in SWM facilities @ \$2M each	Not complete		combined sewershed		Quantity / Quality							8,363,400	8,363,400	100	8,363,400	-	-	-	8,363,400	per development engineering				
<b>Total Residential</b>													<b>439,391</b>							<b>116,073,555</b>	<b>76,453,214</b>	<b>195,926,769</b>	<b>95.99</b>	<b>189,542,401</b>	<b>6,384,388</b>	<b>0</b>	<b>1,475,503</b>	<b>188,066,898</b>		

**APPENDIX G-1: CATEGORY C - STORMWATER MANAGEMENT (QUALITY AND OR QUANTITY FACILITIES) NON-RESIDENTIAL - NOTE: FOR INFORMATION ONLY - NON-RES FACILITIES NOT INCLUDED IN DC CHARGE**

Category		SWMF #	Project Title	Year	Drainage Area (ha)	Purpose	Status	SWMF/ Drainage Work		Type	Description	Total Volume (m3)	Estimated Footprint 4% (ha)	Estimated Footprint 6% (ha)	Study/Draft Plan Footprint (ha)	Footprint (ha)	Land Cost (\$)	Estimated Capital Cost (\$)	Estimated Total Cost Including Land	Growth Related %	Net Growth/Total Associated Cost (\$)	Existing Benefit	Direct Developer Contribution (\$)	Residential Area Fraction Cost (\$)	Net Total Associated Cost (\$)	Remarks	Remarks		
Primary Dev. Areas	Secondary							Type of Work	Location of Work																				
ANC	C	11	Ancaster Industrial Park, Stormwater Detention Facilities Area No. 1,3 and 4	July, 1990	8.2		Not complete			Quantity		2,187	0.33		0.33	870,681	243,833	1,114,514	0	-	-	1,114,514	-	-					
ANC	C	23	Trustwood Industrial Park east facility	Dec-07	30	Functional Servicing Report industrial	Not complete	SWMF	west of Shaver	Quality / Quantity	final drainage area to be determined	21,600		1.80	3.00	3.00	7,963,541	1,566,744	9,530,285	0	-	-	9,530,285	-	-	Increase land to 10% due to known grade constraint	Increase land to 10% due to known grade constraint		
ANC	C	27	Trustwood Industrial Park west facility		19	Functional Servicing Report industrial	Not complete	SWMF	west of Shaver	Quality / Quantity	final drainage area to be determined	5,185		1.14	1.14	3,026,146	578,138	3,604,284	0	-	-	3,604,284	-	-					
BMH	C	9	Future Planned Non-Residential Development		25		Not complete	SWMF		Quality / Quantity	Storage Capacity =	6,667		1.50	1.50	3,536,638	734,111	4,269,749	0	-	-	4,269,749	-	-					
BMH	C	11	Future Planned Non-Residential Development		36		Not complete	SWMF		Quality / Quantity	Storage Capacity =	9,600		2.16	2.16	5,091,318	897,658	5,988,977	0	-	-	5,988,977	-	-					
BMH	C	12	Future Planned Non-Residential Development		20		Not complete	SWMF		Quality / Quantity	Storage Capacity =	5,333		1.20	1.20	2,828,510	594,716	3,423,226	0	-	-	3,423,226	-	-					
BMH	C	13	Future Planned Non-Residential Development		26		Not complete	SWMF		Quality / Quantity	Storage Capacity =	6,933		1.56	1.56	3,677,063	748,979	4,426,043	0	-	-	4,426,043	-	-					
BMH	C	15	Future Planned Non-Residential Development		40		Not complete	dry pond		Quantity	Storage Capacity =	10,666	1.60		1.60	3,771,347	957,130	4,728,477	0	-	-	4,728,477	-	-					
BMH	C	16	Future Planned Non-Residential Development		15		Not complete	dry pond		Quantity	Storage Capacity =	4,000	0.60		0.60	1,414,255	446,037	1,860,292	0	-	-	1,860,292	-	-					
BMH	R	53	Greater Hamilton Airport Business Park	Oct. 1991	11.65	Quality control facility	Not complete	Quality	Hwy 6 & Dickenson Rd W	Quality					0.00	-	422,000	422,000	0	-	-	422,000	-	-					
HAM	C	11	Hannon Creek SWS - North Glanbrook Industrial Business Park MDP	Mar-09	108.7	Develop a Master Drainage Plan for the Hannon Creek Subwatershed	Not complete	SWMF	HC3	Quality / Quantity	Flood Control Volume =	59,291		6.52	4.10	4.10	9,664,077	3,668,268	13,332,344	0	-	-	13,332,344	940,084	940,084				
HAM	C	13	Hannon Creek SWS - North Glanbrook Industrial Business Park MDP	Mar-09	36	Develop a Master Drainage Plan for the Hannon Creek Subwatershed	Not complete	SWMF	TM3	Quality / Quantity	Flood Control Volume =	19,357		2.16	1.85	1.85	4,360,620	1,441,670	5,802,289	0	-	-	5,802,289	-	-				
HAM	C	14	Hannon Creek SWS - North Glanbrook Industrial Business Park MDP	Mar-09	46.3	Develop a Master Drainage Plan for the Hannon Creek Subwatershed	Not complete	SWMF	HC6	Quality / Quantity	Flood Control Volume =	23,889		2.78	2.09	2.09	4,926,322	1,694,361	6,620,683	0	-	-	6,620,683	-	-				
HAM	C	15	Hannon Creek SWS - North Glanbrook Industrial Business Park MDP	Mar-09	71.3	Develop a Master Drainage Plan for the Hannon Creek Subwatershed	Not complete	SWMF	HC7	Quality / Quantity	Flood Control Volume =	40,430		4.28	3.11	3.11	7,330,556	2,616,649	9,947,205	0	-	-	9,947,205	-	-				
HAM	C	16	Hannon Creek SWS - North Glanbrook Industrial Business Park MDP	Mar-09	21.6	Develop a Master Drainage Plan for the Hannon Creek Subwatershed	Not complete	SWMF	HC8	Quality / Quantity	Flood Control Volume =	18,647		1.30	2.00	2.00	4,714,184	1,402,088	6,116,272	0	-	-	6,116,272	-	-				
HAM	C	17	Hannon Creek SWS - North Glanbrook Industrial Business Park MDP	Mar-09	14.1	Develop a Master Drainage Plan for the Hannon Creek Subwatershed	Not complete	SWMF	HC9	Quality / Quantity	Flood Control Volume =	12,503		0.85	1.54	1.54	3,629,921	1,059,554	4,689,475	0	-	-	4,689,475	-	-				
HAM	C	18	Hannon Creek SWS - North Glanbrook Industrial Business Park MDP	Mar-09	19.2	Develop a Master Drainage Plan for the Hannon Creek Subwatershed	Not complete	SWMF	HC12	Quality / Quantity	Flood Control Volume =	12,775		1.15	1.60	1.60	3,771,347	1,074,690	4,846,037	0	-	-	4,846,037	-	-				
HAM	C	20	Hannon Creek SWS - North Glanbrook Industrial Business Park MDP	Mar-09	40.7	Develop a Master Drainage Plan for the Hannon Creek Subwatershed	Not complete	SWMF	HC14	Quality / Quantity	Flood Control Volume =	30,739		2.44	2.72	2.72	6,411,290	2,076,273	8,487,563	0	-	-	8,487,563	-	-				
HAM	C	21	Hannon Creek SWS - North Glanbrook Industrial Business Park MDP	Mar-09	16.6	Develop a Master Drainage Plan for the Hannon Creek Subwatershed	Not complete	SWMF	TM1a	Quality / Quantity	Flood Control Volume =	7,586		1.00	0.75	0.75	1,767,819	785,354	2,553,173	0	-	-	2,553,173	-	-				
HAM	C	22	Hannon Creek SWS - North Glanbrook Industrial Business Park MDP	Mar-09	16.6	Develop a Master Drainage Plan for the Hannon Creek Subwatershed	Not complete	SWMF	TM1b	Quality / Quantity	Flood Control Volume =	7,586		1.00	0.75	0.75	1,767,819	785,354	2,553,173	0	-	-	2,553,173	-	-				
HAM	C	23	Hannon Creek SWS - North Glanbrook Industrial Business Park MDP	Mar-09	35.5	Develop a Master Drainage Plan for the Hannon Creek Subwatershed	Not complete	SWMF	TM2	Quality / Quantity	Flood Control Volume =	18,508		2.13	1.78	1.78	4,195,623	1,394,342	5,589,966	0	-	-	5,589,966	-	-				
SCL	C	10	Stormwater Quality Management Strategy, City of Stoney Creek - Master Plan	2004	63	Stormwater quality and associated resource management	Not complete	Proposed SWMF/Quality	Area P/G: S.W of Lewis & S. Service Rd.	Quality / Quantity	Wetland	17,897		3.78		3.78	8,909,807	1,360,256	10,270,063	0	-	-	10,270,063	-	-				
SCL	C	17	SCUBE Subwatershed Study (Phase 3)	May-13	11.8	Stormwater management strategy	Not complete	SWMF	Fifty Creek east	Quality / Quantity	wet pond #12-1	8,969		0.71	0.71	1,668,821	862,490	2,531,311	0	-	-	2,531,311	-	-					
SCL	C	23	SCUBE Subwatershed Study (Phase 3)	May-13	14.5	Stormwater management strategy	Not complete	SWMF	Fifty Creek west	Quality / Quantity	wet pond #12-2	11,013		0.87	0.87	2,050,670	976,455	3,027,125	0	-	-	3,027,125	-	-					
SCL	R	82	Glover Industrial Park Phase 2B	Jan. 1989	2.05	Flood Control	Not complete	Future Retrofit	Arvin Av. / Glover Rd	Quality					0.00	-	422,000	422,000	0	-	-	337,600	84,400	-	-				
SCM	C	19	Future Planned Industrial Development		14	westerly portion	Not complete			Quality / Quantity		10,080		0.84	0.84	1,979,957	924,434	2,904,392	0	-	-	2,904,392	-	-					
WAT	C	12	Clappison Industrial Park		60	Quality only	Not complete	SWMF	to be determined	Quality / Quantity	Storage Capacity =	21,100		3.60	3.60	9,556,250	1,538,843	11,095,093	0	-	-	11,095,093	-	-					
WAT	R	35	Tech Park	Feb. 1994	15.66	Quality and Flood Control	Not complete	Future Retrofit	Hwy 6 & Hwy 5	Quality					0.00	-	422,000	422,000	0	-	-	337,600	84,400	-	-				
U	C	UNR	Unidentified			provisional item for unidentified non-res SWM works with residential component	Not complete		open	Quality / Quantity					0.00	-	10,000,000	10,000,000	0	-	-	10,000,000	-	-					
<b>Total Non-Residential</b>												<b>392,538</b>						<b>108,883,581</b>	<b>41,694,428</b>	<b>150,578,009</b>	<b>0.62</b>	<b>0</b>	<b>3,579,592</b>	<b>146,998,417</b>	<b>940,084</b>	<b>940,084</b>			
<b>Grand Total</b>												<b>831,929</b>						<b>TOTAL =</b>	<b>224,957,157</b>	<b>118,147,642</b>	<b>346,504,778</b>	<b>54.55</b>	<b>189,542,401</b>	<b>9,963,960</b>	<b>146,998,417</b>	<b>2,415,586</b>	<b>189,006,982</b>		

ANC: Ancaster  
 BMH: Binbrook / Mount Hope  
 HAM: Hamilton Mountain  
 SCL: Stoney Creek - Lower  
 SCM: Stoney Creek - Mountain  
 WAT: Watford



**City of Hamilton**  
**APPENDIX G.1: Summary of Stormwater Service Costs**  
**(GRIDS excluded)**

**Total Residential and Non-Residential**

<b>Category</b>	<b>Gross Estimated Cost</b>	<b>DC Eligible Growth (%)</b>	<b>DC Eligible Growth Cost</b>
A Watercourses	58,898,000	81.54	48,027,800
B Off-Site Erosion	36,516,003	52.12	19,031,997
C SWM	346,504,778	54.55	189,006,056
D Sewer Oversizing/Outlets	24,356,802	88.71	21,606,802
E Culverts/Bridges	11,750,577	82.25	9,664,850
<b>Sub-Total</b>	<b>478,026,161</b>	<b>60.11</b>	<b>287,338,431</b>
<b>15% Allowance<sup>1</sup></b>			<b>43,100,765</b>
<b>Total</b>			<b>330,439,196</b>

**Residential**

<b>Category</b>	<b>Gross Estimated Cost</b>	<b>DC Eligible Growth (%)</b>	<b>DC Eligible Growth Cost</b>
A Watercourses	27,831,000	76.27	21,227,000
B Off-Site Erosion	25,114,295	48.05	12,068,251
C SWM	195,926,769	95.99	188,066,898
D Sewer Oversizing/Outlets	22,455,523	87.75	19,705,523
E Culverts/Bridges	4,817,737	78.05	3,760,185
<b>Sub-Total</b>	<b>276,145,324</b>	<b>88.66</b>	<b>244,827,857</b>
<b>15% Allowance<sup>1</sup></b>			<b>36,724,178</b>
<b>Total</b>			<b>281,552,035</b>

**Non-Residential**

<b>Category</b>	<b>Gross Estimated Cost</b>	<b>DC Eligible Growth (%)</b>	<b>DC Eligible Growth Cost</b>
A Watercourses	31,067,000	86.27	26,800,800
B Off-Site Erosion	11,401,708	61.08	6,963,747
C SWM	150,578,009	0.62	940,084
D Sewer Oversizing/Outlets	1,901,280	100.00	1,901,280
E Culverts/Bridges	6,932,840	85.17	5,904,665
<b>Sub-Total</b>	<b>201,880,837</b>	<b>21.06</b>	<b>42,510,575</b>
<b>15% Allowance<sup>1</sup></b>			<b>6,376,586</b>
<b>Total</b>			<b>48,887,161</b>

<sup>1</sup> 15 % allowance for engineering, design, legal, and survey

**City of Hamilton**  
**APPENDIX G.1: Summary of Stormwater Service Costs**  
**(GRIDS included)**

**Total Residential and Non-Residential**

<b>Category</b>	<b>Gross Estimated Cost</b>	<b>DC Eligible Growth (%)</b>	<b>DC Eligible Growth Cost</b>
A Watercourses	58,898,000	81.54	48,027,800
B Off-Site Erosion	36,516,003	52.12	19,031,997
C SWM	346,504,778	54.55	189,006,982
D Sewer Oversizing/Outlets	24,356,802	88.71	21,606,802
E Culverts/Bridges	11,750,577	82.25	9,664,850
GRIDS SWM	383,876,611	-	-
GRIDS Watercourses	27,477,185	100.00	27,477,185
<b>Sub-Total</b>	<b>889,379,957</b>	<b>35.40</b>	<b>314,815,616</b>
<b>15% Allowance<sup>1</sup></b>			<b>47,222,342</b>
<b>Total</b>			<b>362,037,959</b>

**Residential**

<b>Category</b>	<b>Gross Estimated Cost</b>	<b>DC Eligible Growth (%)</b>	<b>DC Eligible Growth Cost</b>
A Watercourses	27,831,000	76.27	21,227,000
B Off-Site Erosion	25,114,295	48.05	12,068,251
C SWM	195,926,769	95.99	188,066,898
D Sewer Oversizing/Outlets	22,455,523	87.75	19,705,523
E Culverts/Bridges	4,817,737	78.05	3,760,185
GRIDS SWM	135,892,134	-	-
GRIDS Watercourses	10,025,938	100.00	10,025,938
<b>Sub-Total</b>	<b>422,063,395</b>	<b>60.38</b>	<b>254,853,794</b>
<b>15% Allowance<sup>1</sup></b>			<b>38,228,069</b>
<b>Total</b>			<b>293,081,863</b>

**Non-Residential**

<b>Category</b>	<b>Gross Estimated Cost</b>	<b>DC Eligible Growth (%)</b>	<b>DC Eligible Growth Cost</b>
A Watercourses	31,067,000	86.27	26,800,800
B Off-Site Erosion	11,401,708	61.08	6,963,747
C SWM	150,578,009	0.62	940,084
D Sewer Oversizing/Outlets	1,901,280	100.00	1,901,280
E Culverts/Bridges	6,932,840	85.17	5,904,665
GRIDS SWM	247,984,477	-	-
GRIDS Watercourses	17,451,247	100.00	17,451,247
<b>Sub-Total</b>	<b>467,316,562</b>	<b>12.83</b>	<b>59,961,822</b>
<b>15% Allowance<sup>1</sup></b>			<b>8,994,273</b>
<b>Total</b>			<b>68,956,095</b>

<sup>1</sup> 15 % allowance for engineering, design, legal, and survey



# Appendix D

## Summary of Changes to Services Related to a Highway Capital Project List

**SUBJECT**  
Summary of Strategic Transportation Network Review  
March 2024 Updates

**TO**  
Daryl Abbs, BA (Hons), MBE, PLE  
Managing Partner, Watson & Associates Economists Ltd.  
2233 Argentia Rd., Suite 301  
Mississauga, ON L5N 2X7

**DATE**  
March 22, 2024

**OUR REF**  
139879

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Dear Daryl Abbs:

The draft Strategic Transportation Network Review (STNR) report was published on the City of Hamilton website in December 2023, and the second round of public consultation was conducted in early 2024. Since the draft report was published, numerous updates have been made. These updates are summarized below.

## STNR Report Text

The following report sections were updated to provide additional clarity on the scope of the STNR and inputs/direction provided by the City of Hamilton:

- Section 1 Introduction
- Section 4 STNR Summary
- Appendix D Section 4 Local Service Policy

In addition, Section 2.3 Transit Projects was updated to remove the rapid transit network evaluation and identify that the rapid transit network has been developed and reviewed under multiple separate studies and has been presented to City of Hamilton Public Works Committee.

These text updates **did not** result in changes to the development charges net capital costs.

## Road Projects

The following changes were implemented to the road projects:

### Non-Growth Related Road Project

One of the road projects previously included in the draft capital list was determined to be not growth-related and was removed from the capital list.

This resulted in a development charges net capital cost **decrease of approximately \$8 million**.

### Road Project Timing

The City of Hamilton indicated that the timing of select road projects should be “2031 to 2041” instead of “To 2031” to support development and align with the phasing of development in the Airport Employment Growth District (AEGD).

This resulted in a development charges net capital cost **decrease of approximately \$12.5 million.**

## Road Project Segmentation

The City of Hamilton indicated that one of the road projects previously included in the draft capital list should be segmented and listed as two separate projects. The timing of one of these segmented projects was delayed to “2031 to 2041” to support development and align with the phasing of development in the AEGD.

This resulted in a development charges net capital cost **decrease of approximately \$13 million.**

## Road Project Future Pavement Widths

The future pavement widths for some road project improvement types were updated.

This resulted in a development charges net capital cost **decrease of approximately \$0.25 million.**

## Road Project Right-of-Way Assumptions and Updated Local Service Policy Deductions

The right-of-way width assumptions for some road projects were updated, including to reflect the AEGD Transportation Master Plan. The draft capital list also included local service policy (LSP) deductions to select projects within the urban boundary. Some of these deductions have been updated where necessary. The local service policy deductions were also applied to a greater number of projects within the urban boundary based on direction from the City of Hamilton.

This resulted in a development charges net capital cost **decrease of approximately \$12 million.**

## Road Project Updated Local Service Policy and Financial Policies

The City of Hamilton provided updated direction on the application of local share deductions and the financial policies. This includes the following proposed amendment to Section L.2.4. Value of Land for Road Allowance in the Financial Polices for Development:

- “Where a Proponent is required to dedicate more than thirteen (13) metres of land to establish a new road allowance width for a residential road, and more than 16m for a non-residential road, measured from the centerline of the road allowance to one side to its ultimate width, the City shall compensate the Proponent for the value of dedicated land beyond 13 metres in width on that side of the road allowance for a residential road, and 16m for a non-residential road, respectively, for the length of the conveyance. For clarity, non-residential roads include those roads that are meant to carry mixed traffic and not solely residential traffic.”

As a result of this updated direction and proposed amendment, updated LSP deductions were applied to a significant number of “To 2031” road projects within the urban boundary. These deductions were applied to the capital list of projects as a single line item deduction.

This resulted in a development charges net capital cost **decrease of approximately \$64 million.**

## Major Structures

The following changes were implemented to the major structures:

## Additional Major Structures

Two additional major structures (active transportation bridges) were added to the capital list based on the Waterdown Transportation Management Plan.

This resulted in a development charges net capital cost **increase of approximately \$1.5 million.**

## Major Structures Timing

The City of Hamilton indicated that the timing of select major structures should be delayed from “To 2031” to “2031 to 2041”.

This resulted in a development charges net capital cost **decrease of approximately \$6 million.**

## Updated Major Structures Cost Estimate

The City of Hamilton provided an updated cost estimate for the gross capital cost, including the allocation of costs between the City and Ontario Ministry of Transportation, for one of the provincial highway interchange projects.

This resulted in a development charges net capital cost **increase of approximately \$2.5 million.**

## Active Transportation Projects

The following changes were implemented to the active transportation (AT) projects:

### Removing Duplicate Active Transportation Projects

Multiple AT projects were removed or adjusted to eliminate overlap with road and other AT projects.

This resulted in a development charges net capital cost **decrease of approximately \$6 million.**

### Active Transportation Project Cost Allocation to the Local Service Policy

The City of Hamilton provided updated direction on how to allocate the costs of AT projects within and near the former urban boundary expansion areas to the LSP.

This resulted in a development charges net capital cost **decrease of approximately \$0.5 million.**

### Active Transportation Project Timing

The timing of select AT projects was delayed from “To 2031” to “2031 to 2041” to align with the timing of nearby and related road resurfacing projects.

This resulted in a development charges net capital cost **decrease of approximately \$15 million.**

# Conclusion

The table below summarizes the changes to the development charges net capital costs:

Capital List Category	Approximate Net Capital Cost Change
Road Projects	(\$109,750,000)
Major Structures	(\$2,000,000)
Active Transportation	(\$21,500,000)
<b>Total</b>	<b>(\$133,250,000)</b>

The new net capital cost for Services Related to a Highway is approximately **\$628.25 million**, representing a decrease of approximately \$133.25 million compared to the development charges net capital cost previously published in December 2023 (approximately \$761.5 million). The cost of Transit Services remains unchanged.

This memo includes the following tables on the next pages:

- Summary of projects subject to changes, including their gross and net capital cost changes.
- Updated capital list that includes the proposed LSP and financial policies change regarding land value for non-residential roads.
- Updated capital list that includes all changes except for the proposed LSP and financial policies change regarding land value for non-residential roads.

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# Exhibit 1

## 2024 Transportation Summary of Changes by Project



2024 Transportation Summary of Changes by Project

2023 Draft Report Prj No.	Project	2023 Draft Gross Capital Cost	2024 Updated Gross Capital Cost	Gross Capital Cost Change	2023 Draft Net Capital Cost	2024 Updated Net Capital Cost	Net Capital Cost Change	Description of Change
<b>Road</b>								
2	Book Road - Southcote Road to Highway 6	\$ 10,580,564	\$ 11,523,989	\$ 943,425	\$ 8,993,480	\$ 9,795,391	\$ 801,911	Updated right-of-way assumptions and local service policy deductions updated to be included as part of a single line item deduction.
3	Collector 1E - Collector 6N to Dickenson Road	\$ 6,458,583	\$ 6,558,380	\$ 99,797	\$ -	\$ -	\$ -	Updated right-of-way assumptions.
4	Arterial 1N - Collector 2N to Dickenson Road/Garth Street Extension	\$ 34,248,600	\$ 34,917,248	\$ 668,648	\$ 34,248,600	\$ 34,917,248	\$ 668,648	Updated right-of-way assumptions and local service policy deductions updated to be included as part of a single line item deduction.
5	Collector 2N - Collector 5W to Arterial 1N	\$ 4,042,840	\$ 4,105,309	\$ 62,469	\$ -	\$ -	\$ -	Updated right-of-way assumptions.
9	Collector 6E - Collector 6N to Dickenson Road	\$ 6,245,695	\$ 6,342,202	\$ 96,507	\$ 1,831,146	\$ 6,342,202	\$ 4,511,056	Updated right-of-way assumptions and local service policy deductions updated to be included as part of a single line item deduction.
10	Collector 7N - Collector 5W to Collector 2W	\$ 11,577,708	\$ 11,756,604	\$ 178,896	\$ -	\$ -	\$ -	Updated right-of-way assumptions.
12	Dickenson Road - Glancaster Road to Garth Street Extension	\$ 31,576,263	\$ 18,044,132	\$ (13,532,131)	\$ 26,839,824	\$ -	\$ (26,839,824)	Project segmented into multiple projects, timing updated to "2031 to 2041".
N/A	Dickenson Road - Garth Street Extension to Upper James Street	\$ -	\$ 16,039,229	\$ 16,039,229	\$ -	\$ 13,633,344	\$ 13,633,344	New project, previously was segment of project above.
13	Dickenson Road Extension - Glancaster Road to Smith Road	\$ 6,526,966	\$ 9,447,229	\$ 2,920,264	\$ 6,526,966	\$ -	\$ (6,526,966)	Project type updated, timing updated to "2031 to 2041".
14	Book Road - Smith Road to Southcote Road	\$ 4,935,759	\$ 5,343,540	\$ 407,781	\$ 4,195,395	\$ 4,542,009	\$ 346,614	Updated right-of-way assumptions and local service policy deductions updated to be included as part of a single line item deduction.
15	Garth Street Extension - Twenty Road to Collector 6N	\$ 9,296,472	\$ 9,477,970	\$ 181,499	\$ -	\$ -	\$ -	Updated right-of-way assumptions.
16	Garth Street Extension - Collector 6N to Dickenson Road	\$ 7,561,667	\$ 7,709,296	\$ 147,629	\$ -	\$ -	\$ -	Updated right-of-way assumptions.
20	Smith Road - Garner Road to Hydro Corridor	\$ 8,503,884	\$ 8,635,284	\$ 131,400	\$ 8,503,884	\$ 8,635,284	\$ 131,400	Updated right-of-way assumptions and local service policy deductions updated to be included as part of a single line item deduction.
21	Smith Road - Hydro Corridor to Book Road	\$ 9,794,999	\$ 9,946,349	\$ 151,350	\$ -	\$ -	\$ -	Updated right-of-way assumptions.
22	Smith Road - Book Road to Arterial 1N	\$ 6,072,996	\$ 6,166,835	\$ 93,839	\$ -	\$ -	\$ -	Updated right-of-way assumptions.
23	Southcote Road - Garner Road to Book Road	\$ 26,708,722	\$ 23,002,848	\$ (3,705,874)	\$ 22,702,414	\$ -	\$ (22,702,414)	Updated right-of-way assumptions and local service policy deductions updated to be included as part of a single line item deduction.
24	Upper James Street - Rymal Road to Highway 6 South	\$ 86,351,332	\$ 96,459,332	\$ 10,108,000	\$ -	\$ -	\$ -	Updated right-of-way assumptions.
27	Smith Road - Arterial 1N to Airport Boundary	\$ 2,046,951	\$ 2,078,580	\$ 31,629	\$ 600,136	\$ -	\$ (600,136)	Timing updated to "2031 to 2041".
28	Airport Road - East Cargo Road to Upper James Street	\$ 8,247,539	\$ 8,462,899	\$ 215,360	\$ 4,948,523	\$ 5,077,739	\$ 129,216	Updated right-of-way assumptions and local service policy deductions updated to be included as part of a single line item deduction.
30	Collector 10N - Garner Road to Smith Road	\$ 11,312,884	\$ 11,487,688	\$ 174,804	\$ 3,316,771	\$ 11,487,688	\$ 8,170,917	Updated right-of-way assumptions and local service policy deductions updated to be included as part of a single line item deduction.
34	Collector 1W - Collector 10N to Garner Road	\$ 3,761,610	\$ 3,819,733	\$ 58,124	\$ -	\$ -	\$ -	Updated right-of-way assumptions.
36	Golf Links Road - McNiven Road to Kitty Murray Lane	\$ 9,147,781	\$ -	\$ (9,147,781)	\$ 7,775,614	\$ -	\$ (7,775,614)	Project is not growth-related and was removed from the list.
38	Shaver Road - Trustwood to Garner Road	\$ 6,303,822	\$ 6,303,822	\$ -	\$ 5,358,249	\$ -	\$ (5,358,249)	Timing updated to "2031 to 2041".

2023 Draft Report Prj No.	Project	2023 Draft Gross Capital Cost	2024 Updated Gross Capital Cost	Gross Capital Cost Change	2023 Draft Net Capital Cost	2024 Updated Net Capital Cost	Net Capital Cost Change	Description of Change
50	Collector C (Block 2) - Barton Street to Highway 8	\$ 5,642,466	\$ 5,642,466	\$ -	\$ -	\$ 5,642,466	\$ 5,642,466	Updated right-of-way assumptions and local service policy deductions updated to be included as part of a single line item deduction.
52	Collector E (Block 3) - Barton Street to Highway 8	\$ 5,060,086	\$ 5,060,086	\$ -	\$ -	\$ 5,060,086	\$ 5,060,086	Updated right-of-way assumptions and local service policy deductions updated to be included as part of a single line item deduction.
53	Collector F (Block 3) - Barton Street to Collector D	\$ 1,713,732	\$ 1,713,732	\$ -	\$ -	\$ 1,713,732	\$ 1,713,732	Updated right-of-way assumptions and local service policy deductions updated to be included as part of a single line item deduction.
64	Rymal Road - Dartnall Road to Upper James Street	\$ 71,111,462	\$ 56,631,794	\$ (14,479,668)	\$ 60,444,742	\$ 48,137,025	\$ (12,307,718)	Updated right-of-way assumptions and local service policy deductions updated to be included as part of a single line item deduction.
65	Upper Wellington Street - Limeridge Road to Stone Church Road	\$ 12,702,186	\$ 12,404,686	\$ (297,500)	\$ 7,621,312	\$ 7,442,812	\$ (178,500)	Updated right-of-way assumptions.
71	McNeilly Road - Highway 8 to Barton Street	\$ 7,156,843	\$ 7,156,843	\$ -	\$ 6,081,941	\$ 6,083,317	\$ 1,376	Updated right-of-way assumptions and local service policy deductions updated to be included as part of a single line item deduction.
72	Lewis Road - Highway 8 to Barton Street	\$ 3,908,425	\$ 3,908,425	\$ -	\$ 3,321,410	\$ 3,322,161	\$ 751	Updated right-of-way assumptions and local service policy deductions updated to be included as part of a single line item deduction.
74	Jones Road - Highway 8 to Barton Street	\$ 7,293,473	\$ 7,293,473	\$ -	\$ 6,198,050	\$ 6,199,452	\$ 1,402	Updated right-of-way assumptions and local service policy deductions updated to be included as part of a single line item deduction.
81	Parkside Drive - North Waterdown Drive to Avonsyde Boulevard	\$ 37,342,355	\$ 32,319,655	\$ (5,022,700)	\$ 31,741,002	\$ 27,471,707	\$ (4,269,295)	Updated right-of-way assumptions and local service policy deductions updated to be included as part of a single line item deduction.
N/A	Collector 5W - Collector 7N to Collector 2N	\$ 7,183,646	\$ 7,294,646	\$ 111,000	\$ -	\$ -	\$ -	Updated right-of-way assumptions, not included in the capital list because it is a post-2041 project.
N/A	Collector 2W - Garner Road to Dickenson Road Extension	\$ 23,130,538	\$ 23,562,706	\$ 432,168	\$ -	\$ -	\$ -	Updated right-of-way assumptions, not included in the capital list because it is a post-2041 project.
N/A	Collector 10N - Smith Road to Collector 1W	\$ 14,278,176	\$ 14,498,799	\$ 220,623	\$ -	\$ -	\$ -	Updated right-of-way assumptions, not included in the capital list because it is a post-2041 project.
N/A	Collector Road 6E - Collector 6N to Twenty Road West	\$ 6,780,294	\$ 6,885,062	\$ 104,768	\$ -	\$ -	\$ -	Updated right-of-way assumptions, not included in the capital list because it is a post-2041 project.
N/A	Collector Road 1E - Collector 6N to Twenty Road West	\$ 7,066,475	\$ 7,175,665	\$ 109,190	\$ -	\$ -	\$ -	Updated right-of-way assumptions, not included in the capital list because it is a post-2041 project.
N/A	Mud Street - Red Hill Valley Parkway to Upper Centennial Parkway	\$ 61,138,512	\$ 67,449,762	\$ 6,311,250	\$ -	\$ -	\$ -	Updated right-of-way assumptions, not included in the capital list because it is a post-2041 project.
N/A	Dickenson Road East - Upper James Street to 350 meters west of Nebo Road	\$ 37,922,121	\$ 37,820,121	\$ (102,000)	\$ -	\$ -	\$ -	Updated right-of-way assumptions, not included in the capital list because it is a post-2041 project.
N/A	Fletcher Road - McWatters Street to Golf Club Road	\$ 30,171,056	\$ 30,086,056	\$ (85,000)	\$ -	\$ -	\$ -	Updated right-of-way assumptions, not included in the capital list because it is a post-2041 project.
N/A	Local Share Deductions	\$ -	\$ (64,082,002)	\$ (64,082,002)	\$ -	\$ (64,082,002)	\$ (64,082,002)	New single line item deduction added to reflect local share deductions for road projects identified above and select additional road projects.
<b>Major Structures</b>								
91	Highway 5/6 Interchange	\$ 49,093,158	\$ 60,500,000	\$ 11,406,842	\$ 12,273,290	\$ 15,000,000	\$ 2,726,711	Updated cost estimate provided by City of Hamilton.
97	Henderson Lift Bridge	\$ 20,000,000	\$ 20,000,000	\$ -	\$ 3,800,000	\$ -	\$ (3,800,000)	Timing updated to "2031 to 2041".
98	Hamilton Centre Pedestrian and Cyclist Bridge	\$ 9,500,000	\$ 9,500,000	\$ -	\$ 1,805,000	\$ -	\$ (1,805,000)	Timing updated to "2031 to 2041".
100	Dundas Pedestrian and Cyclist Bridge	\$ 3,125,000	\$ 3,125,000	\$ -	\$ 593,750	\$ -	\$ (593,750)	Timing updated to "2031 to 2041".
N/A	Margaret St. Park Active Transportation Bridge	\$ -	\$ 5,900,000	\$ 5,900,000	\$ -	\$ -	\$ -	New major structure added.
N/A	Sealey Park Active Transportation Bridge	\$ -	\$ 7,500,000	\$ 7,500,000	\$ -	\$ 1,425,000	\$ 1,425,000	New major structure added.

2023 Draft Report Prj No.	Project	2023 Draft Gross Capital Cost	2024 Updated Gross Capital Cost	Gross Capital Cost Change	2023 Draft Net Capital Cost	2024 Updated Net Capital Cost	Net Capital Cost Change	Description of Change
<b>Active Transportation</b>								
136	Binbrook Road - Trinity Church to Royal Winter/Binhaven	\$ 342,899	\$ 342,899	\$ -	\$ 240,030	\$ 137,795	\$ (102,235)	Project adjusted to prevent overlap with other projects.
170	Governor's - Wainwright to Lynden	\$ 908,823	\$ 908,823	\$ -	\$ 636,176	\$ -	\$ (636,176)	Timing updated to "2031 to 2041".
172	Grays/ Gray - Confederation Park gate to King	\$ 163,086	\$ 163,086	\$ -	\$ -	\$ 21,690	\$ 21,690	LSP cost allocation updated.
180	Hydro Corridor - Barton to Lawrence	\$ 1,743,769	\$ 1,743,769	\$ -	\$ -	\$ 231,921	\$ 231,921	LSP cost allocation updated.
182	Hydro Corridor - Wilson/Highway 52 to Regional Road 56	\$ 10,617,336	\$ 10,617,336	\$ -	\$ 1,412,106	\$ -	\$ (1,412,106)	LSP cost allocation updated.
193	Limeridge - Garth/ Bonaventure to West 5th/ Hawkridge	\$ 73,877	\$ 73,877	\$ -	\$ -	\$ 9,826	\$ 9,826	LSP cost allocation updated.
194	Limeridge Mall Hydro Corridor Trail - Mohawk Road to South of Rymal	\$ 1,957,036	\$ 1,957,036	\$ -	\$ 260,286	\$ -	\$ (260,286)	LSP cost allocation updated.
219	Red Hill Pedestrian Crossing - Eugene Street to Glengrove Avenue	\$ 2,439,325	\$ -	\$ (2,439,325)	\$ -	\$ -	\$ -	Project removed due to overlap.
227	Strachan Street Trail - James to Ferguson	\$ 469,744	\$ -	\$ (469,744)	\$ 62,476	\$ -	\$ (62,476)	Project is existing, removed from capital list.
230	Upper Sherman - Stone Church to Rymal to Miles	\$ 249,508	\$ 249,508	\$ -	\$ 33,185	\$ -	\$ (33,185)	LSP cost allocation updated.
238	White Church Road West Airport Link	\$ 938,095	\$ 938,095	\$ -	\$ -	\$ 656,666	\$ 656,666	LSP cost allocation updated.
245	Airport Road - Butter to Miles	\$ 932,965	\$ 932,965	\$ -	\$ -	\$ 84,576	\$ 84,576	LSP cost allocation updated.
249	Baseline - Lockport to North Service Road	\$ 372,805	\$ 288,999	\$ (83,806)	\$ 221,819	\$ 171,955	\$ (49,865)	Project adjusted to prevent overlap with other projects.
252	Binbrook Road - Fletcher to Binhaven	\$ 706,274	\$ -	\$ (706,274)	\$ 93,934	\$ -	\$ (93,934)	Project removed due to overlap.
254	Book Road - Shaver to Fiddler's Green	\$ 751,147	\$ 751,147	\$ -	\$ 446,933	\$ -	\$ (446,933)	Timing updated to "2031 to 2041".
264	Carlisle - Highway 6 to Wildberry Way	\$ 704,824	\$ -	\$ (704,824)	\$ 493,377	\$ -	\$ (493,377)	Project removed due to overlap.
267	Carluke - Glancaster to Shaver	\$ 1,058,213	\$ 1,058,213	\$ -	\$ 629,637	\$ -	\$ (629,637)	Timing updated to "2031 to 2041".
269	Chatham Street - Dundurn to Frid	\$ 37,418	\$ -	\$ (37,418)	\$ 4,977	\$ -	\$ (4,977)	Project removed due to overlap.
272	Concession 4 West - Millgrove Sideroad to Highway 6	\$ 532,612	\$ 532,612	\$ -	\$ 316,904	\$ -	\$ (316,904)	Timing updated to "2031 to 2041".
273	Concession 6 East - Highway 6 to Centre Road	\$ 836,846	\$ 836,846	\$ -	\$ 497,924	\$ -	\$ (497,924)	Timing updated to "2031 to 2041".
282	Dundas St E (Highway 5) - Highway 6 to Boundary	\$ 1,428,830	\$ -	\$ (1,428,830)	\$ 190,034	\$ -	\$ (190,034)	Project removed due to overlap.
285	Eighth Road Link - Ridge to Boundary	\$ 1,651,643	\$ 1,651,643	\$ -	\$ 1,156,150	\$ -	\$ (1,156,150)	Timing updated to "2031 to 2041".
292	Ferguson - Charlton to North of Young	\$ 36,563	\$ 7,238	\$ (29,325)	\$ 4,863	\$ 963	\$ (3,900)	Project adjusted to prevent overlap with other projects.
293	Field - Jerseyville Rd W to Governor's Rd	\$ 1,162,739	\$ 1,162,739	\$ -	\$ 813,917	\$ -	\$ (813,917)	Timing updated to "2031 to 2041".
297	First Road East - Highland Road to Ridge Road	\$ 1,148,959	\$ 1,148,959	\$ -	\$ -	\$ -	\$ -	LSP cost allocation updated and timing updated to "2021 to 2041".
299	Flamborough Puslinch Tlin - Maddaugh Road to Centre	\$ 542,586	\$ 542,586	\$ -	\$ 379,810	\$ -	\$ (379,810)	Timing updated to "2031 to 2041".
317	Governors - Binkley to Lynden	\$ 3,001,131	\$ -	\$ (3,001,131)	\$ 1,785,673	\$ -	\$ (1,785,673)	Project removed due to overlap.
319	Greenford - Owen Pl to Cromwell	\$ 8,209	\$ -	\$ (8,209)	\$ 1,092	\$ -	\$ (1,092)	Project removed due to overlap.
320	Greenford - Cromwell to Kenora	\$ 49,861	\$ -	\$ (49,861)	\$ 6,632	\$ -	\$ (6,632)	Project removed due to overlap.
323	Hamilton - Nisbet to Dundas St E	\$ 169,250	\$ -	\$ (169,250)	\$ 22,510	\$ -	\$ (22,510)	Project removed due to overlap.
326	Highbury Drive - Highland Road W to Whitedeer	\$ 145,424	\$ -	\$ (145,424)	\$ 19,341	\$ -	\$ (19,341)	Project removed due to overlap.
328	Highland Rd E - Upper Centennial Pkwy to E Town Line	\$ 3,051,099	\$ 3,051,099	\$ -	\$ -	\$ -	\$ -	LSP cost allocation updated and timing updated to "2021 to 2041".
330	Highway 8 (Flam) - Boundary to Brock	\$ 6,691,317	\$ 6,691,317	\$ -	\$ 4,683,922	\$ -	\$ (4,683,922)	Timing updated to "2031 to 2041".
331	Highway 8 (Sc) - King St E to Dewitt	\$ 193,404	\$ -	\$ (193,404)	\$ 25,723	\$ -	\$ (25,723)	Project removed due to overlap.
332	Highway 8 (Sc) - Fifty to Boundary	\$ 113,390	\$ 113,390	\$ -	\$ 79,373	\$ -	\$ (79,373)	Timing updated to "2031 to 2041".
341	Jerseyville Rd W - Boundary to East of Paddy Greens	\$ 5,533,950	\$ 5,533,950	\$ -	\$ 3,292,700	\$ -	\$ (3,292,700)	Timing updated to "2031 to 2041".
344	John - Charlton Ave E to St Joseph's	\$ 21,829	\$ -	\$ (21,829)	\$ 2,903	\$ -	\$ (2,903)	Project removed due to overlap.
359	Lormont - First Rd W to Picardy	\$ 75,540	\$ -	\$ (75,540)	\$ 10,047	\$ -	\$ (10,047)	Project removed due to overlap.

2023 Draft Report Prj No.	Project	2023 Draft Gross Capital Cost	2024 Updated Gross Capital Cost	Gross Capital Cost Change	2023 Draft Net Capital Cost	2024 Updated Net Capital Cost	Net Capital Cost Change	Description of Change
362	Maddaugh Road - Highway 6 to Flamborough Puslinch Tlin	\$ 334,364	\$ 334,364	\$ -	\$ 234,055	\$ -	\$ (234,055)	Timing updated to "2031 to 2041".
364	Main - Osler to South of Osler	\$ 212,336	\$ -	\$ (212,336)	\$ 28,241	\$ -	\$ (28,241)	Project removed due to overlap.
365	Main - Osler to York	\$ 34,421	\$ -	\$ (34,421)	\$ 4,578	\$ -	\$ (4,578)	Project removed due to overlap.
368	Maple/Mountain Ave Extension - Lake Ave S to End	\$ 15,833	\$ 5,272	\$ (10,561)	\$ 2,106	\$ 701	\$ (1,405)	Project adjusted to prevent overlap with other projects.
376	Miles - Rymal Rd E to Boundary	\$ 3,265,308	\$ 3,265,308	\$ -	\$ -	\$ -	\$ -	LSP cost allocation updated and timing updated to "2021 to 2041".
377	Mill - Dundas St E to Boundary	\$ 392,672	\$ -	\$ (392,672)	\$ 52,225	\$ -	\$ (52,225)	Project removed due to overlap.
379	Mineral Springs - Binkley to Sulphur Springs	\$ 381,791	\$ 381,791	\$ -	\$ 227,166	\$ -	\$ (227,166)	Timing updated to "2031 to 2041".
382	Mountain Brow Blvd - Mohawk Rd E to Mud	\$ 85,532	\$ -	\$ (85,532)	\$ 11,376	\$ -	\$ (11,376)	Project removed due to overlap.
383	Mud - Eleventh Road E to Boundary	\$ 266,629	\$ 266,629	\$ -	\$ 186,640	\$ -	\$ (186,640)	Timing updated to "2031 to 2041".
387	North Service Road Link (Millen) - North Service Road to Shoreview	\$ 26,931	\$ -	\$ (26,931)	\$ 3,582	\$ -	\$ (3,582)	Project removed due to overlap.
389	Old Mud - Paramount to Cedarville	\$ 54,469	\$ 39,480	\$ (14,989)	\$ 7,244	\$ 5,251	\$ (1,993)	Project adjusted to prevent overlap with other projects.
391	Owen Pl - King St E to Greenford	\$ 22,046	\$ -	\$ (22,046)	\$ 2,932	\$ -	\$ (2,932)	Project removed due to overlap.
396	Picardy - Highland Rd W to Lormont	\$ 70,680	\$ -	\$ (70,680)	\$ 9,401	\$ -	\$ (9,401)	Project removed due to overlap.
401	Queensdale - Skyland to Upper Wellington	\$ 15,854	\$ -	\$ (15,854)	\$ 2,109	\$ -	\$ (2,109)	Project removed due to overlap.
402	Raymond - Stonehenge to Garner	\$ 183,962	\$ -	\$ (183,962)	\$ 24,467	\$ -	\$ (24,467)	Project removed due to overlap.
416	Scenic - Angela to West of Chateau	\$ 257,015	\$ -	\$ (257,015)	\$ 34,183	\$ -	\$ (34,183)	Project removed due to overlap.
417	Scenic - Colquhoun to Garth (via Scenic and Denlow)	\$ 61,270	\$ 32,617	\$ (28,653)	\$ 8,149	\$ 4,338	\$ (3,811)	Project adjusted to prevent overlap with other projects.
420	Shaver - Garner to Carluke	\$ 1,832,582	\$ 1,832,582	\$ -	\$ 958,543	\$ -	\$ (958,543)	Timing updated to "2031 to 2041".
426	Southcote - Garner to Airport	\$ 392,445	\$ 392,445	\$ -	\$ 48,155	\$ -	\$ (48,155)	Timing updated to "2031 to 2041".
429	Sulphur Springs - Lover's to Mineral Springs Rd	\$ 439,812	\$ 439,812	\$ -	\$ 261,688	\$ -	\$ (261,688)	Timing updated to "2031 to 2041".
437	Terryberry - Private Rd to Rymal Rd	\$ 28,032	\$ -	\$ (28,032)	\$ 3,728	\$ -	\$ (3,728)	Project removed due to overlap.
439	Twenty Rd - Southcote to West of Nebo	\$ 1,310,636	\$ 1,310,636	\$ -	\$ -	\$ 18,075	\$ 18,075	LSP cost allocation updated.
447	White Church Rd E - Trinity Church Rd to Upper James	\$ 1,972,066	\$ -	\$ (1,972,066)	\$ -	\$ -	\$ -	Project removed due to overlap.
448	Whitedeer - Highbury to Rymal Rd E	\$ 48,561	\$ -	\$ (48,561)	\$ 6,459	\$ -	\$ (6,459)	Project removed due to overlap.
458	York Road Valley Community Centre Park Hydro Corridor Trail - York to Highway 6	\$ 3,109,472	\$ -	\$ (3,109,472)	\$ 1,850,136	\$ -	\$ (1,850,136)	Project removed due to overlap.
461	White Church Rd W Loop - White Church Rd W East of Carluke to White Church Road W West of Highway 6	\$ 1,683,731	\$ -	\$ (1,683,731)	\$ 1,178,611	\$ -	\$ (1,178,611)	Project removed due to overlap.

# Exhibit 2

## 2024 Transportation Capital List including Proposed LSP and Financial Policies Change

2024 Transportation Capital List including Proposed LSP and Financial Policies Change

Prj. No.	Increased Service Needs Attributable to Anticipated Development	2031 Oversizing (To 2031 Road Projects within the Urban Boundary)*	Timing (year)	Length (km)	Capital Improvement	Gross Capital Cost Estimate (2023\$)	Other Deductions	Benefit to Existing Development	Post Period Benefit	Net Capital Cost
<b>Road Projects</b>										
<b>AEGD</b>										
1	Airport Road - Terminal Access Road to Provident Way/East Cargo Road	✓	To 2031	0.32	2r-4u	\$ 3,789,353	\$ -	\$ 1,515,741	\$ -	\$ 2,273,612
2	Book Road - Southcote Road to Highway 6	✓	To 2031	1.05	2r-5u	\$ 11,523,989	\$ -	\$ 1,728,598	\$ -	\$ 9,795,391
3	Collector 1E - Collector 6N to Dickenson Road		2031 to 2041	0.67	3u	\$ 6,558,380	\$ -	\$ -	\$ 6,558,380	\$ -
4	Arterial 1N - Collector 2N to Dickenson Road/Garth Street Extension	✓	To 2031	2.97	5u	\$ 34,917,248	\$ -	\$ -	\$ -	\$ 34,917,248
5	Collector 2N - Collector 5W to Arterial 1N		2031 to 2041	0.42	3u	\$ 4,105,309	\$ -	\$ -	\$ 4,105,309	\$ -
6	Collector 6N - Upper James Street to Collector 6E		2031 to 2041	0.95	4u	\$ 10,307,184	\$ -	\$ -	\$ 10,307,184	\$ -
7	Collector 6N - Collector 6E to Garth Street		2031 to 2041	0.41	4u	\$ 4,524,353	\$ -	\$ -	\$ 4,524,353	\$ -
8	Collector 6N - Garth Street to Glancaster Road		2031 to 2041	1.54	4u	\$ 16,775,250	\$ -	\$ -	\$ 16,775,250	\$ -
9	Collector 6E - Collector 6N to Dickenson Road	✓	To 2031	0.64	3u	\$ 6,342,202	\$ -	\$ -	\$ -	\$ 6,342,202
10	Collector 7N - Collector 5W to Collector 2W		2031 to 2041	1.19	3u	\$ 11,756,604	\$ -	\$ -	\$ 11,756,604	\$ -
11	Collector 8W - Garner Road to Collector 5N		2031 to 2041	1.07	2u	\$ 8,301,996	\$ -	\$ -	\$ 8,301,996	\$ -
12	Dickenson Road - Glancaster Road to Garth Street Extension		2031 to 2041	1.53	2r-5u	\$ 18,044,132	\$ -	\$ -	\$ 18,044,132	\$ -
13	Dickenson Road - Garth Street Extension to Upper James Street	✓	To 2031	1.36	2r-5u	\$ 16,039,229	\$ -	\$ 2,405,884	\$ -	\$ 13,633,344
14	Dickenson Road Extension - Glancaster Road to Smith Road		2031 to 2041	0.83	5u	\$ 9,447,229	\$ -	\$ -	\$ 9,447,229	\$ -
15	Book Road - Smith Road to Southcote Road	✓	To 2031	0.45	2r-5u	\$ 5,343,540	\$ -	\$ 801,531	\$ -	\$ 4,542,009
16	Garth Street Extension - Twenty Road to Collector 6N		2031 to 2041	0.81	5u	\$ 9,477,970	\$ -	\$ -	\$ 9,477,970	\$ -
17	Garth Street Extension - Collector 6N to Dickenson Road		2031 to 2041	0.66	5u	\$ 7,709,296	\$ -	\$ -	\$ 7,709,296	\$ -
18	Glancaster Road - Garner Road to Dickenson Road	✓	To 2031	2.67	2r-3u	\$ 23,144,329	\$ -	\$ 3,471,649	\$ -	\$ 19,672,680
19	Glancaster Road - Dickenson Road to Arterial 1N		2031 to 2041	0.39	3u-5u	\$ 4,605,603	\$ -	\$ -	\$ 4,605,603	\$ -
20	Garner Road - Glancaster Road to Highway 6 South	✓	To 2031	3.12	2r-5u	\$ 31,491,877	\$ -	\$ 4,723,782	\$ -	\$ 26,768,096
21	Smith Road - Garner Road to Hydro Corridor	✓	To 2031	0.88	3u	\$ 8,635,284	\$ -	\$ -	\$ -	\$ 8,635,284
22	Smith Road - Hydro Corridor to Book Road		2031 to 2041	1.01	3u	\$ 9,946,349	\$ -	\$ -	\$ 9,946,349	\$ -
23	Smith Road - Book Road to Arterial 1N		2031 to 2041	0.63	3u	\$ 6,166,835	\$ -	\$ -	\$ 6,166,835	\$ -
24	Southcote Road - Garner Road to Book Road		2031 to 2041	1.95	2r-5u	\$ 23,002,848	\$ -	\$ -	\$ 23,002,848	\$ -
25	Upper James Street - Rymal Road to Highway 6 South		2031 to 2041	7.22	4r-6u	\$ 96,459,332	\$ -	\$ -	\$ 96,459,332	\$ -
26	Glancaster Road - Arterial 1N to Airport Boundary		2031 to 2041	0.48	2u	\$ 3,512,806	\$ -	\$ -	\$ 3,512,806	\$ -
27	Collector 9W - Garner Road to Collector 11N		2031 to 2041	0.33	2u	\$ 2,536,970	\$ -	\$ -	\$ 2,536,970	\$ -
28	Smith Road - Arterial 1N to Airport Boundary		2031 to 2041	0.21	3u	\$ 2,078,580	\$ -	\$ -	\$ 2,078,580	\$ -
29	Airport Road - East Cargo Road to Upper James Street	✓	To 2031	1.08	2r-3u	\$ 8,462,899	\$ -	\$ 3,385,160	\$ -	\$ 5,077,739
30	Book Road East - Collector 2W to Glancaster Road		2031 to 2041	0.85	2r-3u	\$ 6,510,409	\$ -	\$ -	\$ 6,510,409	\$ -
31	Collector 10N - Garner Road to Smith Road	✓	To 2031	1.17	3u	\$ 11,487,688	\$ -	\$ -	\$ -	\$ 11,487,688
32	Twenty Road - Glancaster Road to Upper James Street		2031 to 2041	2.90	2r-4u	\$ 32,145,181	\$ -	\$ -	\$ 32,145,181	\$ -
33	Airport Road - Glancaster Road to Terminal Access Road		To 2031	1.71	2r-2u	\$ 15,971,496	\$ -	\$ 6,388,598	\$ -	\$ 9,582,898
34	Collector 11N - Fiddler's Green Road to Collector 9W		2031 to 2041	0.35	2u	\$ 2,724,513	\$ -	\$ -	\$ 2,724,513	\$ -
35	Collector 1W - Collector 10N to Garner Road		2031 to 2041	0.39	3u	\$ 3,819,733	\$ -	\$ -	\$ 3,819,733	\$ -
<b>Ancaster</b>										
36	Garner Road - Highway 6 South to Wilson Street	✓	To 2031	4.86	2r-5u	\$ 49,311,040	\$ -	\$ 7,396,656	\$ -	\$ 41,914,384
37	Jerseyville Road - Wilson Street to Lloyminn Avenue		2031 to 2041	0.79	2r-3u	\$ 6,367,167	\$ -	\$ -	\$ 6,367,167	\$ -
38	Shaver Road - Trustwood to Garner Road		2031 to 2041	0.74	2r-2i	\$ 6,303,822	\$ -	\$ -	\$ 6,303,822	\$ -
39	McNiven Road - Rousseaux Street/Mohawk Road to Golf Links Road		To 2031	0.62	2r-3u	\$ 4,895,491	\$ -	\$ 3,916,393	\$ -	\$ 979,098
40	Jerseyville Road - Lloyminn Avenue to Meadowbrook Drive		2031 to 2041	1.25	2r-2u	\$ 10,164,929	\$ -	\$ -	\$ 10,164,929	\$ -
<b>Fruitland - Winona</b>										
41	Barton Street - Fruitland Road to Fifty Road	✓	To 2031	5.11	2r-5u	\$ 53,873,435	\$ -	\$ 21,549,374	\$ -	\$ 32,324,061
42	Fifty Road - Barton Street to South Service Road	✓	To 2031	0.55	2r-4u	\$ 5,178,149	\$ -	\$ 776,722	\$ -	\$ 4,401,426
43	Fifty Road - Barton Street to Highway 8		2031 to 2041	0.24	2r-3u	\$ 1,834,403	\$ -	\$ -	\$ 1,834,403	\$ -
44	Gordon Dean Avenue - Barton Street to Highway 8	✓	To 2031	1.08	4u	\$ 11,551,567	\$ -	\$ -	\$ -	\$ 11,551,567
45	Trinity Road/Highway 52 - Highway 403 Interchange to Cormorant Road		To 2031	1.79	2r-4u	\$ 17,792,911	\$ -	\$ 2,668,937	\$ -	\$ 15,123,974
46	Highway 8 - Dewitt Road to Jones Road		To 2031	1.73	2r-4u	\$ 16,331,501	\$ -	\$ 6,532,600	\$ -	\$ 9,798,900

Prj. No.	Increased Service Needs Attributable to Anticipated Development	2031 Oversizing (To 2031 Road Projects within the Urban Boundary)*	Timing (year)	Length (km)	Capital Improvement	Gross Capital Cost Estimate (2023\$)	Other Deductions	Benefit to Existing Development	Post Period Benefit	Net Capital Cost	
47	Highway 8 - Jones Road to McNeilly Road		2031 to 2041	1.73	2r-4u	\$ 17,715,501	\$ -	\$ -	\$ 17,715,501	\$ -	
48	Highway 8 - McNeilly Road to Fifty Road		2031 to 2041	2.67	2r-3u	\$ 20,604,135	\$ -	\$ -	\$ 20,604,135	\$ -	
49	Collector B (Block 1) - Fruitland Road to Jones Road		2031 to 2041	0.89	2u	\$ 6,779,781	\$ -	\$ -	\$ 6,779,781	\$ -	
50	Collector C (Block 2) - Barton Street to Highway 8	✓	To 2031	0.74	2u	\$ 5,642,466	\$ -	\$ -	\$ -	\$ 5,642,466	
51	Collector D (Block 3) - McNeilly Road to Collector F		2031 to 2041	1.25	2u	\$ 9,537,486	\$ -	\$ -	\$ 9,537,486	\$ -	
52	Collector E (Block 3) - Barton Street to Highway 8	✓	To 2031	0.66	2u	\$ 5,060,086	\$ -	\$ -	\$ -	\$ 5,060,086	
53	Collector F (Block 3) - Barton Street to Collector D	✓	To 2031	0.22	2u	\$ 1,713,732	\$ -	\$ -	\$ -	\$ 1,713,732	
54	Fruitland Road - Highway 8 to Barton Street	✓	To 2031	1.05	2r-3u	\$ 8,937,129	\$ -	\$ 1,340,569	\$ -	\$ 7,596,559	
55	Fruitland Road - Arvin Avenue to Barton Street		To 2031	0.36	2u-5u	\$ 4,339,490	\$ -	\$ 650,923	\$ -	\$ 3,688,566	
<b>MTO</b>											
56	Highway 403 - Mohawk Road/Lincoln M. Alexander Parkway to Highway 6 south interchange		To 2031	6	0.00	Truck Climbing Lane	\$ 4,878,650	\$ 2,439,325	\$ 365,899	\$ -	\$ 2,073,426
<b>Red Hill Business Park</b>											
57	Dartnall Road - Twenty Road to Dickenson Road		To 2031	1.55	4u	\$ 17,001,938	\$ -	\$ -	\$ -	\$ 17,001,938	
58	Twenty Road Extension - Glover Road to Upper Redhill Valley Parkway	✓	To 2031	0.35	2i	\$ 3,185,739	\$ -	\$ -	\$ -	\$ 3,185,739	
59	Upper Red Hill Valley Parkway - Rymal Road to Twenty Road		2031 to 2041	1.22	4u	\$ 13,103,066	\$ -	\$ -	\$ 13,103,066	\$ -	
60	Dickenson Road - 350 meters west of Nebo to 330m west of Glover Road		2031 to 2041	1.20	2r-2i	\$ 11,285,379	\$ -	\$ -	\$ 11,285,379	\$ -	
61	Glover Road - Twenty Road to Rymal Road	✓	To 2031	1.31	2r-2i	\$ 11,485,019	\$ -	\$ 1,722,753	\$ -	\$ 9,762,267	
62	Nebo Road - Twenty Road to Dickenson Road/Dartnall Road		To 2031	0.74	2r-2i	\$ 6,302,030	\$ -	\$ 945,305	\$ -	\$ 5,356,726	
63	Nebo Road - Rymal Road to Twenty Road East		To 2031	1.30	2r-2i	\$ 11,085,926	\$ -	\$ 1,662,889	\$ -	\$ 9,423,037	
<b>South Mountain Area</b>											
64	Rymal Road - Dartnall Road to Upper James Street	✓	To 2031	5.17	2r-5u	\$ 56,631,794	\$ -	\$ 8,494,769	\$ -	\$ 48,137,025	
65	Upper Wellington Street - Limeridge Road to Stone Church Road		To 2031	1.04	2r-3u	\$ 12,404,686	\$ -	\$ 4,961,874	\$ -	\$ 7,442,812	
66	Garth Street - Rymal Road to Twenty Road West		2031 to 2041	1.41	2r-5u	\$ 15,963,350	\$ -	\$ -	\$ 15,963,350	\$ -	
67	Rymal Road - Glanaster Road to Upper Paradise Street		To 2031	0.55	2r-5u	\$ 5,594,604	\$ -	\$ 839,191	\$ -	\$ 4,755,413	
68	West 5th Street - Rymal Road to Stone Church Road	✓	To 2031	1.01	2r-3u	\$ 7,728,774	\$ -	\$ 3,091,510	\$ -	\$ 4,637,265	
<b>Stoney Creek</b>											
69	Arvin Avenue - McNeilly Road to Lewis Road		To 2031	0.85	2i	\$ 7,736,794	\$ -	\$ -	\$ -	\$ 7,736,794	
70	South Service Road - Lewis Road to Fifty Road	✓	To 2031	1.79	2r-4r	\$ 13,701,195	\$ -	\$ 2,055,179	\$ -	\$ 11,646,015	
71	McNeilly Road - Highway 8 to Barton Street	✓	To 2031	0.90	2r-2u	\$ 7,156,843	\$ -	\$ 1,073,526	\$ -	\$ 6,083,317	
72	Lewis Road - Highway 8 to Barton Street	✓	To 2031	0.49	2r-2u	\$ 3,908,425	\$ -	\$ 586,264	\$ -	\$ 3,322,161	
73	Glover Road - Highway 8 to Barton Street		2031 to 2041	0.81	2r-2u	\$ 6,259,225	\$ -	\$ -	\$ 6,259,225	\$ -	
74	Jones Road - Highway 8 to Barton Street	✓	To 2031	0.92	2r-2u	\$ 7,293,473	\$ -	\$ 1,094,021	\$ -	\$ 6,199,452	
75	Jones Road - Barton Street to South Service Road		To 2031	0.92	2r-2i	\$ 8,035,897	\$ -	\$ 4,017,949	\$ -	\$ 4,017,949	
76	Lewis Road - Barton Street to South Service Road		To 2031	0.87	2r-2i	\$ 7,871,843	\$ -	\$ 3,935,922	\$ -	\$ 3,935,922	
77	Millen Road - Barton Street to South Service Road		To 2031	1.07	2r-2i	\$ 9,092,330	\$ -	\$ 3,636,932	\$ -	\$ 5,455,398	
78	South Service Road - Millen Road to Gray Road		2031 to 2041	1.55	2r-2u	\$ 12,006,082	\$ -	\$ -	\$ 12,006,082	\$ -	
<b>Twenty Road East</b>											
79	Upper Ottawa Street - End to Twenty Road		2031 to 2041	0.95	4u	\$ 10,215,838	\$ -	\$ -	\$ 10,215,838	\$ -	
<b>Waterdown</b>											
80	North Waterdown Drive - Centre Road to Parkside Drive		To 2031	1.28	3u	\$ 12,464,597	\$ -	\$ -	\$ -	\$ 12,464,597	
81	Parkside Drive - North Waterdown Drive to Avonsyde Boulevard	✓	To 2031	1.47	2r-3u	\$ 32,319,655	\$ -	\$ 4,847,948	\$ -	\$ 27,471,707	
82	North Waterdown Drive - Clappison Avenue Extension to Mosaic Drive		To 2031	0.59	3u	\$ 5,726,919	\$ -	\$ -	\$ -	\$ 5,726,919	
83	Clappison Avenue Extension - Parkside Drive to North Waterdown Drive		To 2031	0.54	2u	\$ 4,132,544	\$ -	\$ -	\$ -	\$ 4,132,544	
84	Parkside Drive - Hollybush Drive to Highway 6	✓	To 2031	1.07	2r-4u	\$ 10,266,769	\$ -	\$ 4,106,708	\$ -	\$ 6,160,062	
85	Parkside Drive - Main Street to North Waterdown Drive		2031 to 2041	0.59	2r-3u	\$ 4,533,236	\$ -	\$ -	\$ 4,533,236	\$ -	
<b>Other</b>											
86	Binbrook Road - Fletcher Road to Binhaven Road	✓	To 2031	0.91	2r-2u	\$ 7,297,133	\$ -	\$ 1,094,570	\$ -	\$ 6,202,563	
87	LRT corridor - Centennial Parkway/Main Street/King Street to McMaster University		To 2031	13.77	Public Realm Improvements	\$ 9,990,000	\$ -	\$ 1,498,500	\$ -	\$ 8,491,500	
88	Longwood Road - Aberdeen Avenue to Main Street		To 2031	0.64	4u	\$ 8,192,524	\$ -	\$ 4,096,262	\$ -	\$ 4,096,262	
89	Lincoln M. Alexander Parkway-Red Hill Valley Parkway - Highway 403 to Queen Elizabeth Way		2031 to 2041	17.30	4r-6u	\$ 135,000,000	\$ -	\$ -	\$ 135,000,000	\$ -	

Prj. No.	Increased Service Needs Attributable to Anticipated Development	2031 Oversizing (To 2031 Road Projects within the Urban Boundary)*	Timing (year)	Length (km)	Capital Improvement	Gross Capital Cost Estimate (2023\$)	Other Deductions	Benefit to Existing Development	Post Period Benefit	Net Capital Cost
<b>Local Share Deductions</b>										
90	Provision for Local Share of Urbanization (Urbanization Rate)					\$ (4,684,630)				\$ (4,684,630)
91	Local Share Deductions					\$ (64,082,002)				\$ (64,082,002)
<b>Major Structures</b>										
92	Highway 5/6 Interchange		To 2031	-	Structure	\$ 60,500,000	\$ 45,500,000	\$ -	\$ -	\$ 15,000,000
93	Mohawk Road - Highway 403 Interchange Ramp		To 2031	-	Structure	\$ 4,042,310	\$ -	\$ 2,021,155	\$ -	\$ 2,021,155
94	Centennial Parkway at QEW		To 2031	-	Interchange Reconfiguration	\$ 8,500,000	\$ -	\$ 4,250,000	\$ -	\$ 4,250,000
95	QEW Off-Ramps at Fifty Road		To 2031	-	Signalization and Ramp Reconfiguration	\$ 4,000,000	\$ -	\$ 600,000	\$ -	\$ 3,400,000
96	Strathcona Pedestrian Bridge		2031 to 2041	-	Structure	\$ 31,500,000	\$ -	\$ -	\$ 31,500,000	\$ -
97	Limeridge Mall Pedestrian Bridge		To 2031	-	Structure	\$ 6,500,000	\$ 3,500,000	\$ 2,430,000	\$ -	\$ 570,000
98	Henderson Lift Pedestrian and Cyclist Bridge		2031 to 2041	-	Structure	\$ 20,000,000	\$ -	\$ -	\$ 20,000,000	\$ -
99	Hamilton Centre Pedestrian and Cyclist Bridge		2031 to 2041	-	Structure	\$ 9,500,000	\$ -	\$ -	\$ 9,500,000	\$ -
100	Red Hill Pedestrian and Cyclist Bridge		To 2031	-	Structure	\$ 19,000,000	\$ -	\$ 15,390,000	\$ -	\$ 3,610,000
101	Dundas Pedestrian and Cyclist Bridge		2031 to 2041	-	Structure	\$ 3,125,000	\$ -	\$ -	\$ 3,125,000	\$ -
102	Margaret St. Park Active Transportation Bridge		2031 to 2041	-	Structure	\$ 5,900,000	\$ -	\$ -	\$ 5,900,000	\$ -
103	Sealey Park Active Transportation Bridge		To 2031	-	Structure	\$ 7,500,000	\$ -	\$ 6,075,000	\$ -	\$ 1,425,000
104	Grade Separation		To 2031	-	Grade Separation	\$ 71,827,667	\$ -	\$ 17,956,917	\$ 26,935,375	\$ 26,935,375
<b>Programs</b>										
105	New Signals (Pedestrian and/or Regular)		2024-2031	-	City-Wide Program	\$ 32,000,000	\$ -	\$ 1,600,000	\$ -	\$ 30,400,000
106	Development Road Urbanization		2024-2031	-	City-Wide Program	\$ 6,500,000	\$ -	\$ 325,000	\$ -	\$ 6,175,000
107	Street Lighting Enhancement Program		2024-2031	-	City-Wide Program	\$ 3,250,000	\$ -	\$ 2,632,500	\$ -	\$ 617,500
108	Pedestrian Crossovers		2024-2031	-	City-Wide Program	\$ 1,680,000	\$ -	\$ 1,360,800	\$ -	\$ 319,200
109	Advanced Traffic Management Systems		2024-2031	-	City-Wide Program	\$ 6,000,000	\$ -	\$ 4,500,000	\$ -	\$ 1,500,000
110	Transit Shelter Expansion Program		2024-2031	-	City-Wide Program	\$ 1,200,000	\$ -	\$ 600,000	\$ -	\$ 600,000
111	Bus Stop Shelter Rehabilitation Program		2024-2031	-	City-Wide Program	\$ 1,000,000	\$ -	\$ 850,000	\$ -	\$ 150,000
112	New Sidewalk Program		2024-2031	-	City-Wide Program	\$ 6,500,000	\$ -	\$ -	\$ -	\$ 6,500,000
113	New Traffic Signals		2024-2031	-	City-Wide Program	\$ 12,000,000	\$ -	\$ 600,000	\$ -	\$ 11,400,000
114	New Traffic Signal - Drakes Drive at North Service Road		2024-2031	-	Traffic Signal	\$ 350,000	\$ -	\$ 17,500	\$ -	\$ 332,500
115	New Traffic Signal - Regional Road 20 at Westbrook Road		2024-2031	-	Traffic Signal	\$ 350,000	\$ -	\$ 17,500	\$ -	\$ 332,500
116	New Traffic Signal - Regional Road 56 at Kirk Road		2024-2031	-	Traffic Signal	\$ 350,000	\$ -	\$ 17,500	\$ -	\$ 332,500
117	New Traffic Signal - Fifty Road at North Service Road		2024-2031	-	Traffic Signal	\$ 350,000	\$ -	\$ 17,500	\$ -	\$ 332,500
118	New Traffic Signal - Fruitland Road at North Service Road		2024-2031	-	Traffic Signal	\$ 350,000	\$ -	\$ 17,500	\$ -	\$ 332,500
119	Unidentified intersection improvements (excluding Traffic Signals)		2024-2031	-	City-Wide Program	\$ 3,250,000	\$ -	\$ 2,632,500	\$ -	\$ 617,500
120	Annual Bike Parking at B/A Line Stops		2024-2031	-	City-Wide Program	\$ 46,000	\$ -	\$ 37,260	\$ -	\$ 8,740
121	Annual Enhanced Bike Parking at Express Bus/Rapid Transit Stops		2024-2031	-	City-Wide Program	\$ 275,000	\$ -	\$ 222,750	\$ -	\$ 52,250
122	Transportation Demand Management		2024-2031	-	City-Wide Program	\$ 4,400,000	\$ -	\$ 3,564,000	\$ -	\$ 836,000
123	Durable Pavement Markings – New Installations		2024-2031	-	City-Wide Program	\$ 1,600,000	\$ -	\$ 240,000	\$ -	\$ 1,360,000
124	Traffic Controller Cabinet Replacements (Capacity Related)		2024-2031	-	City-Wide Program	\$ 3,200,000	\$ -	\$ 160,000	\$ -	\$ 3,040,000
125	Traffic Signal Upgrades		2024-2031	-	City-Wide Program	\$ 2,400,000	\$ -	\$ 120,000	\$ -	\$ 2,280,000
126	Traffic Signal LED Replacement Program		2024-2031	-	City-Wide Program	\$ 1,760,000	\$ -	\$ 1,760,000	\$ -	\$ -
127	Sidewalk Missing Link Program		2024-2031	-	City-Wide Program	\$ 2,000,000	\$ -	\$ 1,620,000	\$ -	\$ 380,000
128	Bike Parking		2024-2031	-	City-Wide Program	\$ 720,000	\$ -	\$ 583,200	\$ -	\$ 136,800
129	Micromobility		2024-2031	-	City-Wide Program	\$ 1,200,000	\$ -	\$ 972,000	\$ -	\$ 228,000
130	Miscellaneous Land Acquisitions		2024-2031	-	City-Wide Program	\$ 6,969,500	\$ -	\$ 348,475	\$ -	\$ 6,621,025
<b>Active Transportation Projects</b>										
131	Barton - Brockley to Fruitland		2024-2031	3.95	Multi-Use Trail	\$ 171,450	\$ -	\$ 138,874	\$ 9,773	\$ 22,803
132	Barton - Red Hill Valley to Lake		2024-2031	1.61	Cycle track	\$ 326,173	\$ -	\$ 264,200	\$ 18,592	\$ 43,381
133	Baseline/ Lockport - Winona Road to Niagara border		2024-2031	1.15	Bike Lane	\$ 32,060	\$ -	\$ 25,968	\$ 1,827	\$ 4,264
134	Battlefield Park - Bruce Trail Link - Greenhill to Bruce Trail to Glover Mtn		2024-2031	0.75	Multi-Use Trail	\$ 742,949	\$ -	\$ 601,788	\$ 42,348	\$ 98,812
135	Beach Bike Lane - under QEW		2024-2031	0.24	Bike Lane	\$ 9,757	\$ -	\$ 7,903	\$ 556	\$ 1,298
136	Beach Boulevard - lift bridge to Woodward/Eastport		2024-2031	4.52	Bike Lane	\$ 131,027	\$ -	\$ 106,132	\$ 7,469	\$ 17,427
137	Beddoe Drive Link		2024-2031	0.91	Multi-Use Trail	\$ 723,434	\$ -	\$ 585,982	\$ 41,236	\$ 96,217
138	Binbrook Road - Regional Road 56 to Southbrook		2024-2031	0.28	Bike Lane	\$ 9,757	\$ -	\$ 7,903	\$ 556	\$ 1,298



Prj. No.	Increased Service Needs Attributable to Anticipated Development	2031 Oversizing (To 2031 Road Projects within the Urban Boundary)*	Timing (year)	Length (km)	Capital Improvement	Gross Capital Cost Estimate (2023\$)	Other Deductions	Benefit to Existing Development	Post Period Benefit	Net Capital Cost
139	Binbrook Road - Trinity Church to Royal Winter/Binhaven		2024-2031	2.16	Multi-Use Trail	\$ 342,899	\$ 146,050	\$ -	\$ 59,055	\$ 137,795
140	Birch/ Holton - Burlington St to Cannon/ King/ Delaware		2024-2031	1.40	Bike Lane	\$ 43,211	\$ -	\$ 35,001	\$ 2,463	\$ 5,747
141	Burlington Street East Boulevard Trail - Ottawa to Parkdale to Glow		2024-2031	2.30	Multi-Use Trail	\$ 1,463,595	\$ -	\$ 1,185,512	\$ 83,425	\$ 194,658
142	Burlington Street Link - Ferguson/ Dock Service Road to Sherman		2024-2031	1.88	Multi-Use Trail	\$ 144,966	\$ -	\$ 117,422	\$ 8,263	\$ 19,280
143	Burlington/ Industrial - Sherman to Gage		2024-2031	0.86	Cycle track	\$ 137,996	\$ -	\$ 111,777	\$ 7,866	\$ 18,353
144	Centennial Parkway - North Service to GO station/ Kenora		2024-2031	1.20	Multi-Use Trail	\$ 217,448	\$ -	\$ 176,133	\$ 12,395	\$ 28,921
145	Centre - Concession 8 E to Concession 7 E		2024-2031	1.80	Paved Shoulder	\$ 489,259	\$ -	\$ 73,389	\$ 124,761	\$ 291,109
146	Centre - Grindstone Creek to Concession 5 E		2024-2031	0.45	Paved Shoulder	\$ 122,663	\$ -	\$ 18,399	\$ 31,279	\$ 72,985
147	Centre - Warren/ Carlisle Road to Progreston		2024-2031	0.78	Paved Shoulder	\$ 210,479	\$ -	\$ 31,572	\$ 53,672	\$ 125,235
148	Charlton/ John - James to Ferguson & St Joseph's Dr		2024-2031	0.80	Bike Lane	\$ 117,088	\$ -	\$ 94,841	\$ 6,674	\$ 15,573
149	Chedmac - Southridge to Rice		2024-2031	0.53	Bike Lane	\$ 32,060	\$ -	\$ 25,968	\$ 1,827	\$ 4,264
150	Chedoke Rail Trail - Highway 403 to Dundurn		2024-2031	4.68	Multi-Use Trail	\$ 2,072,729	\$ -	\$ 1,678,911	\$ 118,146	\$ 275,673
151	Cherry Beach Road Link - Millen to Dewitt		2024-2031	0.91	Multi-Use Trail	\$ 326,173	\$ -	\$ 264,200	\$ 18,592	\$ 43,381
152	Christie-Tews - Christie C.A. to Harvest		2024-2031	2.75	Multi-Use Trail	\$ 1,566,744	\$ -	\$ 235,012	\$ 399,520	\$ 932,212
153	Delawana - Kenora to Lake Devil's Punchbowl Link - Mountain Ave/ Lake Ave to Ridge Road/ Devil's		2024-2031	1.02	Bike Lane	\$ 12,545	\$ -	\$ 10,162	\$ 715	\$ 1,668
154	Dewitt - Barton to Dundee		2024-2031	0.42	Multi-Use Trail	\$ 209,085	\$ -	\$ 169,359	\$ 11,918	\$ 27,808
155	Dewitt - Dundee to Ridge		2024-2031	0.90	Bike Lane	\$ 29,272	\$ -	\$ 23,710	\$ 1,668	\$ 3,893
156	Dundas St - Main to Cootes		2024-2031	0.50	Bike Lane	\$ 1,045,425	\$ -	\$ 846,794	\$ 59,589	\$ 139,042
157	Dundas St in Waterdown - Highway 6 to Kearns (border)		2024-2031	0.68	Bike Lane	\$ 22,302	\$ -	\$ 18,065	\$ 1,271	\$ 2,966
158	Dundas St in Waterdown - Highway 6 to Kearns (border)		2024-2031	6.03	Multi-Use Trail	\$ 179,813	\$ -	\$ 145,649	\$ 10,249	\$ 23,915
159	East Townline - Mud to Highland		2024-2031	1.10	Bike Lane	\$ 18,121	\$ -	\$ 2,718	\$ 4,621	\$ 10,782
160	Eastport Drive Lift Bridge Link		2024-2031	0.60	Multi-Use Trail	\$ 2,439,325	\$ -	\$ 1,975,853	\$ 139,042	\$ 324,430
161	Edgewood - Safari to Highway 6		2024-2031	0.90	Bike Lane	\$ 15,333	\$ -	\$ -	\$ 4,600	\$ 10,733
162	Emperor - Brigade to Acadia		2024-2031	0.44	Bike Lane	\$ 22,302	\$ -	\$ 18,065	\$ 1,271	\$ 2,966
163	Existing Pipeline Trail - Main to Strathearne		2024-2031	2.20	Multi-Use Trail	\$ 6,522,058	\$ -	\$ 5,282,867	\$ 371,757	\$ 867,434
164	Fallsview - Sydenham to Rock Chapel Road		2024-2031	1.40	Multi-Use Trail	\$ 487,865	\$ -	\$ -	\$ 146,360	\$ 341,506
165	Fennell Avenue Boulevard Trail - Garth/ West 18th to West 5th		2024-2031	1.20	Multi-Use Trail	\$ 574,287	\$ -	\$ 465,172	\$ 32,734	\$ 76,380
166	Ferguson - Young to Charlton		2024-2031	0.21	Bike Lane	\$ 2,788	\$ -	\$ 2,258	\$ 159	\$ 371
167	Fiddler's Green - Amberly to Carluke		2024-2031	6.77	Bike Lane	\$ 29,272	\$ 8,509	\$ -	\$ 6,229	\$ 14,534
168	Fiddler's Green - Jerseyville to Wilson		2024-2031	0.25	Bike Lane	\$ 8,363	\$ -	\$ 6,774	\$ 477	\$ 1,112
169	First Rd W/Whitedeer/Terryberry & Picardy/ Highbury - Glover Mtn Road/ Ridgeview Dr to Rymal/ Bellagio		2024-2031	4.08	Bike Lane	\$ 66,907	\$ -	\$ 54,195	\$ 3,814	\$ 8,899
170	Frances - Grays to Southshore		2024-2031	1.15	Bike Lane	\$ 217,448	\$ -	\$ 176,133	\$ 12,395	\$ 28,921
171	Frid/Chatham - Longwood to Dundurn		2024-2031	1.00	Bike Lane	\$ 8,363	\$ -	\$ 6,774	\$ 477	\$ 1,112
172	Golf Links/ Halson - Wilson to Southcote		2024-2031	1.19	Bike Lane	\$ 39,029	\$ -	\$ 31,614	\$ 2,225	\$ 5,191
173	Governor's - Wainwright to Lynden		2031-2041	13.06	Paved Shoulder	\$ 908,823	\$ -	\$ -	\$ 908,823	\$ -
174	Governor's - Ogilvie to Main		2024-2031	0.24	Bike Lane	\$ 59,938	\$ -	\$ 48,550	\$ 3,416	\$ 7,972
175	Grays/ Gray - Confederation Park gate to King		2024-2031	3.00	Multi-Use Trail	\$ 163,086	\$ -	\$ 132,100	\$ 9,296	\$ 21,690
176	Greenhill - Harrisford to Summercrest		2024-2031	1.94	Bike Lane	\$ 105,936	\$ -	\$ 85,808	\$ 6,038	\$ 14,090
177	Greenhill - Summercrest to King		2024-2031	1.20	Bike Lane	\$ 65,513	\$ -	\$ 53,066	\$ 3,734	\$ 8,713
178	Hamilton Drive Link		2024-2031	-	Multi-Use Trail	\$ 2,759,922	\$ -	\$ 2,235,537	\$ 157,316	\$ 367,070
179	Hamilton in Waterdown - Centre/Main to Highway 5/Dundas		2024-2031	1.00	Multi-Use Trail	\$ 86,422	\$ -	\$ 70,002	\$ 4,926	\$ 11,494
180	Hamilton-Brantford Rail Trail - Bridlewood Dr to Ewen		2024-2031	4.00	Multi-Use Trail	\$ 565,923	\$ -	\$ 458,398	\$ 32,258	\$ 75,268
181	Hatt - Peel to John		2024-2031	0.65	Cycle track	\$ 40,423	\$ -	\$ 32,743	\$ 2,304	\$ 5,376
182	Hollybush - Parkside to Dundas St		2024-2031	1.10	Bike Lane	\$ 22,302	\$ -	\$ 18,065	\$ 1,271	\$ 2,966
183	Hydro Corridor - Barton to Lawrence		2024-2031	1.90	Multi-Use Trail	\$ 1,743,769	\$ -	\$ 1,412,453	\$ 99,395	\$ 231,921
184	Hydro Corridor - Lawrence Avenue to Greenhill Avenue		2024-2031	1.15	Multi-Use Trail	\$ 599,377	\$ -	\$ 485,495	\$ 34,164	\$ 79,717
185	Hydro Corridor - Wilson/Highway 52 to Regional Road 56		2024-2031	12.70	Multi-Use Trail	\$ 10,617,336	\$ 10,617,336	\$ -	\$ -	\$ -
186	Iroquois Heights to Old Mohawk - Chedoke Rail Trail to Old Mohawk Road		2024-2031	0.85	Multi-Use Trail	\$ 443,260	\$ -	\$ 359,041	\$ 25,266	\$ 58,954
187	Jones Road Link		2024-2031	2.67	Multi-Use Trail	\$ 309,446	\$ 224,257	\$ -	\$ 25,557	\$ 59,632
188	Karst Escarpment Loop - Pritchard to Mount Albion/Winterberry		2024-2031	0.70	Multi-use Trail	\$ 543,621	\$ -	\$ 440,333	\$ 30,986	\$ 72,302
189	Kenora/ Greenford/ Owen - Bancroft to King		2024-2031	2.60	Bike Lane	\$ 239,751	\$ -	\$ 194,198	\$ 13,666	\$ 31,887
190	Kentley - Eugene to Kenora		2024-2031	0.40	Signed Bike Route	\$ 5,576	\$ -	\$ 4,516	\$ 318	\$ 742

Prj. No.	Increased Service Needs Attributable to Anticipated Development	2031 Oversizing (To 2031 Road Projects within the Urban Boundary)*	Timing (year)	Length (km)	Capital Improvement	Gross Capital Cost Estimate (2023\$)	Other Deductions	Benefit to Existing Development	Post Period Benefit	Net Capital Cost
191	Kerns Road,Waterdown South Link		2024-2031	-	Multi-Use Trail	\$ 1,333,962	\$ -	\$ 1,080,509	\$ 76,036	\$ 177,417
192	King in Dundas - Bond to Peel		2024-2031	0.80	Bike Lane	\$ 43,211	\$ -	\$ 35,001	\$ 2,463	\$ 5,747
193	King over Red Hill Valley Parkway - Lawrence to Pottruff		2024-2031	0.60	Cycle track	\$ 37,635	\$ -	\$ 30,485	\$ 2,145	\$ 5,005
194	Kitty Murray - Garner to Golf Links		2024-2031	2.26	Bike Lane	\$ 73,877	\$ -	\$ 59,840	\$ 4,211	\$ 9,826
195	Limeridge - Birchview to Mtn Brow		2024-2031	1.98	Bike Lane	\$ 97,573	\$ -	\$ 79,034	\$ 5,562	\$ 12,977
196	Limeridge - Garth/ Bonaventure to West 5th/ Hawkridge		2024-2031	1.37	Bike Lane	\$ 73,877	\$ -	\$ 59,840	\$ 4,211	\$ 9,826
197	Limeridge Mall Hydro Corridor Trail - Mohawk Road to South of Rymal		2024-2031	3.80	Multi-Use Trail	\$ 1,957,036	\$ 1,957,036	\$ -	\$ -	\$ -
198	Lovers Lane - Sulphur Springs to Jerseyville		2024-2031	0.90	Bike Lane	\$ 29,272	\$ -	\$ 23,710	\$ 1,668	\$ 3,893
199	Marston - Paramount to Gordon Drummond		2024-2031	0.40	Bike Lane	\$ 19,515	\$ -	\$ 15,807	\$ 1,112	\$ 2,595
200	Meadowbrook		2024-2031	1.00	Bike Lane	\$ 22,302	\$ -	\$ 18,065	\$ 1,271	\$ 2,966
201	Meadowlands/ Raymond - Golf Links to Garner		2024-2031	2.10	Bike Lane	\$ 68,301	\$ -	\$ 55,324	\$ 3,893	\$ 9,084
202	Millen - Shoreview to Millen/ Seaman		2024-2031	0.50	Bike Lane	\$ 43,211	\$ 20,532	\$ 18,370	\$ 1,293	\$ 3,016
203	Mohawk - Old Mohawk to Upper Paradise		2024-2031	1.83	Bike Lane	\$ 65,513	\$ -	\$ 53,066	\$ 3,734	\$ 8,713
204	Montclair/ Central/ Graham/ Frederick		2024-2031	3.80	Signed Bike Route	\$ 26,484	\$ -	\$ 21,452	\$ 1,510	\$ 3,522
205	Mountain Brow Boulevard Trail - Mohawk to Arbour		2024-2031	1.81	Multi-Use Trail	\$ 522,319	\$ -	\$ 422,268	\$ 29,715	\$ 69,335
206	Mountain Brow East Path - Rendell to Oakcrest		2024-2031	0.81	Multi-Use Trail	\$ 2,174,484	\$ -	\$ 1,761,332	\$ 123,946	\$ 289,206
207	Mountain Brow in Waterdown - Mill to Burke to King Road		2024-2031	1.20	Multi-Use Trail	\$ 919,974	\$ -	\$ 745,179	\$ 52,439	\$ 122,357
208	Museum of Steam and Tech Link - Woodward to Red Hill Valley Trail		2024-2031	0.75	Multi-Use Trail	\$ 846,097	\$ -	\$ 685,339	\$ 48,228	\$ 112,531
209	Nash - Bancroft to King		2024-2031	2.58	Cycle track	\$ 140,784	\$ -	\$ 114,035	\$ 8,025	\$ 18,724
210	North Service Road - Bellavista to Baseline		2024-2031	0.98	Bike Lane	\$ 32,060	\$ -	\$ 25,968	\$ 1,827	\$ 4,264
211	North Service Road - Dewitt to Lakeview		2024-2031	0.73	Bike Lane	\$ 22,302	\$ -	\$ 18,065	\$ 1,271	\$ 2,966
212	Northlawn Avenue Link		2024-2031	1.10	Multi-Use Trail	\$ 557,560	\$ 81,100	\$ -	\$ 142,938	\$ 333,522
213	Ogilvie/ Old Ancaster - Hatt/ King to Hamilton-Brantford Rail Trail		2024-2031	0.80	Bike Lane	\$ 19,515	\$ -	\$ 15,807	\$ 1,112	\$ 2,595
214	Old Guelph Road - Paterson to York Bike Lane		2024-2031	3.53	Paved Shoulder	\$ 1,264,267	\$ -	\$ 189,640	\$ 322,388	\$ 752,239
215	Old Mud - Mt Albion to Winterberry		2024-2031	0.40	Bike Lane	\$ 12,545	\$ -	\$ 10,162	\$ 715	\$ 1,668
216	Osler/ Main - Hatt/ King to Main + 125m of Main		2024-2031	2.00	Bike Lane	\$ 122,663	\$ -	\$ 99,357	\$ 6,992	\$ 16,314
217	Ottawa Street South - Bruce Trail Link		2024-2031	0.39	Multi-Use Trail	\$ 956,215	\$ -	\$ 774,534	\$ 54,504	\$ 127,177
218	Proposed Pipeline Trail - Museum of Steam and Technology to Mahoney		2024-2031	2.40	Multi-Use Trail	\$ 720,646	\$ -	\$ 583,724	\$ 41,077	\$ 95,846
219	Queensdale - Upper Sherman to Upper Ottawa		2024-2031	1.56	Bike Lane	\$ 50,180	\$ -	\$ 40,646	\$ 2,860	\$ 6,674
220	Queensdale - Upper Wellington to Skyland		2024-2031	0.39	Bike Lane	\$ 54,362	\$ -	\$ 44,033	\$ 3,099	\$ 7,230
221	Queenston/ Highway 8 - King to Dewitt		2024-2031	1.37	Bike Lane	\$ 342,899	\$ -	\$ 277,749	\$ 19,545	\$ 45,606
222	Regional Road 56 - Swayze Road to Cemetery		2024-2031	4.60	Multi-Use Trail	\$ 4,347,574	\$ 1,414,215	\$ -	\$ 880,008	\$ 2,053,351
223	Regional Road 56 south of Kirk - Windwood to Kirk		2024-2031	1.14	Multi-Use Trail	\$ 1,087,242	\$ -	\$ 163,086	\$ 277,247	\$ 646,909
224	Ridge Road - Devil Punch Bowl to Dewitt		2024-2031	2.91	Multi-Use Trail	\$ 1,087,242	\$ -	\$ 880,666	\$ 61,973	\$ 144,603
225	Rousseaux/ Mohawk - Wilson to Filman		2024-2031	1.60	Bike Lane	\$ 313,628	\$ -	\$ 254,038	\$ 17,877	\$ 41,712
226	Scenic - Chedoke Rail Ttrail to Upper Paradise		2024-2031	2.27	Bike Lane	\$ 37,635	\$ -	\$ 30,485	\$ 2,145	\$ 5,005
227	Scenic/ Denlow - Upper Paradise to Garth		2024-2031	0.95	Bike Lane	\$ 15,333	\$ -	\$ 12,420	\$ 874	\$ 2,039
228	Shaver - Wilson to Garner		2024-2031	0.52	Multi-Use Trail	\$ 16,727	\$ -	\$ 13,549	\$ 953	\$ 2,225
229	Stuart Street Rail Link		2024-2031	0.94	Multi-Use Trail	\$ 354,051	\$ -	\$ 286,781	\$ 20,181	\$ 47,089
230	Upper James - William Connell Park		2024-2031	0.38	Multi-Use Trail	\$ 313,628	\$ -	\$ 254,038	\$ 17,877	\$ 41,712
231	Upper Sherman - Stone Church to Rymal to Miles		2024-2031	1.00	Bike Lane	\$ 249,508	\$ 249,508	\$ -	\$ -	\$ -
232	Upper Wentworth - Concession to Fennell		2024-2031	1.03	Bike Lane	\$ 55,756	\$ -	\$ 45,162	\$ 3,178	\$ 7,416
233	Upper Wentworth - Fennell to East 24th		2024-2031	1.03	Bike Lane	\$ 55,756	\$ -	\$ 45,162	\$ 3,178	\$ 7,416
234	Valley Road - Rock Chapel to York Road		2024-2031	1.40	Paved Shoulder	\$ 434,897	\$ -	\$ 65,235	\$ 110,899	\$ 258,764
235	Van Wagner's - Beach Bike Lane to Centennial Parkway		2024-2031	2.50	Bike Lane	\$ 108,724	\$ -	\$ 88,067	\$ 6,197	\$ 14,460
236	Victoria - Young to Burlington		2024-2031	2.53	Bike Lane	\$ 55,756	\$ -	\$ 45,162	\$ 3,178	\$ 7,416
237	Walnut Grove & Sanctuary Park - Walnut Grove/ Ogilvie to Highland Park Dr		2024-2031	0.40	Multi-Use Trail	\$ 510,167	\$ -	\$ 413,236	\$ 29,080	\$ 67,852
238	Warrington/ South Service/ Lake - Centennial Parkway to Maple		2024-2031	3.86	Multi-Use Trail	\$ 108,724	\$ -	\$ 88,067	\$ 6,197	\$ 14,460
239	White Church Road West Airport Link		2024-2031	-	Multi-Use Trail	\$ 938,095	\$ -	\$ -	\$ 281,428	\$ 656,666
240	White Church Road West Link		2024-2031	6.55	Multi-Use Trail	\$ 1,832,979	\$ 798,725	\$ -	\$ 310,276	\$ 723,977
241	Wilson in Ancaster - Rousseaux to Halson		2024-2031	0.85	Bike Lane	\$ 27,878	\$ -	\$ 22,581	\$ 1,589	\$ 3,708
242	Winona - Lido/ shore to Peachtree (Helena)		2024-2031	1.97	Multi-Use Trail	\$ 64,119	\$ -	\$ 51,937	\$ 3,655	\$ 8,528
243	York Road - Olympic to Valley Road		2024-2031	1.70	Paved Shoulder	\$ 609,134	\$ -	\$ 91,370	\$ 155,329	\$ 362,435

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244	York Road & York Road at Old Guelph - Valley Road to Highway 6		2024-2031	2.50	Multi-Use Trail	\$ 1,997,459	\$ -	\$ -	\$ 599,238	\$ 1,398,221
245	Acadia - Emperor to End		2024-2031	0.54	Signed Bike Route	\$ 21,732	\$ -	\$ 17,603	\$ 1,239	\$ 2,890
246	Airport Road - Butter to Miles		2024-2031	6.66	Bike Lane	\$ 932,965	\$ 812,142	\$ -	\$ 36,247	\$ 84,576
247	Alma - Sydenham to Queen		2024-2031	0.09	Bike Lane	\$ 12,302	\$ -	\$ 9,965	\$ 701	\$ 1,636
248	Aquasanta - Diconzo to Ascoli		2024-2031	0.09	Signed Bike Route	\$ 3,576	\$ -	\$ 2,897	\$ 204	\$ 476
249	Baker - Breadalbane to Dundurn		2024-2031	0.14	Signed Bike Route	\$ 5,681	\$ -	\$ 4,602	\$ 324	\$ 756
250	Winston - Hunter to 413m west of Kelson Ave N		2024-2031	2.06	Bike Lane	\$ 288,999	\$ -	\$ 43,350	\$ 73,695	\$ 171,955
251	Bedrock - First Rd W to 300m West of First Rd W		2024-2031	0.33	Bike Lane	\$ 45,816	\$ -	\$ 37,111	\$ 2,612	\$ 6,094
252	Bellagio - Fletcher to Terryberry		2024-2031	1.64	Bike Lane	\$ 229,437	\$ -	\$ 185,844	\$ 13,078	\$ 30,515
253	Binbrook Road - Southbrook to Boundary		2024-2031	6.02	Paved Shoulder	\$ 1,805,365	\$ -	\$ 270,805	\$ 460,368	\$ 1,074,192
254	Book Road - Shaver to Fiddler's Green		2031-2041	2.50	Paved Shoulder	\$ 751,147	\$ -	\$ -	\$ 751,147	\$ -
255	Book Road - Fiddler's Green to Glancaster		2024-2031	3.42	Bike Lane	\$ 478,291	\$ 417,469	\$ 49,266	\$ 3,467	\$ 8,089
256	Brantdale - West Fifth Street to Upper James		2024-2031	0.42	Signed Bike Route	\$ 16,894	\$ -	\$ 13,684	\$ 963	\$ 2,247
257	Bridlewood - Governor's to Highland Park Drive		2024-2031	0.59	Signed Bike Route	\$ 23,434	\$ -	\$ 18,982	\$ 1,336	\$ 3,117
258	Brigade - Upper Wellington to Emperor		2024-2031	0.82	Signed Bike Route	\$ 32,712	\$ -	\$ 26,497	\$ 1,865	\$ 4,351
259	Brock - Harvest Road to Highway 8		2024-2031	0.55	Paved Shoulder	\$ 164,442	\$ -	\$ 24,666	\$ 41,933	\$ 97,843
260	Brock - Safari to Freelon		2024-2031	4.50	Paved Shoulder	\$ 1,351,337	\$ -	\$ -	\$ 405,401	\$ 945,936
261	Burke - Great Falls Blvd to McKnight Ave E		2024-2031	0.51	Bike Lane	\$ 71,675	\$ -	\$ 58,057	\$ 4,085	\$ 9,533
262	Butter - Glancaster to Fiddler's Green		2024-2031	2.21	Bike Lane	\$ 309,163	\$ -	\$ -	\$ 92,749	\$ 216,414
263	Canada - Locke to Queen		2024-2031	0.41	Signed Bike Route	\$ 16,392	\$ -	\$ 13,277	\$ 934	\$ 2,180
264	Carlisle Trail Loop - Centre Road to Border		2024-2031	3.35	Paved Shoulder	\$ 1,006,151	\$ -	\$ 150,923	\$ 256,568	\$ 598,660
265	Carlson Street - Highland Road to End		2024-2031	0.11	Signed Bike Route	\$ 4,410	\$ -	\$ 3,572	\$ 251	\$ 586
266	Carluka - Glancaster to Shaver		2031-2041	3.53	Paved Shoulder	\$ 1,058,213	\$ -	\$ -	\$ 1,058,213	\$ -
267	Central - Edgemont to Cochrane		2024-2031	1.54	Signed Bike Route	\$ 61,437	\$ -	\$ 49,764	\$ 3,502	\$ 8,171
268	Concession 10 West - Foreman to Freelon		2024-2031	9.28	Signed Bike Route	\$ 371,340	\$ -	\$ -	\$ 111,402	\$ 259,938
269	Concession 11 E - Centre Road to Freelon		2024-2031	2.65	Paved Shoulder	\$ 794,371	\$ -	\$ -	\$ 238,311	\$ 556,060
270	Concession 4 West - Millgrove Sideroad to Highway 6		2031-2041	1.78	Paved Shoulder	\$ 532,612	\$ -	\$ -	\$ 532,612	\$ -
271	Concession 6 East - Highway 6 to Centre Road		2031-2041	2.79	Paved Shoulder	\$ 836,846	\$ -	\$ -	\$ 836,846	\$ -
272	Concession 7 West - Boundary to Edgewood Road		2024-2031	18.80	Paved Shoulder	\$ 5,640,591	\$ -	\$ -	\$ 1,692,177	\$ 3,948,414
273	Concession 8 West - Middletown to Middletown		2024-2031	0.14	Signed Bike Route	\$ 5,787	\$ -	\$ 868	\$ 1,476	\$ 3,443
274	Concession Street - Mountain Park Ave to Mountain Brow Boulevard		2024-2031	0.51	Bike Lane	\$ 71,122	\$ -	\$ 57,609	\$ 4,054	\$ 9,459
275	Confederation Beach Park - Centennial Parkway to West of Gray		2024-2031	1.98	Signed Bike Route	\$ 79,281	\$ -	\$ 64,218	\$ 4,519	\$ 10,544
276	Cormorant - Trinity to Shaver		2024-2031	2.46	Bike Lane	\$ 344,713	\$ -	\$ 279,217	\$ 19,649	\$ 45,847
277	Culotta - Perrelli to Chudleigh		2024-2031	0.14	Signed Bike Route	\$ 5,564	\$ -	\$ 4,507	\$ 317	\$ 740
278	Diconzo Dr - Aquasanta Crescent to South Turn on Diconzo Drive		2024-2031	0.36	Signed Bike Route	\$ 14,232	\$ -	\$ 11,528	\$ 811	\$ 1,893
279	Diconzo Dr - Upper Wellington to Trieste		2024-2031	0.20	Signed Bike Route	\$ 8,182	\$ -	\$ 6,628	\$ 466	\$ 1,088
280	Dundurn - Main to King		2024-2031	0.28	Bike Lane	\$ 39,076	\$ -	\$ 31,651	\$ 2,227	\$ 5,197
281	Edgemont - Montclair to Central		2024-2031	0.18	Signed Bike Route	\$ 7,202	\$ -	\$ 5,834	\$ 411	\$ 958
282	Eighth Road Link - Ridge to Boundary		2031-2041	5.51	Paved Shoulder	\$ 1,651,643	\$ -	\$ -	\$ 1,651,643	\$ -
283	Eleventh - Mud to Green Mountain Road		2024-2031	1.11	Signed Bike Route	\$ 44,403	\$ -	\$ -	\$ 13,321	\$ 31,082
284	Emerson - Whitney to Main		2024-2031	0.65	Bike Lane	\$ 91,299	\$ -	\$ 73,952	\$ 5,204	\$ 12,143
285	Empress - Upper James to East Sixth Street		2024-2031	0.71	Signed Bike Route	\$ 28,561	\$ -	\$ 23,135	\$ 1,628	\$ 3,799
286	Eugene - Pottruff to Nugent		2024-2031	0.18	Signed Bike Route	\$ 7,020	\$ -	\$ 5,687	\$ 400	\$ 934
287	Fallsview - Harvest Road to Sydenham		2024-2031	2.47	Signed Bike Route	\$ 98,780	\$ -	\$ -	\$ 29,634	\$ 69,146
288	Ferguson - Dock Service Road to Burlington		2024-2031	0.28	Signed Bike Route	\$ 11,143	\$ -	\$ 9,026	\$ 635	\$ 1,482
289	Ferguson - Young to North of Young		2024-2031	0.05	Bike Lane	\$ 7,238	\$ -	\$ 5,863	\$ 413	\$ 963
290	Field - Jerseyville Rd W to Governor's Rd		2031-2041	3.88	Paved Shoulder	\$ 1,162,739	\$ -	\$ -	\$ 1,162,739	\$ -
291	Fifty - Ridge to Cokers		2024-2031	1.51	Paved Shoulder	\$ 452,414	\$ -	\$ 67,862	\$ 115,366	\$ 269,186
292	Fifty - Coke to North Service Road		2024-2031	2.24	Bike Lane	\$ 313,978	\$ 110,740	\$ 164,623	\$ 11,585	\$ 27,031
293	Filman - Wilson St E to End		2024-2031	0.40	Signed Bike Route	\$ 15,969	\$ -	\$ -	\$ 4,791	\$ 11,178
294	First Road East - Highland Road to Ridge Road		2031-2041	3.83	Paved Shoulder	\$ 1,148,959	\$ -	\$ -	\$ 1,148,959	\$ -
295	First Road West - North End to Highbury Drive		2024-2031	0.10	Bike Lane	\$ 14,156	\$ -	\$ 11,466	\$ 807	\$ 1,883
296	Flamborough Puslinch Tlin - Maddaugh Road to Centre		2031-2041	1.81	Paved Shoulder	\$ 542,586	\$ -	\$ -	\$ 542,586	\$ -
297	Fleming - North End to York		2024-2031	0.26	Signed Bike Route	\$ 10,268	\$ -	\$ -	\$ 3,081	\$ 7,188
298	Fletcher - Rymal to Pinehill		2024-2031	0.32	Paved Shoulder	\$ 96,800	\$ -	\$ 78,408	\$ 5,518	\$ 12,874
299	Foreman - Boundary to Regional Road 97		2024-2031	3.08	Signed Bike Route	\$ 123,285	\$ -	\$ -	\$ 36,986	\$ 86,300
300	Franklin - Parkview to Longwood		2024-2031	0.20	Signed Bike Route	\$ 7,980	\$ -	\$ 6,464	\$ 455	\$ 1,061
301	Frederick - Barton to Roxborough		2024-2031	0.62	Signed Bike Route	\$ 24,851	\$ -	\$ 20,130	\$ 1,417	\$ 3,305

Prj. No.	Increased Service Needs Attributable to Anticipated Development	2031 Oversizing (To 2031 Road Projects within the Urban Boundary)*	Timing (year)	Length (km)	Capital Improvement	Gross Capital Cost Estimate (2023\$)	Other Deductions	Benefit to Existing Development	Post Period Benefit	Net Capital Cost
302	Freelton - Concession 11 E to South of Highway 6		2024-2031	0.38	Bike Lane	\$ 53,503	\$ -	\$ -	\$ 16,051	\$ 37,452
303	Fruitland - Highway 8 to North Service Road		2024-2031	2.42	Bike Lane	\$ 339,460	\$ 196,897	\$ 115,476	\$ 8,126	\$ 18,961
304	Galbraith - Lake Avenue to Galbraith Three-way Intersection		2024-2031	0.52	Signed Bike Route	\$ 20,811	\$ -	\$ 16,857	\$ 1,186	\$ 2,768
					Paved Multi-Use					
305	Garth - Denlow to Fennell		2024-2031	0.14	Recreational Trail	\$ 106,711	\$ -	\$ 86,436	\$ 6,083	\$ 14,193
306	Garth St Extension - 20 Rd W to Dickenson Rd W		2024-2031	1.38	Bike Lane	\$ 192,797	\$ 32,547	\$ 129,802	\$ 9,134	\$ 21,313
307	Glancaster - Carluke to Airport		2024-2031	1.45	Bike Lane	\$ 202,858	\$ -	\$ 30,429	\$ 51,729	\$ 120,701
308	Glenfern - Kent to Kent		2024-2031	0.04	Signed Bike Route	\$ 1,402	\$ -	\$ 1,136	\$ 80	\$ 187
309	Glover - Watercrest to End		2024-2031	0.11	Bike Lane	\$ 14,756	\$ -	\$ 11,952	\$ 841	\$ 1,963
310	Glow - Parkdale to East of Tate		2024-2031	0.63	Signed Bike Route	\$ 25,311	\$ -	\$ 20,502	\$ 1,443	\$ 3,366
311	Golf Club - Woodburn to Westbrook		2024-2031	2.07	Signed Bike Route	\$ 82,657	\$ -	\$ -	\$ 24,797	\$ 57,860
312	Golf Links - Stone Church to Kitty Murray		2024-2031	1.30	Bike Lane	\$ 182,341	\$ -	\$ 147,696	\$ 10,393	\$ 24,251
313	Gordon Drummond - Marston to Nordale		2024-2031	0.04	Signed Bike Route	\$ 1,739	\$ -	\$ 1,408	\$ 99	\$ 231
314	Graham Ave North - Central to Roxborough		2024-2031	0.78	Signed Bike Route	\$ 31,165	\$ -	\$ 25,243	\$ 1,776	\$ 4,145
315	Guise - Leander to Catharine		2024-2031	0.54	Bike Lane	\$ 76,112	\$ -	\$ 61,651	\$ 4,338	\$ 10,123
316	Gunby - Sadielou to Painter		2024-2031	0.50	Bike Lane	\$ 69,518	\$ -	\$ 56,310	\$ 3,963	\$ 9,246
					Paved Multi-Use					
317	Harrison - Kirk to Binbrook Conservation Area Road		2024-2031	1.30	Recreational Trail	\$ 975,138	\$ -	\$ 146,271	\$ 248,660	\$ 580,207
318	Harvest - Sydenham to Brock		2024-2031	3.40	Paved Shoulder	\$ 1,020,108	\$ -	\$ 153,016	\$ 260,128	\$ 606,964
319	Highland Rd E - Upper Red Hill Valley Pkwy to Winterberry		2024-2031	0.94	Bike Lane	\$ 131,512	\$ -	\$ 106,525	\$ 7,496	\$ 17,491
320	Highland Rd E - Upper Centennial Pkwy to E Town Line		2031-2041	10.17	Paved Shoulder	\$ 3,051,099	\$ -	\$ -	\$ 3,051,099	\$ -
321	Highway 5 West - Dundas St E to Sydenham		2024-2031	3.02	Paved Shoulder	\$ 905,690	\$ -	\$ -	\$ 271,707	\$ 633,983
322	Highway 8 (Flam) - Boundary to Brock		2031-2041	22.30	Paved Shoulder	\$ 6,691,317	\$ -	\$ -	\$ 6,691,317	\$ -
323	Highway 8 (Sc) - Fifty to Boundary		2031-2041	0.81	Bike Lane	\$ 113,390	\$ -	\$ -	\$ 113,390	\$ -
324	Holton - King to Delaware		2024-2031	0.57	Signed Bike Route	\$ 22,826	\$ -	\$ 18,489	\$ 1,301	\$ 3,036
325	Holton - King to Wilson		2024-2031	0.18	Bike Lane	\$ 25,738	\$ -	\$ 20,848	\$ 1,467	\$ 3,423
326	Homestead Dr Path - Upper James to 1200m East of Upper James		2024-2031	1.24	Bike Lane	\$ 173,375	\$ -	\$ 140,433	\$ 9,882	\$ 23,059
327	Hughson - Cannon to Hunter		2024-2031	0.81	Bike Lane	\$ 113,938	\$ -	\$ 92,290	\$ 6,494	\$ 15,154
328	Hunt - Christ the King Elementary School Road to Breadalbane		2024-2031	0.57	Signed Bike Route	\$ 22,819	\$ -	\$ 18,483	\$ 1,301	\$ 3,035
329	Hunter - Locke to Queen		2024-2031	0.41	Signed Bike Route	\$ 16,421	\$ -	\$ 13,301	\$ 936	\$ 2,184
330	Inverness - Tanner to East 8th		2024-2031	0.77	Bike Lane	\$ 107,800	\$ -	\$ 87,318	\$ 6,145	\$ 14,337
331	Jackson St W - End to Locke St S		2024-2031	0.38	Signed Bike Route	\$ 15,222	\$ -	\$ 12,330	\$ 868	\$ 2,025
332	Jerseyville Rd W - Boundary to East of Paddy Greens		2031-2041	18.45	Paved Shoulder	\$ 5,533,950	\$ -	\$ -	\$ 5,533,950	\$ -
333	Jerseyville Rd W - West of Shaver to Wilson		2024-2031	3.49	Paved Shoulder	\$ 1,046,152	\$ 637,152	\$ 331,290	\$ 23,313	\$ 54,397
334	John - Guise to Burlington		2024-2031	0.29	Bike Lane	\$ 41,233	\$ -	\$ 33,399	\$ 2,350	\$ 5,484
335	Kay Drage Park Link - Hunt to End		2024-2031	0.55	Signed Bike Route	\$ 21,874	\$ -	\$ 17,718	\$ 1,247	\$ 2,909
336	Kay Drage Park Link - Macklin to End		2024-2031	0.14	Signed Bike Route	\$ 5,707	\$ -	\$ 4,623	\$ 325	\$ 759
337	King William - James St N to Catharine St N		2024-2031	0.34	Signed Bike Route	\$ 13,479	\$ -	\$ 10,918	\$ 768	\$ 1,793
					Paved Multi-Use					
338	Kirk - Harrison to Highway 56		2024-2031	0.98	Recreational Trail	\$ 731,458	\$ -	\$ 109,719	\$ 186,522	\$ 435,217
339	Kirkwall - Regional Road 97 to South of Concession 8 W		2024-2031	2.51	Signed Bike Route	\$ 100,255	\$ -	\$ -	\$ 30,077	\$ 70,179
340	Kirkwall - South of Concession 8 W to Woodhill Rd		2024-2031	5.78	Paved Shoulder	\$ 1,735,196	\$ -	\$ -	\$ 520,559	\$ 1,214,637
341	Lafarge 2000 (Middletown Rd) - Concession 6 W to Highway 8		2024-2031	7.91	Signed Bike Route	\$ 316,597	\$ -	\$ 47,489	\$ 80,732	\$ 188,375
342	Lafarge 2000 (Middletown Rd/Binkley Rd) - Highway 8 to Mineral Springs Rd		2024-2031	3.57	Paved Shoulder	\$ 1,071,041	\$ -	\$ -	\$ 321,312	\$ 749,728
343	Lamoreaux - Dundurn t N to Strathcona Ave N		2024-2031	0.23	Signed Bike Route	\$ 9,074	\$ -	\$ 7,350	\$ 517	\$ 1,207
344	Leland - Main to North of Ward		2024-2031	0.29	Signed Bike Route	\$ 11,798	\$ -	\$ 9,557	\$ 673	\$ 1,569
345	Lido - Riviera to Winona		2024-2031	0.39	Signed Bike Route	\$ 15,590	\$ -	\$ 12,628	\$ 889	\$ 2,073
346	Livingstone - Sydenham to Queen		2024-2031	0.11	Bike Lane	\$ 15,772	\$ -	\$ 12,775	\$ 899	\$ 2,098
347	Locke - York Blvd to Barton		2024-2031	0.26	Bike Lane	\$ 35,765	\$ -	\$ 28,970	\$ 2,039	\$ 4,757
348	Longwood - Main St W to Frid St		2024-2031	0.40	Bike Lane	\$ 55,713	\$ -	\$ 45,128	\$ 3,176	\$ 7,410
349	Macklin St S - King St W to Main St W		2024-2031	0.24	Signed Bike Route	\$ 9,513	\$ -	\$ 7,706	\$ 542	\$ 1,265
350	Maddaugh Road - Gore to Highway 6		2024-2031	0.95	Signed Bike Route	\$ 37,834	\$ -	\$ -	\$ 11,350	\$ 26,484
351	Maddaugh Road - Highway 6 to Flamborough Puslinch Tlin		2031-2041	1.11	Paved Shoulder	\$ 334,364	\$ -	\$ -	\$ 334,364	\$ -
352	Maggie Johnson - Tanglewood to Highway 56		2024-2031	0.23	Bike Lane	\$ 32,107	\$ -	\$ 26,007	\$ 1,830	\$ 4,270
353	Main St W - Frid to Dundurn St S		2024-2031	0.27	Bike Lane	\$ 37,206	\$ -	\$ 30,137	\$ 2,121	\$ 4,948
354	Malton - Christine to Upper James		2024-2031	0.34	Signed Bike Route	\$ 13,738	\$ -	\$ 11,128	\$ 783	\$ 1,827

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355	Maple/Mountain Ave Extension - Lake Ave S to Mountain Ave S		2024-2031	0.13	Signed Bike Route	\$ 5,272	\$ -	\$ 4,270	\$ 301	\$ 701
356	Marion - Dromore to King St W		2024-2031	0.34	Signed Bike Route	\$ 13,553	\$ -	\$ 10,978	\$ 773	\$ 1,803
357	Market - Hatt to MacNab		2024-2031	0.09	Bike Lane	\$ 13,000	\$ -	\$ 10,530	\$ 741	\$ 1,729
358	Market - MacNab to Creighton		2024-2031	0.09	Signed Bike Route	\$ 3,608	\$ -	\$ 2,922	\$ 206	\$ 480
359	Mayfair - Creighton to Tally Ho		2024-2031	0.31	Signed Bike Route	\$ 12,397	\$ -	\$ 10,041	\$ 707	\$ 1,649
360	McNeilly/8th Road E - Highway 8 to Ridge Road		2024-2031	1.55	Signed Bike Route	\$ 62,051	\$ -	\$ -	\$ 18,615	\$ 43,436
361	Middleton Rd - North of Regional Road 97 to Regional Road 97		2024-2031	0.44	Signed Bike Route	\$ 17,734	\$ -	\$ 2,660	\$ 4,522	\$ 10,551
362	Middleton Rd - North of Concession 8 W to Safari		2024-2031	2.32	Signed Bike Route	\$ 92,626	\$ -	\$ 13,894	\$ 23,620	\$ 55,112
363	Miles - Rymal Rd E to Boundary		2031-2041	10.88	Paved Shoulder	\$ 3,265,308	\$ -	\$ -	\$ 3,265,308	\$ -
364	Millgrove Sr - Highway 6 N to Highway 5 W		2024-2031	0.71	Paved Shoulder	\$ 214,008	\$ -	\$ 32,101	\$ 54,572	\$ 127,335
365	Mineral Springs - Binkley to Sulphur Springs		2031-2041	1.27	Paved Shoulder	\$ 381,791	\$ -	\$ -	\$ 381,791	\$ -
366	Mount Albion - Lawrence to South of Glen Castle		2024-2031	1.39	Bike Lane	\$ 194,283	\$ -	\$ 157,369	\$ 11,074	\$ 25,840
367	Mountain Brow - Concession Street to Rendell		2024-2031	0.27	Bike Lane	\$ 37,692	\$ -	\$ 30,530	\$ 2,148	\$ 5,013
368	Mud - Eleventh Road E to Boundary		2031-2041	0.89	Paved Shoulder	\$ 266,629	\$ -	\$ -	\$ 266,629	\$ -
369	Napier - Queen St N to Bay St N		2024-2031	0.55	Signed Bike Route	\$ 22,063	\$ -	\$ 17,871	\$ 1,258	\$ 2,934
370	Nisbet - Centre Road to Wimberly		2024-2031	0.97	Bike Lane	\$ 136,363	\$ -	\$ 110,454	\$ 7,773	\$ 18,136
371	Nordale - Gordon Drummond to End		2024-2031	0.39	Signed Bike Route	\$ 15,414	\$ -	\$ 12,485	\$ 879	\$ 2,050
372	Nugent - Kentley to Eugene		2024-2031	0.13	Signed Bike Route	\$ 5,181	\$ -	\$ 4,197	\$ 295	\$ 689
373	Old Mud - Upper Mount Albion to Cedarville		2024-2031	0.28	Bike Lane	\$ 39,480	\$ -	\$ 31,979	\$ 2,250	\$ 5,251
374	Ottawa - Main to Montclair		2024-2031	0.49	Bike Lane	\$ 67,977	\$ -	\$ 55,061	\$ 3,875	\$ 9,041
375	Parkdale Ave - Nikola Tesla Blvd to Glow		2024-2031	0.18	Paved Multi-Use Recreational Trail	\$ 138,334	\$ -	\$ 112,051	\$ 7,885	\$ 18,398
376	Pearl - Hunter to Tuckett		2024-2031	0.23	Signed Bike Route	\$ 9,364	\$ -	\$ 7,584	\$ 534	\$ 1,245
377	Peel St S - King St W to Hatt		2024-2031	0.14	Signed Bike Route	\$ 5,774	\$ -	\$ 4,677	\$ 329	\$ 768
378	Perrelli - Culotta to Dundas St E		2024-2031	0.11	Signed Bike Route	\$ 4,267	\$ -	\$ 3,456	\$ 243	\$ 568
379	Picton - Bay St n to Hughson St N		2024-2031	0.39	Signed Bike Route	\$ 15,603	\$ -	\$ 12,639	\$ 889	\$ 2,075
380	Picton - John St N to Ferguson Ave N		2024-2031	0.42	Signed Bike Route	\$ 16,794	\$ -	\$ 13,603	\$ 957	\$ 2,234
381	Queen - Alma to Livingstone		2024-2031	0.16	Bike Lane	\$ 21,913	\$ -	\$ 17,749	\$ 1,249	\$ 2,914
382	Queen St S - Hunter to Canada		2024-2031	0.08	Signed Bike Route	\$ 3,096	\$ -	\$ 2,508	\$ 176	\$ 412
383	Redmond - Rushdale to Stone Church Rd E		2024-2031	0.20	Signed Bike Route	\$ 8,030	\$ -	\$ 6,505	\$ 458	\$ 1,068
384	Regional Road 20 (Highway 20) - Tapleystown to Woodburn		2024-2031	0.28	Signed Bike Route	\$ 11,371	\$ -	\$ 1,706	\$ 2,900	\$ 6,766
385	Regional Road 97 - Kirkwall to Foreman		2024-2031	0.16	Paved Shoulder	\$ 47,125	\$ -	\$ -	\$ 14,137	\$ 32,987
386	Ridge - Dewitt to Boundary		2024-2031	7.05	Paved Shoulder	\$ 2,116,173	\$ -	\$ 317,426	\$ 539,624	\$ 1,259,123
387	Riley - West of Chudleigh to Braehaid		2024-2031	0.21	Signed Bike Route	\$ 8,245	\$ -	\$ 6,678	\$ 470	\$ 1,097
388	Riviera Ridge - Bellavista to Lido		2024-2031	0.12	Undefined	\$ 58,441	\$ -	\$ 47,337	\$ 3,331	\$ 7,773
389	Rock Chapel - Highway 5 W to Service Road East of Sydenham		2024-2031	1.91	Signed Bike Route	\$ 76,420	\$ -	\$ 11,463	\$ 19,487	\$ 45,470
390	Roxborough - Frederick to Graham Ave N		2024-2031	0.05	Signed Bike Route	\$ 2,031	\$ -	\$ 1,645	\$ 116	\$ 270
391	Rushdale - Southpark to Redmond		2024-2031	0.08	Signed Bike Route	\$ 3,149	\$ -	\$ 2,551	\$ 180	\$ 419
392	Rymal - Upper Paradise to Spadara		2024-2031	0.44	Bike Lane	\$ 61,767	\$ -	\$ 50,031	\$ 3,521	\$ 8,215
393	Rymal - Hazelton to West Fifth St		2024-2031	0.77	Bike Lane	\$ 108,451	\$ -	\$ 87,845	\$ 6,182	\$ 14,424
394	Sadieolou - Hollybush to End		2024-2031	0.42	Bike Lane	\$ 59,415	\$ -	\$ 48,126	\$ 3,387	\$ 7,902
395	Santorium - Scenic to Redfern		2024-2031	0.11	Bike Lane	\$ 15,366	\$ -	\$ 12,446	\$ 876	\$ 2,044
396	Scenic - Scenic Dr to Garth St		2024-2031	0.23	Bike Lane	\$ 32,617	\$ -	\$ 26,420	\$ 1,859	\$ 4,338
397	Second St N - King St W to North of Brandow		2024-2031	0.14	Signed Bike Route	\$ 5,695	\$ -	\$ 4,613	\$ 325	\$ 757
398	Shaver - Wilson to Jerseyville Rd W		2024-2031	1.47	Bike Lane	\$ 205,195	\$ -	\$ 166,208	\$ 11,696	\$ 27,291
399	Shaver - Garner to Carluke		2031-2041	6.11	Paved Shoulder	\$ 1,832,582	\$ -	\$ -	\$ 1,832,582	\$ -
400	Sheppard - Sovereign to Fleming		2024-2031	0.10	Signed Bike Route	\$ 4,020	\$ -	\$ -	\$ 1,206	\$ 2,814
401	Sherman - Delaware to CP Rail Line		2024-2031	0.33	Signed Bike Route	\$ 13,221	\$ -	\$ 10,709	\$ 754	\$ 1,758
402	Skinner - Dundas St E to East of McKnight Ave E		2024-2031	1.39	Bike Lane	\$ 195,086	\$ -	\$ 158,019	\$ 11,120	\$ 25,946
403	South Bend - W Second St to Terrace		2024-2031	0.42	Signed Bike Route	\$ 16,631	\$ -	\$ 13,471	\$ 948	\$ 2,212
404	South St W - Oglivie to Osler		2024-2031	0.70	Signed Bike Route	\$ 28,124	\$ -	\$ 22,780	\$ 1,603	\$ 3,740
405	Southcote - Garner to Airport		2031-2041	2.80	Bike Lane	\$ 392,445	\$ -	\$ -	\$ 392,445	\$ -
406	Southpark - Rushdale Park Trail to Rushdale Dr		2024-2031	0.25	Signed Bike Route	\$ 10,003	\$ -	\$ 8,103	\$ 570	\$ 1,330
407	St Joseph's - John St S to End		2024-2031	0.29	Signed Bike Route	\$ 11,537	\$ -	\$ 9,345	\$ 658	\$ 1,534
408	Sulphur Springs - Lover's to Mineral Springs Rd		2031-2041	1.47	Paved Shoulder	\$ 439,812	\$ -	\$ -	\$ 439,812	\$ -
409	Sulphur Springs - Lover's to Wilson St E		2024-2031	1.05	Signed Bike Route	\$ 42,059	\$ -	\$ 34,068	\$ 2,397	\$ 5,594
410	Sunnyridge - Wilson St W to Jerseyville Rd W		2024-2031	2.83	Paved Shoulder	\$ 850,184	\$ -	\$ -	\$ 255,055	\$ 595,129
411	Sydenham/Queen/Livingstone/Alma - Hatt to Romar Dr		2024-2031	1.86	Bike Lane	\$ 261,019	\$ -	\$ 39,153	\$ 66,560	\$ 155,306

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412	Talbot - Melvin to Barton St E		2024-2031	0.19	Signed Bike Route	\$ 7,639	\$ -	\$ 6,187	\$ 435	\$ 1,016
413	Tally Ho - Mayfair to Overfield		2024-2031	0.22	Signed Bike Route	\$ 8,624	\$ -	\$ 6,985	\$ 492	\$ 1,147
414	Tanner - Iverness to End		2024-2031	0.05	Signed Bike Route	\$ 1,926	\$ -	\$ 1,560	\$ 110	\$ 256
415	Tapleystown Rd - Highway 20 E to Highland Rd E		2024-2031	0.83	Signed Bike Route	\$ 33,328	\$ -	\$ 4,999	\$ 8,499	\$ 19,830
416	Tradewind - Wilson St W to Cormorant		2024-2031	0.70	Bike Lane	\$ 98,586	\$ -	\$ 79,855	\$ 5,619	\$ 13,112
417	Twenty Rd - Southcote to West of Nebo		2024-2031	9.36	Bike Lane	\$ 1,310,636	\$ 1,174,735	\$ 110,080	\$ 7,746	\$ 18,075
418	Upper Ottawa - Killbride to Mountain Brow Boulevard		2024-2031	5.22	Bike Lane	\$ 731,426	\$ -	\$ 592,455	\$ 41,691	\$ 97,280
419	Upper Sherman - Macassa to Limeridge Rd E		2024-2031	1.65	Bike Lane	\$ 231,607	\$ -	\$ 187,601	\$ 13,202	\$ 30,804
420	Upper Wellington - S Bend Rd E to Stone Church Rd E		2024-2031	2.40	Bike Lane	\$ 336,154	\$ 145,193	\$ 154,679	\$ 10,885	\$ 25,398
421	W 18th St - Bendamere to End		2024-2031	0.17	Signed Bike Route	\$ 6,741	\$ -	\$ 5,460	\$ 384	\$ 897
422	W 5th St - Brantdale to Governors Blvd		2024-2031	0.62	Multi-Use Trail	\$ 465,956	\$ -	\$ 377,424	\$ 26,559	\$ 61,972
423	W 5th St - Governors Blvd to Marlowe		2024-2031	1.13	Bike Lane	\$ 158,200	\$ -	\$ 128,142	\$ 9,017	\$ 21,041
424	Westbrook - End to Golf Club Rd		2024-2031	0.86	Signed Bike Route	\$ 34,368	\$ -	\$ -	\$ 10,310	\$ 24,057
425	Wilson in Ancaster - Fiddler's Green to Boundary		2024-2031	10.77	Cycle Track	\$ 5,385,075	\$ -	\$ -	\$ 1,615,523	\$ 3,769,553
426	Wimberly - Parkside to Nisbet		2024-2031	0.33	Bike Lane	\$ 45,976	\$ -	\$ 37,240	\$ 2,621	\$ 6,115
427	Windwood Dr - Bradley to Southbrook Dr		2024-2031	0.70	Bike Lane	\$ 97,549	\$ -	\$ 79,015	\$ 5,560	\$ 12,974
428	Woodbine Crescent - Jones to Dundurn St N		2024-2031	0.22	Signed Bike Route	\$ 8,891	\$ -	\$ 7,202	\$ 507	\$ 1,182
429	Woodburn - Binbrook Rd E to Highway 20 E		2024-2031	7.56	Signed Bike Route	\$ 302,206	\$ -	\$ 45,331	\$ 77,063	\$ 179,813
430	Woodhill Rd - Governor's to 800m south of Highway 8		2024-2031	7.05	Signed Bike Route	\$ 282,125	\$ -	\$ -	\$ 84,638	\$ 197,488
431	Woodhill Rd - Highway 8 to 800m south of Highway 8		2024-2031	1.04	Paved Shoulder	\$ 313,044	\$ -	\$ -	\$ 93,913	\$ 219,131
432	Woodward Ave - Beach Blvd to 100m south of Beach Blvd		2024-2031	0.10	Bike Lane	\$ 14,099	\$ -	\$ 11,420	\$ 804	\$ 1,875
433	York - Olympic to Baldwin		2024-2031	2.33	Bike Lane	\$ 326,172	\$ -	\$ 264,199	\$ 18,592	\$ 43,381
434	Highway 6 - Concession 10 W to Freelon		2024-2031	0.39	Paved Multi-Use Recreational Trail	\$ 293,059	\$ -	\$ -	\$ 87,918	\$ 205,141
435	Highway 6 N - Carlisle to Edgewood Road		2024-2031	0.55	Paved Multi-Use Recreational Trail	\$ 414,118	\$ -	\$ -	\$ 124,235	\$ 289,883
436	Carlisle Road - Highway 6 to Milborough Townline		2024-2031	5.85	Paved Shoulder	\$ 1,756,268	\$ -	\$ 263,440	\$ 447,848	\$ 1,044,980
437	Concession 5 West - Highway 6N to Moffatt Road		2024-2031	3.01	Paved Shoulder	\$ 904,289	\$ -	\$ 135,643	\$ 230,594	\$ 538,052
438	Mosaic Dr - Parkside Dr to Highway 6		2024-2031	1.90	Multi-Use Trail	\$ 1,425,000	\$ -	\$ 1,154,250	\$ 81,225	\$ 189,525
<b>Total</b>						<b>\$ 1,668,517,598</b>	<b>\$ 70,483,468</b>	<b>\$ 237,774,589</b>	<b>\$ 732,079,316</b>	<b>\$ 628,180,225</b>

\*Road project oversizing and applicable local share/direct developer deductions were applied based on City of Hamilton direction.

Internal Project Number (Internal use only)	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Length (km)	Capital Improvement	Gross Capital Cost Estimate (2023\$)	Other Deductions	Benefit to Existing Development	Post Period Benefit	Net Capital Cost
<b>Post-2041 Road Projects</b>									
<b>AEGD</b>									
10	Book Road - Highway 6 to Fiddlers Green Road	Post 2041	0.99	2r-5u	\$ 10,769,800	\$ -	\$ -	\$ 10,769,800	\$ -
16	Collector 5W - Collector 7N to Collector 2N	Post 2041	0.74	3u	\$ 7,294,646	\$ -	\$ -	\$ 7,294,646	\$ -
17	Collector 2W - Garner Road to Dickenson Road Extension	Post 2041	2.16	4u	\$ 23,562,706	\$ -	\$ -	\$ 23,562,706	\$ -
23	Collector 5N - Collector 8W to Fiddler's Green	Post 2041	0.83	2r	\$ 5,474,417	\$ -	\$ -	\$ 5,474,417	\$ -
62	Twenty Road West Extension - Glancaster Road to Collector 2W	Post 2041	1.06	2u	\$ 8,286,718	\$ -	\$ -	\$ 8,286,718	\$ -
111	Collector Road 6E - Collector 6N to Twenty Road West	Post 2041	0.70	3u	\$ 6,885,062	\$ -	\$ -	\$ 6,885,062	\$ -
127	Fiddler's Green Road - Garner Road to Book Road	Post 2041	1.97	2r-5u	\$ 20,827,238	\$ -	\$ -	\$ 20,827,238	\$ -
147	Airport Service Road - Glancaster Road to Airport Road	Post 2041	1.78	3u	\$ 17,237,062	\$ -	\$ -	\$ 17,237,062	\$ -
159	Collector 10N - Smith Road to Collector 1W	Post 2041	1.47	3u	\$ 14,498,799	\$ -	\$ -	\$ 14,498,799	\$ -
<b>Elfrida</b>									
115	Upper Centennial Parkway - Mud Street to Highway 20	Post 2041	2.00	4r-5u	\$ 22,580,042	\$ -	\$ -	\$ 22,580,042	\$ -
125	Upper Centennial Parkway - Mud Street to Green Mountain Road	Post 2041	1.00	4r-4u	\$ 10,579,044	\$ -	\$ -	\$ 10,579,044	\$ -
<b>Stoney Creek</b>									
2	Arvin Avenue - Jones Road to 366m west of Glover Road	Post 2041	0.55	2i	\$ 4,960,650	\$ -	\$ -	\$ 4,960,650	\$ -
<b>Waterdown</b>									
48	North Waterdown Drive - Clappison Avenue Extension to Highway 6 North	Post 2041	0.82	3u	\$ 8,008,407	\$ -	\$ -	\$ 8,008,407	\$ -
<b>White Church Area</b>									
118	Mud Street - Red Hill Valley Parkway to Upper Centennial Parkway	Post 2041	3.62	4r-6r	\$ 67,449,762	\$ -	\$ -	\$ 67,449,762	\$ -
174	Airport Access Route - Upper Red Hill Valley Parkway to Highway 6 South	Post 2041	10.92	2r	\$ 71,603,945	\$ 71,603,945	\$ -	\$ -	\$ -
<b>Former Urban Boundary Expansion Area Road Projects</b>									
<b>AEGD</b>									
112	Collector Road 1E - Collector 6N to Twenty Road West	Post 2041	0.73	3u	\$ 7,175,665	\$ 7,175,665	\$ -	\$ -	\$ -
<b>Elfrida</b>									
84	Regional Road 56 - Dalgliesh Trail to Golf Club Road	Post 2041	1.44	2r-5u	\$ 15,741,403	\$ 15,741,403	\$ -	\$ -	\$ -
113	First Road East - Highway 20 to Mud Street	Post 2041	1.97	2r-3u	\$ 15,089,596	\$ 15,089,596	\$ -	\$ -	\$ -
114	First Road East - Highway 20 to Golf Club Road	Post 2041	2.08	3u	\$ 20,239,244	\$ 20,239,244	\$ -	\$ -	\$ -
116	Arterial N-S - Bellagio Avenue to Golf Club Road	Post 2041	1.88	4u	\$ 20,100,545	\$ 20,100,545	\$ -	\$ -	\$ -
117	Dickenson Extension - Trinity Church to Golf Club Road	Post 2041	0.65	2u	\$ 5,177,733	\$ 5,177,733	\$ -	\$ -	\$ -
119	Twenty Road - Upper Red Hill Valley Parkway to Hendershot Road	Post 2041	5.60	4u	\$ 59,897,756	\$ 59,897,756	\$ -	\$ -	\$ -
120	Highway 20 - 500m east of Upper Centennial to Hendershot Road	Post 2041	1.17	2r-4u	\$ 11,653,263	\$ 11,653,263	\$ -	\$ -	\$ -
290	Fletcher Road - 500m south of Rymal Road to Golf Club Road	Post 2041	1.60	2r-3u	\$ 12,245,236	\$ 12,245,236	\$ -	\$ -	\$ -
291	Golf Club Road - Trinity Church Road to Hendershot Road	Post 2041	5.33	2r-3u	\$ 40,967,481	\$ 40,967,481	\$ -	\$ -	\$ -
292	Hendershot Road - Highway 20 to Golf Club Road	Post 2041	2.09	2r-3u	\$ 16,011,393	\$ 16,011,393	\$ -	\$ -	\$ -
293	Highland Road - Upper Centennial Parkway to Second Road East	Post 2041	1.67	2r-3u	\$ 12,799,081	\$ 12,799,081	\$ -	\$ -	\$ -
294	Mud Street - Upper Centennial Parkway to Second Road East	Post 2041	1.67	2r-2u	\$ 13,833,585	\$ 13,833,585	\$ -	\$ -	\$ -
295	Second Road East - Highway 20 to Mud Street	Post 2041	1.94	2r-3u	\$ 14,841,511	\$ 14,841,511	\$ -	\$ -	\$ -
296	Trinity Church Road - Hydro Corridor (470m south of Rymal Road) to Golf Club Road	Post 2041	1.60	2r-3u	\$ 12,642,066	\$ 12,642,066	\$ -	\$ -	\$ -
<b>Twenty Road East</b>									
104	Upper Wentworth Street - End to Twenty Road	Post 2041	0.74	4u	\$ 7,937,327	\$ 7,937,327	\$ -	\$ -	\$ -
105	Upper Sherman Avenue - End to Twenty Road	Post 2041	0.75	4u	\$ 8,078,090	\$ 8,078,090	\$ -	\$ -	\$ -
106	Upper Gage Avenue - End to Twenty Road	Post 2041	0.73	4u	\$ 7,832,103	\$ 7,832,103	\$ -	\$ -	\$ -
108	Miles Road - Rymal Road to Dickenson Road	Post 2041	2.66	2r-4u	\$ 25,003,996	\$ 25,003,996	\$ -	\$ -	\$ -
109	East-West Collector - Upper Wentworth Street to Upper Ottawa Street	Post 2041	2.52	3u	\$ 24,456,044	\$ 24,456,044	\$ -	\$ -	\$ -
110	Twenty Road East - Upper James Street to Dartnall Road	Post 2041	5.76	2r-4u	\$ 54,652,726	\$ 54,652,726	\$ -	\$ -	\$ -
284	Dickenson Road East - Upper James Street to 350 meters west of Nebo Road	Post 2041	4.24	2r-2u	\$ 37,820,121	\$ -	\$ -	\$ 37,820,121	\$ -
<b>White Church Area</b>									
122	White Church Road - Upper James Street to Miles Road	Post 2041	2.88	2r-4u	\$ 27,000,420	\$ 27,000,420	\$ -	\$ -	\$ -
123	Airport Road - Upper James Street to Miles Road	Post 2041	2.75	2r-4u	\$ 25,766,424	\$ 25,766,424	\$ -	\$ -	\$ -
124	Ferris Road Extension - White Church Road to Airport Road	Post 2041	1.34	2u	\$ 10,252,044	\$ 10,252,044	\$ -	\$ -	\$ -
126	Miles Road - Dickenson Road to White Church Road	Post 2041	4.13	2r-4u	\$ 38,893,556	\$ 38,893,556	\$ -	\$ -	\$ -
121	Highway 20 - Hendershot Road to Hamilton boundary	Post 2041	4.57	2r-4u	\$ 45,465,162	\$ -	\$ -	\$ 45,465,162	\$ -
301	Fletcher Road - McWatters Street to Golf Club Road	Post 2041	3.60	2r-2u	\$ 30,086,056	\$ -	\$ -	\$ 30,086,056	\$ -
<b>Total</b>					<b>\$ 921,677,923</b>	<b>\$ 579,892,231</b>	<b>\$ -</b>	<b>\$ 341,785,692</b>	<b>\$ -</b>

Prj. No	Increased Service Needs Attributable to Anticipated Development 2019-2031	Timing (year)	Gross Capital Cost Estimate (2023\$)	Benefit to Existing Development	Post Period Benefit	Grants, Subsidies and Other Contributions Attributable to New Development	Net Capital Cost
1	New Peak Hour 30' Bus (2)	2033-2035	\$ 1,329,504	\$ -	\$ 1,329,504	\$ -	\$ -
2	New Peak Hour 40' Bus (48)	2023-2032	\$ 45,852,096	\$ 38,928,430	\$ 1,031,672	\$ -	\$ 5,891,994
3	New Peak Hour 40' Bus (16)	2033-2035	\$ 15,284,032	\$ -	\$ 15,284,032	\$ -	\$ -
4	New Peak Hour 60' Bus (8)	2023-2032	\$ 9,863,616	\$ 8,374,210	\$ 221,931	\$ -	\$ 1,267,475
5	New Peak Hour 60' Bus (2)	2033-2035	\$ 2,465,904	\$ -	\$ 2,465,904	\$ -	\$ -
6	New Spare 40' Bus (12)	2023-2032	\$ 11,463,024	\$ 9,732,107	\$ 257,918	\$ -	\$ 1,472,999
7	New Spare 40' Bus (3)	2033-2035	\$ 2,865,756	\$ -	\$ 2,865,756	\$ -	\$ -
8	New 40' to 60' Upgrades (37)	2023-2032	\$ 10,274,900	\$ 8,723,390	\$ 231,185	\$ -	\$ 1,320,325
9	Facility: Service Truck	2023-2032	\$ 129,998	\$ 100,878	\$ -	\$ -	\$ 29,120
10	Facility: Stock Room Vehicle	2023-2032	\$ 65,000	\$ 50,440	\$ -	\$ -	\$ 14,560
11	Facility: Garage Equipment Repair Walk Behind Forklift	2023-2032	\$ 184,200	\$ 142,939	\$ 12,341	\$ -	\$ 28,919
12	Facility: Garage Forklift	2023-2032	\$ 106,700	\$ 82,799	\$ 7,149	\$ -	\$ 16,752
13	Facility: Garage Tow Mobile	2023-2032	\$ 62,100	\$ 48,190	\$ 4,161	\$ -	\$ 9,750
14	Facility: Garage Equipment Repair Express Van Vehicles	2023-2032	\$ 173,000	\$ 134,248	\$ -	\$ -	\$ 38,752
15	Accessible Supervisory Vehicles (Specialized Transit)	2023-2032	\$ 612,000	\$ 462,060	\$ -	\$ -	\$ 149,940
16	Transit & Maintenance Storage Facility	2023-2026	\$ 396,000,000	\$ 165,349,200	\$ 26,625,000	\$ 183,000,000	\$ 21,025,800
<b>Total</b>			<b>\$ 496,731,830</b>	<b>\$ 232,128,891</b>	<b>\$ 50,336,554</b>	<b>\$ 183,000,000</b>	<b>\$ 31,266,385</b>



# Exhibit 3

## 2024 Transportation Capital List without Proposed LSP and Financial Policies Change

2024 Transportation Capital List without Proposed LSP and Financial Policies Change

Prj. No.	Increased Service Needs Attributable to Anticipated Development	2031 Oversizing (To 2031 Road Projects within the Urban Boundary)*	Timing (year)	Length (km)	Capital Improvement	Gross Capital Cost Estimate (2023\$)	Other Deductions	Benefit to Existing Development	Post Period Benefit	Net Capital Cost
<b>Road Projects</b>										
<b>AEGD</b>										
1	Airport Road - Terminal Access Road to Provident Way/East Cargo Road	✓	To 2031	0.32	2r-4u	\$ 3,789,353	\$ -	\$ 1,515,741	\$ -	\$ 2,273,612
2	Book Road - Southcote Road to Highway 6	✓	To 2031	1.05	2r-5u	\$ 11,523,989	\$ -	\$ 1,728,598	\$ -	\$ 9,795,391
3	Collector 1E - Collector 6N to Dickenson Road		2031 to 2041	0.67	3u	\$ 6,558,380	\$ -	\$ -	\$ 6,558,380	\$ -
4	Arterial 1N - Collector 2N to Dickenson Road/Garth Street Extensior	✓	To 2031	2.97	5u	\$ 34,917,248	\$ -	\$ -	\$ -	\$ 34,917,248
5	Collector 2N - Collector 5W to Arterial 1N		2031 to 2041	0.42	3u	\$ 4,105,309	\$ -	\$ -	\$ 4,105,309	\$ -
6	Collector 6N - Upper James Street to Collector 6E		2031 to 2041	0.95	4u	\$ 10,307,184	\$ -	\$ -	\$ 10,307,184	\$ -
7	Collector 6N - Collector 6E to Garth Street		2031 to 2041	0.41	4u	\$ 4,524,353	\$ -	\$ -	\$ 4,524,353	\$ -
8	Collector 6N - Garth Street to Glancaster Road		2031 to 2041	1.54	4u	\$ 16,775,250	\$ -	\$ -	\$ 16,775,250	\$ -
9	Collector 6E - Collector 6N to Dickenson Road	✓	To 2031	0.64	3u	\$ 6,342,202	\$ -	\$ -	\$ -	\$ 6,342,202
10	Collector 7N - Collector 5W to Collector 2W		2031 to 2041	1.19	3u	\$ 11,756,604	\$ -	\$ -	\$ 11,756,604	\$ -
11	Collector 8W - Garner Road to Collector 5N		2031 to 2041	1.07	2u	\$ 8,301,996	\$ -	\$ -	\$ 8,301,996	\$ -
12	Dickenson Road - Glancaster Road to Garth Street Extension		2031 to 2041	1.53	2r-5u	\$ 18,044,132	\$ -	\$ -	\$ 18,044,132	\$ -
13	Dickenson Road - Garth Street Extension to Upper James Street	✓	To 2031	1.36	2r-5u	\$ 16,039,229	\$ -	\$ 2,405,884	\$ -	\$ 13,633,344
14	Dickenson Road Extension - Glancaster Road to Smith Road		2031 to 2041	0.83	5u	\$ 9,447,229	\$ -	\$ -	\$ 9,447,229	\$ -
15	Book Road - Smith Road to Southcote Road	✓	To 2031	0.45	2r-5u	\$ 5,343,540	\$ -	\$ 801,531	\$ -	\$ 4,542,009
16	Garth Street Extension - Twenty Road to Collector 6N		2031 to 2041	0.81	5u	\$ 9,477,970	\$ -	\$ -	\$ 9,477,970	\$ -
17	Garth Street Extension - Collector 6N to Dickenson Road		2031 to 2041	0.66	5u	\$ 7,709,296	\$ -	\$ -	\$ 7,709,296	\$ -
18	Glancaster Road - Garner Road to Dickenson Road	✓	To 2031	2.67	2r-3u	\$ 23,144,329	\$ -	\$ 3,471,649	\$ -	\$ 19,672,680
19	Glancaster Road - Dickenson Road to Arterial 1N		2031 to 2041	0.39	3u-5u	\$ 4,605,603	\$ -	\$ -	\$ 4,605,603	\$ -
20	Garner Road - Glancaster Road to Highway 6 South	✓	To 2031	3.12	2r-5u	\$ 31,491,877	\$ -	\$ 4,723,782	\$ -	\$ 26,768,096
21	Smith Road - Garner Road to Hydro Corridor	✓	To 2031	0.88	3u	\$ 8,635,284	\$ -	\$ -	\$ -	\$ 8,635,284
22	Smith Road - Hydro Corridor to Book Road		2031 to 2041	1.01	3u	\$ 9,946,349	\$ -	\$ -	\$ 9,946,349	\$ -
23	Smith Road - Book Road to Arterial 1N		2031 to 2041	0.63	3u	\$ 6,166,835	\$ -	\$ -	\$ 6,166,835	\$ -
24	Southcote Road - Garner Road to Book Road		2031 to 2041	1.95	2r-5u	\$ 23,002,848	\$ -	\$ -	\$ 23,002,848	\$ -
25	Upper James Street - Rymal Road to Highway 6 South		2031 to 2041	7.22	4r-6u	\$ 96,459,332	\$ -	\$ -	\$ 96,459,332	\$ -
26	Glancaster Road - Arterial 1N to Airport Boundary		2031 to 2041	0.48	2u	\$ 3,512,806	\$ -	\$ -	\$ 3,512,806	\$ -
27	Collector 9W - Garner Road to Collector 11N		2031 to 2041	0.33	2u	\$ 2,536,970	\$ -	\$ -	\$ 2,536,970	\$ -
28	Smith Road - Arterial 1N to Airport Boundary		2031 to 2041	0.21	3u	\$ 2,078,580	\$ -	\$ -	\$ 2,078,580	\$ -
29	Airport Road - East Cargo Road to Upper James Street	✓	To 2031	1.08	2r-3u	\$ 8,462,899	\$ -	\$ 3,385,160	\$ -	\$ 5,077,739
30	Book Road East - Collector 2W to Glancaster Road		2031 to 2041	0.85	2r-3u	\$ 6,510,409	\$ -	\$ -	\$ 6,510,409	\$ -
31	Collector 10N - Garner Road to Smith Road	✓	To 2031	1.17	3u	\$ 11,487,688	\$ -	\$ -	\$ -	\$ 11,487,688
32	Twenty Road - Glancaster Road to Upper James Street		2031 to 2041	2.90	2r-4u	\$ 32,145,181	\$ -	\$ -	\$ 32,145,181	\$ -
33	Airport Road - Glancaster Road to Terminal Access Road		To 2031	1.71	2r-2u	\$ 15,971,496	\$ -	\$ 6,388,598	\$ -	\$ 9,582,898
34	Collector 11N - Fiddler's Green Road to Collector 9W		2031 to 2041	0.35	2u	\$ 2,724,513	\$ -	\$ -	\$ 2,724,513	\$ -
35	Collector 1W - Collector 10N to Garner Roac		2031 to 2041	0.39	3u	\$ 3,819,733	\$ -	\$ -	\$ 3,819,733	\$ -
<b>Ancaster</b>										
36	Garner Road - Highway 6 South to Wilson Street	✓	To 2031	4.86	2r-5u	\$ 49,311,040	\$ -	\$ 7,396,656	\$ -	\$ 41,914,384
37	Jerseyville Road - Wilson Street to Lloyminn Avenue		2031 to 2041	0.79	2r-3u	\$ 6,367,167	\$ -	\$ -	\$ 6,367,167	\$ -
38	Shaver Road - Trustwood to Garner Road		2031 to 2041	0.74	2r-2i	\$ 6,303,822	\$ -	\$ -	\$ 6,303,822	\$ -
39	McNiven Road - Rousseaux Street/Mohawk Road to Golf Links Road		To 2031	0.62	2r-3u	\$ 4,895,491	\$ -	\$ 3,916,393	\$ -	\$ 979,098
40	Jerseyville Road - Lloyminn Avenue to Meadowbrook Drive		2031 to 2041	1.25	2r-2u	\$ 10,164,929	\$ -	\$ -	\$ 10,164,929	\$ -
<b>Fruitland - Winona</b>										
41	Barton Street - Fruitland Road to Fifty Road	✓	To 2031	5.11	2r-5u	\$ 53,873,435	\$ -	\$ 21,549,374	\$ -	\$ 32,324,061
42	Fifty Road - Barton Street to South Service Road	✓	To 2031	0.55	2r-4u	\$ 5,178,149	\$ -	\$ 776,722	\$ -	\$ 4,401,426
43	Fifty Road - Barton Street to Highway 8		2031 to 2041	0.24	2r-3u	\$ 1,834,403	\$ -	\$ -	\$ 1,834,403	\$ -
44	Gordon Dean Avenue - Barton Street to Highway 8	✓	To 2031	1.08	4u	\$ 11,551,567	\$ -	\$ -	\$ -	\$ 11,551,567
45	Trinity Road/Highway 52 - Highway 403 Interchange to Cormorant Road		To 2031	1.79	2r-4u	\$ 17,792,911	\$ -	\$ 2,668,937	\$ -	\$ 15,123,974
46	Highway 8 - Dewitt Road to Jones Road		To 2031	1.73	2r-4u	\$ 16,331,501	\$ -	\$ 6,532,600	\$ -	\$ 9,798,900
47	Highway 8 - Jones Road to McNeilly Road		2031 to 2041	1.73	2r-4u	\$ 17,715,501	\$ -	\$ -	\$ 17,715,501	\$ -
48	Highway 8 - McNeilly Road to Fifty Road		2031 to 2041	2.67	2r-3u	\$ 20,604,135	\$ -	\$ -	\$ 20,604,135	\$ -
49	Collector B (Block 1) - Fruitland Road to Jones Road		2031 to 2041	0.89	2u	\$ 6,779,781	\$ -	\$ -	\$ 6,779,781	\$ -
50	Collector C (Block 2) - Barton Street to Highway 8	✓	To 2031	0.74	2u	\$ 5,642,466	\$ -	\$ -	\$ -	\$ 5,642,466
51	Collector D (Block 3) - McNeilly Road to Collector F		2031 to 2041	1.25	2u	\$ 9,537,486	\$ -	\$ -	\$ 9,537,486	\$ -
52	Collector E (Block 3) - Barton Street to Highway 8	✓	To 2031	0.66	2u	\$ 5,060,086	\$ -	\$ -	\$ -	\$ 5,060,086
53	Collector F (Block 3) - Barton Street to Collector D	✓	To 2031	0.22	2u	\$ 1,713,732	\$ -	\$ -	\$ -	\$ 1,713,732
54	Fruitland Road - Highway 8 to Barton Street	✓	To 2031	1.05	2r-3u	\$ 8,937,129	\$ -	\$ 1,340,569	\$ -	\$ 7,596,559
55	Fruitland Road - Arvin Avenue to Barton Street		To 2031	0.36	2u-5u	\$ 4,339,490	\$ -	\$ 650,923	\$ -	\$ 3,688,566
<b>MTO</b>										
56	Highway 403 - Mohawk Road/Lincoln M. Alexander Parkway to Highway 6 south interchange		To 2031	0.00	Truck Climbing Lane	\$ 4,878,650	\$ 2,439,325	\$ 365,899	\$ -	\$ 2,073,426
<b>Red Hill Business Park</b>										

Prj. No.	Increased Service Needs Attributable to Anticipated Development	2031 Oversizing (To 2031 Road Projects within the Urban Boundary)*	Timing (year)	Length (km)	Capital Improvement	Gross Capital Cost Estimate (2023\$)	Other Deductions	Benefit to Existing Development	Post Period Benefit	Net Capital Cost
57	Dartnall Road - Twenty Road to Dickenson Road		To 2031	1.55	4u	\$ 17,001,938	\$ -	\$ -	\$ -	\$ 17,001,938
58	Twenty Road Extension - Glover Road to Upper Redhill Valley Parkway	✓	To 2031	0.35	2i	\$ 3,185,739	\$ -	\$ -	\$ -	\$ 3,185,739
59	Upper Red Hill Valley Parkway - Rymal Road to Twenty Road		2031 to 2041	1.22	4u	\$ 13,103,066	\$ -	\$ -	\$ 13,103,066	\$ -
60	Dickenson Road - 350 meters west of Nebo to 330m west of Glover Road		2031 to 2041	1.20	2r-2i	\$ 11,285,379	\$ -	\$ -	\$ 11,285,379	\$ -
61	Glover Road - Twenty Road to Rymal Road	✓	To 2031	1.31	2r-2i	\$ 11,485,019	\$ -	\$ 1,722,753	\$ -	\$ 9,762,267
62	Nebo Road - Twenty Road to Dickenson Road/Dartnall Road		To 2031	0.74	2r-2i	\$ 6,302,030	\$ -	\$ 945,305	\$ -	\$ 5,356,726
63	Nebo Road - Rymal Road to Twenty Road East		To 2031	1.30	2r-2i	\$ 11,085,926	\$ -	\$ 1,662,889	\$ -	\$ 9,423,037
<b>South Mountain Area</b>										
64	Rymal Road - Dartnall Road to Upper James Street	✓	To 2031	5.17	2r-5u	\$ 56,631,794	\$ -	\$ 8,494,769	\$ -	\$ 48,137,025
65	Upper Wellington Street - Limeridge Road to Stone Church Road		To 2031	1.04	2r-3u	\$ 12,404,686	\$ -	\$ 4,961,874	\$ -	\$ 7,442,812
66	Garth Street - Rymal Road to Twenty Road West		2031 to 2041	1.41	2r-5u	\$ 15,963,350	\$ -	\$ -	\$ 15,963,350	\$ -
67	Rymal Road - Glanaster Road to Upper Paradise Street		To 2031	0.55	2r-5u	\$ 5,594,604	\$ -	\$ 839,191	\$ -	\$ 4,755,413
68	West 5th Street - Rymal Road to Stone Church Road	✓	To 2031	1.01	2r-3u	\$ 7,728,774	\$ -	\$ 3,091,510	\$ -	\$ 4,637,265
<b>Stoney Creek</b>										
69	Arvin Avenue - McNeilly Road to Lewis Road		To 2031	0.85	2i	\$ 7,736,794	\$ -	\$ -	\$ -	\$ 7,736,794
70	South Service Road - Lewis Road to Fifty Road	✓	To 2031	1.79	2r-4r	\$ 13,701,195	\$ -	\$ 2,055,179	\$ -	\$ 11,646,015
71	McNeilly Road - Highway 8 to Barton Street	✓	To 2031	0.90	2r-2u	\$ 7,156,843	\$ -	\$ 1,073,526	\$ -	\$ 6,083,317
72	Lewis Road - Highway 8 to Barton Street		To 2031	0.49	2r-2u	\$ 3,908,425	\$ -	\$ 586,264	\$ -	\$ 3,322,161
73	Glover Road - Highway 8 to Barton Street		2031 to 2041	0.81	2r-2u	\$ 6,259,225	\$ -	\$ -	\$ 6,259,225	\$ -
74	Jones Road - Highway 8 to Barton Street	✓	To 2031	0.92	2r-2u	\$ 7,293,473	\$ -	\$ 1,094,021	\$ -	\$ 6,199,452
75	Jones Road - Barton Street to South Service Road		To 2031	0.92	2r-2i	\$ 8,035,897	\$ -	\$ 4,017,949	\$ -	\$ 4,017,949
76	Lewis Road - Barton Street to South Service Road		To 2031	0.87	2r-2i	\$ 7,871,843	\$ -	\$ 3,935,922	\$ -	\$ 3,935,922
77	Millen Road - Barton Street to South Service Road		To 2031	1.07	2r-2i	\$ 9,092,330	\$ -	\$ 3,636,932	\$ -	\$ 5,455,398
78	South Service Road - Millen Road to Gray Road		2031 to 2041	1.55	2r-2u	\$ 12,006,082	\$ -	\$ -	\$ 12,006,082	\$ -
<b>Twenty Road East</b>										
79	Upper Ottawa Street - End to Twenty Road		2031 to 2041	0.95	4u	\$ 10,215,838	\$ -	\$ -	\$ 10,215,838	\$ -
<b>Waterdown</b>										
80	North Waterdown Drive - Centre Road to Parkside Drive		To 2031	1.28	3u	\$ 12,464,597	\$ -	\$ -	\$ -	\$ 12,464,597
81	Parkside Drive - North Waterdown Drive to Avonsyde Boulevard	✓	To 2031	1.47	2r-3u	\$ 32,319,655	\$ -	\$ 4,847,948	\$ -	\$ 27,471,707
82	North Waterdown Drive - Clappison Avenue Extension to Mosaic Drive		To 2031	0.59	3u	\$ 5,726,919	\$ -	\$ -	\$ -	\$ 5,726,919
83	Clappison Avenue Extension - Parkside Drive to North Waterdown Drive		To 2031	0.54	2u	\$ 4,132,544	\$ -	\$ -	\$ -	\$ 4,132,544
84	Parkside Drive - Hollybush Drive to Highway 6	✓	To 2031	1.07	2r-4u	\$ 10,266,769	\$ -	\$ 4,106,708	\$ -	\$ 6,160,062
85	Parkside Drive - Main Street to North Waterdown Drive		2031 to 2041	0.59	2r-3u	\$ 4,533,236	\$ -	\$ -	\$ 4,533,236	\$ -
<b>Other</b>										
86	Binbrook Road - Fletcher Road to Binhaven Road	✓	To 2031	0.91	2r-2u	\$ 7,297,133	\$ -	\$ 1,094,570	\$ -	\$ 6,202,563
87	LRT corridor - Centennial Parkway/Main Street/King Street to McMaster University		To 2031	13.77	Public Realm Improvements	\$ 9,990,000	\$ -	\$ 1,498,500	\$ -	\$ 8,491,500
88	Longwood Road - Aberdeen Avenue to Main Street		To 2031	0.64	4u	\$ 8,192,524	\$ -	\$ 4,096,262	\$ -	\$ 4,096,262
89	Lincoln M. Alexander Parkway-Red Hill Valley Parkway - Highway 403 to Queen Elizabeth Way		2031 to 2041	17.30	4r-6u	\$ 135,000,000	\$ -	\$ -	\$ 135,000,000	\$ -
<b>Local Share Deductions</b>										
90	Provision for Local Share of Urbanization (Urbanization Rate)					\$ (4,684,630)				\$ (4,684,630)
91	Local Share Deductions					\$ (59,369,731)				\$ (59,369,731)
<b>Major Structures</b>										
92	Highway 5/6 Interchange		To 2031	-	Structure	\$ 60,500,000	\$ 45,500,000	\$ -	\$ -	\$ 15,000,000
93	Mohawk Road - Highway 403 Interchange Ramp		To 2031	-	Structure	\$ 4,042,310	\$ -	\$ 2,021,155	\$ -	\$ 2,021,155
94	Centennial Parkway at QEW		To 2031	-	Interchange Reconfiguration	\$ 8,500,000	\$ -	\$ 4,250,000	\$ -	\$ 4,250,000
95	QEW Off-Ramps at Fifty Road		To 2031	-	Signalization and Ramp Reconfiguration	\$ 4,000,000	\$ -	\$ 600,000	\$ -	\$ 3,400,000
96	Strathcona Pedestrian Bridge		2031 to 2041	-	Structure	\$ 31,500,000	\$ -	\$ -	\$ 31,500,000	\$ -
97	Limeridge Mall Pedestrian Bridge		To 2031	-	Structure	\$ 6,500,000	\$ 3,500,000	\$ 2,430,000	\$ -	\$ 570,000
98	Henderson Lift Pedestrian and Cyclist Bridge		2031 to 2041	-	Structure	\$ 20,000,000	\$ -	\$ -	\$ 20,000,000	\$ -
99	Hamilton Centre Pedestrian and Cyclist Bridge		2031 to 2041	-	Structure	\$ 9,500,000	\$ -	\$ -	\$ 9,500,000	\$ -
100	Red Hill Pedestrian and Cyclist Bridge		To 2031	-	Structure	\$ 19,000,000	\$ -	\$ 15,390,000	\$ -	\$ 3,610,000
101	Dundas Pedestrian and Cyclist Bridge		2031 to 2041	-	Structure	\$ 3,125,000	\$ -	\$ -	\$ 3,125,000	\$ -
102	Margaret St. Park Active Transportation Bridge		2031 to 2041	-	Structure	\$ 5,900,000	\$ -	\$ -	\$ 5,900,000	\$ -
103	Sealey Park Active Transportation Bridge		To 2031	-	Structure	\$ 7,500,000	\$ -	\$ 6,075,000	\$ -	\$ 1,425,000
104	Grade Separation		To 2031	-	Grade Separation	\$ 71,827,667	\$ -	\$ 17,956,917	\$ 26,935,375	\$ 26,935,375
<b>Programs</b>										
105	New Signals (Pedestrian and/or Regular)		2024-2031	-	City-Wide Program	\$ 32,000,000	\$ -	\$ 1,600,000	\$ -	\$ 30,400,000
106	Development Road Urbanization		2024-2031	-	City-Wide Program	\$ 6,500,000	\$ -	\$ 325,000	\$ -	\$ 6,175,000
107	Street Lighting Enhancement Program		2024-2031	-	City-Wide Program	\$ 3,250,000	\$ -	\$ 2,632,500	\$ -	\$ 617,500

Prj. No.	Increased Service Needs Attributable to Anticipated Development	2031 Oversizing (To 2031 Road Projects within the Urban Boundary)*	Timing (year)	Length (km)	Capital Improvement	Gross Capital Cost Estimate (2023\$)	Other Deductions	Benefit to Existing Development	Post Period Benefit	Net Capital Cost
108	Pedestrian Crossovers		2024-2031	-	City-Wide Program	\$ 1,680,000	\$ -	\$ 1,360,800	\$ -	\$ 319,200
109	Advanced Traffic Management Systems		2024-2031	-	City-Wide Program	\$ 6,000,000	\$ -	\$ 4,500,000	\$ -	\$ 1,500,000
110	Transit Shelter Expansion Program		2024-2031	-	City-Wide Program	\$ 1,200,000	\$ -	\$ 600,000	\$ -	\$ 600,000
111	Bus Stop Shelter Rehabilitation Program		2024-2031	-	City-Wide Program	\$ 1,000,000	\$ -	\$ 850,000	\$ -	\$ 150,000
112	New Sidewalk Program		2024-2031	-	City-Wide Program	\$ 6,500,000	\$ -	\$ -	\$ -	\$ 6,500,000
113	New Traffic Signals		2024-2031	-	City-Wide Program	\$ 12,000,000	\$ -	\$ 600,000	\$ -	\$ 11,400,000
114	New Traffic Signal - Drakes Drive at North Service Road		2024-2031	-	Traffic Signal	\$ 350,000	\$ -	\$ 17,500	\$ -	\$ 332,500
115	New Traffic Signal - Regional Road 20 at Westbrook Roac		2024-2031	-	Traffic Signal	\$ 350,000	\$ -	\$ 17,500	\$ -	\$ 332,500
116	New Traffic Signal - Regional Road 56 at Kirk Roac		2024-2031	-	Traffic Signal	\$ 350,000	\$ -	\$ 17,500	\$ -	\$ 332,500
117	New Traffic Signal - Fifty Road at North Service Roac		2024-2031	-	Traffic Signal	\$ 350,000	\$ -	\$ 17,500	\$ -	\$ 332,500
118	New Traffic Signal - Fruitland Road at North Service Roac		2024-2031	-	Traffic Signal	\$ 350,000	\$ -	\$ 17,500	\$ -	\$ 332,500
119	Unidentified intersection improvements (excluding Traffic Signals)		2024-2031	-	City-Wide Program	\$ 3,250,000	\$ -	\$ 2,632,500	\$ -	\$ 617,500
120	Annual Bike Parking at B/A Line Stops		2024-2031	-	City-Wide Program	\$ 46,000	\$ -	\$ 37,260	\$ -	\$ 8,740
121	Annual Enhanced Bike Parking at Express Bus/Rapid Transit Stops		2024-2031	-	City-Wide Program	\$ 275,000	\$ -	\$ 222,750	\$ -	\$ 52,250
122	Transportation Demand Management		2024-2031	-	City-Wide Program	\$ 4,400,000	\$ -	\$ 3,564,000	\$ -	\$ 836,000
123	Durable Pavement Markings – New Installations		2024-2031	-	City-Wide Program	\$ 1,600,000	\$ -	\$ 240,000	\$ -	\$ 1,360,000
124	Traffic Controller Cabinet Replacements (Capacity Related)		2024-2031	-	City-Wide Program	\$ 3,200,000	\$ -	\$ 160,000	\$ -	\$ 3,040,000
125	Traffic Signal Upgrades		2024-2031	-	City-Wide Program	\$ 2,400,000	\$ -	\$ 120,000	\$ -	\$ 2,280,000
126	Traffic Signal LED Replacement Program		2024-2031	-	City-Wide Program	\$ 1,760,000	\$ -	\$ 1,760,000	\$ -	\$ -
127	Sidewalk Missing Link Program		2024-2031	-	City-Wide Program	\$ 2,000,000	\$ -	\$ 1,620,000	\$ -	\$ 380,000
128	Bike Parking		2024-2031	-	City-Wide Program	\$ 720,000	\$ -	\$ 583,200	\$ -	\$ 136,800
129	Micromobility		2024-2031	-	City-Wide Program	\$ 1,200,000	\$ -	\$ 972,000	\$ -	\$ 228,000
130	Miscellaneous Land Acquisitions		2024-2031	-	City-Wide Program	\$ 6,969,500	\$ -	\$ 348,475	\$ -	\$ 6,621,025
<b>Active Transportation Projects</b>										
131	Barton - Brockley to Fruitland		2024-2031	3.95	Multi-Use Trail	\$ 171,450	\$ -	\$ 138,874	\$ 9,773	\$ 22,803
132	Barton - Red Hill Valley to Lake		2024-2031	1.61	Cycle track	\$ 326,173	\$ -	\$ 264,200	\$ 18,592	\$ 43,381
133	Baseline/ Lockport - Winona Road to Niagara border		2024-2031	1.15	Bike Lane	\$ 32,060	\$ -	\$ 25,968	\$ 1,827	\$ 4,264
134	Battlefield Park - Bruce Trail Link - Greenhill to Bruce Trail to Glover Mtr		2024-2031	0.75	Multi-Use Trail	\$ 742,949	\$ -	\$ 601,788	\$ 42,348	\$ 98,812
135	Beach Bike Lane - under QEW		2024-2031	0.24	Bike Lane	\$ 9,757	\$ -	\$ 7,903	\$ 556	\$ 1,298
136	Beach Boulevard - lift bridge to Woodward/Eastport		2024-2031	4.52	Bike Lane	\$ 131,027	\$ -	\$ 106,132	\$ 7,469	\$ 17,427
137	Beddoe Drive Link		2024-2031	0.91	Multi-Use Trail	\$ 723,434	\$ -	\$ 585,982	\$ 41,236	\$ 96,217
138	Binbrook Road - Regional Road 56 to Southbrook		2024-2031	0.28	Bike Lane	\$ 9,757	\$ -	\$ 7,903	\$ 556	\$ 1,298
139	Binbrook Road - Trinity Church to Royal Winter/Binhaber		2024-2031	2.16	Multi-Use Trail	\$ 342,899	\$ 146,050	\$ -	\$ 59,055	\$ 137,795
140	Birch/ Holton - Burlington St to Cannon/ King/ Delaware		2024-2031	1.40	Bike Lane	\$ 43,211	\$ -	\$ 35,001	\$ 2,463	\$ 5,747
141	Burlington Street East Boulevard Trail - Ottawa to Parkdale to Glow		2024-2031	2.30	Multi-Use Trail	\$ 1,463,595	\$ -	\$ 1,185,512	\$ 83,425	\$ 194,658
142	Burlington Street Link - Ferguson/ Dock Service Road to Sherman		2024-2031	1.88	Multi-Use Trail	\$ 144,966	\$ -	\$ 117,422	\$ 8,263	\$ 19,280
143	Burlington/ Industrial - Sherman to Gage		2024-2031	0.86	Cycle track	\$ 137,996	\$ -	\$ 111,777	\$ 7,866	\$ 18,353
144	Centennial Parkway - North Service to GO station/ Kenora		2024-2031	1.20	Multi-Use Trail	\$ 217,448	\$ -	\$ 176,133	\$ 12,395	\$ 28,921
145	Centre - Concession 8 E to Concession 7 E		2024-2031	1.80	Paved Shoulder	\$ 489,259	\$ -	\$ 73,389	\$ 124,761	\$ 291,109
146	Centre - Grindstone Creek to Concession 5 E		2024-2031	0.45	Paved Shoulder	\$ 122,663	\$ -	\$ 18,399	\$ 31,279	\$ 72,985
147	Centre - Warren/ Carlisle Road to Progreston		2024-2031	0.78	Paved Shoulder	\$ 210,479	\$ -	\$ 31,572	\$ 53,672	\$ 125,235
148	Charlton/ John - James to Ferguson & St Joseph's Dr		2024-2031	0.80	Bike Lane	\$ 117,088	\$ -	\$ 94,841	\$ 6,674	\$ 15,573
149	Chedmac - Southridge to Rice		2024-2031	0.53	Bike Lane	\$ 32,060	\$ -	\$ 25,968	\$ 1,827	\$ 4,264
150	Chedoke Rail Trail - Highway 403 to Dundurn		2024-2031	4.68	Multi-Use Trail	\$ 2,072,729	\$ -	\$ 1,678,911	\$ 118,146	\$ 275,673
151	Cherry Beach Road Link - Millen to Dewitt		2024-2031	0.91	Multi-Use Trail	\$ 326,173	\$ -	\$ 264,200	\$ 18,592	\$ 43,381
152	Christie-Tews - Christie C.A. to Harvest		2024-2031	2.75	Multi-Use Trail	\$ 1,566,744	\$ -	\$ 235,012	\$ 399,520	\$ 932,212
153	Delawana - Kenora to Lake		2024-2031	1.02	Bike Lane	\$ 12,545	\$ -	\$ 10,162	\$ 715	\$ 1,668
154	Devil's Punchbowl Link - Mountain Ave/ Lake Ave to Ridge Road/ Devil's		2024-2031	0.42	Multi-Use Trail	\$ 209,085	\$ -	\$ 169,359	\$ 11,918	\$ 27,808
155	Dewitt - Barton to Dundee		2024-2031	0.90	Bike Lane	\$ 29,272	\$ -	\$ 23,710	\$ 1,668	\$ 3,893
156	Dewitt - Dundee to Ridge		2024-2031	0.50	Bike Lane	\$ 1,045,425	\$ -	\$ 846,794	\$ 59,589	\$ 139,042
157	Dundas St - Main to Cootes		2024-2031	0.68	Bike Lane	\$ 22,302	\$ -	\$ 18,065	\$ 1,271	\$ 2,966
158	Dundas St in Waterdown - Highway 6 to Kearns (border)		2024-2031	6.03	Multi-Use Trail	\$ 179,813	\$ -	\$ 145,649	\$ 10,249	\$ 23,915
159	East Townline - Mud to Highland		2024-2031	1.10	Bike Lane	\$ 18,121	\$ -	\$ 2,718	\$ 4,621	\$ 10,782
160	Eastport Drive Lift Bridge Link		2024-2031	0.60	Multi-Use Trail	\$ 2,439,325	\$ -	\$ 1,975,853	\$ 139,042	\$ 324,430
161	Edgewood - Safari to Highway 6		2024-2031	0.90	Bike Lane	\$ 15,333	\$ -	\$ -	\$ 4,600	\$ 10,733
162	Emperor - Brigade to Acadia		2024-2031	0.44	Bike Lane	\$ 22,302	\$ -	\$ 18,065	\$ 1,271	\$ 2,966
163	Existing Pipeline Trail - Main to Strathearne		2024-2031	2.20	Multi-Use Trail	\$ 6,522,058	\$ -	\$ 5,282,867	\$ 371,757	\$ 867,434
164	Fallsview - Sydenham to Rock Chapel Road		2024-2031	1.40	Multi-Use Trail	\$ 487,865	\$ -	\$ -	\$ 146,360	\$ 341,506
165	Fennell Avenue Boulevard Trail - Garth/ West 18th to West 5th		2024-2031	1.20	Multi-Use Trail	\$ 574,287	\$ -	\$ 465,172	\$ 32,734	\$ 76,380
166	Ferguson - Young to Charlton		2024-2031	0.21	Bike Lane	\$ 2,788	\$ -	\$ 2,258	\$ 159	\$ 371
167	Fiddler's Green - Amberly to Carluke		2024-2031	6.77	Bike Lane	\$ 29,272	\$ 8,509	\$ -	\$ 6,229	\$ 14,534
168	Fiddler's Green - Jerseyville to Wilson		2024-2031	0.25	Bike Lane	\$ 8,363	\$ -	\$ 6,774	\$ 477	\$ 1,112
169	First Rd W/Whitedeer/Terryberry & Picardy/ Highbury - Glover Mtn Road/ Ridgeview Dr to Rymal/ Bellagio		2024-2031	4.08	Bike Lane	\$ 66,907	\$ -	\$ 54,195	\$ 3,814	\$ 8,899
170	Frances - Grays to Southshore		2024-2031	1.15	Bike Lane	\$ 217,448	\$ -	\$ 176,133	\$ 12,395	\$ 28,921

Prj. No.	Increased Service Needs Attributable to Anticipated Development	2031 Oversizing (To 2031 Road Projects within the Urban Boundary)*	Timing (year)	Length (km)	Capital Improvement	Gross Capital Cost Estimate (2023\$)	Other Deductions	Benefit to Existing Development	Post Period Benefit	Net Capital Cost
171	Frid/Chatham - Longwood to Dundurn		2024-2031	1.00	Bike Lane	\$ 8,363	\$ -	\$ 6,774	\$ 477	\$ 1,112
172	Golf Links/ Halson - Wilson to Southcote		2024-2031	1.19	Bike Lane	\$ 39,029	\$ -	\$ 31,614	\$ 2,225	\$ 5,191
173	Governor's - Wainwright to Lynden		2031-2041	13.06	Paved Shoulder	\$ 908,823	\$ -	\$ -	\$ 908,823	\$ -
174	Governor's - Ogilvie to Main		2024-2031	0.24	Bike Lane	\$ 59,938	\$ -	\$ 48,550	\$ 3,416	\$ 7,972
175	Grays/ Gray - Confederation Park gate to King		2024-2031	3.00	Multi-Use Trail	\$ 163,086	\$ -	\$ 132,100	\$ 9,296	\$ 21,690
176	Greenhill - Harrisford to Summercrest		2024-2031	1.94	Bike Lane	\$ 105,936	\$ -	\$ 85,808	\$ 6,038	\$ 14,090
177	Greenhill - Summercrest to King		2024-2031	1.20	Bike Lane	\$ 65,513	\$ -	\$ 53,066	\$ 3,734	\$ 8,713
178	Hamilton Drive Link		2024-2031	-	Multi-Use Trail	\$ 2,759,922	\$ -	\$ 2,235,537	\$ 157,316	\$ 367,070
179	Hamilton in Waterdown - Centre/Main to Highway 5/Dundas		2024-2031	1.00	Multi-Use Trail	\$ 86,422	\$ -	\$ 70,002	\$ 4,926	\$ 11,494
180	Hamilton-Brantford Rail Ttrail - Bridlewood Dr to Ewer		2024-2031	4.00	Multi-Use Trail	\$ 565,923	\$ -	\$ 458,398	\$ 32,258	\$ 75,268
181	Hatt - Peel to John		2024-2031	0.65	Cycle track	\$ 40,423	\$ -	\$ 32,743	\$ 2,304	\$ 5,376
182	Hollybush - Parkside to Dundas St		2024-2031	1.10	Bike Lane	\$ 22,302	\$ -	\$ 18,065	\$ 1,271	\$ 2,966
183	Hydro Corridor - Barton to Lawrence		2024-2031	1.90	Multi-Use Trail	\$ 1,743,769	\$ -	\$ 1,412,453	\$ 99,395	\$ 231,921
184	Hydro Corridor - Lawrence Avenue to Greenhill Avenue		2024-2031	1.15	Multi-Use Trail	\$ 599,377	\$ -	\$ 485,495	\$ 34,164	\$ 79,717
185	Hydro Corridor - Wilson/Highway 52 to Regional Road 5f		2024-2031	12.70	Multi-Use Trail	\$ 10,617,336	\$ 10,617,336	\$ -	\$ -	\$ -
186	Iroquois Heights to Old Mohawk - Chedoke Rail Trail to Old Mohawk Roac		2024-2031	0.85	Multi-Use Trail	\$ 443,260	\$ -	\$ 359,041	\$ 25,266	\$ 58,954
187	Jones Road Link		2024-2031	2.67	Multi-Use Trail	\$ 309,446	\$ 224,257	\$ -	\$ 25,557	\$ 59,632
188	Karst Escarpment Loop - Pritchard to Mount Albion/Winterberry		2024-2031	0.70	Multi-Use Trail	\$ 543,621	\$ -	\$ 440,333	\$ 30,986	\$ 72,302
189	Kenora/ Greenford/ Owen - Bancroft to King		2024-2031	2.60	Bike Lane	\$ 239,751	\$ -	\$ 194,198	\$ 13,666	\$ 31,887
190	Kentley - Eugene to Kenora		2024-2031	0.40	Signed Bike Route	\$ 5,576	\$ -	\$ 4,516	\$ 318	\$ 742
191	Kerns Road,Waterdown South Link		2024-2031	-	Multi-Use Trail	\$ 1,333,962	\$ -	\$ 1,080,509	\$ 76,036	\$ 177,417
192	King in Dundas - Bond to Peel		2024-2031	0.80	Bike Lane	\$ 43,211	\$ -	\$ 35,001	\$ 2,463	\$ 5,747
193	King over Red Hill Valley Parkway - Lawrence to Pottruff		2024-2031	0.60	Cycle track	\$ 37,635	\$ -	\$ 30,485	\$ 2,145	\$ 5,005
194	Kitty Murray - Garner to Golf Links		2024-2031	2.26	Bike Lane	\$ 73,877	\$ -	\$ 59,840	\$ 4,211	\$ 9,826
195	Limeridge - Birchview to Mtn Brow		2024-2031	1.98	Bike Lane	\$ 97,573	\$ -	\$ 79,034	\$ 5,562	\$ 12,977
196	Limeridge - Garth/ Bonaventure to West 5th/ Hawkrigde		2024-2031	1.37	Bike Lane	\$ 73,877	\$ -	\$ 59,840	\$ 4,211	\$ 9,826
197	Limeridge Mall Hydro Corridor Trail - Mohawk Road to South of Ryma		2024-2031	3.80	Multi-Use Trail	\$ 1,957,036	\$ 1,957,036	\$ -	\$ -	\$ -
198	Lovers Lane - Sulpher Springs to Jerseyville		2024-2031	0.90	Bike Lane	\$ 29,272	\$ -	\$ 23,710	\$ 1,668	\$ 3,893
199	Marston - Paramount to Gordon Drummond		2024-2031	0.40	Bike Lane	\$ 19,515	\$ -	\$ 15,807	\$ 1,112	\$ 2,595
200	Meadowbrook		2024-2031	1.00	Bike Lane	\$ 22,302	\$ -	\$ 18,065	\$ 1,271	\$ 2,966
201	Meadowlands/ Raymond - Golf Links to Garner		2024-2031	2.10	Bike Lane	\$ 68,301	\$ -	\$ 55,324	\$ 3,893	\$ 9,084
202	Millen - Shoreview to Millen/ Seaman		2024-2031	0.50	Bike Lane	\$ 43,211	\$ 20,532	\$ 18,370	\$ 1,293	\$ 3,016
203	Mohawk - Old Mohawk to Upper Paradise		2024-2031	1.83	Bike Lane	\$ 65,513	\$ -	\$ 53,066	\$ 3,734	\$ 8,713
204	Montclair/ Central/ Graham/ Frederick		2024-2031	3.80	Signed Bike Route	\$ 26,484	\$ -	\$ 21,452	\$ 1,510	\$ 3,522
205	Mountain Brow Boulevard Trail - Mohawk to Arbour		2024-2031	1.81	Multi-Use Trail	\$ 521,319	\$ -	\$ 422,268	\$ 29,715	\$ 69,335
206	Mountain Brow East Path - Rendell to Oakcrest		2024-2031	0.81	Multi-Use Trail	\$ 2,174,484	\$ -	\$ 1,761,332	\$ 123,946	\$ 289,206
207	Mountain Brow in Waterdown - Mill to Burke to King Road		2024-2031	1.20	Multi-Use Trail	\$ 919,974	\$ -	\$ 745,179	\$ 52,439	\$ 122,357
208	Museum of Steam and Tech Link - Woodward to Red Hill Valley Trai		2024-2031	0.75	Multi-Use Trail	\$ 846,097	\$ -	\$ 685,339	\$ 48,228	\$ 112,531
209	Nash - Bancroft to King		2024-2031	2.58	Cycle track	\$ 140,784	\$ -	\$ 114,035	\$ 8,025	\$ 18,724
210	North Service Road - Bellavista to Baseline		2024-2031	0.98	Bike Lane	\$ 32,060	\$ -	\$ 25,968	\$ 1,827	\$ 4,264
211	North Service Road - Dewitt to Lakeview		2024-2031	0.73	Bike Lane	\$ 22,302	\$ -	\$ 18,065	\$ 1,271	\$ 2,966
212	Northlawn Avenue Link		2024-2031	1.10	Multi-Use Trail	\$ 557,560	\$ 81,100	\$ -	\$ 142,938	\$ 333,522
213	Ogilvie/ Old Ancaster - Hatt/ King to Hamilton-Brantford Rail Trai		2024-2031	0.80	Bike Lane	\$ 19,515	\$ -	\$ 15,807	\$ 1,112	\$ 2,595
214	Old Guelph Road - Paterson to York Bike Lane		2024-2031	3.53	Paved Shoulder	\$ 1,264,267	\$ -	\$ 189,640	\$ 322,388	\$ 752,239
215	Old Mud - Mt Albion to Winterberry		2024-2031	0.40	Bike Lane	\$ 12,545	\$ -	\$ 10,162	\$ 715	\$ 1,668
216	Osler/ Main - Hatt/ King to Main + 125m of Main		2024-2031	2.00	Bike Lane	\$ 122,663	\$ -	\$ 99,357	\$ 6,992	\$ 16,314
217	Ottawa Street South - Bruce Trail Link		2024-2031	0.39	Multi-Use Trail	\$ 956,215	\$ -	\$ 774,534	\$ 54,504	\$ 127,177
218	Proposed Pipeline Trail - Museum of Steam and Technology to Mahoney		2024-2031	2.40	Multi-Use Trail	\$ 720,646	\$ -	\$ 583,724	\$ 41,077	\$ 95,846
219	Queensdale - Upper Sherman to Upper Ottawa		2024-2031	1.56	Bike Lane	\$ 50,180	\$ -	\$ 40,646	\$ 2,860	\$ 6,674
220	Queensdale - Upper Wellington to Skyland		2024-2031	0.39	Bike Lane	\$ 54,362	\$ -	\$ 44,033	\$ 3,099	\$ 7,230
221	Queenston/ Highway 8 - King to Dewitt		2024-2031	1.37	Bike Lane	\$ 342,899	\$ -	\$ 277,749	\$ 19,545	\$ 45,606
222	Regional Road 56 - Swayze Road to Cemetery		2024-2031	4.60	Multi-Use Trail	\$ 4,347,574	\$ 1,414,215	\$ -	\$ 880,008	\$ 2,053,351
223	Regional Road 56 south of Kirk - Windwood to Kirk		2024-2031	1.14	Multi-Use Trail	\$ 1,087,242	\$ -	\$ 163,086	\$ 277,247	\$ 646,909
224	Ridge Road - Devil Punch Bowl to Dewitt		2024-2031	2.91	Multi-Use Trail	\$ 1,087,242	\$ -	\$ 880,666	\$ 61,973	\$ 144,603
225	Rousseaux/ Mohawk - Wilson to Filman		2024-2031	1.60	Bike Lane	\$ 313,628	\$ -	\$ 254,038	\$ 17,877	\$ 41,712
226	Scenic - Chedoke Rail Trail to Upper Paradise		2024-2031	2.27	Bike Lane	\$ 37,635	\$ -	\$ 30,485	\$ 2,145	\$ 5,005
227	Scenic/ Denlow - Upper Paradise to Garth		2024-2031	0.95	Bike Lane	\$ 15,333	\$ -	\$ 12,420	\$ 874	\$ 2,039
228	Shaver - Wilson to Garner		2024-2031	0.52	Multi-Use Trail	\$ 16,727	\$ -	\$ 13,549	\$ 953	\$ 2,225
229	Stuart Street Rail Link		2024-2031	0.94	Multi-Use Trail	\$ 354,051	\$ -	\$ 286,781	\$ 20,181	\$ 47,089
230	Upper James - William Connell Park		2024-2031	0.38	Multi-Use Trail	\$ 313,628	\$ -	\$ 254,038	\$ 17,877	\$ 41,712
231	Upper Sherman - Stone Church to Rymal to Miles		2024-2031	1.00	Bike Lane	\$ 249,508	\$ 249,508	\$ -	\$ -	\$ -
232	Upper Wentworth - Concession to Fennell		2024-2031	1.03	Bike Lane	\$ 55,756	\$ -	\$ 45,162	\$ 3,178	\$ 7,416
233	Upper Wentworth - Fennell to East 24th		2024-2031	1.03	Bike Lane	\$ 55,756	\$ -	\$ 45,162	\$ 3,178	\$ 7,416
234	Valley Road - Rock Chapel to York Road		2024-2031	1.40	Paved Shoulder	\$ 434,897	\$ -	\$ 65,235	\$ 110,899	\$ 258,764
235	Van Wagner's - Beach Bike Lane to Centennial Parkway		2024-2031	2.50	Bike Lane	\$ 108,724	\$ -	\$ 88,067	\$ 6,197	\$ 14,460

Prj. No.	Increased Service Needs Attributable to Anticipated Development	2031 Oversizing (To 2031 Road Projects within the Urban Boundary)*	Timing (year)	Length (km)	Capital Improvement	Gross Capital Cost Estimate (2023\$)	Other Deductions	Benefit to Existing Development	Post Period Benefit	Net Capital Cost
236	Victoria - Young to Burlington		2024-2031	2.53	Bike Lane	\$ 55,756	\$ -	\$ 45,162	\$ 3,178	\$ 7,416
237	Walnut Grove & Sanctuary Park - Walnut Grove/ Ogilvie to Highland Park Dr		2024-2031	0.40	Multi-Use Trail	\$ 510,167	\$ -	\$ 413,236	\$ 29,080	\$ 67,852
238	Warrington/ South Service/ Lake - Centennial Parkway to Maple		2024-2031	3.86	Multi-Use Trail	\$ 108,724	\$ -	\$ 88,067	\$ 6,197	\$ 14,460
239	White Church Road West Airport Link		2024-2031	-	Multi-Use Trail	\$ 938,095	\$ -	\$ -	\$ 281,428	\$ 656,666
240	White Church Road West Link		2024-2031	6.55	Multi-Use Trail	\$ 1,832,979	\$ 798,725	\$ -	\$ 310,276	\$ 723,977
241	Wilson in Ancaster - Rousseaux to Halson		2024-2031	0.85	Bike Lane	\$ 27,878	\$ -	\$ 22,581	\$ 1,589	\$ 3,708
242	Winona - Lido/ shore to Peachtree (Helena)		2024-2031	1.97	Multi-Use Trail	\$ 64,119	\$ -	\$ 51,937	\$ 3,655	\$ 8,528
243	York Road - Olympic to Valley Road		2024-2031	1.70	Paved Shoulder	\$ 609,134	\$ -	\$ 91,370	\$ 155,329	\$ 362,435
244	York Road & York Road at Old Guelph - Valley Road to Highway 6		2024-2031	2.50	Multi-Use Trail	\$ 1,997,459	\$ -	\$ -	\$ 599,238	\$ 1,398,221
245	Acadia - Emperor to End		2024-2031	0.54	Signed Bike Route	\$ 21,732	\$ -	\$ 17,603	\$ 1,239	\$ 2,890
246	Airport Road - Butter to Miles		2024-2031	6.66	Bike Lane	\$ 932,965	\$ 812,142	\$ -	\$ 36,247	\$ 84,576
247	Alma - Sydenham to Queen		2024-2031	0.09	Bike Lane	\$ 12,302	\$ -	\$ 9,965	\$ 701	\$ 1,636
248	Aquasanta - Diconzo to Ascoli		2024-2031	0.09	Signed Bike Route	\$ 3,576	\$ -	\$ 2,897	\$ 204	\$ 476
249	Baker - Breadalbane to Dundurn		2024-2031	0.14	Signed Bike Route	\$ 5,681	\$ -	\$ 4,602	\$ 324	\$ 756
250	Winston - Hunter to 413m west of Kelson Ave N		2024-2031	2.06	Bike Lane	\$ 288,999	\$ -	\$ 43,350	\$ 73,695	\$ 171,955
251	Bedrock - First Rd W to 300m West of First Rd W		2024-2031	0.33	Bike Lane	\$ 45,816	\$ -	\$ 37,111	\$ 2,612	\$ 6,094
252	Bellagio - Fletcher to Terryberry		2024-2031	1.64	Bike Lane	\$ 229,437	\$ -	\$ 185,844	\$ 13,078	\$ 30,515
253	Binbrook Road - Southbrook to Boundary		2024-2031	6.02	Paved Shoulder	\$ 1,805,365	\$ -	\$ 270,805	\$ 460,368	\$ 1,074,192
254	Book Road - Shaver to Fiddler's Green		2031-2041	2.50	Paved Shoulder	\$ 751,147	\$ -	\$ -	\$ 751,147	\$ -
255	Book Road - Fiddler's Green to Glancaster		2024-2031	3.42	Bike Lane	\$ 478,291	\$ 417,469	\$ 49,266	\$ 3,467	\$ 8,089
256	Brantdale - West Fifth Street to Upper James		2024-2031	0.42	Signed Bike Route	\$ 16,894	\$ -	\$ 13,684	\$ 963	\$ 2,247
257	Bridlewood - Governor's to Highland Park Drive		2024-2031	0.59	Signed Bike Route	\$ 23,434	\$ -	\$ 18,982	\$ 1,336	\$ 3,117
258	Brigade - Upper Wellington to Emperor		2024-2031	0.82	Signed Bike Route	\$ 32,712	\$ -	\$ 26,497	\$ 1,865	\$ 4,351
259	Brock - Harvest Road to Highway 8		2024-2031	0.55	Paved Shoulder	\$ 164,442	\$ -	\$ 24,666	\$ 41,933	\$ 97,843
260	Brock - Safari to Freelon		2024-2031	4.50	Paved Shoulder	\$ 1,351,337	\$ -	\$ -	\$ 405,401	\$ 945,936
261	Burke - Great Falls Blvd to McKnight Ave E		2024-2031	0.51	Bike Lane	\$ 71,675	\$ -	\$ 58,057	\$ 4,085	\$ 9,533
262	Butter - Glancaster to Fiddler's Green		2024-2031	2.21	Bike Lane	\$ 309,163	\$ -	\$ -	\$ 92,749	\$ 216,414
263	Canada - Locke to Queen		2024-2031	0.41	Signed Bike Route	\$ 16,392	\$ -	\$ 13,277	\$ 934	\$ 2,180
264	Carlisle Trail Loop - Centre Road to Border		2024-2031	3.35	Paved Shoulder	\$ 1,006,151	\$ -	\$ 150,923	\$ 256,568	\$ 598,660
265	Carlson Street - Highland Road to End		2024-2031	0.11	Signed Bike Route	\$ 4,410	\$ -	\$ 3,572	\$ 251	\$ 586
266	Carluke - Glancaster to Shaver		2031-2041	3.53	Paved Shoulder	\$ 1,058,213	\$ -	\$ -	\$ 1,058,213	\$ -
267	Central - Edgemont to Cochrane		2024-2031	1.54	Signed Bike Route	\$ 61,437	\$ -	\$ 49,764	\$ 3,502	\$ 8,171
268	Concession 10 West - Foreman to Freelon		2024-2031	9.28	Signed Bike Route	\$ 371,340	\$ -	\$ -	\$ 111,402	\$ 259,938
269	Concession 11 E - Centre Road to Freelon		2024-2031	2.65	Paved Shoulder	\$ 794,371	\$ -	\$ -	\$ 238,311	\$ 556,060
270	Concession 4 West - Millgrove Sideroad to Highway 6		2031-2041	1.78	Paved Shoulder	\$ 532,612	\$ -	\$ -	\$ 532,612	\$ -
271	Concession 6 East - Highway 6 to Centre Road		2031-2041	2.79	Paved Shoulder	\$ 836,846	\$ -	\$ -	\$ 836,846	\$ -
272	Concession 7 West - Boundary to Edgewood Road		2024-2031	18.80	Paved Shoulder	\$ 5,640,591	\$ -	\$ -	\$ 1,692,177	\$ 3,948,414
273	Concession 8 West - Middletown to Middletown		2024-2031	0.14	Signed Bike Route	\$ 5,787	\$ -	\$ 868	\$ 1,476	\$ 3,443
274	Concession Street - Mountain Park Ave to Mountain Brow Boulevard		2024-2031	0.51	Bike Lane	\$ 71,122	\$ -	\$ 57,609	\$ 4,054	\$ 9,459
275	Confederation Beach Park - Centennial Parkway to West of Gray		2024-2031	1.98	Signed Bike Route	\$ 79,281	\$ -	\$ 64,218	\$ 4,519	\$ 10,544
276	Cormorant - Trinity to Shaver		2024-2031	2.46	Bike Lane	\$ 344,713	\$ -	\$ 279,217	\$ 19,649	\$ 45,847
277	Culotta - Perrelli to Chudleigh		2024-2031	0.14	Signed Bike Route	\$ 5,564	\$ -	\$ 4,507	\$ 317	\$ 740
278	Diconzo Dr - Aquasanta Crescent to South Turn on Diconzo Drive		2024-2031	0.36	Signed Bike Route	\$ 14,232	\$ -	\$ 11,528	\$ 811	\$ 1,893
279	Diconzo Dr - Upper Wellington to Trieste		2024-2031	0.20	Signed Bike Route	\$ 8,182	\$ -	\$ 6,628	\$ 466	\$ 1,088
280	Dundurn - Main to King		2024-2031	0.28	Bike Lane	\$ 39,076	\$ -	\$ 31,651	\$ 2,227	\$ 5,197
281	Edgemont - Montclair to Central		2024-2031	0.18	Signed Bike Route	\$ 7,202	\$ -	\$ 5,834	\$ 411	\$ 958
282	Eighth Road Link - Ridge to Boundary		2031-2041	5.51	Paved Shoulder	\$ 1,651,643	\$ -	\$ -	\$ 1,651,643	\$ -
283	Eleventh - Mud to Green Mountain Road		2024-2031	1.11	Signed Bike Route	\$ 44,403	\$ -	\$ -	\$ 13,321	\$ 31,082
284	Emerson - Whitney to Main		2024-2031	0.65	Bike Lane	\$ 91,299	\$ -	\$ 73,952	\$ 5,204	\$ 12,143
285	Empress - Upper James to East Sixth Street		2024-2031	0.71	Signed Bike Route	\$ 28,561	\$ -	\$ 23,135	\$ 1,628	\$ 3,799
286	Eugene - Pottruff to Nugent		2024-2031	0.18	Signed Bike Route	\$ 7,020	\$ -	\$ 5,687	\$ 400	\$ 934
287	Fallsview - Harvest Road to Sydenham		2024-2031	2.47	Signed Bike Route	\$ 98,780	\$ -	\$ -	\$ 29,634	\$ 69,146
288	Ferguson - Dock Service Road to Burlington		2024-2031	0.28	Signed Bike Route	\$ 11,143	\$ -	\$ 9,026	\$ 635	\$ 1,482
289	Ferguson - Young to North of Young		2024-2031	0.05	Bike Lane	\$ 7,238	\$ -	\$ 5,863	\$ 413	\$ 963
290	Field - Jerseyville Rd W to Governor's Rd		2031-2041	3.88	Paved Shoulder	\$ 1,162,739	\$ -	\$ -	\$ 1,162,739	\$ -
291	Fifty - Ridge to Cokers		2024-2031	1.51	Paved Shoulder	\$ 452,414	\$ -	\$ 67,862	\$ 115,366	\$ 269,186
292	Fifty - Coke to North Service Road		2024-2031	2.24	Bike Lane	\$ 313,978	\$ 110,740	\$ 164,623	\$ 11,585	\$ 27,031
293	Filman - Wilson St E to End		2024-2031	0.40	Signed Bike Route	\$ 15,969	\$ -	\$ -	\$ 4,791	\$ 11,178
294	First Road East - Highland Road to Ridge Road		2031-2041	3.83	Paved Shoulder	\$ 1,148,959	\$ -	\$ -	\$ 1,148,959	\$ -
295	First Road West - North End to Highbury Drive		2024-2031	0.10	Bike Lane	\$ 14,156	\$ -	\$ 11,466	\$ 807	\$ 1,883
296	Flamborough Puslinch Tlin - Maddaugh Road to Centre		2031-2041	1.81	Paved Shoulder	\$ 542,586	\$ -	\$ -	\$ 542,586	\$ -
297	Fleming - North End to York		2024-2031	0.26	Signed Bike Route	\$ 10,268	\$ -	\$ -	\$ 3,081	\$ 7,188
298	Fletcher - Rymal to Pinehill		2024-2031	0.32	Paved Shoulder	\$ 96,800	\$ -	\$ 78,408	\$ 5,518	\$ 12,874
299	Foreman - Boundary to Regional Road 97		2024-2031	3.08	Signed Bike Route	\$ 123,285	\$ -	\$ -	\$ 36,986	\$ 86,300

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300	Franklin - Parkview to Longwood		2024-2031	0.20	Signed Bike Route	\$ 7,980	\$ -	\$ 6,464	\$ 455	\$ 1,061
301	Frederick - Barton to Roxborough		2024-2031	0.62	Signed Bike Route	\$ 24,851	\$ -	\$ 20,130	\$ 1,417	\$ 3,305
302	Freelton - Concession 11 E to South of Highway 6		2024-2031	0.38	Bike Lane	\$ 53,503	\$ -	\$ -	\$ 16,051	\$ 37,452
303	Fruitland - Highway 8 to North Service Road		2024-2031	2.42	Bike Lane	\$ 339,460	\$ 196,897	\$ 115,476	\$ 8,126	\$ 18,961
304	Galbraith - Lake Avenue to Galbraith Three-way Intersection		2024-2031	0.52	Signed Bike Route	\$ 20,811	\$ -	\$ 16,857	\$ 1,186	\$ 2,768
305	Garth - Denlow to Fennell		2024-2031	0.14	Paved Multi-Use Recreational Trail	\$ 106,711	\$ -	\$ 86,436	\$ 6,083	\$ 14,193
306	Garth St Extension - 20 Rd W to Dickenson Rd W		2024-2031	1.38	Bike Lane	\$ 192,797	\$ 32,547	\$ 129,802	\$ 9,134	\$ 21,313
307	Glancaster - Carluke to Airport		2024-2031	1.45	Bike Lane	\$ 202,858	\$ -	\$ 30,429	\$ 51,729	\$ 120,701
308	Glenfern - Kent to Kent		2024-2031	0.04	Signed Bike Route	\$ 1,402	\$ -	\$ 1,136	\$ 80	\$ 187
309	Glover - Watercrest to End		2024-2031	0.11	Bike Lane	\$ 14,756	\$ -	\$ 11,952	\$ 841	\$ 1,963
310	Glow - Parkdale to East of Tate		2024-2031	0.63	Signed Bike Route	\$ 25,311	\$ -	\$ 20,502	\$ 1,443	\$ 3,366
311	Golf Club - Woodburn to Westbrook		2024-2031	2.07	Signed Bike Route	\$ 82,657	\$ -	\$ -	\$ 24,797	\$ 57,860
312	Golf Links - Stone Church to Kitty Murray		2024-2031	1.30	Bike Lane	\$ 182,341	\$ -	\$ 147,696	\$ 10,393	\$ 24,251
313	Gordon Drummond - Marston to Nordale		2024-2031	0.04	Signed Bike Route	\$ 1,739	\$ -	\$ 1,408	\$ 99	\$ 231
314	Graham Ave North - Central to Roxborough		2024-2031	0.78	Signed Bike Route	\$ 31,165	\$ -	\$ 25,243	\$ 1,776	\$ 4,145
315	Guise - Leander to Catharine		2024-2031	0.54	Bike Lane	\$ 76,112	\$ -	\$ 61,651	\$ 4,338	\$ 10,123
316	Gunby - Sadielou to Painter		2024-2031	0.50	Bike Lane	\$ 69,518	\$ -	\$ 56,310	\$ 3,963	\$ 9,246
317	Harrison - Kirk to Binbrook Conservation Area Road		2024-2031	1.30	Paved Multi-Use Recreational Trail	\$ 975,138	\$ -	\$ 146,271	\$ 248,660	\$ 580,207
318	Harvest - Sydenham to Brock		2024-2031	3.40	Paved Shoulder	\$ 1,020,108	\$ -	\$ 153,016	\$ 260,128	\$ 606,964
319	Highland Rd E - Upper Red Hill Valley Pkwy to Winterberry		2024-2031	0.94	Bike Lane	\$ 131,512	\$ -	\$ 106,525	\$ 7,496	\$ 17,491
320	Highland Rd E - Upper Centennial Pkwy to E Town Line		2031-2041	10.17	Paved Shoulder	\$ 3,051,099	\$ -	\$ -	\$ 3,051,099	\$ -
321	Highway 5 West - Dundas St E to Sydenham		2024-2031	3.02	Paved Shoulder	\$ 905,690	\$ -	\$ -	\$ 271,707	\$ 633,983
322	Highway 8 (Flam) - Boundary to Brock		2031-2041	22.30	Paved Shoulder	\$ 6,691,317	\$ -	\$ -	\$ 6,691,317	\$ -
323	Highway 8 (Sc) - Fifty to Boundary		2031-2041	0.81	Bike Lane	\$ 113,390	\$ -	\$ -	\$ 113,390	\$ -
324	Holton - King to Delaware		2024-2031	0.57	Signed Bike Route	\$ 22,826	\$ -	\$ 18,489	\$ 1,301	\$ 3,036
325	Holton - King to Wilson		2024-2031	0.18	Bike Lane	\$ 25,738	\$ -	\$ 20,848	\$ 1,467	\$ 3,423
326	Homestead Dr Path - Upper James to 1200m East of Upper James		2024-2031	1.24	Bike Lane	\$ 173,375	\$ -	\$ 140,433	\$ 9,882	\$ 23,059
327	Hughson - Cannon to Hunter		2024-2031	0.81	Bike Lane	\$ 113,938	\$ -	\$ 92,290	\$ 6,494	\$ 15,154
328	Hunt - Christ the King Elementary School Road to Breadalbane		2024-2031	0.57	Signed Bike Route	\$ 22,819	\$ -	\$ 18,483	\$ 1,301	\$ 3,035
329	Hunter - Locke to Queen		2024-2031	0.41	Signed Bike Route	\$ 16,421	\$ -	\$ 13,301	\$ 936	\$ 2,184
330	Inverness - Tanner to East 8th		2024-2031	0.77	Bike Lane	\$ 107,800	\$ -	\$ 87,318	\$ 6,145	\$ 14,337
331	Jackson St W - End to Locke St S		2024-2031	0.38	Signed Bike Route	\$ 15,222	\$ -	\$ 12,330	\$ 868	\$ 2,025
332	Jerseyville Rd W - Boundary to East of Paddy Greens		2031-2041	18.45	Paved Shoulder	\$ 5,533,950	\$ -	\$ -	\$ 5,533,950	\$ -
333	Jerseyville Rd W - West of Shaver to Wilson		2024-2031	3.49	Paved Shoulder	\$ 1,046,152	\$ 637,152	\$ 331,299	\$ 23,313	\$ 54,397
334	John - Guise to Burlington		2024-2031	0.29	Bike Lane	\$ 41,233	\$ -	\$ 33,399	\$ 2,350	\$ 5,484
335	Kay Drage Park Link - Hunt to End		2024-2031	0.55	Signed Bike Route	\$ 21,874	\$ -	\$ 17,718	\$ 1,247	\$ 2,909
336	Kay Drage Park Link - Macklin to End		2024-2031	0.14	Signed Bike Route	\$ 5,707	\$ -	\$ 4,623	\$ 325	\$ 759
337	King William - James St N to Catharine St N		2024-2031	0.34	Signed Bike Route	\$ 13,479	\$ -	\$ 10,918	\$ 768	\$ 1,793
338	Kirk - Harrison to Highway 56		2024-2031	0.98	Paved Multi-Use Recreational Trail	\$ 731,458	\$ -	\$ 109,719	\$ 186,522	\$ 435,217
339	Kirkwall - Regional Road 97 to South of Concession 8 W		2024-2031	2.51	Signed Bike Route	\$ 100,255	\$ -	\$ -	\$ 30,077	\$ 70,179
340	Kirkwall - South of Concession 8 W to Woodhill Rc		2024-2031	5.78	Paved Shoulder	\$ 1,735,196	\$ -	\$ -	\$ 520,559	\$ 1,214,637
341	Lafarge 2000 (Middletown Rd) - Concession 6 W to Highway 8		2024-2031	7.91	Signed Bike Route	\$ 316,597	\$ -	\$ 47,489	\$ 80,732	\$ 188,375
342	Lafarge 2000 (Middletown Rd/Binkley Rd) - Highway 8 to Mineral Springs Rd		2024-2031	3.57	Paved Shoulder	\$ 1,071,041	\$ -	\$ -	\$ 321,312	\$ 749,728
343	Lamoreaux - Dundurn t N to Strathcona Ave N		2024-2031	0.23	Signed Bike Route	\$ 9,074	\$ -	\$ 7,350	\$ 517	\$ 1,207
344	Leland - Main to North of Ward		2024-2031	0.29	Signed Bike Route	\$ 11,798	\$ -	\$ 9,557	\$ 673	\$ 1,569
345	Lido - Riviera to Winona		2024-2031	0.39	Signed Bike Route	\$ 15,590	\$ -	\$ 12,628	\$ 889	\$ 2,073
346	Livingstone - Sydenham to Queen		2024-2031	0.11	Bike Lane	\$ 15,772	\$ -	\$ 12,775	\$ 899	\$ 2,098
347	Locke - York Blvd to Barton		2024-2031	0.26	Bike Lane	\$ 35,765	\$ -	\$ 28,970	\$ 2,039	\$ 4,757
348	Longwood - Main St W to Frid St		2024-2031	0.40	Bike Lane	\$ 55,713	\$ -	\$ 45,128	\$ 3,176	\$ 7,410
349	Macklin St S - King St W to Main St W		2024-2031	0.24	Signed Bike Route	\$ 9,513	\$ -	\$ 7,706	\$ 542	\$ 1,265
350	Maddaugh Road - Gore to Highway 6		2024-2031	0.95	Signed Bike Route	\$ 37,834	\$ -	\$ -	\$ 11,350	\$ 26,484
351	Maddaugh Road - Highway 6 to Flamborough Puslinch Tlin		2031-2041	1.11	Paved Shoulder	\$ 334,364	\$ -	\$ -	\$ 334,364	\$ -
352	Maggie Johnson - Tanglewood to Highway 56		2024-2031	0.23	Bike Lane	\$ 32,107	\$ -	\$ 26,007	\$ 1,830	\$ 4,270
353	Main St W - Frid to Dundurn St S		2024-2031	0.27	Bike Lane	\$ 37,206	\$ -	\$ 30,137	\$ 2,121	\$ 4,948
354	Malton - Christine to Upper James		2024-2031	0.34	Signed Bike Route	\$ 13,738	\$ -	\$ 11,128	\$ 783	\$ 1,827
355	Maple/Mountain Ave Extension - Lake Ave S to Mountain Ave S		2024-2031	0.13	Signed Bike Route	\$ 5,272	\$ -	\$ 4,270	\$ 301	\$ 701
356	Marion - Dromore to King St W		2024-2031	0.34	Signed Bike Route	\$ 13,553	\$ -	\$ 10,978	\$ 773	\$ 1,803
357	Market - Hatt to MacNab		2024-2031	0.09	Bike Lane	\$ 13,000	\$ -	\$ 10,530	\$ 741	\$ 1,729
358	Market - MacNab to Creighton		2024-2031	0.09	Signed Bike Route	\$ 3,608	\$ -	\$ 2,922	\$ 206	\$ 480
359	Mayfair - Creighton to Tally Ho		2024-2031	0.31	Signed Bike Route	\$ 12,397	\$ -	\$ 10,041	\$ 707	\$ 1,649
360	McNeilly/8th Road E - Highway 8 to Ridge Road		2024-2031	1.55	Signed Bike Route	\$ 62,051	\$ -	\$ -	\$ 18,615	\$ 43,436

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361	Middleton Rd - North of Regional Road 97 to Regional Road 97		2024-2031	0.44	Signed Bike Route	\$ 17,734	\$ -	\$ 2,660	\$ 4,522	\$ 10,551
362	Middleton Rd - North of Concession 8 W to Safar		2024-2031	2.32	Signed Bike Route	\$ 92,626	\$ -	\$ 13,894	\$ 23,620	\$ 55,112
363	Miles - Rymal Rd E to Boundary		2031-2041	10.88	Paved Shoulder	\$ 3,265,308	\$ -	\$ -	\$ 3,265,308	\$ -
364	Millgrove Sr - Highway 6 N to Highway 5 W		2024-2031	0.71	Paved Shoulder	\$ 214,008	\$ -	\$ 32,101	\$ 54,572	\$ 127,335
365	Mineral Springs - Binkley to Sulphur Springs		2031-2041	1.27	Paved Shoulder	\$ 381,791	\$ -	\$ -	\$ 381,791	\$ -
366	Mount Albion - Lawrence to South of Glen Castle		2024-2031	1.39	Bike Lane	\$ 194,283	\$ -	\$ 157,369	\$ 11,074	\$ 25,840
367	Mountain Brow - Concession Street to Rendell		2024-2031	0.27	Bike Lane	\$ 37,692	\$ -	\$ 30,530	\$ 2,148	\$ 5,013
368	Mud - Eleventh Road E to Boundary		2031-2041	0.89	Paved Shoulder	\$ 266,629	\$ -	\$ -	\$ 266,629	\$ -
369	Napier - Queen St N to Bay St N		2024-2031	0.55	Signed Bike Route	\$ 22,063	\$ -	\$ 17,871	\$ 1,258	\$ 2,934
370	Nisbet - Centre Road to Wimberly		2024-2031	0.97	Bike Lane	\$ 136,363	\$ -	\$ 110,454	\$ 7,773	\$ 18,136
371	Nordale - Gordon Drummond to End		2024-2031	0.39	Signed Bike Route	\$ 15,414	\$ -	\$ 12,485	\$ 879	\$ 2,050
372	Nugent - Kentley to Eugene		2024-2031	0.13	Signed Bike Route	\$ 5,181	\$ -	\$ 4,197	\$ 295	\$ 689
373	Old Mud - Upper Mount Albion to Cedarville		2024-2031	0.28	Bike Lane	\$ 39,480	\$ -	\$ 31,979	\$ 2,250	\$ 5,251
374	Ottawa - Main to Montclair		2024-2031	0.49	Bike Lane	\$ 67,977	\$ -	\$ 55,061	\$ 3,875	\$ 9,041
375	Parkdale Ave - Nikola Tesla Blvd to Glow		2024-2031	0.18	Paved Multi-Use Recreational Trail	\$ 138,334	\$ -	\$ 112,051	\$ 7,885	\$ 18,398
376	Pearl - Hunter to Tuckett		2024-2031	0.23	Signed Bike Route	\$ 9,364	\$ -	\$ 7,584	\$ 534	\$ 1,245
377	Peel St S - King St W to Hatt		2024-2031	0.14	Signed Bike Route	\$ 5,774	\$ -	\$ 4,677	\$ 329	\$ 768
378	Perrelli - Culotta to Dundas St E		2024-2031	0.11	Signed Bike Route	\$ 4,267	\$ -	\$ 3,456	\$ 243	\$ 568
379	Picton - Bay St n to Hughson St N		2024-2031	0.39	Signed Bike Route	\$ 15,603	\$ -	\$ 12,639	\$ 889	\$ 2,075
380	Picton - John St N to Ferguson Ave N		2024-2031	0.42	Signed Bike Route	\$ 16,794	\$ -	\$ 13,603	\$ 957	\$ 2,234
381	Queen - Alma to Livingstone		2024-2031	0.16	Bike Lane	\$ 21,913	\$ -	\$ 17,749	\$ 1,249	\$ 2,914
382	Queen St S - Hunter to Canada		2024-2031	0.08	Signed Bike Route	\$ 3,096	\$ -	\$ 2,508	\$ 176	\$ 412
383	Redmond - Rushdale to Stone Church Rd E		2024-2031	0.20	Signed Bike Route	\$ 8,030	\$ -	\$ 6,505	\$ 458	\$ 1,068
384	Regional Road 20 (Highway 20) - Tapleystown to Woodburr		2024-2031	0.28	Signed Bike Route	\$ 11,371	\$ -	\$ 1,706	\$ 2,900	\$ 6,766
385	Regional Road 97 - Kirkwall to Foreman		2024-2031	0.16	Paved Shoulder	\$ 47,125	\$ -	\$ -	\$ 14,137	\$ 32,987
386	Ridge - Dewitt to Boundary		2024-2031	7.05	Paved Shoulder	\$ 2,116,173	\$ -	\$ 317,426	\$ 539,624	\$ 1,259,123
387	Riley - West of Chudleigh to Braeheid		2024-2031	0.21	Signed Bike Route	\$ 8,245	\$ -	\$ 6,678	\$ 470	\$ 1,097
388	Riviera Ridge - Bellavista to Lido		2024-2031	0.12	Undefined	\$ 58,441	\$ -	\$ 47,337	\$ 3,331	\$ 7,773
389	Rock Chapel - Highway 5 W to Service Road East of Sydenham		2024-2031	1.91	Signed Bike Route	\$ 76,420	\$ -	\$ 11,463	\$ 19,487	\$ 45,470
390	Roxborough - Frederick to Graham Ave N		2024-2031	0.05	Signed Bike Route	\$ 2,031	\$ -	\$ 1,645	\$ 116	\$ 270
391	Rushdale - Southpark to Redmond		2024-2031	0.08	Signed Bike Route	\$ 3,149	\$ -	\$ 2,551	\$ 180	\$ 419
392	Rymal - Upper Paradise to Spadara		2024-2031	0.44	Bike Lane	\$ 61,767	\$ -	\$ 50,031	\$ 3,521	\$ 8,215
393	Rymal - Hazelton to West Fifth St		2024-2031	0.77	Bike Lane	\$ 108,451	\$ -	\$ 87,845	\$ 6,182	\$ 14,424
394	Sadielou - Hollybush to End		2024-2031	0.42	Bike Lane	\$ 59,415	\$ -	\$ 48,126	\$ 3,387	\$ 7,902
395	Santorium - Scenic to Redfern		2024-2031	0.11	Bike Lane	\$ 15,366	\$ -	\$ 12,446	\$ 876	\$ 2,044
396	Scenic - Scenic Dr to Garth St		2024-2031	0.23	Bike Lane	\$ 32,617	\$ -	\$ 26,420	\$ 1,859	\$ 4,338
397	Second St N - King St W to North of Brandow		2024-2031	0.14	Signed Bike Route	\$ 5,695	\$ -	\$ 4,613	\$ 325	\$ 757
398	Shaver - Wilson to Jerseyville Rd W		2024-2031	1.47	Bike Lane	\$ 205,195	\$ -	\$ 166,208	\$ 11,696	\$ 27,291
399	Shaver - Garner to Carluke		2031-2041	6.11	Paved Shoulder	\$ 1,832,582	\$ -	\$ -	\$ 1,832,582	\$ -
400	Sheppard - Sovereign to Fleming		2024-2031	0.10	Signed Bike Route	\$ 4,020	\$ -	\$ -	\$ 1,206	\$ 2,814
401	Sherman - Delaware to CP Rail Line		2024-2031	0.33	Signed Bike Route	\$ 13,221	\$ -	\$ 10,709	\$ 754	\$ 1,758
402	Skinner - Dundas St E to East of McKnight Ave E		2024-2031	1.39	Bike Lane	\$ 195,086	\$ -	\$ 158,019	\$ 11,120	\$ 25,946
403	South Bend - W Second St to Terrace		2024-2031	0.42	Signed Bike Route	\$ 16,631	\$ -	\$ 13,471	\$ 948	\$ 2,212
404	South St W - Oglivie to Osler		2024-2031	0.70	Signed Bike Route	\$ 28,124	\$ -	\$ 22,780	\$ 1,603	\$ 3,740
405	Southcote - Garner to Airport		2031-2041	2.80	Bike Lane	\$ 392,445	\$ -	\$ -	\$ 392,445	\$ -
406	Southpark - Rushdale Park Trail to Rushdale Dr		2024-2031	0.25	Signed Bike Route	\$ 10,003	\$ -	\$ 8,103	\$ 570	\$ 1,330
407	St Joseph's - John St S to End		2024-2031	0.29	Signed Bike Route	\$ 11,537	\$ -	\$ 9,345	\$ 658	\$ 1,534
408	Sulphur Springs - Lover's to Mineral Springs Rd		2031-2041	1.47	Paved Shoulder	\$ 439,812	\$ -	\$ -	\$ 439,812	\$ -
409	Sulphur Springs - Lover's to Wilson St E		2024-2031	1.05	Signed Bike Route	\$ 42,059	\$ -	\$ 34,068	\$ 2,397	\$ 5,594
410	Sunnyridge - Wilson St W to Jerseyville Rd W		2024-2031	2.83	Paved Shoulder	\$ 850,184	\$ -	\$ -	\$ 255,055	\$ 595,129
411	Sydenham/Queen/Livingstone/Alma - Hatt to Romar Dr		2024-2031	1.86	Bike Lane	\$ 261,019	\$ -	\$ 39,153	\$ 66,560	\$ 155,306
412	Talbot - Melvin to Barton St E		2024-2031	0.19	Signed Bike Route	\$ 7,639	\$ -	\$ 6,187	\$ 435	\$ 1,016
413	Tally Ho - Mayfair to Overfield		2024-2031	0.22	Signed Bike Route	\$ 8,624	\$ -	\$ 6,985	\$ 492	\$ 1,147
414	Tanner - Iverness to End		2024-2031	0.05	Signed Bike Route	\$ 1,926	\$ -	\$ 1,560	\$ 110	\$ 256
415	Tapleystown Rd - Highway 20 E to Highland Rd E		2024-2031	0.83	Signed Bike Route	\$ 33,328	\$ -	\$ 4,999	\$ 8,499	\$ 19,830
416	Tradewind - Wilson St W to Cormorant		2024-2031	0.70	Bike Lane	\$ 98,586	\$ -	\$ 79,855	\$ 5,619	\$ 13,112
417	Twenty Rd - Southcote to West of Nebo		2024-2031	9.36	Bike Lane	\$ 1,310,636	\$ 1,174,735	\$ 110,080	\$ 7,746	\$ 18,075
418	Upper Ottawa - Killbride to Mountain Brow Boulevarc		2024-2031	5.22	Bike Lane	\$ 731,426	\$ -	\$ 592,455	\$ 41,691	\$ 97,280
419	Upper Sherman - Macassa to Limeridge Rd E		2024-2031	1.65	Bike Lane	\$ 231,607	\$ -	\$ 187,601	\$ 13,202	\$ 30,804
420	Upper Wellington - S Bend Rd E to Stone Church Rd E		2024-2031	2.40	Bike Lane	\$ 336,154	\$ 145,193	\$ 154,679	\$ 10,885	\$ 25,398
421	W 18th St - Bendamere to End		2024-2031	0.17	Signed Bike Route	\$ 6,741	\$ -	\$ 5,460	\$ 384	\$ 897
422	W 5th St - Brantdale to Governors Blvd		2024-2031	0.62	Multi-Use Trail	\$ 465,956	\$ -	\$ 377,424	\$ 26,559	\$ 61,972
423	W 5th St - Governors Blvd to Marlowe		2024-2031	1.13	Bike Lane	\$ 158,200	\$ -	\$ 128,142	\$ 9,017	\$ 21,041
424	Westbrook - End to Golf Club Rd		2024-2031	0.86	Signed Bike Route	\$ 34,368	\$ -	\$ -	\$ 10,310	\$ 24,057



Prj. No.	Increased Service Needs Attributable to Anticipated Development	2031 Oversizing (To 2031 Road Projects within the Urban Boundary)*	Timing (year)	Length (km)	Capital Improvement	Gross Capital Cost Estimate (2023\$)	Other Deductions	Benefit to Existing Development	Post Period Benefit	Net Capital Cost
425	Wilson in Ancaster - Fiddler's Green to Boundary		2024-2031	10.77	Cycle Track	\$ 5,385,075	\$ -	\$ -	\$ 1,615,523	\$ 3,769,553
426	Wimberly - Parkside to Nisbet		2024-2031	0.33	Bike Lane	\$ 45,976	\$ -	\$ 37,240	\$ 2,621	\$ 6,115
427	Windwood Dr - Bradley to Southbrook Dr		2024-2031	0.70	Bike Lane	\$ 97,549	\$ -	\$ 79,015	\$ 5,560	\$ 12,974
428	Woodbine Crescent - Jones to Dundurn St N		2024-2031	0.22	Signed Bike Route	\$ 8,891	\$ -	\$ 7,202	\$ 507	\$ 1,182
429	Woodburn - Binbrook Rd E to Highway 20 E		2024-2031	7.56	Signed Bike Route	\$ 302,206	\$ -	\$ 45,331	\$ 77,063	\$ 179,813
430	Woodhill Rd - Governor's to 800m south of Highway 8		2024-2031	7.05	Signed Bike Route	\$ 282,125	\$ -	\$ -	\$ 84,638	\$ 197,488
431	Woodhill Rd - Highway 8 to 800m south of Highway 8		2024-2031	1.04	Paved Shoulder	\$ 313,044	\$ -	\$ -	\$ 93,913	\$ 219,131
432	Woodward Ave - Beach Blvd to 100m south of Beach Blvc		2024-2031	0.10	Bike Lane	\$ 14,099	\$ -	\$ 11,420	\$ 804	\$ 1,875
433	York - Olympic to Baldwin		2024-2031	2.33	Bike Lane	\$ 326,172	\$ -	\$ 264,199	\$ 18,592	\$ 43,381
434	Highway 6 - Concession 10 W to Freelon		2024-2031	0.39	Paved Multi-Use Recreational Trail	\$ 293,059	\$ -	\$ -	\$ 87,918	\$ 205,141
435	Highway 6 N - Carlisle to Edgewood Road		2024-2031	0.55	Paved Multi-Use Recreational Trail	\$ 414,118	\$ -	\$ -	\$ 124,235	\$ 289,883
436	Carlisle Road - Highway 6 to Milborough Townline		2024-2031	5.85	Paved Shoulder	\$ 1,756,268	\$ -	\$ 263,440	\$ 447,848	\$ 1,044,980
437	Concession 5 West - Highway 6N to Moffatt Road		2024-2031	3.01	Paved Shoulder	\$ 904,289	\$ -	\$ 135,643	\$ 230,594	\$ 538,052
438	Mosaic Dr - Parkside Dr to Highway 6		2024-2031	1.90	Multi-Use Trail	\$ 1,425,000	\$ -	\$ 1,154,250	\$ 81,225	\$ 189,525
<b>Total</b>						<b>\$ 1,673,229,870</b>	<b>\$ 70,483,468</b>	<b>\$ 237,774,589</b>	<b>\$ 732,079,316</b>	<b>\$ 632,892,496</b>

\*Road project oversizing and applicable local share/direct developer deductions were applied based on City of Hamilton direction.

Internal Project Number (Internal use only)	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Length (km)	Capital Improvement	Gross Capital Cost Estimate (2023\$)	Other Deductions	Benefit to Existing Development	Post Period Benefit	Net Capital Cost
<b>Post-2041 Road Projects</b>									
<b>AEGD</b>									
10	Book Road - Highway 6 to Fiddlers Green Road	Post 2041	0.99	2r-5u	\$ 10,769,800	\$ -	\$ -	\$ 10,769,800	\$ -
16	Collector 5W - Collector 7N to Collector 2N	Post 2041	0.74	3u	\$ 7,294,646	\$ -	\$ -	\$ 7,294,646	\$ -
17	Collector 2W - Garner Road to Dickenson Road Extension	Post 2041	2.16	4u	\$ 23,562,706	\$ -	\$ -	\$ 23,562,706	\$ -
23	Collector 5N - Collector 8W to Fiddler's Green	Post 2041	0.83	2r	\$ 5,474,417	\$ -	\$ -	\$ 5,474,417	\$ -
62	Twenty Road West Extension - Glancaster Road to Collector 2W	Post 2041	1.06	2u	\$ 8,286,718	\$ -	\$ -	\$ 8,286,718	\$ -
111	Collector Road 6E - Collector 6N to Twenty Road West	Post 2041	0.70	3u	\$ 6,885,062	\$ -	\$ -	\$ 6,885,062	\$ -
127	Fiddler's Green Road - Garner Road to Book Road	Post 2041	1.97	2r-5u	\$ 20,827,238	\$ -	\$ -	\$ 20,827,238	\$ -
147	Airport Service Road - Glancaster Road to Airport Road	Post 2041	1.78	3u	\$ 17,237,062	\$ -	\$ -	\$ 17,237,062	\$ -
159	Collector 10N - Smith Road to Collector 1W	Post 2041	1.47	3u	\$ 14,498,799	\$ -	\$ -	\$ 14,498,799	\$ -
<b>Elfrida</b>									
115	Upper Centennial Parkway - Mud Street to Highway 20	Post 2041	2.00	4r-5u	\$ 22,580,042	\$ -	\$ -	\$ 22,580,042	\$ -
125	Upper Centennial Parkway - Mud Street to Green Mountain Road	Post 2041	1.00	4r-4u	\$ 10,579,044	\$ -	\$ -	\$ 10,579,044	\$ -
<b>Stoney Creek</b>									
2	Arvin Avenue - Jones Road to 366m west of Glover Road	Post 2041	0.55	2i	\$ 4,960,650	\$ -	\$ -	\$ 4,960,650	\$ -
<b>Waterdown</b>									
48	North Waterdown Drive - Clappison Avenue Extension to Highway 6 North	Post 2041	0.82	3u	\$ 8,008,407	\$ -	\$ -	\$ 8,008,407	\$ -
<b>White Church Area</b>									
118	Mud Street - Red Hill Valley Parkway to Upper Centennial Parkway	Post 2041	3.62	4r-6r	\$ 67,449,762	\$ -	\$ -	\$ 67,449,762	\$ -
174	Airport Access Route - Upper Red Hill Valley Parkway to Highway 6 South	Post 2041	10.92	2r	\$ 71,603,945	\$ 71,603,945	\$ -	\$ -	\$ -
<b>Former Urban Boundary Expansion Area Road Projects</b>									
<b>AEGD</b>									
112	Collector Road 1E - Collector 6N to Twenty Road West	Post 2041	0.73	3u	\$ 7,175,665	\$ 7,175,665	\$ -	\$ -	\$ -
<b>Elfrida</b>									
84	Regional Road 56 - Dalgliesh Trail to Golf Club Road	Post 2041	1.44	2r-5u	\$ 15,741,403	\$ 15,741,403	\$ -	\$ -	\$ -
113	First Road East - Highway 20 to Mud Street	Post 2041	1.97	2r-3u	\$ 15,089,596	\$ 15,089,596	\$ -	\$ -	\$ -
114	First Road East - Highway 20 to Golf Club Road	Post 2041	2.08	3u	\$ 20,239,244	\$ 20,239,244	\$ -	\$ -	\$ -
116	Arterial N-S - Bellagio Avenue to Golf Club Road	Post 2041	1.88	4u	\$ 20,100,545	\$ 20,100,545	\$ -	\$ -	\$ -
117	Dickenson Extension - Trinity Church to Golf Club Road	Post 2041	0.65	2u	\$ 5,177,733	\$ 5,177,733	\$ -	\$ -	\$ -
119	Twenty Road - Upper Red Hill Valley Parkway to Hendershot Road	Post 2041	5.60	4u	\$ 59,897,756	\$ 59,897,756	\$ -	\$ -	\$ -
120	Highway 20 - 500m east of Upper Centennial to Hendershot Road	Post 2041	1.17	2r-4u	\$ 11,653,263	\$ 11,653,263	\$ -	\$ -	\$ -
290	Fletcher Road - 500m south of Rymal Road to Golf Club Road	Post 2041	1.60	2r-3u	\$ 12,245,236	\$ 12,245,236	\$ -	\$ -	\$ -
291	Golf Club Road - Trinity Church Road to Hendershot Road	Post 2041	5.33	2r-3u	\$ 40,967,481	\$ 40,967,481	\$ -	\$ -	\$ -
292	Hendershot Road - Highway 20 to Golf Club Road	Post 2041	2.09	2r-3u	\$ 16,011,393	\$ 16,011,393	\$ -	\$ -	\$ -
293	Highland Road - Upper Centennial Parkway to Second Road East	Post 2041	1.67	2r-3u	\$ 12,799,081	\$ 12,799,081	\$ -	\$ -	\$ -
294	Mud Street - Upper Centennial Parkway to Second Road East	Post 2041	1.67	2r-2u	\$ 13,833,585	\$ 13,833,585	\$ -	\$ -	\$ -
295	Second Road East - Highway 20 to Mud Street	Post 2041	1.94	2r-3u	\$ 14,841,511	\$ 14,841,511	\$ -	\$ -	\$ -
296	Trinity Church Road - Hydro Corridor (470m south of Rymal Road) to Golf Club Road	Post 2041	1.60	2r-3u	\$ 12,642,066	\$ 12,642,066	\$ -	\$ -	\$ -
<b>Twenty Road East</b>									
104	Upper Wentworth Street - End to Twenty Road	Post 2041	0.74	4u	\$ 7,937,327	\$ 7,937,327	\$ -	\$ -	\$ -
105	Upper Sherman Avenue - End to Twenty Road	Post 2041	0.75	4u	\$ 8,078,090	\$ 8,078,090	\$ -	\$ -	\$ -
106	Upper Gage Avenue - End to Twenty Road	Post 2041	0.73	4u	\$ 7,832,103	\$ 7,832,103	\$ -	\$ -	\$ -
108	Miles Road - Rymal Road to Dickenson Road	Post 2041	2.66	2r-4u	\$ 25,003,996	\$ 25,003,996	\$ -	\$ -	\$ -
109	East-West Collector - Upper Wentworth Street to Upper Ottawa Street	Post 2041	2.52	3u	\$ 24,456,044	\$ 24,456,044	\$ -	\$ -	\$ -
110	Twenty Road East - Upper James Street to Dartnall Road	Post 2041	5.76	2r-4u	\$ 54,652,726	\$ 54,652,726	\$ -	\$ -	\$ -
284	Dickenson Road East - Upper James Street to 350 meters west of Nebo Road	Post 2041	4.24	2r-2u	\$ 37,820,121	\$ -	\$ -	\$ 37,820,121	\$ -
<b>White Church Area</b>									
122	White Church Road - Upper James Street to Miles Road	Post 2041	2.88	2r-4u	\$ 27,000,420	\$ 27,000,420	\$ -	\$ -	\$ -
123	Airport Road - Upper James Street to Miles Road	Post 2041	2.75	2r-4u	\$ 25,766,424	\$ 25,766,424	\$ -	\$ -	\$ -
124	Ferris Road Extension - White Church Road to Airport Road	Post 2041	1.34	2u	\$ 10,252,044	\$ 10,252,044	\$ -	\$ -	\$ -
126	Miles Road - Dickenson Road to White Church Road	Post 2041	4.13	2r-4u	\$ 38,893,556	\$ 38,893,556	\$ -	\$ -	\$ -
121	Highway 20 - Hendershot Road to Hamilton boundary	Post 2041	4.57	2r-4u	\$ 45,465,162	\$ -	\$ -	\$ 45,465,162	\$ -
301	Fletcher Road - McWatters Street to Golf Club Road	Post 2041	3.60	2r-2u	\$ 30,086,056	\$ -	\$ -	\$ 30,086,056	\$ -
<b>Total</b>					<b>\$ 921,677,923</b>	<b>\$ 579,892,231</b>	<b>\$ -</b>	<b>\$ 341,785,692</b>	<b>\$ -</b>

Prj. No	Increased Service Needs Attributable to Anticipated Development 2019-2031	Timing (year)	Gross Capital Cost Estimate (2023\$)	Benefit to Existing Development	Post Period Benefit	Grants, Subsidies and Other Contributions Attributable to New Development	Net Capital Cost
1	New Peak Hour 30' Bus (2)	2033-2035	\$ 1,329,504	\$ -	\$ 1,329,504	\$ -	\$ -
2	New Peak Hour 40' Bus (48)	2023-2032	\$ 45,852,096	\$ 38,928,430	\$ 1,031,672	\$ -	\$ 5,891,994
3	New Peak Hour 40' Bus (16)	2033-2035	\$ 15,284,032	\$ -	\$ 15,284,032	\$ -	\$ -
4	New Peak Hour 60' Bus (8)	2023-2032	\$ 9,863,616	\$ 8,374,210	\$ 221,931	\$ -	\$ 1,267,475
5	New Peak Hour 60' Bus (2)	2033-2035	\$ 2,465,904	\$ -	\$ 2,465,904	\$ -	\$ -
6	New Spare 40' Bus (12)	2023-2032	\$ 11,463,024	\$ 9,732,107	\$ 257,918	\$ -	\$ 1,472,999
7	New Spare 40' Bus (3)	2033-2035	\$ 2,865,756	\$ -	\$ 2,865,756	\$ -	\$ -
8	New 40' to 60' Upgrades (37)	2023-2032	\$ 10,274,900	\$ 8,723,390	\$ 231,185	\$ -	\$ 1,320,325
9	Facility: Service Truck	2023-2032	\$ 129,998	\$ 100,878	\$ -	\$ -	\$ 29,120
10	Facility: Stock Room Vehicle	2023-2032	\$ 65,000	\$ 50,440	\$ -	\$ -	\$ 14,560
11	Facility: Garage Equipment Repair Walk Behind Forklift	2023-2032	\$ 184,200	\$ 142,939	\$ 12,341	\$ -	\$ 28,919
12	Facility: Garage Forklift	2023-2032	\$ 106,700	\$ 82,799	\$ 7,149	\$ -	\$ 16,752
13	Facility: Garage Tow Mobile	2023-2032	\$ 62,100	\$ 48,190	\$ 4,161	\$ -	\$ 9,750
14	Facility: Garage Equipment Repair Express Van Vehicles	2023-2032	\$ 173,000	\$ 134,248	\$ -	\$ -	\$ 38,752
15	Accessible Supervisory Vehicles (Specialized Transit)	2023-2032	\$ 612,000	\$ 462,060	\$ -	\$ -	\$ 149,940
16	Transit & Maintenance Storage Facility	2023-2026	\$ 396,000,000	\$ 165,349,200	\$ 26,625,000	\$ 183,000,000	\$ 21,025,800
<b>Total</b>			<b>\$ 496,731,830</b>	<b>\$ 232,128,891</b>	<b>\$ 50,336,554</b>	<b>\$ 183,000,000</b>	<b>\$ 31,266,385</b>



# Appendix E

## Summary of Proposed Amendments to Local Service Policy



Infrastructure Planning Section  
71 Main Street West, 6th Floor  
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# Memorandum

**Hamilton**  
Planning and Economic  
Development Department

**Date:** March 5, 2024

**To:** Daryl Abbs, Managing Partner Watson & Associates Economists Ltd.

**Cc:** Ashraf Hanna, Dir. Growth Management and Chief Development Eng.  
Tony Sergi, Director Strategy Growth  
Brian Hollingworth, Director Transportation Planning and Parking

**From:** Gavin Norman, Manager Infrastructure Planning

**Subject:** 2024 DC By-Law – Proposed Changes to Local Service Policy

The Local Service Policy (LSP) largely focuses on the principle of “Growth Pays for Growth” in the approach to infrastructure and defines those infrastructure costs that are considered a Direct Developer’s responsibility (local) versus those that support growth (DC eligible). Proposed changes to the LSP are meant to provide additional clarity to DC eligible projects and reflect new standards approved by Council since adoption of the 2019 DC Background Study including the Complete Streets Guidelines (2018) and the AEGD Transportation Master Plan Update (2023).

## 1) Roads - refer to LSP Section E.5.3 Infrastructure

Currently the Local Service Policy identifies land for all local roads as a Direct Developer responsibility and that for collector roads and arterial roads land is also a local service component, net of applicable oversizing per the Financial Policies for Development (Comprehensive Development Guidelines and Financial Policies Manual, 2019). Section L.2.4 Value of Land for Road Allowances of the financial policy states:

*“Where a Proponent is required to dedicate more than thirteen (13) metres of land to establish a new road allowance width, measured from the centerline of the road allowance to one side to its ultimate width, the City shall compensate the Proponent for the value of dedicated land beyond 13 metres in width on that side of the road allowance, for the length of the conveyance.”*

Recent approval of the Complete Street Guidelines and the AEGD Transportation Master Plan Update has resulted in non-residential roads tending to have wider road allowances than residential roads, in part due to the nature of the type of traffic, but also to accommodate semi-rural cross-sections for stormwater conveyance (ditches) and complete street elements (sidewalks, multi-use paths, bike lanes). Section L.2.4 of the Financial Policies applies to both residential and non-residential roads and is premised on the basis

that land for road allowances up to the collector designation is a direct developer contribution (local service); however, because non-residential collector road allowances are larger (typically range from 26m to 36m), the impact on the DC is significant and not proportional to what the DC contributes to residential roads. As such, it is recommended that non-residential roads include a larger base width to be considered local (Developer's responsibility) and that the following language be included in Section E.5.3.1 of the Local Service Policy for clarity (new text in **underline bold**):

#### E.5.3.1.1 Local and Collector Roads (including land)

All Local Roads are the developer's financial responsibility. **For the purposes of DC eligibility, the following criteria are applied for Local Roads:**

- **Local Residential – up to 8m width of asphalt driving surface and up to 26m road allowance.**
- **Local Non-Residential – up to 11m of asphalt driving surface and up to 32m of road allowance.**

Note, the proposed change will also require a corresponding amendment to the Financial Policies for Development. Proposed Change to Financial Policy:

#### L.2.4. Value of Land for Road Allowances\*

“Where a Proponent is required to dedicate more than thirteen (13) metres of land to establish a new road allowance width **for a residential road, and more than 16m for a non-residential road,** measured from the centerline of the road allowance to one side to its ultimate width, the City shall compensate the Proponent for the value of dedicated land beyond 13 metres in width on that side of the road allowance **for a residential road, and 16m for a non-residential road, respectively,** for the length of the conveyance.” **For clarity, non-residential roads include those roads that are meant to carry mixed traffic and not solely residential traffic.**

\* It is not intended that the specifics of the change be included in the AF&A report to Council re the DC Addendum, but it would be advantageous that the recommendation in the report include direction for staff to make corresponding changes to the Financial Policies that reflect the proposed changes to E.5.3.1.1. This should eliminate the need to go back to Council to get the amended Financial Policies approved.

For additional clarity to the LSP, the following language is also recommended to be included in Section 5.3.9.1 (new text in **underline bold**):

#### E.5.3.9 Infrastructure Assets Constructed by Developers

1. All infrastructure assets constructed by developers must be designed in accordance with the City's engineering standards and policies, **including the Comprehensive Development Guidelines and Financial Policies Manual (2019), the Complete Streets Guidelines and the AEGD Eco-Industrial Guidelines.**

## 2) Water / Wastewater - Refer to LSP – Section E.2 Local Service Policy for Water and Wastewater

Changes to the Local Service Policy for water and wastewater projects are being proposed to add clarity to what is DC eligible and what is considered a local service which in turn are intended to assure alignment with the Financial Policies for Development. In doing so, no amendments to the Financial Policies are required. It is recommended that the following language be added to Category 1 and Category 2 infrastructure projects in Section E.2 as follows (new text in **underlined bold**):

**Category 1 – Projects External to Proposed Development Lands** (i.e., on existing road allowance and servicing more than one development)

The following project descriptions fall into Category 1 and will be fully or partially allocated to Development Charges:

- Upgrades to existing City infrastructure required to service more than one potential proposed development and/or development property, whether in a Greenfield area or Intensification area. This includes upgrades to infrastructure that is upstream (water) or downstream (wastewater) of multiple developments.
  - **For the purposes of allocating costs**, if an upgrade is triggered by growth (single or multiple potential planned growth is less than or equal to the approved Traffic Survey Zone growth), the upgrade will be all or partially allocated to Development Charges.
  - In the case that a development plans to have more growth than is planned for (by approved Traffic Survey Zones and system capacity) and if the infrastructure upgrade is as a result of growth over and above what is approved, that additional oversizing shall be the responsibility of the Developer **triggering the upgrade** (Direct Developer).
    - This may include watermains for transmission, distribution and looping.

New **infrastructure** projects that physically lie outside of a proposed development, but only service a single development ~~can be considered part of~~ **- refer to Category 2 (for the direct developers responsibilities) whereby the cost to extend the service is a 100% Direct Developer (net of any Development Charge contribution based on minimum size.)** For example, a new sewer on existing road right-of-way (external to development) to service a new building on land not already serviced, with no additional developments potentially draining to the new sewer.

**For Category 1 projects there will always be a local Direct Developer cost contribution based on the development's frontage in accordance with the Financial Policies for Development and authority through the Planning Act whether or not the development is able to or needs to take benefit of the service (e.g. reverse frontage development).** Local cost recoveries will be made on a site-specific basis based on frontage and/or drainage area.

**Category 2 – Projects Within Proposed Development Lands** - The following project descriptions fall into Category 2:

- Water and sewer infrastructure that is required to directly service the proposed development lands.
- Water and sewer infrastructure that is required to directly service the proposed development lands *and* potentially “oversized” in consideration (capacity, looping or fire protection) of additional proposed developable lands that are normally serviced via proposed development property.

With regards to Category 2 projects, the developer is required to pay for the full cost of the installation of sanitary sewers and watermain up to and including the sizes listed below. This is described as the Direct Developer’s Contribution.

**Note: Projects external to the Proposed Development Lands that service only one property are considered Category 2.**

The minimum sizes are provided from the City’s Financial Policies:

- Sanitary Sewer      450 mm diameter
- Watermain            300 mm diameter

Facilities (Water Pumping Station, Water Reservoir or Elevated Tank, Wastewater Pumping Station)

- No minimum size/capacity
- Facilities to service single proposed development lands will be Direct Developer Contribution.
- Facilities servicing multiple developments/service areas will be allocated to Development Charges Categories only (D.C., Benefit to Existing and Post Period Benefit).

Water Treatment / Wastewater Treatment – Treatment upgrades to be included in Development Charges Categories only (D.C., Benefit to Existing and Post Period Benefit).

Should the size of the local infrastructure be required to be greater than the minimum local servicing sizes (i.e., to support external development), Development Charges contributions shall be made. The City shall contribute, through the Development Charges Fund, towards the cost to install the infrastructure on a “Flat Rate” basis. “Flat Rate” is defined as the cost difference between the size required for external development and the minimum size, noted above in the City’s Development Policies.

Projects identified are sized based on the City’s engineering guidelines for design and to accommodate the future population and employment demand/flow within the proposed drainage/service areas.

The Development Charges Capital Program identified in this document demonstrates the calculated cost splits on a project-by-project basis.





# Appendix F

## D.C. Rate Impacts Excluding the Proposed L.S.P. Amendment



# Appendix F: D.C. Rate Impacts Excluding the Proposed L.S.P. Amendment

Section 2.6 of the addendum report provides for a proposed amendment to the L.S.P. for Council's consideration.

The L.S.P. currently identifies land for all local, collector, and arterial roads (net of applicable oversizing) as direct developer responsibility as per the Financial Policies for Development. Recent approval of the Complete Streets Guidelines and the A.E.G.D. Transportation Master Plan Update have resulted in wider road allowances for non-residential roads, relative to residential roads.

The current Financial Policies for Development does not distinguish between residential and non-residential roads. Given that land for road allowances up to the collector designation is a direct developer contribution, the impact on the D.C. is not proportional for non-residential roads. As such, it is recommended that non-residential roads include a larger base width to be considered local service and that the following language be included in Section E.5.3.1 of the L.S.P. (new text in **underline bold**):

## E.5.3.1.1 Local and Collector Roads (including land)

All Local Roads are the developer's financial responsibility. **For the purposes of D.C. eligibility, the following criteria are applied for Local Roads:**

- **Local Residential – up to 8m width of asphalt driving surface and up to 26m road allowance.**
- **Local Non-Residential – up to 11m of asphalt driving surface and up to 32m of road allowance.**

If these changes are not adopted by Council, the L.S.P. deduction identified by Arcadis in Section 2.5 and Appendix D would decrease by \$4.7 million. The detailed capital listing without the proposed L.S.P. amendment and Financial Policies change can be found in Exhibit 3 of Appendix D. The following table provides for the updated rate comparison if the L.S.P. amendment is not adopted by Council:



Table F-1  
City of Hamilton  
D.C. Rate Comparison

Residential (Single Detached) Comparison

Service/Class of Service	Addendum Report: as per Figure 3-1 (i.e. with the LSP and Financial Policies Change)	Recalculated Rates (i.e. without the LSP and Financial Policies Change)
Services Related to a Highway	18,103	18,287
Public Works	1,335	1,335
Transit Services	1,601	1,601
Fire Protection Services	1,151	1,151
Policing Services	1,018	1,018
Parks and Recreation*	11,065	11,065
Library Services	2,061	2,061
Growth Studies**	-	-
Long-term Care Services	231	231
Child Care and Early Years Programs	-	-
Provincial Offences Act Services including By-Law Enforcement	52	52
Public Health Services	42	42
Ambulance	325	325
Waste Diversion	346	346
<b>Total Municipal Wide Services/Classes</b>	<b>37,330</b>	<b>37,514</b>
<b>Water and Wastewater Urban Area Charges</b>		
Wastewater Facilities	7,125	7,125
Wastewater Linear Services	10,641	10,641
Water Services	6,856	6,856
<b>Total Water and Wastewater Urban Area Services</b>	<b>24,622</b>	<b>24,622</b>
<b>Stormwater Services - Combined Sewer System</b>		
Stormwater Drainage and Control Services	9,553	9,553
<b>Stormwater Services - Separate Sewer System</b>		
Stormwater Drainage and Control Services	22,741	22,741
<b>Grand Total - City Wide</b>	<b>37,330</b>	<b>37,514</b>
<b>Grand Total - Urban Area - Combined Sewer Sytem</b>	<b>71,505</b>	<b>71,689</b>
<b>Grand Total - Urban Area - Separate Sewer Sytem</b>	<b>84,693</b>	<b>84,877</b>

\*Parks & Recreation now combined as one D.C. eligible service

\*\*Growth studies are no longer eligible when a new by-law is passed under Bill 23

Note: Rates will be indexed at by-law implementation to 2024\$



Table F-2  
City of Hamilton  
D.C. Rate Comparison

Non-Residential (per sq.ft.) Comparison

Service/Class of Service	Addendum Report: as per Figure 3-2 (i.e. with the LSP and Financial Policies Change)	Addendum Report (without the LSP and Financial Policies Change)
Services Related to a Highway	13.31	13.43
Public Works	0.80	0.80
Transit Services	0.96	0.96
Fire Protection Services	0.69	0.69
Policing Services	0.61	0.61
Parks and Recreation*	0.95	0.95
Library Services	0.18	0.18
Growth Studies**	-	-
Long-term Care Services	0.04	0.04
Child Care and Early Years Programs	-	-
Provincial Offences Act Services including By-Law Enforcement	0.03	0.03
Public Health Services	0.01	0.01
Ambulance	0.06	0.06
Waste Diversion	0.03	0.03
<b>Total Municipal Wide Services/Classes</b>	<b>17.67</b>	<b>17.79</b>
<b>Water and Wastewater Urban Area Charges</b>		
Wastewater Facilities	4.53	4.53
Wastewater Linear Services	6.76	6.76
Water Services	4.36	4.36
<b>Total Water and Wastewater Urban Area Services</b>	<b>15.65</b>	<b>15.65</b>
<b>Stormwater Services - Combined Sewer System</b>		
Stormwater Drainage and Control Services	-	-
<b>Stormwater Services - Separate Sewer System</b>		
Stormwater Drainage and Control Services	4.75	4.75
<b>Grand Total - City Wide</b>	<b>17.67</b>	<b>17.79</b>
<b>Grand Total - Urban Area - Combined Sewer Sytem</b>	<b>33.32</b>	<b>33.44</b>
<b>Grand Total - Urban Area - Separate Sewer Sytem</b>	<b>38.07</b>	<b>38.19</b>

\*Parks & Recreation now combined as one D.C. eligible service

\*\*Growth studies are no longer eligible when a new by-law is passed under Bill 23

Note: Rates will be indexed at by-law implementation to 2024\$

Prepared By:



# City of Hamilton 2023 Development Charges By-Law Study

GMBP File: 717010

May 2024



Hamilton

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## 1.0 Introduction

This water and wastewater technical report is prepared as a background document for the City of Hamilton's 2023 Development Charges (D.C.) By-law. The 2023 D.C. Background Study is an update to the Development Charges Background Study, dated July 2019, prepared by Watson & Associates Limited. This water and wastewater technical report provides engineering input on growth related costs of water and wastewater infrastructure upgrades and will be used to update the City's D.C. By-Law in 2023 for growth to the servicing target.

The objectives of this study are:

- Identify the demand that will be placed on the community's municipal water and wastewater system as a result of approved population and employment growth within the urban boundary to the service target. It is noted that for the Water service and Wastewater service, the forecast is based on the targeted population and employment numbers which was included in the prior D.C. study. The City is undertaking masterplan studies for each of these services to assess the servicing needs for growth beyond these targets (as per O.P.A. 167). However, as of the time of writing, these studies are not complete. As the servicing information is not available for growth identified in O.P.A. 167, the former growth targets have been continued for this study.
- Recommend water and wastewater infrastructure required to service the expected growth needs in the two planning horizons 0 to 5 year and beyond 6 years to urban boundary build-out (U.B.B.O.).
- Provide growth related project cost estimates for water and wastewater infrastructure eligible for D.C. funding.

Section 5 describes the required works that are development related for each urban area. Figures are organized with the digit and decimal (e.g. 2.2). The digit identifies the type of infrastructure and the decimal identifies the urban area as follows (e.g. 2.2 Wastewater System, Ancaster).

### Digit – Infrastructure

- 1 - Water Distribution System
- 2 - Wastewater System

### Decimal – Area

- .1 - Waterdown
- .2 - Ancaster
- .3 - Airport Employment Growth District (A.E.G.D.)/Mount Hope
- .4 - Binbrook
- .5 - Hamilton Mountain
- .6 - Stoney Creek Upper
- .7 - Stoney Creek Lower

The time periods for the projects listed on tables are identified as follows:

- a – 0 to 5 year period:** Includes growth from 2023 to 2028, inclusive.
- b – 6 years to Urban Boundary Build-Out (U.B.B.O):** Includes growth from 2029 to service target.



Within the tables and figure, the projects are further identified with unique identifiers as follows:

W	Waterdown
A	Ancaster
B	Binbrook
MH	A.E.G.D./Mount Hope
HM	Hamilton Mountain
SCU	Stoney Creek Upper
SCL	Stoney Creek Lower
W-23	Water Projects
S-23	Wastewater Projects

Example:

W# – W – 23 represents water project # in Waterdown

SCU# – S – 23 represents wastewater project # in Stoney Creek Upper

This report also includes a table for City-wide projects which lists proposed capital projects that affect the City's overall systems and are typically located outside the previously identified urban areas. General projects such as studies are also included; however, the majority of City Wide projects are being driven by and are benefitting growth.

The Woodward Wastewater Treatment Plant has been added to the charge as a separate item and is not listed in the City-Wide projects.

## 2.0 DEVELOPMENT AREAS

Through the development of the City of Hamilton's Growth Related Integrated Development Study (G.R.I.D.S.) and the ongoing 2024 City of Hamilton Water and Wastewater Master Plan, the City's Planning Department developed expected population and employment targets. This growth was focused in the following areas:

- Waterdown,
- Ancaster,
- Binbrook,
- Airport Employment Growth District (A.E.G.D.) / Mount Hope,
- Hamilton Mountain,
- Stoney Creek Lower, and
- Stoney Creek Upper.

All areas capable of being developed in the urban boundary are assumed to have densities and land uses in accordance with the City's Official Plan.

Additional study was undertaken for the Airport Employment Growth District (A.E.G.D.). A stand-alone servicing master plan for the A.E.G.D. was developed and identified detailed servicing requirements. These recommendations have been incorporated into infrastructure requirements of the D.C. Background Study.

## 3.0 DEVELOPMENT CHARGES CALCULATIONS & POLICIES

### 3.1 Local Service Policy

Utilizing the City's development assumptions, the water and wastewater infrastructure required to service these areas was identified. To determine if a project is a Development Charges (D.C.) related project, the following were evaluated:

## Category 1 – Projects External to Proposed Development Lands

The following project descriptions fall into Category 1, such as projects on existing road allowance and servicing more than one development, and will be fully or partially allocated to Development Charges:

- New infrastructure or upgrades to existing City infrastructure required to service more than one potential proposed development and/or development property, whether in a Greenfield area or Intensification area. This includes upgrades to infrastructure that is upstream (water) or downstream (wastewater) of multiple developments.
  - If an upgrade is triggered by growth (single or multiple potential development) and that planned growth is less than or equal to the approved Traffic Survey Zone growth, the upgrade will be all or partially allocated to Development Charges.
  - In the case that a development plans to have more growth than is planned for (by approved Traffic Survey Zones and system capacity) and if the infrastructure upgrade is as a result of growth over and above what is approved, that additional oversizing shall be the responsibility of the Developer (Direct Developer).
    - This may include watermains for transmission, distribution and looping.

New projects that physically lie outside of a proposed development, but only service a single development can be considered to be part of Category 2. For example, new sewer on existing road right of way (external to development) to service a new building on land not already serviced, with no additional developments potentially draining to the new sewer.

Local cost recoveries will be made on a site-specific basis based on frontage and/or drainage area.

## Category 2 – Projects Within Proposed Development Lands

The following project descriptions fall into Category 2:

- Water and sewer infrastructure that is required to directly service the proposed development lands.
- Water and sewer infrastructure that is required to directly service the proposed development lands and potentially “oversized” in consideration (capacity, looping or fire protection) of additional proposed developable lands that are normally serviced via proposed development property.
- In regard to Category 2 projects, the developer is required to pay for the full cost of the installation of sanitary sewers and watermain up to and including the sizes listed below. This is described as the Direct Developers Contribution. The minimum sizes are provided from the City’s Development Policies:
  - Sanitary Sewer - 450 mm diameter
  - Watermain - 300 mm diameter

### **Facilities (Water Pumping Station, Water Reservoir or Elevated Tank, Wastewater Pumping Station)**

- No minimum size/capacity.
- Facilities to service single proposed development lands will be Direct Developer Contribution.
- Facilities servicing multiple developments/service areas will be allocated to Development Charges Categories only (D.C., Benefit to Existing and Post Period Benefit).

**Water Treatment / Wastewater Treatment** – Treatment upgrades to be included in Development Charges Categories only (D.C., Benefit to Existing and Post Period Benefit).

Should the size of the local infrastructure be required to be greater than the minimum local servicing sizes (i.e. to support external development), Development Charges contributions shall be made. The City shall contribute, through the Development Charges Fund, towards the cost to install the infrastructure on a “Flat Rate” basis. “Flat Rate” is defined as the cost difference between the size required for external development and the minimum size, noted above in the City’s Development Policies.

Projects identified are sized based on the City’s engineering guidelines for design and to accommodate the future population and employment demand / flow within the proposed drainage/service areas.

The Development Charges Capital Program identified in this document demonstrates the calculated cost splits on a project by project basis.

### 3.1.1 Areas Developed Outside the Existing Service Target Urban Boundary

For Developments that occur outside of the existing Urban Boundary, developments will be required to directly cover the costs of all internal (local servicing inside the development/subdivision) servicing and external servicing. External servicing will consist of the infrastructure not identified in the current DC and can consist of, but is not limited to:

- Watermain or sewer extensions from the existing network to the development.
- Upstream/downstream watermain/sewer upgrades or pumping station upgrades triggered by the development.
- New or upgraded storage triggered by the development.

In addition, the development will also be required to pay the Treatment portion of the current DC and may also be charged a portion of post period benefit costs identified in the current DC. The City will consider using cost recovery tools such as best efforts agreements, part XII Municipal Act By-Laws, and / or impose fees for future development which accesses the infrastructure.

### 3.1.2 Funding for Municipal Extensions

In cases where a new watermain or sewer is installed by a developer that benefits and enables a new connection to by an existing, unserviced property, a flat rate contribution is made back to the developer. Additional details of this funding methodology related to Direct Developer (or “Developer Initiated”) projects including projects external to the development lands are found in the 2007 City Report: *TOE02005b/FCS02026b/PED07248 - Funding Methodology for Municipal Infrastructure Extensions Review and Update*.

### 3.1.3 Capacity Allocation

As growth and re-development progresses over time, the City requires a means to determine the amount of spare capacity within the water distribution and wastewater collection systems that are to be allocated to any potential development application. Additionally, the City must also determine a reasonable period of time during which this allocated capacity is to be made available prior to development.

The capacity will be allocated to projects in the order in which the Construction Plans are approved. In the event that multiple projects are approved at the same time, the identification, selection and prioritization of the project given in the City’s Infrastructure Staging of Development Program will prevail.

This policy is intended to be used as a guide for conveyance only (not treatment) and is subject to review and update by the City moving forward.

### 3.1.4 Co-ordinated Projects with Transportation Requirements

Water and wastewater projects external to proposed development lands (i.e. on existing road allowances and/or existing roads) that fall into Category 1 and that are initiated as a result of identified transportation requirements and are eligible for inclusion in the D.C. at the same D.C. eligible percentage as the associated road.

Service connections (water and/or wastewater connections – public portion) will be constructed to each land parcel, when an existing dwelling unit exists. Property owners that require more than one service connection will be required to pay for the cost of the additional service connections prior to construction. Benefitting property owners shall contribute towards the cost to install the infrastructure on a “flat rate” basis. The “flat rate” will be established by the City at the beginning of each year.

### 3.2 Benefit to Existing

The non-growth component has been identified for certain projects which benefit the existing service area. These components are typically associated with upgrades to the existing systems or facilities necessary to continue to provide service to the existing residential and non-residential users. These projects may also involve upgrades or expansions which provide additional capacity to meet growth in the service area. As such, for each of these projects, the growth related and non growth related needs and corresponding capacity and costs have been separately identified.

Given that the servicing program is designed to service growth to the servicing target and the infrastructure is primarily located in new growth areas, there are limited benefit to existing (non-growth) components in the capital program.

For projects that may have a benefit to existing, a methodology was developed to estimate the Benefit to Existing (B.T.E.) split. If reasonable and appropriate data are available to support the accurate calculation of B.T.E., B.T.E.1, a calculation-based approach will be used to arrive at a project-specific B.T.E. percentage. Otherwise, the cost allocation shall reference a structured approximation policy assigning B.T.E. under categories B.T.E.2 through B.T.E.5, as outlined in the table below:

**Table 1-Benefit to Existing (B.T.E.) Approach**

Category	B.T.E. %	Description
B.T.E.1	Calculated – if possible	<p>Calculated based on best available data. Example calculation basis:</p> <ul style="list-style-type: none"> <li>• Cost for existing needs vs cost for growth</li> <li>• Existing measurable capacity deficiency that is addressed through new project that supports growth</li> </ul> <p><b>EXAMPLE:</b></p> <ul style="list-style-type: none"> <li>• Existing watermain/sewer is to be replaced within intensification area based on condition and State of Good Repair (S.O.G.R.) needs. Replacement is identified in the City’s ongoing S.O.G.R. program, not based on growth</li> <li>• There is potential growth (within D.C. Period and identified in planning estimates) that is serviced by watermain / sewer</li> <li>• In order to service existing service area plus growth, increase in diameter is required</li> <li>• B.T.E. % is calculated as:  <math>\text{Cost for Replacement only Project} \div \text{Cost for Upsized Project}</math></li> <li>• Remaining cost is applicable to D.C.</li> </ul>
B.T.E.2	10% B.T.E.	<p>These projects are driven by growth but are likely to address some minor existing deficiencies potentially related to level of service, security of supply, age, operational flexibility, condition or performance.</p> <p><b>EXAMPLE:</b></p> <ul style="list-style-type: none"> <li>• A watermain replacement and upsizing is required to support growth in a new greenfield area</li> <li>• Adjacent existing serviced area is currently serviced by a watermain that is ~25 years old and may have slightly decreased capacity due to condition</li> <li>• Replacement watermain provides new service to new users and a replacement of the existing watermain</li> <li>• <i>Minor condition/age deficiency is addressed by construction of new watermain, therefore, 10% B.T.E. is applied</i></li> </ul>

Category	B.T.E. %	Description
B.T.E.3	25% B.T.E.	<p>These projects are driven by growth but will address some known existing deficiencies potentially related to operational issues or significant level of service, security of supply, age, operational flexibility, condition or performance.</p> <p><b>EXAMPLE:</b></p> <ul style="list-style-type: none"> <li>• A new development within an intensification area is to be serviced by an existing sewer which has known capacity deficiencies and modelled surcharging</li> <li>• A larger sewer is required to address the existing capacity constraint as well as to service growth</li> <li>• <i>Level of service / capacity deficiency is addressed by construction of new watermain, therefore 25% B.T.E. is applied</i></li> </ul>
B.T.E.4	50% B.T.E.	<p>These projects equally provide additional capacity for growth as well as enhanced level of service in existing service areas. These projects address known existing deficiencies but also improve servicing conditions including security of supply/service.</p> <p><b>EXAMPLE:</b></p> <ul style="list-style-type: none"> <li>• A new development within an intensification area is to be serviced by an existing sewer which has significant known condition issues and significant capacity constraints including <i>modelled</i> surcharging and occasional <i>observed</i> surcharging and capacity constraints</li> <li>• A larger, new sewer is required to address the existing deficiencies as well as to service growth</li> <li>• <i>Level of service, capacity and condition/age deficiencies are addressed by construction of new sewer, therefore 50% B.T.E. is applied</i></li> </ul>
B.T.E.5	Other	<p>These projects do not fall within B.T.E.1-B.T.E.4 categories and may require a unique split based on project specific factors.</p> <p><b>EXAMPLE:</b></p> <ul style="list-style-type: none"> <li>• An existing sewage pumping station is deficient in pumping capacity, wet well storage capacity and standby power. Additionally, pumps and other mechanical equipment require replacement due to condition</li> <li>• Modifications to the station are recommended to address all issues, including pump replacement</li> <li>• The new pumps will be re-sized to accommodate both the increase in required existing flow as well as an additional marginal increase in capacity to accommodate small potential intensification developments</li> <li>• <i>Major capacity and level of service and condition constraints trigger the need for S.P.S. upgrade; only marginal increase in capacity is required, therefore an estimated 90% B.T.E. is applied to the project cost</i></li> </ul>

NOTE: The intensification allowance for water and wastewater within the City-Wide category is currently assumed to have a 50% Benefit to Existing 50% D.C. split based on assumed overall age, condition and level of service within intensification areas. The B.T.E. split that is applied will be reviewed and confirmed on a project by project basis as detailed intensification projects are initiated.

### 3.3 Post Period Oversizing

Project costs are identified for any oversizing of infrastructure to service growth beyond the D.C. by-law planning period; in this case, the servicing target.

Under this D.C. program, most of the local development area servicing is sized to service the specific development areas within the approved urban boundary. There is no post-period oversizing for these projects. There are some service areas that have made allowance for servicing lands outside the current urban boundary. These projects have some post period oversizing costs identified.

The trunk infrastructure is based on the City of Hamilton Master Plan. The Master Plan infrastructure and sizing was based on the growth plan projections and urban boundary established under G.R.I.D.S. This baseline data from G.R.I.D.S. forecasted to the planning horizon. In general, there is no post-period oversizing for the trunk infrastructure.

If reasonable and appropriate data is available to support the calculation of Post Period Benefit, P.P.1, a calculation-based approach will be used to arrive at a project-specific Post Period percentage. Otherwise, the cost allocation shall reference a structured approximation policy assigning Post Period splits under categories P.P.2 through P.P.5, as outlined in the table below:

**Table 2- Post Period Oversizing Approach**

Category	Post Period %	Description
<b>P.P.1</b>	Calculated – if possible	Calculated based on best available data. Example calculation basis: <ul style="list-style-type: none"> <li>• Cost for service target project vs cost of oversized needs</li> </ul> Typical P.P. calculation is for greenfield linear works and consists of: $P.P. = \text{Cost for oversized pipe} - \text{Cost for pipe required for in-period growth only}$ <ul style="list-style-type: none"> <li>• Capacity for service target needs vs Capacity for post-period growth</li> </ul> <b>EXAMPLE:</b> <ul style="list-style-type: none"> <li>• A new sewer is required to service a greenfield growth area up to the edge of the urban boundary. The urban boundary is anticipated to be built out within the service target (in-period)</li> <li>• Beyond the urban boundary lies a potential growth area that is likely to require servicing after the service target is reached</li> <li>• The sewer is strategically oversized by one pipe size to accommodate the growth area outside of the urban boundary</li> <li>• <i>Post Period Benefit is calculated as: <math>P.P. = \text{Cost for oversized pipe} - \text{Cost for pipe required for in-period growth only}</math></i></li> </ul>
<b>P.P.1 is applicable in most cases of projects with Post Period Benefit. P.P.2, P.P.3, P.P.4 and P.P.5 are intended to be applied to unique projects where the calculations of capacities and costs applicable to in period growth and post period growth are complex and not easily defined.</b>		
<b>P.P.2</b>	10% P.P.	These projects are driven by growth within the By-law planning period but are oversized to provide some marginal additional capacity to support additional growth beyond the By-law planning period.
<b>P.P.3</b>	25% P.P.	These projects are driven by growth within the By-law planning period but are oversized to provide additional capacity to support growth beyond the By-law planning period. These projects are predominantly located in and/or support areas with likely future growth potential.
<b>P.P.4</b>	50% P.P.	These projects are strategically sized for significant additional future capacity. These projects are located in areas with constraints for additional capacity. These projects may also provide cost effective additional capacity.

P.P.5	Other	These projects do not fall within P.P.1-P.P.4 categories and may require a unique split based on project specific factors.
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### 3.3.1 Provisional Post Period Benefit

Project specific post period benefit has been allocated based on growth triggers and assumptions stated in the table above. However, due to the uncertainty surrounding the post service target to 2041 population and employment growth locations and densities as well as the uncertainty around the subsequent water and wastewater servicing needs, it is anticipated that there will be additional post period benefit within a portion of the program. As such, a \$47M Provisional Post Period Benefit has been allocated proportionally to both the water (\$33M) and wastewater (\$14M) programs.

### 3.4 City-Wide Projects

The City has identified specific monitoring and programs that must be undertaken to evaluate the existing and future infrastructure requirements to service the City. For the most part, these are required for future development; however, the existing infrastructure will have to be evaluated. An allowance has been made for City-Wide costs for these items.

Development related projects are listed in the tables identified by infrastructure (water and sewage) and by urban area. A City-wide project table is included with projects that do not lie within the listed urban areas or that provide City-wide benefit, such as studies.

### 3.5 Residential / Non-Residential Cost Share

The general intent of the cost share for water and wastewater infrastructure is based on proportion of growth attributed to residential and non-residential use.

The Residential and Non-Residential growth split is determined based on growth from 2023 to the service target. This split excludes Work from Home and No Fixed Place of Work uses. The cost share based on this growth is 74% Residential and 26% non-residential.

### 3.6 Costing Criteria

In addition to updating the water and wastewater project scopes and descriptions, the overall project costs have also been revised from the 2019 D.C. Study. A separate report, 2023 City of Hamilton Costing Methodology, dated September 2023, prepared by GM BluePlan Engineering Ltd., provided a comparison to surrounding municipalities costing approaches and recommended a minor modification to the approach taken for the City of Hamilton DC. The costing methodology report recommended utilizing the 2019 Greenfield water and wastewater unit rates as a baseline and adjusting these by a 39% inflation rate to convert the figures from 2019 dollars to 2023 dollars.

Further, depending on the project review, additional costs were applied as follows:

- Additional 75% premium for construction within Urban Areas
- Additional 20% premium for construction of deep sewers
- 15% Soft Costs (Engineering, studies, internal costs, etc)
- 30% Contingency

Where more up to date cost information was available, such as tender prices, detailed Environmental Assessment (E.A.) project cost estimates or from the City's Budget, these costs were used instead of the typical unit cost calculation.



For the Woodward Avenue Wastewater Treatment Plant (W.W.T.P.), the overall project implementation and costing has been reviewed and updated since the 2019 D.C. Study. Costing for the W.W.T.P. is based on either actual incurred costs, actual tender costs received, preliminary design estimates, or conceptual estimates where appropriate. The Woodward Avenue W.W.T.P. information is addressed separately in this report.

### **3.7 Wastewater Runoff Controls**

In order to mitigate the impact of stormwater runoff into the combined sewer network, a policy has been developed that applies to properties that are undergoing re-development within the combined sewer catchment area.

At the development stage, the owner will be required to submit a detailed Storm Water Management Report, to the satisfaction of the Manager of Engineering Design and Construction, addressing the fact that in the absence of an overland flow route, the release rate of a 100 year post development flow will be controlled to the release rate of a 2 year pre development flow.

It has been assumed that the historical 18 year storm criteria are very much equivalent to current 2 year storm using Mount Hope Intensity-Duration-Frequency curves.

## **4.0 SERVICE STANDARDS**

The following standards are the minimum acceptable level of service for each category of service. The City Standards will be used for the design and construction of all roads and municipal services required for all new development. These standards set the level of service for the community, both for new and existing development (i.e. replacement of existing infrastructure).

### **4.1 Water Distribution System**

The water distribution system shall be designed to deliver all required water supply demands and fire flows (protection) based on the Ministry of the Environment, Conservation and Parks (M.E.C.P.) and Regional guidelines with due consideration to the Fire Underwriters Survey. The minimum watermain size for new construction shall be 150 mm diameter for residential areas and 300 mm for Commercial/ Institutional/ Industrial areas.

The City standards require that the minimum distribution system fire flow pressure be not less than 140 kpa (20 psi), distribution system maximum hour pressure does not fall below 275 kpa (40 psi) and distribution system static pressure does not exceed 700 kpa (100 psi). The water system shall be "looped" where possible to minimize water quality problems.

### **4.2 Sanitary Sewer System**

The sewer system shall be designed to carry flows from the drainage area as specified by the City, which may include the Developer's lands, as well as lands beyond the Developer's properties including existing developed lands (external lands) and future developable lands within the urban boundary.

The minimum sewer size for residential development is 250 mm diameter with a minimum velocity of 0.75 m/s. The design shall conform to Ontario Provincial Standards Specifications. For industrial / commercial / institutional development, the minimum sewer size is 375 mm.

The development projections for new developments were provided by the City of Hamilton Planning Department and are the basis for analysis of the sanitary sewer system. The analysis of sewer systems was completed on the basis of the following criteria:

### 4.2.1 Sanitary Sewers

To determine sewer capacity, the sewers affected by new development were reviewed to determine their capacity. As-recorded information from the City was used to obtain pipe sizes and grades.

The following criteria are from the City's Comprehensive Development Guidelines and Financial Policies Manual (2017) and are used to estimate the sewage flows from a new residential and/or employment development:

Per Capita Flow	=	360 L/capita/day
Peaking Factor (Babbitt Formula)	=	$M = 5/P^{0.2}$ 5 (max.), 2.0 (min.)
Infiltration	=	0.4 L/s/ha – 0.6 L/s/ha (depending on anticipated storm sewer and dwelling weeping tile configuration)

The sewers are designed to flow at a maximum of 75% full.

In addition to using the City of Hamilton's design criteria for sizing sewers in new development areas, the 2006 Water and Wastewater Master Plan Class E.A. Report identified major trunk sewer projects and upgrades using calibrated wastewater modelling software. A skeletonized model of the existing City of Hamilton wastewater system using DHI's Mike Urban software was developed and calibrated by AWS Engineers and Planners Corp. This model was ran under future peak wet weather conditions and a 5 year storm event in order to identify major upgrades to the system under the Master Plan. The model results identified trunk projects that would be required to service new growth to the service target.

Construction of the 2006 Master Plan recommended sewer network has been refined through various detailed studies and analyses over the past 17 years. Constructed projects and modifications to the Master Plan program are reflected in the 2023 D.C. Study.

### 4.2.2 Sewage Pumping Stations

Existing sewage pumping stations affected by the new development were assessed to determine their available capacities and if upgrades would be required. For lands where gravity flow is not possible, new pumping stations were sized and identified. New pump stations were identified based on topography and availability of grade to connect into an existing or proposed trunk sanitary sewer system. Previous studies as well as the 2006 Water and Wastewater Master Plan Class E.A. Report identified many of the proposed pumping stations and upgrades.

### 4.2.3 Treatment Facilities

Based on growth projections, the flows draining to the respective treatment facilities were evaluated. The wastewater treatment strategy was based on the Water and Wastewater Master Plan.

The Woodward Avenue W.W.T.P. will require significant upgrades to support the growth related flows and address water quality requirements. The approach, level of capacity of each phase of the upgrade and cost estimates have been further defined through staff reports and project team documents. Additional information on the Woodward Avenue W.W.T.P. upgrade is further detailed in this report.

The Dundas W.W.T.P. will continue to operate. The Waterdown W.W.T.P. has been decommissioned and converted to a sewage pumping station, which pumps flow through a new forcemain, discharging to the existing Borer's Creek Trunk Sewer.

The Woodward Avenue W.T.P. will continue to be the water supply source for all existing and future development areas in Hamilton.

## 5.0 PROJECT DESCRIPTIONS

Provided in Attachments A, B and C are tables listing the projects for each of the growth areas identified in Section 1. The corresponding figures identify the location of the projects listed in the tables. The tables and figures are located as follows:

- Attachment A: Water Projects
- Attachment B: Water City Wide Projects
- Attachment C: Wastewater Projects
- Attachment D: Wastewater City Wide Projects
- Attachment E: Woodward Avenue W.W.T.P. Projects

The project list was devised through an extensive review of background information, including the previous Development Charges Background Studies (2004, 2009, 2011, 2014 and 2019), the 2006 Water and Wastewater Master Plan Class E.A. Report, the ongoing 2024 Water and Waster Master Plan Study and the City's Capital Works Programs. Meetings with key City staff identified additional projects and refined the project lists.

In this section, we have provided some further input on some of the larger projects and servicing strategy that are expected to occur within the next 5-years (near term) within each development area. The 6+ years projects are shown in Figures in appendices A-D.

### 5.1 Water Distribution System

#### 5.1.1 Waterdown

The majority of the water projects in Waterdown are required to service the North Waterdown and South Waterdown lands. The majority of the water infrastructure to service North Waterdown has been built. A 400 mm watermain will extend north on Eager Drive and west to east along a new road alignment north of Parkside Drive, connecting the existing local network and supplying new growth in the north. A 600 mm trunk feedermain and HD016 Booster Station upgrades are planned which will support growth and provide security of supply. The Feedermain and Station upgrades have been refined through detailed studies since the previous D.C. Study.

Refer to Table F-1, as well as Figure 1-1 for location, size and cost of the projects for this area.

#### 5.1.2 Ancaster

A new 500 mm to 600 mm trunk watermain is required on Garner Road from Southcote Road to Wilson Street West in order to provide trunk water transmission capacity to the Ancaster Industrial Park area. This area also has several proposed internal watermain projects, most of which are planned to be Direct Developer Contribution sized, and are required to service the development within the Park. A 300 mm crossing of Highway 403 along Shaver Road is planned to provide looping within the system and support the growth in the Ancaster Industrial Park. A study completed in 2019 identified the proposed location for the new PD18 Elevated Tank, north-east of Jerseyville Road.

Refer to Table F-1, as well as Figure 1-2 for location, size and cost of the projects for this area.

### **5.1.3 Binbrook**

A new 400 mm trunk Feedermain, along Fletcher Road and Cemetery Road, will be required to service the development needs of Binbrook. Additionally, new 400 mm watermain projects in west Binbrook on Binbrook Road, Fletcher Road, and Windwood Drive will service the new growth areas. A class EA study is near completion for the upgrade of the Binbrook PS (HD019) and the preferred option cost estimate has been incorporated in the 2023 DC update.

Refer to Table F-1, as well as Figure 1-3 for location, size and cost of the projects for this area.

### **5.1.4 A.E.G.D./Mount Hope**

Modifications to the A.E.G.D. service areas have resulted in minor updates to the proposed water network. However, the majority of the local 300 mm and 400 mm Pressure Districts 6 and 18 watermain network remains unchanged and follows the proposed road network throughout the A.E.G.D. A 400 mm watermain on Southcote Road, south of Garner Road East is also required to service the Industrial Park area.

Refer to Table F-1, as well as Figure 1-4 for location, size and cost of the projects for this area.

### **5.1.5 Hamilton Mountain**

Several 300 mm to 400 mm watermain is required to service the North Glanbrook Industrial Business Park (N.G.I.B.P.) in the southeast corner of the Hamilton Mountain Growth Area. Also required is a 1200mm trunk feedermain delivering water from Greenhill Pumping Station HD05A (see Stoney Creek Upper) through the newly constructed 1200 mm trunk feedermain on First Street. The 1200 mm trunk feedermain is proposed to be constructed on Mud Street and Stone Church Road to Pumping Station HD06B. Other sections of 300 mm to 400 mm watermain will be required in the growth area of Rymal Road East and a new 400 mm watermain will be required along an easement from Twenty Road to Rymal Road. Recent analysis has determined that the Pressure District 7 elevated tank is to be located at the southwest corner of Trinity Church Road and Twenty Road.

Refer to Table F-1, as well as Figure 1-5 for location, size and cost of the projects for this area.

### **5.1.6 Stoney Creek Upper**

This strategy will include capacity upgrades to Pumping Station HD05A and HD04B, and a new 400 mm watermain on First Road West, both of which will also benefit growth.

Refer to Table F-1, as well as Figure 1-5 for location, size and cost of the projects for this area.

### **5.1.7 Stoney Creek Lower**

Existing 150 mm watermain on Lewis Road is required to upsize to 300 mm and another 300 mm watermain is proposed on Glover Road to service new employment growth areas with the Lower Stoney Creek area. The majority of these are employment growth areas that lie adjacent to the railway and Q.E.W.

Refer to Table F-1, as well as Figure 1-6 for location, size and cost of the projects for this area.

## 5.2 Wastewater System

### 5.2.1 Waterdown

Servicing of Waterdown North is partially complete and will only require short sewer extensions to complete servicing. A 600 mm diameter sewer is required on Sadielou Boulevard north of McCurdy Avenue. This proposed sewer is required to service future growth in the area.

Refer to Table F-3, as well as Figure 2-1 for location, size and cost of the projects for this area.

### 5.2.2 Ancaster

Most of the growth related D.C. wastewater projects within Ancaster have been completed. Two remaining wastewater projects to service growth consist of short sections of gravity sewers of 375 mm and 600 mm south of Wilson Street.

Refer to Table F-3, as well as Figure 2-2 for location, size and cost of the projects for this area.

### 5.2.3 Binbrook

The capacity upgrade for Pump Station HC058 has been successfully finished. There is a planned extension of a 375 mm sewer to the west along Binbrook Road, situated to the east of Fletcher Road. Additionally, to accommodate growth, a 600 mm internal sewer will be extended westward along Windwood Drive. Refer to Table F-3, as well as Figure 2-3 for location, size and cost of the projects for this area.

### 5.2.4 A.E.G.D./Mount Hope

Modifications to the A.E.G.D. service areas have resulted in minor updates to the proposed sewer network. However, the overall servicing strategy remains unchanged since the 2019 D.C. Study. The first anticipated phase of growth will be in the northeast corner of the A.E.G.D. and will be serviced through connections to existing trunk sewers and the Twenty Road S.P.S. The central portion of the A.E.G.D. will convey flow to the new Dickenson Road sewer within the A.E.G.D. which flows east and will connect with the new Dickenson / Centennial Trunk sewer east of Upper James Street.

In order to support growth in the Mount Hope area, 450 mm – 600 mm diameter sewers are required on Garner Road. Additionally, a 375 mm sewer is proposed extending south on John Frederick Drive in the growth areas.

Refer to Table F-3, as well as Figure 2-4 for location, size and cost of the projects for this area.

### 5.2.5 Hamilton Mountain

The main projects required for servicing the Hamilton Mountain growth area are the gravity sewers that service the N.G.I.B.P. This area will require gravity sewers ranging from 375 mm to 525 mm, which will flow to the north to the existing network. The Upper Centennial/Dickenson Trunk Sewer Project crosses the southern limit of the Hamilton Mountain service area, however, this infrastructure will service the A.E.G.D. and Upper Stoney Creek. The required projects have been modified since the previous D.C. They now consist of a deep trunk sewer (1,200 mm to 1,350 mm) tunnel from Upper James to Upper Centennial (Regional Road 56).

Refer to Table F-3, as well as Figure 2-5 for location, size and cost of the projects for this area.

### **5.2.6 Stoney Creek Upper**

All wastewater projects in the Upper Stoney Creek area have been constructed, including the recently completed 450 mm sewer on Rymal Road, west of Upper Centennial Parkway to service the Regional Official Plan Amendment (R.O.P.A.) 9 area.

### **5.2.7 Stoney Creek Lower**

A new sewage pumping station, forcemain and gravity sewer will be required to service the areas south of the Q.E.W. surrounding Fifty Road. Furthermore, growth at the north end of Millen Road and South of Barton Street will require gravity sewer upgrades and connection to the Eastern Sanitary Interceptor (E.S.I.). Additionally, the northern section of the Centennial Parkway Trunk Sewer twinning (1,500 mm) is required to service growth on the Hamilton Mountain.

Refer to Table F-3, as well as Figure 2-6 for location, size and cost of the projects for this area.

## **5.3 City Wide Water and Wastewater Projects**

City-Wide water and wastewater projects cover traditional water and wastewater infrastructure capital works (pumping stations, watermains, sewers, etc.) throughout the City, most of which are required to support growth, however, do not lie within the geographical areas of the other systems mentioned above. Also covered in City-Wide projects are items such as studies, flow monitoring and intensification upgrades.

The costs associated with intensification have been reviewed and updated for the 2023 D.C. to reflect an increased level of density and associated cost escalation within the City core. These costs are further described in Section 5.4.

In addition to projects being identified for servicing new developments, several major projects from the 2006 Water and Wastewater Master Plan Class E.A. Report were carried forward into the D.C. By-Law Study. These are large, trunk infrastructure projects and are required to service new growth areas.

Projects in this section relate to City-wide programs identified to increase available capacity in the system. This will allow development to continue in the City while maintaining water quality targets. Without these improvements, development freezes could take effect.

Refer to Table F-2 and F-4 for location, size and cost of the projects.

## **5.4 Intensification Allowance**

Previous Development Charges By-Law studies have included a lump sum dollar amount for both water and wastewater intensification servicing. With the City undertaking detailed studies for specific intensification areas such as the West Harbour Secondary Plan ("Setting Sail"), Light Rapid Transit (L.R.T.) Corridor as well as the requirement by the province for further increases to the minimum levels of intensification growth, there will continue to be a need to further refine the servicing requirements for these areas.

As part of this D.C. By-Law Study, additional intensification allowance costs have been allocated to the D.C. program. The 2023 D.C. has recommended an increase to the water and wastewater allowance to bring the totals to \$42M for water and \$42M for wastewater over the remaining By-Law period.

## **5.5 Program Changes from 2019 D.C. Study**

With respect to the linear program in the 2023 D.C. Study, the key program changes from 2019 include but are not limited to the following:

Area	Water	Wastewater
<b>Waterdown</b>	<ul style="list-style-type: none"> <li>• New alignment for the PD016 Feedermain</li> <li>• South Waterdown tower has been constructed</li> <li>• Revised alignment for growth related watermains</li> </ul>	<ul style="list-style-type: none"> <li>• Several sanitary sewer projects completed/removed</li> </ul>
<b>Ancaster</b>	<ul style="list-style-type: none"> <li>• Ancaster PD018 elevated tank relocation to 385 Jerseyville Road in Ancaster Community Park</li> <li>• Several watermain projects completed/removed</li> </ul>	<ul style="list-style-type: none"> <li>• Several sanitary sewer projects completed/removed</li> <li>• Updated alignment for remaining sewer projects</li> </ul>
<b>A.E.G.D. / Mount Hope</b>	<ul style="list-style-type: none"> <li>• A.E.G.D. service area boundary has been modified, resulting in removal of certain watermain projects</li> <li>• No major project changes</li> </ul>	<ul style="list-style-type: none"> <li>• A.E.G.D. service area boundary has been modified, resulting in removal of certain sanitary sewer projects</li> </ul>
<b>Binbrook</b>	<ul style="list-style-type: none"> <li>• Binbrook pumping station upgrades are complete</li> </ul>	<ul style="list-style-type: none"> <li>• New Forcemain completed</li> </ul>
<b>Hamilton Mountain</b>	<ul style="list-style-type: none"> <li>• Realignment of the Stone Church Road Feedermain and distribution main on Dartnall Road</li> </ul>	<ul style="list-style-type: none"> <li>• Dickenson Road trunk sewer updated to reflect new deep tunneled sewer strategy; S.P.S./Forcemain removed from program</li> </ul>
<b>Stoney Creek Upper</b>	<ul style="list-style-type: none"> <li>• Several watermain and facility projects completed/removed</li> </ul>	<ul style="list-style-type: none"> <li>• All sanitary sewer projects completed/removed</li> </ul>
<b>Stoney Creek Lower</b>	<ul style="list-style-type: none"> <li>• Several watermain and projects completed/removed</li> </ul>	<ul style="list-style-type: none"> <li>• No major changes to strategy</li> <li>• Additional sewer upgrades added</li> </ul>
<b>City Wide</b>	<ul style="list-style-type: none"> <li>• Increased intensification upgrades to \$42M Total</li> <li>• Several projects complete/removed</li> </ul>	<ul style="list-style-type: none"> <li>• Increased intensification upgrades to \$42M Total</li> <li>• Several projects complete/removed</li> </ul>

## **5.6 Woodward Avenue W.W.T.P.**

### **5.6.1 Project Scope**

As part of the 2023 City of Hamilton Development Charge Study and review of the water and wastewater capital program, it is recognized that the Woodward Avenue W.W.T.P. Upgrade is a significant and major capital project required to meet the future growth to the service target.

The scope of the Woodward Avenue W.W.T.P. expansion has evolved from the project developed under the 2006 Master Plan and carried in previous D.C. updates. The project has undergone review through the original Master Plan, subsequent Class E.A. study, and most significantly through the conceptual / preliminary design phases as part of the project implementation.

Over the last few years, the City of Hamilton proactively and continually reviewed the wastewater treatment capacity trends that were declining. Concurrently, additional discussions were taking place regarding the conditions and expectations for receiving federal and provincial grants and funding for the project. Based on this new information, it was determined that the optimal approach for the Woodward Avenue W.W.T.P. Upgrades would be to complete the water quality upgrades first and defer most of the capacity upgrades out in the future until such time as the current rated capacity of the plant would be constrained.

This approach results in a cost-effective implementation program for the Woodward Avenue W.W.T.P. Upgrades as well as meets the funding/grant requirements with respect to scope and timing in order to secure the funds.

### **5.6.2 Key Considerations**

With respect to the wastewater flow projections, the analysis undertaken by the City team indicated that lower than anticipated flows were observed at the plant and decreasing trends in recent years. It is estimated that due to several factors, including reduced water demands and reduction in large scale employment, the wastewater flows are approximately 34 MLD lower than previously projected. While recent actual flows are below projections, caution should be taken before allocating this capacity to new development. It was determined that there is potential for these uses to return and that the City should safeguard this capacity for the already approved lands. On this basis, it has been determined that 50% of the available capacity will be made available to new development, while 50% will be maintained for the existing serviced areas. As such, 50% of the 34 MLD which equates to 17 MLD, within the current rated capacity of 409 MLD, of the Woodward Avenue W.W.T.P. can be utilized by new development.

Notwithstanding recent trends, it was also determined that the capacity for the future expansion of the Woodward Avenue W.W.T.P. would remain at 500 MLD to satisfy the capacity requirements of the Places To Grow population and employment projections identified in the Places to Grow Act. Updated projections based on recent flow measurement at the W.W.T.P. identified that there would be some Post Period benefit beyond the service target boundary. As such, a 25% Post Period Benefit was applied to the Woodward W.W.T.P. projects.

### **5.6.3 Project Cost Analysis**

Given that the Woodward Avenue W.W.T.P. Upgrades have undergone a significant scope change, a new cost estimate for the total facility upgrades has been completed. Table F-5 provides the overall summary table of the project components that comprise the full upgrades. Attachment D also provides additional detail regarding available cost estimate breakdowns as well as the rationale for the D.C. eligible calculation.

The updated 2023 Cost Estimate for the Woodward Avenue W.W.T.P. Upgrades is summarized in the following table and further detailed in Table F-5.



**Table 3 - Woodward Avenue W.W.T.P. Upgrades Summary & Cost Estimate**

Project ID	Description	Capital Cost Estimate (\$2023)	Internal Staffing Cost Allocation (Not Eligible for Funding)	Capital Cost w Internal Staffing (\$)
1	Wastewater Pumping Station	\$ 91,033,568	\$ 2,145,501	\$ 93,179,000
2a	Primary Clarifier - Primary Treatment (Phase 1) - Engineering Included	\$ 16,255,669	\$ -	\$ 16,256,000
2b	Primary Clarifier - Primary Treatment (Phase 2 - Tanks) - Engineering Included	\$ 52,246,549	\$ -	\$ 52,247,000
2c	Primary Clarifier - Other Costs (includes New/Expanded Laboratory/Admin Building)	\$ 11,857,782	\$ -	\$ 11,858,000
3	Tertiary Upgrades - North and South Secondary Treatment Plant Upgrades	\$ -	\$ -	\$ -
4a	Tertiary Upgrades - New Secondary/Tertiary Treatment Plant (Phase 1)	\$ 155,504,975	\$ 3,664,887	\$ 159,170,000
4b-1	Tertiary Upgrades - Tertiary Treatment Plant & 3rd Plant (Phase 2)	\$ 226,312,000	\$ 4,564,986	\$ 230,877,000
4b-2	Tertiary Upgrades - Primary Effluent PS (Phase 2)	\$ 13,470,000	\$ 271,706	\$ 13,742,000
4b-3	Tertiary Upgrades - WUP Office Relocation (Phase 2)	\$ 5,090,000	\$ 102,671	\$ 5,193,000
4b-4	Tertiary Upgrades - Gas Sphere Relocation / Biogas (Phase 2)	\$ 3,861,000	\$ 77,881	\$ 3,939,000
5a	Chlorine Contact Tank and Outfall - Railway Re-Alignment	\$ 11,390,000	\$ 230,000	\$ 11,620,000
5b	Chlorine Contact Tank and Outfall - Secondary/Tertiary Chlorine contact Tank, Outfall and Red Hill Creek Upgrades	\$ 49,933,570	\$ 1,176,819	\$ 51,110,000
6	Biogas Digester - New Waste Activated Sludge Thickening Facility (forms part of the Digester Upgrades)	\$ 8,803,000	\$ 177,567	\$ 8,981,000
7	Chlorine Contact Tank and Outfall - New Outfall (included in 5b project)	\$ -	\$ -	\$ -
8a	Clean Harbour Project - Actual Costs of Engineering (Projects 1, 4a, 4b, 5, 13) Phase 1	\$ 47,541,754	\$ -	\$ 47,542,000
8b	Clean Harbour Project - O/S Commitments of Engineering (Projects 1, 4a, 4b, 5, 13) Phase 1	\$ 6,788,649	\$ -	\$ 6,789,000
8c	Plant Expansion - Future Engineering (Projects 4b, 5a, 6, 11b, 13b) Phase 2	\$ 62,478,006	\$ -	\$ 62,478,000
8d	Plant Expansion - Engineering - Other Costs (includes Modular Office Building)	\$ 10,701,376		\$ 10,701,000
9	Biogas Digester - Additional Dewatering Capacity	\$ -	\$ -	\$ -
10	Biogas Digester - Refurbishment of Digesters to Increase Capacity	\$ -	\$ -	\$ -
11a	Biogas Digester - Biogas Upgrades	\$ 45,005,784	\$ -	\$ 45,006,000
11b	Biogas Digester - Digesters Upgrades	\$ 48,440,000	\$ 977,000	\$ 49,417,000
12	Biosolids Management Facility - Biosolids Thermal Reduction Disposal Facility	\$ 94,790,000	\$ 4,650,000	\$ 99,440,000
13a	Electrical System Upgrades - New Electrical and power systems - Phase 1	\$ 60,033,299	\$ 1,414,948	\$ 61,448,000
13b	Electrical System Upgrades - New Electrical and power systems - Phase 2	\$ 5,190,000	\$ 105,000	\$ 5,295,000
14	Collection System Upgrades	\$ 10,176,000	\$ 239,825	\$ 10,416,000
	<b>Total</b>	<b>\$ 1,036,902,982</b>	<b>\$ 19,798,792</b>	<b>\$ 1,056,702,000</b>

## 6.0 SUMMARY OF DEVELOPMENT CHARGES PROJECTS

The following tables summarize total project costs for the D.C. projects (not including Woodward W.W.T.P.). The detailed calculations are provided in Attachments A through E.

**Table 4 - Summary of Total Project Costs for the D.C. projects (not including Woodward W.W.T.P.)**

<b>Total Costs</b>			
<b>Area</b>	<b>Sanitary</b>	<b>Water</b>	<b>Total</b>
Ancaster	\$ 1,351,000	\$ 43,983,000	\$ 45,334,000
Waterdown	\$ 485,000	\$ 46,859,000	\$ 47,344,000
Binbrook	\$ 2,217,000	\$ 21,400,000	\$ 23,617,000
AEGD/Mt. Hope	\$ 49,001,000	\$ 26,207,000	\$ 75,208,000
Hamilton Mountain	\$ 119,952,000	\$ 73,311,000	\$ 193,263,000
Stoney Creek Upper	\$ -	\$ 92,629,000	\$ 92,629,000
Stoney Creek Lower	\$ 86,313,000	\$ 14,801,000	\$ 101,114,000
City Wide Projects	\$ 69,394,000	\$ 53,549,285	\$ 122,943,285
<b>Total (\$2023)</b>	<b>\$ 328,713,000</b>	<b>\$ 372,739,285</b>	<b>\$ 701,452,285</b>
<b>Non-Growth Related Costs (City Costs)</b>			
<b>Area</b>	<b>Sanitary</b>	<b>Water</b>	<b>Total</b>
Ancaster	\$ -	\$ 11,157,750	\$ 11,157,750
Waterdown	\$ -	\$ 9,030,500	\$ 9,030,500
Binbrook	\$ -	\$ 3,480,000	\$ 3,480,000
AEGD/Mt. Hope	\$ -	\$ -	\$ -
Hamilton Mountain	\$ -	\$ -	\$ -
Stoney Creek Upper	\$ -	\$ 7,272,750	\$ 7,272,750
Stoney Creek Lower	\$ 235,700	\$ -	\$ 235,700
City Wide Projects	\$ 23,632,000	\$ 21,325,250	\$ 44,957,250
<b>Total (\$2023)</b>	<b>\$ 23,867,700</b>	<b>\$ 52,266,250</b>	<b>\$ 76,133,950</b>
<b>Growth Related Costs - Development Charges</b>			
<b>Area</b>	<b>Sanitary</b>	<b>Water</b>	<b>Total</b>
Ancaster	\$ 1,351,000	\$ 30,798,000	\$ 32,149,000
Waterdown	\$ 126,000	\$ 34,265,000	\$ 34,391,000
Binbrook	\$ 1,319,000	\$ 17,202,000	\$ 18,521,000
AEGD/Mt. Hope	\$ 41,403,000	\$ 20,706,000	\$ 62,109,000
Hamilton Mountain	\$ 107,501,000	\$ 53,733,000	\$ 161,234,000
Stoney Creek Upper	\$ -	\$ 53,874,000	\$ 53,874,000
Stoney Creek Lower	\$ 77,545,300	\$ 14,801,000	\$ 92,346,300
City Wide Projects	\$ 45,762,000	\$ 32,224,035	\$ 77,986,035
<b>Total (\$2023)</b>	<b>\$ 275,007,300</b>	<b>\$ 257,603,035</b>	<b>\$ 532,610,335</b>
<b>Direct Developer's Costs</b>			
<b>Area</b>	<b>Sanitary</b>	<b>Water</b>	<b>Total</b>
Ancaster	\$ -	\$ -	\$ -
Waterdown	\$ 359,000	\$ 592,000	\$ 951,000
Binbrook	\$ 898,000	\$ 718,000	\$ 1,616,000
AEGD/Mt. Hope	\$ 7,598,000	\$ 5,501,000	\$ 13,099,000
Hamilton Mountain	\$ 771,000	\$ 2,010,000	\$ 2,781,000
Stoney Creek Upper	\$ -	\$ 723,000	\$ 723,000
Stoney Creek Lower	\$ 532,000	\$ -	\$ 532,000
City Wide Projects	\$ -	\$ -	\$ -
<b>Total (\$2023)</b>	<b>\$ 10,158,000</b>	<b>\$ 9,544,000</b>	<b>\$ 19,702,000</b>
<b>Post Period Benefit Costs</b>			
<b>Area</b>	<b>Sanitary</b>	<b>Water</b>	<b>Total</b>
Ancaster	\$ -	\$ 2,027,400	\$ 2,027,400
Waterdown	\$ -	\$ 2,972,000	\$ 2,972,000
Binbrook	\$ -	\$ -	\$ -
AEGD/Mt. Hope	\$ -	\$ -	\$ -
Hamilton Mountain	\$ 11,680,000	\$ 17,568,000	\$ 29,248,000
Stoney Creek Upper	\$ -	\$ 30,759,100	\$ 30,759,100
Stoney Creek Lower	\$ 8,000,000	\$ -	\$ 8,000,000
City Wide Projects	\$ -	\$ -	\$ -
<b>Total (\$2023)</b>	<b>\$ 19,680,000</b>	<b>\$ 53,326,500</b>	<b>\$ 73,006,500</b>



## Attachment A – Water Projects

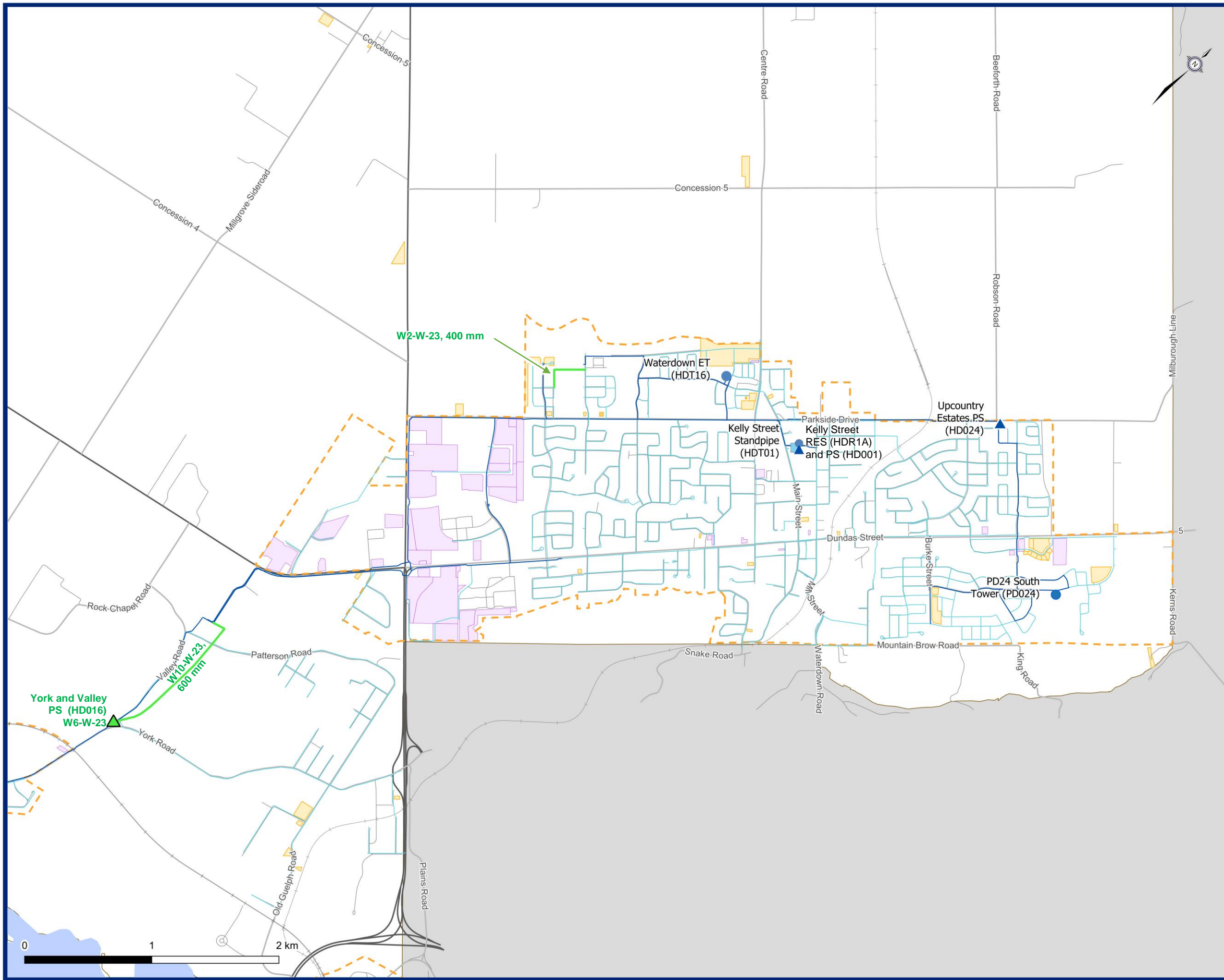
TABLE F-1 - WATER CAPITAL PROGRAM

Area	Planning Period	Project ID	Project/Street	From	To	Length (m)	Size (mm)	Unit Rate Type (Greenfield/Urban)	Unit Cost (2023\$/m)	Estimated Total Cost (2023\$)	Direct Developer Contribution (2023\$)	Benefit to Existing (%)	Benefit to Existing (\$2023)	Post Period Benefit (%)	Post Period Benefit (2023\$)	Development Charges (2023\$)	Updated Timing	Estimate from Updated Methodology	Estimated Cost from Separate Study/City	Scope Change: Location	Scope Change: Length and/or Size	New Project	2023 Comments
<b>WATERDOWN</b>																							
Waterdown	0 to 5 years	W2-W-23	New Road	Sadielou Blvd	Mosaic Dr	700	400	G	\$ 1,084	\$ 1,134,000	\$ 592,000	0%	\$ -	0%	\$ -	\$ 542,000		x			x		Updated cost and modified length as partially completed per GIS
Waterdown	0 to 5 years	W6-W-23	HD016 Booster Station Upgrade, Back Up Power and Building Expansion	208 L/s	309 L/s	208	309 L/s	U	n/a	\$ 16,005,000		10%	\$ 1,600,500	0%	\$ -	\$ 14,405,000			x				Updated cost from HD016 MCEA Addendum Report (2022), land cost not identified
Waterdown	0 to 5 years	W10-W-23	PD16 Feedermain - Valley Rd and Rock Chapel Rd	PS HD016	Thorncrest Blvd at Algoniquan	1200	600	U	n/a	\$ 29,720,000		25%	\$ 7,430,000	10%	\$ 2,972,000	\$ 19,318,000			x	x	x		Updated Alignment and cost estimate from 2023 EA study, property acquisition cost \$122,500
<b>Sub-Total Waterdown</b>										\$ 46,859,000	\$ 592,000		\$ 9,030,500		\$ 2,972,000	\$ 34,265,000							
<b>ANCASTER</b>																							
Ancaster	0 to 5 years	A1-W-23	Garner Rd.	Southcote Rd	Fiddlers Green Rd	2060	600	U	\$ 2,920	\$ 8,993,000		0%	\$ -	0%	\$ -	\$ 8,993,000		x					
Ancaster	0 to 5 years	A2-W-23	Shaver Rd	Westview Ave	Katsura Pl	800	300	U	\$ 1,138	\$ 1,361,000		75%	\$ 1,020,750	0%	\$ -	\$ 340,000		x					
Ancaster	0 to 5 years	A16-W-23	Garner Rd	Fiddlers Green Rd	Hamilton Dr	1680	600	U	\$ 2,920	\$ 7,334,000		0%	\$ -	0%	\$ -	\$ 7,334,000		x					
Ancaster	0 to 5 years	A17-W-23	Garner Rd	Hamilton Dr	Wilson St W	1800	500	U	\$ 2,238	\$ 6,021,000		0%	\$ -	0%	\$ -	\$ 6,021,000		x					
Ancaster	0 to 5 years	A18-W-23	Reservoir W-H 18 (additional elevated storage) AEGD Proj B-20	385 Jerseyville Road, within the Robert E. Wade Ancaster Community Park				9.9 ML	G	n/a	\$ 20,274,000		50%	\$ 10,137,000	10%	\$ 2,027,400	\$ 8,110,000			x			Updated Cost from 2019 Addendum to Class EA study
<b>Sub-Total Ancaster</b>										\$ 43,983,000	\$ -		\$ 11,157,750		\$ 2,027,400	\$ 30,798,000							
<b>AEGD/MT. HOPE</b>																							
AEGD/MT. Hope	0 to 5 years	MH5-W-23	PD 18 Watermain on Southcote Rd	Garner Rd	383 m South	340	400	G	\$ 1,084	\$ 551,000		0%	\$ -	0%	\$ -	\$ 551,000		x					
AEGD/MT. Hope	6 years to UBBO	MH1-W-23	PD 18 Watermain on Smith Rd	Garner Rd	389 m south	360	300	G	\$ 650	\$ 350,000		0%	\$ -	0%	\$ -	\$ 350,000		x					
AEGD/MT. Hope	6 years to UBBO	MH2-W-23	PD 18 Watermain on new road	Southcote Rd	Smith Rd	420	400	G	\$ 1,084	\$ 680,000	\$ 355,000	0%	\$ -	0%	\$ -	\$ 325,000		x					
AEGD/MT. Hope	6 years to UBBO	MH3-W-23	PD 18 Watermain on Southcote Rd	New road	Hydro Corridor	740	400	G	\$ 1,084	\$ 1,199,000		0%	\$ -	0%	\$ -	\$ 1,199,000		x					
AEGD/MT. Hope	6 years to UBBO	MH7-W-23	PD 6 Watermain on Book Rd	372 m east of Smith Rd	Smith Rd	320	400	G	\$ 1,084	\$ 518,000		0%	\$ -	0%	\$ -	\$ 518,000		x					
AEGD/MT. Hope	6 years to UBBO	MH8-W-23	PD 18 Watermain on Southcote Rd	Book Rd	590 m north	530	300	G	\$ 650	\$ 515,000		0%	\$ -	0%	\$ -	\$ 515,000		x					
AEGD/MT. Hope	6 years to UBBO	MH9-W-23	PD 18 Watermain on Smith Rd	Book Rd	603 m north	520	300	G	\$ 650	\$ 505,000		0%	\$ -	0%	\$ -	\$ 505,000		x					
AEGD/MT. Hope	6 years to UBBO	MH10-W-23	PD 18 Watermain on new road	Smith Rd	421 m east	420	400	G	\$ 1,084	\$ 680,000	\$ 355,000	0%	\$ -	0%	\$ -	\$ 325,000		x					
AEGD/MT. Hope	6 years to UBBO	MH11-W-23	PD 6 Watermain on Glancaster Rd	Garner Rd/HD018	Twenty Rd	1310	400	U	\$ 1,896	\$ 3,714,000		0%	\$ -	0%	\$ -	\$ 3,714,000		x			x		updated alignment
AEGD/MT. Hope	6 years to UBBO	MH13-W-23	PD 18 Watermain on new road	Raymond Rd Extension	863 m west	850	400	G	\$ 1,084	\$ 1,377,000	\$ 718,000	0%	\$ -	0%	\$ -	\$ 659,000		x					
AEGD/MT. Hope	6 years to UBBO	MH14-W-23	PD 18 Watermain on new road	Raymond Rd Extension	552 m east	540	400	G	\$ 1,084	\$ 875,000	\$ 456,000	0%	\$ -	0%	\$ -	\$ 419,000		x					
AEGD/MT. Hope	6 years to UBBO	MH15-W-23	PD 6 Watermain on Dickenson Rd	Garth St Extension	953 m west	890	300	G	\$ 650	\$ 865,000		0%	\$ -	0%	\$ -	\$ 865,000		x					
AEGD/MT. Hope	6 years to UBBO	MH16-W-23	PD 18 Watermain on Southcote Rd	Hydro Corridor	293 m south	300	400	G	\$ 1,084	\$ 486,000		0%	\$ -	0%	\$ -	\$ 486,000		x					
AEGD/MT. Hope	6 years to UBBO	MH17-W-23	PD 6 Watermain on Smith Rd	Book Rd	259 m south	260	400	G	\$ 1,084	\$ 421,000		0%	\$ -	0%	\$ -	\$ 421,000		x					
AEGD/MT. Hope	6 years to UBBO	MH18-W-23	PD 18 Watermain on Smith Rd	Hydro Corridor	627 m north	670	300	G	\$ 650	\$ 651,000		0%	\$ -	0%	\$ -	\$ 651,000		x					
AEGD/MT. Hope	6 years to UBBO	MH19-W-23	PD 18 Watermain on Smith Rd	Hydro Corridor	350 m south	360	300	G	\$ 650	\$ 350,000		0%	\$ -	0%	\$ -	\$ 350,000		x					
AEGD/MT. Hope	6 years to UBBO	MH22-W-23	PD 6 Watermain on Book Rd	Glancaster Rd	595 m west	620	400	G	\$ 1,084	\$ 1,004,000		0%	\$ -	0%	\$ -	\$ 1,004,000		x					
AEGD/MT. Hope	6 years to UBBO	MH23-W-23	PD 6 Watermain on Dickenson Rd	Glancaster Rd	598 m east	630	300	G	\$ 650	\$ 612,000		0%	\$ -	0%	\$ -	\$ 612,000		x					
AEGD/MT. Hope	6 years to UBBO	MH24-W-23	PD 6 Watermain on new Garth St Extension	Dickenson Rd	837 m north	1350	400	G	\$ 1,084	\$ 2,187,000	\$ 1,141,000	0%	\$ -	0%	\$ -	\$ 1,046,000		x					
AEGD/MT. Hope	6 years to UBBO	MH25-W-23	PD 6 Watermain on Dickenson Rd	Garth St	870 m east	420	400	G	\$ 1,084	\$ 680,000		0%	\$ -	0%	\$ -	\$ 680,000		x					
AEGD/MT. Hope	6 years to UBBO	MH26-W-23	PD 6 Watermain on new Garth St Extension	Glancaster Rd	1365 m east	1360	400	G	\$ 1,084	\$ 2,203,000	\$ 1,149,000	0%	\$ -	0%	\$ -	\$ 1,054,000		x					
AEGD/MT. Hope	6 years to UBBO	MH27-W-23	PD 6 Watermain on new Garth St Extension	Dickenson Rd	MH26-W-23	370	400	G	\$ 1,084	\$ 599,000	\$ 313,000	0%	\$ -	0%	\$ -	\$ 286,000		x					
AEGD/MT. Hope	6 years to UBBO	MH28-W-23	PD 6 Watermain on Smith Rd	265 m south of Book Rd	625 m south of Book Rd	330	400	G	\$ 1,084	\$ 535,000		0%	\$ -	0%	\$ -	\$ 535,000		x					
AEGD/MT. Hope	6 years to UBBO	MH29-W-23	PD 6 Watermain on new Garth St Extension	Twenty Rd	662 m south	680	400	G	\$ 1,084	\$ 1,102,000	\$ 575,000	0%	\$ -	0%	\$ -	\$ 527,000		x					
AEGD/MT. Hope	6 years to UBBO	MH30-W-23	PD 6 Watermain on Book Rd	Smith Rd	Southcote Rd	440	400	G	\$ 1,084	\$ 713,000		0%	\$ -	0%	\$ -	\$ 713,000		x					
AEGD/MT. Hope	6 years to UBBO	MH44-W-23	PD 6 Watermain on new Garth St extension	Glancaster Rd	Smith Rd	520	400	G	\$ 1,084	\$ 842,000	\$ 439,000	0%	\$ -	0%	\$ -	\$ 403,000		x					
AEGD/MT. Hope	6 years to UBBO	MH45-W-23	PD 6 Watermain on Southcote Rd	Book Rd	590 m south	460	300	G	\$ 650	\$ 447,000		0%	\$ -	0%	\$ -	\$ 447,000		x					
AEGD/MT. Hope	6 years to UBBO	MH46-W-23	PD 6 Watermain on Book Rd	Southcote Rd	420 m west	400	300	G	\$ 650	\$ 389,000		0%	\$ -	0%	\$ -	\$ 389,000		x					
AEGD/MT. Hope	6 years to UBBO	MH47-W-23	PD 18 Watermain on Book Rd	West of Southcote Rd	East of Smith Rd	1190	300	G	\$ 650	\$ 1,157,000		0%	\$ -	0%	\$ -	\$ 1,157,000		x					
<b>Sub-Total AEGD/MT. Hope</b>										\$ 26,207,000	\$ 5,501,000		\$ -		\$ -	\$ 20,706,000							

TABLE F-1 - WATER CAPITAL PROGRAM

Area	Planning Period	Project ID	Project/Street	From	To	Length (m)	Size (mm)	Unit Rate Type (Greenfield/Urban)	Unit Cost (2023\$/m)	Estimated Total Cost (2023\$)	Direct Developer Contribution (2023\$)	Benefit to Existing (%)	Benefit to Existing (\$2023)	Post Period Benefit (%)	Post Period Benefit (2023\$)	Development Charges (2023\$)	Updated Timing	Estimate from Updated Methodology	Estimated Cost from Separate Study/City	Scope Change: Location	Scope Change: Length and/or Size	New Project	2023 Comments
<b>BINBROOK</b>																							
Binbrook	0 to 5 years	B2-W-23	HD019 Pumping Station Expansion and Upgrades to increase Firm Capacity from 75 L/s to 122 L/s	Located at Regional Rd. 56		n/a	122		n/a	\$ 5,800,000		60%	\$ 3,480,000	0%		\$ 2,320,000			x				Updated Estimate based on Binbrook CA&CD Report by GMBP
Binbrook	0 to 5 years	B5-W-23	Fletcher Rd	Binbrook Rd	Pumpkin Pass	330	400	G	\$ 1,084	\$ 535,000		0%	\$ -	0%		\$ 535,000		x			x		updated length
Binbrook	0 to 5 years	B6-W-23	Binbrook Rd	West of Royal Winter Blvd	Fletcher Rd	850	400	G	\$ 1,084	\$ 1,377,000		0%	\$ -	0%		\$ 1,377,000		x					
Binbrook	0 to 5 years	B7-W-23	Binbrook Trunk Feedermain - Fletcher's Rd and Cemetery Rd	Hydro Corridor	HD019	6950	400	G	\$ 1,084	\$ 11,258,000		0%	\$ -	0%		\$ 11,258,000		x					
Binbrook	0 to 5 years	B8-W-23	Fletcher Rd	Binbrook Rd	Binhaven Boulevard Extension	650	400	G	\$ 1,084	\$ 1,053,000		0%	\$ -	0%		\$ 1,053,000		x					
Binbrook	0 to 5 years	B9-W-23	Binhaven Boulevard Extension	Brigham Ave	Fletcher Rd	850	400	G	\$ 1,084	\$ 1,377,000	\$ 718,000	0%	\$ -	0%		\$ 659,000		x					
<b>Sub-Total Binbrook</b>										\$ 21,400,000	\$ 718,000		\$ 3,480,000		\$ -	\$ 17,202,000							
<b>HAMILTON MOUNTAIN</b>																							
Hamilton Mountain	0 to 5 years	HM2-W-23	Terni Blvd extension	140m West of Upper Gage Ave	Miles Rd	430	400	G	\$ 1,084	\$ 697,000	\$ 363,000	0%	\$ -	0%		\$ 334,000		x					
Hamilton Mountain	0 to 5 years	HM3-W-23	Terni Blvd extension	Miles Rd	300m west	300	400	G	\$ 1,084	\$ 486,000	\$ 254,000	0%	\$ -	0%		\$ 232,000							
Hamilton Mountain	0 to 5 years	HM4-W-23	Miles Rd	West extension of Terni Blvd	East extension of Terni Blvd	50	400	U	\$ 1,896	\$ 142,000		0%	\$ -	0%		\$ 142,000		x					
Hamilton Mountain	0 to 5 years	HM5-W-23	Vineberg Dr	140m east of Upper Wentworth St	570m east of Upper Wentworth St	430	400	G	\$ 1,084	\$ 697,000	\$ 363,000	0%	\$ -	0%		\$ 334,000		x					
Hamilton Mountain	0 to 5 years	HM8-W-23	Twenty Rd Extension	Trinity Church Rd	Glover Rd	580	400	G	\$ 1,084	\$ 940,000	\$ 338,000	0%	\$ -	0%		\$ 602,000		x					
Hamilton Mountain	0 to 5 years	HM12-W-23	Nebo Rd	Dickenson Rd	Hydro Corridor	350	300	U	\$ 1,138	\$ 595,000		0%	\$ -	0%		\$ 595,000		x					
Hamilton Mountain	0 to 5 years	HM13-W-23	Dickenson Rd	Nebo Rd	800m east of Nebo Rd.	800	300	U	\$ 1,138	\$ 1,361,000		0%	\$ -	0%		\$ 1,361,000		x					
Hamilton Mountain	0 to 5 years	HM15-W-23	Dartnall Rd and new road alignment	Twenty Rd	Dickenson Rd	1475	300	G	\$ 650	\$ 1,434,000		0%	\$ -	0%		\$ 1,434,000		x					
Hamilton Mountain	0 to 5 years	HM18-W-23	Extension of Terni Blvd	590m east of Upper Wentworth St	300m west of Miles Rd	450	400	G	\$ 1,084	\$ 729,000	\$ 380,000	0%	\$ -	0%		\$ 349,000		x					
Hamilton Mountain	0 to 5 years	HM20-W-23	Stone Church Trunk Feedermain	First Rd W	HD06B	5420	1200	U	\$ 4,659	\$ 45,000,000		0%	\$ -	10%	\$ 4,500,000	\$ 40,500,000			x			Estimated Total Cost (2023\$) provided by City, land cost not specified, project ID 165540243	
Hamilton Mountain	0 to 5 years	HM28-W-23	PD7 Elevated Tank	420 Trinity Church Rd		n/a	9.9 ML	G	n/a	\$ 17,424,000		0%	\$ -	75%	\$ 13,068,000	\$ 4,356,000			x			Estimated Total Cost inflated to 2023\$ from 2019 study, land acquisition cost \$0.5M/\$0.6M (2019\$/2023\$)	
Hamilton Mountain	6 years to UBBO	HM1-W-23	Crerar Dr	160m North of Stone Church Rd	Stone Church Rd.	160	400	G	\$ 1,084	\$ 259,000	\$ 135,000	0%	\$ -	0%		\$ 124,000		x					
Hamilton Mountain	6 years to UBBO	HM2-W-23	New East-West alignment	Upper Sherman Ave	Acadia Dr	210	400	G	\$ 1,084	\$ 340,000	\$ 177,000	0%	\$ -	0%		\$ 163,000							
Hamilton Mountain	6 years to UBBO	HM27-W-23	Upper Wentworth / Turner Park / Twenty Rd	South Limit at Hydro Corridor	Springside Dr	1980	400	G	\$ 1,084	\$ 3,207,000		0%	\$ -	0%		\$ 3,207,000							
<b>Sub-Total Hamilton Mountain</b>										\$ 73,311,000	\$ 2,010,000		\$ -		\$ 17,568,000	\$ 53,733,000							
<b>STONE CREEK UPPER</b>																							
Stoney Creek Upper	0 to 5 years	SCU6-W-23	First Rd W	Green Mountain Rd	Glover Mountain Rd	855	400	G	\$ 1,084	\$ 1,385,000	\$ 723,000	0%	\$ -	0%		\$ 662,000							
Stoney Creek Upper	0 to 5 years	SCU18-W-23	Greenhill PS W-HD05A Upgrades (W-28)	155 MLD		57	155	U	n/a	\$ 29,091,000		25%	\$ 7,272,750	10%	\$ 2,909,100	\$ 18,909,000		x					Inflated estimate from 2019 DC, land cost not specified
Stoney Creek Upper	0 to 5 years	SCU23-W-23	PD5 Trunk Feedermain - HD05A to Valve Chamber	HD05A	Valve Chamber 3B	240	1200	G	\$ -	\$ 7,903,000		0%	\$ -	0%		\$ 7,903,000			x				Inflated estimate from 2019 DC
Stoney Creek Upper	6 years to UBBO	SCU7-W-23	Highland Reservoir HDR07 (additional storage)			n/a	5.5 ML	U	n/a	\$ 17,424,000		0%	\$ -	25%	\$ 4,356,000	\$ 13,068,000		x					Estimated cost and capacity from Study, Inflated to 2023\$
Stoney Creek Upper	6 years to UBBO	SCU21-W-23	New Zone 7 Booster Pumping Station	Upper Centennial Pkwy and Rymal Rd E			60	G	na	\$ 28,575,000		0%	\$ -	75%	\$ 21,431,250	\$ 7,144,000		x					Estimated cost from Study, Inflated to 2023\$, land acquisition cost \$0.5M/\$0.6M (2019\$/2023\$)
Stoney Creek Upper	6 years to UBBO	SCU22-W-23	Upper Centennial Pkwy	Mud St	New PD 7 Booster Station	1890	600	U	\$ 2,920	\$ 8,251,000		0%	\$ -	25%	\$ 2,062,750	\$ 6,188,000							
<b>Sub-Total Stoney Creek Upper</b>										\$ 92,629,000	\$ 723,000		\$ 7,272,750		\$ 30,759,100	\$ 53,874,000							
<b>STONE CREEK LOWER</b>																							
Stoney Creek Lower	0 to 5 years	SCL4-W-23	Replacement on Lewis Rd	Hwy 8	Barton St	500	300	U	\$ 1,138	\$ 850,000		0%	\$ -	0%		\$ 850,000		x					
Stoney Creek Lower	0 to 5 years	SCL6-W-23	Glover Rd	Barton St	Service Rd Extension	700	300	U	\$ 1,138	\$ 1,191,000		0%	\$ -	0%		\$ 1,191,000		x					
Stoney Creek Lower	6 years to UBBO	SCL7-W-23	Millen Rd	South Service Rd	Arvin Ave	670	400	U	\$ 1,896	\$ 1,899,000		0%	\$ -	0%		\$ 1,899,000		x					
Stoney Creek Lower	6 years to UBBO	SCL8-W-23	South Service Rd	Fruiland Rd	Jones Rd	950	400	U	\$ 1,896	\$ 2,693,000		0%	\$ -	0%		\$ 2,693,000		x					
Stoney Creek Lower	6 years to UBBO	SCL9-W-23	South Service Rd	Millen Rd	Seaman St	1600	400	U	\$ 1,896	\$ 4,536,000		0%	\$ -	0%		\$ 4,536,000		x					
Stoney Creek Lower	6 years to UBBO	SCL10-W-23	CNR Tracks	Barton St	Dewitt Rd	610	300	U	\$ 1,138	\$ 1,038,000		0%	\$ -	0%		\$ 1,038,000		x					
Stoney Creek Lower	6 years to UBBO	SCL11-W-23	Jones Rd	South Service Rd	Barton St	915	400	U	\$ 1,896	\$ 2,594,000		0%	\$ -	0%		\$ 2,594,000		x					
<b>Sub-Total Stoney Creek Lower</b>										\$ 14,801,000	\$ -		\$ -		\$ -	\$ 14,801,000							
<b>Total Water</b>										\$ 319,190,000	\$ 9,544,000		\$ 30,941,000		\$ 53,326,500	\$ 225,379,000							

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**General Features**

- Railways
- Expanded Urban Boundary
- Other Municipalities
- Parking Lot
- Vacant Non-Residential
- Vacant Residential

**Existing Infrastructure**

- Water Treatment Plant (WTP)
- Elevated Tank (ET)
- Water Main Less than 400mm
- Water Main 400mm and Greater
- Pumping Station (PS)
- Reservoir (RES)

**Future Water Infrastructure**

- WTP 0 - 5 Years
- PS 0 - 5 Years
- ET 0 - 5 Years
- Watermain 0 - 5 Years
- Watermain 100% Direct Contribution
- PS 6 Plus Years
- RES 6 Plus Years
- Watermain 6 Plus Years

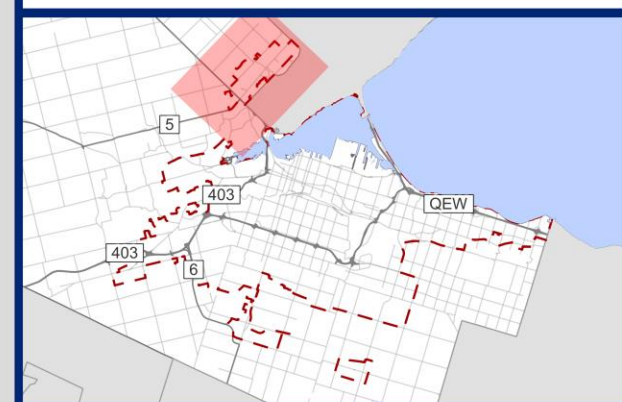


Figure 1-1

### Waterdown Water

Development Charges Background Study



- General Features**
- Railways
  - Expanded Urban Boundary
  - Other Municipalities
  - Parking Lot
  - Vacant Non-Residential
  - Vacant Residential
- Existing Infrastructure**
- Water Treatment Plant (WTP)
  - Elevated Tank (ET)
  - Water Main Less than 400mm
  - Water Main 400mm and Greater
  - Pumping Station (PS)
  - Reservoir (RES)
- Future Water Infrastructure**
- WTP 0 - 5 Years
  - PS 0 - 5 Years
  - ET 0 - 5 Years
  - Watermain 0 - 5 Years
  - Watermain 100% Direct Development Contribute
  - PS 6 Plus Years
  - RES 6 Plus Years
  - Watermain 6 Plus Years

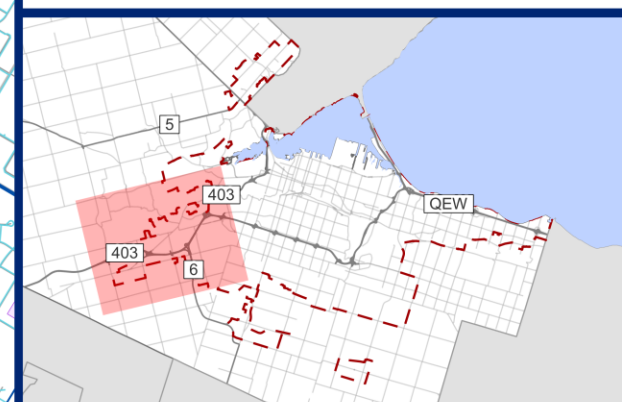
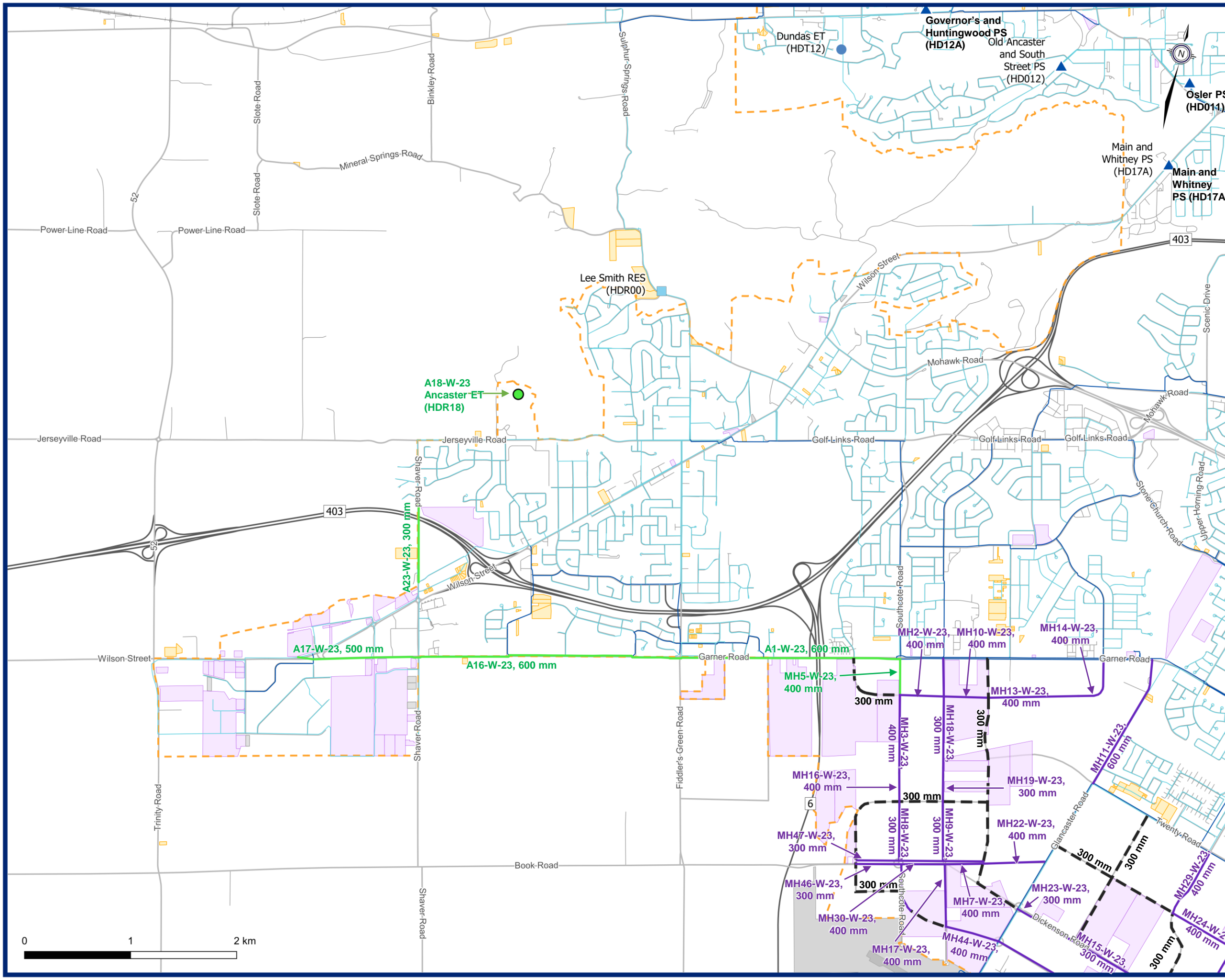
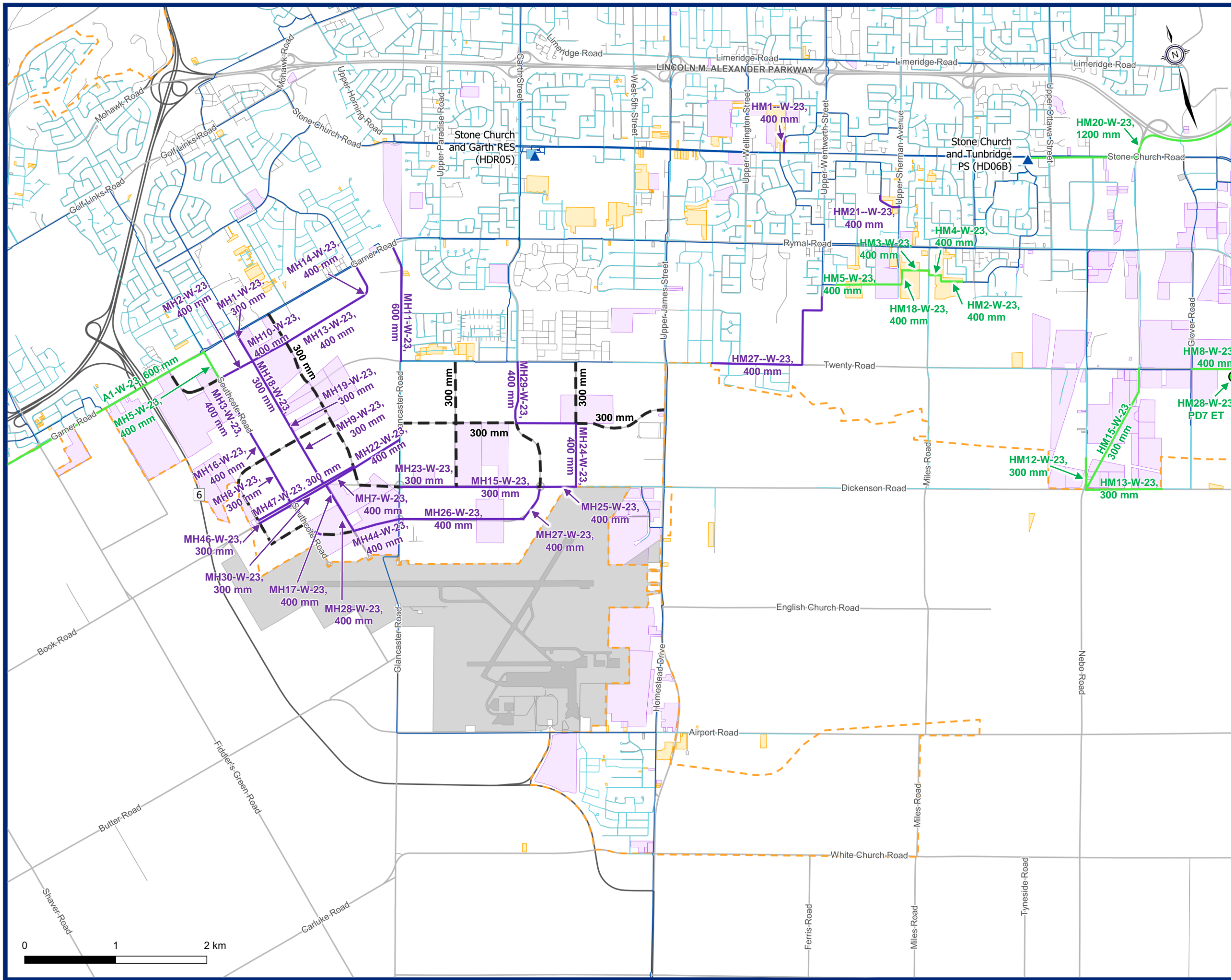


Figure 1-2  
Ancaster Water

Development Charges Background Study





**General Features**

- Railways
- Expanded Urban Boundary
- Other Municipalities
- Parking Lot
- Vacant Non-Residential
- Vacant Residential

**Existing Infrastructure**

- Water Treatment Plant (WTP)
- Elevated Tank (ET)
- Water Main Less than 400mm
- Water Main 400mm and Greater
- Pumping Station (PS)
- Reservoir (RES)

**Future Water Infrastructure**

- WTP 0 - 5 Years
- PS 0 - 5 Years
- ET 0 - 5 Years
- Watermain 0 - 5 Years
- Watermain 100% Direct Development Contribute
- PS 6 Plus Years
- RES 6 Plus Years
- Watermain 6 Plus Years

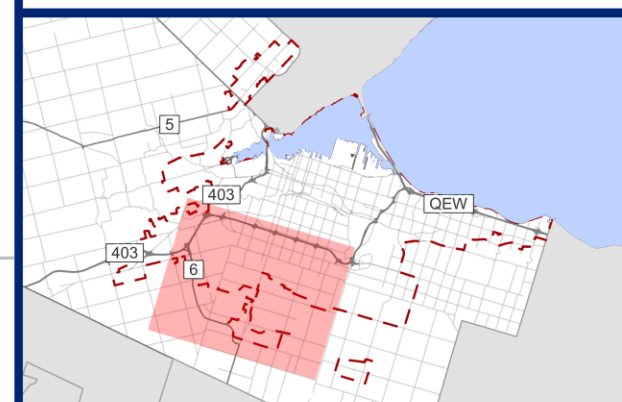
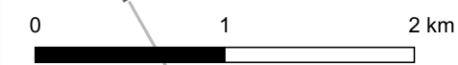


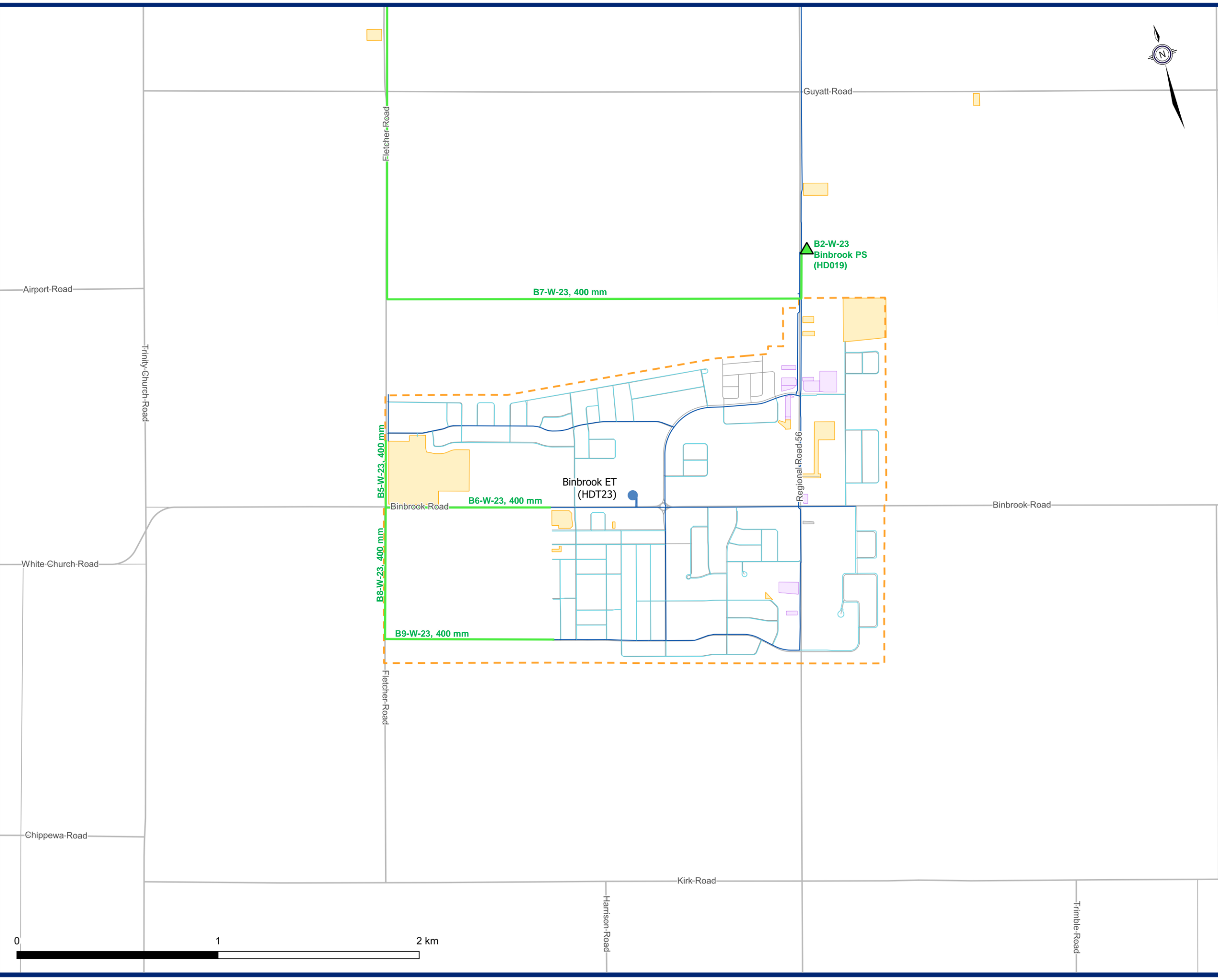
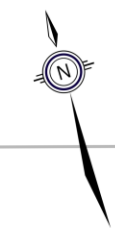
Figure 1-3

**AEGD/Mount Hope Water**

Development Charges Background Study







**General Features**

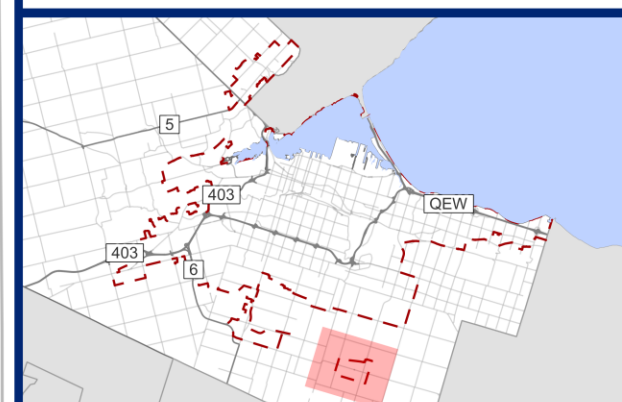
- Railways
- Expanded Urban Boundary
- Other Municipalities
- Parking Lot
- Vacant Non-Residential
- Vacant Residential

**Existing Infrastructure**

- Water Treatment Plant (WTP)
- Elevated Tank (ET)
- Water Main Less than 400mm
- Water Main 400mm and Greater
- Pumping Station (PS)
- Reservoir (RES)

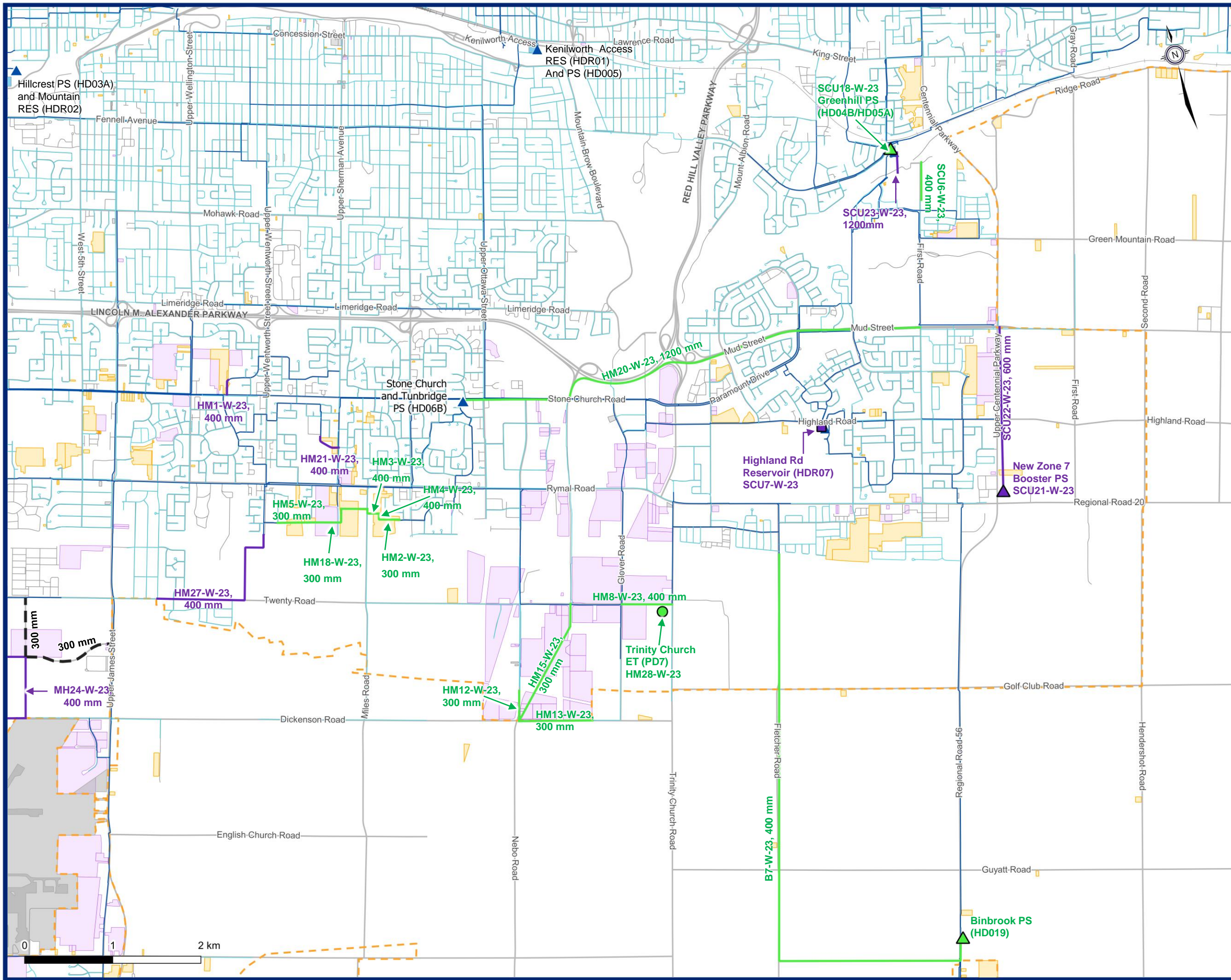
**Future Water Infrastructure**

- WTP 0 - 5 Years
- PS 0 - 5 Years
- ET 0 - 5 Years
- Watermain 0 - 5 Years
- Watermain 100% Direct Contribution
- PS 6 Plus Years
- RES 6 Plus Years
- Watermain 6 Plus Years



**Figure 1-4**  
**Binbrook Water**

Development Charges Background Study



**General Features**

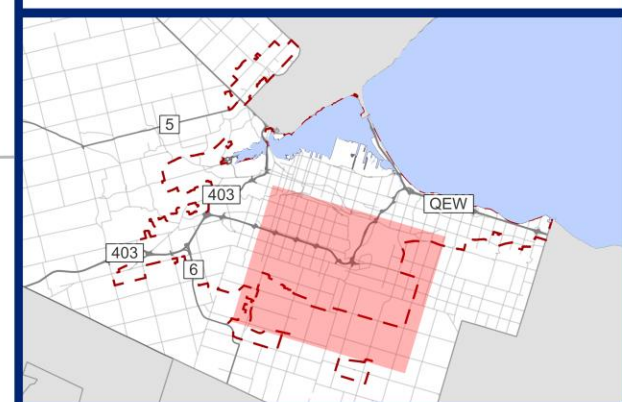
- Railways
- Expanded Urban Boundary
- Other Municipalities
- Parking Lot
- Vacant Non-Residential
- Vacant Residential

**Existing Infrastructure**

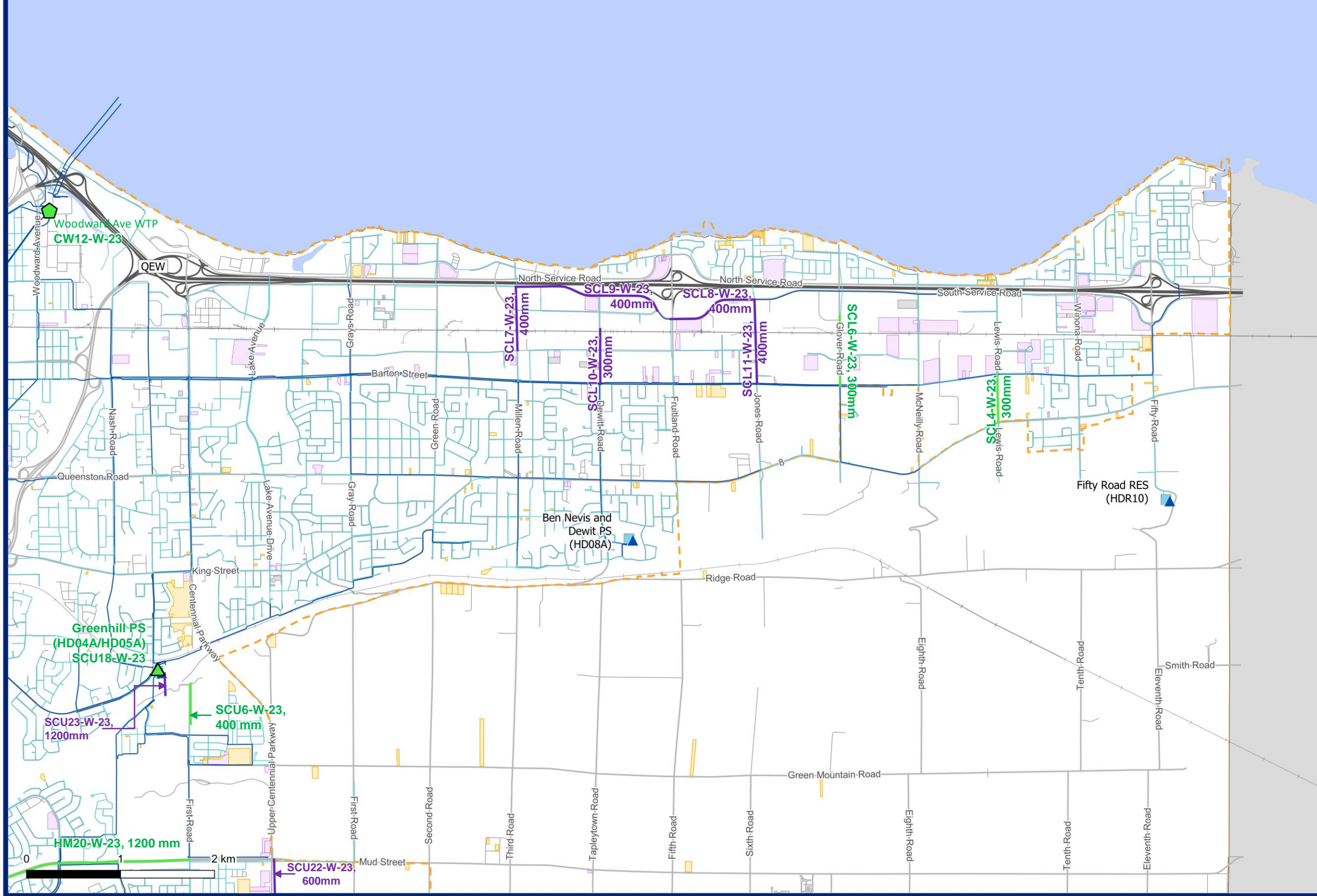
- Water Treatment Plant (WTP)
- Elevated Tank (ET)
- Water Main Less than 400mm
- Water Main 400mm and Greater
- Pumping Station (PS)
- Reservoir (RES)

**Future Water Infrastructure**

- WTP 0 - 5 Years
- PS 0 - 5 Years
- ET 0 - 5 Years
- Watermain 0 - 5 Years
- Watermain 100% Direct Devel Contribut
- PS 6 Plus Years
- RES 6 Plus Years
- Watermain 6 Plus Years



**Figure 1-5**  
**Hamilton Mountain / Stoney Creek**  
**Water**  
 Development Charges Background Study



- General Features**
- Railways
  - Expanded Urban Boundary
  - Other Municipalities
  - Parking Lot
  - Vacant Non-Residential
  - Vacant Residential
- Existing Infrastructure**
- Water Treatment Plant (WTP)
  - Elevated Tank (ET)
  - Water Main Less than 400mm
  - Water Main 400mm and Greater
  - Pumping Station (PS)
  - Reservoir (RES)
- Future Water Infrastructure**
- WTP 0 - 5 Years
  - PS 0 - 5 Years
  - ET 0 - 5 Years
  - Watermain 0 - 5 Years
  - Watermain 100% Direct Contribute
  - PS 6 Plus Years
  - RES 6 Plus Years
  - Watermain 6 Plus Years



Figure 1-6

## Stoney Creek Lower Water

Development Charges Background Study

- General Features**
- Railways
  - Expanded Urban Boundary
  - Other Municipalities
  - Parking Lot
  - Vacant Non-Residential
  - Vacant Residential
- Existing Infrastructure**
- Water Treatment Plant (WTP)
  - Elevated Tank (ET)
  - Water Main Less than 400mm
  - Water Main 400mm and Greater
  - Pumping Station (PS)
  - Reservoir (RES)
- Future Water Infrastructure**
- WTP 0 - 5 Years
  - PS 0 - 5 Years
  - ET 0 - 5 Years
  - Watermain 0 - 5 Years
  - Watermain 100% Direct Development
  - PS 6 Plus Years
  - RES 6 Plus Years
  - Watermain 6 Plus Years

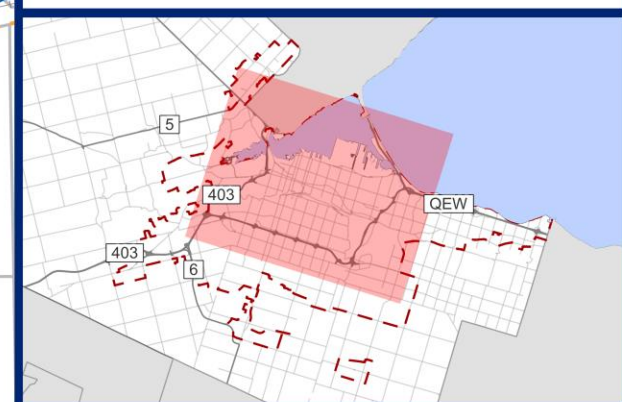
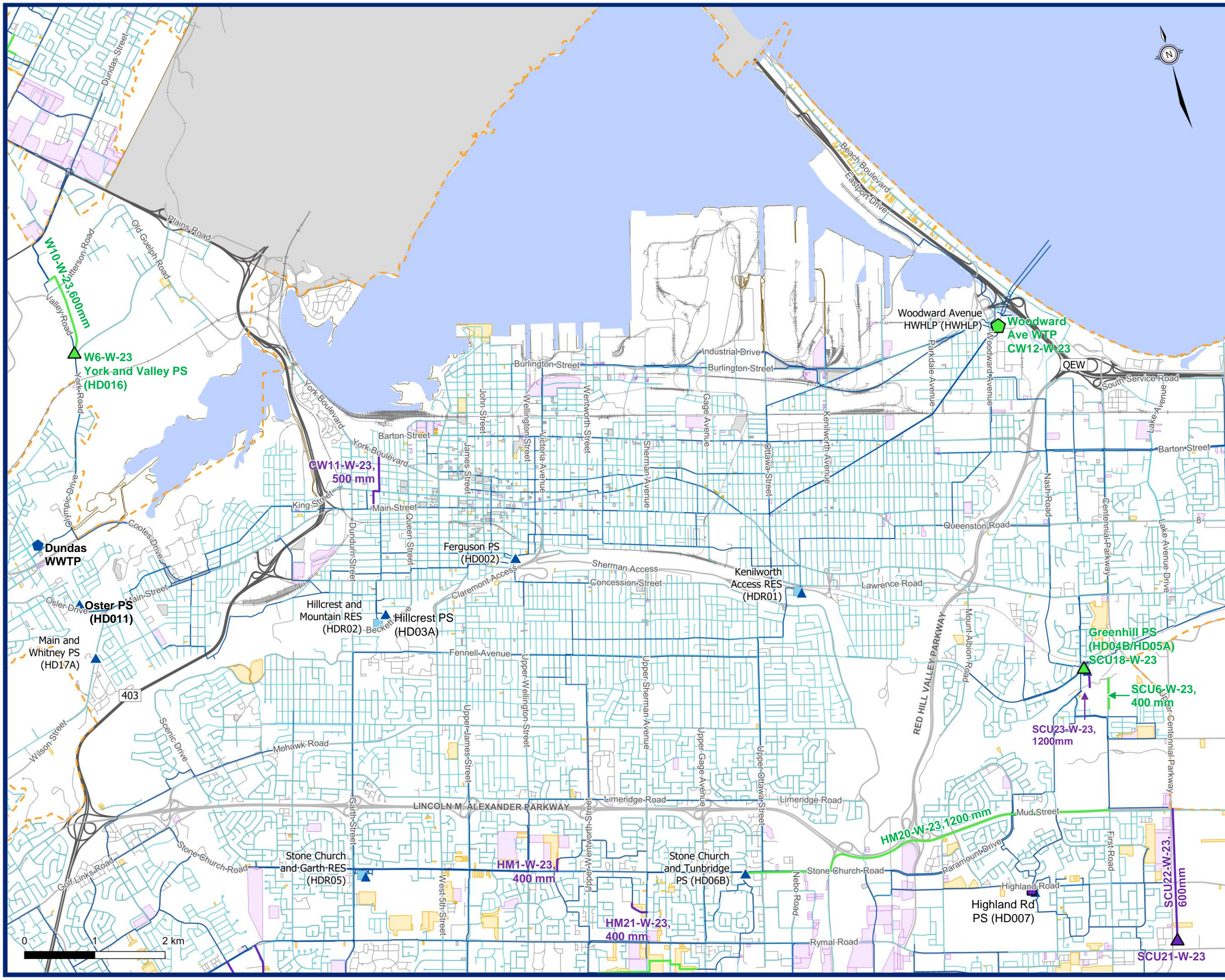


Figure 1-7

**Hamilton Downtown Water**  
Development Charges Background Study



## **Attachment B – Water City Wide Projects**

TABLE F-2 - WATER CAPITAL PROGRAM - CITYWIDE

Area	Planning Period	Project ID	Project	Description	2023 Estimated Total Cost	Direct Developer Contribution	City Cost Share	Post Period Benefit	Development Charges (\$2023)	2019-2023 Change Details
City Wide Projects	0 to 5 years	CW2-W-23	Regional Subdivider's Share for Local Improvements		\$ 1,618,318	\$ -	\$ -	\$ -	\$ 1,618,318	Updated cost - inflation only
City Wide Projects	0 to 5 years	CW3-W-23	Intensification Infrastructure Upgrades - Water (0-5 years)	Upgrades to existing infrastructure to accommodate intensification	\$ 20,909,000	\$ -	\$ 10,454,000	\$ -	\$ 10,455,000	Updated cost - inflation only
City Wide Projects	0 to 5 years	CW15-W-23	Large diameter and cut-in valves on existing watermains		\$ 1,958,000	\$ -	\$ -	\$ -	\$ 1,958,000	Updated cost - inflation only
City Wide Projects	0 to 5 years	CW24-W-23	Freelton Well (FDF01) Capacity Increase	Increase the capacity of the Freelton municipal well in order to meet the ultimate water demand of the Freelton Rural Settlement Area	\$ 4,920,467	\$ -	\$ 417,000	\$ -	\$ 4,503,467	Updated cost - inflation only
City Wide Projects	6 years to UBBO	CW4-W-23	Intensification Infrastructure Upgrades - Water	Upgrades to existing infrastructure to accommodate intensification	\$ 20,908,500	\$ -	\$ 10,454,250	\$ -	\$ 10,454,250	Updated cost - inflation only
City Wide Projects	6 years to UBBO	CW11-W-23	Locke St Watermain	Locke St from Barton St to Main St (1500 m; 500 mm)	\$ 5,985,000	\$ -	\$ -	\$ -	\$ 5,985,000	Updated cost - inflation only
City Wide Projects	6 years to UBBO	CW25-W-23	LRT Related	LRT Related W Capital Projects	\$ 5,250,000	\$ -	\$ -	\$ -	\$ 5,250,000	City provided estimate
Sub-Total					\$ 61,549,285	\$ -	\$ 21,325,250	\$ -	\$ 40,224,035	
<b>\$8M Reduction in Development Charges for Local Servicing Cost (Non-Trunk)</b>					\$ -	\$ -	\$ -	\$ -	\$ (8,000,000.00)	\$8M reduction for local servicing cost (non-trunk) in accordance with Funding Methodology and Financial Policies
<b>Total</b>					\$ 61,549,285	\$ -	\$ 21,325,250	\$ -	\$ 32,224,035	

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## Attachment C – Wastewater Projects

TABLE F-3 - WASTEWATER CAPITAL PROGRAM

Area	Planning Period	Project ID	Project/Street	From	To	Length (m)	Size (mm)	Unit Rate Type (Greenfield/Urban)	Unit Cost (2023\$/m)	Estimated Total Cost (2023\$)	Direct Developer Contribution (2023\$)	Benefit to Existing (%)	Benefit to Existing (2023\$)	Post Period Benefit (%)	Post Period Benefit (2023\$)	Development Charges (2023\$)	Updated Timing	Estimate from Updated Methodology	Estimated Cost from Separate Study/City	Scope Change: Location	Scope Change: Length and/or Size	New Project	2019-2023 Change Details
<b>WATERDOWN</b>																							
Waterdown	0 to 5 years	W3-S-23	Waterdown North Area	McCurdy Ave	Northerly	340	600	G	\$ 954	\$ 485,000	\$ 359,000	0%		0%		\$ 126,000		x		x	x		Updated alignment and length based on Plan drawing
<b>Sub-Total Waterdown</b>										\$ 485,000	\$ 359,000		\$ -		\$ -	\$ 126,000							
<b>ANCASTER</b>																							
Ancaster	0 to 5 years	A13-S-23	Ancaster Industrial Park Area- Hydro Corridor	Shaver Rd	New road	400	600	G	\$ 954	\$ 571,000		0%		0%		\$ 571,000		x		x	x		No longer extends east through the hydro corridor to Shaver Rd. It will connect to Shaver road through Trustwood (new road).
Ancaster	0 to 5 years	A21-S-23	Shaver Rd	Osprey Dr	Hydro Corridor	660	375	G	\$ 791	\$ 780,000		0%		0%		\$ 780,000		x			x		No longer connects at the hydro corridor, now it will connect to future line at Trustwood (future road).
<b>Sub-Total Ancaster</b>										\$ 1,351,000	\$ -		\$ -		\$ -	\$ 1,351,000							
<b>AEGD/MT. HOPE</b>																							
AEGD/Mt. Hope	0 to 5 years	MH1-S-23	Twenty Rd	Silverbirch Blvd	Upper James St	2000	450	U	\$ 1,422	\$ 4,252,000		0%		0%		\$ 4,252,000		x					
AEGD/Mt. Hope	0 to 5 years	MH3-S-23	John Frederick Dr - Garner Rd	200m West of Southcote Rd	360m South	430	375	U	\$ 1,384	\$ 891,000		0%		0%		\$ 891,000		x		x	x		Extended Length to Garner Rd, per Servicing Report
AEGD/Mt. Hope	0 to 5 years	MH4-S-23	Forceman - Garner Rd	360m South of Garner Rd	60m East of Kitty Murray Ln	1100	200	U	\$ -	\$ 2,038,000		0%		0%		\$ 2,038,000		x		x	x		Adjusted length as per GIS
AEGD/Mt. Hope	0 to 5 years	MH6-S-23	Garner Rd	60m East of Kitty Murray Lane	200m West of Springbrook Ave	360	375	U	\$ 1,384	\$ 4,415,000		0%		0%		\$ 4,415,000		x			x		Adjusted Size and length to match Servicing Report
AEGD/Mt. Hope	0 to 5 years	MH7-S-23	New SPS	South of Garner on New Street				U		\$ 3,500,000		0%		0%		\$ 3,500,000			x		x		New SPS identified from Servicing Report, Received 2023-07-19, project id 5162280283, estimate from City, no land
AEGD/Mt. Hope	0 to 5 years	MH8-S-23	Garner Rd	200m West of Springbrook Ave	Barley Lane	700	600	U	\$ 1,669	\$ 8,585,000		0%		0%		\$ 8,585,000		x			x		Sewer connecting to MH6, identified in Servicing Report
AEGD/Mt. Hope	0 to 5 years	MH9-S-23	Garner Rd	120m W of Kitty Murray Lane	200m West of Southcote Rd	480	300	U	\$ 1,327	\$ 953,000		0%		0%		\$ 953,000		x			x		Sewer connecting to MH3, identified in Servicing Report
AEGD/Mt. Hope	6 years to UBBO	MH10-S-23	Dickenson Rd Trunk Sewer	Glancaster Rd	Garth St extension	1530	525	U	\$ 1,517	\$ 3,470,000		0%		0%		\$ 3,470,000		x			x		Reduced Length, updated size, per City comment
AEGD/Mt. Hope	6 years to UBBO	MH11-S-23	Book Rd Trunk Sewer	400 m west of Southcote	Smith Rd	830	600	G	\$ 954	\$ 1,183,000		0%		0%		\$ 1,183,000		x		x			Updated alignment based on AEGD TMP, inflated cost
AEGD/Mt. Hope	6 years to UBBO	MH12-S-23	Smith Rd	Hydro Corridor	Book Rd	950	375	G	\$ 791	\$ 1,123,000		0%		0%		\$ 1,123,000		x		x			Updated alignment based on AEGD TMP, inflated cost
AEGD/Mt. Hope	6 years to UBBO	MH13-S-23	Garth St Extension	Smith Rd	Upper James St	3620	750	U	\$ 2,313	\$ 12,520,000	\$ 7,598,000	0%		0%		\$ 4,922,000		x			x		Increased Length and size, per City comment
AEGD/Mt. Hope	6 years to UBBO	MH14-S-23	Glancaster Rd	Airport	Garth St extension	450	375	G	\$ 791	\$ 532,000		0%		0%		\$ 532,000		x		x			Updated alignment based on AEGD TMP, inflated cost
AEGD/Mt. Hope	6 years to UBBO	MH15-S-23	Glancaster Rd	Dickenson Rd	Garth St extension	375	375	G	\$ 791	\$ 443,000		0%		0%		\$ 443,000		x		x			Updated alignment based on AEGD TMP, inflated cost
AEGD/Mt. Hope	6 years to UBBO	MH16-S-23	Glancaster Rd	Book Rd	Dickenson Rd	380	375	G	\$ 791	\$ 450,000		0%		0%		\$ 450,000		x		x			Updated alignment based on AEGD TMP, inflated cost
AEGD/Mt. Hope	6 years to UBBO	MH17-S-23	Dickenson Rd	Garth St Extension	Smith Rd	825	525	G	\$ 867	\$ 1,069,000		0%		0%		\$ 1,069,000		x		x			Updated alignment based on AEGD TMP, inflated cost
AEGD/Mt. Hope	6 years to UBBO	MH18-S-23	Book Rd	Glancaster Rd	Smith Rd	950	375	G	\$ 791	\$ 1,123,000		0%		0%		\$ 1,123,000		x		x			Updated alignment based on AEGD TMP, inflated cost
AEGD/Mt. Hope	6 years to UBBO	MH19-S-23	Southcote Rd	Hydro Corridor	Book Rd	875	375	G	\$ 791	\$ 1,035,000		0%		0%		\$ 1,035,000		x		x			Updated alignment based on AEGD TMP, inflated cost
AEGD/Mt. Hope	6 years to UBBO	MH20-S-23	Smith Rd	Book Rd	Garth St extension	675	375	G	\$ 791	\$ 798,000		0%		0%		\$ 798,000		x		x			Updated alignment based on AEGD TMP, inflated cost
AEGD/Mt. Hope	6 years to UBBO	MH21-S-23	Southcote Rd	Book Rd	Garth St extension	525	375	G	\$ 791	\$ 621,000		0%		0%		\$ 621,000		x		x			Updated alignment based on AEGD TMP, inflated cost
<b>Sub-Total AEGD/Mt. Hope</b>										\$ 49,001,000	\$ 7,598,000		\$ -		\$ -	\$ 41,403,000							



TABLE F-3 - WASTEWATER CAPITAL PROGRAM																							
Area	Planning Period	Project ID	Project/Street	From	To	Length (m)	Size (mm)	Unit Rate Type (Greenfield/Urban)	Unit Cost (2023\$/m)	Estimated Total Cost (2023\$)	Direct Developer Contribution (2023\$)	Benefit to Existing (%)	Benefit to Existing (2023\$)	Post Period Benefit (%)	Post Period Benefit (2023\$)	Development Charges (2023\$)	Updated Timing	Estimate from Updated Methodology	Estimated Cost from Separate Study/City	Scope Change: Location	Scope Change: Length and/or Size	New Project	2019-2023 Change Details
<b>BINBROOK</b>																							
Binbrook	0 to 5 years	B10-S-23	Windwood Dr Extension	Fletcher Rd	Brigham Ave	850	600	G	\$ 954	\$ 1,212,000	\$ 898,000	0%		0%		\$ 314,000		x					
Binbrook	0 to 5 years	B11-S-23	Binbrook Rd	Fletcher Rd	Brigham Ave	850	375	G	\$ 791	\$ 1,005,000		0%		0%		\$ 1,005,000		x					
<b>Sub-Total Binbrook</b>										\$ 2,217,000	\$ 898,000		\$ -		\$ -	\$ 1,319,000							
<b>HAMILTON MOUNTAIN</b>																							
Hamilton Mountain	0 to 5 years	HM6-S-23	Dartnall Rd extension	Twenty Rd	730 m south	730	525	G	\$ 867	\$ 946,000	\$ 771,000	0%		0%		\$ 175,000		x					
Hamilton Mountain	0 to 5 years	HM9-S-23	Nebo Rd	250 m north of Twenty Rd East	480 m south of Rymal Rd	630	375	U	\$ 1,384	\$ 1,304,000		0%		0%		\$ 1,304,000		x					
Hamilton Mountain	0 to 5 years	HM10-S-23	Upper Ottawa St	275 m north of Twenty Rd East	350 m south of Rymal Rd	675	375	G	\$ 791	\$ 798,000		0%		0%		\$ 798,000		x					
Hamilton Mountain	0 to 5 years	HM20-S-23	Dickenson Rd Trunk Sewer	Upper James St to Miles Rd	Miles Rd to RR56	9700	1200/1500 mm	G		\$ 116,800,000		0%		10%	\$ 11,680,000	\$ 105,120,000			x				Increased Length and Updated Estimate provided by City; includes Construction Cost, Contingency, plus Design.
Hamilton Mountain	6 years to UBBO	HM3-S-23	Miles Rd	Connection of sewers east and west of Miles Rd		50	375	U	\$ 1,384	\$ 104,000		0%		0%		\$ 104,000		x					
<b>Sub-Total Hamilton Mountain</b>										\$ 119,952,000	\$ 771,000		\$ -		\$ 11,680,000	\$ 107,501,000							
<b>STONE CREEK LOWER</b>																							
Stoney Creek Lower	0 to 5 years	SCL2-S-23	Forcemain- South Service Rd	New SPS	30 m west	30	150	U	\$ -	\$ 36,000		0%		0%		\$ 36,000		x					
Stoney Creek Lower	0 to 5 years	SCL3-S-23	New Sewage Pumping Station at South Service Rd, east of Fifty Rd				Not available	U	n/a	\$ 491,000		0%		0%		\$ 491,000							New SPS, inflated cost from 2019 DC Study, land cost not specified
Stoney Creek Lower	0 to 5 years	SCL11-S-23	Centennial Trunk Sewer	King St	ESI at Kenora Ave	4200	1500	U	n/a	\$ 80,000,000		0%		10%	\$ 8,000,000	\$ 72,000,000		x		x	x		Updated alignment and estimate as provided by City, land cost not specified
Stoney Creek Lower	0 to 5 years	SCL14-S-23	South Service Rd	50 m east of Fifty Road	500 m east	500	450	U	\$ 1,422	\$ 1,063,000	\$ 532,000	0%		0%		\$ 531,000		x					
Stoney Creek Lower	0 to 5 years	SCL18-S-23	Barton St	Jones Rd	470 m east toward Glover	250	450	G	\$ 813	\$ 304,000		0%		0%		\$ 304,000		x					Updated length based on BSS 2 drawing
Stoney Creek Lower	0 to 5 years	SCL19-S-23	Glover Rd	Hwy 8	500 m north, past Watercourse 7	500	450	U	\$ 1,422	\$ 924,000		10%	\$ 92,400	0%		\$ 831,600		x					Updated length based on BSS 2 drawing
Stoney Creek Lower	0 to 5 years	SCL20-S-23	Barton St	McNeilly Rd	200 m east of McNeilly Rd	330	450	U	\$ 1,422	\$ 702,000		0%		0%		\$ 702,000		x					Updated length and size based on BSS 3 drawing
Stoney Creek Lower	0 to 5 years	SCL21-S-23	Barton St	200 m east of McNeilly Rd	Lewis Rd	520	450	U	\$ 1,422	\$ 1,105,000		0%		0%		\$ 1,105,000		x					Updated length based on BSS 3 drawing
Stoney Creek Lower	0 to 5 years	SCL22-S-23	Barton St	Lewis Rd	350 m east of Lewis Rd	370	450	U	\$ 1,422	\$ 787,000		10%	\$ 78,700	0%		\$ 708,300		x					Updated length based on BSS 3 drawing
Stoney Creek Lower	0 to 5 years	SCL24-S-23	Barton St	350 m east of Fruitland Rd	200 m east	74	450	U	\$ 1,422	\$ 157,000		10%	\$ 15,700	0%		\$ 141,300		x					Updated length based on BSS 1 Drawing
Stoney Creek Lower	0 to 5 years	SCL25-S-23	Jones St	350 south of Barton St	200 m south	230	450	U	\$ 1,422	\$ 489,000		10%	\$ 48,900	0%		\$ 440,100		x					Updated length based on BSS 1 Drawing
Stoney Creek Lower	0 to 5 years	SCL16-S-23	Millen Rd and easement (QEW Crossing)	South Service Rd	North Service Rd	120	450	U	\$ 1,422	\$ 255,000		0%		0%		\$ 255,000		x					
<b>Sub-Total Stoney Creek Lower</b>										\$ 86,313,000	\$ 532,000		\$ 235,700		\$ 8,000,000	\$ 77,545,300							
<b>Total Wastewater</b>										\$ 259,319,000	\$ 10,158,000		\$ 235,700		\$ 19,680,000	\$ 229,245,300							

### General Features

-  Railways
-  Expanded Urban Boundary
-  Other Municipalities
-  Parking Lot
-  Vacant Non-Residential
-  Vacant Residential

### Existing Infrastructure

-  Wastewater Treatment Plant (WWTP)
-  Sanitary Pumping Station (SPS)
-  Forcemain
-  Sanitary Sewer >= 450mm
-  Sanitary Sewer < 450mm
-  Combined Sewer >= 450mm
-  Combined Sewer < 450mm

### Future Water Infrastructure

-  WWTP 0 - 5 Years
-  SPS 0 - 5 Years
-  Forcemain 0-5 Years
-  Sanitary Sewers 0-5 Years
-  Sanitary Sewers - 100% Direct Development Contribution
-  WWTP 6 Plus Years
-  SPS 6 Plus Years
-  Sanitary Sewers 6 Plus Years

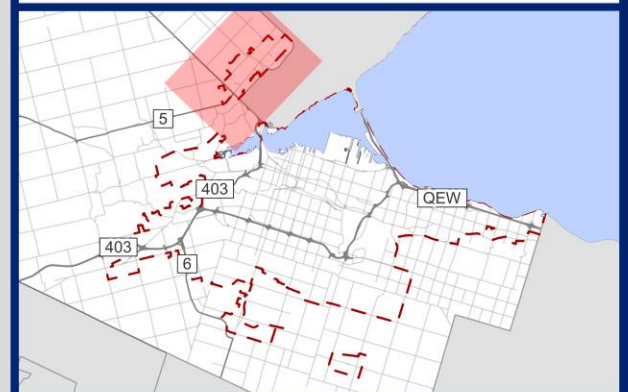
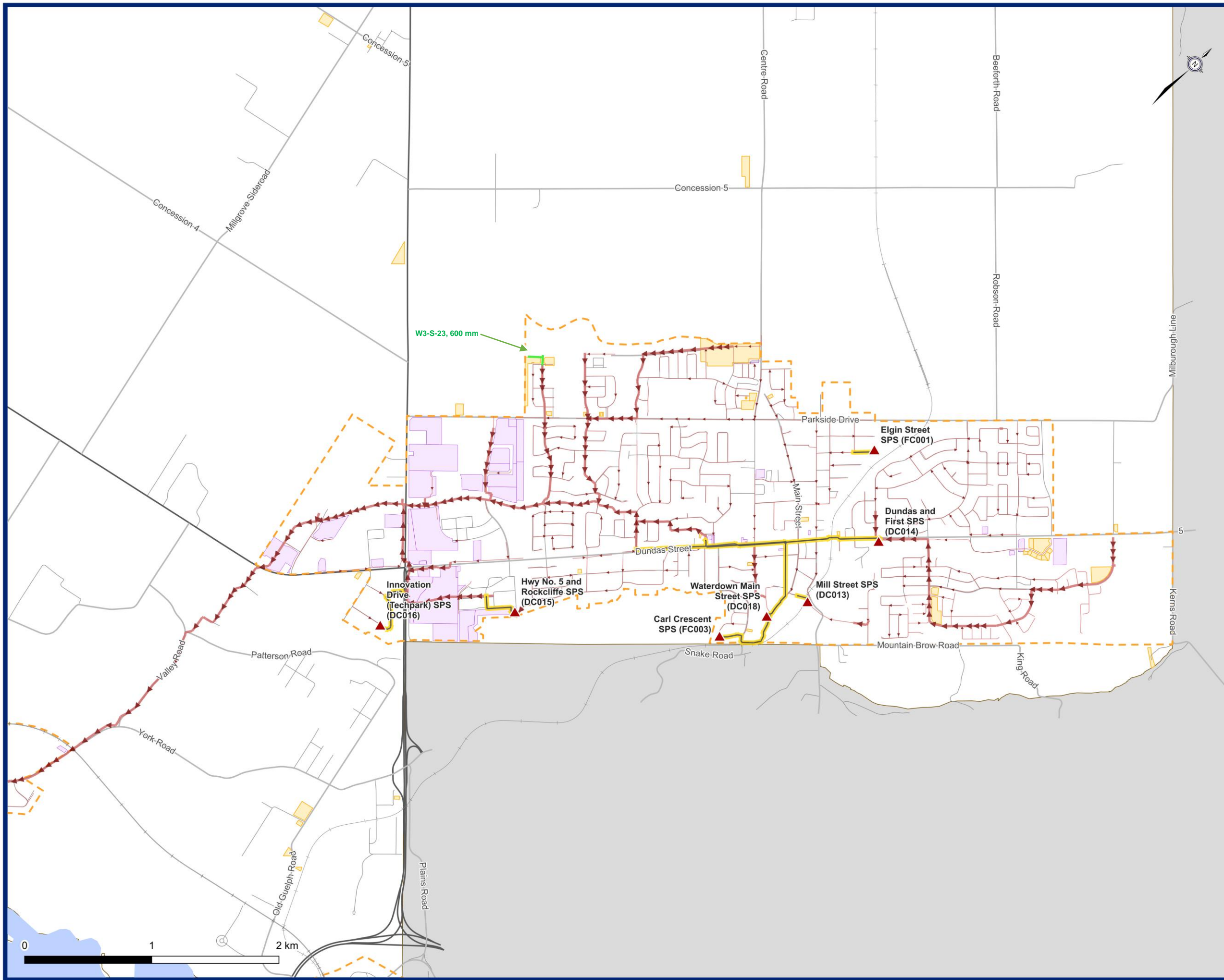
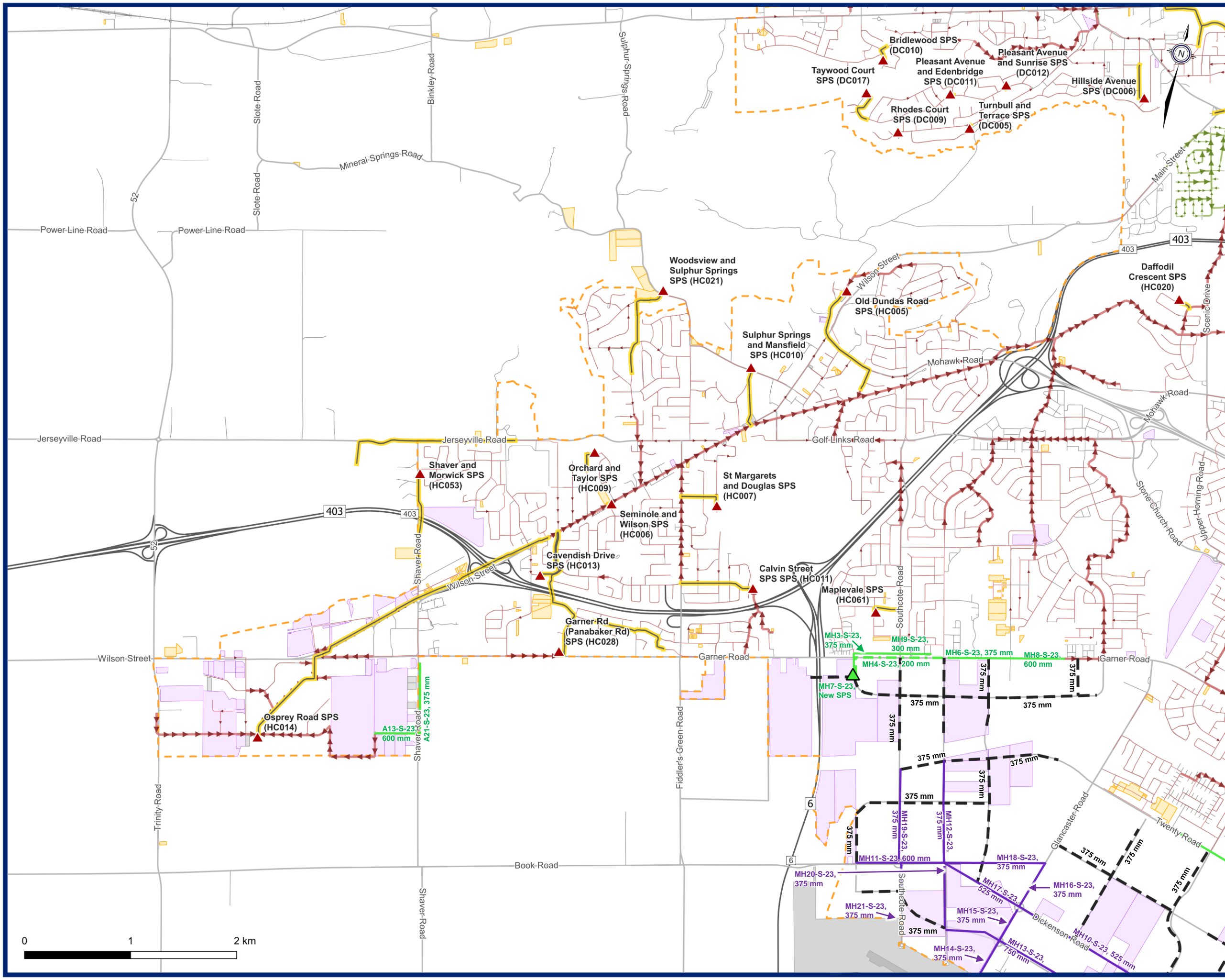


Figure 2-1

## Waterdown Wastewater

Development Charges Background Study





**General Features**

- Railways
- ▭ Parking Lot
- - - Expanded Urban Boundary
- ▭ Vacant Non-Residential
- ▭ Other Municipalities
- ▭ Vacant Residential

**Existing Infrastructure**

- Wastewater Treatment Plant (WWTP)
- ▲ Sanitary Pumping Station (SPS)
- Forcemain
- Sanitary Sewer >= 450mm
- Sanitary Sewer < 450mm
- Combined Sewer >= 450mm
- Combined Sewer < 450mm

**Future Water Infrastructure**

- ◊ WWTP 0 - 5 Years
- ◊ WWTP 6 Plus Years
- ▲ SPS 0 - 5 Years
- ▲ SPS 6 Plus Years
- Force mains 0-5 Years
- Sanitary Sewers 0-5 Years
- Sanitary Sewers 6 Plus Years
- - - Sanitary Sewers - 100% Direct Development Contribution

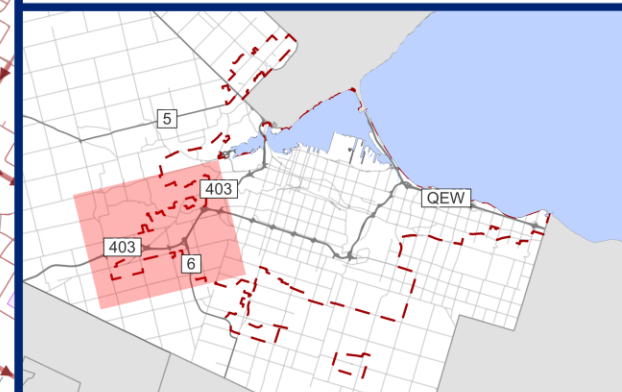
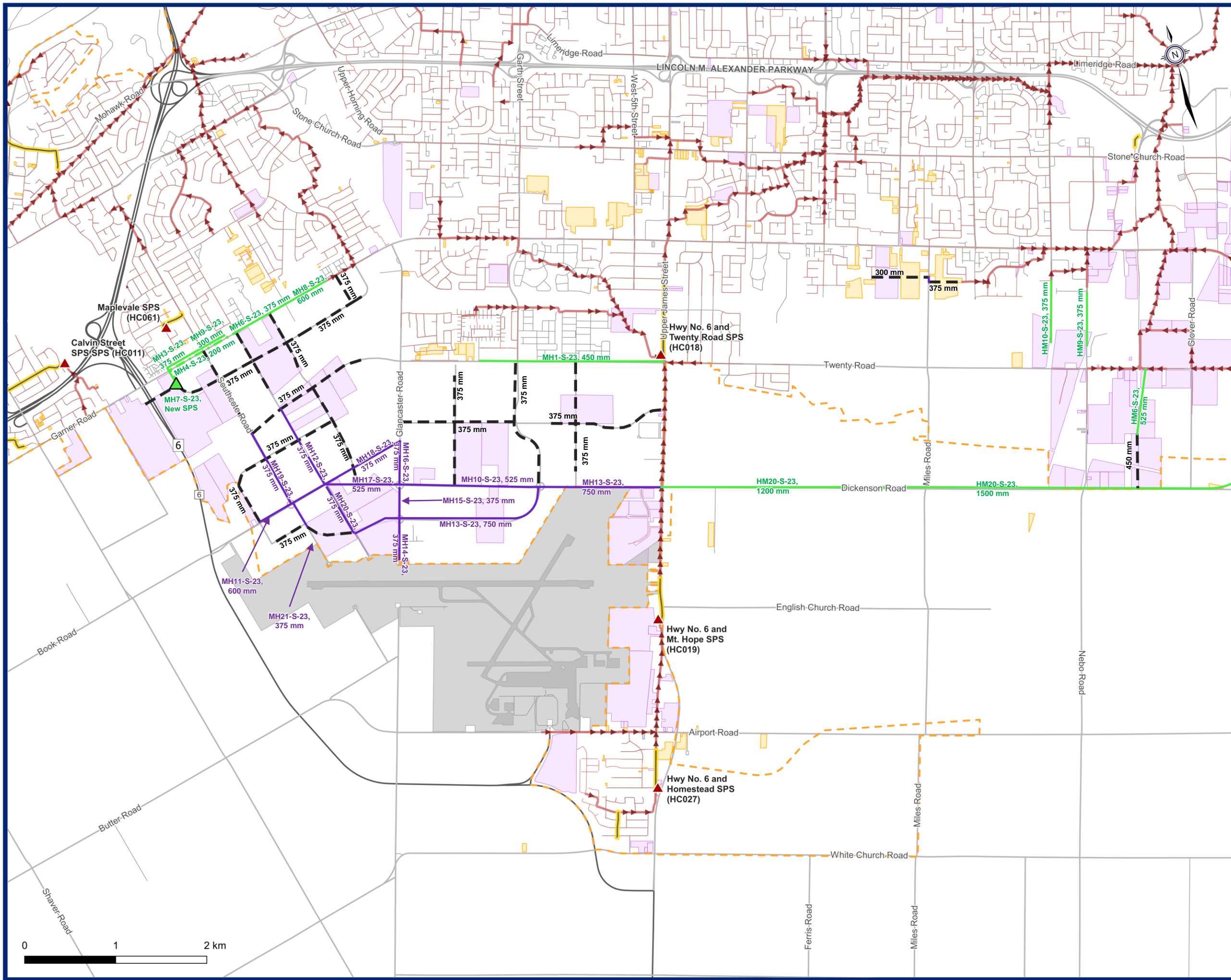


Figure 2-2

**Ancaster Wastewater**

Development Charges Background Study





**General Features**

- Railways
- Expanded Urban Boundary
- Other Municipalities
- Parking Lot
- Vacant Non-Residential
- Vacant Residential

**Existing Infrastructure**

- Wastewater Treatment Plant (WWTP)
- Sanitary Pumping Station (SPS)
- Forcemain
- Sanitary Sewer >= 450mm
- Sanitary Sewer < 450mm
- Combined Sewer >= 450mm
- Combined Sewer < 450mm

**Future Water Infrastructure**

- WWTP 0 - 5 Years
- SPS 0 - 5 Years
- Forcemains 0-5 Years
- Sanitary Sewers 0-5 Years
- Sanitary Sewers - 100% Direct Development Contribution
- WWTP 6 Plus Years
- SPS 6 Plus Years
- Sanitary Sewers 6 Plus Years

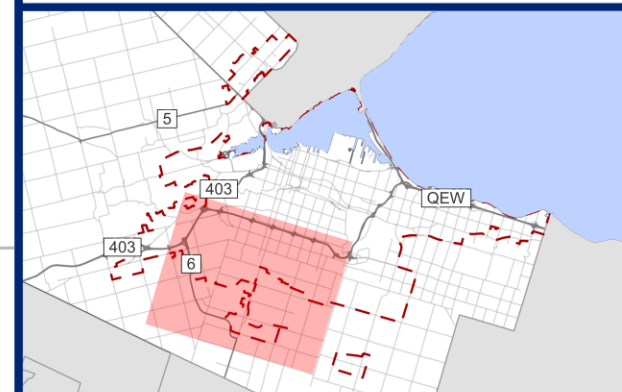
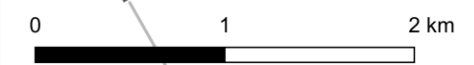
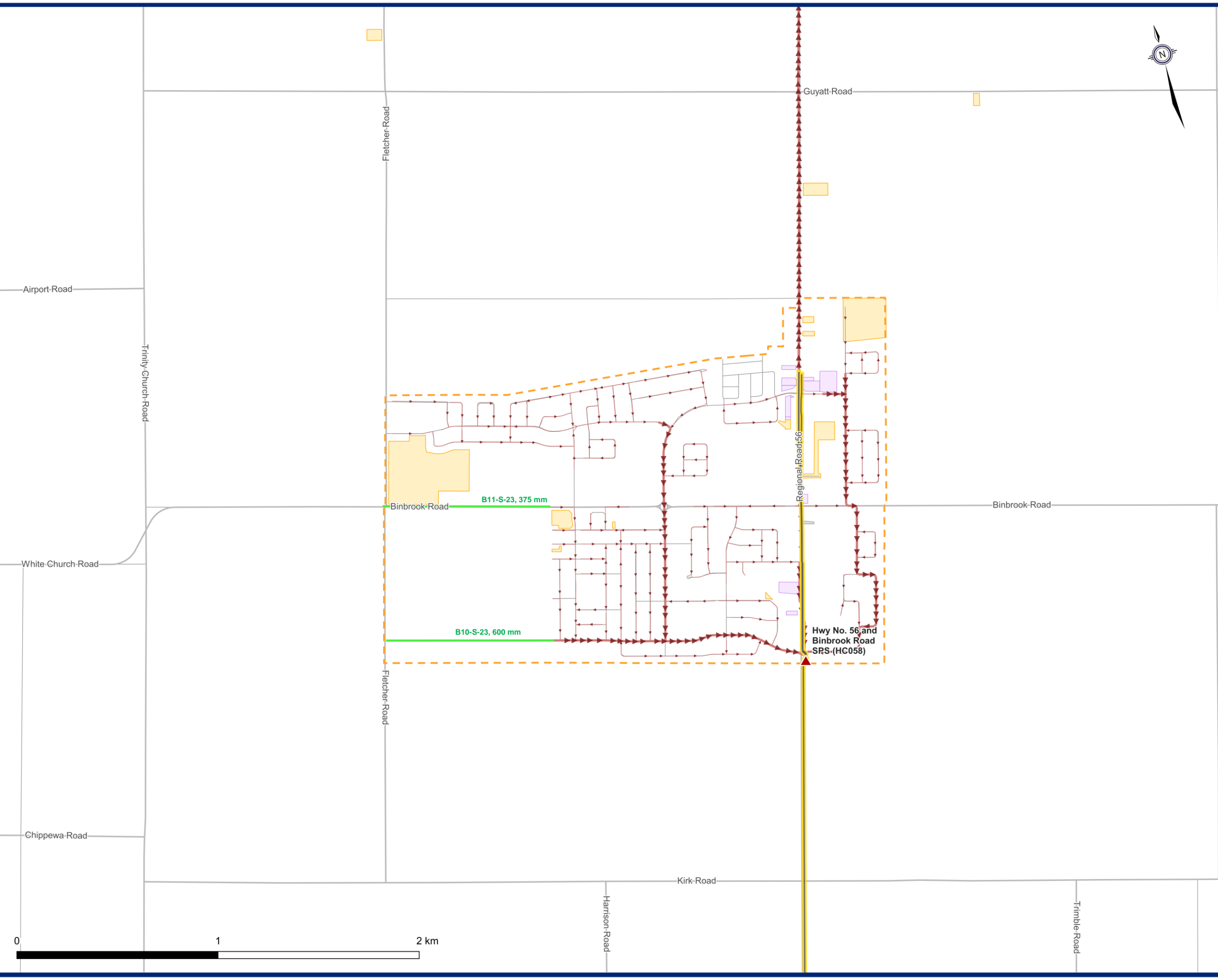
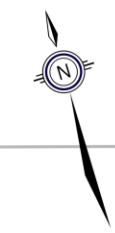


Figure 2-3

**AEGD/Mount Hope Wastewater**

Development Charges Background Study





**General Features**

- Railways
- Expanded Urban Boundary
- Other Municipalities
- Parking Lot
- Vacant Non-Residential
- Vacant Residential

**Existing Infrastructure**

- Wastewater Treatment Plant (WWTP)
- Sanitary Pumping Station (SPS)
- Force main
- Sanitary Sewer >= 450mm
- Sanitary Sewer < 450mm
- Combined Sewer >= 450mm
- Combined Sewer < 450mm

**Future Water Infrastructure**

- WWTP 0 - 5 Years
- SPS 0 - 5 Years
- Force mains 0-5 Years
- Sanitary Sewers 0-5 Years
- Sanitary Sewers - 100% Direct Development Contribution
- WWTP 6 Plus Years
- SPS 6 Plus Years
- Sanitary Sewers 6 Plus Years

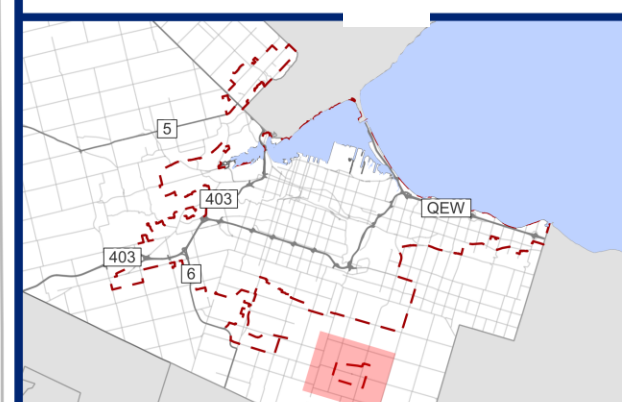
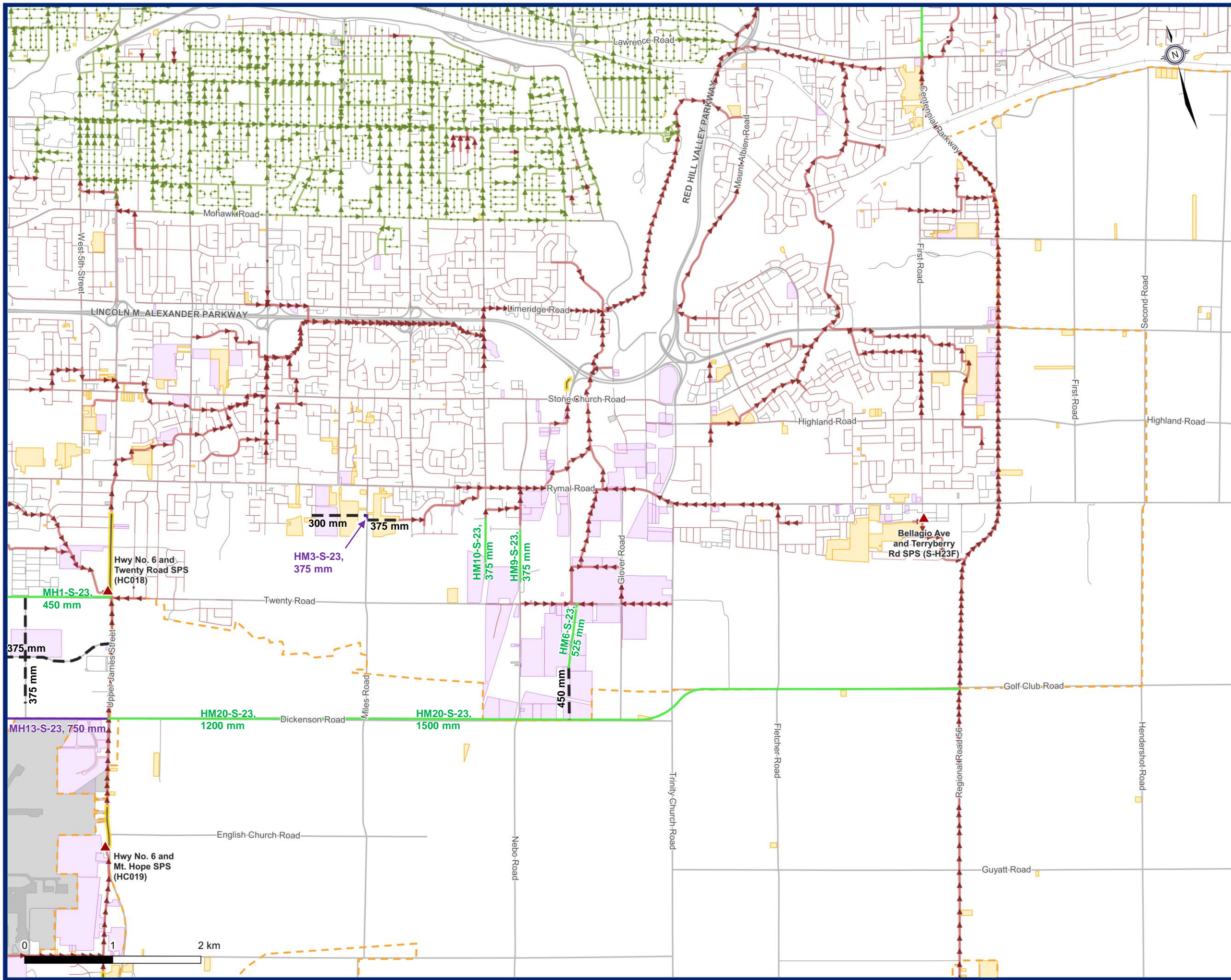


Figure 2-4

**Binbrook Wastewater**

Development Charges Background Study



**General Features**

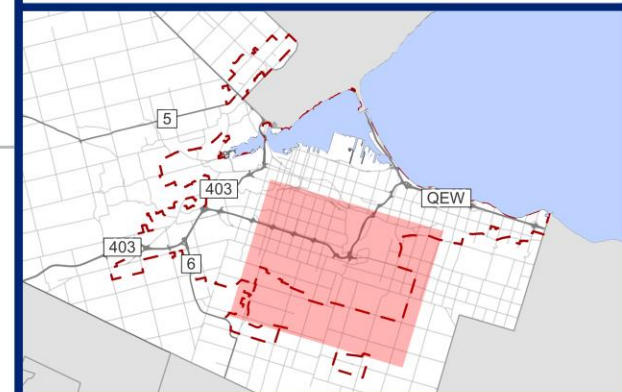
- Railways
- Expanded Urban Boundary
- Other Municipalities
- Parking Lot
- Vacant Non-Residential
- Vacant Residential

**Existing Infrastructure**

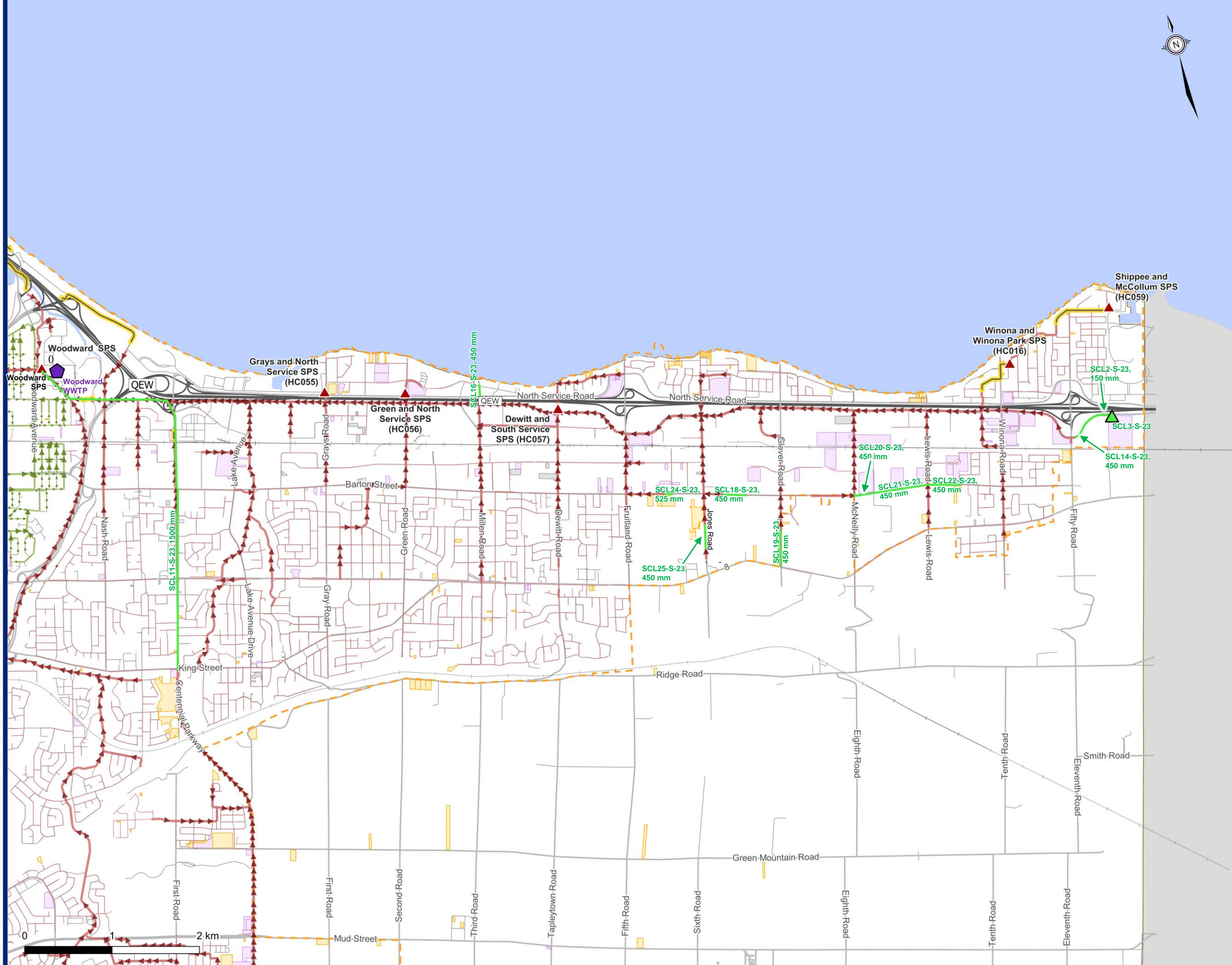
- Wastewater Treatment Plant (WWTP)
- Sanitary Pumping Station (SPS)
- Forcemain
- Sanitary Sewer  $\geq$  450mm
- Sanitary Sewer  $<$  450mm
- Combined Sewer  $\geq$  450mm
- Combined Sewer  $<$  450mm

**Future Water Infrastructure**

- WWTP 0 - 5 Years
- SPS 0 - 5 Years
- Force mains 0-5 Years
- Sanitary Sewers 0-5 Years
- Sanitary Sewers - 100% Direct Development Contribution
- WWTP 6 Plus Years
- SPS 6 Plus Years
- Sanitary Sewers 6 Plus Years



**Figure 2-5**  
**Hamilton Mountain / Stoney Creek Wastewater**  
 Development Charges Background Study



**General Features**

- Railways
- Expanded Urban Boundary
- Other Municipalities
- Parking Lot
- Vacant Non-Residential
- Vacant Residential

**Existing Infrastructure**

- Wastewater Treatment Plant (WWTP)
- Sanitary Pumping Station (SPS)
- Forcemain
- Sanitary Sewer >= 450mm
- Sanitary Sewer < 450mm
- Combined Sewer >= 450mm
- Combined Sewer < 450mm

**Future Water Infrastructure**

- WWTP 0 - 5 Years
- WWTP 6 Plus Years
- SPS 0 - 5 Years
- SPS 6 Plus Years
- Sanitary Sewers 0-5 Years
- Sanitary Sewers 6 Plus Years
- Forcemain 0-5 Years
- Sanitary Sewers - 100% Direct Development Contribution

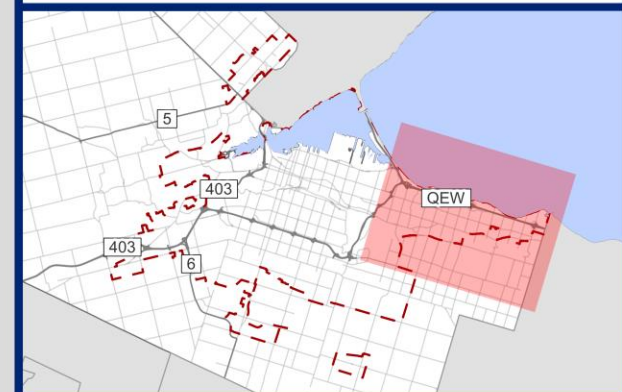


Figure 2-6

**Stoney Creek Lower Wastewater**

Development Charges Background Study

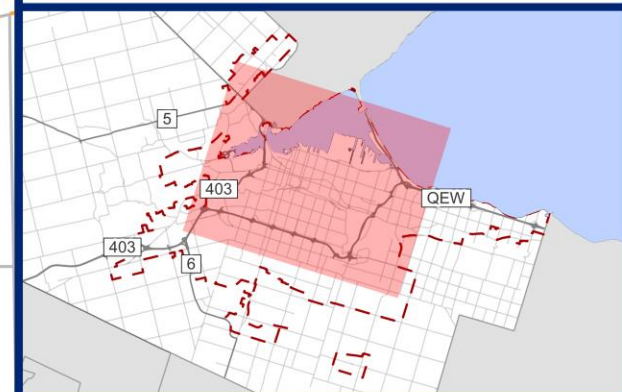
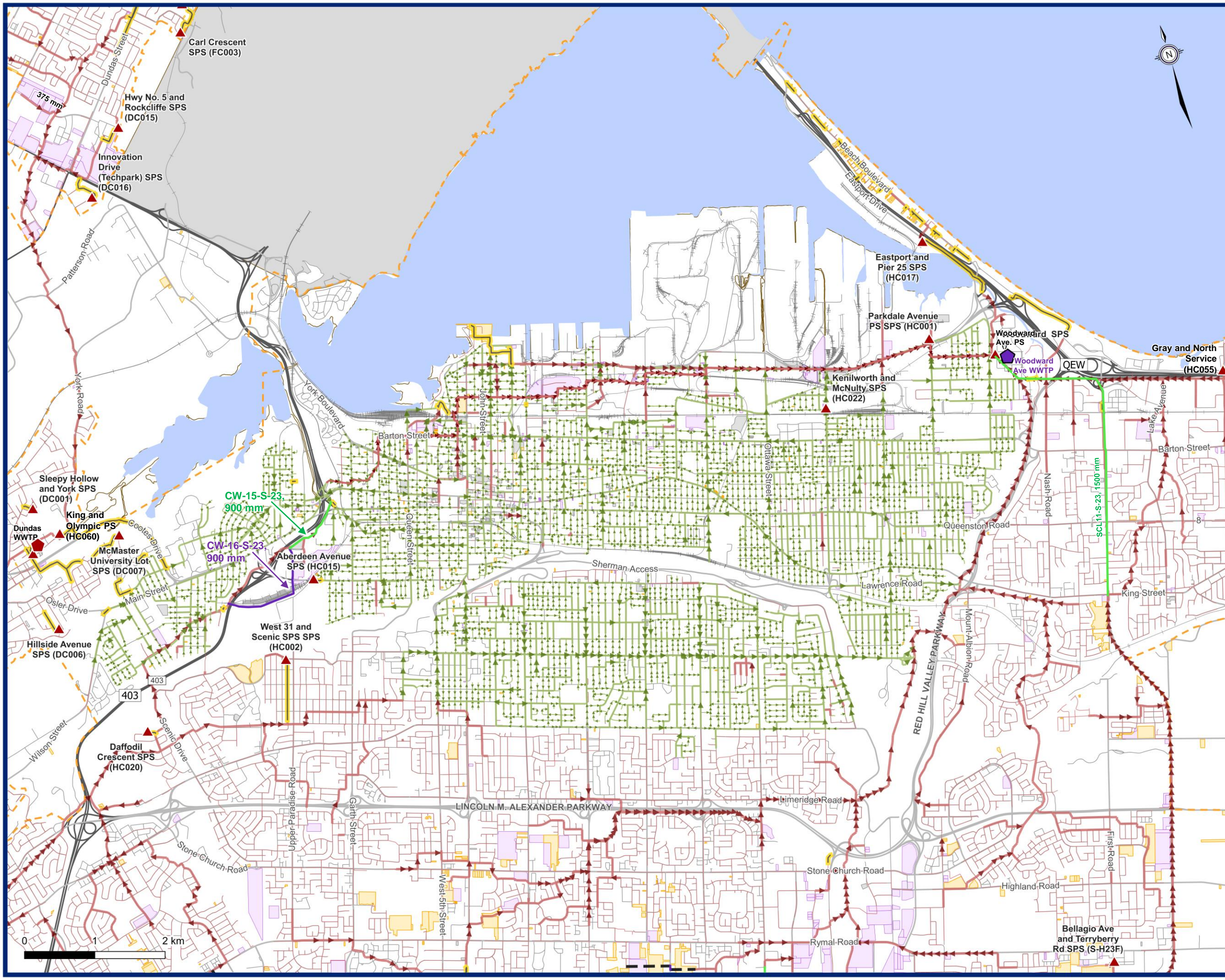


Figure 2-7  
**Hamilton Downtown Wastewater**  
 Development Charges Background Study





## **Attachment D – Wastewater City Wide Projects**

TABLE F-4 - WASTEWATER CAPITAL I WASTEWATER CAPITAL PROGRAM-CITYWIDE

Area	Planning Period	Project ID	Project	Description	Estimated Total Cost (\$2023)	Capital Budget List	Direct Developer Contribution	City Cost Share	Post Period Benefit	Development Charges (\$2023)	2019-2023 Change Details
City Wide Projects	0 to 5 years	CW1-S-23	Flow Monitoring	Total cost over a period of 2 - 2.5 years. Study being undertaken to know various flow characteristics to calibrate the Sanitary Sewer Model to assist the Master Planning Study	\$ 3,250,000		\$ -	\$ 1,625,000	\$ -	\$ 1,625,000	Updated cost based on rate of \$1.3mil/yr, provided by city
City Wide Projects	0 to 5 years	CW2-S-23	I/I Reduction Program	Program to free up extra capacity within the existing sewers - costs over five years	\$ 2,194,000		\$ -	\$ 1,097,000	\$ -	\$ 1,097,000	Updated cost - inflation only
City Wide Projects	0 to 5 years	CW5-S-23	Land requirement for new sewage pumping stations and easements	Areas for SPS footprints and easements- 5 Ha	\$ 852,000		\$ -	\$ -	\$ -	\$ 852,000	Updated cost - inflation only
City Wide Projects	0 to 5 years	CW6-S-23	Intensification Infrastructure Upgrades - Wastewater (0-5 years)	Upgrades to existing infrastructure to accommodate intensification	\$ 20,909,000	\$ 2,400,000	\$ -	\$ 10,455,000	\$ -	\$ 10,454,000	Updated cost - inflation only
City Wide Projects	0 to 5 years	CW15-S-23	Hwy 403 Trunk sewer twinning - Phase 1	MIP to Main-King	\$ 15,000,000		\$ -	\$ -	\$ -	\$ 15,000,000	Updated cost .using estimate provided by city
City Wide Projects	0 to 5 years	CW19-S-23	Regional Subdivider's Share for Local Improvements		\$ 358,000		\$ -	\$ -	\$ -	\$ 358,000	
City Wide Projects	6 years to UBBO	CW7-S-23	Intensification Infrastructure Upgrades - Wastewater	Upgrades to existing infrastructure to accommodate intensification	\$ 20,909,000	\$ 2,400,000	\$ -	\$ 10,455,000	\$ -	\$ 10,454,000	Updated cost - inflation only
City Wide Projects	6 years to UBBO	CW16-S-23	Hwy 403 Trunk sewer twinning - Phase 2	Royal CSO to MIP	\$ 10,672,000		\$ -	\$ -	\$ -	\$ 10,672,000	awaiting cost, currently inflated from 2019 DC report
City Wide Projects	6 years to UBBO	CW23-S-23	LRT Related	LRT Related WW Capital Projects	\$ 5,250,000		\$ -	\$ -	\$ -	\$ 5,250,000	City provided estimate
Sub-Total					\$ 79,394,000		\$ -	\$ 23,632,000	\$ -	\$ 55,762,000	
<b>\$10M Reduction in Development Charges for Local Servicing Cost (Non-Trunk)</b>					\$ -		\$ -	\$ -	\$ -	\$ (10,000,000)	\$10M reduction for local servicing cost (non-trunk) in accordance with Funding Methodology and Financial Policies
<b>Total</b>					<b>\$ 79,394,000</b>		<b>\$ -</b>	<b>\$ 23,632,000</b>	<b>\$ -</b>	<b>\$ 45,762,000</b>	

B:\Working\HAMILTON ON, CITY OF\2402126 - 717010 Hamilton W, WW & SW Master Plans\5 Work in Progress\2023 DC Update\Capital Program\Final\717010 240228- WW Projects\_Updated\_Methodology\_Final\_v5.xlsx\WASTEWATER CITYWIDE



## **Attachment E – Woodward W.W.T.P.**

TABLE F-5 - WOODWARD WWTP CAPITAL PROGRAM

Project ID	Description	Capital Cost Estimate (\$2023)	Internal Staffing Cost Allocation (Not Eligible for Funding)	Capital Cost w Internal Staffing (\$)	Grants, Subsidies and Other Contributions Attributable to New Development	Project Cost Less Grants, Subsidies, etc (\$)	Growth (%)	Non-Growth (%)	Benefit to Existing (\$)	Growth Related Cost (\$)	Post Period (%)	Growth - Post Period (\$)	Growth - In Period DC APPLICABLE COST (\$)
1	Wastewater Pumping Station	\$ 91,033,568	\$ 2,145,501	\$ 93,179,000	\$ 62,159,115	\$ 31,020,000	18.84%	81.16%	\$ 25,175,652	\$ 5,844,348	25.00%	\$ 1,461,087	\$ 4,383,261
2a	Primary Clarifier - Primary Treatment (Phase 1) - Engineering Included	\$ 16,255,669	\$ -	\$ 16,256,000	\$ 5,195,046	\$ 11,061,000	18.84%	81.16%	\$ 8,977,043	\$ 2,083,957	25.00%	\$ 520,989	\$ 1,562,967
2b	Primary Clarifier - Primary Treatment (Phase 2 - Tanks) - Engineering Included	\$ 52,246,549	\$ -	\$ 52,247,000	\$ 34,831,033	\$ 17,416,000	18.84%	81.16%	\$ 14,134,725	\$ 3,281,275	25.00%	\$ 820,319	\$ 2,460,957
2c	Primary Clarifier - Other Costs (includes New/Expanded Laboratory/Admin Building)	\$ 11,857,782	\$ -	\$ 11,858,000	\$ -	\$ 11,858,000	52.92%	47.08%	\$ 5,582,746	\$ 6,275,254	25.00%	\$ 1,568,813	\$ 4,706,440
3	Tertiary Upgrades - North and South Secondary Treatment Plant Upgrades	\$ -	\$ -	\$ -	\$ -	\$ -	0.00%	100.00%	\$ -	\$ -	0.00%	\$ -	\$ -
4a	Tertiary Upgrades - New Secondary/Tertiary Treatment Plant (Phase 1)	\$ 155,504,975	\$ 3,664,887	\$ 159,170,000	\$ 64,732,298	\$ 94,438,000	9.56%	90.44%	\$ 85,410,315	\$ 9,027,685	25.00%	\$ 2,256,921	\$ 6,770,764
4b-1	Tertiary Upgrades - Tertiary Treatment Plant & 3rd Plant (Phase 2)	\$ 226,312,000	\$ 4,564,986	\$ 230,877,000	\$ -	\$ 230,877,000	100.00%	0.00%	\$ -	\$ 230,877,000	25.00%	\$ 57,719,250	\$ 173,157,750
4b-2	Tertiary Upgrades - Primary Effluent PS (Phase 2)	\$ 13,470,000	\$ 271,706	\$ 13,742,000	\$ -	\$ 13,742,000	100.00%	0.00%	\$ -	\$ 13,742,000	25.00%	\$ 3,435,500	\$ 10,306,500
4b-3	Tertiary Upgrades - WUP Office Relocation (Phase 2)	\$ 5,090,000	\$ 102,671	\$ 5,193,000	\$ -	\$ 5,193,000	100.00%	0.00%	\$ -	\$ 5,193,000	25.00%	\$ 1,298,250	\$ 3,894,750
4b-4	Tertiary Upgrades - Gas Sphere Relocation / Biogas (Phase 2)	\$ 3,861,000	\$ 77,881	\$ 3,939,000	\$ -	\$ 3,939,000	100.00%	0.00%	\$ -	\$ 3,939,000	25.00%	\$ 984,750	\$ 2,954,250
5a	Chlorine Contact Tank and Outfall - Railway Re-Alignment	\$ 11,390,000	\$ 230,000	\$ 11,620,000	\$ -	\$ 11,620,000	100.00%	0.00%	\$ -	\$ 11,620,000	25.00%	\$ 2,905,000	\$ 8,715,000
5b	Chlorine Contact Tank and Outfall - Secondary/Tertiary Chlorine contact Tank, Outfall and Red Hill Creek Upgrades	\$ 49,933,570	\$ 1,176,819	\$ 51,110,000	\$ 25,727,795	\$ 25,382,000	19.88%	80.12%	\$ 20,335,355	\$ 5,046,645	25.00%	\$ 1,261,661	\$ 3,784,984
6	Biogas Digester - New Waste Activated Sludge Thickening Facility (forms part of the Digester Upgrades)	\$ 8,803,000	\$ 177,567	\$ 8,981,000		\$ 8,981,000	100.00%	0.00%	\$ -	\$ 8,981,000	0.00%	\$ -	\$ 8,981,000
7	Chlorine Contact Tank and Outfall - New Outfall (included in 5b project)	\$ -	\$ -	\$ -	\$ -	\$ -	0.00%	100.00%	\$ -	\$ -	25.00%	\$ -	\$ -
8a	Clean Harbour Project - Actual Costs of Engineering (Projects 1, 4a, 4b, 5, 13) Phase 1	\$ 47,541,754	\$ -	\$ 47,542,000	\$ -	\$ 47,542,000	14.73%	85.27%	\$ 40,539,063	\$ 7,002,937	25.00%	\$ 1,750,734	\$ 5,252,202
8b	Clean Harbour Project - O/S Commitments of Engineering (Projects 1, 4a, 4b, 5, 13) Phase 1	\$ 6,788,649	\$ -	\$ 6,789,000	\$ -	\$ 6,789,000	14.73%	85.27%	\$ 5,788,980	\$ 1,000,020	25.00%	\$ 250,005	\$ 750,015
8c	Plant Expansion - Future Engineering (Projects 4b, 5a, 6, 11b, 13b) Phase 2	\$ 62,478,006	\$ -	\$ 62,478,000	\$ -	\$ 62,478,000	73.39%	26.61%	\$ 16,626,788	\$ 45,851,212	25.00%	\$ 11,462,803	\$ 34,388,409
8d	Plant Expansion - Engineering - Other Costs (includes Modular Office Building)	\$ 10,701,376		\$ 10,701,000	\$ -	\$ 10,701,000	14.73%	85.27%	\$ 9,124,743	\$ 1,576,257	25.00%	\$ 394,064	\$ 1,182,193
9	Biogas Digester - Additional Dewatering Capacity	\$ -	\$ -	\$ -		\$ -		100.00%	\$ -	\$ -	0.00%	\$ -	\$ -
10	Biogas Digester - Refurbishment of Digesters to Increase Capacity	\$ -	\$ -	\$ -		\$ -		100.00%	\$ -	\$ -	0.00%	\$ -	\$ -
11a	Biogas Digester - Biogas Upgrades	\$ 45,005,784	\$ -	\$ 45,006,000	\$ 20,000,000	\$ 25,006,000	12.89%	87.11%	\$ 21,783,004	\$ 3,222,996	25.00%	\$ 805,749	\$ 2,417,247
11b	Biogas Digester - Digesters Upgrades	\$ 48,440,000	\$ 977,000	\$ 49,417,000	\$ -	\$ 49,417,000	50.00%	50.00%	\$ 24,708,500	\$ 24,708,500	25.00%	\$ 6,177,125	\$ 18,531,375
12	Biosolids Management Facility - Biosolids Thermal Reduction Disposal Facility	\$ 94,790,000	\$ 4,650,000	\$ 99,440,000	\$ 14,300,000	\$ 85,140,000	18.84%	81.16%	\$ 69,099,130	\$ 16,040,870	25.00%	\$ 4,010,217	\$ 12,030,652
13a	Electrical System Upgrades - New Electrical and power systems - Phase 1	\$ 60,033,299	\$ 1,414,948	\$ 61,448,000	\$ 40,596,792	\$ 20,851,000	19.21%	80.79%	\$ 16,846,063	\$ 4,004,937	25.00%	\$ 1,001,234	\$ 3,003,703
13b	Electrical System Upgrades - New Electrical and power systems - Phase 2	\$ 5,190,000	\$ 105,000	\$ 5,295,000	\$ -	\$ 5,295,000	100.00%	0.00%	\$ -	\$ 5,295,000	25.00%	\$ 1,323,750	\$ 3,971,250
14	Collection System Upgrades	\$ 10,176,000	\$ 239,825	\$ 10,416,000	\$ 6,784,000	\$ 3,632,000	0.00%	100.00%	\$ 3,632,000	\$ -	0.00%	\$ -	\$ -
	<b>Total</b>	\$ 1,036,902,982	\$ 19,798,792	\$ 1,056,702,000	\$ 274,326,079	\$ 782,378,000			\$ 367,764,108	\$ 414,613,892		\$ 101,408,223	\$ 313,205,669



**CITY OF HAMILTON  
2024 DEVELOPMENT CHARGES UPDATE**

**STORMWATER  
BACKGROUND STUDY**

**November 2023  
Rev. March 2024**

**WSP (E&I) Canada Inc. and Scheckenberger &  
Associates Ltd.**



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Figures G1-G7: Stormwater Infrastructure

### Appendices

Appendix G1: Cost Summary Sheets - Detailed by Category

## 1. Introduction

This Background Study has been prepared to support the City of Hamilton 2024 Development Charges (D.C.) Update for the Stormwater component of the Background Study. This report documents changes and updates related to eligible projects, land use and costing for the stormwater component of the Development Charges that have occurred in the 2019-2023 period. This Update to the 2019 D.C. constitutes a more simplified review in comparison to previous editions of the D.C. Update with a focus on those project needs within the existing urban boundary and less emphasis on those in the previously designated Growth areas per GRIDS2, due to Provincial Planning changes and pending studies to support and identify the infrastructure needs for those areas in particular (e.g., City Master Plans and Community Secondary Plans). The changes and updates have been summarized as follows:

- Completed projects since the 2019 D.C. Update have been removed/zeroed out and new projects have been identified and added.
- The forecast is based on the target population numbers that were included in the prior D.C. study. The City is undertaking masterplan studies to assess the servicing needs of future growth as per Official Plan Amendment (O.P.A.) 167 however, as of the time of writing, this analysis is not complete. As the servicing information is not available for growth identified in O.P.A. 167, the former growth targets have been continued for this study.
- New stormwater-related studies, and associated project and costs estimates, have been updated or completed (either superseding older studies, or where no earlier studies existed).
- Projects have been updated / modified, based on new information from the City.
- Land requirement calculations for stormwater management facilities, where no studies exist, have been verified by the City, based on recent actual facility land requirements.
- Capital cost calculations for stormwater management facilities have been verified by the City, based on actual facility capital costs for those constructed in the 2019-2023 period.
- Contingencies have been verified against other projects across the GTA and the approach has been harmonized with the calculations associated with Water and Wastewater (where appropriate).
- The Local Service Policy has been updated. Refer to Section 1.4 and Appendix E of the overall Background Report for the full policies.
- Projects have been deleted from the planning timeframe as a result of the updates to the City's growth forecasts, specific to the GRIDS2 land budget.
- Non-residential stormwater facility growth costs excluded from the Development Charge; therefore having non-residential developers construct their stormwater management facilities directly, at their cost.
- In instances where both residential and non-residential growth lands are proposed to contribute to a stormwater management facility, the areally-estimated component shares have been separated for costing purposes. These have been maintained at the 2019 ratios where new information was not available.

In addition to the above, unit rates for land costs have increased and have been provided by the City's Real Estate Department, for 2023, as follows:

- \$1,074,267 per acre, for Ancaster and Flamborough (Waterdown)

- \$953,902 per acre, for Hamilton City, Dundas, Stoney Creek and Glanbrook (includes Binbrook)

Capital costs for construction of stormwater infrastructure have increased by 39.39%, in accordance with the Non-Residential Construction Index prescribed by the Development Charges Act (ref. Table G.4).

## 1.1 Study Area

For the 2024 Development Charges Update, development in the former member municipalities of the City of Hamilton has in accordance with previous renditions of the D.C. Update, been combined for financial purposes, however a column in the stormwater costing tables accompanying this report has been maintained for reference purposes (and to assist in locating the projects on the overall drawing). The geography of the City has been divided into seven (7) areas as follows:

- Ancaster,
- Binbrook/Mount Hope,
- Hamilton Mountain,
- Stoney Creek (Lower),
- Stoney Creek (Mountain),
- Waterdown,
- Other (Hamilton Downtown, Dundas, Greensville, Carlisle, Freulton, and other outlying areas).

## 1.2 Background and Purpose

This Stormwater Background study provides information for the portion of the Development Charges relating to stormwater infrastructure including:

- channel system improvements,
- off-site erosion control,
- stormwater management works,
- oversizing of stormwater related infrastructure, and
- culverts related to identified road projects.

Projects included in this study are future growth related to the service target, which include both planned and unplanned projects. Future growth-related information has been collected from the City and City-approved studies and, where no information was available, appropriate assumptions and calculations have been made.

This report applies a common approach as used in the 2019 D.C. Update in establishing stormwater-related Development Charges for both residential and non-residential development. The report consists of the following sections: Introduction, Municipal Stormwater Drainage Policies and Criteria, Methodology, Development Charges Summaries, and Conclusions.

## 1.3 Development Charges Act: Storm Services

According to the Development Charges Act (S.O. 1997, Chapter 27), the “council of a municipality may by by-law impose development charges against land to pay for increased capital costs required because of increased needs for services arising from development of the area to which the by-law applies”.



The services referred to include stormwater drainage and control and others as described in Appendix E of the 2023 Development Charges Background Study prepared by Watson & Associates Economists Ltd.

The Development Charges for this Update are based on a projection of the costs to service new development to the service target.

All components of the identified drainage works, that have been considered to require development funding have been included. Storm drainage infrastructure has been classified into five categories:

- open watercourses (channel system improvements),
- off-site erosion control (not previously identified),
- stormwater management facilities (quality and quantity),
- storm sewer oversizing, and
- culverts/bridges (not previously identified and associated with new or widened roads).

#### 1.4 City of Hamilton Development Charge – Local Service Policies

Within a Development Charge policy, certain works deemed "local services" remain the responsibility of the developing landowner. The Local Service Policy for Stormwater Drainage Systems can be found in Appendix E of the Development Charge Background Study.

The following summarizes the updates and new policies that have been added or modified as part of the City of Hamilton's Local Service Policy for Stormwater Drainage Systems, through this update to the Development Charge Bylaw. As part of the 2019 D.C. Update there were numerous updates to the Local Servicing Policies including guidelines and practices – these have been repeated herein for continuity. The 2024 Update (this report) has involved a discussion with City staff on the efficacy/use of the 2019 Updates and any emerging needs.

#### New Policies introduced For 2019 Update

- Stormwater management facilities in series
- Combined Residential / Non- Residential stormwater management facilities
- Oversizing of stormwater management facilities due to downstream constraints
- 100 Year Control in stormwater management facilities
- Criteria for stormwater management facilities in Airport Employment Growth District (A.E.G.D.)
- City Standard for total drainage area to stormwater management facilities
- City Standard for stormwater management facilities treating public roads / single applicants
- Definition of underground tanks for stormwater management facilities not Development Charge eligible
- Definition of stormwater management facilities servicing Mixed Use buildings
- Definition of stormwater management facilities servicing Commercial lands
- Tailwater impacts on land for stormwater management facilities
- Construction cost estimates for stormwater management facilities
- Bedrock impacts on stormwater management facilities cost estimates and actuals

- Frontage calculation for stormwater management facilities
- Definitions for culverts and bridges (as related to road infrastructure)
- Definition for culverts and bridges Development Charge eligible costs
- Watercourses definitions
- Watercourse enclosures not Development Charge eligible
- Combined sewer watershed peak flow control
- Combined sewer watershed provisional Development Charge eligible projects
- Combined sewer watershed provisional outlets
- Monitoring (holistic) of more than one development is Development Charge eligible

## New Policies for 2024 D.C. Update

The information provided below on new policies should be confirmed with Appendix E of the 2023 D.C. Background Study (Watson, 2023) where reliance on such information is critical. The information may be condensed from the reference, to focus on stormwater, for the purposes this report. Other services may be mentioned for context.

There are several new considerations for projects based on whether they are within or outside of the Urban Boundary as set out in Official Plan Amendment (O.P.A.) 167, as adopted by Council on June 8, 2022, and without the Minister modifications approved on November 4, 2022 (Council-adopted Urban Boundary). For development within the Council-adopted Urban Boundary, the local service policy set out therein would apply. For development outside of the Council-adopted Urban Boundary, the following would be a direct developer responsibility:

- All costs required to service the development and/or to connect the development area with existing infrastructure including without limitation, all water, wastewater, **stormwater**, transit, transportation works (in accordance with the Complete Street definition), any utility relocation/conversion costs, and land acquisition costs to meet City standards will be a developer responsibility, unless otherwise provided in Appendix E of the 2023 D.C. Background Study.
- In conjunction with the above bullet, the scope to service the development and/or connect the development area would be identified within approval authority accepted studies to support development areas.
- Projects occurring within the Council-adopted Urban Boundary with an oversizing component that is required to service development outside of the Council-adopted Urban Boundary – the oversizing component is a direct developer responsibility.
- Downstream and/or upstream water and wastewater infrastructure located within the Council-adopted Urban Boundary required to support development outside the Council-adopted Urban Boundary would be a direct developer responsibility.

Based on the above, and to be clear, developments occurring outside of the Council-adopted Urban Boundary will be required to pay the City-wide D.C.'s for all services except for **stormwater**, water linear, and wastewater linear.

In the Local Service Policy for Stormwater Drainage Systems, in addition to the City's Major/Minor systems there are also a class of works related to source water management and use of natural systems. These have

been articulated in the City's Green Standards and Guidelines (GSG, 2023). The definitions of these practices per the GSG are as follows:

Low Impact Development (L.I.D.):

- Stormwater management approach that seeks to manage precipitation at source through better site design and use of L.I.D. practices.
- Typically includes a suite of site design strategies to mimic the area's natural hydrology through stormwater infiltration, evapotranspiration, rainwater harvesting, filtration, and detention.
- L.I.D. practices can include those such as bio-swales, permeable pavement, rain gardens, green roofs, and exfiltration systems, etc. L.I.D. practices often employ vegetation and soil in their design, however not always, and the specific form may vary considering local conditions and community character.

Green Infrastructure (G.I.):

- Natural and human-made elements that provide ecological and hydrological functions and processes. G.I. can include components such as natural heritage features and systems, parklands, stormwater management systems, street trees, urban forests, natural channels, permeable surfaces, and green roofs.

Natural Infrastructure / Assets:

- The term "natural infrastructure" refers to naturally occurring landscape features and/or nature-based solutions that promote, use, restore or emulate natural ecological processes.
- In summary, L.I.D. practices are man-made measures to off-set the impacts of development, while Natural infrastructure considers the water management services provided by natural features or nature-based solutions. Green Infrastructure considers both concepts and embodies these into a more holistic term.

For Stormwater Management Facilities, the following should be noted:

- L.I.D. practices and G.I. are not eligible for D.C. contributions.
- Where a centralized (communal) facility serves both residential and non-residential parcels, the cost is established based on the ratio of the areas served and factored by the respective runoff coefficients. Note that the non-residential area, if commercial, may also be required to provide lot-level quality controls, depending on location, however this component (L.I.D. and/or G.I.) would not be eligible for D.C. contributions.

## 1.5 Background Information Collected

City staff, through the Technical Committee noted in Section 1.6, has supplied the following background information:

- Applicable background reports
- Summary of stormwater management facility construction costs and land areas
- Digital topographic mapping
- Digital growth-related land use fabric
- Stormwater policy/philosophy related to Development Charges
- Reviews and comments on overall map of growth areas and identified projects
- Culvert and bridge, and subdivision-related storm sewer oversizing database.

- Draft - Green Standards and Guidelines

## 1.6 Administration

A City of Hamilton Team has assisted in collecting the background information for this study, as well as meeting with WSP and Scheckenberger & Associates Ltd. (S&A) to review the various stormwater projects, cost estimates, financially committed projects, and underlying philosophy and assumptions; these have included:

Tony Sergi, Director & Senior Advisor, Strategic Growth Initiatives

Gavin Norman, Manager of Infrastructure Planning

Mark Hartley, Senior Engineer Stormwater, Infrastructure Planning

Monir Moniruzzaman, Manager Development Engineering

Bhajan Sarker, Senior Project Manager

## 2. Municipal Stormwater Policy and Criteria

### 2.1 Overview

The financial requirements to provide stormwater servicing to the service target have been established in accordance with the Development Charges Act, and specifically relate to the level of service to be provided in the subject growth areas.

The City of Hamilton's Storm Drainage Criteria and level of service has been summarized in this Section. The City's standards have been developed to provide this level of service, and also recognize other Provincial and Federal criteria for management of flooding, erosion, stormwater quality, and fisheries habitat protection and enhancement.

### 2.2 Storm Sewer System

The storm sewer system provides for the drainage and conveyance of the runoff resulting from a design storm event having a 5-year return period. In the former municipalities of the City of Hamilton, the storm sewers were designed to have the capacity for storm events ranging between a 1 in 2-year event and approximately a 1 in 50-year event (ref. Table G.1):

**TABLE G.1  
COMPARISON OF FORMER AREA MUNICIPALITIES  
STORM DRAINAGE SYSTEM CRITERIA AND POLICY**

<b>Former Municipality</b>	<b>Minor System Criteria</b>	<b>Foundation Drainage Requirements<sup>(2)</sup></b>	<b>Combined Sewers</b>	<b>Roof Leader Policy</b>	<b>Major System Criteria</b>
Hamilton	18 – 50 yr <sup>(1)</sup>	Gravity	Yes	Direct to Sewer	100 yr
Ancaster	2 yr	Sump Pumps	No	Surface	100 yr
Dundas	2 – 5 yr	N/A	No <sup>(3)</sup>	N/A	100 yr
Flamborough	2 – 5 yr	Gravity/ Sump Pumps	No	Surface	100 yr/Regional <sup>(4)</sup>
Glanbrook	5 yr	Sump Pumps	No	Surface	100 yr
Stoney Creek	5 yr	Gravity	No	Surface	100 yr

- Notes:
- <sup>(1)</sup> 1942 - 1992 (inclusive) used an 18-year storm event; post 1992 used 50 year. Both design storms used the Modified Rational Area Method
  - <sup>(2)</sup> Foundation drainage requirement exceptions are currently permitted upon receipt of a stormwater management report.
  - <sup>(3)</sup> The Pleasant Valley neighbourhood (Dundas) only has a combined sewer system permitted by By-Law.
  - <sup>(4)</sup> Regional Storm is Hurricane Hazel

New storm sewers will have to be designed to the new criteria, but new development must also reflect both the external upstream drainage and the existing storm sewer system (potentially none) downstream of the site.

The City of Hamilton Criteria and Guidelines for Stormwater Infrastructure Design (September 2007) outline the criteria and assessment requirements for the new storm sewer system as follows:

- Approved Master Drainage Plans (M.D.P.'s), which have established storm sewer sizing criteria other than 1 in 5 year standard will govern. In the absence of approved M.D.P.'s, storm sewers shall be designed to a minimum 1 in 5 year, uncharged standard (i.e. 85% of pipe capacity). For any storm sewer to be assumed by the City the minimum allowable pipe diameter is 300 mm.
- Interfacing between new storm sewers designed to the minimum 1 in 5 year, uncharged standard and existing storm sewers of variable sizing standard shall require hydraulic analysis of the existing and proposed storm sewers. Flow capacity of the proposed storm sewer shall be determined based on the receiving existing sewer remaining uncharged. The proposed storm sewer flow capacity would either be the 1 in 5 year standard or designed to allow the existing storm sewer to remain uncharged. Should the proposed storm sewer flow capacity be required to be less than the 1 in 5 year standard, to prevent downstream surcharging, inlet capacity for the storm sewer should be designed accordingly. Should the existing downstream system already be surcharged, the proposed upstream storm sewer should not increase the level of surcharging downstream.

- Hydraulic analysis of the proposed and existing storm sewer system shall provide hydraulic grade lines for the inlet capacity and/or 1 in 5 year standard and 1 in 100 year standard. Hydraulic analysis should demonstrate that no negative impact on the receiving storm sewer system results from the proposed storm sewer. The extent of the downstream off-site analysis needs to be verified with City staff prior to initiation, to ensure that downstream conditions are adequately accounted for in the analysis. The City shall provide the developer's consultant with the 100-year hydraulic grade line for the existing storm infrastructure system when available. Should downstream storm sewer surcharging be a concern under existing conditions, the proponent may be required to restrict inlet capacity to ensure no negative impact on the receiving system. In addition, the proponent is to ensure that adequate overland flow capacity is available in the development and in the receiving major system, incorporating the influence of the restricted inlet capacity of the storm sewer system.

## Storm Sewer Oversizing

In regards to Storm Sewers, the Development Charges are applicable primarily to oversizing of existing or new storm sewers, to allow for the conveyance of runoff from new development. Current City financial policy provides for financial relief for storm sewers over 1200 mm in diameter (ref. Comprehensive Development Guidelines and Financial Policies Manual, 2017). Oversizing is common when a development has a large upstream drainage area that has also been proposed to be developed. When stormwater peak flows from the area's ultimate land use need to be conveyed through a downstream development, the Development Charges provide a method for collecting funds for the net difference between the storm sewer system required solely for the subject development, and the oversized system required for the conveyance of runoff from multiple off-site developments.

In some areas, a storm sewer system may not be viable, and the major overland system may not be able to safely convey the runoff resulting from a 1 in 100 year design storm event. In this case a relief sewer or alternate conveyance mechanism may be required to provide the additional capacity and hence be funded through Development Charges.

### 2.3 Road Crossings

Waterway openings for culverts and bridge crossings shall be designed in accordance with the current and in-effect Ministry of Transportation Ontario (M.T.O.) policies and guidelines.

Notwithstanding the M.T.O.'s drainage policy and guidelines, it is a City of Hamilton requirement that new roadway culverts and bridges have sufficient conveyance capacity to safely pass the Regulatory flood (larger of Hurricane Hazel or 100 year event), in order to avoid adverse backwater effects (ref. M.T.O. Directive B-100). If, due to economics or other mitigating circumstances, this is not feasible, a backwater analysis must be undertaken to determine the limits of upstream flooding and provide necessary mitigating design modifications.

Arterial and collector roadways in new developments should be, where possible, the only road classifications permitted to cross a watercourse with a drainage area over 125 ha. The spacing and location of roadway crossings other than arterial or collector roads may be considered by the City when documented within the subject Stormwater Management Plan for the respective development.

Freeboard and clearance (as defined in the governing M.T.O. manuals and the Ontario Bridge Code) requirements for watercourse crossings should be based on current M.T.O. criteria.

Where a permit is required from a Conservation Authority, watercourse crossings will not be permitted to increase upstream flooding on private lands, unless appropriate waivers can be secured.

Culvert replacements may require a Class Environmental Assessment as outlined within the City's Storm Drainage Policy.

Allowable Regional Storm event (Hurricane Hazel) flooding depths on roadways should be determined based on the standards within the Ontario Ministry of Natural Resources Natural Hazards Technical Guides, latest revision.

## 2.4 Natural Watercourse Systems

The City of Hamilton Criteria and Guidelines for Stormwater Infrastructure Design (September 2007) outline the criteria for the open watercourses as follows:

Where watercourse alterations are proposed as part of a development, the design of such alterations shall incorporate and consider the following:

### Design Approach and Principles

- Channel design is to be based on natural channel forming processes to achieve a dynamically stable system. The channel evaluation methodology and design approach are to be consistent with the most current Provincial guidelines (ref. Ontario Ministry of Natural Resources Natural Hazards Technical Guides, March 2003 and "Adaptive Management of Stream Corridors in Ontario", M.N.R., 2001 and subsequent updates).
- Alteration to a regulated watercourse will require a permit from the respective Conservation Authority (Development, Interference with Wetlands and Alterations to Shorelines and Watercourses) and potentially clearance/authorization from the Federal Department of Fisheries and Oceans (Fisheries Act) and Ontario Ministry of Natural Resources and Forestry (Lakes and Rivers Improvement Act).
- Remedial works shall incorporate fish habitat protection/mitigation or compensation in accordance with the requirements of the Federal Department of Fisheries and Oceans (DFO) and Ontario Ministry of Natural Resources and Forestry (M.N.R.F.), related to stream type and significance.
- Remedial works shall incorporate the requirements of the governing Official Plan and any Official Plan Amendment (O.P.A.) including Secondary Plans, as well as the requirements of provincial Ministries and other public agencies for protection of associated natural features such as:

### Environmentally Significant Areas (E.S.A.)

- City of Hamilton
- Conservation Authorities

### Niagara Escarpment

- Niagara Escarpment Commission (N.E.C.)

### Heritage Sites

- Ontario Ministry of Tourism, Culture and Recreation

## Setbacks

The City of Hamilton area Conservation Authorities have various watercourse setback policies for watercourse features to establish regulated development boundaries. The proponent should always verify that the most current Conservation Authority's setback policies are being applied. The four Conservation Authorities in the City of Hamilton, Hamilton Conservation Authority (H.C.A.), Niagara Peninsula Conservation Authority (N.P.C.A.), Grand River Conservation Authority (G.R.C.A.), and Conservation Halton (C.H.), require development to adhere to their specific setback policies. Each Conservation Authority has established Generic Regulations for development in or adjacent to hazardous lands and other regulated areas, i.e. "Development, Interference with Wetlands and Alteration to Shorelines and Watercourses".

The size of setbacks from the watercourse edge to developable lands is typically a function of the significance of the valley form, the sensitivity of the watercourse and the type of development (building or other).

The Conservation Authorities may establish setbacks using "Understanding Natural Hazards", M.N.R., 2001 to define the erosion hazard limit using stable slope allowances. Development Proponents should be aware that watercourse setbacks from regulated systems will typically be established in coordination with a Conservation Authority where flooding and/or erosion hazards are present.

## Access/Maintenance

- Creek block dedications in new developments adjacent to private land shall be fenced to prevent human access and encroachment. Fencing shall be on public property, 150 mm from the property line. Private access gates to creek block areas are not allowed.
- Natural channel design shall consider channel and utility maintenance requirements by incorporating access routes. Access routes may be located within the appropriate top of bank setback limit or adjacent to the low flow area in appropriately designated areas.

## 2.5 Stormwater Management Facilities

The City of Hamilton Stormwater Policy (March 2004) outlines the criteria for stormwater management quality, quantity and erosion control as follows:

### Quality Control

*Urbanization typically increases the contaminant load (i.e. sediment, metals, nutrients, bacteria) to natural stream systems. To mitigate this effect, stormwater quality treatment is required for all new development and redevelopment (including reconstruction of roadways with additional lanes, widening and cross-section revisions as required by review on an individual case basis by the Ministry of Environment) within the City of Hamilton, except for areas draining directly to a combined sewer system.*

*Stormwater quality treatment should provide a comprehensive approach to both surface runoff and groundwater. Thus, as a general consideration, maintenance of the natural hydrologic cycle including infiltration is encouraged and the use of stormwater management practices (S.W.M.P.) which enhance or maintain infiltration should be considered for each development.*



Generally, active infiltration measures, such as soakaway pits and rear yard ponding, will be most applicable in permeable soils areas and their use will require supporting soils property documentation. Passive measures such as disconnection of roof leaders have been historically applied in many areas and shall be implemented in all areas unless specific constraints (such as in the former City of Hamilton and Town of Dundas where zero lot line construction on narrow width lots is permitted, or in the older City of Hamilton downtown areas where there is insufficient pervious area) preclude these measures. In all cases, the potential for groundwater contamination shall be considered where infiltration of road runoff is contemplated. In areas where hydrogeologic concerns are identified, particularly in areas where groundwater is used for human consumption and/or critical linkages to fisheries habitat are present, additional study and analysis may be required to determine the appropriate level of mitigation.

Stormwater quality treatment measures shall adhere to the specific guidelines for stormwater management practices that have been developed by the Province (ref. Stormwater Management Planning and Design Manual, Ministry of Environment, March 2003, or subsequent updates).

The design of stormwater quality facilities shall conform to existing Provincial requirements (ref. Stormwater Management Planning and Design Manual, M.O.E., March 2003, Water Management Policies, Guidelines Provincial Water Quality Objectives (Blue Book), M.O.E.E., 1994), as well as current policies within the City of Hamilton (i.e. Hamilton Harbour Remedial Action Plan, Vision 2020), or subsequent updates of the foregoing.

All new development shall implement a stormwater quality management strategy, which considers surface runoff and groundwater in compliance with the existing provincial and municipal policies.

In areas of existing development where re-development is proposed, requirements for stormwater quality measures will be evaluated on a site-specific basis, with regard to the feasibility of implementation. Where on-site measures are considered infeasible, or in areas serviced by combined sewers, the City of Hamilton's Planning and Development Department may consider the potential for contributions to off-site improvements in the form of a cash-in-lieu policy, as in the current Provincial Stormwater Management Planning and Design Manual, March 2003, or subsequent updates. In order to appropriately direct these resources, a Master Storm Water Quality Plan (a regional assessment to identify retrofit locations and costs) is being contemplated by the City's Public Works Department. A 'pilot' study has been prepared for the former community of Stoney Creek.

## Quantity Control and Flood Protection

Urbanization causes increases in runoff volumes and rates, due to an increase in impervious area and changes in conveyance systems. Without proper stormwater management, these increases may result in flooding and erosion.

The specified level of control for subject lands in the City of Hamilton is designated by a Watershed/Subwatershed or Master Drainage Plan where they exist. Such plans account for additional constraints (i.e. economic and physical limitations) which may limit the capacity of proposed stormwater management systems. Such plans may also demonstrate that the existing downstream capacities are sufficient to accommodate local increases in post-development peak flows (i.e. oversized sewers or watercourse reaches with adequate capacity and resistance to flow increases).

Local Conservation Authorities, through their mandate to control flooding and limit flood damage, have developed criteria for runoff control. Hence, application of these criteria through a co-ordinated approach to

*drainage planning on a watershed and subwatershed basis is required to ensure effective runoff control and minimization of flood damages.*

*Several Municipal jurisdictions have implemented a “zero increase in peak runoff rate” policy for controlling post-development runoff. While this type of policy provides simple and clear direction regarding stormwater management flood control, a uniform application of this type of policy does not consider the potentially negative effects on watercourses from extended periods of controlled peak discharge (i.e. increased erosion).*

*In cases where no Master Drainage Plan (M.D.P.) or Watershed/Subwatershed Planning has been completed or development lands are considered as external drainage areas to a M.D.P., watershed/subwatershed planning areas, consultation with the City shall determine if runoff peak flows shall be controlled to pre-development levels or alternative stormwater management is required. Discussion with the City’s Planning and Development Department shall be required to determine the scope of assessment based on the potential impact on the receiving storm system (ref. Conditions for Practice). Should the proponent establish, to the satisfaction of the City’s Planning and Development Department, that the potential impact of the proposed development would be minimal, the City’s Planning and Development Department could decide that detailed modelling and analysis may not be required, as per the Conditions of Practice within the Criteria and Guidelines for Stormwater Infrastructure Design Manual. Should the City’s Planning and Development Department deem a more detailed assessment appropriate, the proponent would need to demonstrate through appropriate modelling and analysis, that uncontrolled flow will not cause detrimental impacts on downstream properties and watercourse systems as per the Criteria and Guidelines for Stormwater Infrastructure Design Manual. At the development application stage, before the City’s Planning and Development Department will accept an increase in runoff rates, the proponent must also receive endorsement from the agencies having jurisdiction. Over-control of runoff (i.e. less than pre-development runoff), may also be required as it relates to downstream constraints.*

The City of Hamilton is also introducing new “Green Standards and Guidelines” (GSG) which are expected to be in place for 2024. These GSG prescribe minimum capture requirements at-source to effectively treat water quality, along with a listing of acceptable Low Impact Development practices. The GSG aligns with Provincial (M.E.C.P.) guidance specific to the use of the 90<sup>th</sup> percentile event in designing a treatment train for stormwater management with the objective of water quality treatment and water balance.

## 2.6 Erosion Control

*The rate that uncontrolled runoff, due to urbanization, can accelerate the natural evolutionary processes of a watercourse depends upon topography and soil conditions. When erosion and/or bank instability is probable (e.g. from outlets from future development areas), the proponent shall either provide effective on-site or system controls (e.g. end-of-pipe controls), stabilize the receiving watercourse by appropriate remedial measures, or contribute to a fund designated towards future watercourse improvements, typically identified in Watershed and Subwatershed Plans. Should on-site or system controls not adequately control flows below the receiving system’s erosion threshold, either off-site watercourse remedial measures or contribution to a fund shall be required.*

*Requirements for erosion control will generally be determined through upper level studies such as Watershed/Subwatershed/Master Drainage Plans. In these cases, the proponent(s) will be required to provide mitigation in accordance with the Watershed or Subwatershed Plans or with the Master Drainage Plans, as well as policies of the local Conservation Authority.*

*In areas where no Watershed, Subwatershed Plan or Master Drainage Plan exists, it shall be the responsibility of the development proponent to mitigate potential erosion impacts in accordance with Provincial Guidelines, unless it can be demonstrated through appropriate modelling and/or analysis that erosion processes will not be adversely affected by the proposed development.*

*In areas where the downstream receiving watercourse is determined to be unstable, or where control/over control of flow rates is either not possible or not feasible, design of watercourse alterations would be considered subject to design in accordance with Natural Channel Design principles.*

*The City of Hamilton supports Natural Channel Design Principles, as specified by the Province in Natural Channel Systems, An Approach to Management and Design, M.N.R., 1994 (or most recent update) and "Adaptive Management of Stream Corridors in Ontario", M.N.R. 2002 (or most recent update) Implementation of Natural Channel Design principles on area watercourses shall follow the guidance within the Criteria and Guidelines for Stormwater Infrastructure Design Manual. Any watercourse alteration shall be designed to the future flow regime with stormwater management controls in-place.*

*Storm sewer outfalls in natural channels should be provided with proper protection against erosion, which includes appropriate bank scouring protection on either side of the outfall and creek. When storm sewer outfalls outlet to steep and/or deep valleys, drop structures shall be designed in such a manner as to ensure bank stability. Such local erosion protection measures shall be designed so as not to interfere with the natural channel forming processes of the receiving watercourse system. Natural channels shall be designed to accommodate various flow regimes resulting from phased stormwater management measures.*

*Although both swales and ditches only provide a flow conveyance function and not the natural channel form, swales and ditches should be designed with appropriate erosion protection. Erosion protection measures shall be provided at storm outfalls and for the swale/ditch according to erosion thresholds.*

### **3. Methodology**

#### **3.1 Overview**

All components of the eligible drainage works that have been considered to require development funding have been included in this assessment/calculation. As noted earlier, the eligible Storm drainage infrastructure may consist of:

- open watercourses,
- storm sewers (shared and outlet works), and
- stormwater management facilities.

For the purposes of this assessment, the charges have been separated into five categories of work as follows:

#### **A. Open Watercourses: Channel System Improvements (identified projects)**

- Erosion control and conveyance works, including channelization and major culverts, identified along watercourses to address the impacts of growth, such as increased peak flows, volumes, and durations of erosive flows, as identified in currently approved studies

## **B. Open Watercourses: Erosion Control – Anticipated Future Works**

- Off-site (immediately downstream of new development) erosion control and conveyance works not yet identified in any approved studies along watercourses to mitigate impacts of growth (i.e. areas not covered in current Master Drainage Plans, Subwatershed Studies, etc.).

## **C. Stormwater Management (Quality and/or Quantity Facilities)**

- Stormwater quantity and quality control infrastructure required to manage runoff from future growth areas, to mitigate impacts on downstream systems, including:
  - Retrofit facilities designed to manage runoff from future growth
  - End-of-pipe infrastructure such as wetlands, wet ponds, dry ponds
- Includes opportunity for certain qualifying source controls, such as Best Management Practices, and Low Impact Development (unidentified in the list)

## **D. Storm Sewers – Oversizing and Neighbourhood Outlet Works**

### **D1 Oversizing of trunk storm sewers**

- Oversizing of storm sewers to accommodate new growth, or where multiple new growth areas combine to generate sufficient additional runoff that a sewer more than 1200 mm in diameter is required; the cost of the oversizing would be considered a Development Charge. Local storm sewers to service new growth, equal to and less than the 1200 mm diameter threshold, are considered a local Developer Contribution, and are not included in the Development Charge.

### **D2 Storm sewer – neighbourhood outlet works (as recommended by studies)**

- Storm sewers and outlet works, shared by multiple development growth parcels, required to accommodate new growth

## **E. Culverts and Bridges: Anticipated Future Works**

- Future culverts/bridges (i.e. those not identified in previous studies as part of Category A) which require an upgrade (either in length or capacity) normally associated with new road construction to support growth.

A further two sub-categories (one for stormwater management facilities and one for watercourses) have been included, to specifically capture the infrastructure required for the identified growth areas:

- G.R.I.D.S. stormwater management facilities
- G.R.I.D.S. watercourses

G.R.I.D.S. is the City's Growth Related Integrated Development Strategy, which includes the areas identified as Potential New Business Park, in the existing Airport Business Park Special Policy Area, new employment lands adjacent to the Airport Special Policy Area (S.P.A.) lands, and a proposed urban boundary expansion/employment lands to the south and east of Highway 20 and Highway 53/Elfrida.

These growth areas include the lands which are the subject of the completed studies: Airport Employment Growth District – Phase 2, Dillon et al 2009, A.E.G.D. Subwatershed Study and Stormwater Master Plan

(S.W.M.P.) Implementation Document, Aquafor Beech Ltd., April 2017, and Elfrida Subwatershed Study, Phase 1 Report, Aquafor Beech Limited, May 2018.

It should be noted that projects related to Elfrida have had their time frame revised to be a post-period benefit whereas in 2019, they were indicated for the 2014-31 time period.

### 3.2 Future Development (Residential /Non-Residential growth areas)

Figures G1-G7 cover the City of Hamilton, along with the bounded development areas from previous Development Charge Background Studies.

It should be noted that for the purpose of calculating the stormwater component of the Development Charge, no distinction between the development time frame has been made. A column in the costing tables has been added for reference purposes only.

Figures G1-G7 show the forty (40) +/- subwatersheds that cover the City of Hamilton. These subwatersheds lie within the jurisdiction of the four Conservation Authorities, namely: Conservation Halton, Hamilton Conservation Authority, Grand River Conservation Authority, and the Niagara Peninsula Conservation Authority.

### 3.3 Costing Assumptions

The estimates of the construction and land costs have been based on the best available information for the future projects. A complete listing of all the projects is in Appendix G1. All assumptions used to derive the costs are listed in this section. Estimated land costs have also been included in the totals. Residential land costs have been tracked by the City, and currently have been set at \$953,900/ac (\$2,357,100/ha), except for Ancaster and Waterdown, which has been set at \$1,074,300/ac. (\$2,654,600/ha). The costs shown under the individual categories (A to E and G.R.I.D.S.) are based only on estimated construction costs. A 15 % allowance for engineering, design, legal, and survey has been added to the subtotals as shown in the Appendix G1 summary pages.

The costs have either been calculated using formulas based on:

- 2019-2023 construction prices from projects completed in the City, and neighbouring Municipalities in the GTA, where no cost estimates are available in the background reports, or
- where construction estimates were available, the unit rates used in those estimates were considered to be valid in 2024 (i.e. same rates as from current contract bids provided by the City of Hamilton).

Where a portion of the Development Charge (for the stormwater component cost of the project) benefits existing development, the amount attributable to new development has been adjusted by examining the percentage of existing development that would benefit from the proposed infrastructure.

#### 3.3.1 Specific Costing Assumptions By Category

A complete summary listing of all projects is in Appendix G1, with the Residential listing first followed by the Non-Residential, sorted by geographic area, then category of project.

**Costs for Category A (Open Watercourses: Channel System Improvements, for projects identified in City studies)** have been established using the existing studies provided by the City (ref. list of references at the end of the report), . In instances where the studies identified watercourse and road crossings, but no specific costs (Waterdown East-West Corridor, Airport Employment Growth District), the City estimated the culvert crossing size and costing estimate using the method described below for Category E.

**Costs for Category B (Open Watercourses: Erosion Control – Estimated Future Works not identified in previous studies)** have been calculated as follows:

- for existing open watercourses downstream of new development, the information has been abstracted from the topographic mapping provided by the City.
- The applicable watercourse length assumed to require treatment for erosion protection has been defined based on the distance to a receiving water body (i.e. lake), or to a point downstream where erosion potential is deemed to no longer be predicted to occur as a result of the subject development. This point has been estimated as the point where the total tributary drainage area exceeds 2 times the area tributary to the development discharge point (i.e. immediately downstream of the new development). This approach is intended to reflect the diminished erosion impact potential of development discharge, as the size of the drainage area and flow in the watercourse increases downstream from the point of discharge from the subject development.
- The percentage of the total length of channel required for require erosion works has been established at between 5 and 20 %, depending on the relationship of total development area as a function of upstream drainage area. The greater the amount of developed area, tributary to the subject watercourse, the greater the percentage of watercourse assumed to require erosion control. The limit of up to 20 % of a receiving watercourse requiring treatment reflects the anticipated benefits from on-site stormwater management which would greatly reduce downstream erosion potential. However, since 100 % volume control is not considered practical in most parts of Hamilton, it is predicted that erosion potential would not be eliminated entirely with on-site controls in place.
- The cost per metre of work has been estimated to be either \$2,090 or \$3,485 depending on the general size or depth of the creek bankfull section, and potential valley slopes, which has been expressed as a function of the upstream drainage area. Subject watercourses having an upstream drainage area of under 500 ha have been costed at \$2,090 /m, and drainage areas over 500 ha at \$3,485 /m. The difference reflects the condition whereby the required protection may vary between simple regrading of banks and vegetative bioengineering, to structural measures such as armour-stone and major earth excavation. The unit rate of \$2,090 /m involves site preparation, dewatering, earth excavation, bioengineering (live staking, timber cribs, brush mattresses, etc.), and site restoration. The unit rate of \$3,485 /m differs in that more structural materials are employed for erosion control, such as riprap, and armour stone, which typically involve more excavation and items such as geotextiles, subdrains and backfill.
- The cost for land for an armoured watercourse to be brought into public control (i.e., through an easement) has been assumed to be the same as the cost of land for stormwater management facilities, i.e. assuming highest and best use for the land. The land required for an easement has been estimated as either 5 m or 10 m width depending on the size of the creek (i.e. drainage area under or over 500 ha), multiplied by the length of creek to be treated. This estimate does not allow for connections between easements on separate sections of the creek.
- The amount of the costs allocated to growth, or the new development percentage, is calculated by dividing the new development area (residential and non-residential) by the total of existing and future development area (residential and non-residential) within the contributing drainage area to the subject watercourse erosion project reach. The division of areas determined in 2019 was carried forward, as no new information was available for revisiting the calculations.

**Costs for Category C (Stormwater Management Facilities)** have either been based on available studies or, if no estimate was available, the cost has been based on a formula related to the drainage area, to estimate required volume, and the required land to accommodate the facility footprint. The cost of land has been set at either \$953,900 per acre, or \$1,074,300 per acre (Ancaster and Waterdown) in accordance with the City's calculated costs.

Target volumes for stormwater quality, erosion control and flood control vary widely, each specific to the location of development and the watershed's characteristics. For the purpose of this D.C. Update, Volumetric Ranges have been estimated to be between 100 and 200 m<sup>3</sup>/impervious hectare for quality only; between 100 and 400 m<sup>3</sup>/impervious hectare for extended detention erosion control, and between 300 to 500 m<sup>3</sup>/impervious hectare for flood control. These values are based on recent experience in developing urban environments in Hamilton and the Greater Golden Horseshoe. The specific volumetric amounts are directly related to the type of receiving watercourse. For sizing quality control only, in the absence of available reporting, an average target volume of 475 m<sup>3</sup>/impervious hectare has been used, with an approximate impervious fraction of 40 %, resulting in an average volume of 190 m<sup>3</sup>/hectare for Development Charge calculation purposes. A volume of 720 m<sup>3</sup>/hectare has been used for Development Charge calculation purposes for combined quantity/quality control facilities.

The erosion control and flood control volumes are typically stacked above the water quality control volumes, hence there can be economies in terms of land requirements when multiple functions are required at a facility. The construction costs have been based on the total volumes.

The land costs have been developed to take into account the required footprint of the facilities and have been based on the following rule:

- If the footprint has been established through a City-approved study, this area is to be used;
- If no study exists, a quality (only) facility or quantity (only) facility will require 4 % of the contributing drainage area; or
- If no study exists, a combined quality/quantity facility (and those combined facilities that include an erosion control volume) will require 6 % of the contributing drainage area
- The City has identified seven (7) facilities in the Fruitland-Winona Secondary Plan area, which will require 10 % of the contributing drainage area, due to grading constraints associated with flat local grades and comparatively high existing ditch outlets. The City has furthermore identified two (2) additional residential facilities for which similar grading constraints have been identified, and hence also applied the 10 % estimate to the area requirement: Ancaster facility ANC 14 at Meadowlands Phase 4, and Hamilton facility HAM 31 at Stonechurch and Wellington. (The City has identified one (1) non-residential facility for which grading constraints have been identified: Ancaster facility ANC 23 at Trustwood Industrial East).

A construction cost relationship for S.W.M.F. has been developed based on past estimates and actual construction costs of a range of stormwater management facilities constructed in Southern Ontario over the past five years. Capital costs assigned to the individual projects are based on \$112/m<sup>3</sup> of total volume for the first 6,500 m<sup>3</sup>, and \$56/m<sup>3</sup> of total volume for the balance of storage volume.

The City has identified seven (7) facilities (number carried forward from 2019) which are known to be located in an area of shallow depth to bedrock. The City has estimated the volume of rock that will be encountered,

and increased the facility cost estimate for excavation accordingly, based on using the \$112/m<sup>3</sup> unit rate, to account for the estimated rock volume in excess of the 6,500 m<sup>3</sup> cutoff under the standard cost estimate noted above. (Note that the City also has a contingency for additional facilities which may encounter more bedrock than estimated).

**Comparison of Actual Costs for Two (2) Completed S.W.M. Facilities vs. 2019**

The City provided actual costs for two (2) completed S.W.M. facilities and comparison ratios for each vs. 2019 estimates. The comparison is summarized in Table G.2. For Waterdown S.W.M.F. #4, the land cost and capital cost were 17% and 29% higher, respectively. For Waterdown S.W.M.F. #5, the land cost and capital cost were 13% and 17% lower, respectively. Although the cost increases are less than the indexed inflation value of 39.4%, they are still notably higher than estimated in 2019, for three of the four comparison ratios made.

**TABLE G.2  
COMPARISON OF ACTUAL COSTS FOR TWO (2) COMPLETED S.W.M. FACILITIES VS. 2019**

Primary Dev. Area	S.W.M.F.#	Proj. Title	2019 Land Cost (\$M)	2019 Est. Cap. Cost (\$M)	Schedule of Fees Land (\$M)	Schedule of Fees Capital (\$M)	Land Cost Ratio: Actual / 2019	Cap. Cost Ratio: Actual / 2019
WAT	4	Mtview Heights	4.85	2.99	5.67	3.86	1.17	1.29
WAT	5	Mtview Heights	2.91	1.58	3.28	1.31	1.13	0.83

**Unidentified Projects (Category C – Res. – Facility U1)**

The City has included a placeholder item entry under Category C for stormwater management facilities that are not currently identified in the list of projects. The basis for this is that the City has had several occasions over the preceding years where development has occurred in such a manner as to require temporary or additional stormwater management works. These works may, in some cases, be determined by the City to provide a long-term benefit to the stormwater system, and hence the City has added these select works to its infrastructure. In these instances, the City may credit these works in part or in full, and hence has created this item as a form of a Credit Pool. The City will also review whether previously identified works in the area may need to be updated to reflect the new works. The City will develop a process for the auditing and accounting of these potential works to confirm the reasonableness of each cost estimate of the facility or portion of facility for which credit is being sought. An amount of \$5,000,000 has been carried forward from 2019.

**Low Impact Development Credit Policy (Category C – Res. – Facility U2)**

The City of Hamilton is supportive of Low Impact Development measures and as such wishes to encourage these through a form of incentive program. To this end, the City, through this Development Charge, has



set up an initial Low Impact Development Credit Pool in the amount of \$1,500,000 (carried forward from 2019). The City is developing a policy for the management of this credit, which will be refined as the policy evolves over time.

### **Facility Road Frontage Costs (Category C – Res. – Facility U3)**

This constitutes an item entry under Category C for S.W.M. facility road frontage costs, to cover the portion of road cost that is fronted by a City S.W.M. facility block. The average frontage being applied in the calculation is 120 m, based on the average footprint and geometry of facilities, and verification of past frontages from the past. This amounts to 120 m \* \$2090/m/facility for the 38 residential facilities listed (retrofits excluded) or \$9,530,000.

### **Facility Land Footprint Contingency (Category C – Res. – Facility U4)**

This constitutes an entry under Category C for special instances where the land footprint required is more than either the City formula-based calculation or the detailed estimate. The basis for this contingency is that the City has had several occasions over the recent past where the footprint was between 6 and 10 % of the contributing drainage area, and hence the Development Charge for those facilities did not cover the full cost of the land. The City has proposed that, on average, 1 in 4 stormwater management facilities will require a larger footprint. Since there are 38 residential facilities on the list, this amounts to approximately 10 facilities. The average footprint for the 38 facilities has been used to calculate the land footprint contingency, using an average exceedance of the footprint by 25 %, amounting to approximately \$6,100,000 of additional land. Note that for the 2024 D.C. Update Study, the City has identified eight (8) facilities (number of facilities carried forward from 2019) which may require a larger footprint, and they would not apply to this contingency. In identifying the eight (8) facilities, the likelihood of another ten (10) requiring a larger footprint is expected to be lowered.

### **Facility Volume Construction Contingency (Category C – Res. – Facility U5)**

This constitutes an item entry under Category C for special instances where the storage volume required is more than either the City estimate or the detailed estimate. This may be for exceptional circumstances, including an increase in land use density at a specific facility and/or tributary drainage area. The basis for this contingency is that the City has had several occasions over the recent past where estimated volumes have been exceeded, and based on this experience has assumed that 1 in 10 facilities will exceed the design volume by 10 %, amounting to \$4,391,000 in additional construction cost (primarily excavation). The ratio of facilities has been carried forward from 2019 while the cost has been indexed by inflation for 2019-2023.

### **Facility Rock Excavation Construction Contingency (Category C – Res. – Facility U6)**

This constitutes an item entry under Category C for special instances where the volume of rock encountered is more than either the City estimate or the detailed estimate. The City has recorded the instances of extra rock encountered in the facility construction over a previous 5 year period (2014-2019), and based on this experience has assumed that 1 in 10 facilities (3.8) will encounter 9,000 m<sup>3</sup> of rock, amounting to \$3,813,700

(indexed to inflation for 2019-2023) ( in extra construction cost for excavation. Note that for the 2024 D.C. Update Study, the City has identified seven (7) facilities (carried forward from 2019) which have been identified in bedrock, and they would not apply to this contingency. In identifying the seven (7) facilities, the likelihood of another 3.8 encountering bedrock is expected to be lowered.

## **Unidentified Facilities in Combined Sewer Area (Category C – Res. – Facility U7)**

The City has included an item entry under Category C for stormwater management facilities in the combined sewershed area, which are currently not identified in the list of projects. These works may, in some cases, be determined by the City to provide a long-term benefit to the stormwater system, and hence the City proposes to add these select works to their infrastructure. The area is currently under study, and the City estimates that there will be three (3) projects that result in a facility, costing an estimated \$2,787,800 each, for a total of \$8,363,400.

## **S.W.M. Retrofits**

The City, as part of its Stormwater Master Plan (2007), assessed the feasibility of retrofitting existing stormwater management facilities in order to provide stormwater quality control and erosion control measures. The objective for the City is to improve environmental conditions in the downstream receiving water bodies.

There are 29 identified retrofit opportunities (e.g. add a quality or erosion component to an area currently receiving only quantity or flood control) in the City. These have been separated into those 11 locations which serve only existing development (therefore not growth-related, and not currently considered), and those 18 which serve both existing and new development (the benefit to existing must be deducted).

For the 18 facilities that meet the criteria, the total area served is 759 ha and the growth-related fraction has been estimated at 54.45 %. Note that the City has confirmed that one of the facilities (Binbrook R54) has been superseded through the development process, and this one has been removed from the 2019 list of potential retrofits.

## **G.R.I.D.S.**

G.R.I.D.S. is the City's Growth-Related Integrated Development Strategy, which includes the areas identified as Potential new Business Park, in the existing Airport Business Park Special Policy Area, and new employment lands adjacent to the Airport S.P.A. lands. Projects related to Elfrida are considered a post-period benefit in this study as Elfrida is located outside of the Council-adopted Urban Boundary. The growth areas identified in the G.R.I.D.S. study account for approximately 75 new projects, including an estimated 57 stormwater management facilities and 18 off-site erosion control projects, with the erosion projects lumped into 5 area erosion studies, based on the watersheds and distinct growth areas.

The City has completed the Draft Airport Employment Growth District study (December 2009), and the Airport Employment Growth District Subwatershed Study and Stormwater Master Plan (S.W.M.P) Implementation Document (April 2017), however the reports do not detail the siting of all future stormwater management facilities. There may be opportunities to further plan the areas, and reduce the infrastructure, however it is left at the conservative level for the charge calculation purposes. Once a Final Master Drainage

Plan is complete, an update may be required for the G.R.I.D.S. stormwater management facilities (number, location, and sizes).

The G.R.I.D.S. development areas are drained by the Welland River, Three Mile Creek, and Twenty Mile Creek, each of which are considered to be sensitive coldwater fish habitat. Based on the anticipated Enhanced level of protection to be applied to the tributaries, it is proposed that all watercourse tributaries will be required to remain open: this therefore increases the number of facilities required to service the area.

Similar to the 2004, 2009, 2011, 2014 and 2019 Development Charge Background Studies, there are off-site erosion control studies and potentially work proposed for each receiving tributary downstream of the growth area.

The Airport S.P.A. facilities have been preliminarily sized to have larger footprints on account of the condition that Transport Canada typically imposes on stormwater management facilities near airports. There cannot be open water facilities since these are considered to attract waterfowl, and pose a navigation hazard to aircraft. The facilities have therefore been sized as dry ponds. (ref. Storm Drainage System Local Service Policy number 18, Appendix E).

**Costs for Category D (Storm Sewers Oversizing and Neighbourhood Outlet Works)** are developed for two sub-categories: storm sewer oversizing, and storm sewers identified for neighbourhood outlet works.

### **Storm Sewers - Oversizing**

The oversizing costs are based on the relative increase in cost for storm sewers over a threshold diameter of 1200 mm, as set by previous City Financial Policy. In 2019, a list of projects had been generated by the City Development Engineering Department. The list was based on two sources of information: Draft Approved Subdivision Plans and Approved Secondary Plans. The 2024 list does not contain any new projects, however complete projects have been removed and two Binbrook projects were moved from Part Two – Secondary Plans to Part One – Subdivisions. The current list is included in Appendix G1-D.

### **Storm Sewers – Neighbourhood Outlet Works**

The neighbourhood outlet works cost estimates are based on City studies for four (4) proposed Neighbourhood storm outlet works (shared by multiple development growth parcels). One project (Swayze Nhd Storm Outlet) has been completed since the original list of five (5) from 2019 and has been removed from the list. A list of projects has been generated by the City Development Engineering Department, and is included in Appendix G1-D.

The City has included a provisional entry under Category D2 for storm sewer neighbourhood outlet works within the combined sewershed that are currently under study by the City and not identified in the list of projects. The City estimates a total of three (3) new Neighbourhood outlets to service growth, at an estimated cost of \$1,393,900 each. The estimate of three (3) outlets has been carried over from 2019 while the cost has been indexed to inflation for 2019-2023.

**Costs for Category E (culvert and bridge upgrades not identified in previous studies)** have been estimated in the following manner:

- Based on the planned Development Charge eligible road projects (replacement and widening of existing) affected watercourse crossings, based on the topographic mapping, have been determined (current estimate = 32),

- The size of the new culvert cross-sectional area has been estimated as a function of the upstream drainage area,
- All “small” crossings where the culvert will likely have a diameter smaller than 1200 mm have been removed from the calculation, as those works would be assumed to be part of the road works,
- Also, any culverts previously identified in Category A (75) have not been included under this category,
- The remaining (79) culverts have been separated into three categories, based on: estimated flow conveyance area of 2 m<sup>2</sup>, 4 m<sup>2</sup>, and 8 m<sup>2</sup>, (68, 6, and 5 respectively); for costing purposes unit rates of \$117,500, \$235,000 and \$470,000 per culvert/bridge respectively have been used, assuming a 26 m road width for all culverts/bridges. This cost estimate is based on concrete box culverts and has been developed using 2019 unit rates and adjusted by the CPI factor for 2019-2023 of 39.39 %, installation estimated at double the supply cost, and allows for an average depth of cover on each culvert.

The costs are currently attributed to new development based on the benefit to growth percentage established in the roads study (ref. Appendix H).

### 3.4 Existing Agreements

As noted in Section 2, there are existing agreements (e.g. Special Policy Areas, Local Area Improvements, and Developer Agreements) in force that will need to be accounted for in the financial section of the Development Charges Update. Where it can be identified and verified by the City, existing developer contributions that have been made under existing agreements will be credited after the Development Charges are collected.

## 4. Summary of Stormwater Component of Development Charges

### 4.1 Overview

Table G.3 presents the stormwater development charges cost estimates, by Category A to E, plus G.R.I.D.S.. In each table, the costs have been split into Residential and Non-Residential, providing the gross costs and the Development Charge related costs.

**Table G.3: Summary of Stormwater Development Charges Costs**

Type of Work	Gross Estimated Cost	Development Charge Eligible Growth %	Development Charge Cost
<b>A Channel System Improvements (Identified Projects)</b>			
Residential	\$27,831,000	76.27	\$21,227,000
Non-Residential	<u>\$31,070,000</u>	<u>86.27</u>	<u>\$26,800,000</u>
<b>Subtotal A</b>	\$58,900,000	81.54	\$48,030,000
<b>B Erosion Control – Estimated Downstream Future Works</b>			
Residential	\$25,114,295	48.05	\$12,068,251
Non-Residential	<u>\$11,401,708</u>	<u>61.08</u>	<u>\$6,963,747</u>
<b>Subtotal B</b>	\$36,516,003	52.12	\$ 19,031,997
<b>C Stormwater Management Quality/Quantity Facilities</b>			
Residential	\$195,926,769	95.99	\$188,066,898
Non-Residential	<u>\$150,578,009</u>	<u>0.62</u>	<u>\$940,084</u>
<b>Subtotal C</b>	\$346,504,778	54.55	\$189,006,982

**Table G.3: Summary of Stormwater Development Charges Costs**

Type of Work		Gross Estimated Cost	Development Charge Eligible Growth %	Development Charge Cost
<b><i>D Oversizing of trunk sewers and culverts</i></b>				
	Residential	\$22,455,523	87.75	\$19,705,523
	Non-Residential	<u>\$1,901,280</u>	<u>100</u>	<u>\$1,901,280</u>
<b>Subtotal D</b>		\$24,356,802	88.71	\$21,606,802
<b><i>E Culverts and Bridges (not in Category A)</i></b>				
	Residential	\$4,817,737	78.05	\$3,760,185
	Non-Residential	<u>\$6,932,840</u>	<u>85.17</u>	<u>\$5,904,665</u>
<b>Subtotal E</b>		\$11,750,577	82.25	\$9,664,850
<b><i>Categories A to E</i></b>				
	Residential	\$285,689,398	89.04	\$254,371,931
	Non-Residential	<u>\$201,880,837</u>	<u>20.13</u>	<u>\$42,510,575</u>
<b>Subtotal Categories A to E</b>		<b>\$478,026,161</b>	<b>60.11</b>	<b>\$287,338,431</b>
<b>15% Allowance</b>				<b>\$43,100,765</b>
<b>Total Categories A to E</b>				<b>\$330,439,196</b>

**Table G.3: Summary of Stormwater Development Charges Costs**

Type of Work	Gross Estimated Cost	Development Charge Eligible Growth %	Development Charge Cost
<b><i>G.R.I.D.S. Stormwater Management Quality/Quantity Facilities</i></b>			
Residential	\$135,892,134	0.00	\$0
Non-Residential	<u>\$247,984,477</u>	<u>0.00</u>	<u>\$0</u>
<b>Subtotal G.R.I.D.S. S.W.M.</b>	\$383,876,611	0.00	\$0
<b><i>G.R.I.D.S. Watercourses</i></b>			
Residential	\$10,025,938	100	\$10,025,938
Non-Residential	<u>\$17,451,247</u>	<u>100</u>	<u>\$17,451,247</u>
<b>Subtotal G.R.I.D.S. Watercourses</b>	\$27,477,185	100	\$27,477,185
<b>Residential</b>	\$431,607,470	61.26	\$264,397,869
<b>Non-Residential</b>	\$467,316,562	12.83	\$59,961,822
<b>SUBTOTAL</b>	<b>\$889,379,957</b>	<b>35.40</b>	<b>\$314,815,616</b>
<b>15% ALLOWANCE</b>			<b>\$47,222,342</b>
<b>TOTAL</b>			<b>\$362,037,959</b>

All of the proposed projects in Categories A to E and G.R.I.D.S., which have been considered for the storm drainage Development Charge, can be attributed to distinct parcels of residential and/or non-residential growth lands. These linkages form the basis for the proposed split of the total charge. For categories D, and E, in the absence of information to support the establishment of a City share, the % attributable to the City has been set at zero.

## 4.2 Summary

The City of Hamilton has updated the 2019 Development Charges project listing. The City has prepared an overall report, including appendices for details related to Stormwater, Water, Wastewater, and Transportation.

The Stormwater appendix provides information for the portion of the Development Charges relating to stormwater works including: erosion control, channel improvements, stormwater management works, oversizing of existing stormwater related infrastructure and stormwater related studies. Projects included in this report are future growth related which includes both planned and unplanned projects. Future growth-related information has been collected from the City and other studies, and where no information was available appropriate assumptions have been made, as detailed herein. This appendix provides a summary of the approach used in establishing the Development Charges related costs and summarizing of the stormwater-related Development Charges for both residential and non-residential development.

For a final summary of the costs with G.R.I.D.S. excluded (Categories A to E), a gross total of \$478,026,161, with the portion allocated to new development totaling \$287,338,431 plus a 15% allowance for a total development charge cost of \$330,439,196.

For a final summary of the costs with G.R.I.D.S. included (Categories A to E + G.R.I.D.S. S.W.M. + G.R.I.D.S. Watercourses), a gross total of \$889,379,957, with the portion allocated to new development totaling \$314,815,616 plus a 15% allowance for a total development charge cost of \$362,037,959.



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101. Weslake Inc. Master Drainage Plan Update Report – Binbrook Settlement Area. October 2006.
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## Additional City Reference Studies

NAME	DATE	REVISIONS	AUTHOR
Ancaster Commercial Development (S.W.M. Report)		September-95	Cosburn Patterson Wardman Limited
Ancaster Community Center (S.W.M. Plan)	September-91		Sandwell Swan Wooster.
Ancaster Industrial Park (S.W.M. Report Update)	September-02	December-02	A.J. Clarke and Associates Ltd.
Ancaster Industrial Park Detention Pond No. 2 (S.W.M. Study Addendum)	November-98		A.J. Clarke and Associates Ltd.
Ancaster Master Drainage Plan (Final Draft)	January-87		Philips Planning and Engineering Limited
Ancaster Meadows Phase 1 (S.W.M. Updated)	November-09		Metropolitan Consulting Inc.
Ancaster Meadows Phase II (Storm Drainage & Final Detention Pond Design)	August-86		Upper Canada Consultants
Ancaster Village Townhomes (S.W.M. Report)	September-93	January-95	A.J. Clarke and Associates Ltd.
Ancaster Woodlands Subdivision (S.W.M. Report)	July-013	Jan 14	S. Llewellyn & Associates Limited
Anpropco Developments (S.W.M. Study)		December-80	Paul Theil Associates Limited
Binbrook Settlement Area (Master Drainage Plan Update Report)	December-08		Weslake Inc.
Binbrook Urban Settlement Area (S.W.M. Report)	June-00		A.J. Clarke and Associates Ltd.
Bogle Subdivision (Functional Servicing Design Report)	June-00		Stantec
Bridgeport Subdivision (Preliminary S.W.M. Report)	May-03		A.J. Clarke and Associates Ltd.
Bridgeport Watercourses (Hydrologic & Hydraulic Analysis)	May-05		A.J. Clarke and Associates Ltd.
Bridle Ridge Subdivision Phase 3 ((S.W.M. Report)	July-05		S. Llewellyn & Associates Limited
Canada Bread (S.W.M. NGIBP S.W.M. Facility HC3-FB)		Aug-010	AMEC Earth & Environmental
Chedoke Golf Course Channel Municipal Class EA (Schedule B) Final	July-08		McCormick Rankin Corporation
City of Stoney Creek (Implementation of Drainage Works Watercourse 5,6,7 & 9)	May-92		Philips Planning and Engineering Limited
Clappison's Corners Industrial Business Park Master Drainage Plan (Final Report)	May-89		Totten Sims Hubicki Associates Consultants
Clovervale Subdivision (S.W.M. Report)	September-04		Lamarre Consulting Group Inc.
Clovervale Subdivision (Retrofit Design-S.W.M. Facility & Associated Conveyance Improvements)	November-013		AMEC Environment & Infrastructure
D'Aminco Cimico (S.W.M. Report)	September-09		Kenneth Youngs Engineering Inc.
Dartnall Rd Extension Culvert/Bridge (Hydraulic Impacts Report) Final Report	March-012		Dillon Consulting

NAME	DATE	REVISIONS	AUTHOR
Delsey Creek (Storm Drainage Master Plan - Class EA Study Project File Report)	October-03		MTE Consultants Inc.
Duff's Corners Business Park (S.W.M. Report)	May-06	April-07	A.J. Clarke and Associates Ltd.
Dussin Property - Meadowlands Neighbourhood (S.W.M. Report)	May-013		Lamarre Consulting Group Inc.
Elizabeth Gardens - Binbrook Settlement Area (S.W.M. Report)	June-04		Lamarre Consulting Group Inc.
Enclave The (S.W.M. Report)	April-97	July-97	A.J. Clarke and Associates Ltd.
Falling Brook Estates (S.W.M. Assessment)	July-96		A.J. Clarke and Associates Ltd.
Fiddler's Green Estates (S.W.M. Report)	July-91		Aquafor Engineering Limited
Fifty Road Joint Venture Inc. (S.W.M. Implementation Report)	February-00		Rand Engineering Corporation
Fifty Point West Neighbourhood (Addendum to Preliminary S.W.M. Plan)	November-97		Hydro Comp Inc.
Flamborough Business Park - Highway 6 & Dundas Street (S.W.M. Report)	March-06		Lamarre Consulting Group Inc.
Fontana Gardens Phase 3 (S.W.M. Assessment Report)	December-07		A.J. Clarke and Associates Ltd.
Foothills of Winona Avatar International Realty Corporation (S.W.M. Report)	August-01		Planning & Engineering Initiatives Limited
Forest Ridge (S.W.M. Report)	December-04		A.J. Clarke and Associates Ltd.
Forty Mile Creek Flood Damage Reduction Study	August-95		Aquafor Beech Limited
Fruitland Centre (S.W.M. Report)	June-03		Serabill Designbuild Corporation Inc.
Fruitland Meadows (S.W.M. Report for Existing S.W.M. Facility Retrofit)	January-02	March-03	S. Llewellyn & Associates Limited
Garner Grove Subdivision (S.W.M. Report)	December-02	July-03	Ashenurst Nouwens Limited
Garner Neighbourhood (Master Drainage Plan)	July-96		Philips Planning and Engineering Limited
Garth Trails (S.W.M. Addendum)	June-02		A.J. Clarke and Associates Ltd.
Gates of Ancaster II Limited (S.W.M. Report)	April-07		John Towle Associates Limited
Gatesbury Developments Phase IV (Functional Report)	November-94		F. J. Ternoway & Associates Limited
Greater Hamilton Airport Business Park Phase 1 (SW Drainage Report)		August-92	CC Parker Consultants Limited
Green Millen Shore Estates (S.W.M. Report)	February-011	September-11	AMEC Environment & Infrastructure
Greenforest Estates (S.W.M. Report)	September-08		Kenneth Youngs Engineering Inc.
Greenhill Avenue Area Storm Drainage Study	June-08		SNC Lavalin
Greenwood Estates Subdivision (S.W.M. Report)	May-88		Youngs Consultants
Greystones (S.W.M. Report)	December-08		A.J. Clarke and Associates Ltd.
Hamilton International Airport Apron Expansion Phase 2 (S.W.M. Report)	October-02		Giffels Associates Limited
Hannon Creek Subwatershed NGIBP (Master Drainage Plan) Draft Report	March-07		Totten Sims Hubicki Associates Consultants

NAME	DATE	REVISIONS	AUTHOR
Head of the Lake (Mount Hope Terrace) (S.W.M. Report)	October-90	July-91	Philips Planning and Engineering Limited
Heritage Green Community - (Functional Engineering Report)	April-91		Delcan
Highgrove Park Estates (S.W.M. & Floodplain Mapping Tributary of Ann St Creek)	April-86	July-86	G. M. Serns & Associates Ltd.
Highland Estates (S.W.M. Review)	November-92		C.C. Parker Consultants Limited
Jackson Heights Phase 3 (S.W.M. Report)	July-06		A.J. Clarke and Associates Ltd.
Kaleidoscope Phase 1 - 157 Parkside Drive (S.W.M. Report)			AMEC Environment & Infrastructure
Kopperfields West Residential Community (S.W.M. Report)	September-98		Paul Theil Associates Limited
Lake Vista Winona Subdivision (Mattamy Winona Limited)	June-06	November-06	David Schaeffer Engineering Ltd
Lewis Road Improvements Class EA from Barton Street to South Service Road (Drainage and S.W.M. Report)	October-06	July-07	MacViro Consultants
Limberlost Estates (S.W.M. Report)	November-91		Town of Ancaster
Lime Kiln (S.W.M. Plan)	September-88		Philips Planning and Engineering Limited
Limestone Manor (S.W.M. Report)	September-12		Lamarre Consulting Group Inc.
Maple Leaf Foods - New Build (Site S.W.M. Design Report)	March-012		AECOM
Mattamy (Southcote) Limited (S.W.M. Implementation Report)	September-09		Rand Engineering Corporation
Mattamy on the Lake Subdivision (Mattamy (Winona) Limited) (S.W.M. Report)	April-07		David Schaeffer Engineering Ltd
Meadowbrook Manors (S.W.M. Report)	January-95		Weslake Inc.
Meadowlands Neighbourhoods 3, 4, 5 (Master Plan)	F-00		A.J. Clarke and Associates Ltd.
Meadowlands Neighbourhood 4 (Functional Servicing & S.W.M. Report)	March-04		Metropolitan Consulting Inc.
Meadowlands of Ancaster (Phase 6) (Proposed S.W.M. Facility)	October-01		A.J. Clarke and Associates Ltd.
Meadowlands of Ancaster (Phase 7) (S.W.M. Report)	March-03		A.J. Clarke and Associates Ltd.
Meadowlands Phase 10 (Proposed S.W.M. Plan)	January-08	May-08	Stantec Consulting Ltd.
Meadowlands Place (Functional Servicing & S.W.M. Assessment)	March-98	March-99	A.J. Clarke and Associates Ltd.
Meadowlands Place (S.W.M. Report)	September-98		A.J. Clarke and Associates Ltd.
Meadowlands The (Tiffany Watershed) (Detailed Master Drainage Plan)	March-88		Philips Planning and Engineering Limited
Millcreek Estates (S.W.M. Report)	September-92		Kenneth Youngs Engineering Inc.
Millers Pond Subdivision (S.W.M. Report)	July-01	July-02	S. Llewellyn & Associates Limited
Millrun Condominiums (S.W.M. Plan)	September-99		Phillips Planning and Engineering Limited
Montgomery Creek (S.W.M. Class EA)	August-97		Philips Planning and Engineering Limited
Morgan Firestone Arena Twinning (S.W.M. Report)	August-10		Their and Curran Architects Inc.



NAME	DATE	REVISIONS	AUTHOR
Mount Hope Secondary Plan (S.W.M. Report)	No date		Youngs Consultants
Mount Hope Urban Settlement Area (Master S.W.M. Plan)		December-94	Kenneth Youngs Engineering Inc.
Orchard Park Subdivision (S.W.M. Report)	May-13	Aug13;Oct13	S. Llewellyn & Associates Limited
Orkney Acres Rural Estate Subdivision (S.W.M. Report)	June-04		Lamarre Consulting Group Inc.
Orlick Aeropark (Design Brief)	February-08	April-09	Odan/Detech Group Inc.
Paradise Gardens (S.W.M. Report)	May-03		A.J. Clarke and Associates Ltd.
Paramount Estates (S.W.M. Report)	October-013		Lamarre Consulting Group Inc.
Parkside Hills Phase 1 (S.W.M. Design Brief)	May-07		Metropolitan Consulting Inc.
Pleasant Valley Development (S.W.M. Report)		July-07	Planning & Engineering Initiatives Limited
QEW Drainage Report (Pinelands Ave to Fifty Road)	No date		UMA Engineering Ltd.
Redeemer University College (S.W.M. Report)	November-04	Dec04;Apr05	Van der Woerd & Associates Ltd.
Ridgeview Subdivision (S.W.M. Report)	September-011		Lamarre Consulting Group Inc.
Riocan Power Centre (S.W.M. Report)	March-06		A.J. Clarke and Associates Ltd.
Rockcliffe Gardens (Storm Drainage Study)	February-77		William L. Sears and Associates Limited
Rockview Summit (S.W.M. Report)	Septemer-93	August-94	A.J. Clarke and Associates Ltd.
Rothsay Avenue Flood Remediation (Class EA) DRAFT	February-012		AMEC Environment & Infrastructure
Scenic Wood (Ancaster) (S.W.M. Study)	No date		Stantec
Seabreeze (S.W.M. Report)	July-06	April-07	A.J. Clarke and Associates Ltd.
Shaver Estates (S.W.M. Report)	January-04	June-04	A.J. Clarke and Associates Ltd.
Shaver Neighbourhood (East) (S.W.M. Plan)	November-96		Philips Planning and Engineering Limited
Shaver Neighbourhood (Master Drainage Plan - Addendum) (Final)	April-97		Weslake Inc.
Silverwood Homes (Functional Servicing & S.W.M. Report)	July-08		Metropolitan Consulting Inc.
Southampton Estates (S.W.M. Report)	April-03		Lamarre Consulting Group Inc.
Southcote Woodlands Plan of Subdivision (Design Brief for Phase II)	January-86	Jan;Jun;Jul07	Odan/Detech Group Inc.
Spencer Creek Estates (Preliminary S.W.M. Report)	October-98	January-99	Philips Planning and Engineering Limited
Spencer Creek Estates (S.W.M. Report)	April-98		CVE Engineering Ltd.
Spencer Creek Estates Phase 2 (S.W.M. Report)	May-12		EXP
Spencer Creek Village (S.W.M. Report)	June-99	October-99	Planning & Engineering Initiatives Limited
Springbrook Meadows - Phase 1 (S.W.M. Report)	February-92		Philips Planning and Engineering Limited

NAME	DATE	REVISIONS	AUTHOR
Spring Valley West, Shaver and Garner (S.W.M. Study Expanded Urban Area)	February-92		Philips Planning and Engineering Limited
Spring Valley West, Shaver and Garner (M.D.P. - Proposed Amendment)	November-96		Weslake Inc.
Stone Church Centre (S.W.M. Report)	March-04		A.J. Clarke and Associates Ltd.
Stoney Creek Master Drainage Plan Industrial Corridor Area No's 5-7(Addndm 1)	January-91		Philps Planning and Engineering Limited
Summerlea West Residential Subdivision (S.W.M. Report)	February-011	January-12	MTE Consultants Inc.
Sundusk Estates Subdivision (S.W.M. Report)	August-94		Kenneth Youngs Engineering Inc.
Sunnymeade Property (Storm Drainage Report)	February-88		Upper Canada Consultants
Sunset Ridge (S.W.M. Report)	July-98		Planning Initiatives Ltd.
Tech Park (S.W.M. Report)	February-94		Philips Planning and Engineering Limited
Tiffany (S.W.M. Report)	June-93	Oct-93 Jun 97	A.J. Clarke and Associates Ltd.
Trillium Estates Subdivision (S.W.M. Report)	August-03		S. Llewellyn & Associates Limited
Town of Ancaster (Master Drainage Plan)	August-99		C.N. Watson and Associates Ltd.
Twenty Road (Regional Stormwater Facility Design Report)	August-012		AECOM
Twin Gable Estates - Shaver Neighbour (East) (S.W.M. Plan)	July-97		Philips Planning and Engineering Limited
Upcountry Estates Limited - Proposed Residential Subdivision (Functional)	May-09		Condeland Engineering Ltd.
Van Every Gardens (S.W.M. Report)	March-96		Kenneth Youngs Engineering Inc.
Venotor Crane Ltd. (S.W.M. Report)	May-06		S. Llewellyn & Associates Limited
Village Grove in Carlisle Subdivision (Final S.W.M. Report)	November-00		Stantec
Ward Estates (S.W.M. Report)	August-00		A.J. Clarke and Associates Ltd.
Waterdown Bay (Functional S.W.M. Plan Final Report)	May-05		McCormick Rankin Corporation
Watercourse 5.0 & 6.0 (Hydraulic Assessment)	January-011		Dillon Consulting
Waterdown North (Master Drainage Plan Addendum)	February-012		AMEC Environment & Infrastructure
Waterdown Woods (Functional Report)	January-91		Kenneth Youngs Engineering Inc.
Webster Estates (S.W.M. Report)	June-02	September-02	S. Llewellyn & Associates Limited
Wellington Meadows (Preliminary S.W.M. Plan)	July-97	September-97	Hydro Comp Inc.
West Bloom Estates (S.W.M. Update Report)	April-12		Metropolitan Consulting Inc.
West Central Mountain Drainage Assessment Supplemental Capacity Analysis & S.W.M. Sizing	October-11		AMEC Environment & Infrastructure
Westover Winds (Servicing/S.W.M. Report)	July-06		Weslake Inc.
Westview Estates (S.W.M. Plan)	November-96	May-97	Hydro Comp Inc.

<b>NAME</b>	<b>DATE</b>	<b>REVISIONS</b>	<b>AUTHOR</b>
Wilson Woods Condominium (S.W.M. Report)	August-94	November-94	A.J. Clarke and Associates Ltd.
Winona Crossing (Functional Servicing Report & S.W.M. Report)	January-013	November-013	A.J. Clarke and Associates Ltd.
Winona Meadows (S.W.M. Assessment)	July-95		A.J. Clarke and Associates Ltd.
Winona Park Estates (S.W.M. Study)	April-90		Environmental Hydraulics Group
Winona Urban Area (Master Drainage Plan Implementation)	May-90		Philips Planning and Engineering Limited
Winona Urban Boundary Expansion (Preliminary Engineering Servicing Study)	August-92		Philips Planning and Engineering Limited
Woodland Manor (Functional Servicing Report)	May-08		Stantec Consultant Ltd.

**TABLE G.4: INFLATION INDEX 2019-2023**

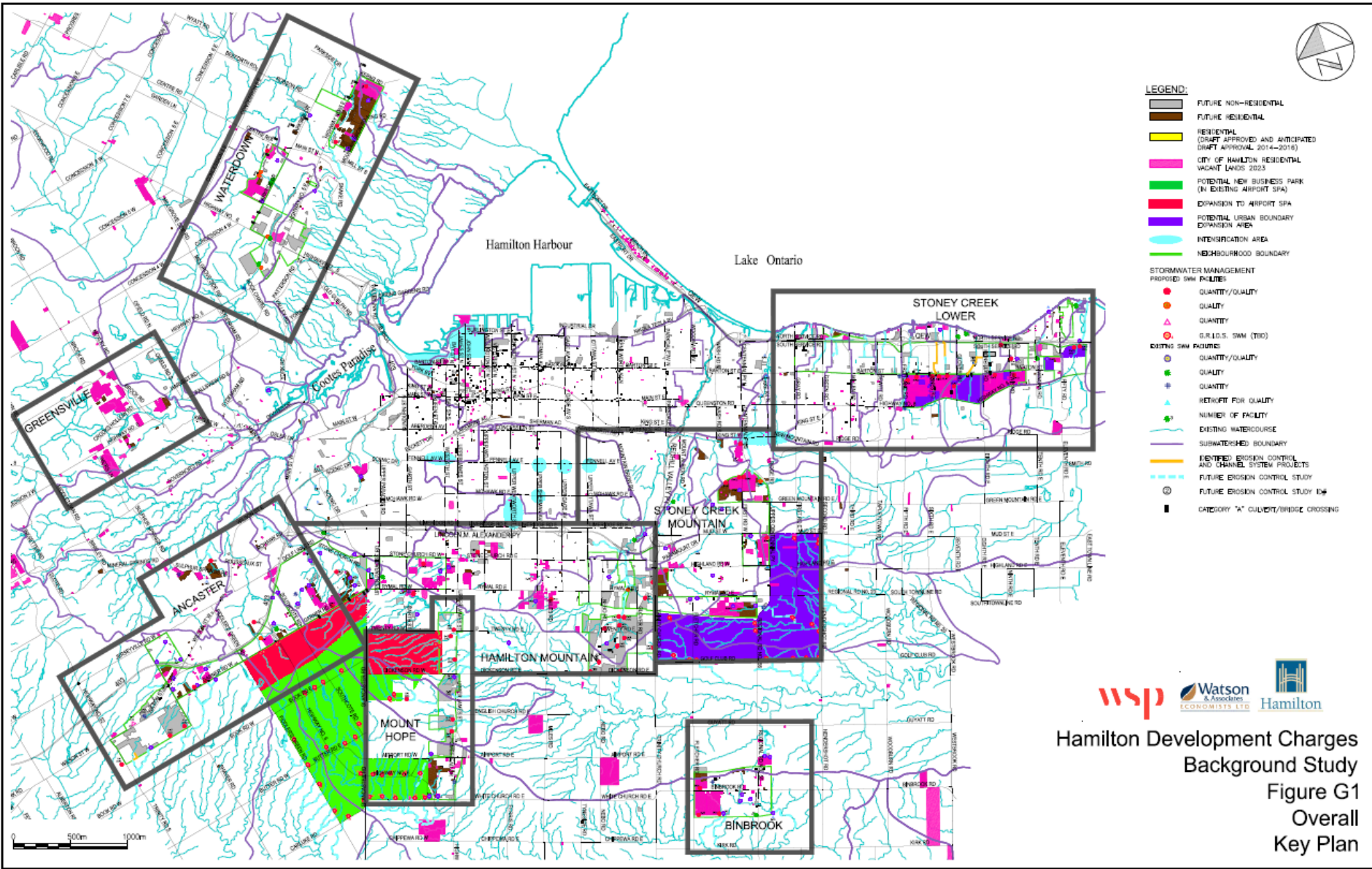
*As of  
July 31,  
2023*

**Toronto Series**

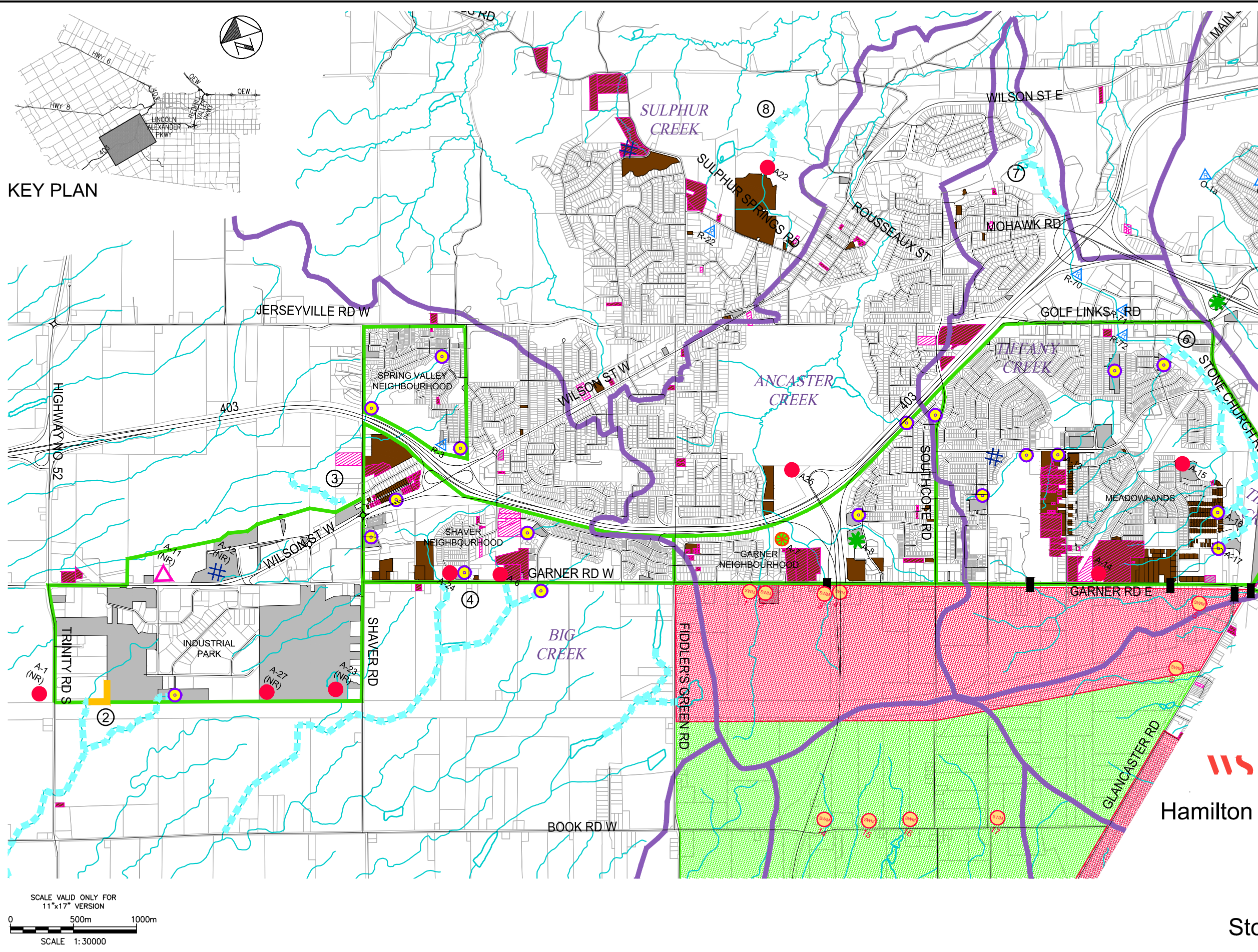
2017 BASE YEAR	2019		2020		2021		2022		2023	
	INDEX	YR/YR	INDEX	YR/YR	INDEX	YR/YR	INDEX	YR/YR	INDEX	YR/YR
QUARTER		% CHNG		% CHNG		% CHNG		% CHNG		% CHNG
I	107.4	5.2%	110.6	3.0%	114.2	3.3%	134.2	17.5%	150.6	12.2%
II	108.3	4.0%	111.1	2.6%	119.9	7.9%	140.9	17.5%	152.3	8.1%
III	109.2	3.3%	111.9	2.5%	125.0	11.7%	144.5	15.6%		
IV	109.7	2.9%	112.1	2.2%	129.3	15.3%	148.1	14.5%		
Ann. Avg.	108.7	3.8%	111.4	2.6%	122.1	9.6%	141.9	16.2%	151.5	6.7%

Source: Statistics Canada. Table 18-10-0276-02. Building construction price indexes, by type of building

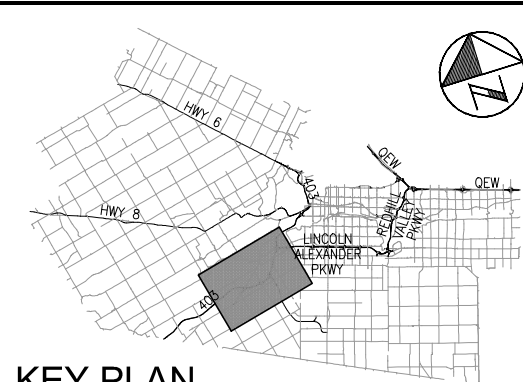
2019 to  
2023 39.39%



Hamilton Development Charges  
Background Study  
Figure G1  
Overall  
Key Plan



**KEY PLAN**



- LEGEND:**
- FUTURE NON-RESIDENTIAL
  - FUTURE RESIDENTIAL
  - RESIDENTIAL (DRAFT APPROVED AND ANTICIPATED DRAFT APPROVAL 2014-2016)
  - CITY OF HAMILTON RESIDENTIAL VACANT LANDS 2023
  - POTENTIAL NEW BUSINESS PARK (IN EXISTING AIRPORT SPA)
  - EXPANSION TO AIRPORT SPA
  - POTENTIAL URBAN BOUNDARY EXPANSION AREA
  - INTENSIFICATION AREA
  - NEIGHBOURHOOD BOUNDARY
- STORMWATER MANAGEMENT PROPOSED SWM FACILITIES**
- QUANTITY/QUALITY
  - QUALITY
  - ▲ QUANTITY
  - G.R.I.D.S. SWM (TBD)
- EXISTING SWM FACILITIES**
- QUANTITY/QUALITY
  - QUALITY
  - # QUANTITY
  - ▲ RETROFIT FOR QUALITY
  - NUMBER OF FACILITY
  - ▲ EXISTING WATERCOURSE
  - SUBWATERSHED BOUNDARY
  - IDENTIFIED EROSION CONTROL AND CHANNEL SYSTEM PROJECTS
  - FUTURE EROSION CONTROL STUDY
  - 2 FUTURE EROSION CONTROL STUDY ID#
  - CATEGORY "A" CULVERT/BRIDGE CROSSING

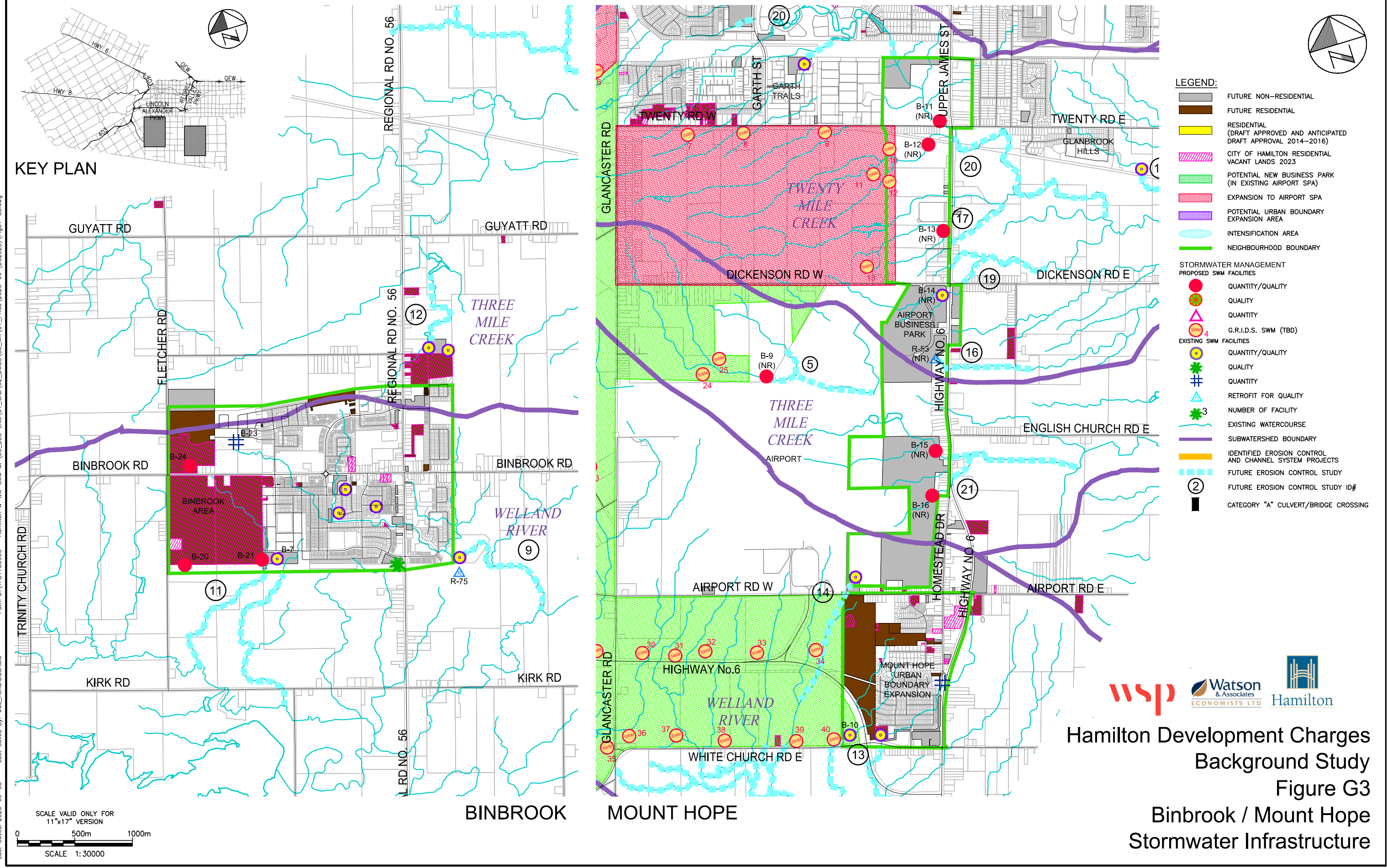
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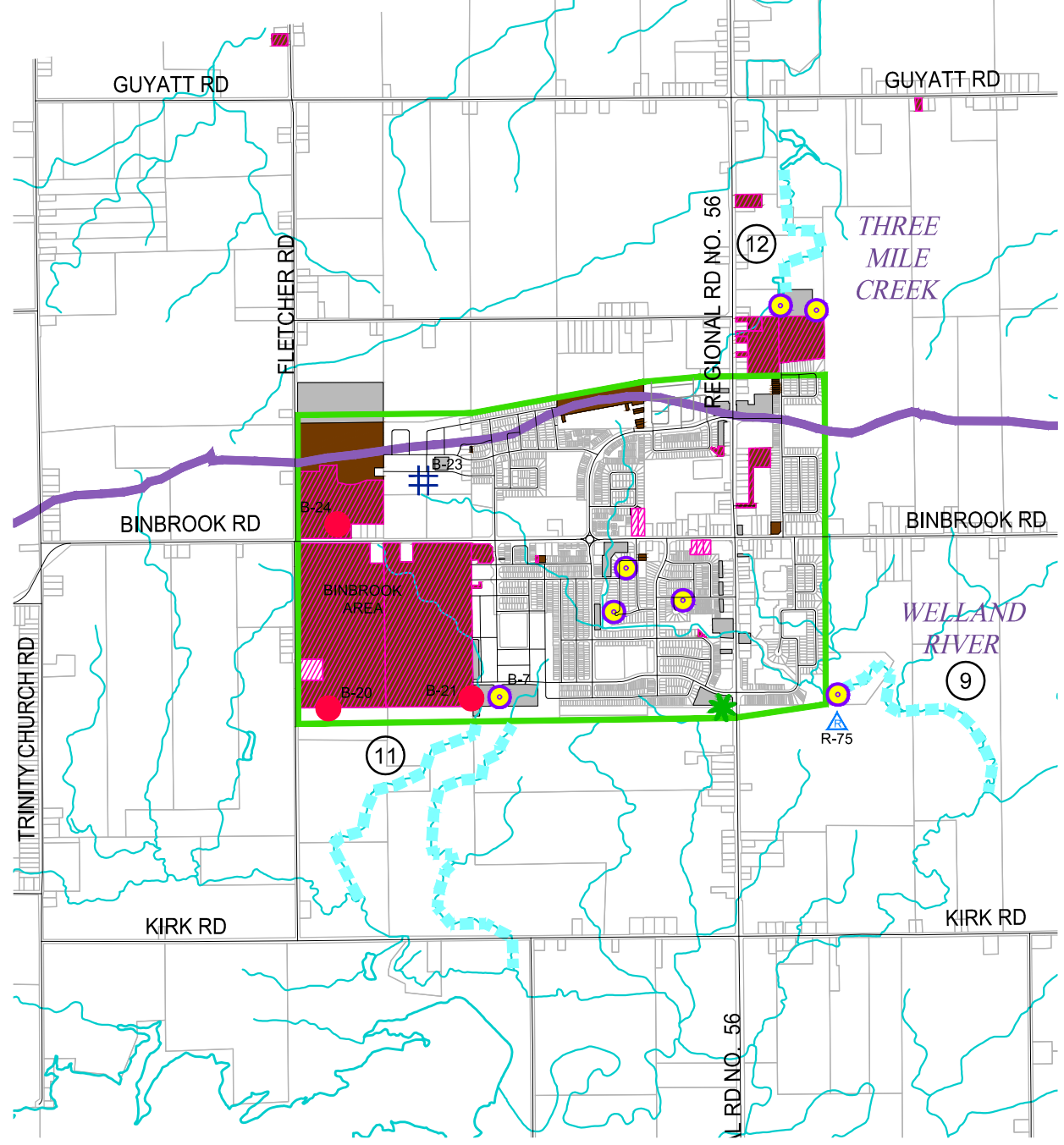


**Hamilton Development Charges  
 Background Study  
 Figure G2  
 Ancaster  
 Stormwater Infrastructure**

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**KEY PLAN**



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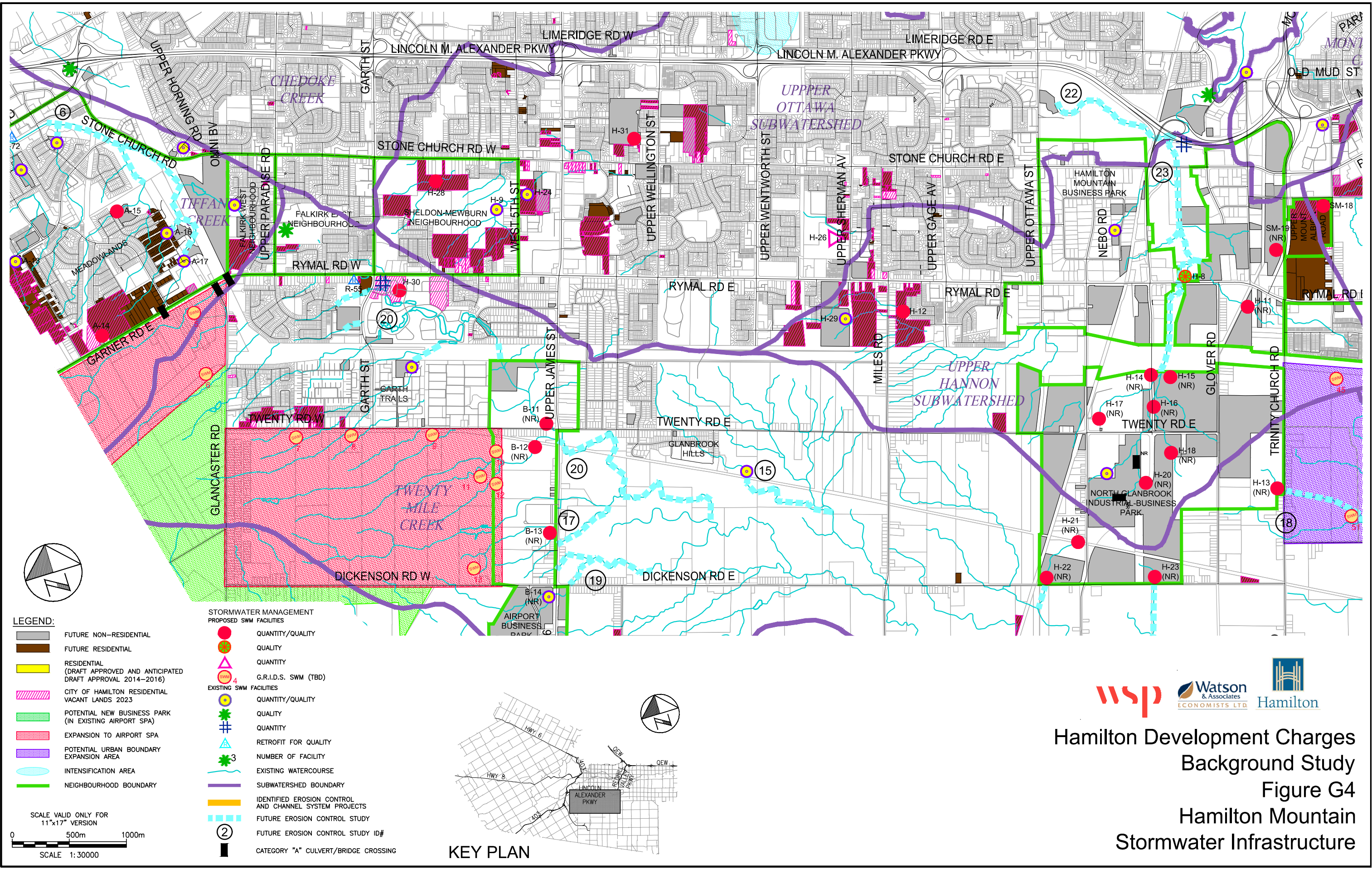
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- LEGEND:**
- FUTURE NON-RESIDENTIAL
  - FUTURE RESIDENTIAL
  - RESIDENTIAL (DRAFT APPROVED AND ANTICIPATED DRAFT APPROVAL 2014-2016)
  - CITY OF HAMILTON RESIDENTIAL VACANT LANDS 2023
  - POTENTIAL NEW BUSINESS PARK (IN EXISTING AIRPORT SPA)
  - EXPANSION TO AIRPORT SPA
  - POTENTIAL URBAN BOUNDARY EXPANSION AREA
  - INTENSIFICATION AREA
  - NEIGHBOURHOOD BOUNDARY
- STORMWATER MANAGEMENT PROPOSED SWM FACILITIES**
- QUANTITY/QUALITY
  - QUALITY
  - QUANTITY
  - 4 G.R.I.D.S. SWM (TBD)
- EXISTING SWM FACILITIES**
- QUANTITY/QUALITY
  - QUALITY
  - # QUANTITY
  - △ RETROFIT FOR QUALITY
  - \*3 NUMBER OF FACILITY
  - △ EXISTING WATERCOURSE
  - # SUBWATERSHED BOUNDARY
  - IDENTIFIED EROSION CONTROL AND CHANNEL SYSTEM PROJECTS
  - FUTURE EROSION CONTROL STUDY
  - ② FUTURE EROSION CONTROL STUDY ID#
  - A CATEGORY "A" CULVERT/BRIDGE CROSSING

**Hamilton Development Charges  
Background Study  
Figure G3  
Binbrook / Mount Hope  
Stormwater Infrastructure**

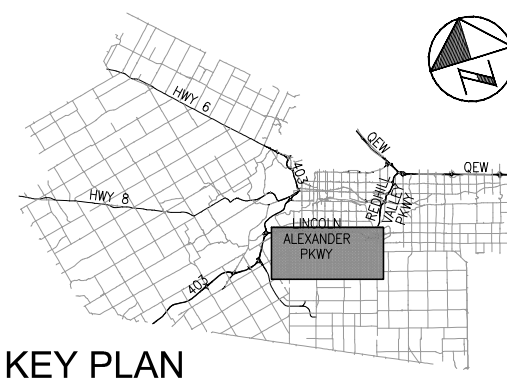
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2023-09-08  
Last Saved: 2023-09-08



- LEGEND:**
- FUTURE NON-RESIDENTIAL
  - FUTURE RESIDENTIAL
  - RESIDENTIAL (DRAFT APPROVED AND ANTICIPATED DRAFT APPROVAL 2014-2016)
  - CITY OF HAMILTON RESIDENTIAL VACANT LANDS 2023
  - POTENTIAL NEW BUSINESS PARK (IN EXISTING AIRPORT SPA)
  - EXPANSION TO AIRPORT SPA
  - POTENTIAL URBAN BOUNDARY EXPANSION AREA
  - INTENSIFICATION AREA
  - NEIGHBOURHOOD BOUNDARY

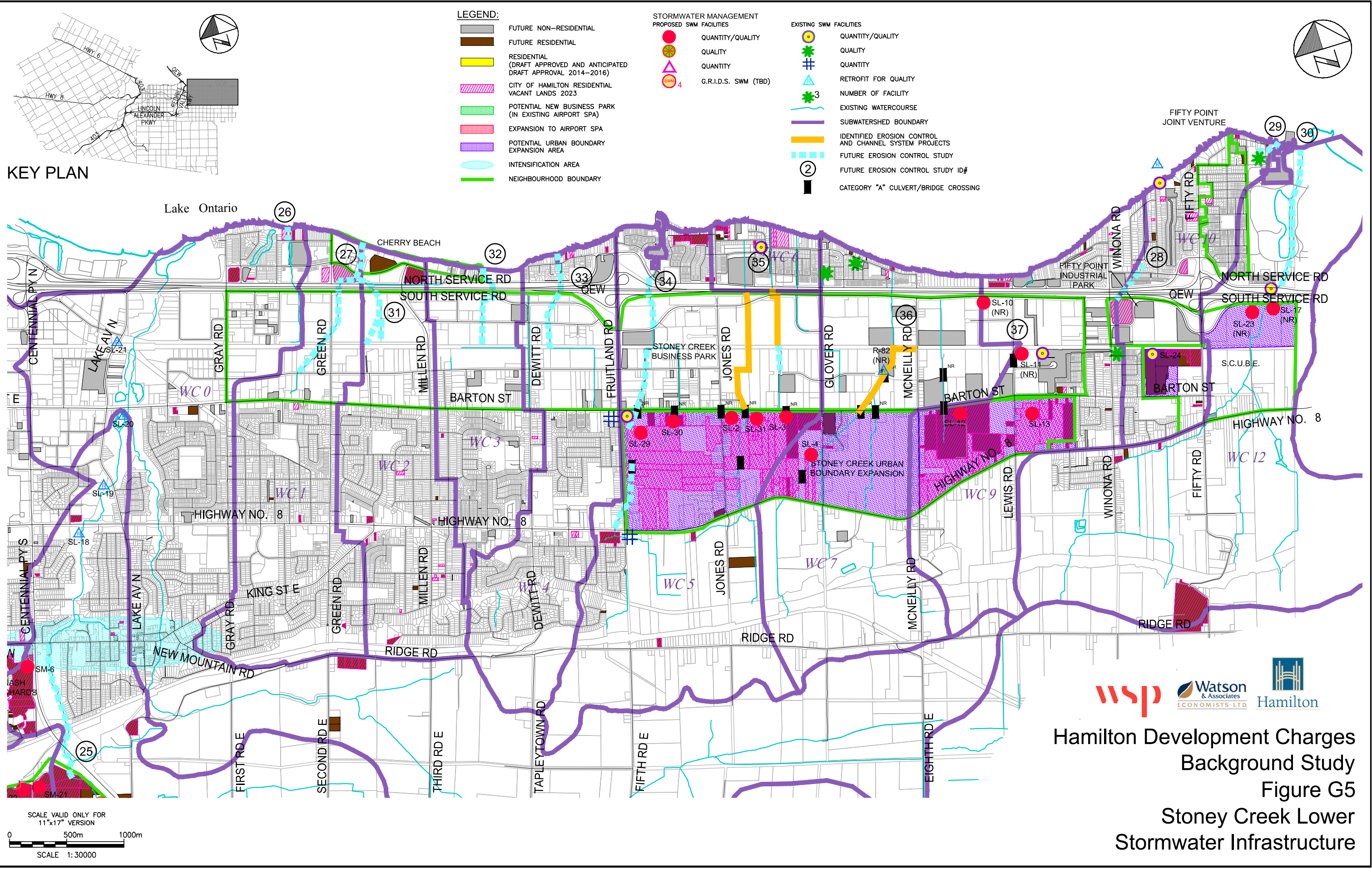
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  - QUALITY
  - QUANTITY
  - G.R.I.D.S. SWM (TBD)
- EXISTING SWM FACILITIES**
- QUANTITY/QUALITY
  - QUANTITY
  - RETROFIT FOR QUALITY
  - NUMBER OF FACILITY
- OTHER FACILITIES**
- EXISTING WATERCOURSE
  - SUBWATERSHED BOUNDARY
  - IDENTIFIED EROSION CONTROL AND CHANNEL SYSTEM PROJECTS
  - FUTURE EROSION CONTROL STUDY
  - FUTURE EROSION CONTROL STUDY ID#
  - CATEGORY "A" CULVERT/BRIDGE CROSSING



**Hamilton Development Charges  
Background Study  
Figure G4  
Hamilton Mountain  
Stormwater Infrastructure**

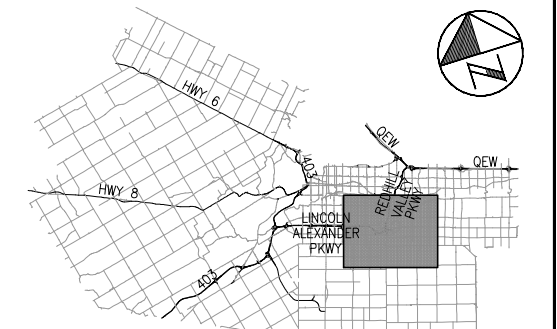
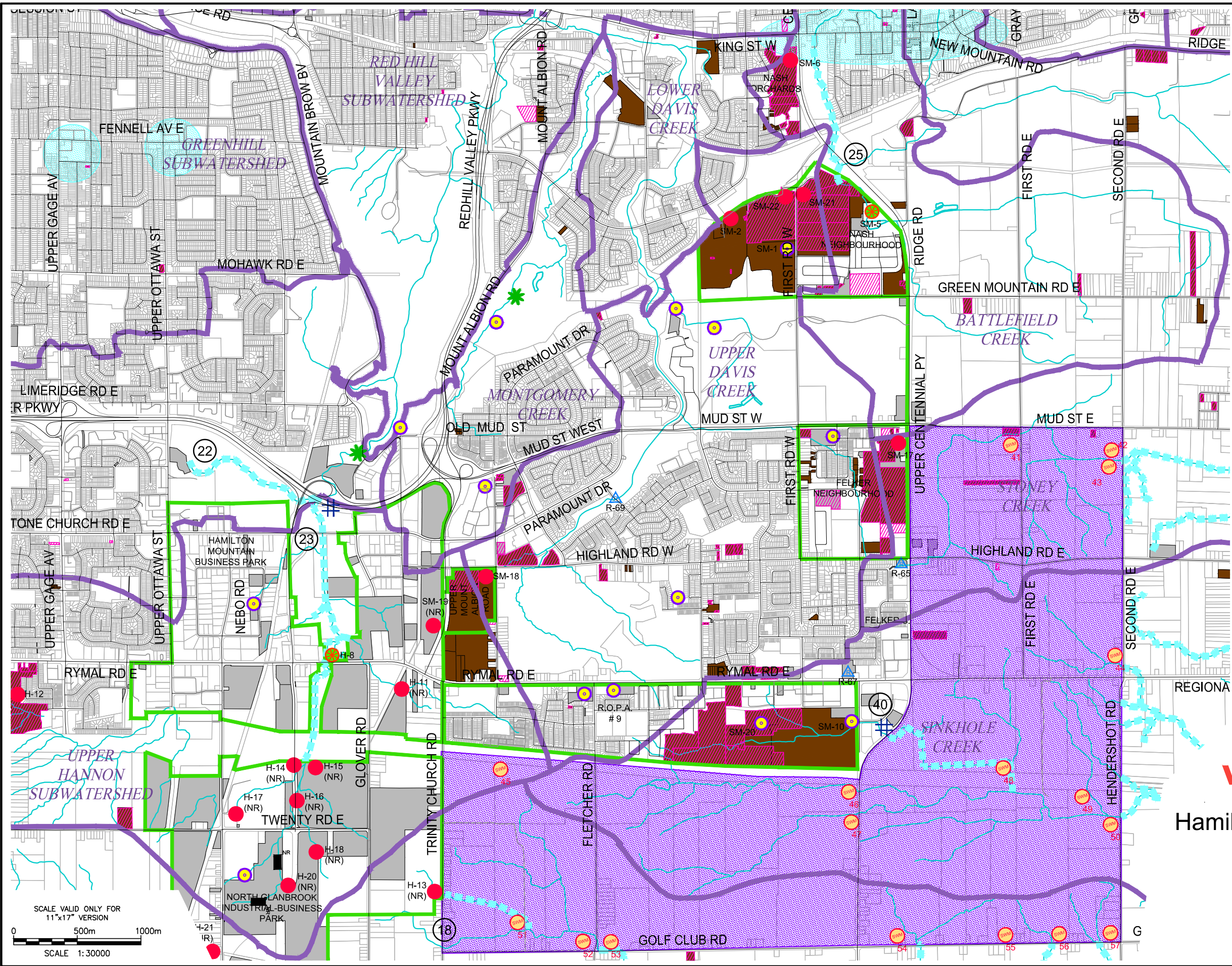
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**KEY PLAN**

**LEGEND:**

- FUTURE NON-RESIDENTIAL
- FUTURE RESIDENTIAL
- RESIDENTIAL (DRAFT APPROVED AND ANTICIPATED DRAFT APPROVAL 2014-2016)
- CITY OF HAMILTON RESIDENTIAL VACANT LANDS 2023
- POTENTIAL NEW BUSINESS PARK (IN EXISTING AIRPORT SPA)
- EXPANSION TO AIRPORT SPA
- POTENTIAL URBAN BOUNDARY EXPANSION AREA
- INTENSIFICATION AREA
- NEIGHBOURHOOD BOUNDARY

**STORMWATER MANAGEMENT**

**PROPOSED SWM FACILITIES**

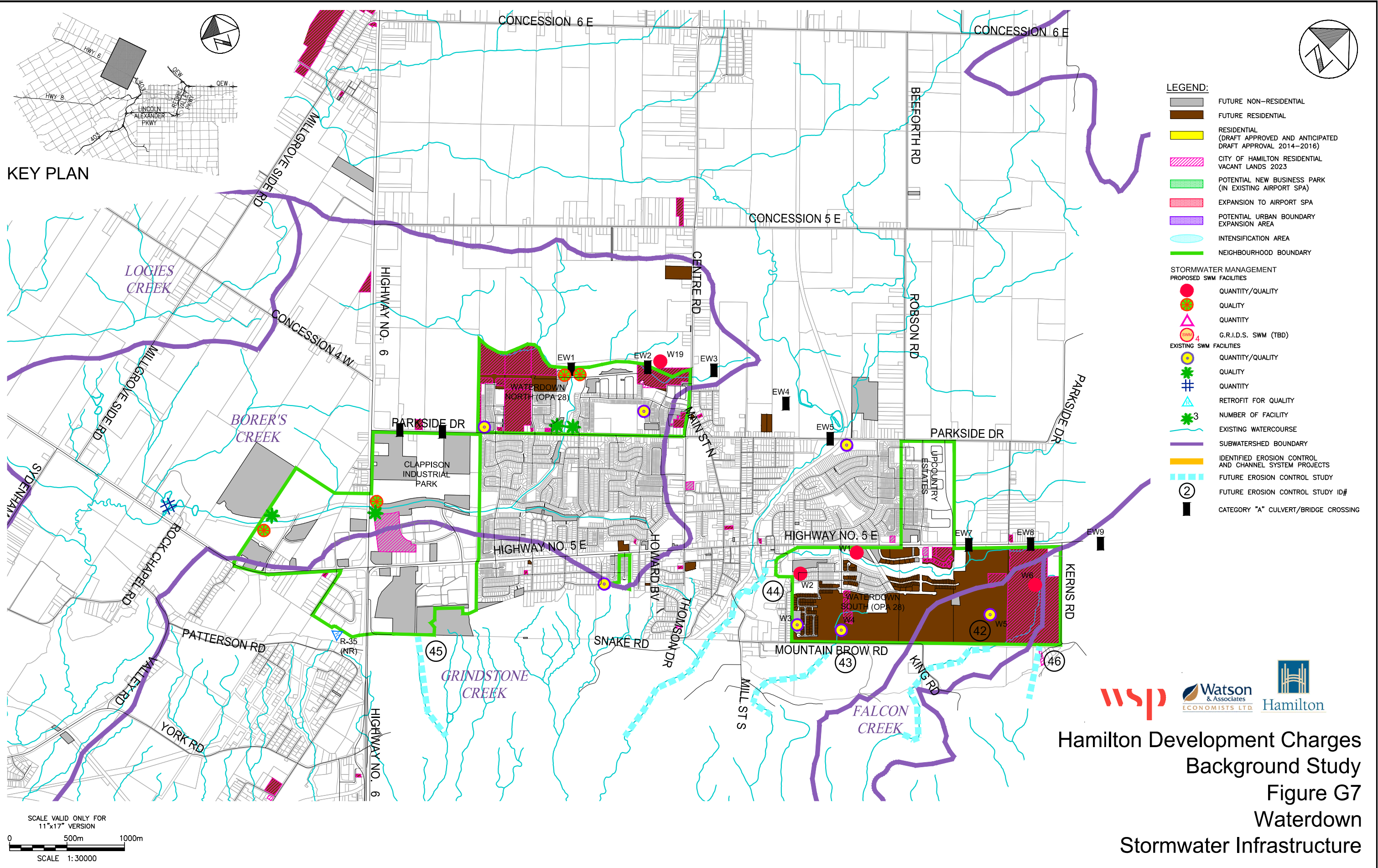
- QUANTITY/QUALITY
- QUANTITY
- △ QUANTITY
- △ G.R.I.D.S. SWM (TBD)

**EXISTING SWM FACILITIES**

- QUANTITY/QUALITY
- QUANTITY
- # QUANTITY
- △ RETROFIT FOR QUALITY
- NUMBER OF FACILITY
- EXISTING WATERCOURSE
- SUBWATERSHED BOUNDARY
- IDENTIFIED EROSION CONTROL AND CHANNEL SYSTEM PROJECTS
- - - FUTURE EROSION CONTROL STUDY
- 2 FUTURE EROSION CONTROL STUDY ID#
- CATEGORY "A" CULVERT/BRIDGE CROSSING



**Hamilton Development Charges  
 Background Study  
 Figure G6  
 Stoney Creek Mountain  
 Stormwater Infrastructure**





**Appendix G-1**

**Cost Summary Sheets – Detailed By Category**



**APPENDIX G-1: CATEGORY A - OPEN WATERCOURSES: CHANNEL SYSTEM IMPROVEMENTS (IDENTIFIED PROJECTS) RESIDENTIAL**

Category		Project Title	Status?	Study Year	Drainage Area (ha)	Purpose	SWMF/ Drainage Work						Estimated Total Cost (Rounded)(\$)	Growth Related %	Net Total Cost (\$)	Remarks	Other Changes From 2019 Study	
Primary Dev. Areas	Secondary						Type of Work	Location of Work	Type	Description	Length (m)	2019 Estimated Capital Cost (\$)						2023 Estimated Capital Cost (\$)
ANC	A	Gamer Road EA	Not Complete	2013			5 structures	Gamer Rd Hwy 6 to Glancaster				1,405,000	1,958,430	1,958,000	100	1,958,000		Inflation applied
SCL	A	Master Drainage Plan Area No. 5, 6, 7. City of Stoney Creek	Not Complete	1989		Erosion Control and Channel System Improvements	Lower culvert by 0.4 m - South Service Rd. under w/c #6					183,417	255,665	256,000	100	256,000	will be updated when WC5,6 studied	Inflation applied
SCL	A	SCUBE - Barton Street	Not Complete	2013		road crossings at existing watercourses	7 structures (3@\$400k, 4@\$750k)	Fruitland to Fifty				4,720,800	6,580,323	6,580,000	100	6,580,000		Inflation applied
SCL	A	SCUBE Block 1	Not Complete	2017		road crossings at existing watercourses	1 structure	Fruitland to N/S Collector				843,000	1,175,058	1,175,000	100	1,175,000	location set with Block plan - study underway	Inflation applied
SCL		SCUBE Block 2	Not Complete	2017		road crossings at existing watercourses	2 structures	Jones to Glover				1,686,000	2,350,115	2,350,000	100	2,350,000	location set with Block plan - study underway	Inflation applied
SCM	A	ELFRIDA Secondary Plan major roads xngs	Not Complete	2017		road crossings at existing watercourses	20 culverts (6 small, 6 med, 8 large)	ELFRIDA SP				4,737,660	6,603,824	6,604,000	0	0	Included as Post Period Benefit. Estimated total cost is maintained in this list while Growth Related % set to 0, for current period.	Inflation applied
WAT	A	East West Corridor - North Waterdown Drive	Not Complete	2012		road crossings at existing watercourses	6 culverts (med)	EW2,3,4,7,8,EW9				1,011,600	1,410,069	1,410,000	100	1,410,000	NEW	Inflation applied
WAT	A	East West Corridor - North Waterdown Drive	Not Complete	2012		road crossings at existing watercourses	1 structure	EW5				5,000,000	6,969,500	6,970,000	100	6,970,000	NEW	Inflation applied
WAT	A	Parkside Drive EA	Not Complete	2013			2 culverts (med)	Parkside Dr Hwy 6 to Hollybush				379,013	528,306	528,000	100	528,000		Inflation applied
<b>Total Residential</b>												<b>19,966,490</b>	<b>27,831,290</b>	<b>27,831,000</b>	<b>76.27</b>	<b>21,227,000</b>		

ANC: Ancaster  
 BMIH: Binbrook / Mount Hope  
 HAM: Hamilton Mountain  
 SCL: Stoney Creek - Lower  
 SCM: Stoney Creek - Mountain  
 WAT: Waterdown

**APPENDIX G-1: CATEGORY A - OPEN WATERCOURSES: CHANNEL SYSTEM IMPROVEMENTS (IDENTIFIED PROJECTS) NON-RESIDENTIAL**

Category		Project Title	Status	Study Year	Drainage Area (ha)	Purpose	SWMF/ Drainage Work					2019 Estimated Capital Cost (\$)	2023 Estimated Capital Cost (\$)	Estimated Total Cost (Rounded)(\$)	Growth Related %	Net Total Cost (\$)	Remarks	Other Changes From 2019 Study
Primary Dev. Areas	Secondary						Type of Work	Location of Work	Type	Description	Length (m)							
BMH	A	AEGD major roads crossings	Not Complete	2017		road crossings at existing watercourses	40 culverts (12 small, 12 med, 16 large)	AEGD				9,475,320	13,207,649	13,208,000	100	13,208,000	City updated estimate	Inflation applied
HAM	A	Red Hill Business Park - Dartnall Road	Not Complete	2017			2 culverts (small)	Twenty to Dickenson				400,000	557,560	558,000	100	558,000	Upper Hannon Creek MDP Oct 2017	Inflation applied
SCL	A	Master Drainage Plan Area No. 5, 6, 7. City of Stoney Creek	Not Complete	1990			Triple-Culvert replacement - QEW Corridor at w/c #5					1,579,774	2,202,047	2,202,000	100	2,202,000	to be updated when WC 5/6 studies completed	Inflation applied
SCL	A	Master Drainage Plan Area No. 5, 6, 7. City of Stoney Creek	Not Complete	1990			New culvert - North Service Rd. at w/c #5					262,380	365,731	366,000	100	366,000	to be updated when WC 5/6 studies completed	Inflation applied
SCL	A	Creek System Improvement W/C 7	Not Complete	2003			Lower culvert by 0.4 m - South Service Rd. under w/c #6					131,670	183,535	184,000	50	92,000	to be updated when WC 5/6 studies completed	Inflation applied
SCL	A	Master Drainage Plan Area No. 5, 6, 7. City of Stoney Creek	Not Complete	1990			Culvert replacement - QEW Corridor on w/c #6.2					583,112	812,800	813,000	100	813,000		Inflation applied
SCL	A	Water Course 5- Master Drainage Plan Area No. 5, 6, 7. City of Stoney Creek	Not Complete	1990	582		channel improvements			Length of channel improvement work	1015	2,591,610	3,612,445	3,612,000	100	3,612,000	to be updated when WC 5/6 studies completed	Inflation applied
SCL	A	Master Drainage Plan Area No. 5, 6, 7. City of Stoney Creek	Not Complete	1990			Lower culvert by 1.6 m - Ar'n Ave. on w/c #5					70,224	97,886	98,000	20	19,600	to be updated when WC 5/6 studies completed	Inflation applied
SCL	A	Master Drainage Plan Area No. 5, 6, 7. City of Stoney Creek	Not Complete	1990			Culvert replacement - CNR line on w/c #5					183,837	256,251	256,000	20	51,200	to be updated when WC 5/6 studies completed	Inflation applied
SCL	A	Water Course 6 - Master Drainage Plan Area No. 5, 6, 7. City of Stoney Creek	Not Complete	1990	67		channel improvements			Length of channel improvement work	1077	2,775,530	3,868,812	3,869,000	50	1,934,500	to be updated when WC 5/6 studies completed	Inflation applied
SCL	A	Master Drainage Plan Area No. 5, 6, 7. City of Stoney Creek	Not Complete	1990			Lower culvert by 1.84 m - South Service Rd. under w/c #5					131,670	183,535	184,000	100	184,000		Inflation applied
SCL	A	SCUBE - Barton Street	Not Complete	2017			WC9 channel/enclosure	west property limit of school to 140 m east				786,800	1,096,721	1,097,000	50	548,500	new configuration	Inflation applied
SCL	A	SCUBE - NSR	Not Complete	2013			culvert	Green easterly to City limits				843,000	1,175,058	1,175,000	100	1,175,000		Inflation applied
WAT	A	Hwy 5/6 Interchange	Not Complete				2 or 3 culverts	Hwy 5/6 and ramp				1,348,800	1,880,092	1,880,000	25	470,000	per City agreement with MTO	Inflation applied
WAT	A	Highway 6	Not Complete				culvert	Borer's Ck				1,124,000	1,566,744	1,567,000	100	1,567,000		Inflation applied
<b>Total Non-Residential</b>												<b>22,287,728</b>	<b>31,066,864</b>	<b>31,067,000</b>	<b>86.27</b>	<b>26,800,800</b>		
<b>Grand Total</b>												<b>42,254,218</b>	<b>58,898,154</b>	<b>58,898,000</b>	<b>81.54</b>	<b>48,027,800</b>		

ANC: Ancaster  
 BMH: Binbrook / Mount Hope  
 HAM: Hamilton Mountain  
 SCL: Stoney Creek - Lower  
 SCM: Stoney Creek - Mountain  
 WAT: Waterdown

**APPENDIX G-1 CATEGORY B: OFF SITE EROSION WORKS NOT IDENTIFIED IN PREVIOUS STUDIES (RESIDENTIAL & NON RESIDENTIAL)**

ID #	Primary Development Area	Res/Non-Res	Subwatershed	Watershed	Status	Remarks	Watershed Area <sup>1</sup>	Existing Development Area (ha)		Future Development Area (ha)		Development Fraction	Fraction of Watercourse Assumed to Require Erosion Control <sup>2</sup>	Total Length of Downstream Watercourse to Assumed End-Point <sup>3</sup>	Length of Erosion Control Works	Cost <sup>4</sup>	Land Cost	Total Cost	New Development Fraction	Development Related Cost	Remarks	Other Changes from 2019 Study					
							A	B	C	D	E	F = 100 X (B+C+D+E) / A	G	H	I = G X H	J	K	L=J+K	M = (D+E) / (B+C+D+E)	L X M							
							(ha)	Res.	Non-Res.	Res.	Non-Res.	(%)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)			(m)	(m)	(m)	(m)	(m)
							(ha)	(ha)	(ha)	(ha)	(ha)	(%)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)			(m)	(m)	(m)	(m)	(m)
2	ANC	Non-Res	Big Creek (Outlet #1 & #2 Industrial Park)	Big Creek	Not complete		271		11.6	5.32	136.83	56.73	0.15	4,988	748	\$1,564,486	\$993,054	\$2,557,540	0.925	\$2,364,581	new development fraction recalculated as fraction of existing and future development, not drainage area	land values updated					
3	ANC	Res	Big Creek (Spring Valley West and Shaver Neighbourhood)	Big Creek	Not complete	South of Shaver Neighbourhood	43	35		5.5		94.19	0.20	600	120	\$250,920	\$159,271	\$410,191	0.136	\$55,705	new development fraction recalculated as fraction of existing and future development, not drainage area	land values updated					
4	ANC	Res	Big Creek (Spring Valley West and Shaver Neighbourhood)	Big Creek	Not complete		100	70.92		21.48	0.29	92.69	0.20	1,500	300	\$627,300	\$398,177	\$1,025,477	0.235	\$240,853	new development fraction recalculated as fraction of existing and future development, not drainage area	land values updated					
5	BMH	Non-Res	Three Mile Creek	Twenty Mile Creek	Not complete	Part of Airport Business Park and Airport	165		20		24.48	26.96	0.10	1,500	150	\$313,650	\$199,089	\$512,739	0.550	\$282,191	new development fraction recalculated as fraction of existing and future development, not drainage area	land values updated					
6	ANC	Res	Tiffany Creek	Coote's Paradise	Not complete	Meadowlands, Gamer, Ancaster. A portion of the w/c is lined in a SWMF	165	25		129.84	0.37	94.07	0.20	2,500	500	\$1,045,500	\$663,628	\$1,709,128	0.839	\$1,433,836	new development fraction recalculated as fraction of existing and future development, not drainage area	land values updated					
7	ANC	Res	Tiffany Creek	Coote's Paradise	Not complete	Falkirk West and Bayview Glen Estates	110			11.5	1.76	12.05	0.05	450	23	\$47,048	\$29,863	\$76,911	1.000	\$76,911	new development fraction recalculated as fraction of existing and future development, not drainage area	land values updated					
8	ANC	Res	Sulphur Creek	Coote's Paradise	Not complete		1794			15.98		0.89	0.05	500	25	\$87,125	\$66,363	\$153,488	1.000	\$153,488	new development fraction recalculated as fraction of existing and future development, not drainage area	land values updated					
9	BMH	Res	Binbrook Node B	Welland River	Not complete	Binbrook Urban area of 200 ha Draining at Node 'B'	300	191.27		100.12	0.5	97.30	0.20	4,500	900	\$1,881,900	\$1,060,691	\$2,942,591	0.345	\$1,014,367	new development fraction recalculated as fraction of existing and future development, not drainage area	land values updated					
11	BMH	Res	Binbrook Node D	Welland River	Not complete	Three tributaries B7-a,b,c	133			100.26		75.38	0.20	4,100	820	\$1,714,620	\$966,408	\$2,681,028	1.000	\$2,681,028	new development fraction recalculated as fraction of existing and future development, not drainage area	land values updated					
12	BMH	Res	Binbrook Node G	Twenty Mile Creek (Three Mile, Sinkhole Creek)	Not complete	Jackson Heights etc	25	15		9.14		96.56	0.20	750	150	\$313,650	\$176,782	\$490,432	0.379	\$185,690	new development fraction recalculated as fraction of existing and future development, not drainage area	land values updated					
13	BMH	Res	Node of Welland River south of Mount Hope Urban Boundary SWMF # B-10	Welland River	Not complete	Mount Hope & adjacent areas (including Airport Business Area)-two outlet	220	128.52	20	47.39	4.76	91.21	0.20	1,500	300	\$627,300	\$353,564	\$980,864	0.260	\$254,906	new development fraction recalculated as fraction of existing and future development, not drainage area	land values updated					
14	BMH	Non-Res	Node of Welland River north of Mount Hope Urban Boundary	Welland River	Not complete		30				20	66.67	0.15	1,200	180	\$376,380	\$212,138	\$588,518	1.000	\$588,518	new development fraction recalculated as fraction of existing and future development, not drainage area	land values updated					
15	HAM	Res	Node Downstream of Glanbrook Hills	Twenty Mile Creek (Three Mile, Sinkhole Creek)	Not complete?	Garth Trail, North Glanbrook Industrial Park, Airport Industrial Business Park, part of Binbrook and others	40	20		16.47		91.18	0.20	900	180	\$376,380	\$212,138	\$588,518	0.452	\$265,777	new development fraction recalculated as fraction of existing and future development, not drainage area	land values updated					

<sup>1</sup>To point immediately d/s of future development (start of off-site erosion assessment)

<sup>2</sup>-0.05 - Where Development Fraction is 0 - 25%

0.10 - Where Development Fraction is 26 - 49%

0.15 - Where Development Fraction is 50 - 74%

0.20 - Where Development Fraction is 75 - 100%

<sup>3</sup>Location where d/s of this point no erosion is deemed to occur from subject development; total drainage area to this point estimated as a maximum of 2X the study watershed area (Column A). Note that the end point may also be set by Hamilton Harbour or La

<sup>4</sup>\$3485/m for Watershed Area > 500 ha (increase of 39.39% from 2019: \$2500/m for Watershed Area > 500 ha)

\$2091/m for Watershed Area < 500 ha (increase of 39.39% from 2019: \$1500/m for Watershed Area < 500 ha)

Coote's Paradise (Borer's Creek, Spencer Creek, Sulphur Creek, Ancaster Creek, Chedoke Creek, Others)

Hamilton Harbour (Red Hill Creek, Central Business Park)

**APPENDIX G-1 CATEGORY B: OFF SITE EROSION WORKS NOT IDENTIFIED IN PREVIOUS STUDIES (RESIDENTIAL & NON RESIDENTIAL)**

16	BMH	Non-Res	Node Downstream of SWMF # R53	Twenty Mile Creek (Three Mile, Sinkhole Creek)	Not complete		40			36.81	92.03	0.20	850	170	\$355,470	\$200,353	\$555,823	1.000	\$555,823	new development fraction recalculated as fraction of existing and future development, not drainage area	land values updated	
17	HAM	Non-Res	Node Downstream of SWMF # B 13	Twenty Mile Creek (Three Mile, Sinkhole Creek)	Not complete		32			19.67	61.47	0.15	600	90	\$188,190	\$106,069	\$294,259	1.000	\$294,259	new development fraction recalculated as fraction of existing and future development, not drainage area	land values updated	
18	HAM	Non-Res	Node Downstream of SWMF # H 13	Twenty Mile Creek (Three Mile, Sinkhole Creek)	Not complete		181			63.3	34.97	0.10	2,000	200	\$418,200	\$235,709	\$653,909	1.000	\$653,909	new development fraction recalculated as fraction of existing and future development, not drainage area	land values updated	
19	HAM	Non-Res	Node Downstream of SWMF # B 14	Twenty Mile Creek (Three Mile, Sinkhole Creek)	Not complete		58			5.71	9.84	0.05	1,100	55	\$115,005	\$64,820	\$179,825	1.000	\$179,825	new development fraction recalculated as fraction of existing and future development, not drainage area	land values updated	
20	HAM	Non-Res	Node Downstream of SWMF # B 11 & B 12	Twenty Mile Creek (Three Mile, Sinkhole Creek)	Not complete		700	282.29	26.2	48.63	51.02	0.15	3,000	450	\$1,568,250	\$1,060,691	\$2,628,941	0.210	\$550,862	new development fraction recalculated as fraction of existing and future development, not drainage area	land values updated	
21	BMH	Non-Res	Node Downstream of SWMF # B 15 & 16	Twenty Mile Creek (Three Mile, Sinkhole Creek)	Not complete		179	100	54.41	86.26	0.20	1,400	280	\$585,480	\$329,993	\$915,473	0.352	\$322,588	new development fraction recalculated as fraction of existing and future development, not drainage area	land values updated		
22	HAM	Res	Upper Ottawa subwatershed	Hamilton Harbour	Not complete	Erosion works downstream identified in previous studies	1356	766	308.9	136.28	0.86	89.38	0.20	1,100	220	\$766,700	\$518,560	\$1,285,260	0.113	\$145,425	new development fraction recalculated as fraction of existing and future development, not drainage area	land values updated
23	HAM	Res	Hannon Creek subwatershed	Hamilton Harbour	Not complete		1070	115.2	357.7	75.95	292.53	78.63	0.20	2,000	400	\$1,394,000	\$942,837	\$2,336,837	0.438	\$1,023,411	new development fraction recalculated as fraction of existing and future development, not drainage area	land values updated
25	SCL	Res	Battlefield Creek	Lake Ontario (Battlefield Creek, SC, WC 0-12)	Not complete	Nash	300		62.09	1.92	21.34	0.05	1,250	63	\$130,688	\$73,659	\$204,347	1.000	\$204,347	new development fraction recalculated as fraction of existing and future development, not drainage area	land values updated	
26	SCL	Res	Water Course 0	Lake Ontario (Battlefield Creek, SC, WC 0-12)	Not complete	WC 0	321	112.9	149.7	1.12	2.98	83.08	0.20	50	10	\$20,910	\$11,785	\$32,695	0.015	\$503	new development fraction recalculated as fraction of existing and future development, not drainage area	land values updated
27	SCL	Res	Water Course 1	Lake Ontario (Battlefield Creek, SC, WC 0-12)	Not complete	WC 1	330	157.5	61	13.09	2.87	71.05	0.15	1,900	285	\$595,935	\$335,886	\$931,821	0.068	\$63,430	new development fraction recalculated as fraction of existing and future development, not drainage area	land values updated
28	Water Course 10/12	Non-Res	Fifty Point Industrial Park	Lake Ontario (Battlefield Creek, SC, WC 0-12)	Not complete	assumed Fruitland-Winona SP land use	20			16.56	82.80	0.20	600	120	\$250,920	\$141,426	\$392,346	1.000	\$392,346	new development fraction recalculated as fraction of existing and future development, not drainage area	land values updated	
<p><sup>1</sup>To point immediately d/s of future development (start of off-site erosion assessment)  <sup>2</sup>-0.05 - Where Development Fraction is 0 - 25%  0.10 - Where Development Fraction is 26 - 49%  0.15 - Where Development Fraction is 50 - 74%  0.20 - Where Development Fraction is 75 - 100%  <sup>3</sup>Location where d/s of this point no erosion is deemed to occur from subject development; total drainage area to this point estimated as a maximum of 2X the study watershed area (Column A). Note that the end point may also be set by Hamilton Harbour or La  <sup>4</sup>\$3485/m for Watershed Area &gt; 500 ha (increase of 39.39% from 2019: \$2500/m for Watershed Area &gt; 500 ha)  \$2091/m for Watershed Area &lt; 500 ha (increase of 39.39% from 2019: \$1500/m for Watershed Area &lt; 500 ha)</p>																						

Cootes Paradise (Borer's Creek, Spencer Creek, Sulphur Creek, Ancaster Creek, Chedoke Creek, Others)  
Hamilton Harbour (Red Hill Creek, Central Business Park)



**APPENDIX G-1 CATEGORY B: OFF SITE EROSION WORKS NOT IDENTIFIED IN PREVIOUS STUDIES (RESIDENTIAL & NON RESIDENTIAL)**

29	SCL	Res	Fifty Point Joint Venture	Lake Ontario (Battlefield Creek, SC, WC 0-12)			45	32	1.17	0.19	74.13	0.20	300	60	\$125,460	\$70,713	\$196,173	0.041	\$7,997	new development fraction recalculated as fraction of existing and future development, not drainage area	land values updated	
30	SCL	Non-Res	Water Course 12	Lake Ontario (Battlefield Creek, SC, WC 0-12)	assumed Fruitland-Winona SP land use		642	75.8	14.1	0.89	24	17.88	0.05	1,350	68	\$235,238	\$159,104	\$394,341	0.217	\$85,505	new development fraction recalculated as fraction of existing and future development, not drainage area	land values updated
31	SCL	Res	Water Course 2	Lake Ontario (Battlefield Creek, SC, WC 0-12)	WC 2		283	148	76.8	1.69	0.56	80.23	0.20	1,100	220	\$460,020	\$259,280	\$719,300	0.010	\$7,128	new development fraction recalculated as fraction of existing and future development, not drainage area	land values updated
32	SCL	Res	Water Course 3	Lake Ontario (Battlefield Creek, SC, WC 0-12)	WC 3		190	74.4	73.3	4.44	2.44	81.36	0.20	900	180	\$376,380	\$212,138	\$588,518	0.045	\$26,194	new development fraction recalculated as fraction of existing and future development, not drainage area	land values updated
33	SCL	Non-Res	Water Course 4	Lake Ontario (Battlefield Creek, SC, WC 0-12)	WC 4		376	133.9	60.9		14	55.53	0.15	800	120	\$250,920	\$141,426	\$392,346	0.067	\$26,307	new development fraction recalculated as fraction of existing and future development, not drainage area	land values updated
34	SCL	Res	Water Course 5	Lake Ontario (Battlefield Creek, SC, WC 0-12)	w/c 5.1-1100m, w/c 5.0-2500; assumed FWSP land use		636	121.4	112.9	118.35	7.64	56.65	0.15	3,600	540	\$1,881,900	\$1,272,830	\$3,154,730	0.350	\$1,103,179	new development fraction recalculated as fraction of existing and future development, not drainage area	land values updated
35	SCL	Res	Water Course 6	Lake Ontario (Battlefield Creek, SC, WC 0-12)	assumed Fruitland-Winona SP land use		100	19	18.1	50.39	11.65	99.14	0.20	1,300	260	\$543,660	\$306,422	\$850,082	0.626	\$531,966	new development fraction recalculated as fraction of existing and future development, not drainage area	land values updated
36	SCL	Non-Res	Water Course 7	Lake Ontario (Battlefield Creek, SC, WC 0-12)	assumed Fruitland-Winona SP land use		421	77.2	28.2	25.28	36.2	39.64	0.10	1,000	100	\$209,100	\$117,855	\$326,955	0.368	\$120,453	new development fraction recalculated as fraction of existing and future development, not drainage area	land values updated
37	SCL	Non-Res	Water Course 9	Lake Ontario (Battlefield Creek, SC, WC 0-12)	assumed Fruitland-Winona SP land use		579	148.76	51.2	86.41	16.98	52.39	0.15	800	120	\$418,200	\$282,851	\$701,051	0.341	\$238,937	new development fraction recalculated as fraction of existing and future development, not drainage area	land values updated
40	SCM	Res	Sinkhole Creek	Twenty Mile Creek (Three Mile, Sinkhole Creek)	Felkirk South and ROPA #9 (Rymal Rd.)		140	63.1		100.13		116.59	0.20	1,200	240	\$501,840	\$282,851	\$784,691	0.613	\$481,352	new development fraction recalculated as fraction of existing and future development, not drainage area	land values updated

<sup>1</sup>To point immediately d/s of future development (start of off-site erosion assessment)

<sup>2</sup>-0.05 - Where Development Fraction is 0 - 25%

0.10 - Where Development Fraction is 26 - 49%

0.15 - Where Development Fraction is 50 - 74%

0.20 - Where Development Fraction is 75 - 100%

<sup>3</sup>Location where d/s of this point no erosion is deemed to occur from subject development; total drainage area to this point estimated as a maximum of 2X the study watershed area (Column A). Note that the end point may also be set by Hamilton Harbour or La

<sup>4</sup>\$3485/m for Watershed Area > 500 ha (increase of 39.39% from 2019: \$2500/m for Watershed Area > 500 ha)

\$2091/m for Watershed Area < 500 ha (increase of 39.39% from 2019: \$1500/m for Watershed Area < 500 ha)

Cootes Paradise (Borer's Creek, Spencer Creek, Sulphur Creek, Ancaster Creek, Chedoke Creek, Others)

Hamilton Harbour (Red Hill Creek, Central Business Park)

**APPENDIX G-1 CATEGORY B: OFF SITE EROSION WORKS NOT IDENTIFIED IN PREVIOUS STUDIES (RESIDENTIAL & NON RESIDENTIAL)**

42	WAT	Res	Falcon Creek	Grindstone Creek/ North Shore Watershed		OPA 28 South	48		48		100.00	0.20	1,200	240	\$501,840	\$318,542	\$820,382	1.000	\$820,382	new development fraction recalculated as fraction of existing and future development, not drainage area	land values updated	
43	WAT	Res	Grindstone Creek SWMF # W7	Grindstone Creek/ North Shore Watershed			45		45		100.00	0.20	900	180	\$376,380	\$238,906	\$615,286	1.000	\$615,286	new development fraction recalculated as fraction of existing and future development, not drainage area	land values updated	
44	WAT	Res	Grindstone Creek SWMF # W1 to SWMF # W8	Grindstone Creek/ North Shore Watershed		OPA 28 South and Upcountry Estates, Gatesbury, etc.	1011	254.8	108.81		35.97	0.10	2,000	200	\$697,000	\$530,903	\$1,227,903	0.299	\$367,449	new development fraction recalculated as fraction of existing and future development, not drainage area	land values updated	
45	WAT	Non-Res	Flamborough Industrial Park SWMF # W14	Grindstone Creek/ North Shore Watershed			45		15		33.33	0.10	900	90	\$188,190	\$119,453	\$307,643	1.000	\$307,643	new development fraction recalculated as fraction of existing and future development, not drainage area	land values updated	
46	WAT	Res	Indian Creek	Grindstone Creek/ North Shore Watershed		OPA 28 South	14		10.91		77.93	0.20	450	90	\$188,190	\$119,453	\$307,643	1.000	\$307,643	new development fraction recalculated as fraction of existing and future development, not drainage area	land values updated	
48	OTH	Res	Central Business Subwatershed	Hamilton Harbour		Not in growth area	2400				0.00	0.00		0	\$0	\$0	\$0	0.000	\$0			
49	OTH	Res	Chedoke Creek	Hamilton Harbour		Not in growth area	2706				0.00	0.00		0	\$0	\$0	\$0	0.000	\$0			
50	OTH	Res	Green Hill subwatershed	Hamilton Harbour		Not in growth area	1225	1102.5			90.00	0.20	0	0	\$0	\$0	\$0	0.000	\$0			
51	OTH	Res	Logies Creek	Coote's Paradise		Not in growth area	1217				0.00	0.00		0	\$0	\$0	\$0	0.000	\$0			
52	OTH	Res	Lower Spencer Creek	Coote's Paradise		Not in growth area	277				0.00	0.00		0	\$0	\$0	\$0	0.000	\$0			
53	OTH	Res	Mid Spencer Creek	Coote's Paradise		Not in growth area	5513				0.00	0.00		0	\$0	\$0	\$0	0.000	\$0			
54	OTH	Res	Spring Creek	Coote's Paradise		Not in growth area	1305				0.00	0.00		0	\$0	\$0	\$0	0.000	\$0			
55	OTH	Res	Sydenham Creek	Coote's Paradise		Not in growth area	442				0.00	0.00		0	\$0	\$0	\$0	0.000	\$0			
<b>Grand Total</b>							<b>27,643.0</b>	<b>4,270.5</b>	<b>1,364.4</b>	<b>1,379.2</b>	<b>863.9</b>	<b>28.50</b>		<b>58,638</b>	<b>9446</b>	<b>\$22,570,324</b>	<b>\$13,945,679</b>	<b>\$36,516,003</b>	<b>52.12</b>	<b>\$19,031,997</b>		

<sup>1</sup>To point immediately d/s of future development (start of off-site erosion assessment)

<sup>2</sup>-0.05 - Where Development Fraction is 0 - 25%

0.10 - Where Development Fraction is 26 - 49%

0.15 - Where Development Fraction is 50 - 74%

0.20 - Where Development Fraction is 75 - 100%

<sup>3</sup>Location where d/s of this point no erosion is deemed to occur from subject development; total drainage area to this point estimated as a maximum of 2X the study watershed area (Column A). Note that the end point may also be set by Hamilton Harbour or La

<sup>4</sup>\$3485/m for Watershed Area > 500 ha (increase of 39.39% from 2019: \$2500/m for Watershed Area > 500 ha)

\$2091/m for Watershed Area < 500 ha (increase of 39.39% from 2019: \$1500/m for Watershed Area < 500 ha)

Coote's Paradise (Borer's Creek, Spencer Creek, Sulphur Creek, Ancaster Creek, Chedoke Creek, Others)

Hamilton Harbour (Red Hill Creek, Central Business Park)

<b>Total Residential</b>	<b>\$25,114,295</b>	<b>48.05</b>	<b>\$12,068,251</b>
<b>Total Non-Residential</b>	<b>\$11,401,708</b>	<b>61.08</b>	<b>\$6,963,747</b>

**APPENDIX G-1: CATEGORY C - STORMWATER MANAGEMENT (QUALITY AND OR QUANTITY) FACILITIES RESIDENTIAL**

Category		Project Title		Year	Drainage Area (ha)	Purpose	Status	SWMF/ Drainage Work										Growth Related %	Net Growth/Total Associated Cost (\$)	Existing Benefit	Direct Developer Contribution (\$)	Non-Res Area Fraction Cost (\$)	Net Total Associated Cost (\$)	Remarks	Other Changes From 2019 Study		
Primary Dev. Areas	Secondary	SWMF #						Type of Work	Location of Work	Type	Description	Total Volume (m3)	Estimated Footprint 4% (ha)	Estimated Footprint 6% (ha)	Study/Draft Plan Footprint (ha)	Footprint (ha)	Land Cost									Estimated Capital Cost (\$)	Estimated Total Cost Including Land
ANC	C	7	Garner Neighbourhood Master Drainage Plan - Ancaster	July, 1996 Rev. Nov. 2003	10.4	MDP addressing drainage related issues for existing and future development	Not complete	Proposed Quality Facility #1: Extended detention wetland	Between proposed Highway 6 (new) interchange corridor and the existing development	Quality	Storage Capacity =	910	0.42		0.42	1,104,278	101,476	1,205,754	100	1,205,754	-	-	-	1,205,754		land values updated	
ANC	C	14	Meadowlands Phase IV		6		Not complete		Springbrook at Garner	Quality / Quantity	Storage Capacity =	2,110		0.36	0.60	1,592,708	235,286	1,827,994	100	1,827,994	-	-	-	1,827,994	increase land to 10% due to known grade constraint	land values updated	
ANC	C	22	Woodland Manor Preliminary SWM Report	Jul-08	15.3	SWM Plan for proposed urban development	Not complete	SWMF	Sulpher Springs Road and Mansfield Drive	Quality / Quantity	Storage Volume =	13,289		0.92	0.92	2,436,844	1,103,378	3,540,221	100	3,540,221	-	-	-	3,540,221		land values updated	
ANC	C	24	Miller's pond expansion		5		Not complete	SWMF	Shaver Road and Garner Road	Quality		3,600	0.20		0.20	530,903	401,443	932,346	100	932,346	-	-	-	932,346		land values updated	
ANC	C	25	Golf Stream Manor		36		Not complete			Quality / Quantity		25,920	1.44		1.44	3,822,500	1,807,610	5,630,109	100	5,630,109	-	-	-	5,630,109		land values updated	
ANC	R	3	N/A	N/A	31.34	Flood Control	Not complete	Future Retrofit	Galley Crt & Speers Rd	Quality					0.00	-	443,100	443,100	30	132,930	310,170	-	-	-	132,930		
ANC	R	22	N/A	N/A	2.19	Flood Control	Not complete	Future Retrofit	Harrington Place and Lover's Lane	Quality					0.00	-	422,000	422,000	50	211,000	211,000	-	-	-	211,000		
ANC	R	70	Drainage Report - The Meadowlands	N/A	296.9		Not complete	Future Retrofit	Hwy 403 and Golf Links Rd	Quality					0.00	-	4,135,600	4,135,600	40	1,654,240	2,481,360	-	-	-	1,654,240		
ANC	R	71	Drainage Report - The Meadowlands	N/A	42.51		Not complete	Future Retrofit	Golf Links Rd and Meadowlands Blvd	Quality					0.00	-	601,350	601,350	40	240,540	360,810	-	-	-	240,540		
ANC	R	72	Drainage Report - The Meadowlands	N/A	18.03		Not complete	Future Retrofit	Golf Links Rd. and Meadowlands Blvd.	Quality					0.00	-	422,000	422,000	40	168,800	253,200	-	-	-	168,800		
BMH	C	24	Ceterini	2013	15		Not complete	SWMF	Binbrook Rd west of Woodland	Quality / Quantity	Storage Capacity =	9,400		0.90	0.90	2,121,383	886,515	3,007,897	100	3,007,897	-	-	-	3,007,897		land values updated	
BMH	C	21	Master Drainage Plan Update Report - Binbrook Settlement Area	Oct. 2006	31	additional facility adjacent to the watercourse	Not complete	SWMF		Quality / Quantity	Storage Capacity =	19,376		1.86	1.86	4,384,191	1,442,768	5,826,959	100	5,826,959	-	-	-	5,826,959		land values updated	
BMH	C	20	Binbrook Settlement Area	2013	22.72	MacNeill facility	Not complete	SWMF	Area draining to the south west near Fletcher Road	Quality / Quantity	Storage Capacity =	19,201		1.36	1.80	4,242,765	1,432,969	5,675,734	100	5,675,734	-	-	-	5,675,734		land values updated	
HAM	C	12	Hanson Creek SWS - North Glanbrook Industrial Business Park MDP	Nov. 2008	10		Not complete	SWMF	Upper Gage/Terni in tandem with HAM29	Quality / Quantity	Storage volume =	8,817		0.40	0.40	942,837	853,992	1,796,829	100	1,796,829	-	-	-	1,796,829		land values updated	
HAM	C	28	305 Stone Church Road West	2011	33.29	SWM Plan for proposed urban development	Not complete	SWMF	NE limit of development	Quality / Quantity	Storage volume =	20,382		2.00	2.00	4,708,055	2,056,374	6,764,429	100	6,764,429	-	-	-	6,764,429	estimated 10,000 m3 rock	land values updated	
HAM	C	29	Miles	2011	42	SWM Plan for proposed urban development	Not complete	SWMF	NE limit of development	Quality / Quantity	Storage volume =	30,240		2.52	2.52	5,939,871	2,745,425	8,685,297	100	8,685,297	-	-	-	8,685,297	estimated 12500 m3 rock	land values updated	
HAM	C	30	St Elizabeth expansion	2013	50	SWM facility expansion	Not complete	SWMF	expand for new development	Quality / Quantity	Storage volume =	38,000			0.00	-	2,481,142	2,481,142	100	2,481,142	-	-	-	2,481,142			
HAM	C	31	Upper Wellington and Stonechurch		14		Not complete	SWMF	SW corner of Upper Wellington and Stonechurch Rd	Quality / Quantity	Extended Detention Pond	11,263		0.84	1.40	3,299,929	1,255,986	4,555,915	100	4,555,915	-	-	-	4,555,915	increase land to 10% due to known grade constraint: estimated 7000 m3 in rock	land values updated	
HAM	R	55	Villages of Glancaster	Jul. 1990	77.63	Flood Control	Not complete	Future Retrofit	Twenty Rd and Garth St	Quality		-	3.11		3.11	7,319,242	1,086,650	8,405,892	80	6,724,713	1,681,178	-	-	-	6,724,713		land values updated
SCL	C	2	SCUBE Subwatershed Study (Phase 3)	May-13	26.4	Stormwater management strategy	Not complete	SWMF	WC6 south of Barton West	Quantity / Quality	wet pond #3	13,216		1.58	2.64	6,222,722	1,099,285	7,322,008	100	7,322,008	-	-	-	7,322,008	increase land to 10% due to known grade constraint	land values updated	
SCL	C	3	SCUBE Subwatershed Study (Phase 3 - Block 2)	Sep-18	16.4	Stormwater management strategy	Not complete	SWMF	WC6.1 south of Barton West	Quantity / Quality	wet pond for 6.0	10,331		0.98	1.64	3,865,631	938,429	4,804,060	100	4,804,060	-	-	-	4,804,060	increase land to 10% due to known grade constraint	land values updated	
SCL	C	31	SCUBE Subwatershed Study (Phase 3 - Block 2)	Sep-18	27.6	Stormwater management strategy	Not complete	SWMF	WC6.1 south of Barton West	Quantity / Quality	wet pond for 6.1	18,115		1.66	2.76	6,505,573	1,372,434	7,878,007	100	7,878,007	-	-	-	7,878,007	increase land to 10% due to known grade constraint	land values updated	
SCL	C	12	SCUBE Subwatershed Study (Phase 3)	May-13	54	Stormwater management strategy	Not complete	SWMF	SCUBE Central	Quantity / Quality	wet pond #9-2	34,060		3.24	5.40	12,728,296	2,261,463	14,989,759	100	14,989,759	-	-	-	14,989,759	increase land to 10% due to known grade constraint	land values updated	
SCL	C	13	SCUBE Subwatershed Study (Phase 3)	May-13	23.1	Stormwater management strategy	Not complete	SWMF	SCUBE Central	Quantity / Quality	wet pond #9-3	14,592		1.39	2.31	5,444,882	1,176,006	6,620,888	100	6,620,888	-	-	-	6,620,888	increase land to 10% due to known grade constraint	land values updated	

ANC: Ancaster  
 BMH: Binbrook / Mount Hope  
 HAM: Hamilton Mountain  
 SCL: Stoney Creek - Lower  
 SCM: Stoney Creek - Mountain  
 WAT: Waterdown

**APPENDIX G-1: CATEGORY C - STORMWATER MANAGEMENT (QUALITY AND OR QUANTITY) FACILITIES RESIDENTIAL**

Category		SWMF #	Project Title	Year	Drainage Area (ha)	Purpose	Status	SWMF/ Drainage Work											Growth Related %	Net Growth/Total Associated Cost (\$)	Existing Benefit	Direct Developer Contribution (\$)	Non-Res Area Fraction Cost (\$)	Net Total Associated Cost (\$)	Remarks	Other Changes From 2019 Study				
Primary Dev. Areas	Secondary							Type of Work	Location of Work	Type	Description	Total Volume (m3)	Estimated Footprint 4% (ha)	Estimated Footprint 6% (ha)	Study/Draft Plan Footprint (ha)	Footprint (ha)	Land Cost	Estimated Capital Cost (\$)									Estimated Total Cost Including Land			
SCL	C	29	SCUBE Subwatershed Study (Phase 3)	May-13	39.8	Stormwater management strategy	Not complete	SWMF	WC5 south of Barton West	SCUBE	Quantity / Quality	wet pond #1	19,417		2.39	3.98	3.98	9,381,226	1,445,028	10,826,254	100	10,826,254	-	-	-	10,826,254	Increase land to 10% due to known grade constraint	land values updated		
SCL	C	30	SCUBE Subwatershed Study (Phase 3)	May-13	24.5	Stormwater management strategy	Not complete	SWMF	WC5.2 south of Barton West	SCUBE	Quantity / Quality	wet pond #2	12,773		1.47	2.45	2.45	5,774,875	1,074,585	6,849,460	100	6,849,460	-	-	-	6,849,460	Increase land to 10% due to known grade constraint	land values updated		
SCL	R	16	Lake Vista			Stormwater quality and associated resource management	Not complete	Storm outfall retrofit	Lake Vista		Quality	OSS					0.00	-	50,000	50,000	100	50,000	-	-	-	50,000				
SCL	R	18	Stormwater Quality Management Strategy Stoney Creek Master Plan	2004	27.2	Stormwater quality and associated resource management	Not complete	Storm outfall retrofit	BFC, Little League Park, Queenston Rd.		Quality	Wetland	2,413				0.00	-	269,078	269,078	100	269,078	-	-	-	269,078				
SCL	R	19	Stormwater Quality Management Strategy Stoney Creek Master Plan	2004	33	Stormwater quality and associated resource management	Not complete	Storm outfall retrofit	BFC, Lake Ave. Park, Huckleberry Dr.		Quality	Wetland	2,582				0.00	-	287,924	287,924	100	287,924	-	-	-	287,924				
SCL	R	20	Stormwater Quality Management Strategy Stoney Creek Master Plan	2004	77	Stormwater quality and associated resource management	Not complete	Storm outfall retrofit	North of Barton St.		Quality	Wetland	6,724				0.00	-	737,317	737,317	100	737,317	-	-	-	737,317				
SCL	R	21	Stormwater Quality Management Strategy Stoney Creek Master Plan	2004	20.5	Stormwater quality and associated resource management	Not complete	Storm outfall retrofit	Lake Avenue, Warrington St.		Quality	Wetland	1,923				0.00	-	214,438	214,438	100	214,438	-	-	-	214,438				
SCM 18 has been funded and is removed from this list with costs updated accordingly.																														
SCM	C	21	Davis CK SWS - Nash Nhd		21		Not complete	SWMF	North limit of First Road W. at west side OH lands		Quantity / Quality	Extended Detention Pond	15,395		1.26		2,969,936	1,220,770	4,190,706	100	4,190,706	-	-	-	4,190,706		land values updated			
SCM	C	22	Davis CK SWS - Nash Nhd		15		Not complete	SWMF	North limit of First Road W. at east side		Quantity / Quality	Extended Detention Pond	11,425		0.90		2,121,383	999,421	3,120,803	100	3,120,803	-	-	-	3,120,803		land values updated			
SCM 2 has been funded and is removed from this list with costs updated accordingly.																														
SCM	C	6	Montgomery Creek Nash Orchards		22.49		Not complete				Quality		17,436	0.90	1.35	1.35	3,182,074	1,334,561	4,516,635	100	4,516,635	-	-	-	4,516,635		land values updated			
SCM	C	17	Heritage Green Valley Park Community Functional SWM	Nov. 2008	30	Functional Service Plan for proposed urban development	Not complete	SWMF	SW corner Mud St. and Upper Centennial PKWY.		Quantity / Quality	Storage volume =	20,300		1.80	1.87	4,407,762	1,494,250	5,902,011	100	5,902,011	-	-	1,475,503	4,426,509		land values updated			
SCM	R	65	N/A	N/A	15.2		Not complete	Future Retrofit	Hwy 20 and Highland Rd		Quality					0.00	-	422,000	422,000	30	126,600	295,400	-	-	-	126,600				
SCM	R	67	Deerfield Estate Phase 1	Apr. 1991	19.8		Complete?	Future Retrofit	Rymal Rd E and Whitedeer Rd.		Quality					0.00	-	422,000	422,000	50	211,000	211,000	-	-	-	211,000				
SCM	R	69	Heritage Green Valley Park Stage II	Sept. 1990	83.9		Not complete	Future Retrofit	Winter Drive and Paramount Drive		Quality					0.00	-	1,160,500	1,160,500	50	580,250	580,250	-	-	-	580,250				
WAT	C	1	Mtview Heights/Waterdown Bay Phase 2	Jul-13	12.43	To guide future development and management of the South Waterdown lands	Not complete	SWMF	Grindstone Creek - East Tributary 58 (Northwest)		Quantity / Quality	Storage Capacity =	13,509				0.00	-	3,400,000	3,400,000	100	3,400,000	-	-	-	3,400,000	cost estimate including land, from developer, 2018			
WAT	C	6	Mtview Heights	Jul-13	5.66	To guide future development and management of the South Waterdown lands	Not complete	SWMF	Salem Property		Quantity / Quality	Storage Capacity =	16,754	0.34	0.34	800,468	1,296,550	2,097,018	100	2,097,018	-	-	-	2,097,018		land values updated				
WAT	C	19	Waterdown North Master Drainage Plan	Feb. 2007	9.7	Assess proposed expansion for the urban settlement area of Waterdown	Not complete	SWMF for quality and erosion control	Along Borer's Creek, NW of Centre Road and Parkside Road intersection		Quantity/Erosion	Storage Capacity =	5,918		1.75	1.75	4,124,911	659,939	4,784,850	100	4,784,850	-	-	-	4,784,850	footprint estimated June 1, 2011 by Metropolitan/City agreed hazard land impacts price \$175,000/acre	land values updated			
U	C	U1	Unidentified			provisional item for unidentified SWM works	Not complete		open		Quantity / Quality						-	5,000,000	5,000,000	100	5,000,000	-	-	-	5,000,000					
U	C	U2	Intills			to include provision for LID infrastructure cost recovery	Not complete		open		Quantity						-	1,500,000	1,500,000	100	1,500,000	-	-	-	1,500,000					
U	C	U3	Frontage Costs			estimate of road frontage costs for 38 residential SWM facilities (Retrofits and Unidentified facilities excluded)	Not complete		open		Quantity / Quality	120m * \$2091/m per facility (\$1500 increased by 39.39%)					-	9,534,276	9,534,276	100	9,534,276	-	-	-	9,534,276					
U	C	U4	Land Footprint Contingency			estimate that 10 facilities will exceed the estimated land footprint by 20%	Not complete		open		Quantity / Quality	Land Cost increased by 25/20 to account for 25% larger footprint instead of 20% and also increased by 39.39% from 2019.					6,098,313		6,098,313	100	6,098,313	-	-	-	6,098,313					
U	C	U5	Facility Unidentified Volume Contingency			estimate that 1/10 facilities will exceed the estimated volume by 10%	Not complete		open		Quantity / Quality	Estimated Capital Cost increased by 39.39% from 2019.						4,390,785	4,390,785	100	4,390,785	-	-	-	4,390,785					
U	C	U6	Facility Unidentified Volume Contingency			estimate that 1/10 facilities will encounter unanticipated 9000 m3 rock	Not complete		open		Quantity / Quality	Estimated Capital Cost increased by 39.39% from 2019.						3,813,710	3,813,710	100	3,813,710	-	-	-	3,813,710	per development engineering				
U	C	U7	Unidentified - Within Combined Sewershed			under study - estimate 3 projects will result in SWM facilities @ \$2M each	Not complete		combined sewershed		Quantity / Quality							8,363,400	8,363,400	100	8,363,400	-	-	-	8,363,400	per development engineering				
<b>Total Residential</b>													<b>439,391</b>							<b>116,073,555</b>	<b>76,453,214</b>	<b>195,926,769</b>	<b>95.99</b>	<b>169,542,401</b>	<b>6,384,368</b>	<b>0</b>	<b>1,475,503</b>	<b>188,066,898</b>		







APPENDIX G-1 - CATEGORY E - CULVERTS AND BRIDGES NOT PREVIOUSLY IDENTIFIED IN CATEGORY A

AEGD Projects  
SMATS Projects  
SCUBE Projects

0 45 1 1

Ref: Hamilton Development Charges -Transportation

Item Number	Road Project Description	From	To	Status	Improvement	Length km	Benefit to Growth % (Roads)	Number of Culverts/Bridges > 1m <sup>2</sup> end area	Replacement /Widening/ New	Identified in Category "A"	Small @ \$117,500 1-4m <sup>2</sup>	Medium @ \$235,000 4-8m <sup>2</sup>	Large @ \$470,000 >8m <sup>2</sup>	Cost (2019\$)	Cost (2023\$)	Benefit to Growth % (SWM)	Cost	Cost (2023)	Notes	Other Changes From 2019 Study	
<b>AEGD Projects</b>																					
1	Airport Road	Upper James Street	Glancaster Road	Not Complete	2r-4u	2.84	60	3	Widening		3			\$252,900	\$352,517	60	\$151,740	\$211,510	non-res	inflation applied to benchmark costs	
4	Book Road	Fiddler's Green Road	Highway 6	Not Complete	2r-4u	0.99	85	1	Widening		1			\$84,300	\$117,506	85	\$71,655	\$99,880	non-res	inflation applied to benchmark costs	
5	Book Road	Highway 6	Southcote Road	Not Complete	2r-4u	1.11	85	1	Widening		1			\$84,300	\$117,506	85	\$71,655	\$99,880	non-res	inflation applied to benchmark costs	
41	Dickenson Road	Glancaster Road	Upper James Street	Not Complete	2r-4u	2.9	85	8	Widening		7	1		\$927,300	\$1,292,563	85	\$788,205	\$1,098,679	non-res	inflation applied to benchmark costs	
42	Dickenson Road extension	Southcote Road	Smith Road	Not Complete	4u	0.42	100	1	New		1			\$84,300	\$117,506	100	\$84,300	\$117,506	non-res	inflation applied to benchmark costs	
46	Garner Road	w/o Southcote	e/o Glancaster	Not Complete	2r-5u	2.98	85	2	Widening		2			\$168,600	\$235,012	85	\$143,310	\$199,760		inflation applied to benchmark costs	
47	Garner Road	e/o Fiddler's Green Road	w/o Southcote Road	Not Complete	2r-4u	2.02	85	1	Widening		1			\$84,300	\$117,506	85	\$71,655	\$99,880		inflation applied to benchmark costs	
48	Garth Street extension	Twenty Road	Dickenson Road	Not Complete	5u	1.5	100	2	New		2			\$168,600	\$235,012	100	\$168,600	\$235,012	non-res	inflation applied to benchmark costs	
49	Garth Street extension	Dickenson Road	Collector 2E	Not Complete	5u	0.62	100	1	New		1			\$84,300	\$117,506	100	\$84,300	\$117,506	non-res	inflation applied to benchmark costs	
52	Glancaster Road	Garner Road	Dickenson Road	Not Complete	2r-4u	2.46	85	4	Widening		4			\$337,200	\$470,023	85	\$286,620	\$399,520	non-res	inflation applied to benchmark costs	
54	Smith Road	Garner Road	Dickenson Road extension	Not Complete	2u	1.57	100	1	New		1			\$84,300	\$117,506	100	\$84,300	\$117,506		inflation applied to benchmark costs	
59	Twenty Road	Glancaster Road	Aldercree Avenue	Not Complete	2r-4u	3.08	85	9	Widening		9			\$758,700	\$1,057,552	85	\$644,895	\$898,919	non-res	inflation applied to benchmark costs	
60	Twenty Road extension	Southcote Road	Glancaster Road	Not Complete	4u	1.86	100	2	New		2			\$168,600	\$235,012	100	\$168,600	\$235,012	non-res	inflation applied to benchmark costs	
61	Fiddler's Green Road	Garner Road	Carlisle Road	Not Complete	2r-4u	6.07	85	7	Widening		7			\$590,100	\$822,540	85	\$501,585	\$699,159	non-res	inflation applied to benchmark costs	
62	Glancaster Road	Butter Road	White Church Road	Not Complete	2r-4u	2.31	85	2	Widening		2			\$168,600	\$235,012	85	\$143,310	\$199,760	non-res	inflation applied to benchmark costs	
65	Upper James Street	Ardelea Avenue	Homestead Drive	Not Complete	4u-6u	4.69	85	6	Widening		5	1		\$590,100	\$822,540	85	\$501,585	\$699,159	non-res	inflation applied to benchmark costs	
66	White Church Road	Glancaster Road	Highway 6	Not Complete	2r-4u	2.31	85	1	Widening		1			\$84,300	\$117,506	85	\$71,655	\$99,880	non-res	inflation applied to benchmark costs	
<b>SMATS Projects</b>																					
70	Rymal Road	Glancaster Road	Garth Street	Not Complete	2r-5u	1.3	85	1	Widening				1	\$337,200	\$470,023	85	\$286,620	\$399,520		inflation applied to benchmark costs	
<b>SCUBE Projects</b>																					
<b>Ancaster Industrial Park and TMP Projects</b>																					
90	Trinity Road	1km S. of Wilson	Hwy 403	Not Complete	2r-4u	2.2	85	2	Widening				2	\$674,400	\$940,046	85	\$573,240	\$799,039		inflation applied to benchmark costs	
<b>RHBPS Projects</b>																					
97	Dickenson Road	w/o Nebo	w/o Glover	Not Complete	2r-2u	1.1	60	3	Widening		3			\$252,900	\$352,517	60	\$151,740	\$211,510		inflation applied to benchmark costs	
98	Nebo Road	Rymal Road	Twenty Road	Not Complete	2r-2u	1.3	85	1	Replacement		1			\$84,300	\$117,506	85	\$71,655	\$99,880	non-res	inflation applied to benchmark costs	
100	Regional Road 56	Rymal Road	ROPA 9 Boundary	Complete	2r-5u	1.2	85	3	Widening		3			\$252,900	\$352,517	85	\$214,965	\$299,640		inflation applied to benchmark costs	
102	Twenty Road extension	Glover Road	Upper Red Hill Valley Parkway	Not Complete	3u	0.6	100	2	New		2			\$168,600	\$235,012	100	\$168,600	\$235,012		inflation applied to benchmark costs	
104	Upper Red Hill Valley Parkway (previously Trinity Church Road)	Rymal Road	Dartnall Road extension (change to 20 Rd Extn)	Not Complete	5u	2.5	100	1	New		1			\$84,300	\$117,506	100	\$84,300	\$117,506	non-res	inflation applied to benchmark costs	
<b>Waterdown Projects</b>																					
110	Mountain Brow Road	Waterdown Road	New north-southlink	Not Complete	2r-4u	0.91	85	2	Widening			2		\$337,200	\$470,023	85	\$286,620	\$399,520		inflation applied to benchmark costs	
<b>Fruitland Winona Projects</b>																					
119	Highway 8 (Stoney Creek)	Fruitland Road	East City Limit	Not Complete	2r-4r_NBR	3.3	60	4	Widening		3	1		\$421,500	\$587,529	60	\$252,900	\$352,517		inflation applied to benchmark costs	
<b>Other Road Projects</b>																					
132	Jones Road	Barton Street	South Service Road	Not Complete	2r-2u	0.90	50	1	Widening		1			\$84,300	\$117,506	50	\$42,150	\$58,753	non-res	inflation applied to benchmark costs	
135	Miles Road	Rymal Road	Hydro Corridor	Not Complete	2r-3u	2.00	85	1	Widening		1			\$84,300	\$117,506	85	\$71,655	\$99,880		inflation applied to benchmark costs	
137	Fletcher Road	Binbrook Road	Golf Club Road	Complete? (check with MM)	2r-2u	4.20	60	3	Widening		3			\$252,900	\$352,517	60	\$151,740	\$211,510		inflation applied to benchmark costs	
139	Trinity Church Road	Binbrook Road	Golf Club Road	Not Complete	2r-2u	5.20	60	1	Widening			1		\$337,200	\$470,023	60	\$202,320	\$282,014		inflation applied to benchmark costs	
147	Shaver Road	Hwy 403	Wilson Road	Not Complete		1.50	100	1	Widening			1		\$168,600	\$235,012	100	\$168,600	\$235,012		inflation applied to benchmark costs	
148	Scenic Drive	Old City Limits	Lavender S Leg	Not Complete		1.40	100	1	Widening			1		\$168,600	\$235,012	100	\$168,600	\$235,012		inflation applied to benchmark costs	
<b>Grand Total</b>																					
								79			0	68	6	5	\$8,430,000	\$11,750,577		\$6,933,675	\$9,664,850		
<b>Growth %</b>																		82%	82.25%		
<b>Total Growth</b>																		\$6,933,675	\$9,664,850		

<b>Total Residential</b>	\$3,456,300	\$4,817,737	Res	\$2,697,600	\$3,760,185
<b>Total Non-Residential</b>	\$4,973,700	\$6,932,840	Non-Res	\$4,236,075	\$5,904,665

0.780487805

0.851694915



**City of Hamilton**  
**APPENDIX G.1: Summary of Stormwater Service Costs**  
**(GRIDS excluded)**

**Total Residential and Non-Residential**

<b>Category</b>	<b>Gross Estimated Cost</b>	<b>DC Eligible Growth (%)</b>	<b>DC Eligible Growth Cost</b>
A Watercourses	58,898,000	81.54	48,027,800
B Off-Site Erosion	36,516,003	52.12	19,031,997
C SWM	346,504,778	54.55	189,006,056
D Sewer Oversizing/Outlets	24,356,802	88.71	21,606,802
E Culverts/Bridges	11,750,577	82.25	9,664,850
<b>Sub-Total</b>	<b>478,026,161</b>	<b>60.11</b>	<b>287,338,431</b>
<b>15% Allowance<sup>1</sup></b>			<b>43,100,765</b>
<b>Total</b>			<b>330,439,196</b>

**Residential**

<b>Category</b>	<b>Gross Estimated Cost</b>	<b>DC Eligible Growth (%)</b>	<b>DC Eligible Growth Cost</b>
A Watercourses	27,831,000	76.27	21,227,000
B Off-Site Erosion	25,114,295	48.05	12,068,251
C SWM	195,926,769	95.99	188,066,898
D Sewer Oversizing/Outlets	22,455,523	87.75	19,705,523
E Culverts/Bridges	4,817,737	78.05	3,760,185
<b>Sub-Total</b>	<b>276,145,324</b>	<b>88.66</b>	<b>244,827,857</b>
<b>15% Allowance<sup>1</sup></b>			<b>36,724,178</b>
<b>Total</b>			<b>281,552,035</b>

**Non-Residential**

<b>Category</b>	<b>Gross Estimated Cost</b>	<b>DC Eligible Growth (%)</b>	<b>DC Eligible Growth Cost</b>
A Watercourses	31,067,000	86.27	26,800,800
B Off-Site Erosion	11,401,708	61.08	6,963,747
C SWM	150,578,009	0.62	940,084
D Sewer Oversizing/Outlets	1,901,280	100.00	1,901,280
E Culverts/Bridges	6,932,840	85.17	5,904,665
<b>Sub-Total</b>	<b>201,880,837</b>	<b>21.06</b>	<b>42,510,575</b>
<b>15% Allowance<sup>1</sup></b>			<b>6,376,586</b>
<b>Total</b>			<b>48,887,161</b>

<sup>1</sup> 15 % allowance for engineering, design, legal, and survey

**APPENDIX G-1 - GRIDS-RELATED STORMWATER MANAGEMENT (QUALITY AND OR QUANTITY) FACILITIES**

Primary Dev. Areas	SWIRF #	AEGD Stage #	Drainage Area (ha)	Volume (m3)	Estimated Footprint 4% (ha)	Land Cost 4%	Estimated Capital Cost (\$)	Estimated Cost (\$)	Growth Related %	Total Growth Associated Cost (\$)	Post Period Cost (\$)	Net Total Associated Cost 2014-2031 (\$)	Direct Developer Contribution (%)	Direct Developer Contribution (\$)	Net Total Associated Cost (\$)	Remarks	Other Changes From 2019 Study	
Expansion to Airport SPA	1	2	77	17,325	3.08	7,259,843	1,096,673	8,356,515	100	8,356,515	8,356,515	-	100	-	-	In Ancaster, south of Garner Road	land value updated, benchmark costs verified unchanged	
	2	2	33	7,425	1.32	3,111,361	470,003	3,581,364	100	3,581,364	3,581,364	-	100	-	-	In Ancaster, south of Garner Road	land value updated, benchmark costs verified unchanged	
	3	2	38.5	8,663	1.54	3,629,921	548,336	4,178,258	100	4,178,258	4,178,258	-	100	-	-	In Ancaster, south of Garner Road	land value updated, benchmark costs verified unchanged	
	4	2	88	19,800	3.52	8,296,963	1,253,340	9,550,303	100	9,550,303	9,550,303	-	100	-	-	In Ancaster, south of Garner Road	land value updated, benchmark costs verified unchanged	
	5	1	160	36,000	6.40	15,085,388	2,278,800	17,364,188	100	17,364,188	-	17,364,188	-	100	17,364,188	-	In Ancaster, south of Garner Road	land value updated, benchmark costs verified unchanged
	6	1	63	14,175	2.52	5,939,871	897,278	6,837,149	100	6,837,149	-	6,837,149	-	100	6,837,149	-	In Ancaster, south of Garner Road	land value updated, benchmark costs verified unchanged
	10	1	33	7,425	1.32	3,111,361	470,003	3,581,364	100	3,581,364	-	3,581,364	-	100	3,581,364	-	North of Airport	land value updated, benchmark costs verified unchanged
	11	1	28	6,300	1.12	2,639,943	398,790	3,038,733	100	3,038,733	-	3,038,733	-	100	3,038,733	-	North of Airport	land value updated, benchmark costs verified unchanged
	12	1	17.88	4,023	0.72	1,685,792	254,656	1,940,448	100	1,940,448	-	1,940,448	-	100	1,940,448	-	North of Airport	land value updated, benchmark costs verified unchanged
	13	1	108	24,300	4.32	10,182,637	1,538,190	11,720,827	100	11,720,827	-	11,720,827	-	100	11,720,827	-	North of Airport	land value updated, benchmark costs verified unchanged
	14	1	42.5	9,563	1.70	4,007,056	605,306	4,612,362	100	4,612,362	-	4,612,362	-	100	4,612,362	-		land value updated, benchmark costs verified unchanged
	15	1	25.5	5,738	1.02	2,404,234	363,184	2,767,417	100	2,767,417	-	2,767,417	-	100	2,767,417	-		land value updated, benchmark costs verified unchanged
	16	1	34	7,650	1.36	3,205,645	484,245	3,689,890	100	3,689,890	-	3,689,890	-	100	3,689,890	-		land value updated, benchmark costs verified unchanged
17	1	41	9,225	1.64	3,865,631	583,943	4,449,573	100	4,449,573	-	4,449,573	-	100	4,449,573	-		land value updated, benchmark costs verified unchanged	
18	1	124.88	28,098	5.00	11,774,145	1,778,603	13,552,749	100	13,552,749	-	13,552,749	-	100	13,552,749	-		land value updated, benchmark costs verified unchanged	
19	1	100	22,500	4.00	9,428,367	1,424,250	10,852,617	100	10,852,617	-	10,852,617	-	100	10,852,617	-	Involves off-site stream work	land value updated, benchmark costs verified unchanged	
20	1	230.5	51,863	9.22	21,732,387	3,282,896	25,015,283	100	25,015,283	-	25,015,283	-	100	25,015,283	-		land value updated, benchmark costs verified unchanged	
21	1	15	3,375	0.60	1,414,255	213,638	1,627,893	100	1,627,893	-	1,627,893	-	100	1,627,893	-		land value updated, benchmark costs verified unchanged	
22	1	34	7,650	1.36	3,205,645	484,245	3,689,890	100	3,689,890	-	3,689,890	-	100	3,689,890	-		land value updated, benchmark costs verified unchanged	
23	1	140.88	31,698	5.64	13,282,684	2,006,483	15,289,167	100	15,289,167	-	15,289,167	-	100	15,289,167	-		land value updated, benchmark costs verified unchanged	
24	1	50.5	11,363	2.02	4,761,326	719,246	5,480,572	100	5,480,572	-	5,480,572	-	100	5,480,572	-		land value updated, benchmark costs verified unchanged	
25	1	97	21,825	3.88	9,145,516	1,381,523	10,527,039	100	10,527,039	-	10,527,039	-	100	10,527,039	-		land value updated, benchmark costs verified unchanged	
26	2	45	10,125	1.80	4,242,765	640,913	4,883,678	100	4,883,678	-	4,883,678	-	100	-	-	Involves off-site stream work	land value updated, benchmark costs verified unchanged	
27	2	42.75	9,619	1.71	4,030,627	608,867	4,639,494	100	4,639,494	-	4,639,494	-	100	-	-	Involves off-site stream work	land value updated, benchmark costs verified unchanged	
28	2	18	4,050	0.72	1,697,106	256,365	1,953,471	100	1,953,471	-	1,953,471	-	100	-	-	Involves off-site stream work	land value updated, benchmark costs verified unchanged	
29	2	196.75	44,269	7.87	18,550,313	2,802,212	21,352,525	100	21,352,525	-	21,352,525	-	100	-	-		land value updated, benchmark costs verified unchanged	
30	2	24.75	5,569	0.99	2,333,521	352,502	2,686,023	100	2,686,023	-	2,686,023	-	100	-	-		land value updated, benchmark costs verified unchanged	
31	2	16.25	3,656	0.65	1,532,110	231,441	1,763,550	100	1,763,550	-	1,763,550	-	100	-	-		land value updated, benchmark costs verified unchanged	
32	2	15	3,375	0.60	1,414,255	213,638	1,627,893	100	1,627,893	-	1,627,893	-	100	-	-		land value updated, benchmark costs verified unchanged	
33	2	30.25	6,806	1.21	2,852,081	430,836	3,282,917	100	3,282,917	-	3,282,917	-	100	-	-		land value updated, benchmark costs verified unchanged	
34	1	24.75	5,569	0.99	2,333,521	352,502	2,686,023	100	2,686,023	-	2,686,023	-	100	2,686,023	-		land value updated, benchmark costs verified unchanged	
35	2	12.75	2,869	0.51	1,202,117	181,592	1,383,709	100	1,383,709	-	1,383,709	-	100	-	-		land value updated, benchmark costs verified unchanged	
36	2	22.5	5,063	0.90	2,121,383	320,456	2,441,839	100	2,441,839	-	2,441,839	-	100	-	-		land value updated, benchmark costs verified unchanged	
37	2	33.75	7,594	1.35	3,182,074	480,684	3,662,758	100	3,662,758	-	3,662,758	-	100	-	-	Involves off-site stream work	land value updated, benchmark costs verified unchanged	
38	2	56.25	12,656	2.25	5,303,457	801,141	6,104,597	100	6,104,597	-	6,104,597	-	100	-	-	Involves off-site stream work	land value updated, benchmark costs verified unchanged	
39	1	37.5	8,438	1.50	3,535,638	534,094	4,069,732	100	4,069,732	-	4,069,732	-	100	-	-	Involves off-site stream work	land value updated, benchmark costs verified unchanged	
7	1	20	4,500	0.80	1,885,673	284,850	2,170,523	100	2,170,523	-	2,170,523	-	100	2,170,523	-	South of Twenty Road West, north of Airport	land value updated, benchmark costs verified unchanged	
8	1	37.25	8,381	1.49	3,512,067	530,533	4,042,600	100	4,042,600	-	4,042,600	-	100	4,042,600	-	South of Twenty Road West, north of Airport	land value updated, benchmark costs verified unchanged	
9	1	58.13	13,079	2.33	5,480,710	827,917	6,308,626	100	6,308,626	-	6,308,626	-	100	6,308,626	-	South of Twenty Road West, north of Airport	land value updated, benchmark costs verified unchanged	
40	1	11.25	2,531	0.45	1,060,691	160,228	1,220,919	100	1,220,919	-	1,220,919	-	100	1,220,919	-	potential to combine with B10	land value updated, benchmark costs verified unchanged	
41	Elfrida (Res)	126	28,350	5.04	11,879,743	1,794,555	13,674,298	100	13,674,298	13,674,298	-	0	-	-	-	First Rd E and Mud	land value updated, benchmark costs verified unchanged	
42	Elfrida (Res)	21.25	4,781	0.85	2,003,528	302,653	2,306,181	100	2,306,181	-	2,306,181	-	0	-	-	Second Rd E, involves off-site stream work	land value updated, benchmark costs verified unchanged	
43	Elfrida (Res)	60	13,500	2.40	5,657,020	854,550	6,511,570	100	6,511,570	-	6,511,570	-	0	-	-	Second Rd E, involves off-site stream work	land value updated, benchmark costs verified unchanged	
44	Elfrida (Res)	71.25	16,031	2.85	6,717,712	1,014,778	7,732,490	100	7,732,490	-	7,732,490	-	0	-	-	Second Rd E, involves off-site stream work	land value updated, benchmark costs verified unchanged	
45	Elfrida (Res)	22	4,950	0.88	2,074,241	313,335	2,387,576	100	2,387,576	-	2,387,576	-	0	-	-	NW corner, Trinity Church at Hydro ROW	land value updated, benchmark costs verified unchanged	
46	Elfrida (Res)	147	33,075	5.88	13,859,700	2,093,648	15,953,348	100	15,953,348	-	15,953,348	-	0	-	-	HWY 56	land value updated, benchmark costs verified unchanged	
47	Elfrida (Res)	168.75	37,969	6.75	15,910,370	2,403,422	18,313,792	100	18,313,792	-	18,313,792	-	0	-	-	HWY 56	land value updated, benchmark costs verified unchanged	
48	Elfrida (Res)	140	31,500	5.60	13,199,714	1,993,950	15,193,664	100	15,193,664	-	15,193,664	-	0	-	-	First Rd E, involves off-site stream work	land value updated, benchmark costs verified unchanged	
49	Elfrida (Res)	66	14,850	2.64	6,222,722	940,005	7,162,727	100	7,162,727	-	7,162,727	-	0	-	-	Second Rd E, involves off-site stream work	land value updated, benchmark costs verified unchanged	
50	Elfrida (Res)	130.75	29,419	5.23	12,327,590	1,862,207	14,189,797	100	14,189,797	-	14,189,797	-	0	-	-	Second Rd E, involves off-site stream work	land value updated, benchmark costs verified unchanged	
51	Elfrida (Res)	38.5	8,663	1.54	3,629,921	548,336	4,178,258	100	4,178,258	-	4,178,258	-	0	-	-	u/s confluence u/s Fletcher	land value updated, benchmark costs verified unchanged	
52	Elfrida (Res)	102.25	23,006	4.09	9,640,506	1,456,296	11,096,801	100	11,096,801	-	11,096,801	-	0	-	-	Fletcher at Golf Club	land value updated, benchmark costs verified unchanged	
53	Elfrida (Res)	25.16	5,661	1.01	2,372,177	358,341	2,730,519	100	2,730,519	-	2,730,519	-	0	-	-	Fletcher at Golf Club, involves off-site stream work	land value updated, benchmark costs verified unchanged	
54	Elfrida (Res)	29.25	6,581	1.17	2,757,797	416,593	3,174,391	100	3,174,391	-	3,174,391	-	0	-	-	Golf Club E of 56, involves off-site stream work	land value updated, benchmark costs verified unchanged	
55	Elfrida (Res)	48.75	10,969	1.95	4,596,329	694,322	5,290,651	100	5,290,651	-	5,290,651	-	0	-	-	Golf Club btwn 56 and Hendershott	land value updated, benchmark costs verified unchanged	
56	Elfrida (Res)	29.25	6,581	1.17	2,757,797	416,593	3,174,391	100	3,174,391	-	3,174,391	-	0	-	-	Golf Club W of Hendershott, involves off-site stream work	land value updated, benchmark costs verified unchanged	
57	Elfrida (Res)	26	5,850	1.04	2,451,376	370,305	2,821,681	100	2,821,681	-	2,821,681	-	0	-	-	Gol Club at Hendershott, involves off-site stream work	land value updated, benchmark costs verified unchanged	
<b>Total</b>								<b>383,876,611</b>	<b>100</b>	<b>383,876,611</b>	<b>217,341,027</b>	<b>166,535,584</b>		<b>166,535,584</b>				
<b>Total Residential</b>								<b>135,892,134</b>	<b>100</b>	<b>135,892,134</b>	<b>135,892,134</b>	<b>-</b>		<b>-</b>				
<b>Total Non-Residential</b>								<b>247,984,477</b>	<b>100</b>	<b>247,984,477</b>	<b>81,448,893</b>	<b>166,535,584</b>		<b>166,535,584</b>				

**APPENDIX G-1 - GRIDS-RELATED OPEN WATERCOURSES: EROSION CONTROL AND CHANNEL SYSTEM IMPROVEMENTS**

Primary Dev. Areas	Location	Total Length of Downstream Watercourse to Assumed End-Point <sup>3</sup>	Fraction of Watercourse Assumed to Required Erosion Control <sup>2</sup>	Length of Erosion Control Works	Estimated Cost (\$)	Land Cost	Estimated Total Cost (\$)	Growth Related %	Net Total Associated Cost (\$)	Remarks	Other Changes From 2019 Study
Expansion to Airport SPA	Ancaster	1,303	0.2	260.6	544,654	345,883	890,537	100	890,537		land values updated, unit costs for watershed idea indexed to inflation
	North of Airport	-	0.2	-	-	-	-	100	-		land values updated, unit costs for watershed idea indexed to inflation
Potential New Business Park (In Existing Airport Spa)	West of Airport	24,231	0.2	4,846.2	10,128,558	6,432,152	16,560,710	100	16,560,710		land values updated, unit costs for watershed idea indexed to inflation
Potential Urban Boundary Expansion Area	South of Twenty Road West, north of Airport	-	0.2	-	-	-	-	100	-		land values updated, unit costs for watershed idea indexed to inflation
	Northwest of Golf Club Road and Second Road East	15,337	0.2	3,067.4	6,410,866	3,615,072	10,025,938	100	10,025,938	Residential	land values updated, unit costs for watershed idea indexed to inflation
<b>Grand Total</b>							<b>27,477,185</b>	<b>100</b>	<b>27,477,185</b>		
<b>Total Residential</b>							<b>10,025,938</b>	<b>100</b>	<b>10,025,938</b>		
<b>Total Non-Residential</b>							<b>17,451,247</b>	<b>100</b>	<b>17,451,247</b>		

<sup>2</sup>-0.05 - Where Development Fraction is 0 - 25%  
 0.10 - Where Development Fraction is 26 - 49%  
 0.15 - Where Development Fraction is 50 - 74%  
 0.20 - Where Development Fraction is 75 - 100%

<sup>3</sup>Location where d/s of this point no erosion is deemed to occur from subject development; total drainage area to this point estimated as a maximum of 2X the study watershed area.

<sup>4</sup>\$3485/m for Watershed Area > 500 ha (Was in 2019: \$2500/m for Watershed Area > 500 ha)  
 \$2090/m for Watershed Area < 500 ha (Was in 2019: \$1500/m for Watershed Area < 500 ha)

**City of Hamilton**  
**APPENDIX G.1: Summary of Stormwater Service Costs**  
**(GRIDS included)**

**Total Residential and Non-Residential**

<b>Category</b>	<b>Gross Estimated Cost</b>	<b>DC Eligible Growth (%)</b>	<b>DC Eligible Growth Cost</b>
A Watercourses	58,898,000	81.54	48,027,800
B Off-Site Erosion	36,516,003	52.12	19,031,997
C SWM	346,504,778	54.55	189,006,982
D Sewer Oversizing/Outlets	24,356,802	88.71	21,606,802
E Culverts/Bridges	11,750,577	82.25	9,664,850
GRIDS SWM	383,876,611	-	-
GRIDS Watercourses	27,477,185	100.00	27,477,185
<b>Sub-Total</b>	<b>889,379,957</b>	<b>35.40</b>	<b>314,815,616</b>
<b>15% Allowance<sup>1</sup></b>			<b>47,222,342</b>
<b>Total</b>			<b>362,037,959</b>

**Residential**

<b>Category</b>	<b>Gross Estimated Cost</b>	<b>DC Eligible Growth (%)</b>	<b>DC Eligible Growth Cost</b>
A Watercourses	27,831,000	76.27	21,227,000
B Off-Site Erosion	25,114,295	48.05	12,068,251
C SWM	195,926,769	95.99	188,066,898
D Sewer Oversizing/Outlets	22,455,523	87.75	19,705,523
E Culverts/Bridges	4,817,737	78.05	3,760,185
GRIDS SWM	135,892,134	-	-
GRIDS Watercourses	10,025,938	100.00	10,025,938
<b>Sub-Total</b>	<b>422,063,395</b>	<b>60.38</b>	<b>254,853,794</b>
<b>15% Allowance<sup>1</sup></b>			<b>38,228,069</b>
<b>Total</b>			<b>293,081,863</b>

**Non-Residential**

<b>Category</b>	<b>Gross Estimated Cost</b>	<b>DC Eligible Growth (%)</b>	<b>DC Eligible Growth Cost</b>
A Watercourses	31,067,000	86.27	26,800,800
B Off-Site Erosion	11,401,708	61.08	6,963,747
C SWM	150,578,009	0.62	940,084
D Sewer Oversizing/Outlets	1,901,280	100.00	1,901,280
E Culverts/Bridges	6,932,840	85.17	5,904,665
GRIDS SWM	247,984,477	-	-
GRIDS Watercourses	17,451,247	100.00	17,451,247
<b>Sub-Total</b>	<b>467,316,562</b>	<b>12.83</b>	<b>59,961,822</b>
<b>15% Allowance<sup>1</sup></b>			<b>8,994,273</b>
<b>Total</b>			<b>68,956,095</b>

<sup>1</sup> 15 % allowance for engineering, design, legal, and survey



City of Hamilton

# Strategic Transportation Network Review

May 29, 2024

# Strategic Transportation Network Review

May 29, 2024

**Prepared By:**

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## Acronyms and Abbreviations

<b>2019 DC Study</b>	2019 Development Charges Background Study
<b>2024 DC Study</b>	2024 Development Charges Background Study
<b>AEGD</b>	Airport Employment Growth District
<b>AT</b>	Active Transportation
<b>BTE</b>	Benefit to Existing
<b>DCs</b>	Development Charges
<b>DCA</b>	Development Charges Act
<b>EA</b>	Municipal Class Environmental Assessment
<b>GRIDS 2</b>	City of Hamilton Growth Related Development Strategy
<b>HSR</b>	Hamilton Street Railway
<b>LRT</b>	Light Rail Transit
<b>LSP</b>	Local Service Policy
<b>MSF</b>	Transit Maintenance and Storage Facility
<b>MTO</b>	Ontario Ministry of Transportation
<b>PIC</b>	Public Information Centre
<b>PPB</b>	Post-Period Benefit
<b>ROW</b>	Right of Way
<b>STNR</b>	Strategic Transportation Network Review
<b>TMP</b>	City of Hamilton 2018 Transportation Master Plan

# 1 Introduction

## 1.1 Study Purpose

This report provides an update to the City of Hamilton's (the City's) planned future multi-modal transportation network to account for new information and needs identified by the City since the completion of the *Transportation Master Plan (TMP)* in 2018. It also provides input to the City's 2024 Development Charges By-Law. This study has been titled as the Strategic Transportation Network Review (STNR). The STNR:

- Draws on the 2018 TMP, other municipal transportation plans and transportation needs identified by the City of Hamilton to review and update the timing of short, medium and long-term planned transportation projects (to 2041 with consideration to 2051) in the context of forecasted population and employment growth;
- Considers the timing of other supporting transportation assets and infrastructure such as buses, transit maintenance facilities and transportation related programs needed to support growth as identified by the City of Hamilton;
- Updates the costs of projects and programs; and
- Identifies transportation projects to include in the 2024 Development Charges Background Study (2024 DC Study), and the proportion of their costs to be funded through the 2024 Development Charges By-Law. While the STNR has a 2041 horizon (with consideration to 2051), the 2024 DC Study uses a service target (2032 for transit, 2031 for all other transportation projects including roads and active transportation). This is further discussed in Appendix D.

Projects identified in this STNR report are intended to meet phases 1 and 2 of the Municipal Class Environmental Assessment (MCEA) process. Phases 1 and 2 develop a recommended alternative solution. Alternative designs would be developed in future class EAs, meeting phases 3 and 4 requirements.

The report is structured as follows:

- **Chapter 2** summarizes the timing of future transportation projects, including roads, transit, active transportation (AT), structures, and programs;
- **Chapter 3** presents the approach to costing future transportation projects;
- **Appendix A** lists the timing evaluation results for future road projects;
- **Appendix B** lists the future AT projects;
- **Appendix C** lists the unit cost values that were used to cost road and AT projects;

- **Appendix D** is a report that outlines the transportation inputs to the 2024 DC Study, including apportioning benefit. It is noted that the City of Hamilton *Local Service Policy* and *Financial Policies* are outside of the scope of the transportation inputs;
- **Appendix E** outlines all the transportation capital projects for inclusion in the 2024 DC Study; and,
- **Appendix F** identifies updates made to the STNR report since the draft was published in December 2023.

## 1.2 Study Context

The City of Hamilton's 2018 *Transportation Master Plan* (TMP) provides a foundation for short and long-term transportation planning in the city. While the vision and goals of the 2018 TMP remain in effect, the City's planning context, growth projections and growth allocations have been updated since 2018 and a review of the planned future transportation network was warranted to account for these changes. New plans are in progress (such as the City's *Growth Related Integrated Development Strategy* (GRIDS 2)), the City has established a new 2041 planning horizon with consideration to 2051, and the City has conducted a needs assessment to determine required future transportation projects within this new planning horizon. The STNR draws on these sources and builds on this work to date to reconfirm road project timing, provide updated cost estimates, and provide inputs to the 2024 DC Study.

## 1.3 Study Process

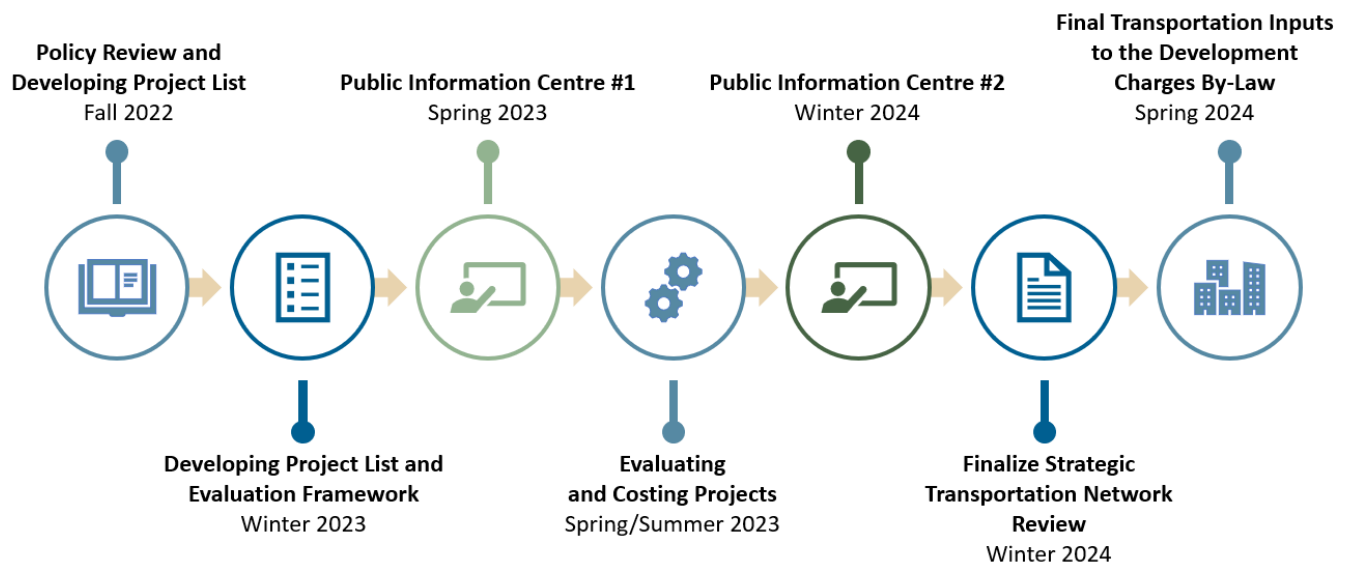
The STNR follows phases 1 and 2 of the Municipal Class Environmental Assessment (EA) process for Master Plans, which develop and recommend alternative solutions. This study included five main steps:

- **Policy Review:** The *2019 Development Charges Background Study* (2019 DC Study) and other applicable City of Hamilton plans and strategies were reviewed to understand existing City policies as well as existing and planned transportation projects. This step also considered broader legislative changes to development charges in Ontario (i.e. Bill 23).
- **Develop Project List and Evaluation Framework:** A long list of potential future transportation projects was consolidated from existing City of Hamilton plans, strategies and needs assessments. An evaluation framework was developed, grounded in the 2018 TMP that is still in effect.
- **Evaluate and Cost Projects:** The long list of projects was evaluated. Updated cost estimates were developed for projects, and the project costs were apportioned based on the project's benefit to different groups (discussed further in Appendix D).

- **Public and Stakeholder Consultation:** Public and stakeholder consultation meetings were conducted to obtain feedback on the evaluation framework and capital list of transportation projects.
- **Final Transportation Inputs to the Development Charges Background Study:** Feedback gained from public and stakeholder consultation efforts were used to confirm the future transportation projects. These future transportation projects will serve as inputs to the 2024 DC Study.

These steps are summarized below in Exhibit 1.1.

*Exhibit 1.1: Strategic Transportation Network Review Timeline*



## 2 Future Transportation Projects

Future transportation projects in the City of Hamilton fall within one of five main categories:

- Road projects,
- Transit projects,
- Active transportation projects,
- Structures, and
- Programs.

This chapter describes the approach to confirm future needs, including the process for evaluating and phasing projects in line with the 2018 TMP vision and desired outcomes.<sup>1</sup>

### 2.1 Developing the Long List of Future Transportation Projects

The first step in determining future transportation projects for all categories was to develop a “long list” of potential projects. The long list was developed by the City of Hamilton based on the following source documents:

- ***Growth Related Integrated Development Strategy (GRIDS 2) (ongoing)*** – Reviews existing conditions in Hamilton and evaluates implications of anticipated growth to 2051 on land use, infrastructure, and other dimensions to identified needed transportation network improvements.
- ***Transportation Master Plan (2018)*** – Builds on the existing transportation conditions in Hamilton to provide an overall vision for the transportation system, alongside policies, actions, and planned cycling, transit, and road networks. The vision of the plan is “To provide a comprehensive and attainable transportation blueprint for Hamilton as a whole that balances all modes of transportation to become a healthier city. The success of the plan will be based on specific, measurable, achievable, relevant and programmed results.”. The desired outcomes of the plan include a sustainable and balanced transportation system, healthy and safe communities and economic prosperity and growth.
- ***Development Charges Background Study (2019)*** – Provides transportation projects that were previously funded through municipal development charges.

---

<sup>1</sup> Before a project is implemented, further study is required as part of the Environmental Assessment process. This includes determining specific alignments, review of property impacts, consideration for archaeology and cultural heritage, coordination with utilities, and consultation.

- **Cycling Master Plan Update (2018)** – Focuses on development and operation of Hamilton’s cycling infrastructure, including a proposed network, classification of cycling facility types, maintenance, supporting programs, implementation, and assessment/monitoring components.
- **Airport Employment Growth District (AEGD) Secondary Plan (2022)** – Sets specific requirements for transportation system design in 1,204 hectares surrounding the John C. Munro Hamilton International Airport.
- **Rapid Ready (2013)** – Sets requirements to prepare for rapid transit, including funding needs and proposed implementation timelines for improvements to the rapid transit network.
- **Ten Year Local Transit Strategy (2015)** – Builds on *Rapid Ready* by identifying transit actions and projects to accommodate growth over a ten-year horizon.
- **(Re)envision HSR (ongoing since 2019)** – Proposes updates to the Hamilton Street Railway (HSR) network to improve transit service and provide better connections to light rail transit (LRT).
- **City of Hamilton STNR Infrastructure Needs Assessment** – The City of Hamilton has identified several projects for inclusion in the STNR that are not included in the documents noted above based on various City processes and studies, including development applications and traffic studies.

The following subsections describe the evaluation process and results for each of the five infrastructure project categories.

## 2.2 Road Projects

This section describes the evaluation of road projects, including new roads, road widenings, and road reconstructions and urbanizations. Road projects can also include highway projects where the costs of such projects are shared between the Ontario Ministry of Transportation (MTO) and the City of Hamilton.

### 2.2.1 Road Project Evaluation Framework

The evaluation process for road projects includes three steps:

1. **Consolidate the long list of projects** developed by the City of Hamilton as described in Section 2.1;
2. **Evaluate projects** based on a set of evaluation criteria that are consistent with the 2018 TMP’s evaluation criteria; and
3. **Phase projects** based on their scores from step 2 and additional considerations where applicable.

These three steps are described in further detail below.

### 2.2.1.1 Long List

The long list of road projects was drawn from the sources described in Section 2.1. In total, 152 road projects were identified. Twenty road projects were screened out based on input from the City of Hamilton (i.e. projects already constructed) and 132 projects were carried forward in the SNTR.

### 2.2.1.2 Project Evaluation

The road project evaluation framework was developed to align with the evaluation categories from the 2018 TMP, which are:

- **Transportation (Sustainable & Balanced)** – Supports a range of mobility options for all, especially marginalized communities.
- **Environment (Sustainable & Balanced)** – Limits impacts on natural areas.
- **Social (Healthy & Safe Communities)** – Emphasizes active lifestyles, safe movements of people and reduced dependence on single-occupancy vehicles.
- **Economic (Economic Prosperity & Growth)** – Supports local industries and businesses and access to employment centers.
- **Implementation (Sustainable & Balanced)** – Considers priorities, implementation strategies and performance measurement.

Based on the TMP, one to three indicators were developed per evaluation category. These categories and criteria were developed by Arcadis with input from City staff and presented to the public for input. Though some categories have different numbers of indicators, each category was weighted equally, with six potential points each. Across all five categories, the maximum potential score for a project was 30 points.

### 2.2.1.3 Project Phasing

Road projects were phased based on the evaluation scores, with higher scoring projects recommended for earlier implementation. The phases and associated score thresholds are:

- **Short-term** to 2031, for projects scoring 15 or more;
- **Medium-term**, 2031 to 2041, for projects scoring less than 15 and above 10; and,
- **Long-term**, defer beyond 2041, for projects scoring 10 or less.

In addition to the project score, some project timing recommendations were refined based on project-specific conditions as advised by City of Hamilton staff. Examples included the timing of adjacent developments, relationships to other transportation projects, road condition and



other policy considerations. Timing should be reviewed annually to determine if associated development timing has changed.

## 2.2.2 Long List of Road Projects and Evaluation

A total of ten metrics across the five evaluation categories were identified to assess the 132 road projects to determine alignment with the TMP vision and desired outcomes. Individual metrics were scored from 0 to 2 (not all metrics used the full range of scores), with more positive impacts scoring higher. While the City of Hamilton transportation model results were used in the evaluation framework, the model itself was updated by another party as part of a separate study and was not part of the STNR scope. These are presented below in Exhibit 2.1.

*Exhibit 2.1: Road Project Evaluation Framework*

Category	Metrics	Data Source	Scoring	Decision Guidelines
Transportation (sustainable and balanced)	2041 Volume/Capacity (VC) Ratio <sup>2</sup>	City of Hamilton Model	2 – 2041 V/C ratio 0.7 or higher. 1 – 2041 V/C ratio between 0.7-0.5. 0 – 2041 V/C ratio less than 0.5.	
	Community Benefit	Public Health Ontario's Marginalization Index <sup>3</sup> by census dissemination area	2 – Serves census dissemination areas with an average marginalization index score of greater than three. 1 – Serves dissemination areas with an average marginalization index score of three or less.	Any projects along or adjacent to areas that score greater than 3 on an average of the marginalization index's four dimensions.

<sup>2</sup> V/C ratios were based on a modelling scenario that included the urban boundary expansion areas. This was the applicable land use scenario used by the City of Hamilton at the time of the road project evaluation.

<sup>3</sup> Public Health Ontario (2016). Retrieved from <https://www.publichealthontario.ca/en/Data-and-Analysis/Health-Equity/Ontario-Marginalization-Index>

Category	Metrics	Data Source	Scoring	Decision Guidelines
	Indigenous Population	Indigenous population by ward from Hamilton Open Data	2 – Serves wards with above-median proportions of Indigenous peoples. 1 – Serves communities with median or less proportions of Indigenous Peoples.	Any projects along or adjacent to areas with greater than 1.8% Indigenous population (median).
Environment (sustainable and balanced)	Proximity to natural heritage areas	Natural heritage features designated in the City of Hamilton Urban and Rural Official Plans	2 – Neither in nor directly adjacent to a natural heritage feature. 1 – Directly adjacent to a natural heritage feature. 0 – In a natural heritage feature.	
Social (healthy and safe communities)	Promotes transit	Map of rapid transit network based on the ongoing (Re)envision the HSR study.	2 – Along rapid transit network. 1 – Not along rapid transit network.	Any road project on which the rapid transit network operates.
	Promotes active transportation	Map of future AT network provided by the City of Hamilton.	2 – Along existing or future AT network. 1 – Not along existing or future AT network.	Any road project on which the existing or future AT network operates, excluding paved shoulders and standard sidewalks.
Economic (economic prosperity and growth)	Proximity to commercial/mixed-use/employment designations	<i>Urban Hamilton Official Plan</i> Schedule E-1, <i>Rural Hamilton Official Plan</i> Schedule D.	2 – Adjacent to or in a commercial, mixed use, and/or employment area. 1 – Not adjacent to nor within a commercial, mixed use, and/or employment area.	Any project that is along the edge or within a designated area.

Category	Metrics	Data Source	Scoring	Decision Guidelines
	Increase in Truck Volumes	City of Hamilton Model	2 – 2019-2041 change in A.M. peak hour truck volumes is 20 or more. 1 – 2019-2041 change in A.M. peak hour truck volumes greater than zero and less than 20. 0 – 2019-2041 change in A.M. peak hour truck volumes zero or less.	
Implementation (sustainable and balanced)	EA status	City of Hamilton	2 – No EA needed or complete EA. 1 – EA in progress. 0 – Requires an EA but EA not in progress.	
	Cost effectiveness	Technical points (weighted average) for other metrics and preliminary project cost estimates.	2 – Cost per technical point in the lowest third of projects. 1 – Cost per technical point in middle third of projects. 0 – Cost per technical point in upper third of projects.	Minimal cost for most technical points is preferred.

### 2.2.3 Road Project Evaluation Results

The road projects were grouped into one of three phases based on the evaluation results:

- Short-term to 2031:** These projects received the highest scores in the evaluation (at least 15 points out of 30). These projects generally had in progress or approved EAs, were supportive of rapid transit and/or AT routes and were typically not in areas with natural heritage features.

- **Medium-term, 2031 to 2041:** These projects scored less than 15 but more than 10 technical points (out of 30). These projects generally scored high in some metrics and low in others.
- **Long-term, Post-2041:** These projects received the lowest scores in the evaluation (10 or fewer technical points out of 30). These projects generally were located in areas with natural heritage features, lacked an EA, did not serve commercial, mixed-use, or employment areas, or did not experience high goods movement volumes.

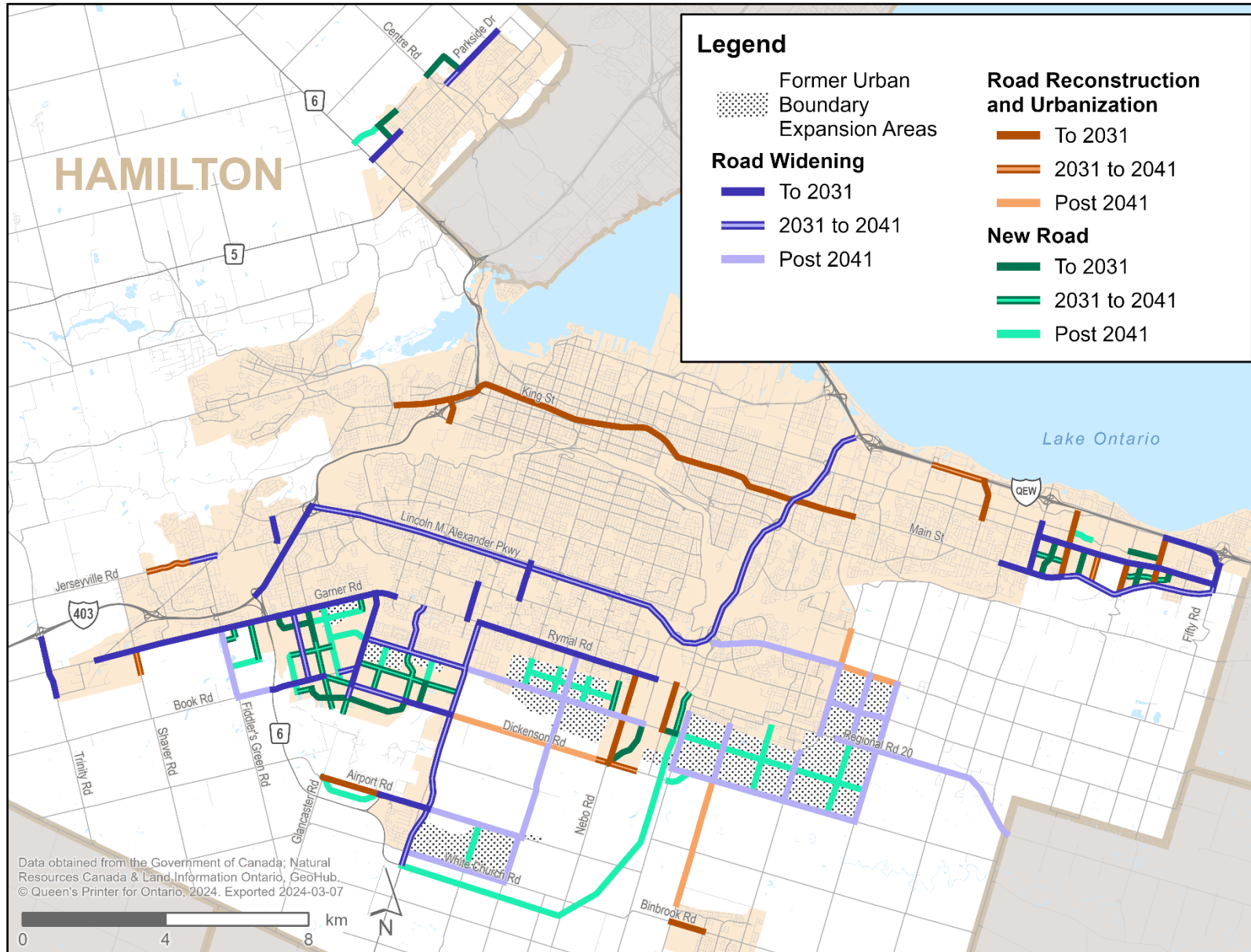
The long-term (Post-2041) group includes road projects located in the former urban boundary expansion areas. At the time of the road project evaluation, the City of Hamilton Official Plans and land use planning scenarios included urban boundary expansion areas as directed by the Province of Ontario. In Fall 2023, after the completion of the project evaluation process, the Province of Ontario reversed its previous decision, and the City of Hamilton determined that the expansion areas should not be included in the city's urban boundary. City of Hamilton staff are currently undertaking analysis to determine the implications of this urban boundary change. The road projects within these former urban boundary expansion areas that have been impacted by the change have been grouped separately in Appendix E. The potential need for these projects, like all projects in the medium and long-term time horizons, will be reviewed during subsequent transportation network reviews.

Of the 132 road projects evaluated, 89 road projects are recommended for implementation by 2041. The remaining projects are recommended for implementation after 2041. Projects recommended for implementation by 2041 include:

- 36 new roads;
- 36 road widenings; and,
- 17 road reconstructions and urbanizations.

These 132 road projects were carried forward in the STNR. Exhibit 2.2 below shows the locations and recommended timing for each of the 132 road projects.

Exhibit 2.2: 2024 DC Study Road Project Evaluation Results



## 2.3 Transit Projects

The existing five rapid transit network routes (historically referred to as the “BLAST”) and the additional sixth E-line rapid transit route form the main corridor-level transit projects in Hamilton. These routes are part of a transit network designed to increase the attractiveness of transit, manage auto congestion and emissions, and connect Hamiltonians to employment and other important destinations. The City of Hamilton developed preferred routes for these rapid transit lines as part of other transit studies, including *Rapid Ready (2013)*, *Transportation Master Plan (2018)*, *Ten Year Local Transit Strategy*, and ongoing *(Re)envision HSR*.<sup>4</sup> These rapid transit projects have been carried forward for inclusion in the STNR and are shown below in Exhibit 2.3.

*Exhibit 2.3: Rapid Transit Projects*



<sup>4</sup> The six rapid transit routes and the (Re)envision the HSR (re)Designed HSR Network report were presented to City of Hamilton Public Works Committee on April 3, 2023.

The six rapid transit routes are not being funded through development charges and will therefore not be included in the 2024 DC Study. However, additional supporting transit infrastructure to support the six rapid transit routes and overall transit network will be included in the 2024 DC Study. These were identified by the City of Hamilton and include new vehicles, spanning conventional and specialized services, as well as transit operations and facilities. These are further described in Section 3.2 and Appendix D.

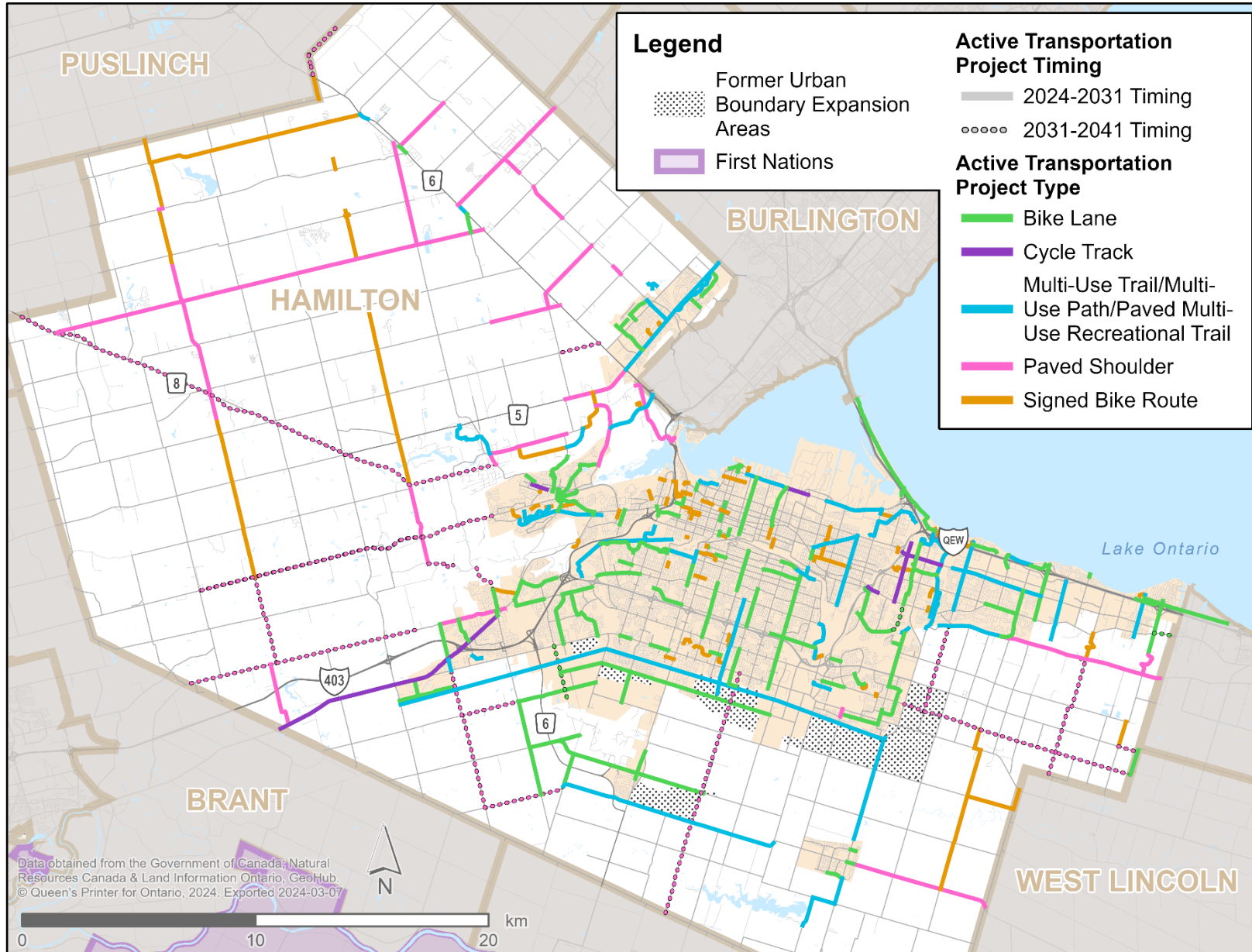
## **2.4 Active Transportation Projects**

The active transportation (AT) projects included in the STNR, listed in Appendix B, were identified by the City of Hamilton in the sources outlined in Section 2.1 including the 2018 TMP and GRIDS 2.

Beyond projects identified in Hamilton's planning documents, additional AT infrastructure will be included in individual road projects in all time horizons based on the City's *Engineering Standard Drawings Update* (in progress) and the *Complete Streets Design Guidelines*. These AT facilities are included in the evaluation and costing of individual road projects. In cases where there is geographic overlap between an individual AT project and a road project that includes AT facilities, the costs of the AT project is reduced based on the length of the overlap. This ensures that costs for AT facilities are not being double counted.

Expanding the viability of AT as a mobility option in Hamilton is an essential component of the 2018 TMP vision and desired outcomes. Identified future AT projects are necessary to fill existing AT gaps and support future growth. Accordingly, all AT projects listed in Appendix B are carried forward as part of the STNR process. Most AT projects are recommended for implementation by the 2018 TMP's horizon year of 2031. Select AT projects, that were identified by the City of Hamilton, are recommended for implementation from 2031-2041 to align with related road resurfacing projects. In total, there are 308 AT projects which are outlined below in Exhibit 2.4.

Exhibit 2.4: STNR Active Transportation Projects





## 2.5 Structures

The STNR included three types of structures identified by the City of Hamilton as part of the long list of future transportation projects:

- **Active Transportation Bridges** that connect existing AT facilities over physical barriers such as roads, rail tracks and water bodies. This includes the following bridges: Strathcona, Limeridge Mall, Henderson Lift, Hamilton Centre, Margaret St. Park, Sealey Park, Red Hill, and Dundas.
- **Interchange Improvements** including new interchanges, interchange reconfigurations, signalization, and ramp improvements to accommodate increased travel demand. These include the Highway 5/6 interchange, Mohawk Road – Highway 403 interchange ramp, Centennial Parkway at Queen Elizabeth Way (QEW) interchange improvements, and QEW off-ramps at Fifty Road.
- **Grade Separation** to improve traffic flow and safety at intersections between roads and rail tracks by providing physical separation. This includes grade separation at Fifty Road.

These projects are necessary to support the overall road, transit and AT networks. Many of these projects were identified in the 2019 DC Study and other City of Hamilton plans (such as the *Recreational Trails Master Plan (2016)* and the *Cycling Master Plan (2018)*). Accordingly, these structures are carried forward as part of the STNR process. Structures are recommended for implementation in both the short-term (To 2031) and medium-term (2031 to 2041) based on the timelines identified in the 2019 DC Study and other studies as well as input from the City of Hamilton.

## 2.6 Programs

The City of Hamilton's mobility system includes city-wide programs designed to support the individual road, AT and transit projects described above. These supporting programs were identified by the City of Hamilton, aligned with the vision and desired outcomes of the 2018 TMP, and were carried forward as part of the STNR. These programs are described below:

- **Intersection improvements**, including new traffic signals, and traffic signal upgrades and traffic controller cabinet replacements;
- **Pedestrian experience**, including crossovers, pedestrian signals, new sidewalks, pavement improvements and street lighting enhancements;
- **Bicycle parking** at rapid transit stops, conventional route bus stops, and elsewhere;
- **Transit stop improvements** such as bus stop shelter rehabilitation and transit shelter expansion; and,

- **Network management**, including road urbanization and Advanced Traffic Management Systems.

### 3 Project Costing

Project costing updates were undertaken for the recommended projects in the STNR (Section 2). This includes the following:

- 132 road projects;
- Transit-supportive infrastructure such as buses and operations vehicles (the rapid transit routes are not funded through DCs and are not included in project costing);
- 308 AT projects;
- 13 structures; and,
- 26 programs.

Updated costs estimates were developed by Arcadis for road and active transportation projects whereas costs for transit related infrastructure, programs, and structures were provided by the City of Hamilton. Costs provide order of magnitude estimates for planning purposes and do not reflect detailed design considerations unless otherwise noted. All costs are presented as 2023 dollars.

#### 3.1 Road Projects

This section describes the costing approach and unit rates used for road projects. Broadly, the costing approach follows seven main steps:

- Consulting **recent tender documents** to develop an understanding of current construction costs;
- Developing **unit rates** for individual components of road projects;
- Aggregating component unit rates to develop **per-kilometre unit costs** for various road project types;
- Multiplying per kilometre unit costs by the **lengths** of individual projects;
- Adding additional costs for projects that include **bridges and/or culverts**;
- Adding additional costs for **property acquisition** requirements; and,
- Considering **Provincial funding** if applicable.

Each step is described below in greater detail.

### 3.1.1 Recent Tender Documents

The City of Hamilton provided the cost details for construction projects completed between 2016-2021 from the City's State of Good Repair Program and Growth Program. These included tender bids for specific projects as well as average construction costs for roadworks. Both types of documents contained itemized costs for various components of roadwork projects. These were used as the foundation for developing cost estimates that reflect current construction costs.

### 3.1.2 Component Unit Rates and Inflation

The City of Hamilton provided unit rates (2022) for various components of road projects. The recent tender documents described above were used to reconcile and update these component unit rates to reflect current construction costs.

In some cases, it was determined that the component unit rates did not reasonably reflect the cost of construction. A construction inflation factor (39.39% from 2019 to 2023<sup>5</sup>) was applied where necessary.

The tender documents and historic unit costs contained a wide variety of roadwork components. There was a lack of historical data for some roadwork components. To cost these components in 2023 dollars, a combination of the last known cost of the component and the average increase of all component rates was applied.

The full list of component unit rates derived for use in capital project estimates is in Appendix C.

### 3.1.3 Road Per Kilometer Costs

Road projects were categorized into various improvement types based on the proposed changes to the road. These improvement types fall under two categories:

- **New Construction**, including new industrial, rural and urban roads; and,
- **Reconstruction and Urbanization**, including road improvements, rural to urban upgrades and road widenings.

For each improvement type, the *Hamilton Engineering Guidelines (update ongoing)* were used to identify the typical cross-section based on the road type. This document draws on the *Complete Streets Design Manual (2022)* to outline the components and design requirements for all road types in the City of Hamilton. The typical cross-sections were used to determine the

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<sup>5</sup> Provided by Watson & Associates Economists based on Statistics Canada non-residential building construction price indexes.

required construction components for each road improvement type, such as concrete, excavation, catch basins, active transportation facilities and topsoil among others. The costs for each of the required components (Section 3.1.2) were combined to form a per kilometer cost for each road improvement type.

The full list of road per kilometer costs by improvement type is in Appendix C.

### **3.1.4 Bridges and Culverts**

To increase the accuracy of cost estimates, additional cost resolution was added to individual projects that included bridges and/or culverts.<sup>6</sup> The City of Hamilton's asset database and satellite imagery were used to determine the number of bridges and/or culverts, and their approximate size, for applicable projects. Unit costs for the bridges (\$/m<sup>2</sup>) and culverts (\$/ln.m) were then developed based on the size and perceived project complexity.

### **3.1.5 Property Acquisition Cost**

Determining property acquisition requirements for road projects is a highly complex exercise that is generally undertaken at the environmental assessment and detailed design level. Property acquisition requirements, and associated costs, can vary significantly depending on a wide range of factors, including design, location, land use, developer dedication and cultural heritage among others. For the purposes of this study, high-level property acquisition cost estimates were developed – detailed property acquisition requirements are more appropriately determined at later stages of individual project design.

The formula to calculate property acquisition costs considered the right-of-way (ROW) width required (based on the City of Hamilton Official Plans, City of Hamilton *Road Classification and Right-of-Way Width Review* and City of Hamilton *Complete Streets Design Guidelines*), length of the project, developer dedication of land, and land cost per area.

Each variable is described in detail below.

#### **3.1.5.1 Right-of-Way (ROW) Width Required**

The ROW width required can vary significantly between projects and even within a single project. Roadway design can be influenced by a desire to minimize property acquisition, particularly when considering cultural heritage impacts. Exact ROW widths for individual projects are generally determined at the environmental assessment and/or detailed design project stage.

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<sup>6</sup> This does not include bridges and/or culverts that are included in other ongoing Master Plan studies.

For the purposes of this study, a high-level approach has been taken to estimate the required ROW width for the various road projects. First, the existing ROW width for each project was determined using City of Hamilton spatial data and standard right-of-way width guidelines. For new roads, it was assumed that the City does not currently own any of required ROW. For road widening and reconstruction/urbanization projects, the existing ROW width was assessed based on the road classification and nature of the existing road (i.e. number of lanes, rural versus urban).

Future ROW width requirements were derived from multiple sources including:

- The *Urban Hamilton Official Plan (2013)* and *Rural Hamilton Official Plan (2012)* identify future ROW dedications in schedules C-2 and C-1, respectively;
- Additional ROW widths required for projects in the airport employment growth district (AEGD), provided by the City of Hamilton;
- The *Road Classification and Right-of-Way Width Review (2023)* draws on the official plans and *Hamilton Complete Streets Design Guidelines (2022)* to identify typical ROW widths for various road classes; and,
- Consideration for the nature of the road project improvement (i.e. number of lanes, urban versus rural).

The additional ROW width required is calculated as the future ROW width required minus the existing ROW width.

### **3.1.5.2 Length of Road**

The length of each road project was determined during the development of the long list of road projects (Section 2.2). These lengths have been carried forward for property acquisition costing.

### **3.1.5.3 Developer Dedication Percentage**

Developers often dedicate land as part of a development application. This land is used to accommodate municipal infrastructure, including road projects. The percentage of land that developers will dedicate often varies on a project-by-project basis.

For the purposes of calculating high-level property acquisition requirements, the following dedication assumptions, based on professional judgement and input from City of Hamilton staff, were used:

- New Road Construction: 90% of the ROW is dedicated directly by developers.
- Road Widening/Reconstruction/Urbanization: 60% of the ROW is dedicated directly by developers.

#### 3.1.5.4 Land Cost

The unit cost for land was estimated at \$250/m<sup>2</sup> based on information provided by the City of Hamilton and available environmental assessments to reflect the variety of road contexts in the city (including urban, rural, residential, and non-residential).

#### 3.1.6 Road Project Capital Costs

The capital cost for road projects was calculated using the following formula:

***Road Project Capital Cost = (Road Length x Improvement Type Per Kilometer Cost) + (Area of All Bridges x Bridge Unit Cost) + (Area of All Culverts x Culvert Unit Cost) + Property Acquisition Cost***

The total capital cost of all road projects is approximately **\$2,165,000,000** based on the following timing:

- **To 2031:** approximately **\$655,000,000**
- **2031 to 2041:** approximately **\$590,000,000**
- **Post-2041:** approximately **\$920,000,000**

The full list of all road projects and their capital costs can be found in Appendix E, and a discussion of which costs are eligible for development charges can be found in Appendix D.

#### 3.1.7 Provincial Highway Projects

There are multiple provincial highways that are within the City of Hamilton's boundary. While these highways are within the jurisdiction of the Ontario Ministry of Transportation (MTO), the costs of highway improvements can be shared between the MTO and the City of Hamilton. The project listed below is an MTO highway project that is partially funded by the City. The cost for this project was provided by the MTO and the City of Hamilton.

- Highway 403 Truck Climbing Lane (Mohawk/Lincoln M. Alexander Parkway to Highway 6 South Interchange).

### 3.2 Transit Projects, Transit Fleet, and Transit Supportive Infrastructure

Section 2.3 outlines the six transit projects that form Hamilton's rapid transit network. These rapid transit projects are not funded through municipal development charges and were not costed as a part of this study. However, the rapid transit network cannot operate alone and needs to be supported conventional and specialized transit networks. Components of the

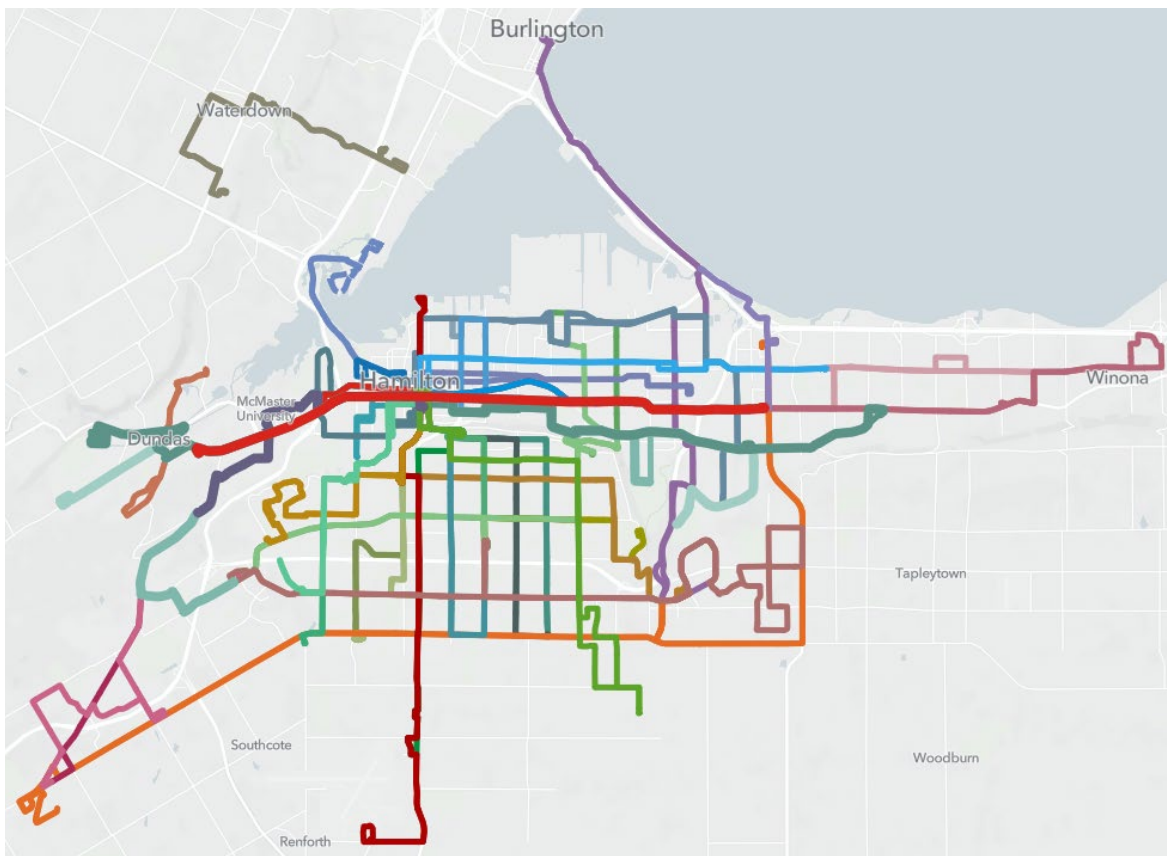
City’s transit network including the transit fleet and any required maintenance and storage facilities.

This section describes the future transit vehicle requirements and vehicle costs for both conventional and specialized service over the ten-year transit horizon (2023-2032) and the transit post-period (2033-2035), as identified by the City of Hamilton.

### 3.2.1 Existing HSR Transit Network (2023)

HSR currently operates 32 regular and three seasonal bus routes throughout the City of Hamilton. Exhibit 3.1 below shows the Fall 2023 HSR network based on the HSR *Ten Year (2015-2024) Local Transit Strategy*. HSR also operates additional services including school extras (unscheduled buses to accommodate school-related demand), on demand (TransCab shared taxi and myRide) and specialized transit service for persons with disabilities that are unable to access conventional transit services.

*Exhibit 3.1: HSR Fall 2023 Bus Network*



Source: HSR Fall 2023 Network Map (Remix)

Hamilton is also connected to the Greater Toronto Area through inter-municipal routes from Burlington Transit and Metrolinx (GO Bus and GO Rail).

### 3.2.2 Future HSR Transit Network

HSR is currently in the third to last year of the *Ten Year (2015-2024) Local Transit Strategy*.<sup>7</sup> In 2019, HSR launched the *(Re)envision the HSR* study with the aim of modernizing the transit network and improving customer experience. This ongoing study identifies six rapid transit routes, including five rapid bus routes and one Light Rail Transit (LRT) route, as well as a new maintenance and storage facility. The new transit growth plan (including phasing, and implementation as well as the financial strategy) is scheduled to be presented to City of Hamilton Council in 2024.

### 3.2.3 Ten-Year Capital Plan

This section describes the ten-year capital plan that was developed for the transit growth period (2023-2032). This capital plan includes the future vehicle requirements for conventional and specialized service as well as associated support vehicles.

#### 3.2.3.1 New Conventional Transit Vehicles

HSR uses the following vehicle types for conventional service:

- 30-foot community bus;
- 40-foot standard bus; and,
- 60-foot articulated bus.

The component and total costs for the various vehicle types are listed below in Exhibit 3.2. These costs were provided by HSR.

*Exhibit 3.2: Total Costs (2023\$) by Bus Type*

	30' Bus	40' Bus	60' Bus
Capital Cost of Bus	\$600,400	\$890,900	\$1,168,600
IT Package	\$31,800	\$31,800	\$31,800
Farebox	\$18,000	\$18,000	\$18,000
PRESTO	\$14,552	\$14,552	\$14,552

<sup>7</sup> The *Ten Year (2015-2024) Local Transit Strategy* was paused in both 2017 and 2020.



	30' Bus	40' Bus	60' Bus
<b>Total Cost:</b>	<b>\$664,752</b>	<b>\$955,252</b>	<b>\$1,232,952</b>

HSR applies the following considerations and level of service metrics to forecast future conventional fleet requirements:

- **Service Levels:** The desired frequency of service is the primary determining factor for future conventional fleet requirements – more buses are required to achieve higher frequencies. Service frequencies are generally highest during weekday peak hours and buses are acquired to meet minimum service levels for weekday peak hours. The existing minimum service standard is 30-minute frequency during peak hours. Service frequencies may also vary by route type.
- **Route Length and Travel Time:** Transit routes vary in length, resulting in varying travel times. Different numbers of buses can be required for different routes to meet the same service levels.
- **Scheduling:** This considers the number of buses required to operate a service reliably with consideration for the schedule and on-time performance.
- **Demand:** Bus sizes are largely determined by the demand on specific corridors. Increases in demand can be met either with a larger vehicle that operates at a normal frequency or multiple smaller vehicles that operate at a higher frequency.
- **Service Area Coverage:** HSR aims to ensure a standard of 90% of residents and businesses within the urban transit area are within 400m of transit service during peak hours. This standard informs route planning and fleet requirements.
- **Additional Vehicles:** HSR maintains a minimum number of spare vehicles to allow for buses to be serviced, inspected, maintained and fueled. The existing standard of peak service vehicles to spare vehicles is a ratio of approximately 80:20.

Exhibit 3.3 below outlines the total future conventional transit fleet needs, and their associated costs, for the growth period (2023-2032) within the 2024 DC Study horizon and the post-period (2033-2035) beyond the 2024 DC Study horizon. The total cost of the required additional conventional fleet vehicles is approximately **\$99,000,000**.

*Exhibit 3.3: Total Growth Period and Post-Period Conventional Transit Bus Requirements (2023\$)*

	Unit Cost	Growth Period (2023-2032)	Post-Period (2033-2035)
New Peak Hour 30' Bus	\$664,752	0	2
New Peak Hour 40' Bus	\$955,252	48	16
New Peak Hour 60' Bus	\$1,232,952	8	2
New Spare 40' Bus	\$955,252	12	3
New 40' to 60' Upgrades	\$277,700	37	0
<b>Total Cost of Additional Vehicles</b>		<b>\$77,453,636</b>	<b>\$21,945,196</b>

### 3.2.3.2 Specialized Transit

Specialized transit service is provided by DARTS for persons who are unable to access conventional transit service due to disabilities or health conditions. DARTS is a shared-ride service that operates under a contract with HSR.

Specialized transit fleet vehicles have not been included in this DC background study. HSR has identified the need for four new accessible supervisory vehicles to support growing specialized transit operations. Each of these four vehicles costs \$153,000 (2023\$), resulting in a total cost of **\$612,000** for the accessible supervisory vehicles.

### 3.2.3.3 Maintenance and Storage Facility and Related Vehicles

Transit is growing in Hamilton and a new Maintenance and Storage Facility (MSF) is needed to support this growth. The cost of this facility has been assessed as approximately \$396,000,000 by HSR and the City of Hamilton.

This MSF will include the following facility vehicles:

- Service Truck;
- Stock Room Vehicle;

- Garage Equipment Repair Walk Behind Forklift;
- Garage Forklift;
- Garage Tow Mobile; and,
- Garage Equipment Repair Express Van Vehicles.

The number of new facility vehicles and cost per facility vehicle is outlined below in Exhibit 3.4. The total cost of the required additional facility vehicles is **\$720,998**.

*Exhibit 3.4: Total Growth Period Facility Vehicle Requirements (2023\$)*

Facility Vehicle Type	Unit Cost (2023\$)	Additional Vehicles Required (2023-2032)
Service Truck	\$64,999	2
Stock Room Vehicle	\$65,000	1
Garage Equipment Repair Walk Behind Forklift	\$92,100	2
Garage Forklift	\$106,700	1
Garage Tow Mobile	\$62,100	1
Garage Equipment Repair Express Van Vehicles	\$86,500	2
<b>Total Cost</b>		<b>\$720,998</b>

### 3.2.4 Total Future Transit Needs

Exhibit 3.5 below summarizes the future transit requirements (spanning conventional fleet, specialized, facility vehicles and a storage and maintenance facility) and their associated costs. The total cost of all future transit requirements in the transit growth period (2023-2032) is approximately **\$475,000,000** and the total cost of all future transit requirements in the transit post-period (2033-2035) is approximately **\$22,000,000**. The full list of all transit projects and their capital costs can be found in Appendix E.

Exhibit 3.5: Summary of Growth Period and Post-Period Future Transit Needs (2023\$)

Vehicle Type	Quantity	Growth Period (2023-2032)	Post-Period (2033-2035)
New Peak Hour 30' Bus	2		\$1,329,504
New Peak Hour 40' Bus	48	\$45,852,096	
New Peak Hour 40' Bus	16		\$15,284,032
New Peak Hour 60' Bus	8	\$9,863,616	
New Peak Hour 60' Bus	2		\$2,465,904
New Spare 40' Bus	12	\$11,463,024	
New Spare 40' Bus	3		\$2,865,756
New 40' to 60' Upgrades	37	\$10,274,900	
Accessible Supervisory Vehicles (Specialized Transit)	4	\$612,000	
Transit & Maintenance Storage Facility	1	\$396,000,000	
Facility: Service Truck	2	\$129,998	
Facility: Stock Room Vehicle	1	\$65,000	
Facility: Garage Equipment Repair Walk Behind Forklift	2	\$184,200	
Facility: Garage Forklift	1	\$106,700	
Facility: Garage Tow Mobile	1	\$62,100	
Facility: Garage Equipment Repair Express Van Vehicles	2	\$173,000	
<b>Approximate Total Cost</b>		<b>\$475,000,000</b>	<b>\$22,000,000</b>

### 3.3 Active Transportation Projects

This section describes the costing approach used to update the capital costs for active transportation projects. The AT costing methodology included updating costs identified in the

2019 DC Study as well as developing unit rates to cost AT projects that were not previously identified in the 2019 DC Study but are part of Hamilton's future AT network.

### **3.3.1 Active Transportation Projects from the 2019 DC Background Study**

The 2019 DC Study included approximately 160 AT projects, each with an identified length, facility type, timing and cost. All projects with a post-2023 implementation date were carried forward for updated costing. A 39.39% inflation factor was applied to the costs of these projects to escalate the capital costs from 2019 to 2023.

### **3.3.2 New Active Transportation Projects**

For the new AT projects that were not included in the 2019 DC Study, a unit costing approach was used. The City of Hamilton provided typical costs for various active transportation components. These were reconciled with industry-standard costs to develop updated unit costs for various AT facility types. These unit costs, by facility type, were then multiplied by the length of each project to determine the cost of the AT project. The updated AT unit costs are in Appendix C.

### **3.3.3 Active Transportation Project Capital Costs**

The total cost of all AT projects is approximately **\$144,000,000**. The full list of all AT projects and their capital costs can be found in Appendix E and a discussion of which costs are eligible for development charges can be found in Appendix D.

## **3.4 Structures**

Structures that are eligible for development charge funding include projects such as bridges, grade separations and interchange projects.

The costs for the bridges and grade separation projects were carried forward from the 2019 DC Study and provided by the City of Hamilton. A 39.39% inflation factor was applied to the costs of the projects carried forward from the 2019 DC Study to escalate the capital costs from 2019 to 2023.

Interchange projects connect to highways that are within the jurisdiction of the Ontario Ministry of Transportation (MTO). Interchange projects included in the STNR have costs that are shared between the MTO and the City of Hamilton. The costs for the following interchange projects were provided by the MTO and the City of Hamilton.

- Highway 5/6 Interchange;

- Mohawk Road – Highway 403 Interchange Ramp;
- Centennial Parkway at QEW Interchange Reconfiguration; and,
- QEW Off-Ramps at Fifty Road (Signalization and Reconfiguration).

The total capital cost of the major structure projects is approximately **\$252,000,000**. The full list of all structures and their capital costs can be found in Appendix E.

### 3.5 Programs

The City of Hamilton’s planned transportation improvements include growth-related programs. These are initiatives, often implemented city-wide, that aim to improve infrastructure associated with the road, active transportation and transit networks. Categories of programs included in the STNR are described in Section 2.6. The costs for the programs were carried forward from the *2019 DC Study* and provided by the City of Hamilton. A 39.39% inflation factor was applied to the costs of the projects carried forward from the *2019 DC Study* to escalate the capital costs from 2019 to 2023.

The total capital cost of the programs is approximately **\$100,000,000**. The full list of all programs and their capital costs can be found in Appendix E.

### 3.6 Transportation Project Costing Summary

The costing process for the STNR provided updated capital cost estimates for future transportation projects in the City of Hamilton spanning road projects, active transportation projects, transit projects, structures and programs. The total capital cost of all future transportation projects within the STNR horizon (to 2051) is approximately **\$3,158,000,000** as outlined below in Exhibit 3.6. A discussion of which costs are eligible for development charges funding can be found in Appendix D.

*Exhibit 3.6: Summary of STNR Project Capital Costs*

Project Type	Approximate Capital Cost (To 2031)	Approximate Capital Cost (2031 to 2041)	Approximate Capital Cost (2041 to 2051)	Approximate Capital Cost (Total)
Road	\$655,000,000	\$590,000,000	\$920,000,000	<b>\$2,165,000,000</b>
Transit (Vehicles and Facility)	\$475,000,000 (2023-2032)	\$22,000,000 (2033-2035)	-	<b>\$497,000,000</b>

Project Type	Approximate Capital Cost (To 2031)	Approximate Capital Cost (2031 to 2041)	Approximate Capital Cost (2041 to 2051)	Approximate Capital Cost (Total)
Active Transportation	\$113,000,000	\$31,000,000	-	<b>\$144,000,000</b>
Structures	\$182,000,000	\$70,000,000	-	<b>\$252,000,000</b>
Programs	\$100,000,000	-	-	<b>\$100,000,000</b>
<b>Total</b>				<b>\$3,158,000,000</b>

## 4 STNR Summary

This study reviewed the proposed timing and developed updated cost estimates for future transportation projects within the context of forecasted population and employment growth in the City of Hamilton to a 2041 planning horizon with consideration to 2051. This included transportation projects spanning roads, active transportation, transit, structures and programs. An evaluation framework was used to ensure that the future road projects aligned with the 2018 TMP vision and desired outcomes. The results of the evaluation process informed the phasing of individual projects, with highest scoring projects being recommended for earlier implementation. The following projects are being recommended as part of the STNR:

- 132 road projects;
- 16 transit projects (transit fleet, and other transit supportive infrastructure);
- 308 active transportation projects;
- 13 structures; and,
- 26 programs.

These projects represent a total capital cost of approximately **\$3,158,000,000**. Consideration for these projects in the 2024 DC Study is discussed in Appendix D.

The following appendices provide supporting documents to this STNR report:

- **Appendix A** lists the evaluation results for future road projects;
- **Appendix B** lists the future active transportation projects;
- **Appendix C** lists the detailed unit cost tables to accompany road and AT project costing in Section 3;

- **Appendix D** is a report that outlines the transportation inputs to the 2024 DC Study, including apportioning benefit;
- **Appendix E** outlines all the transportation capital projects for inclusion in the 2024 DC Study; and,
- **Appendix F** identifies updates made to the STNR report since the draft was published in December 2023.



# Appendix A

## Strategic Transportation Network Review Project Evaluation Results

Project Description			Project Evaluation							
Location	Length (km)	Project Type	Transportation	Environment	Social	Economic	Implementation	Overall Project Score	Additional Considerations	Draft Proposed Implementation Date
<b>Road Projects</b>										
Airport Road - Terminal Access Road to Provident Way/East Cargo Road	0.32	Road Widening	2	3	6	3	3	17		To 2031
Arvin Avenue - Jones Road to 366m west of Glover Road	0.55	New Road	2	6	3	3	3	17	Due to land use constraints and presence of an active factory, the opportunity to connect Arvin Avenue in this block is not available. A longer implementation timeline would be realistic and allow the City to continue discussion with the land owner to dedicate land for road ROW.	Post 2041
Barton Street - Fruitland Road to Fifty Road	5.11	Road Widening	4	0	6	6	1.5	17.5		To 2031
Arvin Avenue - McNeilly Road to Lewis Road	0.85	New Road	2	0	3	3	1.5	9.5	This project is prioritized to fill in missing links, support new developments, provide servicing, and serve as an alternative to Barton Street for commercial vehicles.	To 2031
Binbrook Road - Fletcher Road to Binhaven Road	0.91	Road Reconstruction and Urbanization	2	0	4.5	1.5	6	14	This road is scheduled for completion by developers before 2031.	To 2031
Book Road - Southcote Road to Highway 6	1.05	Road Widening	2	0	4.5	3	1.5	11	Book Road implementation is prioritized to enable Airport Employment Growth District (AEGD) area growth.	To 2031
Book Road - Highway 6 to Fiddlers Green Road	0.99	Road Widening	4	3	4.5	1.5	1.5	14.5	This project is delayed as it is located outside of the Urban Boundary.	Post 2041
Collector 1E - Collector 6N to Dickenson Road	0.67	New Road	2	0	3	3	1.5	9.5	This project is in the existing urban boundary and subject to active development application	2031 to 2041
Arterial 1N - Collector 2N to Dickenson Road/Garth Street Extension	2.97	New Road	2	0	4.5	3	0	9.5	This project is prioritized to provide a critical east-west link in the Airport Employment Growth District (AEGD)	To 2031
Collector 2N - Collector 5W to Arterial 1N	0.42	New Road	2	0	3	3	3	11		2031 to 2041
Collector 5W - Collector 7N to Collector 2N	0.74	New Road	2	0	3	3	1.5	9.5		Post 2041
Collector 2W - Garner Road to Dickenson Road Extension	2.16	New Road	2	0	4.5	3	0	9.5		Post 2041

Project Description			Project Evaluation							
Location	Length (km)	Project Type	Transportation	Environment	Social	Economic	Implementation	Overall Project Score	Additional Considerations	Draft Proposed Implementation Date
Collector 6N - Upper James Street to Collector 6E	0.95	New Road	2	0	3	3	0	8	The Collector 6N is a strategic link in the AEGD. It is within the Upper Westside active development site and abuts the Panettoni Development. The Road will require an EA and could be constructed by 2031 or immediately after.	2031 to 2041
Collector 6N - Collector 6E to Garth Street	0.41	New Road	2	0	3	3	3	11	The Collector 6N is a strategic link in the AEGD. It is within the Upper Westside active development site and abuts the Panettoni Development. The Road will require an EA and could be constructed by 2031 or immediately after.	2031 to 2041
Collector 6N - Garth Street to Glancaster Road	1.54	New Road	2	0	3	3	0	8	This project is part of an active development application.	2031 to 2041
Collector 6E - Collector 6N to Dickenson Road	0.64	New Road	2	0	3	3	1.5	9.5	This project is within an active development site.	To 2031
Collector 7N - Collector 5W to Collector 2W	1.19	New Road	2	0	4.5	3	1.5	11		2031 to 2041
Collector 5N - Collector 8W to Fiddler's Green	0.83	New Road	2	0	3	1.5	1.5	8		Post 2041
Collector 8W - Garner Road to Collector 5N	1.07	New Road	2	0	4.5	3	1.5	11		2031 to 2041
Dartnall Road - Twenty Road to Dickenson Road	1.55	New Road	2	0	3	3	3	11	This project is scheduled for 2026/2027 construction.	To 2031
Dickenson Road - Glancaster Road to Garth Street Extension	1.53	Road Widening	3	0	4.5	3	1.5	12	This project has been delayed to align with the phasing of development in the AEGD	2031 to 2041
Dickenson Road - Garth Street Extension to Upper James Street	1.36	Road Widening	3	0	4.5	3	1.5	12	This project is scheduled for 2027 construction.	To 2031
Dickenson Road Extension - Glancaster Road to Smith Road	0.83	New Road	2	0	4.5	3	3	12.5	This project has been delayed to align with the phasing of development in the AEGD	2031 to 2041
Book Road - Smith Road to Southcote Road	0.45	Road Widening	4	0	4.5	3	3	14.5	Book Road implementation is prioritized to enable Airport Employment Growth District (AEGD) area growth.	To 2031
Fifty Road - Barton Street to South Service Road	0.55	Road Widening	2	0	6	4.5	4.5	17		To 2031
Fifty Road - Barton Street to Highway 8	0.24	Road Widening	3	0	4.5	4.5	4.5	16.5	Given that Barton Street will be widened to four lanes and function as the key east-west corridor, Fifty Road improvement south of Barton Street will not be prioritized before 2031	2031 to 2041

Project Description			Project Evaluation							
Location	Length (km)	Project Type	Transportation	Environment	Social	Economic	Implementation	Overall Project Score	Additional Considerations	Draft Proposed Implementation Date
Garth Street Extension - Twenty Road to Collector 6N	0.81	New Road	2	0	4.5	3	1.5	11		<b>2031 to 2041</b>
Garth Street Extension - Collector 6N to Dickenson Road	0.66	New Road	2	0	3	3	1.5	9.5	This project is currently undergoing an EA and is part of an active development. It will be constructed by 2041	<b>2031 to 2041</b>
Glancaster Road - Garner Road to Dickenson Road	2.67	Road Widening	2	0	4.5	3	1.5	11		<b>To 2031</b>
Glancaster Road - Dickenson Road to Arterial 1N	0.39	Road Widening	2	0	4.5	3	3	12.5		<b>2031 to 2041</b>
Gordon Dean Avenue - Barton Street to Highway 8	1.08	New Road	3	6	3	1.5	3	16.5		<b>To 2031</b>
North Waterdown Drive - Centre Road to Parkside Drive	2.25	New Road	2	0	3	1.5	3	9.5	Part of North Waterdown Drive is constructed, this project is prioritized to fill in missing sections.	<b>To 2031</b>
Parkside Drive - North Waterdown Drive to Avonsyde Boulevard	2.25	Road Widening	2	0	4.5	3	3	12.5	Part of North Waterdown Drive is constructed, this project is prioritized to fill in missing sections.	<b>To 2031</b>
North Waterdown Drive - Clappison Avenue Extension to Mosaic Drive	0.59	New Road	2	0	3	1.5	6	12.5	Part of North Waterdown Drive is constructed, this project is prioritized to fill in missing sections.	<b>To 2031</b>
North Waterdown Drive - Clappison Avenue Extension to Highway 6 North	0.82	New Road	2	0	3	1.5	4.5	11	This project is delayed since it is outside the urban boundary and the City does not own land to provide for the future right of way. This road is intended to direct traffic from North Waterdown Drive to Highway 6 (through Clappison Avenue and Parkside Drive) until the land can be acquired.	<b>Post 2041</b>
Rymal Road - Dartnall Road to Upper James Street	5.17	Road Widening	5	3	4.5	6	1.5	20		<b>To 2031</b>
Garner Road - Glancaster Road to Highway 6 South	3.12	Road Widening	3	0	6	4.5	0	13.5	Garner Road Construction is scheduled for 2028 to enable the development of lands south of Garner Road within the AEGD. The road widening is in response to capacity constraints and to improve Multimodal LOS along the corridor.	<b>To 2031</b>
Garner Road - Highway 6 South to Wilson Street	4.86	Road Widening	3	0	6	6	1.5	16.5		<b>To 2031</b>

Project Description			Project Evaluation							
Location	Length (km)	Project Type	Transportation	Environment	Social	Economic	Implementation	Overall Project Score	Additional Considerations	Draft Proposed Implementation Date
Smith Road - Garner Road to Hydro Corridor	0.88	New Road	2	0	3	3	1.5	9.5	The Section of Smith Road from Garner Road to the Hydro corridor is part of an active planning application. The southerly section is required by 2041 to support anticipated developments in the AEGD aligned with the phasing plan of the AEGD secondary plan.	To 2031
Southcote Road - Garner Road to Book Road	1.95	Road Widening	3	0	4.5	3	0	10.5	This project has been delayed to align with the phasing of development in the AEGD	2031 to 2041
Trinity Road/Highway 52 - Highway 403 Interchange to Cormorant Road	1.79	Road Widening	2	0	4.5	6	0	12.5	This road improvement is required in short term to support the Ancaster Business Park development.	To 2031
Twenty Road Extension - Glover Road to Upper Redhill Valley Parkway	0.35	New Road	4	6	4.5	3	4.5	22		To 2031
Twenty Road West Extension - Glanaster Road to Collector 2W	1.06	New Road	2	0	4.5	3	1.5	11	This road extension is fronting woodlot to the south and hydro corridor to the north. It provides network connectivity, capacity and redundancy and will not be required in the short term given the slow growth pattern in this part of the business park.	Post 2041
Smith Road - Hydro Corridor to Book Road	1.01	New Road	2	0	3	3	1.5	9.5	The Section of Smith Road from Garner Road to the Hydro corridor is part of an active planning application. The southerly section is required by 2041 to support anticipated developments in the AEGD aligned with the phasing plan of the AEGD secondary plan.	2031 to 2041
Smith Road - Book Road to Arterial 1N	0.63	New Road	2	6	3	3	3	17	The Section of Smith Road from Garner Road to the Hydro corridor is part of an active planning application. The southerly section is required by 2041 to support anticipated developments in the AEGD aligned with the phasing plan of the AEGD secondary plan.	2031 to 2041
Upper Red Hill Valley Parkway - Rymal Road to Twenty Road	1.22	New Road	3	0	3	3	3	12		2031 to 2041
LRT corridor - Centennial Parkway/Main Street/King Street to McMaster University	13.77	Road Reconstruction and Urbanization	6	0	6	3	6	21		To 2031

Project Description			Project Evaluation							
Location	Length (km)	Project Type	Transportation	Environment	Social	Economic	Implementation	Overall Project Score	Additional Considerations	Draft Proposed Implementation Date
Highway 8 - Dewitt Road to Jones Road	1.73	Road Widening	4	6	6	6	4.5	26.5	This project has been prioritized to support Stoney Creek Block Servicing and developments	To 2031
Highway 8 - Jones Road to McNeilly Road	1.73	Road Widening	3	3	4.5	4.5	3	18		2031 to 2041
Clappison Avenue Extension - Parkside Drive to North Waterdown Drive	0.54	New Road	2	0	3	1.5	3	9.5	This project has been prioritized as per the Waterdown/Aldershot Transportation Master Plan	To 2031
Highway 8 - McNeilly Road to Fifty Road	2.67	Road Widening	2	0	4.5	1.5	1.5	9.5	This project has been scheduled to support Block 3 of the SCUBE developments	2031 to 2041
Collector B (Block 1) - Fruitland Road to Jones Road	0.89	New Road	3	0	3	1.5	3	10.5		2031 to 2041
Collector C (Block 2) - Barton Street to Highway 8	0.74	New Road	3	3	3	1.5	6	16.5		To 2031
Collector D (Block 3) - McNeilly Road to Collector F	1.25	New Road	2	3	3	1.5	4.5	14		2031 to 2041
Collector E (Block 3) - Barton Street to Highway 8	0.66	New Road	2	3	4.5	1.5	6	17		To 2031
Collector F (Block 3) - Barton Street to Collector D	0.22	New Road	2	6	3	1.5	6	18.5		To 2031
Longwood Road - Aberdeen Avenue to Main Street	0.64	Road Reconstruction and Urbanization	5	3	4.5	3	6	21.5		To 2031
Upper Wellington Street - Limeridge Road to Stone Church Road	1.04	Road Widening	6	3	4.5	1.5	3	18		To 2031
Regional Road 56 - Dalgliesh Trail to Golf Club Road	1.44	Road Widening	2	0	3	4.5	1.5	11	This project is related to the Elfrida developments which will not take place before 2041.	Post 2041
Garth Street - Rymal Road to Twenty Road West	1.41	Road Widening	3	0	4.5	1.5	0	9	This project supports the Airport Employment Growth District (AEGD)	2031 to 2041
South Service Road - Lewis Road to Fifty Road	1.79	Road Widening	2	6	4.5	4.5	1.5	18.5		To 2031

Project Description			Project Evaluation							
Location	Length (km)	Project Type	Transportation	Environment	Social	Economic	Implementation	Overall Project Score	Additional Considerations	Draft Proposed Implementation Date
Lincoln M. Alexander Parkway-Red Hill Valley Parkway - Highway 403 to Queen Elizabeth Way	17.30	Road Widening	6	0	4.5	3	1.5	15	The Road Widening to 6 lanes is not feasible by 2031. The EA needs to be completed for the two local expressways, which requires robust engagement with Indigenous Nations (Joint Stewardship Board of Haudenosaunee Development Institute). The work also requires coordination with MTO for Highway 403 and QEW interchange improvements.	2031 to 2041
Upper James Street - Rymal Road to Highway 6 South	7.22	Road Widening	3	0	4.5	4.5	0	12		2031 to 2041
Upper Wentworth Street - End to Twenty Road	0.74	New Road	4	0	3	1.5	1.5	10		Post 2041
Upper Sherman Avenue - End to Twenty Road	0.75	New Road	4	0	3	1.5	1.5	10		Post 2041
Upper Gage Avenue - End to Twenty Road	0.73	New Road	3	0	3	1.5	1.5	9		Post 2041
Upper Ottawa Street - End to Twenty Road	0.95	New Road	3	0	3	3	1.5	10.5		2031 to 2041
Miles Road - Rymal Road to Dickenson Road	2.66	Road Widening	4	0	4.5	1.5	0	10		Post 2041
East-West Collector - Upper Wentworth Street to Upper Ottawa Street	2.52	New Road	2	0	3	3	0	8		Post 2041
Twenty Road East - Upper James Street to Dartnall Road	5.76	Road Widening	2	0	4.5	3	0	9.5		Post 2041
Collector Road 6E - Collector 6N to Twenty Road West	0.70	New Road	2	3	3	1.5	1.5	11	This project has been delayed as it is outside of the urban boundary.	Post 2041
Collector Road 1E - Collector 6N to Twenty Road West	0.73	New Road	2	0	3	3	1.5	9.5		Post 2041
First Road East - Highway 20 to Mud Street	1.97	Road Widening	2	6	4.5	1.5	1.5	15.5	This project is related to the Elfrida developments which will not take place before 2041.	Post 2041
First Road East - Highway 20 to Golf Club Road	2.08	New Road	2	0	3	1.5	0	6.5		Post 2041
Upper Centennial Parkway - Mud Street to Highway 20	2.00	Road Widening	5	3	4.5	6	1.5	20	This project is related to the Elfrida developments which will not take place before 2041.	Post 2041
Arterial N-S - Bellagio Avenue to Golf Club Road	1.88	New Road	2	0	3	1.5	0	6.5		Post 2041

Project Description			Project Evaluation							
Location	Length (km)	Project Type	Transportation	Environment	Social	Economic	Implementation	Overall Project Score	Additional Considerations	Draft Proposed Implementation Date
Dickenson Extension - Trinity Church to Golf Club Road	0.65	New Road	2	0	3	1.5	1.5	8		Post 2041
Mud Street - Red Hill Valley Parkway to Upper Centennial Parkway	3.62	Road Widening	5	0	4.5	6	0	15.5	This project has been delayed as the Mud Street widening is not justified without the Elfrida lands fully developed.	Post 2041
Twenty Road - Upper Red Hill Valley Parkway to Hendershot Road	5.60	New Road	2	0	3	1.5	0	6.5		Post 2041
Highway 20 - 500m east of Upper Centennial to Hendershot Road	1.17	Road Widening	2	3	3	3	1.5	12.5	This project is related to the Elfrida developments which will not take place before 2041.	Post 2041
Highway 20 - Hendershot Road to Hamilton boundary	4.57	Road Widening	3	0	4.5	3	0	10.5	This project is related to the Elfrida developments which will not take place before 2041.	Post 2041
White Church Road - Upper James Street to Miles Road	2.88	Road Widening	2	3	4.5	1.5	0	11	This project is to support the development of White Church lands in the urban boundary expansion area. These lands are subject to the completion of the Secondary Planning process and the council's decision to freeze greenfield development until 2041.	Post 2041
Airport Road - Upper James Street to Miles Road	2.75	Road Widening	4	0	4.5	1.5	0	10		Post 2041
Ferris Road Extension - White Church Road to Airport Road	1.34	New Road	2	3	3	1.5	1.5	11	This project is to support the development of White Church lands in the urban boundary expansion area. These lands are subject to the completion of the Secondary Planning process and the council's decision to freeze greenfield development until 2041.	Post 2041
Upper Centennial Parkway - Mud Street to Green Mountain Road	1.00	Road Reconstruction and Urbanization	5	3	4.5	6	3	21.5	This project is related to the Elfrida developments which will not take place before 2041.	Post 2041
Miles Road - Dickenson Road to White Church Road	4.13	Road Widening	2	0	4.5	1.5	0	8		Post 2041
Fiddler's Green Road - Garner Road to Book Road	1.97	Road Widening	2	0	4.5	3	0	9.5		Post 2041
Glancaster Road - Arterial 1N to Airport Boundary	0.48	New Road	2	3	4.5	3	3	15.5	This road urbanization project will be scheduled with the section of Glancaster From Dickenson Road to Arterial 1N which is planned for 2031 - 2041 implementation.	2031 to 2041



Project Description			Project Evaluation							
Location	Length (km)	Project Type	Transportation	Environment	Social	Economic	Implementation	Overall Project Score	Additional Considerations	Draft Proposed Implementation Date
Collector 9W - Garner Road to Collector 11N	0.33	New Road	2	6	3	3	3	17	Collector 9W is a new road supporting a small enclave of institutional land in the western part of the AEGD. The institutional land is not subject to an active development application. Hence the road implementation could be postponed to post-2031.	2031 to 2041
Smith Road - Arterial 1N to Airport Boundary	0.21	New Road	2	6	3	3	3	17	This project has been delayed to align with the phasing of development in the AEGD	2031 to 2041
Airport Road - East Cargo Road to Upper James Street	1.08	Road Widening	2	3	6	3	3	17		To 2031
Airport Service Road - Glancaster Road to Airport Road	1.78	New Road	2	0	3	1.5	0	6.5		Post 2041
Book Road East - Collector 2W to Glancaster Road	0.85	Road Widening	2	3	4.5	3	3	15.5		2031 to 2041
Collector 10N - Garner Road to Smith Road	1.17	New Road	4	6	3	3	3	19		To 2031
Collector 10N - Smith Road to Collector 1W	1.47	New Road	2	6	3	1.5	1.5	14	This project has been delayed as it is outside of the urban boundary.	Post 2041
Airport Access Route - Upper Red Hill Valley Parkway to Highway 6 South	10.92	New Road	2	0	3	3	0	8		Post 2041
Rymal Road - Glancaster Road to Upper Paradise Street	0.55	Road Widening	3	0	6	4.5	6	19.5		To 2031
Twenty Road - Glancaster Road to Upper James Street	2.90	Road Widening	2	0	4.5	3	0	9.5	This project is needed to support the Twenty Road West developments.	2031 to 2041
Airport Road - Glancaster Road to Terminal Access Road	1.71	Road Reconstruction and Urbanization	2	6	6	1.5	1.5	17	This project is required in the short term to support the Airside developments and the KF facility.	To 2031
West 5th Street - Rymal Road to Stone Church Road	1.01	Road Widening	3	3	4.5	3	3	16.5		To 2031
Fruitland Road - Highway 8 to Barton Street	1.05	Road Widening	3	3	4.5	3	3	16.5		To 2031
McNeilly Road - Highway 8 to Barton Street	0.90	Road Reconstruction and Urbanization	3	3	3	1.5	3	13.5	The road will be improved as part of Stoney Creek Block 1 and 2 development which is planned for pre 2031 implementation	To 2031
Lewis Road - Highway 8 to Barton Street	0.49	Road Reconstruction and Urbanization	2	3	3	1.5	3	12.5	The road will be improved as part of Stoney Creek Block 1 and 2 development which is planned for pre 2031 implementation	To 2031

Project Description			Project Evaluation							
Location	Length (km)	Project Type	Transportation	Environment	Social	Economic	Implementation	Overall Project Score	Additional Considerations	Draft Proposed Implementation Date
Glover Road - Highway 8 to Barton Street	0.81	Road Reconstruction and Urbanization	3	0	4.5	1.5	3	12		<b>2031 to 2041</b>
Jones Road - Highway 8 to Barton Street	0.92	Road Reconstruction and Urbanization	3	3	4.5	3	3	16.5		<b>To 2031</b>
Jerseyville Road - Wilson Street to Lloyminn Avenue	0.79	Road Widening	2	0	4.5	1.5	1.5	9.5	This project has been prioritized to align with the timing of the other Jerseyville Road projects	<b>2031 to 2041</b>
Shaver Road - Trustwood to Garner Road	0.74	Road Reconstruction and Urbanization	2	3	4.5	3	3	15.5	This project has been delayed to align with the phasing of development in the AEGD	<b>2031 to 2041</b>
McNiven Road - Rousseaux Street/Mohawk Road to Golf Links Road	0.62	Road Widening	4	0	6	1.5	3	14.5	This project has been prioritized based on road condition.	<b>To 2031</b>
Dickenson Road - 350 meters west of Nebo to 330m west of Glover Road	1.20	Road Reconstruction and Urbanization	4	3	3	3	1.5	14.5		<b>2031 to 2041</b>
Dickenson Road East - Upper James Street to 350 meters west of Nebo Road	4.24	Road Reconstruction and Urbanization	3	0	4.5	1.5	0	9		<b>Post 2041</b>
Glover Road - Twenty Road to Rymal Road	1.31	Road Reconstruction and Urbanization	3	0	3	3	1.5	10.5	The road needs upgrade in coordination with servicing which is planned for implementation in the next five years.	<b>To 2031</b>
Parkside Drive - Hollybush Drive to Highway 6	1.07	Road Widening	3	0	4.5	3	1.5	12	This project is planned for construction in 2026, associated with the Highway 5/6 interchange works.	<b>To 2031</b>
Parkside Drive - Main Street to North Waterdown Drive	0.59	Road Widening	3	0	4.5	3	3	13.5		<b>2031 to 2041</b>
Fruitland Road - Arvin Avenue to Barton Street	0.36	Road Widening	3	6	4.5	4.5	3	21		<b>To 2031</b>
Fletcher Road - 500m south of Rymal Road to Golf Club Road	1.60	Road Widening	4	0	3	1.5	0	8.5		<b>Post 2041</b>
Golf Club Road - Trinity Church Road to Hendershot Road	5.33	Road Widening	4	0	3	1.5	0	8.5	This project is related to the Elfrida developments which will not take place before 2041.	<b>Post 2041</b>
Hendershot Road - Highway 20 to Golf Club Road	2.09	Road Widening	3	0	3	1.5	0	7.5	This project is related to the Elfrida developments which will not take place before 2041.	<b>Post 2041</b>

Project Description			Project Evaluation							
Location	Length (km)	Project Type	Transportation	Environment	Social	Economic	Implementation	Overall Project Score	Additional Considerations	Draft Proposed Implementation Date
Highland Road - Upper Centennial Parkway to Second Road East	1.67	Road Widening	3	3	4.5	1.5	1.5	13.5	This project is delayed since the urban boundary expansion will occur post-2041 once the expansion freeze is lifted.	Post 2041
Mud Street - Upper Centennial Parkway to Second Road East	1.67	Road Reconstruction and Urbanization	2	3	3	3	1.5	12.5	This project is related to the Elfrida developments which will not take place before 2041.	Post 2041
Second Road East - Highway 20 to Mud Street	1.94	Road Widening	2	3	3	1.5	0	9.5	This project is related to the Elfrida developments which will not take place before 2041.	Post 2041
Trinity Church Road - Hydro Corridor (470m south of Rymal Road) to Golf Club Road	1.60	Road Widening	4	0	4.5	3	1.5	13	This project is related to the Elfrida developments which will not take place before 2041.	Post 2041
Jones Road - Barton Street to South Service Road	0.92	Road Reconstruction and Urbanization	3	6	3	3	3	18		To 2031
Lewis Road - Barton Street to South Service Road	0.87	Road Reconstruction and Urbanization	2	3	3	4.5	3	15.5		To 2031
Millen Road - Barton Street to South Service Road	1.07	Road Reconstruction and Urbanization	3	6	4.5	3	3	19.5		To 2031
Fletcher Road - McWatters Street to Golf Club Road	3.60	Road Reconstruction and Urbanization	2	0	3	1.5	0	6.5		Post 2041
South Service Road - Millen Road to Gray Road	1.55	Road Reconstruction and Urbanization	4	3	3	3	1.5	14.5		2031 to 2041
Jerseyville Road - Lloyminn Avenue to Meadowbrook Drive	1.25	Road Reconstruction and Urbanization	2	3	4.5	1.5	1.5	12.5		2031 to 2041
Nebo Road - Twenty Road to Dickenson Road/Dartnall Road	0.74	Road Reconstruction and Urbanization	2	0	3	3	1.5	9.5	This project has been prioritized as it is in conjunction with the Dartnall Road extension project	To 2031
Collector 11N - Fiddler's Green Road to Collector 9W	0.35	New Road	2	6	3	3	3	17	This road is adjacent to lands that are in phase 2 of the Airport Employment Growth District secondary plan.	2031 to 2041
Nebo Road - Rymal Road to Twenty Road East	1.30	Road Reconstruction and Urbanization	3	0	4.5	3	1.5	12	This project is scheduled for construction in 2024.	To 2031

Project Description			Project Evaluation							
Location	Length (km)	Project Type	Transportation	Environment	Social	Economic	Implementation	Overall Project Score	Additional Considerations	Draft Proposed Implementation Date
Collector 1W - Collector 10N to Garner Road	0.39	New Road	2	0	3	1.5	3	9.5	Collector 1W connects Collector 10N to Garner Road. It provides network redundancy and accessibility to lands south of Garner Road. The implementation of Collector 1W should be the same as the Collector 10N.	<b>2031 to 2041</b>
Highway 403 - Mohawk Road/Lincoln M. Alexander Parkway to Highway 6 south interchange	-	Road Widening	4	3	3	6	4.5	20.5	This project is an MTO project	<b>To 2031</b>

# Appendix B

## Strategic Transportation Network Review Active Transportation Projects

Location	Timing (year)	Length (km)	Facility Type
Barton - Brockley to Fruitland	2024-2031	3.95	Multi-Use Trail
Barton - Red Hill Valley to Lake	2024-2031	1.61	Cycle track
Baseline/ Lockport - Winona Road to Niagara border	2024-2031	1.15	Bike Lane
Battlefield Park - Bruce Trail Link - Greenhill to Bruce Trail to Glover Mtn	2024-2031	0.75	Multi-Use Trail
Beach Bike Lane - under QEW	2024-2031	0.24	Bike Lane
Beach Boulevard - lift bridge to Woodward/Eastport	2024-2031	4.52	Bike Lane
Beddoe Drive Link	2024-2031	0.91	Multi-Use Trail
Binbrook Road - Regional Road 56 to Southbrook	2024-2031	0.28	Bike Lane
Binbrook Road - Trinity Church to Royal Winter/Binhaven	2024-2031	2.16	Multi-Use Trail
Birch/ Holton - Burlington St to Cannon/ King/ Delaware	2024-2031	1.40	Bike Lane
Burlington Street East Boulevard Trail - Ottawa to Parkdale to Glow	2024-2031	2.30	Multi-Use Trail
Burlington Street Link - Ferguson/ Dock Service Road to Sherman	2024-2031	1.88	Multi-Use Trail
Burlington/ Industrial - Sherman to Gage	2024-2031	0.86	Cycle track
Centennial Parkway - North Service to GO station/ Kenora	2024-2031	1.20	Multi-Use Trail
Centre - Concession 8 E to Concession 7 E	2024-2031	1.80	Paved Shoulder
Centre - Grindstone Creek to Concession 5 E	2024-2031	0.45	Paved Shoulder
Centre - Warren/ Carlisle Road to Progreston	2024-2031	0.78	Paved Shoulder
Charlton/ John - James to Ferguson & St Joseph's Dr	2024-2031	0.80	Bike Lane
Chedmac - Southridge to Rice	2024-2031	0.53	Bike Lane
Chedoke Rail Trail - Highway 403 to Dundurn	2024-2031	4.68	Multi-Use Trail
Cherry Beach Road Link - Millen to Dewitt	2024-2031	0.91	Multi-Use Trail
Christie-Tews - Christie C.A. to Harvest	2024-2031	2.75	Multi-Use Trail
Delawana - Kenora to Lake	2024-2031	1.02	Bike Lane
Devil's Punchbowl Link - Mountain Ave/ Lake Ave to Ridge Road/ Devil's	2024-2031	0.42	Multi-Use Trail
Dewitt - Barton to Dundee	2024-2031	0.90	Bike Lane
Dewitt - Dundee to Ridge	2024-2031	0.50	Bike Lane
Dundas St - Main to Cootes	2024-2031	0.68	Bike Lane
Dundas St in Waterdown - Highway 6 to Kearns (border)	2024-2031	6.03	Multi-Use Trail
East Townline - Mud to Highland	2024-2031	1.10	Bike Lane
Eastport Drive Lift Bridge Link	2024-2031	0.60	Multi-Use Trail
Edgewood - Safari to Highway 6	2024-2031	0.90	Bike Lane
Emperor - Brigade to Acadia	2024-2031	0.44	Bike Lane
Existing Pipeline Trail - Main to Strathearne	2024-2031	2.20	Multi-Use Trail
Fallsview - Sydenham to Rock Chapel Road	2024-2031	1.40	Multi-Use Trail

Location	Timing (year)	Length (km)	Facility Type
Fennell Avenue Boulevard Trail - Garth/ West 18th to West 5th	2024-2031	1.20	Multi-Use Trail
Ferguson - Young to Charlton	2024-2031	0.21	Bike Lane
Fiddler's Green - Amberly to Carluke	2024-2031	6.77	Bike Lane
Fiddler's Green - Jerseyville to Wilson	2024-2031	0.25	Bike Lane
First Rd W/Whitedeer/Terryberry & Picardy/ Highbury - Glover Mtn Road/ Ridgeview Dr to Rymal/ Bellagio	2024-2031	4.08	Bike Lane
Frances - Grays to Southshore	2024-2031	1.15	Bike Lane
Frid/Chatham - Longwood to Dundurn	2024-2031	1.00	Bike Lane
Golf Links/ Halson - Wilson to Southcote	2024-2031	1.19	Bike Lane
Governor's - Wainwright to Lynden	2031-2041	13.06	Paved Shoulder
Governor's - Ogilvie to Main	2024-2031	0.24	Bike Lane
Grays/ Gray - Confederation Park gate to King	2024-2031	3.00	Multi-Use Trail
Greenhill - Harrisford to Summercrest	2024-2031	1.94	Bike Lane
Greenhill - Summercrest to King	2024-2031	1.20	Bike Lane
Hamilton Drive Link	2024-2031	-	Multi-Use Trail
Hamilton in Waterdown - Centre/Main to Highway 5/Dundas	2024-2031	1.00	Multi-Use Trail
Hamilton-Brantford Rail Trail - Bridlewood Dr to Ewen	2024-2031	4.00	Multi-Use Trail
Hatt - Peel to John	2024-2031	0.65	Cycle track
Hollybush - Parkside to Dundas St	2024-2031	1.10	Bike Lane
Hydro Corridor - Barton to Lawrence	2024-2031	1.90	Multi-Use Trail
Hydro Corridor - Lawrence Avenue to Greenhill Avenue	2024-2031	1.15	Multi-Use Trail
Hydro Corridor - Wilson/Highway 52 to Regional Road 56	2024-2031	12.70	Multi-Use Trail
Iroquois Heights to Old Mohawk - Chedoke Rail Trail to Old Mohawk Road	2024-2031	0.85	Multi-Use Trail
Jones Road Link	2024-2031	2.67	Multi-Use Trail
Karst Escarpment Loop - Pritchard to Mount Albion/Winterberry	2024-2031	0.70	Multi-use Trail
Kenora/ Greenford/ Owen - Bancroft to King	2024-2031	2.60	Bike Lane
Kentley - Eugene to Kenora	2024-2031	0.40	Signed Bike Route
Kerns Road, Waterdown South Link	2024-2031	-	Multi-Use Trail
King in Dundas - Bond to Peel	2024-2031	0.80	Bike Lane
King over Red Hill Valley Parkway - Lawrence to Pottruff	2024-2031	0.60	Cycle track
Kitty Murray - Garner to Golf Links	2024-2031	2.26	Bike Lane
Limeridge - Birchview to Mtn Brow	2024-2031	1.98	Bike Lane
Limeridge - Garth/ Bonaventure to West 5th/ Hawkrige	2024-2031	1.37	Bike Lane
Limeridge Mall Hydro Corridor Trail - Mohawk Road to South of Rymal	2024-2031	3.80	Multi-Use Trail
Lovers Lane - Sulpher Springs to Jerseyville	2024-2031	0.90	Bike Lane

Location	Timing (year)	Length (km)	Facility Type
Marston - Paramount to Gordon Drummond	2024-2031	0.40	Bike Lane
Meadowbrook	2024-2031	1.00	Bike Lane
Meadowlands/ Raymond - Golf Links to Garner	2024-2031	2.10	Bike Lane
Millen - Shoreview to Millen/ Seaman	2024-2031	0.50	Bike Lane
Mohawk - Old Mohawk to Upper Paradise	2024-2031	1.83	Bike Lane
Montclair/ Central/ Graham/ Frederick	2024-2031	3.80	Signed Bike Route
Mountain Brow Boulevard Trail - Mohawk to Arbour	2024-2031	1.81	Multi-Use Trail
Mountain Brow East Path - Rendell to Oakcrest	2024-2031	0.81	Multi-Use Trail
Mountain Brow in Waterdown - Mill to Burke to King Road	2024-2031	1.20	Multi-Use Trail
Museum of Steam and Tech Link - Woodward to Red Hill Valley Trail	2024-2031	0.75	Multi-Use Trail
Nash - Bancroft to King	2024-2031	2.58	Cycle track
North Service Road - Bellavista to Baseline	2024-2031	0.98	Bike Lane
North Service Road - Dewitt to Lakeview	2024-2031	0.73	Bike Lane
Northlawn Avenue Link	2024-2031	1.10	Multi-Use Trail
Ogilvie/ Old Ancaster - Hatt/ King to Hamilton-Brantford Rail Trail	2024-2031	0.80	Bike Lane
Old Guelph Road - Paterson to York Bike Lane	2024-2031	3.53	Paved Shoulder
Old Mud - Mt Albion to Winterberry	2024-2031	0.40	Bike Lane
Osler/ Main - Hatt/ King to Main + 125m of Main	2024-2031	2.00	Bike Lane
Ottawa Street South - Bruce Trail Link	2024-2031	0.39	Multi-Use Trail
Proposed Pipeline Trail - Museum of Steam and Technology to Mahoney	2024-2031	2.40	Multi-Use Trail
Queensdale - Upper Sherman to Upper Ottawa	2024-2031	1.56	Bike Lane
Queensdale - Upper Wellington to Skyland	2024-2031	0.39	Bike Lane
Queenston/ Highway 8 - King to Dewitt	2024-2031	1.37	Bike Lane
Regional Road 56 - Swayze Road to Cemetery	2024-2031	4.60	Multi-Use Trail
Regional Road 56 south of Kirk - Windwood to Kirk	2024-2031	1.14	Multi-Use Trail
Ridge Road - Devil Punch Bowl to Dewitt	2024-2031	2.91	Multi-Use Trail
Rousseaux/ Mohawk - Wilson to Filman	2024-2031	1.60	Bike Lane
Scenic - Chedoke Rail Trail to Upper Paradise	2024-2031	2.27	Bike Lane
Scenic/ Denlow - Upper Paradise to Garth	2024-2031	0.95	Bike Lane
Shaver - Wilson to Garner	2024-2031	0.52	Multi-Use Trail
Stuart Street Rail Link	2024-2031	0.94	Multi-Use Trail
Upper James - William Connell Park	2024-2031	0.38	Multi-Use Trail
Upper Sherman - Stone Church to Rymal to Miles	2024-2031	1.00	Bike Lane
Upper Wentworth - Concession to Fennell	2024-2031	1.03	Bike Lane
Upper Wentworth - Fennell to East 24th	2024-2031	1.03	Bike Lane
Valley Road - Rock Chapel to York Road	2024-2031	1.40	Paved Shoulder
Van Wagner's - Beach Bike Lane to Centennial Parkway	2024-2031	2.50	Bike Lane
Victoria - Young to Burlington	2024-2031	2.53	Bike Lane



Location	Timing (year)	Length (km)	Facility Type
Walnut Grove & Sanctuary Park - Walnut Grove/Ogilvie to Highland Park Dr	2024-2031	0.40	Multi-Use Trail
Warrington/ South Service/ Lake - Centennial Parkway to Maple	2024-2031	3.86	Multi-Use Trail
White Church Road West Airport Link	2024-2031	-	Multi-Use Trail
White Church Road West Link	2024-2031	6.55	Multi-Use Trail
Wilson in Ancaster - Rousseaux to Halson	2024-2031	0.85	Bike Lane
Winona - Lido/ shore to Peachtree (Helena)	2024-2031	1.97	Multi-Use Trail
York Road - Olympic to Valley Road	2024-2031	1.70	Paved Shoulder
York Road & York Road at Old Guelph - Valley Road to Highway 6	2024-2031	2.50	Multi-Use Trail
Acadia - Emperor to End	2024-2031	0.54	Signed Bike Route
Airport Road - Butter to Miles	2024-2031	6.66	Bike Lane
Alma - Sydenham to Queen	2024-2031	0.09	Bike Lane
Aquasanta - Diconzo to Ascoli	2024-2031	0.09	Signed Bike Route
Baker - Breadalbane to Dundurn	2024-2031	0.14	Signed Bike Route
Winston - Hunter to 413m west of Kelson Ave N	2024-2031	2.06	Bike Lane
Bedrock - First Rd W to 300m West of First Rd W	2024-2031	0.33	Bike Lane
Bellagio - Fletcher to Terryberry	2024-2031	1.64	Bike Lane
Binbrook Road - Southbrook to Boundary	2024-2031	6.02	Paved Shoulder
Book Road - Shaver to Fiddler's Green	2031-2041	2.50	Paved Shoulder
Book Road - Fiddler's Green to Glancaster	2024-2031	3.42	Bike Lane
Brantdale - West Fifth Street to Upper James	2024-2031	0.42	Signed Bike Route
Bridlewood - Governor's to Highland Park Drive	2024-2031	0.59	Signed Bike Route
Brigade - Upper Wellington to Emperor	2024-2031	0.82	Signed Bike Route
Brock - Harvest Road to Highway 8	2024-2031	0.55	Paved Shoulder
Brock - Safari to Freelton	2024-2031	4.50	Paved Shoulder
Burke - Great Falls Blvd to McKnight Ave E	2024-2031	0.51	Bike Lane
Butter - Glancaster to Fiddler's Green	2024-2031	2.21	Bike Lane
Canada - Locke to Queen	2024-2031	0.41	Signed Bike Route
Carlisle Trail Loop - Centre Road to Border	2024-2031	3.35	Paved Shoulder
Carlson Street - Highland Road to End	2024-2031	0.11	Signed Bike Route
Carluke - Glancaster to Shaver	2031-2041	3.53	Paved Shoulder
Central - Edgemont to Cochrane	2024-2031	1.54	Signed Bike Route
Concession 10 West - Foreman to Freelton	2024-2031	9.28	Signed Bike Route
Concession 11 E - Centre Road to Freelton	2024-2031	2.65	Paved Shoulder
Concession 4 West - Millgrove Sideroad to Highway 6	2031-2041	1.78	Paved Shoulder
Concession 6 East - Highway 6 to Centre Road	2031-2041	2.79	Paved Shoulder
Concession 7 West - Boundary to Edgewood Road	2024-2031	18.80	Paved Shoulder
Concession 8 West - Middletown to Middletown	2024-2031	0.14	Signed Bike Route
Concession Street - Mountain Park Ave to Mountain Brow Boulevard	2024-2031	0.51	Bike Lane
Confederation Beach Park - Centennial Parkway to West of Gray	2024-2031	1.98	Signed Bike Route

Location	Timing (year)	Length (km)	Facility Type
Cormorant - Trinity to Shaver	2024-2031	2.46	Bike Lane
Culotta - Perrelli to Chudleigh	2024-2031	0.14	Signed Bike Route
Dicenzo Dr - Aquasanta Crescent to South Turn on Dicenzo Drive	2024-2031	0.36	Signed Bike Route
Dicenzo Dr - Upper Wellington to Trieste	2024-2031	0.20	Signed Bike Route
Dundurn - Main to King	2024-2031	0.28	Bike Lane
Edgemont - Montclair to Central	2024-2031	0.18	Signed Bike Route
Eighth Road Link - Ridge to Boundary	2031-2041	5.51	Paved Shoulder
Eleventh - Mud to Green Mountain Road	2024-2031	1.11	Signed Bike Route
Emerson - Whitney to Main	2024-2031	0.65	Bike Lane
Empress - Upper James to East Sixth Street	2024-2031	0.71	Signed Bike Route
Eugene - Pottruff to Nugent	2024-2031	0.18	Signed Bike Route
Fallsview - Harvest Road to Sydenham	2024-2031	2.47	Signed Bike Route
Ferguson - Dock Service Road to Burlington	2024-2031	0.28	Signed Bike Route
Ferguson - Young to North of Young	2024-2031	0.05	Bike Lane
Field - Jerseyville Rd W to Governor's Rd	2031-2041	3.88	Paved Shoulder
Fifty - Ridge to Cokers	2024-2031	1.51	Paved Shoulder
Fifty - Coke to North Service Road	2024-2031	2.24	Bike Lane
Filman - Wilson St E to End	2024-2031	0.40	Signed Bike Route
First Road East - Highland Road to Ridge Road	2031-2041	3.83	Paved Shoulder
First Road West - North End to Highbury Drive	2024-2031	0.10	Bike Lane
Flamborough Puslinch Tlin - Maddaugh Road to Centre	2031-2041	1.81	Paved Shoulder
Fleming - North End to York	2024-2031	0.26	Signed Bike Route
Fletcher - Rymal to Pinehill	2024-2031	0.32	Paved Shoulder
Foreman - Boundary to Regional Road 97	2024-2031	3.08	Signed Bike Route
Franklin - Parkview to Longwood	2024-2031	0.20	Signed Bike Route
Frederick - Barton to Roxborough	2024-2031	0.62	Signed Bike Route
Freelton - Concession 11 E to South of Highway 6	2024-2031	0.38	Bike Lane
Fruitland - Highway 8 to North Service Road	2024-2031	2.42	Bike Lane
Galbraith - Lake Avenue to Galbraith Three-way Intersection	2024-2031	0.52	Signed Bike Route
Garth - Denlow to Fennell	2024-2031	0.14	Paved Multi-Use Recreational Trail
Garth St Extension - 20 Rd W to Dickenson Rd W	2024-2031	1.38	Bike Lane
Glancaster - Carluke to Airport	2024-2031	1.45	Bike Lane
Glenfern - Kent to Kent	2024-2031	0.04	Signed Bike Route
Glover - Watercrest to End	2024-2031	0.11	Bike Lane
Glow - Parkdale to East of Tate	2024-2031	0.63	Signed Bike Route
Golf Club - Woodburn to Westbrook	2024-2031	2.07	Signed Bike Route
Golf Links - Stone Church to Kitty Murray	2024-2031	1.30	Bike Lane
Gordon Drummond - Marston to Nordale	2024-2031	0.04	Signed Bike Route
Graham Ave North - Central to Roxborough	2024-2031	0.78	Signed Bike Route
Guise - Leander to Catharine	2024-2031	0.54	Bike Lane
Gunby - Sadielou to Painter	2024-2031	0.50	Bike Lane

Location	Timing (year)	Length (km)	Facility Type
Harrison - Kirk to Binbrook Conservation Area Road	2024-2031	1.30	Paved Multi-Use Recreational Trail
Harvest - Sydenham to Brock	2024-2031	3.40	Paved Shoulder
Highland Rd E - Upper Red Hill Valley Pkwy to Winterberry	2024-2031	0.94	Bike Lane
Highland Rd E - Upper Centennial Pkwy to E Town Line	2031-2041	10.17	Paved Shoulder
Highway 5 West - Dundas St E to Sydenham	2024-2031	3.02	Paved Shoulder
Highway 8 (Flam) - Boundary to Brock	2031-2041	22.30	Paved Shoulder
Highway 8 (Sc) - Fifty to Boundary	2031-2041	0.81	Bike Lane
Holton - King to Delaware	2024-2031	0.57	Signed Bike Route
Holton - King to Wilson	2024-2031	0.18	Bike Lane
Homestead Dr Path - Upper James to 1200m East of Upper James	2024-2031	1.24	Bike Lane
Hughson - Cannon to Hunter	2024-2031	0.81	Bike Lane
Hunt - Christ the King Elementary School Road to Breadalbane	2024-2031	0.57	Signed Bike Route
Hunter - Locke to Queen	2024-2031	0.41	Signed Bike Route
Inverness - Tanner to East 8th	2024-2031	0.77	Bike Lane
Jackson St W - End to Locke St S	2024-2031	0.38	Signed Bike Route
Jerseyville Rd W - Boundary to East of Paddy Greens	2031-2041	18.45	Paved Shoulder
Jerseyville Rd W - West of Shaver to Wilson	2024-2031	3.49	Paved Shoulder
John - Guise to Burlington	2024-2031	0.29	Bike Lane
Kay Drage Park Link - Hunt to End	2024-2031	0.55	Signed Bike Route
Kay Drage Park Link - Macklin to End	2024-2031	0.14	Signed Bike Route
King William - James St N to Catharine St N	2024-2031	0.34	Signed Bike Route
Kirk - Harrison to Highway 56	2024-2031	0.98	Paved Multi-Use Recreational Trail
Kirkwall - Regional Road 97 to South of Concession 8 W	2024-2031	2.51	Signed Bike Route
Kirkwall - South of Concession 8 W to Woodhill Rd	2024-2031	5.78	Paved Shoulder
Lafarge 2000 (Middletown Rd) - Concession 6 W to Highway 8	2024-2031	7.91	Signed Bike Route
Lafarge 2000 (Middletown Rd/Binkley Rd) - Highway 8 to Mineral Springs Rd	2024-2031	3.57	Paved Shoulder
Lamoreaux - Dundurn t N to Strathcona Ave N	2024-2031	0.23	Signed Bike Route
Leland - Main to North of Ward	2024-2031	0.29	Signed Bike Route
Lido - Riviera to Winona	2024-2031	0.39	Signed Bike Route
Livingstone - Sydenham to Queen	2024-2031	0.11	Bike Lane
Locke - York Blvd to Barton	2024-2031	0.26	Bike Lane
Longwood - Main St W to Frid St	2024-2031	0.40	Bike Lane
Macklin St S - King St W to Main St W	2024-2031	0.24	Signed Bike Route
Maddaugh Road - Gore to Highway 6	2024-2031	0.95	Signed Bike Route

Location	Timing (year)	Length (km)	Facility Type
Maddaugh Road - Highway 6 to Flamborough Puslinch Tlin	2031-2041	1.11	Paved Shoulder
Maggie Johnson - Tanglewood to Highway 56	2024-2031	0.23	Bike Lane
Main St W - Frid to Dundurn St S	2024-2031	0.27	Bike Lane
Malton - Christine to Upper James	2024-2031	0.34	Signed Bike Route
Maple/Mountain Ave Extension - Lake Ave S to Mountain Ave S	2024-2031	0.13	Signed Bike Route
Marion - Dromore to King St W	2024-2031	0.34	Signed Bike Route
Market - Hatt to MacNab	2024-2031	0.09	Bike Lane
Market - MacNab to Creighton	2024-2031	0.09	Signed Bike Route
Mayfair - Creighton to Tally Ho	2024-2031	0.31	Signed Bike Route
McNeilly/8th Road E - Highway 8 to Ridge Road	2024-2031	1.55	Signed Bike Route
Middleton Rd - North of Regional Road 97 to Regional Road 97	2024-2031	0.44	Signed Bike Route
Middleton Rd - North of Concession 8 W to Safari	2024-2031	2.32	Signed Bike Route
Miles - Rymal Rd E to Boundary	2031-2041	10.88	Paved Shoulder
Millgrove Sr - Highway 6 N to Highway 5 W	2024-2031	0.71	Paved Shoulder
Mineral Springs - Binkley to Sulphur Springs	2031-2041	1.27	Paved Shoulder
Mount Albion - Lawrence to South of Glen Castle	2024-2031	1.39	Bike Lane
Mountain Brow - Concession Street to Rendell	2024-2031	0.27	Bike Lane
Mud - Eleventh Road E to Boundary	2031-2041	0.89	Paved Shoulder
Napier - Queen St N to Bay St N	2024-2031	0.55	Signed Bike Route
Nisbet - Centre Road to Wimberly	2024-2031	0.97	Bike Lane
Nordale - Gordon Drummond to End	2024-2031	0.39	Signed Bike Route
Nugent - Kentley to Eugene	2024-2031	0.13	Signed Bike Route
Old Mud - Upper Mount Albion to Cedarville	2024-2031	0.28	Bike Lane
Ottawa - Main to Montclair	2024-2031	0.49	Bike Lane
Parkdale Ave - Nikola Tesla Blvd to Glow	2024-2031	0.18	Paved Multi-Use Recreational Trail
Pearl - Hunter to Tuckett	2024-2031	0.23	Signed Bike Route
Peel St S - King St W to Hatt	2024-2031	0.14	Signed Bike Route
Perrelli - Culotta to Dundas St E	2024-2031	0.11	Signed Bike Route
Picton - Bay St n to Hughson St N	2024-2031	0.39	Signed Bike Route
Picton - John St N to Ferguson Ave N	2024-2031	0.42	Signed Bike Route
Queen - Alma to Livingstone	2024-2031	0.16	Bike Lane
Queen St S - Hunter to Canada	2024-2031	0.08	Signed Bike Route
Redmond - Rushdale to Stone Church Rd E	2024-2031	0.20	Signed Bike Route
Regional Road 20 (Highway 20) - Tapleystown to Woodburn	2024-2031	0.28	Signed Bike Route
Regional Road 97 - Kirkwall to Foreman	2024-2031	0.16	Paved Shoulder
Ridge - Dewitt to Boundary	2024-2031	7.05	Paved Shoulder
Riley - West of Chudleigh to Braeheid	2024-2031	0.21	Signed Bike Route
Riviera Ridge - Bellavista to Lido	2024-2031	0.12	Undefined
Rock Chapel - Highway 5 W to Service Road East of Sydenham	2024-2031	1.91	Signed Bike Route
Roxborough - Frederick to Graham Ave N	2024-2031	0.05	Signed Bike Route

Location	Timing (year)	Length (km)	Facility Type
Rushdale - Southpark to Redmond	2024-2031	0.08	Signed Bike Route
Rymal - Upper Paradise to Spadara	2024-2031	0.44	Bike Lane
Rymal - Hazelton to West Fifth St	2024-2031	0.77	Bike Lane
Sadielou - Hollybush to End	2024-2031	0.42	Bike Lane
Santorium - Scenic to Redfern	2024-2031	0.11	Bike Lane
Scenic - Scenic Dr to Garth St	2024-2031	0.23	Bike Lane
Second St N - King St W to North of Brandow	2024-2031	0.14	Signed Bike Route
Shaver - Wilson to Jerseyville Rd W	2024-2031	1.47	Bike Lane
Shaver - Garner to Carluke	2031-2041	6.11	Paved Shoulder
Sheppard - Sovereign to Fleming	2024-2031	0.10	Signed Bike Route
Sherman - Delaware to CP Rail Line	2024-2031	0.33	Signed Bike Route
Skinner - Dundas St E to East of McKnight Ave E	2024-2031	1.39	Bike Lane
South Bend - W Second St to Terrace	2024-2031	0.42	Signed Bike Route
South St W - Oglivie to Osler	2024-2031	0.70	Signed Bike Route
Southcote - Garner to Airport	2031-2041	2.80	Bike Lane
Southpark - Rushdale Park Trail to Rushdale Dr	2024-2031	0.25	Signed Bike Route
St Joseph's - John St S to End	2024-2031	0.29	Signed Bike Route
Sulphur Springs - Lover's to Mineral Springs Rd	2031-2041	1.47	Paved Shoulder
Sulphur Springs - Lover's to Wilson St E	2024-2031	1.05	Signed Bike Route
Sunnyridge - Wilson St W to Jerseyville Rd W	2024-2031	2.83	Paved Shoulder
Sydenham/Queen/Livingstone/Alma - Hatt to Romar Dr	2024-2031	1.86	Bike Lane
Talbot - Melvin to Barton St E	2024-2031	0.19	Signed Bike Route
Tally Ho - Mayfair to Overfield	2024-2031	0.22	Signed Bike Route
Tanner - Iverness to End	2024-2031	0.05	Signed Bike Route
Tapleytown Rd - Highway 20 E to Highland Rd E	2024-2031	0.83	Signed Bike Route
Tradewind - Wilson St W to Cormorant	2024-2031	0.70	Bike Lane
Twenty Rd - Southcote to West of Nebo	2024-2031	9.36	Bike Lane
Upper Ottawa - Killbride to Mountain Brow Boulevard	2024-2031	5.22	Bike Lane
Upper Sherman - Macassa to Limeridge Rd E	2024-2031	1.65	Bike Lane
Upper Wellington - S Bend Rd E to Stone Church Rd E	2024-2031	2.40	Bike Lane
W 18th St - Bendamere to End	2024-2031	0.17	Signed Bike Route
W 5th St - Brantdale to Governors Blvd	2024-2031	0.62	Multi-Use Trail
W 5th St - Governors Blvd to Marlowe	2024-2031	1.13	Bike Lane
Westbrook - End to Golf Club Rd	2024-2031	0.86	Signed Bike Route
Wilson in Ancaster - Fiddler's Green to Boundary	2024-2031	10.77	Cycle Track
Wimberly - Parkside to Nisbet	2024-2031	0.33	Bike Lane
Windwood Dr - Bradley to Southbrook Dr	2024-2031	0.70	Bike Lane
Woodbine Crescent - Jones to Dundurn St N	2024-2031	0.22	Signed Bike Route
Woodburn - Binbrook Rd E to Highway 20 E	2024-2031	7.56	Signed Bike Route
Woodhill Rd - Governor's to 800m south of Highway 8	2024-2031	7.05	Signed Bike Route
Woodhill Rd - Highway 8 to 800m south of Highway 8	2024-2031	1.04	Paved Shoulder

Location	Timing (year)	Length (km)	Facility Type
Woodward Ave - Beach Blvd to 100m south of Beach Blvd	2024-2031	0.10	Bike Lane
York - Olympic to Baldwin	2024-2031	2.33	Bike Lane
Highway 6 - Concession 10 W to Freelton	2024-2031	0.39	Paved Multi-Use Recreational Trail
Highway 6 N - Carlisle to Edgewood Road	2024-2031	0.55	Paved Multi-Use Recreational Trail
Carlisle Road - Highway 6 to Milborough Townline	2024-2031	5.85	Paved Shoulder
Concession 5 West - Highway 6N to Moffatt Road	2024-2031	3.01	Paved Shoulder
Mosaic Dr - Parkside Dr to Highway 6	2024-2031	1.90	Multi-Use Trail

# Appendix C

## Strategic Transportation Network Review Costing Tables

Appendix C

Exhibit 4.1: Road Project Component Unit Rate

Item	Quantity	Average Unit Price (\$2023)
<b>Removals</b>		
Clearing and Grubbing (Area)	m <sup>2</sup>	\$4.53
Excavation	m <sup>3</sup>	\$28.24
Concrete Sidewalk/Drive	m <sup>2</sup>	\$19.42
Culverts (Including headwalls/sewers)	m	\$127.00
Catch basin (Single)	Each	\$876.67
Catch basin (Double)	Each	\$896.94
Concrete Curb and Gutter	m	\$12.01
Maintenance Hole (Full Depth)	Each	\$640.12
Maintenance Hole (Partial Depth)	Each	\$770.14
Concrete Curb Outlets	Each	\$12.01
Cold Plan Existing Asphalt (Milling)	m <sup>2</sup>	\$29.90
Full Depth Asphalt	m <sup>2</sup>	\$5.79
<b>New Construction</b>		
20mm CRLS (Crusher Run Limestone)	Tonne	\$32.38
50mm CRLS (Crusher Run Limestone)	Tonne	\$32.89
Granular A – Roadway	m <sup>3</sup>	\$78.06
Granular B – Roadway	m <sup>3</sup>	\$77.43
Tack Coat	m <sup>2</sup>	\$0.69
Surface Mix (40mm)	Tonne	\$158.23
Surface Mix (50mm)	Tonne	\$126.12
Binder Mix (80mm)	Tonne	\$118.89
Binder Mix (100mm)	Tonne	\$113.88



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Item	Quantity	Average Unit Price (\$2023)
Binder Mix (120mm)	Tonne	\$168.35
100mm Diameter Non-Perforated Sub-Drain	m	\$40.85
150mm Diameter Non-Perforated Sub-Drain	m	\$33.01
Concrete Sidewalk (Ex. Granular/Excavation)	m <sup>2</sup>	\$72.75
Concrete Sidewalk (Including Granular)	m <sup>2</sup>	\$98.03
Concrete Curb & Gutter	m	\$121.59
Topsoil & Sod (300mm)	m <sup>2</sup>	\$23.61
Supply/Install Storm/Sewer Pipes	m	\$1,322.99
Supply/Install Catch basin Leads (250mm)	m	\$500.84
Supply/Install Catch basin (OPSD 705.010)	Each	\$4,683.02
Supply/Install Catch basin (OPSD 705.020)	Each	\$6,722.25
Supply/Install Manhole (OPSD 701.010)	Each	\$19,101.15
Pavement Markings	m	\$8.50
Fire Hydrants	Each	\$11,347.85
<b>Adjustments</b>		
Double Catch basin	Each	\$765.50
Single Catch basin	Each	\$763.73
Maintenance Holes	Each	\$797.00
Catch basin Manhole	Each	\$564.48
Water Valve Boxes	Each	\$794.73

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Exhibit 4.2: Road Project Per Kilometre Cost by Improvement Type

Improvement Type	Code	Cost Per Kilometre (\$2023)
<b>New Construction</b>		
Industrial Collector 2 Lanes	2i	\$ 8,502,110.30
Industrial Collector 3 Lanes	3i	\$ 9,308,901.69
Collector Rural Residential	2r	\$ 5,854,196.86
Rural 3 Lanes	3r	\$ 6,279,790.05
Rural 4 Lanes	4r	\$ 6,681,294.09
Rural 5 Lanes	5r	\$ 7,100,864.99
Rural 6 Lanes	6r	\$ 7,520,435.89
Collector Urban Residential	2u	\$ 7,044,788.91
Urban 3 Lanes Arterial/Collector	3u	\$ 9,107,630.09
Urban 4 Lanes Arterial	4u	\$10,004,419.36
Urban 5 Lanes Arterial	5u	\$10,624,646.86
Urban 6 Lanes Arterial	6u	\$11,244,874.36
<b>Reconstruction and Urbanization</b>		
Collector Rural Residential to Industrial Collector 2 Lanes	2r-2i	\$ 8,534,594.64
Collector Rural Residential to Collector Urban Residential	2r-2u	\$ 7,731,543.27
Collector Rural Residential to 3 Lane Urban	2r-3u	\$ 7,659,304.44
Collector Rural Residential to 3 Lanes Rural Arterial/Collector	2r-3r	\$ 6,340,575.66
Collector Rural Residential to 3 Lanes Rural Arterial with Bike Facilities	2r-3r+Bikes	\$ 7,790,478.99
Collector Rural Residential to 4 Lanes Rural Arterial	2r-4r	\$ 7,367,234.44
Collector Rural Residential to 4 Lanes Rural Arterial with no Base Removal	2r-4r-nbr	\$ 7,367,234.44
Collector Rural Residential to 4 Lanes Urban Arterial	2r-4u	\$ 9,382,573.73
Collector Rural Residential to 5 Lanes Urban Arterial	2r-5u	\$10,093,550.41
Collector Urban Residential to 4 Lanes Urban Arterial	2u-4u	\$ 9,556,325.05

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Improvement Type	Code	Cost Per Kilometre (\$2023)
3 Lanes Rural to 3 Lanes Urban	3r-3u	\$ 9,264,853.85
3 Lanes Rural to 5 Lanes Urban	3r-5u	\$11,026,843.95
2 Lanes Urban to 5 Lanes Urban	2u-5u	\$11,130,934.09
3 Lanes Urban to 5 Lanes Urban	3u-5u	\$11,155,773.19
4 Lanes Rural to 6 Lanes Rural	4r-6r	\$11,943,397.78
4 Lanes Rural to 4 Lanes Urban	4r-4u	\$10,521,444.43
4 Lanes Rural to 5 Lanes Urban	4r-5u	\$11,232,421.10
4 Lanes Rural to 6 Lanes Urban	4r-6u	\$11,943,397.78
4 Lanes Rural to 5 Lanes Urban with no Base Removal	4r-5u-nbr	\$11,232,421.10
4 Lanes Urban to 5 Lanes Urban	4u-5u	\$11,387,622.07
4 Lanes Urban to 6 Lanes Urban	4u-6u	\$12,098,598.74

*Exhibit 4.3: Active Transportation Per Metre Cost by Facility Type*

Facility Type	Cost (\$/m)
Bike Lane	\$140
Cycle track	\$500
Paved Shoulder	\$300
Signed Bike Route	\$40
Commuter Trail	\$66
Paved Multi-Use Recreational Trail	\$750
Multi-Use Path	\$750
Multi-Use Trail	\$750

# Appendix D

## Transportation Inputs to the 2024 Development Charges Background Study

## 1 Introduction

The City of Hamilton is conducting a 2024 Development Charges Background Study (2024 DC Study) to update the 2024 Development Charges By-Law. One of the goals of the STNR is to provide the transportation inputs to the 2024 DC Study. The 2024 DC By-Law will use the following transportation **service targets**:

- **2031** for roads, active transportation, structures and programs.
- **2032** for transit projects.

This means that projects in the STNR recommended for implementation after the service target years are not included in the 2024 DC Study or are included with a 100% deduction for post-period benefit (PPB).

The following report builds on the foundation of the STNR to describe how the identified future transportation projects will be included in the 2024 DC Study. This appendix is structured as follows:

- **Chapter 2** provides a background on the Development Charges (DC) framework in Ontario.
- **Chapter 3** describes how the updated capital costs of transportation projects from the STNR are carried forward to the 2024 DC Study;
- **Chapter 4** explains how the local service policy applies to certain projects as determined by the City of Hamilton. It is noted that the City of Hamilton *Local Service Policy* and *Financial Policies* are outside of the scope of the transportation inputs; and,
- **Chapter 5** explains how the costs of DC-eligible transportation projects are divided among different groups.

## 2 Development Charges Overview

Development charges (DCs) are a municipal financing tool in the Province of Ontario, governed by the *Development Charges Act* (DCA), intended to ensure that “growth pays for growth”. This framework allows municipalities to collect funds from developers to help pay for the costs of hard and soft infrastructure needed to support new growth in the city. These charges are administered through by-law as a cost per unit for new residential development and cost per sq.ft for new non-residential development.

Section 2(4) in the *DCA* lists the types of services that may be funded through development charges, while section 5(1) in the *DCA* outlines the process for determining development charges and the necessary reductions. The *DCA* states that a DC background study must be completed in advance of the passing of a DC by-law.

There have been numerous changes to the provincial *DCA* since the last DC background study was published in 2019. A summary of key changes resulting from new legislation is described below. The transportation inputs to the 2024 DC Study conform to requirements of the *DCA*, including changes since 2019.

- **COVID-19 Economic Recovery Act (Bill 197, 2020):** Among other changes, this act removed the 10-year planning horizon limit for all services except for transit.
- **Planning Act:** Bills 108 and 138 introduced changes to the *Planning Act* by introducing community benefits charges (CBCs) to replace the former section 37. CBCs are a municipal financing tool intended to be applied in partnership with DCs. CBCs can be used to fund capital costs of public services associated with new growth provided that these costs have not already been funded through DCs or parkland dedication. Transportation-related services cannot be funded through CBCs if they are already being funded through DCs.
- **More Homes Built Faster Act (Bill 23, 2022):** This bill introduced significant changes to planning in Ontario. This included changes to DCs such as studies no longer being eligible for DCs, land acquisition costs potentially no longer being eligible for DCs and a longer historical service level (15 years) for determining service ceilings. Municipalities across the province are working to identify the implications of this new bill, including the City of Hamilton.

The City of Hamilton currently implements DCs through By-law 19-142 (as amended by by-law 21-102), supported by the 2019 DC Background Study. The existing DC by-law is set to expire in June 2024. The transportation inputs from this study will be included in the 2024 DC Study that will be used to develop the new 2024 development charges by-law.

### 3 Development Charges Transportation Project Costs

The STNR included a detailed costing exercise to update the capital costs of all future transportation projects. However, only the costs of the projects within the 2024 DC Study service targets are included in the 2024 DC Study. These costs are summarized below in Exhibit 3.1.

*Exhibit 3.1: Summary of STNR Project Capital Costs Included in the 2024 DC Study*

Project Type	Approximate Capital Cost
Road	\$655,000,000
Transit	\$475,000,000
Active Transportation	\$113,000,000
Structures	\$182,000,000
Programs	\$100,000,000
<b>Total</b>	<b>\$1,525,000,000</b>

These capital costs will be subject to deductions described in the following sections.

### 4 Local Service Policy

The *Local Service Policy* (LSP) and the financial policies in the City of Hamilton *Comprehensive Development Guidelines and Financial Policies Manual (2019)* set the requirements for what is a direct developer responsibility and what is eligible for DC funding. Project costs that are directly funded by the developing landowner (as per the LSP and applicable financial policies) cannot also be included in the DC. For further information, including the treatment of local roads that are a direct developer responsibility, please refer to the LSP.

Developing the LSP and the financial policies are outside of the scope of the STNR study. Direction on how to apply the LSP and the financial policies to the 2024 DC Study calculations was provided by the City of Hamilton. This includes deductions from the DC-eligible costs to reflect the local share of roads (including bridges, culverts, land, and the road) that are a direct developer responsibility. Transportation project costs subject to the LSP were not included in the calculation of DC-recoverable costs. For road projects with a “To 2031” timing, the LSP deductions were applied as follows:

- The City of Hamilton identified projects subject to LSP deductions.
- Benefit to existing (BTE) deductions were applied to the projects (refer to Section 5.1).
- After accounting for the BTE deductions, the capital costs were then subject to LSP deductions. This was applied in two ways: to the road construction cost and to the land cost.
- Road construction cost allocation to the LSP excludes the cost of bridges, culverts, and land. The road construction cost deduction from development charges (allocation to the LSP) was the cost of up to an 11m wide local non-residential road or 8m wide local residential road. Any width beyond the local road width (11m or 8m) was included in development charge net capital costs. This deduction was only applied to new road projects. Road widening and reconstruction projects were assumed to have an existing local share.
- For the land costs, the deduction represents the cost of additional required land up to a 26m wide right-of-way (residential roads) and up to a 32m wide right-of-way (non-residential roads). Land costs beyond this 26m or 32m wide right-of-way were included in development charge net capital costs. For the development of land costs, refer to Section 3.1.5.
- The costs of bridges and culverts were included in the development charges net capital costs, after BTE deductions.

In addition to the above, the City of Hamilton also includes a deduction to reflect the local share of urbanization along existing roads at the time of development.

## 5 Apportioning Benefit

DC funding for capital projects is intended to reflect the principle that “growth pays for growth”. However, new capital projects can provide benefit to other users beyond the new growth population. Accordingly, the *DCA* requires a development charges by-law to apply deductions to ensure the new growth population only pays for the growth-related benefits of new capital projects. This process is known as apportioning benefit, and involves splitting the costs of the projects among three main groups:

- **Benefit to Existing (BTE):** This group comprises of the existing population that lives in the municipality as of the date a project is identified for inclusion in this study.
- **New Growth Population:** This group comprises of the new population that is added to the municipality during the growth period.
- **Post-Period Benefit (PPB):** This group comprises of the population that will be added to the municipality after the end of the growth period.



The calculation approach to apportioning benefit involves splitting the total cost of projects between the three groups above using percentages. The process of determining these benefit percentages varies by project, however, generally considers the following factors:

- The group that warranted the need for the project;
- The extent that the project benefits specific population groups;
- The geographic location/application of the project; and,
- The amount of excess capacity in the project beyond the growth period horizon.

In addition to the factors above, the process for determining benefit allocation involved a peer review of four comparable municipalities (City of London, City of Ottawa, Niagara Region, Waterloo Region) to confirm best practices and help inform the applicable percentages used in this study. The following sections describe the benefit allocation for various project types.

## 5.1 Apportioning Benefit: Road Projects

The section describes the BTE and PPB percentages, and their rationale, for road projects within the service target.

### 5.1.1 Road Project Benefit to Existing

The BTE percentages for road projects largely follow the percentages that were identified in the *2019 DC Study*. Apportioning benefit for road projects is primarily based on which group warrants the need for the road project. Exhibit 5.1 describes the BTE percentages and rationale below.

*Exhibit 5.1: Road Project Benefit to Existing Percentages and Rationale*

Project Type	BTE Percentage	Rationale
Road Reconstruction with no Capacity Increase	100%	These projects are not warranted by new growth and entirely benefit existing traffic.
Road Widening	15%	This percentage applies to most road widening projects. These projects are primarily intended to increase capacity to support new traffic volumes, however there is a small benefit to existing users due to resurfacing and upgrades to meet new design standards.
	40-50%	These percentages were applied for projects located in long established and/or developed corridors as well as

Project Type	BTE Percentage	Rationale
		mature neighbourhoods that are subject to increased travel demand generated by new growth located elsewhere. Higher BTE rates for these projects were identified by the City in the 2019 DC Study and carried forward for the 2024 DC Study.
	80%	This was applied to one project in Ancaster in a highly developed corridor. The higher BTE rate for this project was identified by the City in the 2019 DC Study and carried forward for the 2024 DC Study.
Road Reconstruction and Urbanization	15%	This percentage applies to most road reconstruction and urbanization projects. These projects are primarily driven by new developments, however there is a small benefit to existing users due to resurfacing and upgrades to meet new design standards.
	40-50%	These percentages were applied to projects in long established and/or developed corridors and those rural corridors linking urban centres. Higher BTE rates for these projects were identified by the City in the 2019 DC Study and carried forward for the 2024 DC Study.
New Road	0%	These projects are entirely warranted by new growth.

### 5.1.2 Road Project Post-Period Benefit

All road projects scheduled for implementation beyond the 2024 DC Study service target have been assigned 100% PPB.

## 5.2 Apportioning Benefit: Transit

The process for apportioning benefit for transit is primarily based on the composition of future ridership between existing and new growth populations, in addition to determining the in-period and post-period ridership.

Ridership forecasts are used to assign benefit between the existing population (2022), the transit new growth population (2023-2032) and the post-period population (2033-2035). The

method varies slightly between conventional and specialized transit. The details of the calculations for both conventional and specialized transit are described below.<sup>8</sup>

## 5.2.1 Transit Mode Share and Ridership Forecasts

### 5.2.1.1 Conventional Transit

The existing *City of Hamilton Transportation Master Plan (TMP)* identifies a transit mode share target of 12% by 2031. This mode share includes both local Hamilton Street Railway (“HSR”) transit and GO Transit. Development charges are administered at the municipal level, so the 12% transit mode share needs to be adjusted to exclude GO Transit-only trips. The Transportation Tomorrow Survey (TTS) was used to divide the 12% total mode share between local and GO Transit-only trips as shown below in Exhibit 5.2. The 2031 local transit mode share is 11.3%, while the GO Transit-only transit mode share is 0.7%.<sup>9</sup>

*Exhibit 5.2: 2031 A.M. Peak Period Transit Mode Share based on 2016 T.T.S.*

	Origin and/or Destination in Hamilton	Distribution of Transit Trips (HSR & GO)	2031 Transit Mode Share
Local Transit Only	19,907	94.2%	<b>11.3%</b>
Local Transit + GO	1,218		
GO Only	1,292	5.8%	<b>0.7%</b>
<b>Total Transit</b>	<b>22,417</b>		<b>12.0%</b>

Exhibit 5.3 outlines the total A.M. peak period person trips per year from the City’s E.M.M.E. model. The total A.M. peak period person trips are then multiplied by the local transit mode share per year, derived from the 11.3% 2031 local transit mode share target identified in Exhibit 5.2, to determine the total local A.M. peak period transit ridership per year. This

<sup>8</sup> Values in the exhibits have been rounded to the nearest tenth for percentages and to the nearest whole number for all other values.

<sup>9</sup> This transit mode share distribution was used in the previous Development Charges Background Study (2019). The 2016 TTS survey, used in the previous Development Charges Background Study (2019), is the most updated version of the TTS survey, as the 2021 TTS survey was delayed due to the COVID-10 pandemic.

ridership is then split between bus and light rail transit (LRT), with an assumed LRT opening year of 2031.<sup>10</sup>

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<sup>10</sup> The 2031 opening assumption is an estimate for the purposes of this project provided by the City of Hamilton.

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Exhibit 5.3: Summary of Projected Local HSR Transit Ridership and Mode Share (2022-2035)

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Total A.M. Peak Period Person Trips	290,099	293,461	296,822	300,184	303,545	306,906	310,268	313,629	316,991	320,352	324,030	327,751	331,515	335,321
Total Local A.M. Peak Period Ridership	18,981	19,426	19,922	22,519	25,117	27,714	29,836	31,957	34,078	36,200	36,615	37,036	37,461	37,891
A.M. Peak Period HSR Bus Ridership	18,981	19,426	19,922	22,519	25,117	27,714	29,836	31,957	34,078	35,239	34,671	34,086	33,814	33,867
A.M. Peak Period HSR LRT Ridership	-	-	-	-	-	-	-	-	-	961	1,944	2,950	3,647	4,024
A.M. Peak Period Bus Mode Share	-	-	-	7.5%	8.3%	9.0%	9.6%	10.2%	10.8%	11.0%	10.7%	10.4%	10.2%	10.1%
A.M. Peak Period HSR LRT Mode Share	-	-	-	-	-	-	-	-	-	0.3%	0.6%	0.9%	1.1%	1.2%
Local Transit Mode Share	6.5%	6.6%	6.7%	7.5%	8.3%	9.0%	9.6%	10.2%	10.8%	11.3%	11.3%	11.3%	11.3%	11.3%

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The TMP is the most recent transportation master plan and identifies a 2031 horizon – the total local transit mode share is assumed to remain constant beyond the TMP horizon between 2031-2035 and apply city-wide. Since the LRT infrastructure is not being funded through municipal development charges, the bus-only mode share is used for the transit DC calculations.

### **5.2.1.2 Specialized Transit**

HSR experienced a significant decrease in specialized transit ridership during the COVID-19 pandemic between 2020 and 2022. Specialized transit ridership has not recovered to 2019 pre-pandemic levels, and it is unclear when this may happen. Accordingly, HSR 2019-2022 ridership data was used to develop the specialized transit ridership forecast.

To address the impacts of the COVID-19 pandemic and limited data, the observed number of active registrants and rides per active registrant from 2019-2022 are used as the foundation of the forecast. The active registrant growth rate of 2.07% from the previous D.C. background study is used to calculate the number of active registrants between 2023-2032. Since specialized transit ridership recovery is unclear, the 2019 trip rate per active registrant is assumed to hold constant from 2023-2032. This is shown below in Exhibit 5.4.

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Exhibit 5.4: Specialized Service Active Registrant and Ridership Forecast (2019-2032)

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Active Registrants	9,819	7,650	6,059	7,124	7,271	7,422	7,575	7,732	7,891	8,055	8,221	8,391	8,565	8,742
Rides per Active Registrant	86	42.8	46.4	63.8	86	86	86	86	86	86	86	86	86	86
Total Annual Specialized Transit Ridership	844,434	327,420	281,138	454,511	625,330	638,257	651,451	664,919	678,665	692,694	707,014	721,630	736,549	751,775
Increase in Specialized Transit Trips (Compared to 2022 Baseline Population)	-	-	-	-	170,818	183,746	196,940	210,408	224,153	238,183	252,503	267,119	282,037	297,264

## 5.2.2 Transit Benefit to Existing

Future growth-related transit infrastructure projects provide benefits to the existing population. This is referred to as benefit to existing (BTE), and development charge calculations need to reflect this existing benefit where appropriate. This section describes how the BTE deductions are calculated for conventional transit vehicles, specialized transit vehicles, and facility and operations vehicles. The growth period is defined as 2023-2032.

### 5.2.2.1 Conventional Transit Vehicles

New growth-related conventional transit fleet vehicles can be used to add to the fleet to increase service on existing routes (either through increased service frequency or additional service hours) and/or add to the fleet to introduce service on new routes. The benefit of these new conventional transit vehicles is primarily experienced through the increase in transit trips during the growth period (i.e. people making new transit trips). This includes both the existing population who begin taking transit in the growth period (due to increasing transit mode share) and the new growth population.

Accordingly, the conventional transit BTE is calculated using a proportional ridership method. Exhibit 5.5 below uses the ridership and mode share information from Exhibit 5.3 above to outline the proportion of bus trips made by existing 2022 residents who begin taking transit in the growth period versus new growth residents. This information is summarized below:

- 2023-2032 Increase in Bus Trips by 2022 Baseline Population (due to Increasing Transit Mode Share): **72,422**
- 2023-2032 Total Number of Bus Trips (New Growth Population): **18,247**
- 2023-2032 Total Increase in Bus Trips Versus 2022 Baseline Population: **90,669**



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Exhibit 5.5: Allocation of Bus Trips between Existing and New Growth Population (2022-2032)

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Sum of 2023-2032
Total A.M. Peak Period Person Trips	290,099	293,461	296,822	300,184	303,545	306,906	310,268	313,629	316,991	320,352	324,030	-
<b>Increase in Bus Trips by 2022 Baseline Population (Due to Increasing Mode Share)</b>												
Increase in A.M. Peak Period Bus Mode Share (versus 2022 Baseline)	-	0.1%	0.2%	1.0%	1.7%	2.5%	3.1%	3.6%	4.2%	4.5%	4.2%	-
Increase in A.M. Peak Period Bus Trips by Existing 2022 Baseline Population (Due to Increasing Mode Share)	-	222	490	2,781	5,023	7,215	8,916	10,578	12,206	12,930	12,060	<b>72,422</b>
<b>New Growth Population (Versus 2022 Baseline Population)</b>												
A.M. Peak Period Bus Mode Share	6.5%	6.6%	6.7%	7.5%	8.3%	9.0%	9.6%	10.2%	10.8%	11.0%	10.7%	-
A.M. Peak Period Person Trips by New Growth Population (Versus 2022 Baseline Population)	-	3,362	6,723	10,085	13,446	16,807	20,169	23,530	26,892	30,253	33,931	-
A.M. Peak Period Bus Trips by New Growth Population (Versus 2022 Baseline Population)	-	223	451	757	1,113	1,518	1,939	2,398	2,891	3,328	3,631	<b>18,247</b>
<b>Total Increase in Bus Trips (Versus 2022 Baseline Population)</b>												
Total Increase in Bus Trips Versus 2022 Baseline Population (by New Growth and Existing Population)	-	445	941	3,538	6,136	8,733	10,855	12,976	15,097	16,258	15,690	<b>90,669</b>

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The benefit to existing and benefit to growth shares are calculated on a proportional ridership basis. This is described below:

$$\text{Benefit to Existing} = \frac{\text{2023-2032 Increase in Bus Trips by 2022 Baseline Population}}{\text{2023-2032 Total Increase in Bus Trips (Versus 2022 Baseline Population)}}$$

$$= \frac{72,422}{90,669}$$

$$= \mathbf{79.9\%}$$

$$\text{Benefit to Growth} = \frac{\text{2023-2032 Total Number of Bus Trips (New Growth Population)}}{\text{2023-2032 Total Increase in Bus Trips (Versus 2022 Baseline Population)}}$$

$$= \frac{18,247}{90,669}$$

$$= \mathbf{20.1\%}$$

As stated above, new conventional transit fleet vehicles can be used to increase service frequency on existing routes. This can result in a small benefit to existing transit users (who used transit in 2022 and years prior) due to increased convenience when taking transit (i.e. more trip options, not needing to consult a schedule depending on service frequency). New conventional transit fleet vehicles can also be used to introduce transit service on new routes. Existing transit users may also experience a small benefit from these new routes (i.e. to access new destinations, transfers as part of a multi-route transit trip).

The BTE calculations above do not capture the small benefits of increased service frequency and new transit routes for existing transit users. Accordingly, an additional 5% BTE is added to the calculations above to reflect this small benefit. This results in the following benefit to existing and benefit to growth shares:

- **Benefit to Existing = 84.9%**
- **Benefit to Growth = 15.1%**

The benefit to existing share is 84.9%. The benefit to growth will be adjusted from 15.1% to 12.9% to account for post-period benefit deductions (described in Section 5.2.3).

### 5.2.2.2 Specialized Transit Vehicles

Similar to conventional transit vehicles, a proportional ridership approach is used to calculate specialized transit BTE. Growth in specialized transit ridership can be partially attributed to the existing 2022 population, since the 2022 population will age during the growth period and, while individuals of any age can experience a disability, the prevalence of disability<sup>11</sup> is higher among older age cohorts. The new growth population who use specialized transit services will also account for a share of increasing specialized transit ridership in the growth period.

Ontario Ministry of Finance population projections by age cohort<sup>12</sup> and Statistics Canada disability prevalence percentages by age cohort<sup>13</sup> are used to determine the split of specialized transit ridership growth between the existing 2022 population ageing and the new growth population. Exhibit 5.6 outlines the Ontario Ministry of Finance population projections by age cohort from 2022-2032. Exhibit 5.7 multiplies the population projections by age cohort in Exhibit 5.6 by the prevalence of disability per age cohort percentages to project the number of people with a disability per age group by year from 2022-2032.

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<sup>11</sup> Statistics Canada uses the International Classification of Functioning, Disability and Health (ICF) definition of disability, which is “the relationship between body structures and functions, daily activities and social participation, while recognizing the role of environmental factors...disability is a social disadvantage that an unsupportive environment imposes on top of an individual’s impairment.” Statistics Canada (2018). *Canadian Survey on Disability, 2017: Concepts and Methods Guide*. <<https://www150.statcan.gc.ca/n1/pub/89-654-x/89-654-x2018001-eng.htm>>. Accessed September 2023.

<sup>12</sup> Ontario Ministry of Finance (2021). *Population projections*. <<https://data.ontario.ca/dataset/population-projections>>. Accessed April 2023.

<sup>13</sup> Statistics Canada (2018). *A demographic, employment and income profile of Canadians with disabilities aged 15 years and over, 2017*. <<https://www150.statcan.gc.ca/n1/pub/89-654-x/89-654-x2018002-eng.htm>>. Accessed April 2023.

Exhibit 5.6: City-Wide Population Projections by Age Cohort (2022-2032)

Age Group	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
0-14	91,618	92,186	92,906	93,603	94,416	95,334	96,397	97,416	98,478	99,657	100,982
15-24	73,288	75,124	76,085	76,718	77,255	77,698	78,141	78,732	79,436	80,235	80,826
25-44	168,249	172,847	176,357	179,862	183,094	186,571	189,502	192,351	194,983	197,366	199,889
45-64	153,050	152,244	151,412	150,643	149,960	149,485	149,310	149,277	149,717	150,883	152,468
65-74	61,242	62,791	64,631	66,551	68,560	70,467	72,270	73,896	75,003	75,539	75,618
75+	48,839	50,650	52,295	53,891	55,634	57,468	59,444	61,595	64,011	66,465	69,014
<b>Total</b>	<b>596,286</b>	<b>605,842</b>	<b>613,686</b>	<b>621,268</b>	<b>628,919</b>	<b>637,023</b>	<b>645,064</b>	<b>653,267</b>	<b>661,628</b>	<b>670,145</b>	<b>678,797</b>

Source: Ontario Ministry of Finance Population Projections (2021).

Exhibit 5.7: City-Wide Population with a Disability by Age Cohort (2022-2032)

Age Group	Prevalence of Disability	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
15-24	13.1%	9,601	9,841	9,967	10,050	10,120	10,178	10,236	10,314	10,406	10,511	10,588
25-44	15.3%	25,742	26,446	26,983	27,519	28,013	28,545	28,994	29,430	29,832	30,197	30,583
45-64	24.3%	37,191	36,995	36,793	36,606	36,440	36,325	36,282	36,274	36,381	36,665	37,050
65-74	32.0%	19,597	20,093	20,682	21,296	21,939	22,549	23,126	23,647	24,001	24,172	24,198
75+	47.4%	23,150	24,008	24,788	25,544	26,371	27,240	28,176	29,196	30,341	31,504	32,713
<b>Total Persons with Disabilities</b>		<b>115,281</b>	<b>117,383</b>	<b>119,213</b>	<b>121,016</b>	<b>122,884</b>	<b>124,838</b>	<b>126,815</b>	<b>128,861</b>	<b>130,962</b>	<b>133,049</b>	<b>135,131</b>

Source: Analysis of Ontario Ministry of Finance Population Projections (2021) and Statistics Canada Prevalence of Disability Percentages (2018).

Exhibit 5.8 below uses the information from Exhibit 5.6 and Exhibit 5.7 to identify the total population (15 years +) and the total population with a disability (15 years +) between 2022-2032. The projected increase in total population with a disability (15 years +) between 2023-2032 is identified and this increase is split between the existing 2022 population ageing and the new growth population. It is assumed that the proportion of the population with a disability grows at the same rate as the overall population.

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Exhibit 5.8: Summary of Population with Disability Growth between Existing Ageing Population and New Growth Population (2022-2032)

Row #		2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
<b>Total Population (15 years +)</b>												
1	<b>Total Population (15 years +)</b>	<b>504,668</b>	<b>513,656</b>	<b>520,780</b>	<b>527,665</b>	<b>534,503</b>	<b>541,689</b>	<b>548,667</b>	<b>555,851</b>	<b>563,150</b>	<b>570,488</b>	<b>577,815</b>
2	2022 Existing Population Percentage	-	98.3%	96.9%	95.6%	94.4%	93.2%	92.0%	90.8%	89.6%	88.5%	87.3%
3	New Growth Percentage	-	1.7%	3.1%	4.4%	5.6%	6.8%	8.0%	9.2%	10.4%	11.5%	12.7%
<b>Total Population with a Disability</b>												
4	<b>Total Population with a Disability (15 years +)</b>	<b>115,281</b>	<b>117,383</b>	<b>119,213</b>	<b>121,016</b>	<b>122,884</b>	<b>124,838</b>	<b>126,815</b>	<b>128,861</b>	<b>130,962</b>	<b>133,049</b>	<b>135,131</b>
5	Existing Ageing Population	-	115,329	115,524	115,742	116,025	116,306	116,646	116,995	117,362	117,699	118,025
6	New Growth Population	-	2,054	3,688	5,274	6,859	8,532	10,170	11,866	13,600	15,351	17,107
7	<b>Increase in Total Population with a Disability (15 years +) Versus 2022 Baseline Population</b>	<b>-</b>	<b>2,102</b>	<b>3,932</b>	<b>5,735</b>	<b>7,603</b>	<b>9,557</b>	<b>11,534</b>	<b>13,580</b>	<b>15,681</b>	<b>17,768</b>	<b>19,850</b>
8	Increase in Total Population with a Disability Due to Existing 2022 Population Ageing	-	48	243	461	744	1,025	1,365	1,714	2,081	2,418	2,744
9	<i>Percentage of Row 7 Due to Existing 2022 Population Ageing</i>	-	2.3%	6.2%	8.0%	9.8%	10.7%	11.8%	12.6%	13.3%	13.6%	13.8%
10	Increase in Total Population with a Disability Due to New Growth Population	-	2,054	3,688	5,274	6,859	8,532	10,170	11,866	13,600	15,351	17,107
11	<i>Percentage of Row 7 Due to New Growth Population</i>	-	97.7%	93.8%	92.0%	90.2%	89.3%	88.2%	87.4%	86.7%	86.4%	86.2%

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Exhibit 5.4 and Exhibit 5.8 are used to calculate the number of growth period specialized transit trips taken by the current users and ageing 2022 population compared to the new growth population.

The approach for apportioning specialized transit benefit is described below.

- **The total number of specialized transit trips** taken during the growth period can be attributed to two groups. The first group is the existing 2022 population (that will age over the growth period), while the second group is the new growth population.
- **The existing 2022 population group** is comprised of two sub-groups. The first is the 2022 population that used specialized transit in 2022 and will continue to do so throughout the growth period. The second is the 2022 population that did not use specialized transit in 2022 but will begin to use specialized transit during the growth period, largely due to ageing and the associated higher disability prevalence (Exhibit 1.6).
- **The new growth population group** is comprised of people who move to Hamilton during the growth period (2023-2032) and use specialized transit. This population group is not present in Hamilton in the 2022 baseline year.
- **A proportional approach between these two groups**, based on specialized transit ridership during the growth period, is used to allocate benefit for specialized transit.

The calculation for this approach is described in detail below:

$$\begin{aligned} \text{Number of Specialized Transit Trips by Existing and Ageing 2022 Population (2023-2032)} &= (2022 \text{ Active Registrants} \times 2023\text{-}2032 \text{ Riders Per Active Registrant Rate} \times \text{Number of Years in the Growth Period}) + (\text{Sum of the products of Increase in Specialized Transit Ridership from 2022 per year and the Existing 2022 Population Ageing Percentage of Increase in Total Population with a Disability per year}) \\ &= (7,124 \times 86 \times 10) + 250,684 \\ &= \mathbf{6,377,324} \end{aligned}$$

$$\begin{aligned} \text{Number of Specialized Transit Trips by New Growth Population (2023-2032)} &= \text{Sum of the products of Increase in Specialized Transit Ridership from 2022 per year and the New Growth Population percentage of Increase in Total Population with a Disability per year} \\ &= \mathbf{2,072,488} \end{aligned}$$

The benefit to existing and benefit to growth shares are calculated on a proportional ridership basis. This is described below:

$$\begin{aligned}
 \text{Benefit to Existing} &= \frac{\text{Number of Specialized Transit Trips by Existing and Ageing 2022 Population (2023-2032)}}{\text{Total Number of 2023-2032 Specialized Transit Trips (Existing and Ageing 2022 Population and New Growth Population)}} \\
 &= \frac{6,377,324}{8,449,812} \\
 &= \mathbf{75.5\%}
 \end{aligned}$$

$$\begin{aligned}
 \text{Benefit to Growth} &= \frac{\text{Number of Specialized Transit Trips by New Growth Population (2023-2032)}}{\text{Total Number of 2023-2032 Specialized Transit Trips (Existing and Ageing 2022 Population and New Growth Population)}} \\
 &= \frac{2,072,488}{8,449,812} \\
 &= \mathbf{24.5\%}
 \end{aligned}$$

The benefit to existing share is 75.5% and the benefit to growth share is 24.5% for specialized transit.

### 5.2.2.3 Operations and Facility Vehicles

Operations vehicles are used to supervise transit operations throughout the service area. Existing operations vehicles can continue to be used in the existing service areas. New operations vehicles are required to supervise transit service in new growth areas. Since these new operations vehicles are solely needed for the new growth areas, they are fully allocated to growth and have a 0% BTE.

Facility vehicles are required to support the operations of the new transit maintenance facility that is required to support growth in the transit fleet. The facility vehicles should have the same benefit allocation as the overall new transit facility. Watson & Associates assessed the new facility and determined the following growth allocations for the facility and facility vehicles:



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- Benefit to Existing: **77.6%**
- Benefit to Growth: **22.4%** (will be further adjusted to 15.7% to account for post-period benefit deductions in Section 5.2.3)

### 5.2.3 Transit Post-Period Benefit

Future growth-related transit projects provide some benefit to users beyond the transit growth period horizon (2023-2032). This is referred to as post-period benefit (PPB), and development charge calculations need to reflect this future benefit where appropriate. This section describes how the PPB deductions are calculated for transit services. The post-period is defined as 2033-2035.

#### 5.2.3.1 Conventional Vehicles

HSR's transit fleet features vehicles of various sizes, including 30-foot, 40-foot and 60-foot buses. The capital plan identifies the number of required new vehicles, of varying sizes, to meet anticipated ridership demand. However, there is limited ability to right-size a bus. If a service level threshold is met to warrant an additional vehicle on a route, the entire bus will be used regardless of whether it is full or not. This results in excess vehicle capacity during the growth period, and this excess capacity will be used in the post-period.

Similar to the BTE approach, a proportional ridership method is used to calculate the PPB deductions for conventional transit vehicles. Exhibit 5.9 below uses the information from Exhibit 1.2, Summary of Projected Local HSR Transit Ridership and Mode Share (2022-2035), to outline the total number of A.M. Peak period transit trips in the post-period and the split of these trips between the 2032 population and the post-period population.

The total number of transit trips and the split between trips made by the growth period baseline population (2032) and the post-period population (2033-2035) is described below:

- 2033-2035 Total Number of Transit Trips (Growth Period and Post-Period Population): **101,768**
- 2033-2035 Total Number of Transit Trips (Growth Period): **99,477**
- 2033-2035 Total Number of Transit Trips (Post-Period Population): **2,291**

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Exhibit 5.9: Allocation of Transit Trips between Existing and New Growth Population (2032-2035)

	2032	2033	2034	2035	Sum of 2033-2035
Total A.M. Peak Period Person Trips (Model)	324,030	327,751	331,515	335,321	-
A.M. Peak Period Additional Person Trips (Versus 2032 Baseline Population)	-	3,721	7,484	11,291	-
A.M. Peak Period Bus Mode Share	10.7%	10.4%	10.2%	10.1%	-
A.M. Peak Period HSR Bus Ridership	34,671	34,086	33,814	33,867	<b>101,768</b>
A.M. Peak Period Transit Trips made by Growth Period 2032 Population	34,671	33,699	33,051	32,727	<b>99,477</b>
A.M. Peak Period Transit Trips by Post-Period Population (Versus 2032 Baseline Population)	-	387	763	1,140	<b>2,291</b>

The post-period benefit is calculated using a proportional ridership basis as described below:

$$\text{Post-Period Benefit} = \frac{\text{2033-2035 Total Number of Transit Trips (Post-Period Population)}}{\text{2033-2035 Total Number of Transit Trips (Growth Period and Post-Period Population)}}$$

$$= \frac{2,291}{101,768}$$

$$= \mathbf{2.2\%}$$

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Since the growth period accounts for 2.2% of assumed transit trips beyond 2032, the growth period benefit share outlined in Section 5.2.2 needs to be adjusted:

$$\begin{aligned} \text{Adjusted Growth Period Benefit} &= \text{Original Growth Period Benefit} - \text{Post-Period Benefit} \\ &= 15.1\% - 2.2\% \\ &= \mathbf{12.9\%} \end{aligned}$$

The adjusted growth period benefit share is 12.9% and the post-period benefit share is 2.2% for conventional transit.

### 5.2.3.2 Specialized, Operations and Facility Vehicles

The new accessible supervisory vehicles for specialized transit are needed to support specialized transit operations in the growth period. Similarly, the new operations support vehicles are needed to support conventional transit operations in the growth period. Accordingly, there is no post-period benefit for the purchase of these vehicles.

Additional facility vehicles are needed to support the new transit maintenance facility. The service truck, stock room vehicle and garage equipment repair express van vehicles have an operational life of approximately 10 years. This is within the growth period, and these vehicles have no post-period benefit.

The garage equipment repair walk behind forklift, garage forklift and garage tow mobile have an operational life of approximately 20 years, which extends beyond the growth period into the post-period. These vehicles have been assigned the same post-period benefit as the overall transit maintenance facility.

This post-period benefit share is 6.7% based on an assessment by Watson & Associates.

The growth period share for these vehicles is adjusted to accommodate the post-period benefit share as described below:

$$\text{Adjusted Growth} = \text{Original Growth Period Benefit} - \text{Post-Period Benefit}$$

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$$\begin{aligned} \text{Period} &= 22.4\% - 6.7\% \\ \text{Benefit} & \end{aligned}$$

$$= 15.7\%$$

The adjusted growth period benefit share is 15.7% and the post-period benefit share is 6.7% for the garage equipment repair walk behind forklift, garage forklift and garage tow mobile.

### 5.2.4 Transit Benefit to Existing, Growth Period Benefit and Post-Period Benefit Summary

Exhibit 5.10 below summarizes the benefit allocation for transit services.

*Exhibit 5.10: Summary of Transit Benefit Allocation*

	Benefit to Existing	Benefit to Growth	Post-Period Benefit
Conventional Transit Vehicles	84.9%	12.9%	2.2%
Specialized Transit Vehicles	75.5%	24.5%	0%
Operations Vehicles	0%	100%	0%
Facility Vehicles – 10-Year Operational Life	77.6%	22.4%	0%
Facility Vehicles – 20-Year Operational Life	77.6%	15.7%	6.7%

## 5.3 Apportioning Benefit: Active Transportation Projects

The section describes the BTE and PPB percentages, and their rationale, for AT projects within the service target.

### 5.3.1 Active Transportation Benefit to Existing

The BTE percentages for AT projects vary based on the geographic location and the nature of the upgrade. Describes the BTE percentages and rationale below:

Exhibit 5.11: Active Transportation Benefit to Existing Percentages and Rationale

Project Type	BTE Percentage	Rationale
Infill Active Transportation (Cycling and/or Pedestrian Facilities)	81%	These projects are located within the urban boundary where there is a mix of existing and new growth residents. Existing and new residents benefit from active transportation projects in these infill areas. A population proportion approach is used to calculate the BTE percentage to reflect the 2023 population size relative to the 2041 STNR planning horizon population size.
New Growth Active Transportation (Upgrade Existing Cycling and/or Pedestrian Facilities)	15%	These projects are located outside of the urban boundary and are upgrades to existing facilities. The need for these upgrades is due to the new growth population, however existing users receive small benefits (i.e. repaving). This is consistent with BTE approach for road widenings.
New Growth Active Transportation (New Cycling and/or Pedestrian Facilities)	0%	These projects are located outside of the urban boundary. Since there is no existing facility, the need is driven entirely by new development.

### 5.3.2 Active Transportation Post-Period Benefit

A 30% PPB has been applied to all AT projects to account for the portion of the projects that would benefit growth beyond the service target – this aligns with the *2019 DC Study*.

## 5.4 Apportioning Benefit: Structures

This section describes the BTE and PPB percentages and their rationale for structures within the service target.

### 5.4.1 Structures Benefit to Existing

Structures comprise of three groups of projects: interchanges, active transportation bridges and grade separations. The BTE rates and explanations for each of these groups is outlined below:

- **Interchanges:** These projects increase the capacity of intersections and help to accommodate growing traffic. The nature of these projects can differ based on location and are thus assessed at an individual project level. The BTE rates from the *2019 DC Study* have been carried forward for two projects, with the Highway 5/6 Interchange project receiving 0% BTE and the Mohawk Road-Highway 403 Interchange Ramp project receiving 50% BTE. This study also includes two interchange projects that were not included in the *2019 DC Study*. The Centennial Parkway at QEW Interchange Reconfiguration received 50% BTE (similar to the Mohawk Road-Highway 403 Interchange Ramp project) as it appears to be warranted by both the existing and new growth populations, while the QEW Off-Ramps at Fifty Road (signalization and ramp reconfiguration) received 15% BTE as it appears to be largely growth-driven.
- **Active Transportation Bridges:** These projects are generally located in built-up areas and benefit existing and new growth residents. A population proportion approach is used to calculate the BTE as 81% – this reflects the 2023 population size relative to the 2041 STNR planning horizon population size.
- **Grade Separation:** These projects are designed to accommodate increased traffic flow and are warranted by new growth. It is recognized that these projects provide some benefit to existing users due to increased safety and improved travel time. These projects have been assigned 25% BTE.

#### 5.4.2 Structures Post-Period Benefit

Most structures are scheduled for implementation prior to the service target and accordingly have no PPB. Active transportation bridges scheduled for implementation beyond the service target have been assigned 100% PPB. Grade separation was assigned a 50% PPB in the *2019 DC Study* – this has been carried forward as it was deemed that project benefit will extend to development built beyond the service target.

### 5.5 Apportioning Benefit: Programs

This section describes the BTE and PPB percentages and their rationale for programs within the service target.

#### 5.5.1 Programs Benefit to Existing

Exhibit 5.12 below outlines the various programs, their BTE level, and the associated rationale.

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*Exhibit 5.12: Programs Benefit to Existing Percentages and Rationale*

Program	BTE Percentage	Rationale
Development Road Urbanization	5%	This program is largely driven by growth in adjacent developments. There is a small benefit to existing users due to resurfacing.
Advanced Traffic Management Systems	75%	This program improves traffic flow throughout the city and primarily benefits existing users. There is a benefit to growth as the systems help to accommodate growth-related traffic increases.
New Traffic Signals	5%	These signals are warranted by growth. There is a small benefit to existing users due to safety improvements.
Traffic Signal Upgrades	5%	These upgrades are primarily conducted to accommodate growth. There is a small benefit to existing users due to safety improvements.
Traffic Signal LED Replacement Program	100%	This program is not growth-related.
Traffic Controller Cabinet Replacements (Capacity Related)	5%	Traffic controller cabinet replacements are generally undertaken to accommodate growth and road network capacity increases. There may be a small benefit to existing users due to improved traffic signal operations.
Unidentified intersection improvements (excluding Traffic Signals)	81%	Improvements can be driven by growth (e.g. new signal phasing, intersection widening requiring signal changes), or could be driven by safety upgrades (i.e. cross-rides for AT users, new signals to address high collision locations) that benefit both existing users and new growth users. A population proportion approach is used to calculate the BTE as 81%. This reflects the 2023 population size relative to the 2041 STNR planning horizon population size.
Miscellaneous Land Acquisitions	5%	Land acquisition is typically used to add road capacity through adding additional lanes. There is a small benefit to existing users due to repaving.
Transit Shelter Expansion Program	50%	Many new transit shelters are located in growth areas, but some transit shelters are replacements in infill areas.

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Program	BTE Percentage	Rationale
Bus Stop Shelter Rehabilitation Program	85%	Rehabilitation of bus shelters benefits new growth and existing users. It is assumed that many bus shelters in infill areas with existing users, however there will be some bus shelters that are rehabilitated in new growth areas to accommodate new users.
Annual Bike Parking at B/A Line Stops	81%	Hamilton’s rapid transit network is largely located within the urban boundary on intensification corridors. New growth and existing residents both benefit. A population proportion approach is used to calculate the BTE as 81%. This reflects the 2023 population size relative to the 2041 STNR planning horizon population size.
Annual Enhanced Bike Parking at Express Bus/Rapid Transit Stops	81%	New growth and existing residents both benefit. A population proportion approach is used to calculate the BTE as 81%. This reflects the 2023 population size relative to the 2041 STNR planning horizon population size.
Bike Parking	81%	New growth and existing residents both benefit. A population proportion approach is used to calculate the BTE as 81%. This reflects the 2023 population size relative to the 2041 STNR planning horizon population size.
Micromobility	81%	New growth and existing residents both benefit. A population proportion approach is used to calculate the BTE as 81%. This reflects the 2023 population size relative to the 2041 STNR planning horizon population size.
Transportation Demand Management	81%	New growth and existing residents both benefit. A population proportion approach is used to calculate the BTE as 81%. This reflects the 2023 population size relative to the 2041 STNR planning horizon population size.
New Signals (Pedestrian and/or Regular)	5%	New signals are warranted by new development. There is a small benefit to existing users due to improved safety and traffic operations.
Street Lighting Enhancement Program	81%	New growth and existing residents both benefit. A population proportion approach is used to calculate the BTE as 81%. This reflects the 2023 population size relative to the 2041 STNR planning horizon population size.



## Appendix D

Program	BTE Percentage	Rationale
Pedestrian Crossovers	81%	New growth and existing residents both benefit. A population proportion approach is used to calculate the BTE as 81%. This reflects the 2023 population size relative to the 2041 STNR planning horizon population size.
New Sidewalk Program	0%	New sidewalks are warranted by new developments.
Durable Pavement Markings – New Installations	15%	These projects are similar to road as they are warranted by growth but provide small benefits (i.e. safety) to existing users.
Sidewalk Missing Link Program	81%	New growth and existing residents both benefit. A population proportion approach is used to calculate the BTE as 81%. This reflects the 2023 population size relative to the 2041 STNR planning horizon population size.

### 5.5.2 Programs Post-Period Benefit

All programs are scheduled for implementation prior to the service target and accordingly have no PPB.

# Appendix E

**2024 Development Charges Background Study Transportation  
Capital Projects List**

Prj. No.	Increased Service Needs Attributable to Anticipated Development	2031 Oversizing (To 2031 Road Projects within the Urban Boundary)*	Timing (year)	Length (km)	Capital Improvement	Gross Capital Cost Estimate (2023\$)	Other Deductions	Benefit to Existing Development	Post Period Benefit	Net Capital Cost
<b>Road Projects</b>										
<b>AEGD</b>										
1	Airport Road - Terminal Access Road to Provident Way/East Cargo Road	✓	To 2031	0.32	2r-4u	\$ 3,789,353	\$ -	\$ 1,515,741	\$ -	\$ 2,273,612
2	Book Road - Southcote Road to Highway 6	✓	To 2031	1.05	2r-5u	\$ 11,523,989	\$ -	\$ 1,728,598	\$ -	\$ 9,795,391
3	Collector 1E - Collector 6N to Dickenson Road		2031 to 2041	0.67	3u	\$ 6,558,380	\$ -	\$ -	\$ 6,558,380	\$ -
4	Arterial 1N - Collector 2N to Dickenson Road/Garth Street Extension	✓	To 2031	2.97	5u	\$ 34,917,248	\$ -	\$ -	\$ -	\$ 34,917,248
5	Collector 2N - Collector 5W to Arterial 1N		2031 to 2041	0.42	3u	\$ 4,105,309	\$ -	\$ -	\$ 4,105,309	\$ -
6	Collector 6N - Upper James Street to Collector 6E		2031 to 2041	0.95	4u	\$ 10,307,184	\$ -	\$ -	\$ 10,307,184	\$ -
7	Collector 6N - Collector 6E to Garth Street		2031 to 2041	0.41	4u	\$ 4,524,353	\$ -	\$ -	\$ 4,524,353	\$ -
8	Collector 6N - Garth Street to Glancaster Road		2031 to 2041	1.54	4u	\$ 16,775,250	\$ -	\$ -	\$ 16,775,250	\$ -
9	Collector 6E - Collector 6N to Dickenson Road	✓	To 2031	0.64	3u	\$ 6,342,202	\$ -	\$ -	\$ -	\$ 6,342,202
10	Collector 7N - Collector 5W to Collector 2W		2031 to 2041	1.19	3u	\$ 11,756,604	\$ -	\$ -	\$ 11,756,604	\$ -
11	Collector 8W - Garner Road to Collector 5N		2031 to 2041	1.07	2u	\$ 8,301,996	\$ -	\$ -	\$ 8,301,996	\$ -
12	Dickenson Road - Glancaster Road to Garth Street Extension		2031 to 2041	1.53	2r-5u	\$ 18,044,132	\$ -	\$ -	\$ 18,044,132	\$ -
13	Dickenson Road - Garth Street Extension to Upper James Street	✓	To 2031	1.36	2r-5u	\$ 16,039,229	\$ -	\$ 2,405,884	\$ -	\$ 13,633,344
14	Dickenson Road Extension - Glancaster Road to Smith Road		2031 to 2041	0.83	5u	\$ 9,447,229	\$ -	\$ -	\$ 9,447,229	\$ -
15	Book Road - Smith Road to Southcote Road	✓	To 2031	0.45	2r-5u	\$ 5,343,540	\$ -	\$ 801,531	\$ -	\$ 4,542,009
16	Garth Street Extension - Twenty Road to Collector 6N		2031 to 2041	0.81	5u	\$ 9,477,970	\$ -	\$ -	\$ 9,477,970	\$ -
17	Garth Street Extension - Collector 6N to Dickenson Road		2031 to 2041	0.66	5u	\$ 7,709,296	\$ -	\$ -	\$ 7,709,296	\$ -
18	Glancaster Road - Garner Road to Dickenson Road	✓	To 2031	2.67	2r-3u	\$ 23,144,329	\$ -	\$ 3,471,649	\$ -	\$ 19,672,680
19	Glancaster Road - Dickenson Road to Arterial 1N		2031 to 2041	0.39	3u-5u	\$ 4,605,603	\$ -	\$ -	\$ 4,605,603	\$ -
20	Garner Road - Glancaster Road to Highway 6 South	✓	To 2031	3.12	2r-5u	\$ 31,491,877	\$ -	\$ 4,723,782	\$ -	\$ 26,768,096
21	Smith Road - Garner Road to Hydro Corridor	✓	To 2031	0.88	3u	\$ 8,635,284	\$ -	\$ -	\$ -	\$ 8,635,284
22	Smith Road - Hydro Corridor to Book Road		2031 to 2041	1.01	3u	\$ 9,946,349	\$ -	\$ -	\$ 9,946,349	\$ -
23	Smith Road - Book Road to Arterial 1N		2031 to 2041	0.63	3u	\$ 6,166,835	\$ -	\$ -	\$ 6,166,835	\$ -
24	Southcote Road - Garner Road to Book Road		2031 to 2041	1.95	2r-5u	\$ 23,002,848	\$ -	\$ -	\$ 23,002,848	\$ -
25	Upper James Street - Rymal Road to Highway 6 South		2031 to 2041	7.22	4r-6u	\$ 96,459,332	\$ -	\$ -	\$ 96,459,332	\$ -
26	Glancaster Road - Arterial 1N to Airport Boundary		2031 to 2041	0.48	2u	\$ 3,512,806	\$ -	\$ -	\$ 3,512,806	\$ -
27	Collector 9W - Garner Road to Collector 11N		2031 to 2041	0.33	2u	\$ 2,536,970	\$ -	\$ -	\$ 2,536,970	\$ -
28	Smith Road - Arterial 1N to Airport Boundary		2031 to 2041	0.21	3u	\$ 2,078,580	\$ -	\$ -	\$ 2,078,580	\$ -
29	Airport Road - East Cargo Road to Upper James Street	✓	To 2031	1.08	2r-3u	\$ 8,462,899	\$ -	\$ 3,385,160	\$ -	\$ 5,077,739
30	Book Road East - Collector 2W to Glancaster Road		2031 to 2041	0.85	2r-3u	\$ 6,510,409	\$ -	\$ -	\$ 6,510,409	\$ -
31	Collector 10N - Garner Road to Smith Road	✓	To 2031	1.17	3u	\$ 11,487,688	\$ -	\$ -	\$ -	\$ 11,487,688
32	Twenty Road - Glancaster Road to Upper James Street		2031 to 2041	2.90	2r-4u	\$ 32,145,181	\$ -	\$ -	\$ 32,145,181	\$ -
33	Airport Road - Glancaster Road to Terminal Access Road		To 2031	1.71	2r-2u	\$ 15,971,496	\$ -	\$ 6,388,598	\$ -	\$ 9,582,898
34	Collector 11N - Fiddler's Green Road to Collector 9W		2031 to 2041	0.35	2u	\$ 2,724,513	\$ -	\$ -	\$ 2,724,513	\$ -
35	Collector 1W - Collector 10N to Garner Road		2031 to 2041	0.39	3u	\$ 3,819,733	\$ -	\$ -	\$ 3,819,733	\$ -
<b>Ancaster</b>										
36	Garner Road - Highway 6 South to Wilson Street	✓	To 2031	4.86	2r-5u	\$ 49,311,040	\$ -	\$ 7,396,656	\$ -	\$ 41,914,384
37	Jerseyville Road - Wilson Street to Lloyminn Avenue		2031 to 2041	0.79	2r-3u	\$ 6,367,167	\$ -	\$ -	\$ 6,367,167	\$ -
38	Shaver Road - Trustwood to Garner Road		2031 to 2041	0.74	2r-2i	\$ 6,303,822	\$ -	\$ -	\$ 6,303,822	\$ -
39	McNiven Road - Rousseaux Street/Mohawk Road to Golf Links Road		To 2031	0.62	2r-3u	\$ 4,895,491	\$ -	\$ 3,916,393	\$ -	\$ 979,098
40	Jerseyville Road - Lloyminn Avenue to Meadowbrook Drive		2031 to 2041	1.25	2r-2u	\$ 10,164,929	\$ -	\$ -	\$ 10,164,929	\$ -
<b>Fruitland - Winona</b>										
41	Barton Street - Fruitland Road to Fifty Road	✓	To 2031	5.11	2r-5u	\$ 53,873,435	\$ -	\$ 21,549,374	\$ -	\$ 32,324,061
42	Fifty Road - Barton Street to South Service Road	✓	To 2031	0.55	2r-4u	\$ 5,178,149	\$ -	\$ 776,722	\$ -	\$ 4,401,426
43	Fifty Road - Barton Street to Highway 8		2031 to 2041	0.24	2r-3u	\$ 1,834,403	\$ -	\$ -	\$ 1,834,403	\$ -
44	Gordon Dean Avenue - Barton Street to Highway 8	✓	To 2031	1.08	4u	\$ 11,551,567	\$ -	\$ -	\$ -	\$ 11,551,567
45	Trinity Road/Highway 52 - Highway 403 Interchange to Cormorant Road		To 2031	1.79	2r-4u	\$ 17,792,911	\$ -	\$ 2,668,937	\$ -	\$ 15,123,974
46	Highway 8 - Dewitt Road to Jones Road		To 2031	1.73	2r-4u	\$ 16,331,501	\$ -	\$ 6,532,600	\$ -	\$ 9,798,900

Prj. No.	Increased Service Needs Attributable to Anticipated Development	2031 Oversizing (To 2031 Road Projects within the Urban Boundary)*	Timing (year)	Length (km)	Capital Improvement	Gross Capital Cost Estimate (2023\$)	Other Deductions	Benefit to Existing Development	Post Period Benefit	Net Capital Cost
47	Highway 8 - Jones Road to McNeilly Road		2031 to 2041	1.73	2r-4u	\$ 17,715,501	\$ -	\$ -	\$ 17,715,501	\$ -
48	Highway 8 - McNeilly Road to Fifty Road		2031 to 2041	2.67	2r-3u	\$ 20,604,135	\$ -	\$ -	\$ 20,604,135	\$ -
49	Collector B (Block 1) - Fruitland Road to Jones Road		2031 to 2041	0.89	2u	\$ 6,779,781	\$ -	\$ -	\$ 6,779,781	\$ -
50	Collector C (Block 2) - Barton Street to Highway 8	✓	To 2031	0.74	2u	\$ 5,642,466	\$ -	\$ -	\$ -	\$ 5,642,466
51	Collector D (Block 3) - McNeilly Road to Collector F		2031 to 2041	1.25	2u	\$ 9,537,486	\$ -	\$ -	\$ 9,537,486	\$ -
52	Collector E (Block 3) - Barton Street to Highway 8	✓	To 2031	0.66	2u	\$ 5,060,086	\$ -	\$ -	\$ -	\$ 5,060,086
53	Collector F (Block 3) - Barton Street to Collector D	✓	To 2031	0.22	2u	\$ 1,713,732	\$ -	\$ -	\$ -	\$ 1,713,732
54	Fruitland Road - Highway 8 to Barton Street	✓	To 2031	1.05	2r-3u	\$ 8,937,129	\$ -	\$ 1,340,569	\$ -	\$ 7,596,559
55	Fruitland Road - Arvin Avenue to Barton Street		To 2031	0.36	2u-5u	\$ 4,339,490	\$ -	\$ 650,923	\$ -	\$ 3,688,566
<b>MTO</b>										
56	Highway 403 - Mohawk Road/Lincoln M. Alexander Parkway to Highway 6 south interchange		To 2031	6	Truck Climbing Lane	\$ 4,878,650	\$ 2,439,325	\$ 365,899	\$ -	\$ 2,073,426
<b>Red Hill Business Park</b>										
57	Dartnall Road - Twenty Road to Dickenson Road		To 2031	1.55	4u	\$ 17,001,938	\$ -	\$ -	\$ -	\$ 17,001,938
58	Twenty Road Extension - Glover Road to Upper Redhill Valley Parkway	✓	To 2031	0.35	2i	\$ 3,185,739	\$ -	\$ -	\$ -	\$ 3,185,739
59	Upper Red Hill Valley Parkway - Rymal Road to Twenty Road		2031 to 2041	1.22	4u	\$ 13,103,066	\$ -	\$ -	\$ 13,103,066	\$ -
60	Dickenson Road - 350 meters west of Nebo to 330m west of Glover Road		2031 to 2041	1.20	2r-2i	\$ 11,285,379	\$ -	\$ -	\$ 11,285,379	\$ -
61	Glover Road - Twenty Road to Rymal Road	✓	To 2031	1.31	2r-2i	\$ 11,485,019	\$ -	\$ 1,722,753	\$ -	\$ 9,762,267
62	Nebo Road - Twenty Road to Dickenson Road/Dartnall Road		To 2031	0.74	2r-2i	\$ 6,302,030	\$ -	\$ 945,305	\$ -	\$ 5,356,726
63	Nebo Road - Rymal Road to Twenty Road East		To 2031	1.30	2r-2i	\$ 11,085,926	\$ -	\$ 1,662,889	\$ -	\$ 9,423,037
<b>South Mountain Area</b>										
64	Rymal Road - Dartnall Road to Upper James Street	✓	To 2031	5.17	2r-5u	\$ 56,631,794	\$ -	\$ 8,494,769	\$ -	\$ 48,137,025
65	Upper Wellington Street - Limeridge Road to Stone Church Road		To 2031	1.04	2r-3u	\$ 12,404,686	\$ -	\$ 4,961,874	\$ -	\$ 7,442,812
66	Garth Street - Rymal Road to Twenty Road West		2031 to 2041	1.41	2r-5u	\$ 15,963,350	\$ -	\$ -	\$ 15,963,350	\$ -
67	Rymal Road - Glancaster Road to Upper Paradise Street		To 2031	0.55	2r-5u	\$ 5,594,604	\$ -	\$ 839,191	\$ -	\$ 4,755,413
68	West 5th Street - Rymal Road to Stone Church Road	✓	To 2031	1.01	2r-3u	\$ 7,728,774	\$ -	\$ 3,091,510	\$ -	\$ 4,637,265
<b>Stoney Creek</b>										
69	Arvin Avenue - McNeilly Road to Lewis Road		To 2031	0.85	2i	\$ 7,736,794	\$ -	\$ -	\$ -	\$ 7,736,794
70	South Service Road - Lewis Road to Fifty Road	✓	To 2031	1.79	2r-4r	\$ 13,701,195	\$ -	\$ 2,055,179	\$ -	\$ 11,646,015
71	McNeilly Road - Highway 8 to Barton Street	✓	To 2031	0.90	2r-2u	\$ 7,156,843	\$ -	\$ 1,073,526	\$ -	\$ 6,083,317
72	Lewis Road - Highway 8 to Barton Street	✓	To 2031	0.49	2r-2u	\$ 3,908,425	\$ -	\$ 586,264	\$ -	\$ 3,322,161
73	Glover Road - Highway 8 to Barton Street		2031 to 2041	0.81	2r-2u	\$ 6,259,225	\$ -	\$ -	\$ 6,259,225	\$ -
74	Jones Road - Highway 8 to Barton Street	✓	To 2031	0.92	2r-2u	\$ 7,293,473	\$ -	\$ 1,094,021	\$ -	\$ 6,199,452
75	Jones Road - Barton Street to South Service Road		To 2031	0.92	2r-2i	\$ 8,035,897	\$ -	\$ 4,017,949	\$ -	\$ 4,017,949
76	Lewis Road - Barton Street to South Service Road		To 2031	0.87	2r-2i	\$ 7,871,843	\$ -	\$ 3,935,922	\$ -	\$ 3,935,922
77	Millen Road - Barton Street to South Service Road		To 2031	1.07	2r-2i	\$ 9,092,330	\$ -	\$ 3,636,932	\$ -	\$ 5,455,398
78	South Service Road - Millen Road to Gray Road		2031 to 2041	1.55	2r-2u	\$ 12,006,082	\$ -	\$ -	\$ 12,006,082	\$ -
<b>Twenty Road East</b>										
79	Upper Ottawa Street - End to Twenty Road		2031 to 2041	0.95	4u	\$ 10,215,838	\$ -	\$ -	\$ 10,215,838	\$ -
<b>Waterdown</b>										
80	North Waterdown Drive - Centre Road to Parkside Drive		To 2031	1.28	3u	\$ 12,464,597	\$ -	\$ -	\$ -	\$ 12,464,597
81	Parkside Drive - North Waterdown Drive to Avonsyde Boulevard	✓	To 2031	1.47	2r-3u	\$ 32,319,655	\$ -	\$ 4,847,948	\$ -	\$ 27,471,707
82	North Waterdown Drive - Clappison Avenue Extension to Mosaic Drive		To 2031	0.59	3u	\$ 5,726,919	\$ -	\$ -	\$ -	\$ 5,726,919
83	Clappison Avenue Extension - Parkside Drive to North Waterdown Drive		To 2031	0.54	2u	\$ 4,132,544	\$ -	\$ -	\$ -	\$ 4,132,544
84	Parkside Drive - Hollybush Drive to Highway 6	✓	To 2031	1.07	2r-4u	\$ 10,266,769	\$ -	\$ 4,106,708	\$ -	\$ 6,160,062
85	Parkside Drive - Main Street to North Waterdown Drive		2031 to 2041	0.59	2r-3u	\$ 4,533,236	\$ -	\$ -	\$ 4,533,236	\$ -
<b>Other</b>										
86	Binbrook Road - Fletcher Road to Binhaven Road	✓	To 2031	0.91	2r-2u	\$ 7,297,133	\$ -	\$ 1,094,570	\$ -	\$ 6,202,563
87	LRT corridor - Centennial Parkway/Main Street/King Street to McMaster University		To 2031	13.77	Public Realm Improvements	\$ 9,990,000	\$ -	\$ 1,498,500	\$ -	\$ 8,491,500
88	Longwood Road - Aberdeen Avenue to Main Street		To 2031	0.64	4u	\$ 8,192,524	\$ -	\$ 4,096,262	\$ -	\$ 4,096,262
89	Lincoln M. Alexander Parkway-Red Hill Valley Parkway - Highway 403 to Queen Elizabeth Way		2031 to 2041	17.30	4r-6u	\$ 135,000,000	\$ -	\$ -	\$ 135,000,000	\$ -

Prj. No.	Increased Service Needs Attributable to Anticipated Development	2031 Oversizing (To 2031 Road Projects within the Urban Boundary)*	Timing (year)	Length (km)	Capital Improvement	Gross Capital Cost Estimate (2023\$)	Other Deductions	Benefit to Existing Development	Post Period Benefit	Net Capital Cost
<b>Local Share Deductions</b>										
90	Provision for Local Share of Urbanization (Urbanization Rate)					\$ (4,684,630)				\$ (4,684,630)
91	Local Share Deductions					\$ (64,082,002)				\$ (64,082,002)
<b>Major Structures</b>										
92	Highway 5/6 Interchange		To 2031	-	Structure	\$ 60,500,000	\$ 45,500,000	\$ -	\$ -	\$ 15,000,000
93	Mohawk Road - Highway 403 Interchange Ramp		To 2031	-	Structure	\$ 4,042,310	\$ -	\$ 2,021,155	\$ -	\$ 2,021,155
94	Centennial Parkway at QEW		To 2031	-	Interchange Reconfiguration	\$ 8,500,000	\$ -	\$ 4,250,000	\$ -	\$ 4,250,000
95	QEW Off-Ramps at Fifty Road		To 2031	-	Signalization and Ramp Reconfiguration	\$ 4,000,000	\$ -	\$ 600,000	\$ -	\$ 3,400,000
96	Strathcona Pedestrian Bridge		2031 to 2041	-	Structure	\$ 31,500,000	\$ -	\$ -	\$ 31,500,000	\$ -
97	Limeridge Mall Pedestrian Bridge		To 2031	-	Structure	\$ 6,500,000	\$ 3,500,000	\$ 2,430,000	\$ -	\$ 570,000
98	Henderson Lift Pedestrian and Cyclist Bridge		2031 to 2041	-	Structure	\$ 20,000,000	\$ -	\$ -	\$ 20,000,000	\$ -
99	Hamilton Centre Pedestrian and Cyclist Bridge		2031 to 2041	-	Structure	\$ 9,500,000	\$ -	\$ -	\$ 9,500,000	\$ -
100	Red Hill Pedestrian and Cyclist Bridge		To 2031	-	Structure	\$ 19,000,000	\$ -	\$ 15,390,000	\$ -	\$ 3,610,000
101	Dundas Pedestrian and Cyclist Bridge		2031 to 2041	-	Structure	\$ 3,125,000	\$ -	\$ -	\$ 3,125,000	\$ -
102	Margaret St. Park Active Transportation Bridge		2031 to 2041	-	Structure	\$ 5,900,000	\$ -	\$ -	\$ 5,900,000	\$ -
103	Sealey Park Active Transportation Bridge		To 2031	-	Structure	\$ 7,500,000	\$ -	\$ 6,075,000	\$ -	\$ 1,425,000
104	Grade Separation		To 2031	-	Grade Separation	\$ 71,827,667	\$ -	\$ 17,956,917	\$ 26,935,375	\$ 26,935,375
<b>Programs</b>										
105	New Signals (Pedestrian and/or Regular)		2024-2031	-	City-Wide Program	\$ 32,000,000	\$ -	\$ 1,600,000	\$ -	\$ 30,400,000
106	Development Road Urbanization		2024-2031	-	City-Wide Program	\$ 6,500,000	\$ -	\$ 325,000	\$ -	\$ 6,175,000
107	Street Lighting Enhancement Program		2024-2031	-	City-Wide Program	\$ 3,250,000	\$ -	\$ 2,632,500	\$ -	\$ 617,500
108	Pedestrian Crossovers		2024-2031	-	City-Wide Program	\$ 1,680,000	\$ -	\$ 1,360,800	\$ -	\$ 319,200
109	Advanced Traffic Management Systems		2024-2031	-	City-Wide Program	\$ 6,000,000	\$ -	\$ 4,500,000	\$ -	\$ 1,500,000
110	Transit Shelter Expansion Program		2024-2031	-	City-Wide Program	\$ 1,200,000	\$ -	\$ 600,000	\$ -	\$ 600,000
111	Bus Stop Shelter Rehabilitation Program		2024-2031	-	City-Wide Program	\$ 1,000,000	\$ -	\$ 850,000	\$ -	\$ 150,000
112	New Sidewalk Program		2024-2031	-	City-Wide Program	\$ 6,500,000	\$ -	\$ -	\$ -	\$ 6,500,000
113	New Traffic Signals		2024-2031	-	City-Wide Program	\$ 12,000,000	\$ -	\$ 600,000	\$ -	\$ 11,400,000
114	New Traffic Signal - Drakes Drive at North Service Road		2024-2031	-	Traffic Signal	\$ 350,000	\$ -	\$ 17,500	\$ -	\$ 332,500
115	New Traffic Signal - Regional Road 20 at Westbrook Road		2024-2031	-	Traffic Signal	\$ 350,000	\$ -	\$ 17,500	\$ -	\$ 332,500
116	New Traffic Signal - Regional Road 56 at Kirk Road		2024-2031	-	Traffic Signal	\$ 350,000	\$ -	\$ 17,500	\$ -	\$ 332,500
117	New Traffic Signal - Fifty Road at North Service Road		2024-2031	-	Traffic Signal	\$ 350,000	\$ -	\$ 17,500	\$ -	\$ 332,500
118	New Traffic Signal - Fruitland Road at North Service Road		2024-2031	-	Traffic Signal	\$ 350,000	\$ -	\$ 17,500	\$ -	\$ 332,500
119	Unidentified intersection improvements (excluding Traffic Signals)		2024-2031	-	City-Wide Program	\$ 3,250,000	\$ -	\$ 2,632,500	\$ -	\$ 617,500
120	Annual Bike Parking at B/A Line Stops		2024-2031	-	City-Wide Program	\$ 46,000	\$ -	\$ 37,260	\$ -	\$ 8,740
121	Annual Enhanced Bike Parking at Express Bus/Rapid Transit Stops		2024-2031	-	City-Wide Program	\$ 275,000	\$ -	\$ 222,750	\$ -	\$ 52,250
122	Transportation Demand Management		2024-2031	-	City-Wide Program	\$ 4,400,000	\$ -	\$ 3,564,000	\$ -	\$ 836,000
123	Durable Pavement Markings – New Installations		2024-2031	-	City-Wide Program	\$ 1,600,000	\$ -	\$ 240,000	\$ -	\$ 1,360,000
124	Traffic Controller Cabinet Replacements (Capacity Related)		2024-2031	-	City-Wide Program	\$ 3,200,000	\$ -	\$ 160,000	\$ -	\$ 3,040,000
125	Traffic Signal Upgrades		2024-2031	-	City-Wide Program	\$ 2,400,000	\$ -	\$ 120,000	\$ -	\$ 2,280,000
126	Traffic Signal LED Replacement Program		2024-2031	-	City-Wide Program	\$ 1,760,000	\$ -	\$ 1,760,000	\$ -	\$ -
127	Sidewalk Missing Link Program		2024-2031	-	City-Wide Program	\$ 2,000,000	\$ -	\$ 1,620,000	\$ -	\$ 380,000
128	Bike Parking		2024-2031	-	City-Wide Program	\$ 720,000	\$ -	\$ 583,200	\$ -	\$ 136,800
129	Micromobility		2024-2031	-	City-Wide Program	\$ 1,200,000	\$ -	\$ 972,000	\$ -	\$ 228,000
130	Miscellaneous Land Acquisitions		2024-2031	-	City-Wide Program	\$ 6,969,500	\$ -	\$ 348,475	\$ -	\$ 6,621,025
<b>Active Transportation Projects</b>										
131	Barton - Brockley to Fruitland		2024-2031	3.95	Multi-Use Trail	\$ 171,450	\$ -	\$ 138,874	\$ 9,773	\$ 22,803
132	Barton - Red Hill Valley to Lake		2024-2031	1.61	Cycle track	\$ 326,173	\$ -	\$ 264,200	\$ 18,592	\$ 43,381
133	Baseline/ Lockport - Winona Road to Niagara border		2024-2031	1.15	Bike Lane	\$ 32,060	\$ -	\$ 25,968	\$ 1,827	\$ 4,264
134	Battlefield Park - Bruce Trail Link - Greenhill to Bruce Trail to Glover Mtn		2024-2031	0.75	Multi-Use Trail	\$ 742,949	\$ -	\$ 601,788	\$ 42,348	\$ 98,812
135	Beach Bike Lane - under QEW		2024-2031	0.24	Bike Lane	\$ 9,757	\$ -	\$ 7,903	\$ 556	\$ 1,298
136	Beach Boulevard - lift bridge to Woodward/Eastport		2024-2031	4.52	Bike Lane	\$ 131,027	\$ -	\$ 106,132	\$ 7,469	\$ 17,427
137	Beddoe Drive Link		2024-2031	0.91	Multi-Use Trail	\$ 723,434	\$ -	\$ 585,982	\$ 41,236	\$ 96,217
138	Binbrook Road - Regional Road 56 to Southbrook		2024-2031	0.28	Bike Lane	\$ 9,757	\$ -	\$ 7,903	\$ 556	\$ 1,298

Prj. No.	Increased Service Needs Attributable to Anticipated Development	2031 Oversizing (To 2031 Road Projects within the Urban Boundary)*	Timing (year)	Length (km)	Capital Improvement	Gross Capital Cost Estimate (2023\$)	Other Deductions	Benefit to Existing Development	Post Period Benefit	Net Capital Cost
139	Binbrook Road - Trinity Church to Royal Winter/Binhaven		2024-2031	2.16	Multi-Use Trail	\$ 342,899	\$ 146,050	\$ -	\$ 59,055	\$ 137,795
140	Birch/ Holton - Burlington St to Cannon/ King/ Delaware		2024-2031	1.40	Bike Lane	\$ 43,211	\$ -	\$ 35,001	\$ 2,463	\$ 5,747
141	Burlington Street East Boulevard Trail - Ottawa to Parkdale to Glow		2024-2031	2.30	Multi-Use Trail	\$ 1,463,595	\$ -	\$ 1,185,512	\$ 83,425	\$ 194,658
142	Burlington Street Link - Ferguson/ Dock Service Road to Sherman		2024-2031	1.88	Multi-Use Trail	\$ 144,966	\$ -	\$ 117,422	\$ 8,263	\$ 19,280
143	Burlington/ Industrial - Sherman to Gage		2024-2031	0.86	Cycle track	\$ 137,996	\$ -	\$ 111,777	\$ 7,866	\$ 18,353
144	Centennial Parkway - North Service to GO station/ Kenora		2024-2031	1.20	Multi-Use Trail	\$ 217,448	\$ -	\$ 176,133	\$ 12,395	\$ 28,921
145	Centre - Concession 8 E to Concession 7 E		2024-2031	1.80	Paved Shoulder	\$ 489,259	\$ -	\$ 73,389	\$ 124,761	\$ 291,109
146	Centre - Grindstone Creek to Concession 5 E		2024-2031	0.45	Paved Shoulder	\$ 122,663	\$ -	\$ 18,399	\$ 31,279	\$ 72,985
147	Centre - Warren/ Carlisle Road to Progreston		2024-2031	0.78	Paved Shoulder	\$ 210,479	\$ -	\$ 31,572	\$ 53,672	\$ 125,235
148	Charlton/ John - James to Ferguson & St Joseph's Dr		2024-2031	0.80	Bike Lane	\$ 117,088	\$ -	\$ 94,841	\$ 6,674	\$ 15,573
149	Chedmac - Southridge to Rice		2024-2031	0.53	Bike Lane	\$ 32,060	\$ -	\$ 25,968	\$ 1,827	\$ 4,264
150	Chedoke Rail Trail - Highway 403 to Dundurn		2024-2031	4.68	Multi-Use Trail	\$ 2,072,729	\$ -	\$ 1,678,911	\$ 118,146	\$ 275,673
151	Cherry Beach Road Link - Millen to Dewitt		2024-2031	0.91	Multi-Use Trail	\$ 326,173	\$ -	\$ 264,200	\$ 18,592	\$ 43,381
152	Christie-Tews - Christie C.A. to Harvest		2024-2031	2.75	Multi-Use Trail	\$ 1,566,744	\$ -	\$ 235,012	\$ 399,520	\$ 932,212
153	Delawana - Kenora to Lake		2024-2031	1.02	Bike Lane	\$ 12,545	\$ -	\$ 10,162	\$ 715	\$ 1,668
154	Devil's Punchbowl Link - Mountain Ave/ Lake Ave to Ridge Road/ Devil's		2024-2031	0.42	Multi-Use Trail	\$ 209,085	\$ -	\$ 169,359	\$ 11,918	\$ 27,808
155	Dewitt - Barton to Dundee		2024-2031	0.90	Bike Lane	\$ 29,272	\$ -	\$ 23,710	\$ 1,668	\$ 3,893
156	Dewitt - Dundee to Ridge		2024-2031	0.50	Bike Lane	\$ 1,045,425	\$ -	\$ 846,794	\$ 59,589	\$ 139,042
157	Dundas St - Main to Cootes		2024-2031	0.68	Bike Lane	\$ 22,302	\$ -	\$ 18,065	\$ 1,271	\$ 2,966
158	Dundas St in Waterdown - Highway 6 to Kearns (border)		2024-2031	6.03	Multi-Use Trail	\$ 179,813	\$ -	\$ 145,649	\$ 10,249	\$ 23,915
159	East Townline - Mud to Highland		2024-2031	1.10	Bike Lane	\$ 18,121	\$ -	\$ 2,718	\$ 4,621	\$ 10,782
160	Eastport Drive Lift Bridge Link		2024-2031	0.60	Multi-Use Trail	\$ 2,439,325	\$ -	\$ 1,975,853	\$ 139,042	\$ 324,430
161	Edgewood - Safari to Highway 6		2024-2031	0.90	Bike Lane	\$ 15,333	\$ -	\$ -	\$ 4,600	\$ 10,733
162	Emperor - Brigade to Acadia		2024-2031	0.44	Bike Lane	\$ 22,302	\$ -	\$ 18,065	\$ 1,271	\$ 2,966
163	Existing Pipeline Trail - Main to Strathearne		2024-2031	2.20	Multi-Use Trail	\$ 6,522,058	\$ -	\$ 5,282,867	\$ 371,757	\$ 867,434
164	Fallsview - Sydenham to Rock Chapel Road		2024-2031	1.40	Multi-Use Trail	\$ 487,865	\$ -	\$ -	\$ 146,360	\$ 341,506
165	Fennell Avenue Boulevard Trail - Garth/ West 18th to West 5th		2024-2031	1.20	Multi-Use Trail	\$ 574,287	\$ -	\$ 465,172	\$ 32,734	\$ 76,380
166	Ferguson - Young to Charlton		2024-2031	0.21	Bike Lane	\$ 2,788	\$ -	\$ 2,258	\$ 159	\$ 371
167	Fiddler's Green - Amberly to Carluke		2024-2031	6.77	Bike Lane	\$ 29,272	\$ 8,509	\$ -	\$ 6,229	\$ 14,534
168	Fiddler's Green - Jerseyville to Wilson		2024-2031	0.25	Bike Lane	\$ 8,363	\$ -	\$ 6,774	\$ 477	\$ 1,112
169	First Rd W/Whitedeer/Terryberry & Picardy/ Highbury - Glover Mtn Road/ Ridgeview Dr to Rymal/ Bellagio		2024-2031	4.08	Bike Lane	\$ 66,907	\$ -	\$ 54,195	\$ 3,814	\$ 8,899
170	Frances - Grays to Southshore		2024-2031	1.15	Bike Lane	\$ 217,448	\$ -	\$ 176,133	\$ 12,395	\$ 28,921
171	Frid/Chatham - Longwood to Dundurn		2024-2031	1.00	Bike Lane	\$ 8,363	\$ -	\$ 6,774	\$ 477	\$ 1,112
172	Golf Links/ Halson - Wilson to Southcote		2024-2031	1.19	Bike Lane	\$ 39,029	\$ -	\$ 31,614	\$ 2,225	\$ 5,191
173	Governor's - Wainwright to Lynden		2031-2041	13.06	Paved Shoulder	\$ 908,823	\$ -	\$ -	\$ 908,823	\$ -
174	Governor's - Ogilvie to Main		2024-2031	0.24	Bike Lane	\$ 59,938	\$ -	\$ 48,550	\$ 3,416	\$ 7,972
175	Grays/ Gray - Confederation Park gate to King		2024-2031	3.00	Multi-Use Trail	\$ 163,086	\$ -	\$ 132,100	\$ 9,296	\$ 21,690
176	Greenhill - Harrisford to Summercrest		2024-2031	1.94	Bike Lane	\$ 105,936	\$ -	\$ 85,808	\$ 6,038	\$ 14,090
177	Greenhill - Summercrest to King		2024-2031	1.20	Bike Lane	\$ 65,513	\$ -	\$ 53,066	\$ 3,734	\$ 8,713
178	Hamilton Drive Link		2024-2031	-	Multi-Use Trail	\$ 2,759,922	\$ -	\$ 2,235,537	\$ 157,316	\$ 367,070
179	Hamilton in Waterdown - Centre/Main to Highway 5/Dundas		2024-2031	1.00	Multi-Use Trail	\$ 86,422	\$ -	\$ 70,002	\$ 4,926	\$ 11,494
180	Hamilton-Brantford Rail Trail - Bridlewood Dr to Ewen		2024-2031	4.00	Multi-Use Trail	\$ 565,923	\$ -	\$ 458,398	\$ 32,258	\$ 75,268
181	Hatt - Peel to John		2024-2031	0.65	Cycle track	\$ 40,423	\$ -	\$ 32,743	\$ 2,304	\$ 5,376
182	Hollybush - Parkside to Dundas St		2024-2031	1.10	Bike Lane	\$ 22,302	\$ -	\$ 18,065	\$ 1,271	\$ 2,966
183	Hydro Corridor - Barton to Lawrence		2024-2031	1.90	Multi-Use Trail	\$ 1,743,769	\$ -	\$ 1,412,453	\$ 99,395	\$ 231,921
184	Hydro Corridor - Lawrence Avenue to Greenhill Avenue		2024-2031	1.15	Multi-Use Trail	\$ 599,377	\$ -	\$ 485,495	\$ 34,164	\$ 79,717
185	Hydro Corridor - Wilson/Highway 52 to Regional Road 56		2024-2031	12.70	Multi-Use Trail	\$ 10,617,336	\$ -	\$ -	\$ -	\$ -
186	Iroquois Heights to Old Mohawk - Chedoke Rail Trail to Old Mohawk Road		2024-2031	0.85	Multi-Use Trail	\$ 443,260	\$ -	\$ 359,041	\$ 25,266	\$ 58,954
187	Jones Road Link		2024-2031	2.67	Multi-Use Trail	\$ 309,446	\$ 224,257	\$ -	\$ 25,557	\$ 59,632
188	Karst Escarpment Loop - Pritchard to Mount Albion/Winterberry		2024-2031	0.70	Multi-use Trail	\$ 543,621	\$ -	\$ 440,333	\$ 30,986	\$ 72,302
189	Kenora/ Greenford/ Owen - Bancroft to King		2024-2031	2.60	Bike Lane	\$ 239,751	\$ -	\$ 194,198	\$ 13,666	\$ 31,887
190	Kentley - Eugene to Kenora		2024-2031	0.40	Signed Bike Route	\$ 5,576	\$ -	\$ 4,516	\$ 318	\$ 742

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191	Kerns Road,Waterdown South Link		2024-2031	-	Multi-Use Trail	\$ 1,333,962	\$ -	\$ 1,080,509	\$ 76,036	\$ 177,417
192	King in Dundas - Bond to Peel		2024-2031	0.80	Bike Lane	\$ 43,211	\$ -	\$ 35,001	\$ 2,463	\$ 5,747
193	King over Red Hill Valley Parkway - Lawrence to Pottruff		2024-2031	0.60	Cycle track	\$ 37,635	\$ -	\$ 30,485	\$ 2,145	\$ 5,005
194	Kitty Murray - Garner to Golf Links		2024-2031	2.26	Bike Lane	\$ 73,877	\$ -	\$ 59,840	\$ 4,211	\$ 9,826
195	Limeridge - Birchview to Mtn Brow		2024-2031	1.98	Bike Lane	\$ 97,573	\$ -	\$ 79,034	\$ 5,562	\$ 12,977
196	Limeridge - Garth/ Bonaventure to West 5th/ Hawkridge		2024-2031	1.37	Bike Lane	\$ 73,877	\$ -	\$ 59,840	\$ 4,211	\$ 9,826
197	Limeridge Mall Hydro Corridor Trail - Mohawk Road to South of Rymal		2024-2031	3.80	Multi-Use Trail	\$ 1,957,036	\$ 1,957,036	\$ -	\$ -	\$ -
198	Lovers Lane - Sulphur Springs to Jerseyville		2024-2031	0.90	Bike Lane	\$ 29,272	\$ -	\$ 23,710	\$ 1,668	\$ 3,893
199	Marston - Paramount to Gordon Drummond		2024-2031	0.40	Bike Lane	\$ 19,515	\$ -	\$ 15,807	\$ 1,112	\$ 2,595
200	Meadowbrook		2024-2031	1.00	Bike Lane	\$ 22,302	\$ -	\$ 18,065	\$ 1,271	\$ 2,966
201	Meadowlands/ Raymond - Golf Links to Garner		2024-2031	2.10	Bike Lane	\$ 68,301	\$ -	\$ 55,324	\$ 3,893	\$ 9,084
202	Millen - Shoreview to Millen/ Seaman		2024-2031	0.50	Bike Lane	\$ 43,211	\$ 20,532	\$ 18,370	\$ 1,293	\$ 3,016
203	Mohawk - Old Mohawk to Upper Paradise		2024-2031	1.83	Bike Lane	\$ 65,513	\$ -	\$ 53,066	\$ 3,734	\$ 8,713
204	Montclair/ Central/ Graham/ Frederick		2024-2031	3.80	Signed Bike Route	\$ 26,484	\$ -	\$ 21,452	\$ 1,510	\$ 3,522
205	Mountain Brow Boulevard Trail - Mohawk to Arbour		2024-2031	1.81	Multi-Use Trail	\$ 522,319	\$ -	\$ 422,268	\$ 29,715	\$ 69,335
206	Mountain Brow East Path - Rendell to Oakcrest		2024-2031	0.81	Multi-Use Trail	\$ 2,174,484	\$ -	\$ 1,761,332	\$ 123,946	\$ 289,206
207	Mountain Brow in Waterdown - Mill to Burke to King Road		2024-2031	1.20	Multi-Use Trail	\$ 919,974	\$ -	\$ 745,179	\$ 52,439	\$ 122,357
208	Museum of Steam and Tech Link - Woodward to Red Hill Valley Trail		2024-2031	0.75	Multi-Use Trail	\$ 846,097	\$ -	\$ 685,339	\$ 48,228	\$ 112,531
209	Nash - Bancroft to King		2024-2031	2.58	Cycle track	\$ 140,784	\$ -	\$ 114,035	\$ 8,025	\$ 18,724
210	North Service Road - Bellavista to Baseline		2024-2031	0.98	Bike Lane	\$ 32,060	\$ -	\$ 25,968	\$ 1,827	\$ 4,264
211	North Service Road - Dewitt to Lakeview		2024-2031	0.73	Bike Lane	\$ 22,302	\$ -	\$ 18,065	\$ 1,271	\$ 2,966
212	Northlawn Avenue Link		2024-2031	1.10	Multi-Use Trail	\$ 557,560	\$ 81,100	\$ -	\$ 142,938	\$ 333,522
213	Ogilvie/ Old Ancaster - Hatt/ King to Hamilton-Brantford Rail Trail		2024-2031	0.80	Bike Lane	\$ 19,515	\$ -	\$ 15,807	\$ 1,112	\$ 2,595
214	Old Guelph Road - Paterson to York Bike Lane		2024-2031	3.53	Paved Shoulder	\$ 1,264,267	\$ -	\$ 189,640	\$ 322,388	\$ 752,239
215	Old Mud - Mt Albion to Winterberry		2024-2031	0.40	Bike Lane	\$ 12,545	\$ -	\$ 10,162	\$ 715	\$ 1,668
216	Osler/ Main - Hatt/ King to Main + 125m of Main		2024-2031	2.00	Bike Lane	\$ 122,663	\$ -	\$ 99,357	\$ 6,992	\$ 16,314
217	Ottawa Street South - Bruce Trail Link		2024-2031	0.39	Multi-Use Trail	\$ 956,215	\$ -	\$ 774,534	\$ 54,504	\$ 127,177
218	Proposed Pipeline Trail - Museum of Steam and Technology to Mahoney		2024-2031	2.40	Multi-Use Trail	\$ 720,646	\$ -	\$ 583,724	\$ 41,077	\$ 95,846
219	Queensdale - Upper Sherman to Upper Ottawa		2024-2031	1.56	Bike Lane	\$ 50,180	\$ -	\$ 40,646	\$ 2,860	\$ 6,674
220	Queensdale - Upper Wellington to Skyland		2024-2031	0.39	Bike Lane	\$ 54,362	\$ -	\$ 44,033	\$ 3,099	\$ 7,230
221	Queenston/ Highway 8 - King to Dewitt		2024-2031	1.37	Bike Lane	\$ 342,899	\$ -	\$ 277,749	\$ 19,545	\$ 45,606
222	Regional Road 56 - Swayze Road to Cemetery		2024-2031	4.60	Multi-Use Trail	\$ 4,347,574	\$ 1,414,215	\$ -	\$ 880,008	\$ 2,053,351
223	Regional Road 56 south of Kirk - Windwood to Kirk		2024-2031	1.14	Multi-Use Trail	\$ 1,087,242	\$ -	\$ 163,086	\$ 277,247	\$ 646,909
224	Ridge Road - Devil Punch Bowl to Dewitt		2024-2031	2.91	Multi-Use Trail	\$ 1,087,242	\$ -	\$ 880,666	\$ 61,973	\$ 144,603
225	Rousseaux/ Mohawk - Wilson to Filman		2024-2031	1.60	Bike Lane	\$ 313,628	\$ -	\$ 254,038	\$ 17,877	\$ 41,712
226	Scenic - Chedoke Rail Ttrail to Upper Paradise		2024-2031	2.27	Bike Lane	\$ 37,635	\$ -	\$ 30,485	\$ 2,145	\$ 5,005
227	Scenic/ Denlow - Upper Paradise to Garth		2024-2031	0.95	Bike Lane	\$ 15,333	\$ -	\$ 12,420	\$ 874	\$ 2,039
228	Shaver - Wilson to Garner		2024-2031	0.52	Multi-Use Trail	\$ 16,727	\$ -	\$ 13,549	\$ 953	\$ 2,225
229	Stuart Street Rail Link		2024-2031	0.94	Multi-Use Trail	\$ 354,051	\$ -	\$ 286,781	\$ 20,181	\$ 47,089
230	Upper James - William Connell Park		2024-2031	0.38	Multi-Use Trail	\$ 313,628	\$ -	\$ 254,038	\$ 17,877	\$ 41,712
231	Upper Sherman - Stone Church to Rymal to Miles		2024-2031	1.00	Bike Lane	\$ 249,508	\$ 249,508	\$ -	\$ -	\$ -
232	Upper Wentworth - Concession to Fennell		2024-2031	1.03	Bike Lane	\$ 55,756	\$ -	\$ 45,162	\$ 3,178	\$ 7,416
233	Upper Wentworth - Fennell to East 24th		2024-2031	1.03	Bike Lane	\$ 55,756	\$ -	\$ 45,162	\$ 3,178	\$ 7,416
234	Valley Road - Rock Chapel to York Road		2024-2031	1.40	Paved Shoulder	\$ 434,897	\$ -	\$ 65,235	\$ 110,899	\$ 258,764
235	Van Wagner's - Beach Bike Lane to Centennial Parkway		2024-2031	2.50	Bike Lane	\$ 108,724	\$ -	\$ 88,067	\$ 6,197	\$ 14,460
236	Victoria - Young to Burlington		2024-2031	2.53	Bike Lane	\$ 55,756	\$ -	\$ 45,162	\$ 3,178	\$ 7,416
237	Walnut Grove & Sanctuary Park - Walnut Grove/ Ogilvie to Highland Park Dr		2024-2031	0.40	Multi-Use Trail	\$ 510,167	\$ -	\$ 413,236	\$ 29,080	\$ 67,852
238	Warrington/ South Service/ Lake - Centennial Parkway to Maple		2024-2031	3.86	Multi-Use Trail	\$ 108,724	\$ -	\$ 88,067	\$ 6,197	\$ 14,460
239	White Church Road West Airport Link		2024-2031	-	Multi-Use Trail	\$ 938,095	\$ -	\$ -	\$ 281,428	\$ 656,666
240	White Church Road West Link		2024-2031	6.55	Multi-Use Trail	\$ 1,832,979	\$ 798,725	\$ -	\$ 310,276	\$ 723,977
241	Wilson in Ancaster - Rousseaux to Halson		2024-2031	0.85	Bike Lane	\$ 27,878	\$ -	\$ 22,581	\$ 1,589	\$ 3,708
242	Winona - Lido/ shore to Peachtree (Helena)		2024-2031	1.97	Multi-Use Trail	\$ 64,119	\$ -	\$ 51,937	\$ 3,655	\$ 8,528
243	York Road - Olympic to Valley Road		2024-2031	1.70	Paved Shoulder	\$ 609,134	\$ -	\$ 91,370	\$ 155,329	\$ 362,435

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244	York Road & York Road at Old Guelph - Valley Road to Highway 6		2024-2031	2.50	Multi-Use Trail	\$ 1,997,459	\$ -	\$ -	\$ 599,238	\$ 1,398,221
245	Acadia - Emperor to End		2024-2031	0.54	Signed Bike Route	\$ 21,732	\$ -	\$ 17,603	\$ 1,239	\$ 2,890
246	Airport Road - Butter to Miles		2024-2031	6.66	Bike Lane	\$ 932,965	\$ 812,142	\$ -	\$ 36,247	\$ 84,576
247	Alma - Sydenham to Queen		2024-2031	0.09	Bike Lane	\$ 12,302	\$ -	\$ 9,965	\$ 701	\$ 1,636
248	Aquasanta - Diconzo to Ascoli		2024-2031	0.09	Signed Bike Route	\$ 3,576	\$ -	\$ 2,897	\$ 204	\$ 476
249	Baker - Breadalbane to Dundurn		2024-2031	0.14	Signed Bike Route	\$ 5,681	\$ -	\$ 4,602	\$ 324	\$ 756
250	Winston - Hunter to 413m west of Kelson Ave N		2024-2031	2.06	Bike Lane	\$ 288,999	\$ -	\$ 43,350	\$ 73,695	\$ 171,955
251	Bedrock - First Rd W to 300m West of First Rd W		2024-2031	0.33	Bike Lane	\$ 45,816	\$ -	\$ 37,111	\$ 2,612	\$ 6,094
252	Bellagio - Fletcher to Terryberry		2024-2031	1.64	Bike Lane	\$ 229,437	\$ -	\$ 185,844	\$ 13,078	\$ 30,515
253	Binbrook Road - Southbrook to Boundary		2024-2031	6.02	Paved Shoulder	\$ 1,805,365	\$ -	\$ 270,805	\$ 460,368	\$ 1,074,192
254	Book Road - Shaver to Fiddler's Green		2031-2041	2.50	Paved Shoulder	\$ 751,147	\$ -	\$ -	\$ 751,147	\$ -
255	Book Road - Fiddler's Green to Glancaster		2024-2031	3.42	Bike Lane	\$ 478,291	\$ 417,469	\$ 49,266	\$ 3,467	\$ 8,089
256	Brantdale - West Fifth Street to Upper James		2024-2031	0.42	Signed Bike Route	\$ 16,894	\$ -	\$ 13,684	\$ 963	\$ 2,247
257	Bridlewood - Governor's to Highland Park Drive		2024-2031	0.59	Signed Bike Route	\$ 23,434	\$ -	\$ 18,982	\$ 1,336	\$ 3,117
258	Brigade - Upper Wellington to Emperor		2024-2031	0.82	Signed Bike Route	\$ 32,712	\$ -	\$ 26,497	\$ 1,865	\$ 4,351
259	Brock - Harvest Road to Highway 8		2024-2031	0.55	Paved Shoulder	\$ 164,442	\$ -	\$ 24,666	\$ 41,933	\$ 97,843
260	Brock - Safari to Freelon		2024-2031	4.50	Paved Shoulder	\$ 1,351,337	\$ -	\$ -	\$ 405,401	\$ 945,936
261	Burke - Great Falls Blvd to McKnight Ave E		2024-2031	0.51	Bike Lane	\$ 71,675	\$ -	\$ 58,057	\$ 4,085	\$ 9,533
262	Butter - Glancaster to Fiddler's Green		2024-2031	2.21	Bike Lane	\$ 309,163	\$ -	\$ -	\$ 92,749	\$ 216,414
263	Canada - Locke to Queen		2024-2031	0.41	Signed Bike Route	\$ 16,392	\$ -	\$ 13,277	\$ 934	\$ 2,180
264	Carlisle Trail Loop - Centre Road to Border		2024-2031	3.35	Paved Shoulder	\$ 1,006,151	\$ -	\$ 150,923	\$ 256,568	\$ 598,660
265	Carlson Street - Highland Road to End		2024-2031	0.11	Signed Bike Route	\$ 4,410	\$ -	\$ 3,572	\$ 251	\$ 586
266	Carluk - Glancaster to Shaver		2031-2041	3.53	Paved Shoulder	\$ 1,058,213	\$ -	\$ -	\$ 1,058,213	\$ -
267	Central - Edgemont to Cochrane		2024-2031	1.54	Signed Bike Route	\$ 61,437	\$ -	\$ 49,764	\$ 3,502	\$ 8,171
268	Concession 10 West - Foreman to Freelon		2024-2031	9.28	Signed Bike Route	\$ 371,340	\$ -	\$ -	\$ 111,402	\$ 259,938
269	Concession 11 E - Centre Road to Freelon		2024-2031	2.65	Paved Shoulder	\$ 794,371	\$ -	\$ -	\$ 238,311	\$ 556,060
270	Concession 4 West - Millgrove Sideroad to Highway 6		2031-2041	1.78	Paved Shoulder	\$ 532,612	\$ -	\$ -	\$ 532,612	\$ -
271	Concession 6 East - Highway 6 to Centre Road		2031-2041	2.79	Paved Shoulder	\$ 836,846	\$ -	\$ -	\$ 836,846	\$ -
272	Concession 7 West - Boundary to Edgewood Road		2024-2031	18.80	Paved Shoulder	\$ 5,640,591	\$ -	\$ -	\$ 1,692,177	\$ 3,948,414
273	Concession 8 West - Middletown to Middletown		2024-2031	0.14	Signed Bike Route	\$ 5,787	\$ -	\$ 868	\$ 1,476	\$ 3,443
274	Concession Street - Mountain Park Ave to Mountain Brow Boulevard		2024-2031	0.51	Bike Lane	\$ 71,122	\$ -	\$ 57,609	\$ 4,054	\$ 9,459
275	Confederation Beach Park - Centennial Parkway to West of Gray		2024-2031	1.98	Signed Bike Route	\$ 79,281	\$ -	\$ 64,218	\$ 4,519	\$ 10,544
276	Cormorant - Trinity to Shaver		2024-2031	2.46	Bike Lane	\$ 344,713	\$ -	\$ 279,217	\$ 19,649	\$ 45,847
277	Culotta - Perrelli to Chudleigh		2024-2031	0.14	Signed Bike Route	\$ 5,564	\$ -	\$ 4,507	\$ 317	\$ 740
278	Diconzo Dr - Aquasanta Crescent to South Turn on Diconzo Drive		2024-2031	0.36	Signed Bike Route	\$ 14,232	\$ -	\$ 11,528	\$ 811	\$ 1,893
279	Diconzo Dr - Upper Wellington to Trieste		2024-2031	0.20	Signed Bike Route	\$ 8,182	\$ -	\$ 6,628	\$ 466	\$ 1,088
280	Dundurn - Main to King		2024-2031	0.28	Bike Lane	\$ 39,076	\$ -	\$ 31,651	\$ 2,227	\$ 5,197
281	Edgemont - Montclair to Central		2024-2031	0.18	Signed Bike Route	\$ 7,202	\$ -	\$ 5,834	\$ 411	\$ 958
282	Eighth Road Link - Ridge to Boundary		2031-2041	5.51	Paved Shoulder	\$ 1,651,643	\$ -	\$ -	\$ 1,651,643	\$ -
283	Eleventh - Mud to Green Mountain Road		2024-2031	1.11	Signed Bike Route	\$ 44,403	\$ -	\$ -	\$ 13,321	\$ 31,082
284	Emerson - Whitney to Main		2024-2031	0.65	Bike Lane	\$ 91,299	\$ -	\$ 73,952	\$ 5,204	\$ 12,143
285	Empress - Upper James to East Sixth Street		2024-2031	0.71	Signed Bike Route	\$ 28,561	\$ -	\$ 23,135	\$ 1,628	\$ 3,799
286	Eugene - Pottruff to Nugent		2024-2031	0.18	Signed Bike Route	\$ 7,020	\$ -	\$ 5,687	\$ 400	\$ 934
287	Fallsview - Harvest Road to Sydenham		2024-2031	2.47	Signed Bike Route	\$ 98,780	\$ -	\$ -	\$ 29,634	\$ 69,146
288	Ferguson - Dock Service Road to Burlington		2024-2031	0.28	Signed Bike Route	\$ 11,143	\$ -	\$ 9,026	\$ 635	\$ 1,482
289	Ferguson - Young to North of Young		2024-2031	0.05	Bike Lane	\$ 7,238	\$ -	\$ 5,863	\$ 413	\$ 963
290	Field - Jerseyville Rd W to Governor's Rd		2031-2041	3.88	Paved Shoulder	\$ 1,162,739	\$ -	\$ -	\$ 1,162,739	\$ -
291	Fifty - Ridge to Cokers		2024-2031	1.51	Paved Shoulder	\$ 452,414	\$ -	\$ 67,862	\$ 115,366	\$ 269,186
292	Fifty - Coke to North Service Road		2024-2031	2.24	Bike Lane	\$ 313,978	\$ 110,740	\$ 164,623	\$ 11,585	\$ 27,031
293	Filman - Wilson St E to End		2024-2031	0.40	Signed Bike Route	\$ 15,969	\$ -	\$ -	\$ 4,791	\$ 11,178
294	First Road East - Highland Road to Ridge Road		2031-2041	3.83	Paved Shoulder	\$ 1,148,959	\$ -	\$ -	\$ 1,148,959	\$ -
295	First Road West - North End to Highbury Drive		2024-2031	0.10	Bike Lane	\$ 14,156	\$ -	\$ 11,466	\$ 807	\$ 1,883
296	Flamborough Puslinch Tlin - Maddaugh Road to Centre		2031-2041	1.81	Paved Shoulder	\$ 542,586	\$ -	\$ -	\$ 542,586	\$ -
297	Fleming - North End to York		2024-2031	0.26	Signed Bike Route	\$ 10,268	\$ -	\$ -	\$ 3,081	\$ 7,188
298	Fletcher - Rymal to Pinehill		2024-2031	0.32	Paved Shoulder	\$ 96,800	\$ -	\$ 78,408	\$ 5,518	\$ 12,874
299	Foreman - Boundary to Regional Road 97		2024-2031	3.08	Signed Bike Route	\$ 123,285	\$ -	\$ -	\$ 36,986	\$ 86,300
300	Franklin - Parkview to Longwood		2024-2031	0.20	Signed Bike Route	\$ 7,980	\$ -	\$ 6,464	\$ 455	\$ 1,061
301	Frederick - Barton to Roxborough		2024-2031	0.62	Signed Bike Route	\$ 24,851	\$ -	\$ 20,130	\$ 1,417	\$ 3,305



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302	Freelton - Concession 11 E to South of Highway 6		2024-2031	0.38	Bike Lane	\$ 53,503	\$ -	\$ -	\$ 16,051	\$ 37,452
303	Fruitland - Highway 8 to North Service Road		2024-2031	2.42	Bike Lane	\$ 339,460	\$ 196,897	\$ 115,476	\$ 8,126	\$ 18,961
304	Galbraith - Lake Avenue to Galbraith Three-way Intersection		2024-2031	0.52	Signed Bike Route	\$ 20,811	\$ -	\$ 16,857	\$ 1,186	\$ 2,768
					Paved Multi-Use					
305	Garth - Denlow to Fennell		2024-2031	0.14	Recreational Trail	\$ 106,711	\$ -	\$ 86,436	\$ 6,083	\$ 14,193
306	Garth St Extension - 20 Rd W to Dickenson Rd W		2024-2031	1.38	Bike Lane	\$ 192,797	\$ 32,547	\$ 129,802	\$ 9,134	\$ 21,313
307	Glancaster - Carluke to Airport		2024-2031	1.45	Bike Lane	\$ 202,858	\$ -	\$ 30,429	\$ 51,729	\$ 120,701
308	Glenfern - Kent to Kent		2024-2031	0.04	Signed Bike Route	\$ 1,402	\$ -	\$ 1,136	\$ 80	\$ 187
309	Glover - Watercrest to End		2024-2031	0.11	Bike Lane	\$ 14,756	\$ -	\$ 11,952	\$ 841	\$ 1,963
310	Glow - Parkdale to East of Tate		2024-2031	0.63	Signed Bike Route	\$ 25,311	\$ -	\$ 20,502	\$ 1,443	\$ 3,366
311	Golf Club - Woodburn to Westbrook		2024-2031	2.07	Signed Bike Route	\$ 82,657	\$ -	\$ -	\$ 24,797	\$ 57,860
312	Golf Links - Stone Church to Kitty Murray		2024-2031	1.30	Bike Lane	\$ 182,341	\$ -	\$ 147,696	\$ 10,393	\$ 24,251
313	Gordon Drummond - Marston to Nordale		2024-2031	0.04	Signed Bike Route	\$ 1,739	\$ -	\$ 1,408	\$ 99	\$ 231
314	Graham Ave North - Central to Roxborough		2024-2031	0.78	Signed Bike Route	\$ 31,165	\$ -	\$ 25,243	\$ 1,776	\$ 4,145
315	Guise - Leander to Catharine		2024-2031	0.54	Bike Lane	\$ 76,112	\$ -	\$ 61,651	\$ 4,338	\$ 10,123
316	Gunby - Sadielou to Painter		2024-2031	0.50	Bike Lane	\$ 69,518	\$ -	\$ 56,310	\$ 3,963	\$ 9,246
					Paved Multi-Use					
317	Harrison - Kirk to Binbrook Conservation Area Road		2024-2031	1.30	Recreational Trail	\$ 975,138	\$ -	\$ 146,271	\$ 248,660	\$ 580,207
318	Harvest - Sydenham to Brock		2024-2031	3.40	Paved Shoulder	\$ 1,020,108	\$ -	\$ 153,016	\$ 260,128	\$ 606,964
319	Highland Rd E - Upper Red Hill Valley Pkwy to Winterberry		2024-2031	0.94	Bike Lane	\$ 131,512	\$ -	\$ 106,525	\$ 7,496	\$ 17,491
320	Highland Rd E - Upper Centennial Pkwy to E Town Line		2031-2041	10.17	Paved Shoulder	\$ 3,051,099	\$ -	\$ -	\$ 3,051,099	\$ -
321	Highway 5 West - Dundas St E to Sydenham		2024-2031	3.02	Paved Shoulder	\$ 905,690	\$ -	\$ -	\$ 271,707	\$ 633,983
322	Highway 8 (Flam) - Boundary to Brock		2031-2041	22.30	Paved Shoulder	\$ 6,691,317	\$ -	\$ -	\$ 6,691,317	\$ -
323	Highway 8 (Sc) - Fifty to Boundary		2031-2041	0.81	Bike Lane	\$ 113,390	\$ -	\$ -	\$ 113,390	\$ -
324	Holton - King to Delaware		2024-2031	0.57	Signed Bike Route	\$ 22,826	\$ -	\$ 18,489	\$ 1,301	\$ 3,036
325	Holton - King to Wilson		2024-2031	0.18	Bike Lane	\$ 25,738	\$ -	\$ 20,848	\$ 1,467	\$ 3,423
326	Homestead Dr Path - Upper James to 1200m East of Upper James		2024-2031	1.24	Bike Lane	\$ 173,375	\$ -	\$ 140,433	\$ 9,882	\$ 23,059
327	Hughson - Cannon to Hunter		2024-2031	0.81	Bike Lane	\$ 113,938	\$ -	\$ 92,290	\$ 6,494	\$ 15,154
328	Hunt - Christ the King Elementary School Road to Breadalbane		2024-2031	0.57	Signed Bike Route	\$ 22,819	\$ -	\$ 18,483	\$ 1,301	\$ 3,035
329	Hunter - Locke to Queen		2024-2031	0.41	Signed Bike Route	\$ 16,421	\$ -	\$ 13,301	\$ 936	\$ 2,184
330	Inverness - Tanner to East 8th		2024-2031	0.77	Bike Lane	\$ 107,800	\$ -	\$ 87,318	\$ 6,145	\$ 14,337
331	Jackson St W - End to Locke St S		2024-2031	0.38	Signed Bike Route	\$ 15,222	\$ -	\$ 12,330	\$ 868	\$ 2,025
332	Jerseyville Rd W - Boundary to East of Paddy Greens		2031-2041	18.45	Paved Shoulder	\$ 5,533,950	\$ -	\$ -	\$ 5,533,950	\$ -
333	Jerseyville Rd W - West of Shaver to Wilson		2024-2031	3.49	Paved Shoulder	\$ 1,046,152	\$ 637,152	\$ 331,290	\$ 23,313	\$ 54,397
334	John - Guise to Burlington		2024-2031	0.29	Bike Lane	\$ 41,233	\$ -	\$ 33,399	\$ 2,350	\$ 5,484
335	Kay Drage Park Link - Hunt to End		2024-2031	0.55	Signed Bike Route	\$ 21,874	\$ -	\$ 17,718	\$ 1,247	\$ 2,909
336	Kay Drage Park Link - Macklin to End		2024-2031	0.14	Signed Bike Route	\$ 5,707	\$ -	\$ 4,623	\$ 325	\$ 759
337	King William - James St N to Catharine St N		2024-2031	0.34	Signed Bike Route	\$ 13,479	\$ -	\$ 10,918	\$ 768	\$ 1,793
					Paved Multi-Use					
338	Kirk - Harrison to Highway 56		2024-2031	0.98	Recreational Trail	\$ 731,458	\$ -	\$ 109,719	\$ 186,522	\$ 435,217
339	Kirkwall - Regional Road 97 to South of Concession 8 W		2024-2031	2.51	Signed Bike Route	\$ 100,255	\$ -	\$ -	\$ 30,077	\$ 70,179
340	Kirkwall - South of Concession 8 W to Woodhill Rd		2024-2031	5.78	Paved Shoulder	\$ 1,735,196	\$ -	\$ -	\$ 520,559	\$ 1,214,637
341	Lafarge 2000 (Middletown Rd) - Concession 6 W to Highway 8		2024-2031	7.91	Signed Bike Route	\$ 316,597	\$ -	\$ 47,489	\$ 80,732	\$ 188,375
342	Lafarge 2000 (Middletown Rd/Binkley Rd) - Highway 8 to Mineral Springs Rd		2024-2031	3.57	Paved Shoulder	\$ 1,071,041	\$ -	\$ -	\$ 321,312	\$ 749,728
343	Lamoreaux - Dundurn t N to Strathcona Ave N		2024-2031	0.23	Signed Bike Route	\$ 9,074	\$ -	\$ 7,350	\$ 517	\$ 1,207
344	Leland - Main to North of Ward		2024-2031	0.29	Signed Bike Route	\$ 11,798	\$ -	\$ 9,557	\$ 673	\$ 1,569
345	Lido - Riviera to Winona		2024-2031	0.39	Signed Bike Route	\$ 15,590	\$ -	\$ 12,628	\$ 889	\$ 2,073
346	Livingstone - Sydenham to Queen		2024-2031	0.11	Bike Lane	\$ 15,772	\$ -	\$ 12,775	\$ 899	\$ 2,098
347	Locke - York Blvd to Barton		2024-2031	0.26	Bike Lane	\$ 35,765	\$ -	\$ 28,970	\$ 2,039	\$ 4,757
348	Longwood - Main St W to Frid St		2024-2031	0.40	Bike Lane	\$ 55,713	\$ -	\$ 45,128	\$ 3,176	\$ 7,410
349	Macklin St S - King St W to Main St W		2024-2031	0.24	Signed Bike Route	\$ 9,513	\$ -	\$ 7,706	\$ 542	\$ 1,265
350	Maddaugh Road - Gore to Highway 6		2024-2031	0.95	Signed Bike Route	\$ 37,834	\$ -	\$ -	\$ 11,350	\$ 26,484
351	Maddaugh Road - Highway 6 to Flamborough Puslinch Tlin		2031-2041	1.11	Paved Shoulder	\$ 334,364	\$ -	\$ -	\$ 334,364	\$ -
352	Maggie Johnson - Tanglewood to Highway 56		2024-2031	0.23	Bike Lane	\$ 32,107	\$ -	\$ 26,007	\$ 1,830	\$ 4,270
353	Main St W - Frid to Dundurn St S		2024-2031	0.27	Bike Lane	\$ 37,206	\$ -	\$ 30,137	\$ 2,121	\$ 4,948
354	Malton - Christine to Upper James		2024-2031	0.34	Signed Bike Route	\$ 13,738	\$ -	\$ 11,128	\$ 783	\$ 1,827

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355	Maple/Mountain Ave Extension - Lake Ave S to Mountain Ave S		2024-2031	0.13	Signed Bike Route	\$ 5,272	\$ -	\$ 4,270	\$ 301	\$ 701
356	Marion - Dromore to King St W		2024-2031	0.34	Signed Bike Route	\$ 13,553	\$ -	\$ 10,978	\$ 773	\$ 1,803
357	Market - Hatt to MacNab		2024-2031	0.09	Bike Lane	\$ 13,000	\$ -	\$ 10,530	\$ 741	\$ 1,729
358	Market - MacNab to Creighton		2024-2031	0.09	Signed Bike Route	\$ 3,608	\$ -	\$ 2,922	\$ 206	\$ 480
359	Mayfair - Creighton to Tally Ho		2024-2031	0.31	Signed Bike Route	\$ 12,397	\$ -	\$ 10,041	\$ 707	\$ 1,649
360	McNeilly/8th Road E - Highway 8 to Ridge Road		2024-2031	1.55	Signed Bike Route	\$ 62,051	\$ -	\$ -	\$ 18,615	\$ 43,436
361	Middleton Rd - North of Regional Road 97 to Regional Road 97		2024-2031	0.44	Signed Bike Route	\$ 17,734	\$ -	\$ 2,660	\$ 4,522	\$ 10,551
362	Middleton Rd - North of Concession 8 W to Safari		2024-2031	2.32	Signed Bike Route	\$ 92,626	\$ -	\$ 13,894	\$ 23,620	\$ 55,112
363	Miles - Rymal Rd E to Boundary		2031-2041	10.88	Paved Shoulder	\$ 3,265,308	\$ -	\$ -	\$ 3,265,308	\$ -
364	Millgrove Sr - Highway 6 N to Highway 5 W		2024-2031	0.71	Paved Shoulder	\$ 214,008	\$ -	\$ 32,101	\$ 54,572	\$ 127,335
365	Mineral Springs - Binkley to Sulphur Springs		2031-2041	1.27	Paved Shoulder	\$ 381,791	\$ -	\$ -	\$ 381,791	\$ -
366	Mount Albion - Lawrence to South of Glen Castle		2024-2031	1.39	Bike Lane	\$ 194,283	\$ -	\$ 157,369	\$ 11,074	\$ 25,840
367	Mountain Brow - Concession Street to Rendell		2024-2031	0.27	Bike Lane	\$ 37,692	\$ -	\$ 30,530	\$ 2,148	\$ 5,013
368	Mud - Eleventh Road E to Boundary		2031-2041	0.89	Paved Shoulder	\$ 266,629	\$ -	\$ -	\$ 266,629	\$ -
369	Napier - Queen St N to Bay St N		2024-2031	0.55	Signed Bike Route	\$ 22,063	\$ -	\$ 17,871	\$ 1,258	\$ 2,934
370	Nisbet - Centre Road to Wimberly		2024-2031	0.97	Bike Lane	\$ 136,363	\$ -	\$ 110,454	\$ 7,773	\$ 18,136
371	Nordale - Gordon Drummond to End		2024-2031	0.39	Signed Bike Route	\$ 15,414	\$ -	\$ 12,485	\$ 879	\$ 2,050
372	Nugent - Kentley to Eugene		2024-2031	0.13	Signed Bike Route	\$ 5,181	\$ -	\$ 4,197	\$ 295	\$ 689
373	Old Mud - Upper Mount Albion to Cedarville		2024-2031	0.28	Bike Lane	\$ 39,480	\$ -	\$ 31,979	\$ 2,250	\$ 5,251
374	Ottawa - Main to Montclair		2024-2031	0.49	Bike Lane	\$ 67,977	\$ -	\$ 55,061	\$ 3,875	\$ 9,041
375	Parkdale Ave - Nikola Tesla Blvd to Glow		2024-2031	0.18	Paved Multi-Use Recreational Trail	\$ 138,334	\$ -	\$ 112,051	\$ 7,885	\$ 18,398
376	Pearl - Hunter to Tuckett		2024-2031	0.23	Signed Bike Route	\$ 9,364	\$ -	\$ 7,584	\$ 534	\$ 1,245
377	Peel St S - King St W to Hatt		2024-2031	0.14	Signed Bike Route	\$ 5,774	\$ -	\$ 4,677	\$ 329	\$ 768
378	Perrelli - Culotta to Dundas St E		2024-2031	0.11	Signed Bike Route	\$ 4,267	\$ -	\$ 3,456	\$ 243	\$ 568
379	Picton - Bay St n to Hughson St N		2024-2031	0.39	Signed Bike Route	\$ 15,603	\$ -	\$ 12,639	\$ 889	\$ 2,075
380	Picton - John St N to Ferguson Ave N		2024-2031	0.42	Signed Bike Route	\$ 16,794	\$ -	\$ 13,603	\$ 957	\$ 2,234
381	Queen - Alma to Livingstone		2024-2031	0.16	Bike Lane	\$ 21,913	\$ -	\$ 17,749	\$ 1,249	\$ 2,914
382	Queen St S - Hunter to Canada		2024-2031	0.08	Signed Bike Route	\$ 3,096	\$ -	\$ 2,508	\$ 176	\$ 412
383	Redmond - Rushdale to Stone Church Rd E		2024-2031	0.20	Signed Bike Route	\$ 8,030	\$ -	\$ 6,505	\$ 458	\$ 1,068
384	Regional Road 20 (Highway 20) - Tapleystown to Woodburn		2024-2031	0.28	Signed Bike Route	\$ 11,371	\$ -	\$ 1,706	\$ 2,900	\$ 6,766
385	Regional Road 97 - Kirkwall to Foreman		2024-2031	0.16	Paved Shoulder	\$ 47,125	\$ -	\$ -	\$ 14,137	\$ 32,987
386	Ridge - Dewitt to Boundary		2024-2031	7.05	Paved Shoulder	\$ 2,116,173	\$ -	\$ 317,426	\$ 539,624	\$ 1,259,123
387	Riley - West of Chudleigh to Braehaid		2024-2031	0.21	Signed Bike Route	\$ 8,245	\$ -	\$ 6,678	\$ 470	\$ 1,097
388	Riviera Ridge - Bellavista to Lido		2024-2031	0.12	Undefined	\$ 58,441	\$ -	\$ 47,337	\$ 3,331	\$ 7,773
389	Rock Chapel - Highway 5 W to Service Road East of Sydenham		2024-2031	1.91	Signed Bike Route	\$ 76,420	\$ -	\$ 11,463	\$ 19,487	\$ 45,470
390	Roxborough - Frederick to Graham Ave N		2024-2031	0.05	Signed Bike Route	\$ 2,031	\$ -	\$ 1,645	\$ 116	\$ 270
391	Rushdale - Southpark to Redmond		2024-2031	0.08	Signed Bike Route	\$ 3,149	\$ -	\$ 2,551	\$ 180	\$ 419
392	Rymal - Upper Paradise to Spadara		2024-2031	0.44	Bike Lane	\$ 61,767	\$ -	\$ 50,031	\$ 3,521	\$ 8,215
393	Rymal - Hazelton to West Fifth St		2024-2031	0.77	Bike Lane	\$ 108,451	\$ -	\$ 87,845	\$ 6,182	\$ 14,424
394	SadieLou - Hollybush to End		2024-2031	0.42	Bike Lane	\$ 59,415	\$ -	\$ 48,126	\$ 3,387	\$ 7,902
395	Santorium - Scenic to Redfern		2024-2031	0.11	Bike Lane	\$ 15,366	\$ -	\$ 12,446	\$ 876	\$ 2,044
396	Scenic - Scenic Dr to Garth St		2024-2031	0.23	Bike Lane	\$ 32,617	\$ -	\$ 26,420	\$ 1,859	\$ 4,338
397	Second St N - King St W to North of Brandow		2024-2031	0.14	Signed Bike Route	\$ 5,695	\$ -	\$ 4,613	\$ 325	\$ 757
398	Shaver - Wilson to Jerseyville Rd W		2024-2031	1.47	Bike Lane	\$ 205,195	\$ -	\$ 166,208	\$ 11,696	\$ 27,291
399	Shaver - Garner to Carluke		2031-2041	6.11	Paved Shoulder	\$ 1,832,582	\$ -	\$ -	\$ 1,832,582	\$ -
400	Sheppard - Sovereign to Fleming		2024-2031	0.10	Signed Bike Route	\$ 4,020	\$ -	\$ -	\$ 1,206	\$ 2,814
401	Sherman - Delaware to CP Rail Line		2024-2031	0.33	Signed Bike Route	\$ 13,221	\$ -	\$ 10,709	\$ 754	\$ 1,758
402	Skinner - Dundas St E to East of McKnight Ave E		2024-2031	1.39	Bike Lane	\$ 195,086	\$ -	\$ 158,019	\$ 11,120	\$ 25,946
403	South Bend - W Second St to Terrace		2024-2031	0.42	Signed Bike Route	\$ 16,631	\$ -	\$ 13,471	\$ 948	\$ 2,212
404	South St W - Oglivie to Osler		2024-2031	0.70	Signed Bike Route	\$ 28,124	\$ -	\$ 22,780	\$ 1,603	\$ 3,740
405	Southcote - Garner to Airport		2031-2041	2.80	Bike Lane	\$ 392,445	\$ -	\$ -	\$ 392,445	\$ -
406	Southpark - Rushdale Park Trail to Rushdale Dr		2024-2031	0.25	Signed Bike Route	\$ 10,003	\$ -	\$ 8,103	\$ 570	\$ 1,330
407	St Joseph's - John St S to End		2024-2031	0.29	Signed Bike Route	\$ 11,537	\$ -	\$ 9,345	\$ 658	\$ 1,534
408	Sulphur Springs - Lover's to Mineral Springs Rd		2031-2041	1.47	Paved Shoulder	\$ 439,812	\$ -	\$ -	\$ 439,812	\$ -
409	Sulphur Springs - Lover's to Wilson St E		2024-2031	1.05	Signed Bike Route	\$ 42,059	\$ -	\$ 34,068	\$ 2,397	\$ 5,594
410	Sunnyridge - Wilson St W to Jerseyville Rd W		2024-2031	2.83	Paved Shoulder	\$ 850,184	\$ -	\$ -	\$ 255,055	\$ 595,129
411	Sydenham/Queen/Livingstone/Alma - Hatt to Romar Dr		2024-2031	1.86	Bike Lane	\$ 261,019	\$ -	\$ 39,153	\$ 66,560	\$ 155,306

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412	Talbot - Melvin to Barton St E		2024-2031	0.19	Signed Bike Route	\$ 7,639	\$ -	\$ 6,187	\$ 435	\$ 1,016
413	Tally Ho - Mayfair to Overfield		2024-2031	0.22	Signed Bike Route	\$ 8,624	\$ -	\$ 6,985	\$ 492	\$ 1,147
414	Tanner - Iversness to End		2024-2031	0.05	Signed Bike Route	\$ 1,926	\$ -	\$ 1,560	\$ 110	\$ 256
415	Tapleystown Rd - Highway 20 E to Highland Rd E		2024-2031	0.83	Signed Bike Route	\$ 33,328	\$ -	\$ 4,999	\$ 8,499	\$ 19,830
416	Tradewind - Wilson St W to Cormorant		2024-2031	0.70	Bike Lane	\$ 98,586	\$ -	\$ 79,855	\$ 5,619	\$ 13,112
417	Twenty Rd - Southcote to West of Nebo		2024-2031	9.36	Bike Lane	\$ 1,310,636	\$ 1,174,735	\$ 110,080	\$ 7,746	\$ 18,075
418	Upper Ottawa - Killbride to Mountain Brow Boulevard		2024-2031	5.22	Bike Lane	\$ 731,426	\$ -	\$ 592,455	\$ 41,691	\$ 97,280
419	Upper Sherman - Macassa to Limeridge Rd E		2024-2031	1.65	Bike Lane	\$ 231,607	\$ -	\$ 187,601	\$ 13,202	\$ 30,804
420	Upper Wellington - S Bend Rd E to Stone Church Rd E		2024-2031	2.40	Bike Lane	\$ 336,154	\$ 145,193	\$ 154,679	\$ 10,885	\$ 25,398
421	W 18th St - Bendamere to End		2024-2031	0.17	Signed Bike Route	\$ 6,741	\$ -	\$ 5,460	\$ 384	\$ 897
422	W 5th St - Brantdale to Governors Blvd		2024-2031	0.62	Multi-Use Trail	\$ 465,956	\$ -	\$ 377,424	\$ 26,559	\$ 61,972
423	W 5th St - Governors Blvd to Marlowe		2024-2031	1.13	Bike Lane	\$ 158,200	\$ -	\$ 128,142	\$ 9,017	\$ 21,041
424	Westbrook - End to Golf Club Rd		2024-2031	0.86	Signed Bike Route	\$ 34,368	\$ -	\$ -	\$ 10,310	\$ 24,057
425	Wilson in Ancaster - Fiddler's Green to Boundary		2024-2031	10.77	Cycle Track	\$ 5,385,075	\$ -	\$ -	\$ 1,615,523	\$ 3,769,553
426	Wimberly - Parkside to Nisbet		2024-2031	0.33	Bike Lane	\$ 45,976	\$ -	\$ 37,240	\$ 2,621	\$ 6,115
427	Windwood Dr - Bradley to Southbrook Dr		2024-2031	0.70	Bike Lane	\$ 97,549	\$ -	\$ 79,015	\$ 5,560	\$ 12,974
428	Woodbine Crescent - Jones to Dundurn St N		2024-2031	0.22	Signed Bike Route	\$ 8,891	\$ -	\$ 7,202	\$ 507	\$ 1,182
429	Woodburn - Binbrook Rd E to Highway 20 E		2024-2031	7.56	Signed Bike Route	\$ 302,206	\$ -	\$ 45,331	\$ 77,063	\$ 179,813
430	Woodhill Rd - Governor's to 800m south of Highway 8		2024-2031	7.05	Signed Bike Route	\$ 282,125	\$ -	\$ -	\$ 84,638	\$ 197,488
431	Woodhill Rd - Highway 8 to 800m south of Highway 8		2024-2031	1.04	Paved Shoulder	\$ 313,044	\$ -	\$ -	\$ 93,913	\$ 219,131
432	Woodward Ave - Beach Blvd to 100m south of Beach Blvd		2024-2031	0.10	Bike Lane	\$ 14,099	\$ -	\$ 11,420	\$ 804	\$ 1,875
433	York - Olympic to Baldwin		2024-2031	2.33	Bike Lane	\$ 326,172	\$ -	\$ 264,199	\$ 18,592	\$ 43,381
434	Highway 6 - Concession 10 W to Freelon		2024-2031	0.39	Paved Multi-Use Recreational Trail	\$ 293,059	\$ -	\$ -	\$ 87,918	\$ 205,141
435	Highway 6 N - Carlisle to Edgewood Road		2024-2031	0.55	Paved Multi-Use Recreational Trail	\$ 414,118	\$ -	\$ -	\$ 124,235	\$ 289,883
436	Carlisle Road - Highway 6 to Milborough Townline		2024-2031	5.85	Paved Shoulder	\$ 1,756,268	\$ -	\$ 263,440	\$ 447,848	\$ 1,044,980
437	Concession 5 West - Highway 6N to Moffatt Road		2024-2031	3.01	Paved Shoulder	\$ 904,289	\$ -	\$ 135,643	\$ 230,594	\$ 538,052
438	Mosaic Dr - Parkside Dr to Highway 6		2024-2031	1.90	Multi-Use Trail	\$ 1,425,000	\$ -	\$ 1,154,250	\$ 81,225	\$ 189,525
<b>Total</b>						<b>\$ 1,668,517,598</b>	<b>\$ 70,483,468</b>	<b>\$ 237,774,589</b>	<b>\$ 732,079,316</b>	<b>\$ 628,180,225</b>

\*Road project oversizing and applicable local share/direct developer deductions were applied based on City of Hamilton direction.

Increased Service Needs Attributable to Anticipated Development	Timing (year)	Length (km)	Capital Improvement	Gross Capital Cost Estimate (2023\$)	Other Deductions	Benefit to Existing Development	Post Period Benefit	Net Capital Cost
<b>Post-2041 Road Projects</b>								
<b>AEGD</b>								
Book Road - Highway 6 to Fiddlers Green Road	Post 2041	0.99	2r-5u	\$ 10,769,800	\$ -	\$ -	\$ 10,769,800	\$ -
Collector 5W - Collector 7N to Collector 2N	Post 2041	0.74	3u	\$ 7,294,646	\$ -	\$ -	\$ 7,294,646	\$ -
Collector 2W - Garner Road to Dickenson Road Extension	Post 2041	2.16	4u	\$ 23,562,706	\$ -	\$ -	\$ 23,562,706	\$ -
Collector 5N - Collector 8W to Fiddler's Green	Post 2041	0.83	2r	\$ 5,474,417	\$ -	\$ -	\$ 5,474,417	\$ -
Twenty Road West Extension - Glancaster Road to Collector 2W	Post 2041	1.06	2u	\$ 8,286,718	\$ -	\$ -	\$ 8,286,718	\$ -
Collector Road 6E - Collector 6N to Twenty Road West	Post 2041	0.70	3u	\$ 6,885,062	\$ -	\$ -	\$ 6,885,062	\$ -
Fiddler's Green Road - Garner Road to Book Road	Post 2041	1.97	2r-5u	\$ 20,827,238	\$ -	\$ -	\$ 20,827,238	\$ -
Airport Service Road - Glancaster Road to Airport Road	Post 2041	1.78	3u	\$ 17,237,062	\$ -	\$ -	\$ 17,237,062	\$ -
Collector 10N - Smith Road to Collector 1W	Post 2041	1.47	3u	\$ 14,498,799	\$ -	\$ -	\$ 14,498,799	\$ -
<b>Elfrida</b>								
Upper Centennial Parkway - Mud Street to Highway 20	Post 2041	2.00	4r-5u	\$ 22,580,042	\$ -	\$ -	\$ 22,580,042	\$ -
Upper Centennial Parkway - Mud Street to Green Mountain Road	Post 2041	1.00	4r-4u	\$ 10,579,044	\$ -	\$ -	\$ 10,579,044	\$ -
<b>Stoney Creek</b>								
Arvin Avenue - Jones Road to 366m west of Glover Road	Post 2041	0.55	2i	\$ 4,960,650	\$ -	\$ -	\$ 4,960,650	\$ -
<b>Waterdown</b>								
North Waterdown Drive - Clappison Avenue Extension to Highway 6 North	Post 2041	0.82	3u	\$ 8,008,407	\$ -	\$ -	\$ 8,008,407	\$ -
<b>White Church Area</b>								
Mud Street - Red Hill Valley Parkway to Upper Centennial Parkway	Post 2041	3.62	4r-6r	\$ 67,449,762	\$ -	\$ -	\$ 67,449,762	\$ -
Airport Access Route - Upper Red Hill Valley Parkway to Highway 6 South	Post 2041	10.92	2r	\$ 71,603,945	\$ 71,603,945	\$ -	\$ -	\$ -
<b>Former Urban Boundary Expansion Area Road Projects</b>								
<b>AEGD</b>								
Collector Road 1E - Collector 6N to Twenty Road West	Post 2041	0.73	3u	\$ 7,175,665	\$ 7,175,665	\$ -	\$ -	\$ -
<b>Elfrida</b>								
Regional Road 56 - Dalgliesh Trail to Golf Club Road	Post 2041	1.44	2r-5u	\$ 15,741,403	\$ 15,741,403	\$ -	\$ -	\$ -
First Road East - Highway 20 to Mud Street	Post 2041	1.97	2r-3u	\$ 15,089,596	\$ 15,089,596	\$ -	\$ -	\$ -
First Road East - Highway 20 to Golf Club Road	Post 2041	2.08	3u	\$ 20,239,244	\$ 20,239,244	\$ -	\$ -	\$ -
Arterial N-S - Bellagio Avenue to Golf Club Road	Post 2041	1.88	4u	\$ 20,100,545	\$ 20,100,545	\$ -	\$ -	\$ -
Dickenson Extension - Trinity Church to Golf Club Road	Post 2041	0.65	2u	\$ 5,177,733	\$ 5,177,733	\$ -	\$ -	\$ -
Twenty Road - Upper Red Hill Valley Parkway to Hendershot Road	Post 2041	5.60	4u	\$ 59,897,756	\$ 59,897,756	\$ -	\$ -	\$ -
Highway 20 - 500m east of Upper Centennial to Hendershot Road	Post 2041	1.17	2r-4u	\$ 11,653,263	\$ 11,653,263	\$ -	\$ -	\$ -
Fletcher Road - 500m south of Rymal Road to Golf Club Road	Post 2041	1.60	2r-3u	\$ 12,245,236	\$ 12,245,236	\$ -	\$ -	\$ -
Golf Club Road - Trinity Church Road to Hendershot Road	Post 2041	5.33	2r-3u	\$ 40,967,481	\$ 40,967,481	\$ -	\$ -	\$ -
Hendershot Road - Highway 20 to Golf Club Road	Post 2041	2.09	2r-3u	\$ 16,011,393	\$ 16,011,393	\$ -	\$ -	\$ -
Highland Road - Upper Centennial Parkway to Second Road East	Post 2041	1.67	2r-3u	\$ 12,799,081	\$ 12,799,081	\$ -	\$ -	\$ -
Mud Street - Upper Centennial Parkway to Second Road East	Post 2041	1.67	2r-2u	\$ 13,833,585	\$ 13,833,585	\$ -	\$ -	\$ -
Second Road East - Highway 20 to Mud Street	Post 2041	1.94	2r-3u	\$ 14,841,511	\$ 14,841,511	\$ -	\$ -	\$ -
Trinity Church Road - Hydro Corridor (470m south of Rymal Road) to Golf Club Road	Post 2041	1.60	2r-3u	\$ 12,642,066	\$ 12,642,066	\$ -	\$ -	\$ -
<b>Twenty Road East</b>								
Upper Wentworth Street - End to Twenty Road	Post 2041	0.74	4u	\$ 7,937,327	\$ 7,937,327	\$ -	\$ -	\$ -
Upper Sherman Avenue - End to Twenty Road	Post 2041	0.75	4u	\$ 8,078,090	\$ 8,078,090	\$ -	\$ -	\$ -
Upper Gage Avenue - End to Twenty Road	Post 2041	0.73	4u	\$ 7,832,103	\$ 7,832,103	\$ -	\$ -	\$ -
Miles Road - Rymal Road to Dickenson Road	Post 2041	2.66	2r-4u	\$ 25,003,996	\$ 25,003,996	\$ -	\$ -	\$ -
East-West Collector - Upper Wentworth Street to Upper Ottawa Street	Post 2041	2.52	3u	\$ 24,456,044	\$ 24,456,044	\$ -	\$ -	\$ -
Twenty Road East - Upper James Street to Dartnall Road	Post 2041	5.76	2r-4u	\$ 54,652,726	\$ 54,652,726	\$ -	\$ -	\$ -
Dickenson Road East - Upper James Street to 350 meters west of Nebo Road	Post 2041	4.24	2r-2u	\$ 37,820,121	\$ -	\$ -	\$ 37,820,121	\$ -
<b>White Church Area</b>								
White Church Road - Upper James Street to Miles Road	Post 2041	2.88	2r-4u	\$ 27,000,420	\$ 27,000,420	\$ -	\$ -	\$ -
Airport Road - Upper James Street to Miles Road	Post 2041	2.75	2r-4u	\$ 25,766,424	\$ 25,766,424	\$ -	\$ -	\$ -
Ferris Road Extension - White Church Road to Airport Road	Post 2041	1.34	2u	\$ 10,252,044	\$ 10,252,044	\$ -	\$ -	\$ -
Miles Road - Dickenson Road to White Church Road	Post 2041	4.13	2r-4u	\$ 38,893,556	\$ 38,893,556	\$ -	\$ -	\$ -
Highway 20 - Hendershot Road to Hamilton boundary	Post 2041	4.57	2r-4u	\$ 45,465,162	\$ -	\$ -	\$ 45,465,162	\$ -
Fletcher Road - McWatters Street to Golf Club Road	Post 2041	3.60	2r-2u	\$ 30,086,056	\$ -	\$ -	\$ 30,086,056	\$ -
<b>Total</b>				<b>\$ 921,677,923</b>	<b>\$ 579,892,231</b>	<b>\$ -</b>	<b>\$ 341,785,692</b>	<b>\$ -</b>

Prj. No	Increased Service Needs Attributable to Anticipated Development 2019-2031	Timing (year)	Gross Capital Cost Estimate (2023\$)	Benefit to Existing Development	Post Period Benefit	Grants, Subsidies and Other Contributions Attributable to New Development	Net Capital Cost
1	New Peak Hour 30' Bus (2)	2033-2035	\$ 1,329,504	\$ -	\$ 1,329,504	\$ -	\$ -
2	New Peak Hour 40' Bus (48)	2023-2032	\$ 45,852,096	\$ 38,928,430	\$ 1,031,672	\$ -	\$ 5,891,994
3	New Peak Hour 40' Bus (16)	2033-2035	\$ 15,284,032	\$ -	\$ 15,284,032	\$ -	\$ -
4	New Peak Hour 60' Bus (8)	2023-2032	\$ 9,863,616	\$ 8,374,210	\$ 221,931	\$ -	\$ 1,267,475
5	New Peak Hour 60' Bus (2)	2033-2035	\$ 2,465,904	\$ -	\$ 2,465,904	\$ -	\$ -
6	New Spare 40' Bus (12)	2023-2032	\$ 11,463,024	\$ 9,732,107	\$ 257,918	\$ -	\$ 1,472,999
7	New Spare 40' Bus (3)	2033-2035	\$ 2,865,756	\$ -	\$ 2,865,756	\$ -	\$ -
8	New 40' to 60' Upgrades (37)	2023-2032	\$ 10,274,900	\$ 8,723,390	\$ 231,185	\$ -	\$ 1,320,325
9	Facility: Service Truck	2023-2032	\$ 129,998	\$ 100,878	\$ -	\$ -	\$ 29,120
10	Facility: Stock Room Vehicle	2023-2032	\$ 65,000	\$ 50,440	\$ -	\$ -	\$ 14,560
11	Facility: Garage Equipment Repair Walk Behind Forklift	2023-2032	\$ 184,200	\$ 142,939	\$ 12,341	\$ -	\$ 28,919
12	Facility: Garage Forklift	2023-2032	\$ 106,700	\$ 82,799	\$ 7,149	\$ -	\$ 16,752
13	Facility: Garage Tow Mobile	2023-2032	\$ 62,100	\$ 48,190	\$ 4,161	\$ -	\$ 9,750
14	Facility: Garage Equipment Repair Express Van Vehicles	2023-2032	\$ 173,000	\$ 134,248	\$ -	\$ -	\$ 38,752
15	Accessible Supervisory Vehicles (Specialized Transit)	2023-2032	\$ 612,000	\$ 462,060	\$ -	\$ -	\$ 149,940
16	Transit & Maintenance Storage Facility	2023-2026	\$ 396,000,000	\$ 165,349,200	\$ 26,625,000	\$ 183,000,000	\$ 21,025,800
<b>Total</b>			<b>\$ 496,731,830</b>	<b>\$ 232,128,891</b>	<b>\$ 50,336,554</b>	<b>\$ 183,000,000</b>	<b>\$ 31,266,385</b>

# Appendix F

**Summary of Strategic Transportation Network Review Report  
Updates**

# 1 Summary of Strategic Transportation Network Review Report Updates

The draft STNR report was published on the City of Hamilton website in December 2023, and the second round of public consultation was conducted in early 2024. Since the draft report was published, numerous updates have been made. These updates are summarized below.

## 1.1 STNR Report Text

The following report sections were updated to provide additional clarity on the scope of the STNR and inputs/direction provided by the City of Hamilton:

- Section 1 Introduction
- Section 4 STNR Summary
- Appendix D Section 4 Local Service Policy

In addition, Section 2.3 Transit Projects was updated to remove the rapid transit network evaluation and identify that the rapid transit network has been developed and reviewed under multiple separate studies and has been presented to City of Hamilton Public Works Committee.

These text updates **did not** result in changes to the development charges net capital costs.

## 1.2 Road Projects

The following changes were implemented to the road projects:

### 1.2.1 Non-Growth Related Road Project

One of the road projects previously included in the draft capital list was determined to be not growth-related and was removed from the capital list.

This resulted in a development charges net capital cost **decrease of approximately \$8 million.**

### 1.2.2 Road Project Timing

The City of Hamilton indicated that the timing of select road projects should be “2031 to 2041” instead of “To 2031” to support development and align with the phasing of development in the Airport Employment Growth District (AEGD).

This resulted in a development charges net capital cost **decrease of approximately \$12.5 million.**

### 1.2.3 Road Project Segmentation

The City of Hamilton indicated that one of the road projects previously included in the draft capital list should be segmented and listed as two separate projects. The timing of one of these segmented projects was delayed to “2031 to 2041” to support development and align with the phasing of development in the AEGD.

This resulted in a development charges net capital cost **decrease of approximately \$13 million.**

### 1.2.4 Road Project Future Pavement Widths

The future pavement widths for some road project improvement types were updated.

This resulted in a development charges net capital cost **decrease of approximately \$0.25 million.**

### 1.2.5 Road Project Right-of-Way Assumptions and Updated Local Service Policy Deductions

The right-of-way width assumptions for some road projects were updated, including to reflect the AEGD Transportation Master Plan. The draft capital list also included local service policy (LSP) deductions to select projects within the urban boundary. Some of these deductions have been updated where necessary. The local service policy deductions were also applied to a greater number of projects within the urban boundary based on direction from the City of Hamilton.

This resulted in a development charges net capital cost **decrease of approximately \$12 million.**

### 1.2.6 Road Project Updated Local Service Policy and Financial Policies

The City of Hamilton provided direction on the application of local share deductions and the financial policies. This includes the following amendment to Section L.2.4. Value of Land for Road Allowance in the Financial Policies for Development:

- “Where a Proponent is required to dedicate more than thirteen (13) metres of land to establish a new road allowance width for a residential road, and more than 16m for a non-residential road, measured from the centerline of the road allowance to one side to its ultimate width, the City shall compensate the Proponent for the value of dedicated land beyond 13 metres in width on that side of the road allowance for a residential road, and 16m for a non-residential road, respectively, for the length of the conveyance. For clarity,



non-residential roads include those roads that are meant to carry mixed traffic and not solely residential traffic.”

As a result of this direction and amendment, updated LSP deductions were applied to a significant number of “To 2031” road projects within the urban boundary. These deductions were applied to the capital list of projects as a single line item deduction. This report reflects the amended LSP and financial policies. Changes compared to the draft STNR report published in December 2023 are listed in the tables at the end Appendix F.

This resulted in a development charges net capital cost **decrease of approximately \$64 million.**

## 1.3 Major Structures

The following changes were implemented to the major structures:

### 1.3.1 Additional Major Structures

Two additional major structures (active transportation bridges) were added to the capital list based on the Waterdown Transportation Management Plan.

This resulted in a development charges net capital cost **increase of approximately \$1.5 million.**

### 1.3.2 Major Structures Timing

The City of Hamilton indicated that the timing of select major structures should be delayed from “To 2031” to “2031 to 2041”.

This resulted in a development charges net capital cost **decrease of approximately \$6 million.**

### 1.3.3 Updated Major Structures Cost Estimate

The City of Hamilton provided an updated cost estimate for the gross capital cost, including the allocation of costs between the City and Ontario Ministry of Transportation, for one of the provincial highway interchange projects.

This resulted in a development charges net capital cost **increase of approximately \$2.5 million.**

## 1.4 Active Transportation Projects

The following changes were implemented to the active transportation (AT) projects:

### 1.4.1 Removing Duplicate Active Transportation Projects

Multiple AT projects were removed or adjusted to eliminate overlap with road and other AT projects.

This resulted in a development charges net capital cost **decrease of approximately \$6 million.**

### 1.4.2 Active Transportation Project Cost Allocation to the Local Service Policy

The City of Hamilton provided updated direction on how to allocate the costs of AT projects within and near the former urban boundary expansion areas to the LSP.

This resulted in a development charges net capital cost **decrease of approximately \$0.5 million.**

### 1.4.3 Active Transportation Project Timing

The timing of select AT projects was delayed from “To 2031” to “2031 to 2041” to align with the timing of nearby and related road resurfacing projects.

This resulted in a development charges net capital cost **decrease of approximately \$15 million.**

## 2 Conclusion

The table below summarizes the changes to the development charges net capital costs:

<b>Capital List Category</b>	<b>Approximate Net Capital Cost Change</b>
Road Projects	(\$109,750,000)
Major Structures	(\$2,000,000)
Active Transportation	(\$21,500,000)
<b>Total</b>	<b>(\$133,250,000)</b>

The new net capital cost for Services Related to a Highway is approximately **\$628.25 million**, representing a decrease of approximately \$133.25 million compared to the development charges net capital cost previously published in December 2023 (approximately \$761.5 million). The cost of Transit Services remains unchanged.

The exhibit on the next pages includes a summary of projects subject to changes, including their gross and net capital cost changes.

2024 Transportation Summary of Changes by Project

2023 Draft Report Prj No.	Project	2023 Draft Gross Capital Cost	2024 Updated Gross Capital Cost	Gross Capital Cost Change	2023 Draft Net Capital Cost	2024 Updated Net Capital Cost	Net Capital Cost Change	Description of Change
<b>Road</b>								
2	Book Road - Southcote Road to Highway 6	\$ 10,580,564	\$ 11,523,989	\$ 943,425	\$ 8,993,480	\$ 9,795,391	\$ 801,911	Updated right-of-way assumptions and local service policy deductions updated to be included as part of a single line item deduction.
3	Collector 1E - Collector 6N to Dickenson Road	\$ 6,458,583	\$ 6,558,380	\$ 99,797	\$ -	\$ -	\$ -	Updated right-of-way assumptions.
4	Arterial 1N - Collector 2N to Dickenson Road/Garth Street Extension	\$ 34,248,600	\$ 34,917,248	\$ 668,648	\$ 34,248,600	\$ 34,917,248	\$ 668,648	Updated right-of-way assumptions and local service policy deductions updated to be included as part of a single line item deduction.
5	Collector 2N - Collector 5W to Arterial 1N	\$ 4,042,840	\$ 4,105,309	\$ 62,469	\$ -	\$ -	\$ -	Updated right-of-way assumptions.
9	Collector 6E - Collector 6N to Dickenson Road	\$ 6,245,695	\$ 6,342,202	\$ 96,507	\$ 1,831,146	\$ 6,342,202	\$ 4,511,056	Updated right-of-way assumptions and local service policy deductions updated to be included as part of a single line item deduction.
10	Collector 7N - Collector 5W to Collector 2W	\$ 11,577,708	\$ 11,756,604	\$ 178,896	\$ -	\$ -	\$ -	Updated right-of-way assumptions.
12	Dickenson Road - Glancaster Road to Garth Street Extension	\$ 31,576,263	\$ 18,044,132	\$ (13,532,131)	\$ 26,839,824	\$ -	\$ (26,839,824)	Project segmented into multiple projects, timing updated to "2031 to 2041".
N/A	Dickenson Road - Garth Street Extension to Upper James Street	\$ -	\$ 16,039,229	\$ 16,039,229	\$ -	\$ 13,633,344	\$ 13,633,344	New project, previously was segment of project above.
13	Dickenson Road Extension - Glancaster Road to Smith Road	\$ 6,526,966	\$ 9,447,229	\$ 2,920,264	\$ 6,526,966	\$ -	\$ (6,526,966)	Project type updated, timing updated to "2031 to 2041".
14	Book Road - Smith Road to Southcote Road	\$ 4,935,759	\$ 5,343,540	\$ 407,781	\$ 4,195,395	\$ 4,542,009	\$ 346,614	Updated right-of-way assumptions and local service policy deductions updated to be included as part of a single line item deduction.
15	Garth Street Extension - Twenty Road to Collector 6N	\$ 9,296,472	\$ 9,477,970	\$ 181,499	\$ -	\$ -	\$ -	Updated right-of-way assumptions.
16	Garth Street Extension - Collector 6N to Dickenson Road	\$ 7,561,667	\$ 7,709,296	\$ 147,629	\$ -	\$ -	\$ -	Updated right-of-way assumptions.
20	Smith Road - Garner Road to Hydro Corridor	\$ 8,503,884	\$ 8,635,284	\$ 131,400	\$ 8,503,884	\$ 8,635,284	\$ 131,400	Updated right-of-way assumptions and local service policy deductions updated to be included as part of a single line item deduction.
21	Smith Road - Hydro Corridor to Book Road	\$ 9,794,999	\$ 9,946,349	\$ 151,350	\$ -	\$ -	\$ -	Updated right-of-way assumptions.
22	Smith Road - Book Road to Arterial 1N	\$ 6,072,996	\$ 6,166,835	\$ 93,839	\$ -	\$ -	\$ -	Updated right-of-way assumptions.
23	Southcote Road - Garner Road to Book Road	\$ 26,708,722	\$ 23,002,848	\$ (3,705,874)	\$ 22,702,414	\$ -	\$ (22,702,414)	Updated right-of-way assumptions and local service policy deductions updated to be included as part of a single line item deduction.
24	Upper James Street - Rymal Road to Highway 6 South	\$ 86,351,332	\$ 96,459,332	\$ 10,108,000	\$ -	\$ -	\$ -	Updated right-of-way assumptions.
27	Smith Road - Arterial 1N to Airport Boundary	\$ 2,046,951	\$ 2,078,580	\$ 31,629	\$ 600,136	\$ -	\$ (600,136)	Timing updated to "2031 to 2041".
28	Airport Road - East Cargo Road to Upper James Street	\$ 8,247,539	\$ 8,462,899	\$ 215,360	\$ 4,948,523	\$ 5,077,739	\$ 129,216	Updated right-of-way assumptions and local service policy deductions updated to be included as part of a single line item deduction.
30	Collector 10N - Garner Road to Smith Road	\$ 11,312,884	\$ 11,487,688	\$ 174,804	\$ 3,316,771	\$ 11,487,688	\$ 8,170,917	Updated right-of-way assumptions and local service policy deductions updated to be included as part of a single line item deduction.
34	Collector 1W - Collector 10N to Garner Road	\$ 3,761,610	\$ 3,819,733	\$ 58,124	\$ -	\$ -	\$ -	Updated right-of-way assumptions.
36	Golf Links Road - McNiven Road to Kitty Murray Lane	\$ 9,147,781	\$ -	\$ (9,147,781)	\$ 7,775,614	\$ -	\$ (7,775,614)	Project is not growth-related and was removed from the list.
38	Shaver Road - Trustwood to Garner Road	\$ 6,303,822	\$ 6,303,822	\$ -	\$ 5,358,249	\$ -	\$ (5,358,249)	Timing updated to "2031 to 2041".

2023 Draft Report Prj No.	Project	2023 Draft Gross Capital Cost	2024 Updated Gross Capital Cost	Gross Capital Cost Change	2023 Draft Net Capital Cost	2024 Updated Net Capital Cost	Net Capital Cost Change	Description of Change
50	Collector C (Block 2) - Barton Street to Highway 8	\$ 5,642,466	\$ 5,642,466	\$ -	\$ -	\$ 5,642,466	\$ 5,642,466	Updated right-of-way assumptions and local service policy deductions updated to be included as part of a single line item deduction.
52	Collector E (Block 3) - Barton Street to Highway 8	\$ 5,060,086	\$ 5,060,086	\$ -	\$ -	\$ 5,060,086	\$ 5,060,086	Updated right-of-way assumptions and local service policy deductions updated to be included as part of a single line item deduction.
53	Collector F (Block 3) - Barton Street to Collector D	\$ 1,713,732	\$ 1,713,732	\$ -	\$ -	\$ 1,713,732	\$ 1,713,732	Updated right-of-way assumptions and local service policy deductions updated to be included as part of a single line item deduction.
64	Rymal Road - Dartnall Road to Upper James Street	\$ 71,111,462	\$ 56,631,794	\$ (14,479,668)	\$ 60,444,742	\$ 48,137,025	\$ (12,307,718)	Updated right-of-way assumptions and local service policy deductions updated to be included as part of a single line item deduction.
65	Upper Wellington Street - Limeridge Road to Stone Church Road	\$ 12,702,186	\$ 12,404,686	\$ (297,500)	\$ 7,621,312	\$ 7,442,812	\$ (178,500)	Updated right-of-way assumptions.
71	McNeilly Road - Highway 8 to Barton Street	\$ 7,156,843	\$ 7,156,843	\$ -	\$ 6,081,941	\$ 6,083,317	\$ 1,376	Updated right-of-way assumptions and local service policy deductions updated to be included as part of a single line item deduction.
72	Lewis Road - Highway 8 to Barton Street	\$ 3,908,425	\$ 3,908,425	\$ -	\$ 3,321,410	\$ 3,322,161	\$ 751	Updated right-of-way assumptions and local service policy deductions updated to be included as part of a single line item deduction.
74	Jones Road - Highway 8 to Barton Street	\$ 7,293,473	\$ 7,293,473	\$ -	\$ 6,198,050	\$ 6,199,452	\$ 1,402	Updated right-of-way assumptions and local service policy deductions updated to be included as part of a single line item deduction.
81	Parkside Drive - North Waterdown Drive to Avonsyde Boulevard	\$ 37,342,355	\$ 32,319,655	\$ (5,022,700)	\$ 31,741,002	\$ 27,471,707	\$ (4,269,295)	Updated right-of-way assumptions and local service policy deductions updated to be included as part of a single line item deduction.
N/A	Collector 5W - Collector 7N to Collector 2N	\$ 7,183,646	\$ 7,294,646	\$ 111,000	\$ -	\$ -	\$ -	Updated right-of-way assumptions, not included in the capital list because it is a post-2041 project.
N/A	Collector 2W - Garner Road to Dickenson Road Extension	\$ 23,130,538	\$ 23,562,706	\$ 432,168	\$ -	\$ -	\$ -	Updated right-of-way assumptions, not included in the capital list because it is a post-2041 project.
N/A	Collector 10N - Smith Road to Collector 1W	\$ 14,278,176	\$ 14,498,799	\$ 220,623	\$ -	\$ -	\$ -	Updated right-of-way assumptions, not included in the capital list because it is a post-2041 project.
N/A	Collector Road 6E - Collector 6N to Twenty Road West	\$ 6,780,294	\$ 6,885,062	\$ 104,768	\$ -	\$ -	\$ -	Updated right-of-way assumptions, not included in the capital list because it is a post-2041 project.
N/A	Collector Road 1E - Collector 6N to Twenty Road West	\$ 7,066,475	\$ 7,175,665	\$ 109,190	\$ -	\$ -	\$ -	Updated right-of-way assumptions, not included in the capital list because it is a post-2041 project.
N/A	Mud Street - Red Hill Valley Parkway to Upper Centennial Parkway	\$ 61,138,512	\$ 67,449,762	\$ 6,311,250	\$ -	\$ -	\$ -	Updated right-of-way assumptions, not included in the capital list because it is a post-2041 project.
N/A	Dickenson Road East - Upper James Street to 350 meters west of Nebo Road	\$ 37,922,121	\$ 37,820,121	\$ (102,000)	\$ -	\$ -	\$ -	Updated right-of-way assumptions, not included in the capital list because it is a post-2041 project.
N/A	Fletcher Road - McWatters Street to Golf Club Road	\$ 30,171,056	\$ 30,086,056	\$ (85,000)	\$ -	\$ -	\$ -	Updated right-of-way assumptions, not included in the capital list because it is a post-2041 project.
N/A	Local Share Deductions	\$ -	\$ (64,082,002)	\$ (64,082,002)	\$ -	\$ (64,082,002)	\$ (64,082,002)	New single line item deduction added to reflect local share deductions for road projects identified above and select additional road projects.
<b>Major Structures</b>								
91	Highway 5/6 Interchange	\$ 49,093,158	\$ 60,500,000	\$ 11,406,842	\$ 12,273,290	\$ 15,000,000	\$ 2,726,711	Updated cost estimate provided by City of Hamilton.
97	Henderson Lift Bridge	\$ 20,000,000	\$ 20,000,000	\$ -	\$ 3,800,000	\$ -	\$ (3,800,000)	Timing updated to "2031 to 2041".
98	Hamilton Centre Pedestrian and Cyclist Bridge	\$ 9,500,000	\$ 9,500,000	\$ -	\$ 1,805,000	\$ -	\$ (1,805,000)	Timing updated to "2031 to 2041".
100	Dundas Pedestrian and Cyclist Bridge	\$ 3,125,000	\$ 3,125,000	\$ -	\$ 593,750	\$ -	\$ (593,750)	Timing updated to "2031 to 2041".
N/A	Margaret St. Park Active Transportation Bridge	\$ -	\$ 5,900,000	\$ 5,900,000	\$ -	\$ -	\$ -	New major structure added.
N/A	Sealey Park Active Transportation Bridge	\$ -	\$ 7,500,000	\$ 7,500,000	\$ -	\$ 1,425,000	\$ 1,425,000	New major structure added.

2023 Draft Report Prj No.	Project	2023 Draft Gross Capital Cost	2024 Updated Gross Capital Cost	Gross Capital Cost Change	2023 Draft Net Capital Cost	2024 Updated Net Capital Cost	Net Capital Cost Change	Description of Change
<b>Active Transportation</b>								
136	Binbrook Road - Trinity Church to Royal Winter/Binhaven	\$ 342,899	\$ 342,899	\$ -	\$ 240,030	\$ 137,795	\$ (102,235)	Project adjusted to prevent overlap with other projects.
170	Governor's - Wainwright to Lynden	\$ 908,823	\$ 908,823	\$ -	\$ 636,176	\$ -	\$ (636,176)	Timing updated to "2031 to 2041".
172	Grays/ Gray - Confederation Park gate to King	\$ 163,086	\$ 163,086	\$ -	\$ -	\$ 21,690	\$ 21,690	LSP cost allocation updated.
180	Hydro Corridor - Barton to Lawrence	\$ 1,743,769	\$ 1,743,769	\$ -	\$ -	\$ 231,921	\$ 231,921	LSP cost allocation updated.
182	Hydro Corridor - Wilson/Highway 52 to Regional Road 56	\$ 10,617,336	\$ 10,617,336	\$ -	\$ 1,412,106	\$ -	\$ (1,412,106)	LSP cost allocation updated.
193	Limeridge - Garth/ Bonaventure to West 5th/ Hawkridge	\$ 73,877	\$ 73,877	\$ -	\$ -	\$ 9,826	\$ 9,826	LSP cost allocation updated.
194	Limeridge Mall Hydro Corridor Trail - Mohawk Road to South of Rymal	\$ 1,957,036	\$ 1,957,036	\$ -	\$ 260,286	\$ -	\$ (260,286)	LSP cost allocation updated.
219	Red Hill Pedestrian Crossing - Eugene Street to Glengrove Avenue	\$ 2,439,325	\$ -	\$ (2,439,325)	\$ -	\$ -	\$ -	Project removed due to overlap.
227	Strachan Street Trail - James to Ferguson	\$ 469,744	\$ -	\$ (469,744)	\$ 62,476	\$ -	\$ (62,476)	Project is existing, removed from capital list.
230	Upper Sherman - Stone Church to Rymal to Miles	\$ 249,508	\$ 249,508	\$ -	\$ 33,185	\$ -	\$ (33,185)	LSP cost allocation updated.
238	White Church Road West Airport Link	\$ 938,095	\$ 938,095	\$ -	\$ -	\$ 656,666	\$ 656,666	LSP cost allocation updated.
245	Airport Road - Butter to Miles	\$ 932,965	\$ 932,965	\$ -	\$ -	\$ 84,576	\$ 84,576	LSP cost allocation updated.
249	Baseline - Lockport to North Service Road	\$ 372,805	\$ 288,999	\$ (83,806)	\$ 221,819	\$ 171,955	\$ (49,865)	Project adjusted to prevent overlap with other projects.
252	Binbrook Road - Fletcher to Binhaven	\$ 706,274	\$ -	\$ (706,274)	\$ 93,934	\$ -	\$ (93,934)	Project removed due to overlap.
254	Book Road - Shaver to Fiddler's Green	\$ 751,147	\$ 751,147	\$ -	\$ 446,933	\$ -	\$ (446,933)	Timing updated to "2031 to 2041".
264	Carlisle - Highway 6 to Wildberry Way	\$ 704,824	\$ -	\$ (704,824)	\$ 493,377	\$ -	\$ (493,377)	Project removed due to overlap.
267	Carluke - Glancaster to Shaver	\$ 1,058,213	\$ 1,058,213	\$ -	\$ 629,637	\$ -	\$ (629,637)	Timing updated to "2031 to 2041".
269	Chatham Street - Dundurn to Frid	\$ 37,418	\$ -	\$ (37,418)	\$ 4,977	\$ -	\$ (4,977)	Project removed due to overlap.
272	Concession 4 West - Millgrove Sideroad to Highway 6	\$ 532,612	\$ 532,612	\$ -	\$ 316,904	\$ -	\$ (316,904)	Timing updated to "2031 to 2041".
273	Concession 6 East - Highway 6 to Centre Road	\$ 836,846	\$ 836,846	\$ -	\$ 497,924	\$ -	\$ (497,924)	Timing updated to "2031 to 2041".
282	Dundas St E (Highway 5) - Highway 6 to Boundary	\$ 1,428,830	\$ -	\$ (1,428,830)	\$ 190,034	\$ -	\$ (190,034)	Project removed due to overlap.
285	Eighth Road Link - Ridge to Boundary	\$ 1,651,643	\$ 1,651,643	\$ -	\$ 1,156,150	\$ -	\$ (1,156,150)	Timing updated to "2031 to 2041".
292	Ferguson - Charlton to North of Young	\$ 36,563	\$ 7,238	\$ (29,325)	\$ 4,863	\$ 963	\$ (3,900)	Project adjusted to prevent overlap with other projects.
293	Field - Jerseyville Rd W to Governor's Rd	\$ 1,162,739	\$ 1,162,739	\$ -	\$ 813,917	\$ -	\$ (813,917)	Timing updated to "2031 to 2041".
297	First Road East - Highland Road to Ridge Road	\$ 1,148,959	\$ 1,148,959	\$ -	\$ -	\$ -	\$ -	LSP cost allocation updated and timing updated to "2021 to 2041".
299	Flamborough Puslinch Tlin - Maddaugh Road to Centre	\$ 542,586	\$ 542,586	\$ -	\$ 379,810	\$ -	\$ (379,810)	Timing updated to "2031 to 2041".
317	Governors - Binkley to Lynden	\$ 3,001,131	\$ -	\$ (3,001,131)	\$ 1,785,673	\$ -	\$ (1,785,673)	Project removed due to overlap.
319	Greenford - Owen Pl to Cromwell	\$ 8,209	\$ -	\$ (8,209)	\$ 1,092	\$ -	\$ (1,092)	Project removed due to overlap.
320	Greenford - Cromwell to Kenora	\$ 49,861	\$ -	\$ (49,861)	\$ 6,632	\$ -	\$ (6,632)	Project removed due to overlap.
323	Hamilton - Nisbet to Dundas St E	\$ 169,250	\$ -	\$ (169,250)	\$ 22,510	\$ -	\$ (22,510)	Project removed due to overlap.
326	Highbury Drive - Highland Road W to Whitedeer	\$ 145,424	\$ -	\$ (145,424)	\$ 19,341	\$ -	\$ (19,341)	Project removed due to overlap.
328	Highland Rd E - Upper Centennial Pkwy to E Town Line	\$ 3,051,099	\$ 3,051,099	\$ -	\$ -	\$ -	\$ -	LSP cost allocation updated and timing updated to "2021 to 2041".
330	Highway 8 (Flam) - Boundary to Brock	\$ 6,691,317	\$ 6,691,317	\$ -	\$ 4,683,922	\$ -	\$ (4,683,922)	Timing updated to "2031 to 2041".
331	Highway 8 (Sc) - King St E to Dewitt	\$ 193,404	\$ -	\$ (193,404)	\$ 25,723	\$ -	\$ (25,723)	Project removed due to overlap.
332	Highway 8 (Sc) - Fifty to Boundary	\$ 113,390	\$ 113,390	\$ -	\$ 79,373	\$ -	\$ (79,373)	Timing updated to "2031 to 2041".
341	Jerseyville Rd W - Boundary to East of Paddy Greens	\$ 5,533,950	\$ 5,533,950	\$ -	\$ 3,292,700	\$ -	\$ (3,292,700)	Timing updated to "2031 to 2041".
344	John - Charlton Ave E to St Joseph's	\$ 21,829	\$ -	\$ (21,829)	\$ 2,903	\$ -	\$ (2,903)	Project removed due to overlap.
359	Lormont - First Rd W to Picardy	\$ 75,540	\$ -	\$ (75,540)	\$ 10,047	\$ -	\$ (10,047)	Project removed due to overlap.

2023 Draft Report Prj No.	Project	2023 Draft Gross Capital Cost	2024 Updated Gross Capital Cost	Gross Capital Cost Change	2023 Draft Net Capital Cost	2024 Updated Net Capital Cost	Net Capital Cost Change	Description of Change
362	Maddaugh Road - Highway 6 to Flamborough Puslinch Tlin	\$ 334,364	\$ 334,364	\$ -	\$ 234,055	\$ -	\$ (234,055)	Timing updated to "2031 to 2041".
364	Main - Osler to South of Osler	\$ 212,336	\$ -	\$ (212,336)	\$ 28,241	\$ -	\$ (28,241)	Project removed due to overlap.
365	Main - Osler to York	\$ 34,421	\$ -	\$ (34,421)	\$ 4,578	\$ -	\$ (4,578)	Project removed due to overlap.
368	Maple/Mountain Ave Extension - Lake Ave S to End	\$ 15,833	\$ 5,272	\$ (10,561)	\$ 2,106	\$ 701	\$ (1,405)	Project adjusted to prevent overlap with other projects.
376	Miles - Rymal Rd E to Boundary	\$ 3,265,308	\$ 3,265,308	\$ -	\$ -	\$ -	\$ -	LSP cost allocation updated and timing updated to "2021 to 2041".
377	Mill - Dundas St E to Boundary	\$ 392,672	\$ -	\$ (392,672)	\$ 52,225	\$ -	\$ (52,225)	Project removed due to overlap.
379	Mineral Springs - Binkley to Sulphur Springs	\$ 381,791	\$ 381,791	\$ -	\$ 227,166	\$ -	\$ (227,166)	Timing updated to "2031 to 2041".
382	Mountain Brow Blvd - Mohawk Rd E to Mud	\$ 85,532	\$ -	\$ (85,532)	\$ 11,376	\$ -	\$ (11,376)	Project removed due to overlap.
383	Mud - Eleventh Road E to Boundary	\$ 266,629	\$ 266,629	\$ -	\$ 186,640	\$ -	\$ (186,640)	Timing updated to "2031 to 2041".
387	North Service Road Link (Millen) - North Service Road to Shoreview	\$ 26,931	\$ -	\$ (26,931)	\$ 3,582	\$ -	\$ (3,582)	Project removed due to overlap.
389	Old Mud - Paramount to Cedarville	\$ 54,469	\$ 39,480	\$ (14,989)	\$ 7,244	\$ 5,251	\$ (1,993)	Project adjusted to prevent overlap with other projects.
391	Owen Pl - King St E to Greenford	\$ 22,046	\$ -	\$ (22,046)	\$ 2,932	\$ -	\$ (2,932)	Project removed due to overlap.
396	Picardy - Highland Rd W to Lormont	\$ 70,680	\$ -	\$ (70,680)	\$ 9,401	\$ -	\$ (9,401)	Project removed due to overlap.
401	Queensdale - Skyland to Upper Wellington	\$ 15,854	\$ -	\$ (15,854)	\$ 2,109	\$ -	\$ (2,109)	Project removed due to overlap.
402	Raymond - Stonehenge to Garner	\$ 183,962	\$ -	\$ (183,962)	\$ 24,467	\$ -	\$ (24,467)	Project removed due to overlap.
416	Scenic - Angela to West of Chateau	\$ 257,015	\$ -	\$ (257,015)	\$ 34,183	\$ -	\$ (34,183)	Project removed due to overlap.
417	Scenic - Colquhoun to Garth (via Scenic and Denlow)	\$ 61,270	\$ 32,617	\$ (28,653)	\$ 8,149	\$ 4,338	\$ (3,811)	Project adjusted to prevent overlap with other projects.
420	Shaver - Garner to Carluke	\$ 1,832,582	\$ 1,832,582	\$ -	\$ 958,543	\$ -	\$ (958,543)	Timing updated to "2031 to 2041".
426	Southcote - Garner to Airport	\$ 392,445	\$ 392,445	\$ -	\$ 48,155	\$ -	\$ (48,155)	Timing updated to "2031 to 2041".
429	Sulphur Springs - Lover's to Mineral Springs Rd	\$ 439,812	\$ 439,812	\$ -	\$ 261,688	\$ -	\$ (261,688)	Timing updated to "2031 to 2041".
437	Terryberry - Private Rd to Rymal Rd	\$ 28,032	\$ -	\$ (28,032)	\$ 3,728	\$ -	\$ (3,728)	Project removed due to overlap.
439	Twenty Rd - Southcote to West of Nebo	\$ 1,310,636	\$ 1,310,636	\$ -	\$ -	\$ 18,075	\$ 18,075	LSP cost allocation updated.
447	White Church Rd E - Trinity Church Rd to Upper James	\$ 1,972,066	\$ -	\$ (1,972,066)	\$ -	\$ -	\$ -	Project removed due to overlap.
448	Whitedeer - Highbury to Rymal Rd E	\$ 48,561	\$ -	\$ (48,561)	\$ 6,459	\$ -	\$ (6,459)	Project removed due to overlap.
458	York Road Valley Community Centre Park Hydro Corridor Trail - York to Highway 6	\$ 3,109,472	\$ -	\$ (3,109,472)	\$ 1,850,136	\$ -	\$ (1,850,136)	Project removed due to overlap.
461	White Church Rd W Loop - White Church Rd W East of Carluke to White Church Road W West of Highway 6	\$ 1,683,731	\$ -	\$ (1,683,731)	\$ 1,178,611	\$ -	\$ (1,178,611)	Project removed due to overlap.

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