

Region of Niagara Development Charge Background Study

In association with:

IBI Group

and

GM BluePlan Engineering Consultants Limited

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Plaza Three
101-2000 Argentia Rd.
Mississauga, Ontario
Canada L5N 1V9

Phone: (905) 272-3600

Fax: (905) 272-3602

e-mail: info@watson-econ.ca

www.watson-econ.ca

 **Planning for growth**

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List of Acronyms and Abbreviations

| Acronym | Phrase or word |
|------------|--------------------------------|
| A.T. | Active Transportation |
| B.T.E. | Benefit to Existing |
| D.C. | Development Charge |
| D.C.A. | Development Charges Act |
| E.S.A. | Environmentally Sensitive Area |
| G.F.A. | Gross floor area |
| M.C.R. | Municipal Comprehensive Review |
| N.F.P.O.W. | No Fixed Place of Work |
| O.M.B. | Ontario Municipal Board |
| O.P.A. | Official Plan Amendment |
| O.Reg. | Ontario Regulation |
| P.O.A. | Provincial Offences Act |
| P.P.C. | Post Period Commitment |
| P.P.U. | Persons per unit |
| R.S.O. | Revised Statutes of Ontario |
| S.D.U. | Single detached unit |
| S.O. | Statutes of Ontario |
| s.s. | Subsection |
| S.W.M. | Stormwater management |
| sq.ft. | Square footage |
| W.F.H. | Work from Home |

Executive Summary

1. The report provided herein represents the Development Charge Background Study for the Region of Niagara required by the *Development Charges Act, 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 Region;
 - Chapter 3 – Summary of the residential and non-residential growth forecasts for the Region;
 - Chapter 4 – Approach to calculating the development charge;
 - Chapter 5 – Review of historic service standards and identification of future capital requirements to service growth and related deductions and allocations;
 - Chapter 6 – Calculation of the development charges;
 - Chapter 7 – Development charge policy recommendations and rules; and
 - Chapter 8 – By-law implementation.
2. Development charges (D.C.) 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;
 - Statutory 10% deduction (soft services);
 - Amounts in excess of 10-year historic service calculation;
 - D.C. reserve funds (where applicable);

- 5) Net costs are then allocated between residential and non-residential benefit; and
 - 6) Net costs divided by growth to provide the D.C. charge.
3. The growth forecast (Chapter 3) on which the Region-wide development charge is based projects the following population, housing and non-residential floor area for the 10-year (2017-2026) and 25-year (2017-2041) periods.

| Measure | 10 Year 2017-2026 | Water 2017-2041 | Wastewater 2017-2041 | 25 Year 2017-2041 |
|--|----------------------|--------------------|-------------------------|----------------------|
| (Net) Population Increase | 47,982 | 147,344 | 147,517 | 153,086 |
| Residential Unit Increase | 24,072 | 63,382 | 63,368 | 65,392 |
| Non-Residential Gross Floor Area Increase (ft ²) | 9,810,900 | 27,914,500 | 27,914,500 | 29,062,000 |

Source: Watson & Associates Economists Ltd. Forecast 2017

4. On July 6, 2012, the Region of Niagara passed By-law 62-2012 under the Development Charges Act, 1997, as amended (D.C.A.). The by-law imposes development charges on residential and non-residential uses. This by-law was amended via by-law 84-2015 to update the maps in Schedule D. The Region is undertaking a development charge public process and anticipates passing a new by-law in advance of the expiry date. The mandatory public meeting has been set for June 8, 2017 with adoption of the by-law scheduled for June 29, 2017.
5. The Region's development charges currently in effect are \$10,484 for single detached dwelling units for General Government, Emergency Medical Services, Police Services, Roads Services, Water Services, and Wastewater Services. Non-residential charges are \$12.12 for commercial developments, \$5.43 for industrial developments, \$5.68 for institutional developments, and \$3.65 for hotel/motel developments (per square foot) for the same services noted above. This report has undertaken a recalculation of the charge based on future identified needs (presented in Schedule ES-1 for residential and non-residential).

The proposed charges have been provided on a Region-wide basis for all services noted above, as well as Long-Term Care, Social Housing, P.O.A., Health, Social and Child Services, and Waste Diversion Services. Note that water and wastewater services are only imposed in urban serviced areas. The corresponding single-detached unit charge is \$19,006. The non-residential charges are \$11.41 for commercial developments, \$4.73 for industrial developments, \$8.15 for institutional developments (per sq.ft.) and \$7,371 per wind turbine.

6. The *Development Charges Act* requires a summary be provided of the gross capital costs and the net costs to be recovered over the life of the by-law. This calculation is provided by service and is presented in Table 6-6. A summary of these costs is provided below:

| | |
|---|-----------------------|
| Total gross expenditures planned over the next five years | \$ 1,073,275,881 |
| Less: | |
| Benefit to existing development | \$ 515,374,787 |
| Post planning period benefit | \$ 48,571,785 |
| Ineligible re: Level of Service | \$ 170,000 |
| Mandatory 10% deduction for certain services | \$ 7,541,882 |
| Grants, subsidies and other contributions | \$ 55,155,714 |
| Net Costs to be recovered from development charges | \$ 446,461,713 |

Hence, \$626.81 million (or an annual amount of \$125.36 million) will need to be contributed from taxes and rates, or other sources. Of this amount, \$48.57 million 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 Region plans to spend \$1,073.28 million over the next five years, of which \$446.46 million (42%) is recoverable from development charges. Of this net amount, \$351.60 million is recoverable from residential development and \$94.86 million from non-residential development. It is noted also that any exemptions or reductions in the charges would reduce this recovery further.

7. 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 a 25-year forecast for areas which will receive these services:

- Wastewater Services – Treatment, Pumping, Linear and Wet Weather Reduction; and
- Water Services – Treatment, Pumping, Storage, and Linear.

The following services are calculated based on a 25-year Region-wide forecast:

- Services Related to a Highway; and
- Police Services.

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

- General Government;
 - Long Term Care;
 - Provincial Offences Act;
 - Health;
 - Social and Child Services;
 - Emergency Medical Services;
 - Social Housing; and
 - Waste Diversion.
8. A number of changes to the D.C. process need to be address as a result of Bill 73. These changes have been addressed throughout the report and in the updated draft by-law, as necessary. These items include:
- a. Area-rating: Council must consider the use of area specific charges.
 - b. Asset Management Plan for New Infrastructure: The D.C. background study must include an asset management plan that deals with all assets proposed to be funded, in whole or in part, by D.C.s. The asset management plan must show that the assets are financially sustainable over their full lifecycle.
 - c. 60-day Circulation Period: The D.C. background study must be released to the public at least 60-days prior to passage of the D.C. by-law.
 - d. Timing of Collection of Development Charges: The D.C.A. now required D.C.s to be collected at the time of the first building permit.
9. 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. These directions will refine the draft D.C. by-law which is appended in Appendix J. These decisions may include:
- adopting the charges and policies recommended herein;
 - considering additional exemptions to the by-law;
 - considering phase-in or transition policies to the by-law; 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-1
Niagara Region
Schedule of Development Charges

| Service | RESIDENTIAL | | | | | | NON-RESIDENTIAL | | | |
|--------------------------------------|-----------------------------------|---------------------------|-----------------------------|-------------------------------------|-----------------|---|--|--|---|---------------|
| | Single and Semi-Detached Dwelling | Apartments - 4 Bedrooms + | Apartments - 2 & 3 Bedrooms | Apartments - Bachelor and 1 Bedroom | Other Multiples | Special Care/Special Dwelling Units/Rooms | Commercial (per ft² of Gross Floor Area) | Industrial (per ft² of Gross Floor Area) | Institutional (per ft² of Gross Floor Area) | Wind Turbines |
| Municipal Wide Services: | | | | | | | | | | |
| Services Related to a Highway | 6,297 | 8,655 | 4,068 | 2,596 | 4,587 | 2,380 | 4.45 | 1.85 | 3.18 | 6,297 |
| Police Services | 696 | 957 | 450 | 287 | 507 | 263 | 0.50 | 0.21 | 0.36 | 696 |
| General Government | 212 | 291 | 137 | 87 | 154 | 80 | 0.19 | 0.07 | 0.13 | 212 |
| Long Term Care | 1,212 | 1,666 | 783 | 500 | 883 | 458 | 0.35 | 0.14 | 0.25 | - |
| Provincial Offences Act | 48 | 66 | 31 | 20 | 35 | 18 | 0.04 | 0.02 | 0.03 | - |
| Health | 148 | 203 | 96 | 61 | 108 | 56 | 0.05 | 0.02 | 0.03 | - |
| Social and Child Services | 194 | 267 | 125 | 80 | 141 | 73 | 0.06 | 0.02 | 0.04 | - |
| Emergency Medical Services | 166 | 228 | 107 | 68 | 121 | 63 | 0.04 | 0.02 | 0.03 | 166 |
| Social Housing | 2,123 | 2,918 | 1,372 | 875 | 1,547 | 803 | - | - | - | - |
| Waste Diversion | 362 | 497 | 234 | 149 | 263 | 137 | 0.31 | 0.12 | 0.22 | - |
| Total Municipal Wide Services | 11,457 | 15,748 | 7,403 | 4,723 | 8,346 | 4,331 | 5.98 | 2.47 | 4.27 | 7,371 |
| Urban Services | | | | | | | | | | |
| Wastewater Services | 4,420 | 6,076 | 2,856 | 1,823 | 3,220 | 1,671 | 3.18 | 1.32 | 2.27 | - |
| Water Services | 3,129 | 4,301 | 2,021 | 1,290 | 2,280 | 1,183 | 2.25 | 0.94 | 1.61 | - |
| Total Urban Services | 7,549 | 10,377 | 4,877 | 3,113 | 5,500 | 2,854 | 5.43 | 2.26 | 3.88 | - |
| GRAND TOTAL RURAL AREA | 11,457 | 15,748 | 7,403 | 4,723 | 8,346 | 4,331 | 5.98 | 2.47 | 4.27 | 7,371 |
| GRAND TOTAL URBAN AREA | 19,006 | 26,125 | 12,280 | 7,836 | 13,846 | 7,185 | 11.41 | 4.73 | 8.15 | 7,371 |

1. Introduction

1.1 Purpose of this Document

This background study has been prepared pursuant to the requirements of the *Development Charges Act, 1997* (s.10), as amended (D.C.A.) and, accordingly, recommends new development charges and policies for the Region of Niagara.

The Region retained Watson & Associates Economists Ltd. (Watson), to undertake the development charges (D.C.) study process throughout 2016 and 2017. Watson worked with Regional staff as well as engineering consultants (GM BluePlan Engineering Consultants Limited and IBI Group) in preparing the D.C. analysis and policy recommendations.

This development charge background study, containing the proposed development charge by-law, 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 Region's development charge background study, as summarized in Chapter 4. It also addresses the requirement for "rules" (contained in Chapter 7) and the proposed by-law 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), Niagara's current D.C. policy (Chapter 2) and the policies underlying the proposed by-law (Chapter 7), 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 June 8, 2017. 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 Region's development charges.

In accordance with the legislation, the background study and proposed D.C. by-law will be available for public review on April 28, 2017.

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-law subsequent to the public meeting.

Figure 1-1 outlines the schedule of the D.C. process that has been undertaken and the D.C. public process to be followed, including the by-law adoption process.

Figure 1-1
Schedule of Key Development Charge Process Dates for the Region of Niagara

| | |
|---|---|
| 1. Data collection, staff review, engineering work, D.C. calculations and policy work | August 2016 – April 2017 |
| 2. Internal Stakeholder meetings | July - December 2016 |
| 3. Regional Development Charges Task Force Meetings | 1. January 17, 2017 2. April 11, 2017 |
| 4. Local Area Municipalities (Treasurers, Planners, Economic Development Officers, and Chief Building Officials) Meetings | 1. October 2016 2. March 2, 2017 3. April 4, 2017 4. April 26, 2017 |
| 5. Chief Building Officials Meetings | 1. December 2016 2. April 7, 2017 |
| 6. Public Information Centres | 1. November 30, 2017 2. December 6, 2017 3. December 7, 2017 4. December 8, 2017 |
| 7. Non-Governmental Stakeholder Meetings | 1. February 14, 2017 2. April 4, 2017 3. April 11, 2017 |
| 8. Corporate Services Committee | 1. May 10, 2017 |
| 9. Public meeting advertisement placed in newspaper(s) | May 4, 2014 (Niagara This Week) |
| 10. Background study and proposed by-law available to public | April 28, 2017 |
| 11. Public meeting of Council | June 8, 2017 |
| 12. Council considers adoption of background study and passage of by-law | June 29, 2017 |
| 13. Newspaper notice given of by-law passage | By 20 days after passage |
| 14. Last day for by-law appeal | 40 days after passage |
| 15. Region makes pamphlet available (where by-law not appealed) | By 60 days after in force date |

1.3 Changes to the Development Charges Act: Bill 73

With the amendment of the D.C.A. (as a result of Bill 73 and O.Reg. 428/15), there are a number of areas that must be addressed to ensure that the Region is in compliance with the D.C.A., as amended. The following provides an explanation of the changes to the Act that affect the Region's Background Study and how they have been dealt with to ensure compliance with the amended legislation.

1.3.1 Area Rating

Bill 73 has introduced two new sections where Council must consider the use of area specific charges:

- 1) Section 2(9) of the Act 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.

Presently, the Region's by-law includes area rated charges for water and wastewater services. These charges are for recovery of costs specific to the urban serviced areas that benefit directly from these water and/or wastewater systems. All other Region services are recovered based on a uniform, Region-wide basis. On January 17, 2017, discussions were undertaken with the D.C. Taskforce to consider area rating. At this meeting, Watson provided a report on Region-wide vs. Area-specific D.C.'s outlining general perspectives of both approaches. Several reasons why area-specific charges have not been imposed include:

1. All Region services, with the exception of water and wastewater, require that the average 10-year service standard be calculated. This average service standard multiplied by growth in the Region, establishes an upper ceiling on the amount of funds which 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 layman terms, the average service standard multiplied by the growth within the specific area, would establish an area specific ceiling which would significantly reduce the total revenue recoverable for the Region, 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 Region-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 & C. The development charges would be lower in Area A (as all services are now funded) and higher in B and C. As well, funding shortfalls may then potentially encourage the Region to provide less services to B and C due to reduced revenue.
3. Many services which are provided (roads, police, E.M.S., etc.) are not restricted to one specific area and are often used by all residents. For example, a Regional road in St. Catharines may not only be used by residents in the City. Residents from other municipalities in the Region may use this road to travel to and from work, other residents’ homes, or businesses in the area, hence usage of any one of the Regional roads identified in the capital program cannot be solely attributed to one area.

For the reasons noted above and the additional information provided to the D.C. Taskforce in January, 2017, the D.C. Taskforce directed staff and Watson to calculate the D.C. on a Region-wide basis. It is recommended that Council continue the D.C. approach to calculate the charges on a uniform Region-wide basis for all services except water and wastewater which would continue to be calculated on an urban-wide basis.

1.3.2 Asset Management Plan for New Infrastructure

The new legislation now requires that a D.C. background study must include an Asset Management Plan (s.10 (2) c.2). The asset management plan 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 asset management plan related to transit services; however, they are silent with respect to how the asset management plan is to be provided for all other services. As part of any asset

management plan, the examination should be consistent with the municipality's existing assumptions, approaches and policies on asset management planning. This examination may include both qualitative and quantitative measures such as examining the annual future lifecycle contributions needs (discussed further in Appendix I of this report).

1.3.3 60-Day Circulation of D.C. Background Study

Previously the legislation required that a D.C. background study be made available to the public at least two weeks prior to the public meeting. The amended legislation now provides that the D.C. background study must be made available to the public (including posting on the municipal website) at least 60 days prior to passage of the D.C. by-law. No other changes were made to timing requirements for such things as notice of the public meeting and notice of by-law passage.

This D.C. study is being provided to the public on April 28, 2017 to ensure the new requirements for release of the study is met.

1.3.4 Timing of Collection of Development Charges

The D.C.A. has been refined by Bill 73 to require that D.C.s are collected at the time of the first building permit. For the majority of development, this will not impact the Region's present process. However, there may be instances where several building permits are to be issued and either the size of the development or the uses will not be definable at the time of the first building permit. In these instances, the Region may enter into a delayed payment agreement in order to capture the full development.

1.3.5 Other Changes

It is also noted that a number of other changes were made through Bill 73 and O.Reg. 428/15 including changes to the way in which Transit D.C. service standards are calculated, the inclusion of Waste Diversion, and the ability for collection of additional levies. Transit services have not been included in this D.C. background study, however, Waste Diversion services have been included. Transit was not included in this analysis due to the additional engineering information required as a result of Bill 73. The methodology required to include Transit services in the D.C. background study requires forecasts and ridership capacity for all modes of transit over the 10 years, identification of excess capacity which exists at the end of 10 years, identification of whether new ridership is from existing or planned development. This would require additional engineering work and analysis. Further, a review of the Region's inter-municipal transit is currently being undertaken. Therefore, it is suggested that Transit

services be analysed in the Region's next D.C. background study process or alternatively, could be considered earlier when the required engineering data is available.

2. Current Region of Niagara Policy

2.1 Schedule of Charges

On July 6, 2012, the Region of Niagara passed By-law 62-2012 under the D.C.A. This by-law was amended via by-law 84-2015 to amend the maps in Schedule D.

This by-law, as amended, imposes development charges for residential and non-residential uses. The table below provides the rates currently in effect, as at September 1, 2016.

Table 2-1
Region of Niagara
Development Charges as at September 1, 2016

| Service | Residential | | | | Non-Residential | | | |
|----------------------------|-----------------|--------------|--------------|-------------------|--------------------------------|--------------------------------|-----------------------------------|---------------------------------|
| | Single Detached | Multiples | Apartments | Per Dwelling Room | Commercial per ft ² | Industrial per ft ² | Institutional per ft ² | Hotel/Motel per ft ² |
| Roads | 5,743 | 2,957 | 1,992 | 1,251 | 6.34 | 2.86 | 2.98 | 1.91 |
| Police Services | 265 | 192 | 148 | 88 | 0.35 | 0.15 | 0.16 | 0.10 |
| Emergency Medical Services | 78 | 56 | 44 | 25 | 0.03 | 0.01 | 0.01 | 0.01 |
| General Government | 83 | 58 | 46 | 27 | 0.10 | 0.05 | 0.05 | 0.03 |
| Sub-total | 6,169 | 3,263 | 2,230 | 1,391 | 6.82 | 3.07 | 3.20 | 2.05 |
| Wastewater Services | 3,349 | 2,415 | 1,879 | 1,097 | 4.02 | 1.79 | 1.88 | 1.21 |
| Water Services | 966 | 697 | 542 | 316 | 1.28 | 0.57 | 0.60 | 0.39 |
| Total | 10,484 | 6,375 | 4,651 | 2,804 | 12.12 | 5.43 | 5.68 | 3.65 |

2.2 Services Covered

The following services are covered under By-law 62-2012, as amended:

- Roads;
- General Government;
- Emergency Medical Services;
- Police Services;
- Water Services; and
- Wastewater Services.

2.3 Timing of D.C. Calculation and Payment

Development charges are payable at the time of building permit issuance and are collected by the local tier municipalities. The Region may, by agreement pursuant to section 38 of the Act, permit an owner to perform work that relates to a service to

which this by-law applies in lieu of the payment of all or any portion of a development charge. The Region will give the owner who performed the work a credit towards the development charge in accordance with the agreement and subject to the requirements of the Act. In addition, the Region may, in the case of development located outside of the existing service area, require payment of an appropriate share of the costs of the required infrastructure within the existing service area, in addition to the costs external to the service area.

2.4 Indexing

Rates shall be indexed on the anniversary of the effective date of the D.C. by-law (every September 1st) by the percentage change recorded in the Statistics Canada Quarterly Non-residential Building Construction Price Index (catalogue number 62-007).

2.5 Redevelopment Allowance - Demolitions

If application is made for a building permit in respect of a parcel of land upon which a premise existed within five years prior to the date of such application, but which premise has been demolished or destroyed before the date of such application, then the amount of development charges payable upon issuance of the said building permit shall be reduced to the net amount, calculated pursuant to this By-law at the current development charge rates, that would be payable as development charges in respect of the demolished or destroyed premise, provided that such reduction shall not exceed the development charges otherwise payable. For purposes of this subsection, “net” means the excess of the development charges for premises constructed, over the development charges for premises demolished or destroyed.

If, at the time of payment of development charges in respect of a parcel of land, the owner of the said land provides written notification of his/her intention to demolish (within five years) a premise existing on that parcel at the time of such payment, then upon the subsequent assurance by the Treasurer of the relevant local municipality (or his or her designate) to the Region’s Treasurer, within five years after such payment, that such premise on such parcel has indeed been so demolished (and the particulars of such demolished premise), the Region shall refund to such owner a reduction in the development charges paid, which reduction is the amount, calculated pursuant to this By-law or a predecessor by-law of the Region, at the development charge rates in effect at the time of such payment, that would have been payable as development charges in respect of the premise demolished, provided that such reduction shall not exceed the development charges actually paid.

2.6 Redevelopment Allowance – Conversions

If a development includes the conversion of a premise from one use (the “first use”) to another use, then the amount of development charges payable shall be reduced by the amount, calculated pursuant to this By-law at the current development charge rates, that would be payable as development charges in respect of the first use, provided that such reduction shall not exceed the development charges otherwise payable.

2.7 Exemptions

The following non-statutory exemptions are provided under By-law 62-2012:

- Granny flats;
- Parking structures;
- Lands and buildings used for agricultural use; notwithstanding this provision, a development charge shall be imposed in relation to agricultural use unless the owner of the fee simple of the land intends to actually use and occupy the land for such respective agricultural use;
- that portion of a place of worship which is used exclusively as a place of worship for religious services and any reception and meeting areas used in connection with, or integral to, the worship space, including hallways, attached meeting rooms and lobbies and excluding, but not limited to, areas such as office, storage buildings, kitchen, classrooms, fellowship hall and library;
- lands and buildings which are used or intended to be used as municipal housing project facilities, as set out in section 110 of the *Municipal Act, 2001*, S.O. 2001, c. 25, O. Reg. 603/06 under the *Municipal Act, 2001*, and the Region’s *Municipal Housing Facility By-law* (No. 34-2004), all as may be amended;
- lands and buildings used for affordable housing projects that receive funding through an agreement with Niagara Regional Housing, provided that the owner of the lands continues to use the lands and buildings for affordable housing. The owner shall be required to enter into an agreement with the Region under section 27 of the Act, in a form satisfactory to the Commissioner of Integrated Community Planning and Director of Legal Services, notice of which the owner shall register on the title to the lands at its sole cost and expense, with the intention that the provisions shall bind and run with title to the lands. If the owner ceases to use the lands and buildings for affordable housing, the development charges shall become immediately due and payable;
- land owned, used and occupied by a charitable institution, provided that the charitable institution continues to own, use and occupy the lands for the relief

of the poor for a period of three (3) years from the date that the development charges would otherwise be payable under this By-law or the Act (the “deferral period”). The charitable institution shall be required to enter into an agreement with the Region under section 27 of the Act, in a form satisfactory to the Commissioner of Integrated Community Planning and Director of Legal Services, notice of which the charitable institution shall register on the title to the lands at its sole cost and expense, with the intention that the provisions shall bind and run with title to the lands. If the charitable institution ceases to own, use or occupy the lands for the relief of the poor within the deferral period, the development charges shall become immediately due and payable; and

- gas station canopies.

2.8 Reductions

- Designated Exemption Areas:
 - The applicable development charge shall be reduced by 50% for any development (other than agricultural) for the following:
 - CIP area developments;
 - Brownfields developments; and
 - Long-term care homes developments.
- The remaining 50% of applicable development charges may be reduced as approved by Council of the Region, where, in the opinion of Council, the development includes three or more of the following features:
 - Intensification of an existing use;
 - Creation of mixed uses;
 - Contribution towards the creation of a walkable neighbourhood character;
 - Creation of a range of housing opportunities and choices;
 - Reduced setbacks from roadways; and
 - Other features and program details in the Smart Growth Program.

3. Anticipated Development in the Region of Niagara

3.1 Requirement of the Act

Chapter 4 provides the methodology for calculating a development charge 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 development charge that may be imposed, it is a requirement of Section 5 (1) of the D.C.A. that “the anticipated amount, type and location of development, for which D.C’s can be imposed, must be estimated.”

The growth forecast contained in this chapter (with supplemental tables in Appendix A) provides for the anticipated development for which Niagara Region will be required to provide services, over a 10-year and 25-year (2041) time horizon.

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

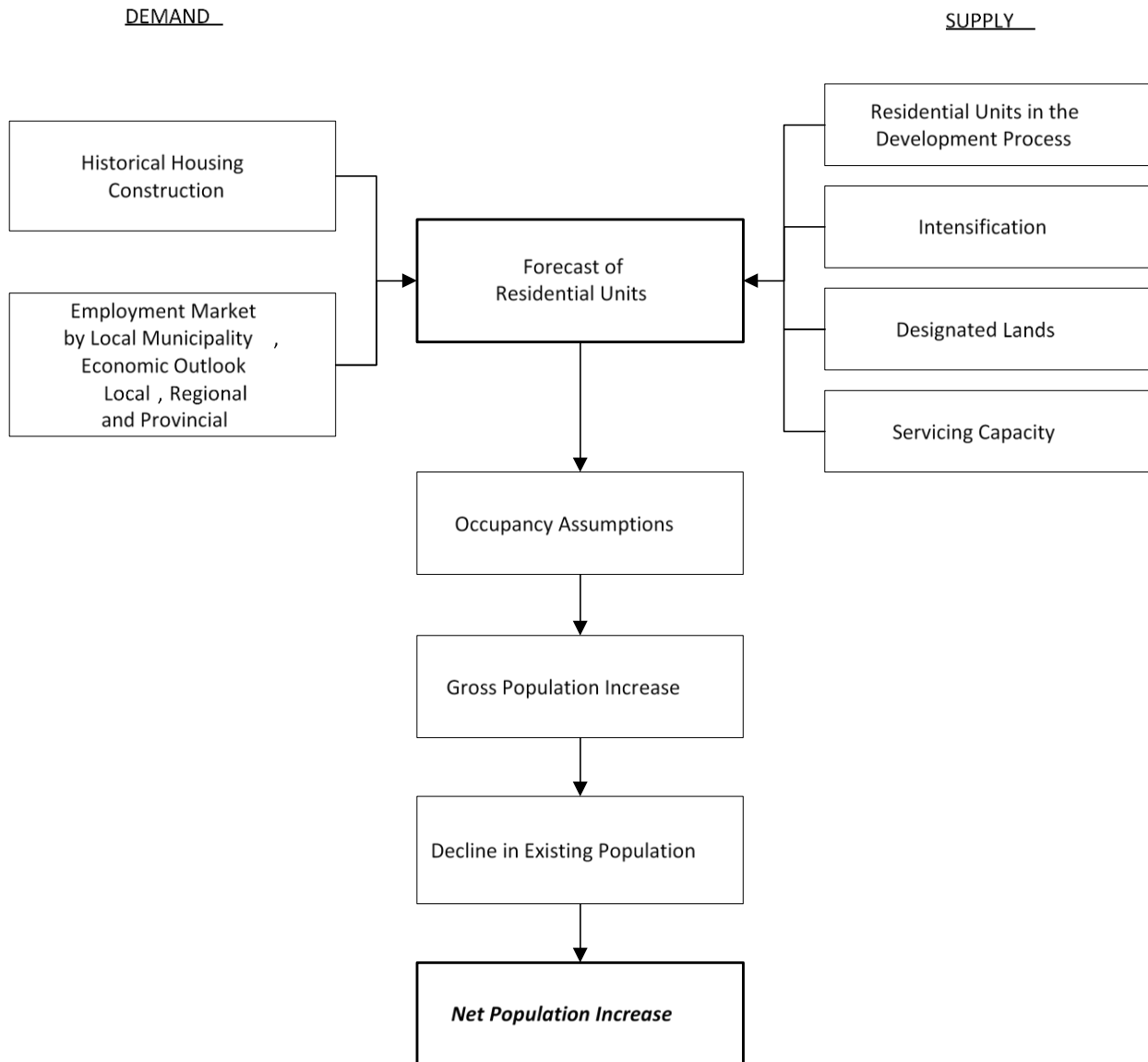
The D.C. growth forecast has been derived from the Draft Niagara Region Municipal Comprehensive Review (M.C.R.) Strategic Growth Option, November 2016. In compiling the growth forecast, the following information sources were also consulted to help assess residential and non-residential development potential for the Region over the forecast period; including:

- A review of Niagara Regions Master Plan Strategy Update regarding Regional water and wastewater capacity;
- A review of historical development activity; and
- Discussions with Regional staff regarding the anticipated residential and non-residential development trends for Niagara Region.

3.3 Summary of Growth Forecast

A detailed analysis of the residential and non-residential growth forecast is provided in Appendix A. The discussion provided herein summarizes the anticipated growth for the Region and describes the basis for the forecast. The results of the residential growth forecast analysis are summarized herein, with additional details provided in Appendix A.

Figure 3-1
Household Formation-based Population and Household Projection Model



As identified in Table 3-1 and Schedule 1 of Appendix A, the Niagara Region population is anticipated to reach approximately 489,120 by 2027 and 594,220 by 2041. This represents an increase of 47,980 persons and 153,090 persons, respectively, over the 10-year and 25-year forecast periods. The population forecast excludes the net Census undercount, which is estimated at approximately 2.6%. The Census undercount represents the net number of persons missed during Census enumeration. In calculating the D.C. for Niagara Region, the net Census undercount has been excluded from the growth forecast. Accordingly, all references provided herein to the population forecast exclude the net Census undercount.

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

- The forecast unit mix for the Region was derived from the Niagara Region M.C.R. Strategic Growth Option.
- Based on the above, the 25-year (2017-2041) household growth forecast is comprised of a housing unit mix of approximately 49% low density (single detached and semi-detached), 30% medium density (multiples except apartments) and 21% high density (bachelor/1 bedroom, 2/3 bedroom and 4+ bedroom apartments).

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

- *Schedule 2* summarizes the anticipated amount, type and location of development for Niagara Region by development location. The percentage of forecast housing growth between 2017 and 2041 by urban serviced area and remaining rural area is summarized below.
 - Serviced - 97%
 - Unserviced - 3%

Table 3-1
Region of Niagara
Residential Growth Forecast Summary

| Year | | Population (Excluding Census Undercount) | Population (Including Census Undercount) ¹ | Housing Units | | | | | |
|------------|--------------------------------|---|--|-----------------------------|------------------------------------|-------------------------|-------------|---------------------|--------------------------|
| | | | | Singles & Semi- Detached | Multiple Dwellings ² | Apartments ³ | Other | Total Households | Person Per Unit (PPU) |
| Historical | <i>Mid 2001</i> | 410,574 | 421,480 | 122,770 | 12,375 | 26,425 | 845 | 162,415 | 2.53 |
| | <i>Mid 2006</i> | 427,421 | 438,770 | 124,025 | 15,860 | 28,445 | 1,170 | 169,500 | 2.52 |
| | <i>Mid 2011</i> | 431,346 | 442,800 | 128,795 | 16,695 | 28,285 | 915 | 174,690 | 2.47 |
| Forecast | <i>Early 2017</i> | 441,135 | 452,850 | 134,188 | 19,009 | 29,497 | 915 | 183,608 | 2.40 |
| | <i>Early 2027</i> | 489,117 | 502,110 | 145,488 | 26,393 | 34,884 | 915 | 207,680 | 2.36 |
| | <i>Mid 2041</i> | 594,221 | 610,000 | 166,008 | 38,479 | 43,599 | 915 | 249,000 | 2.39 |
| | Mid 2001 - Mid 2006 | 16,847 | 17,290 | 1,255 | 3,485 | 2,020 | 325 | 7,085 | |
| | Mid 2006 - Mid 2011 | 3,925 | 4,030 | 4,770 | 835 | -160 | -255 | 5,190 | |
| | Mid 2011 - Early 2017 | 9,789 | 10,050 | 5,393 | 2,314 | 1,212 | 0 | 8,918 | |
| | Early 2017 - Early 2027 | 47,982 | 49,260 | 11,300 | 7,384 | 5,387 | 0 | 24,072 | |
| | Early 2017 - Mid 2041 | 153,086 | 157,150 | 31,820 | 19,470 | 14,102 | 0 | 65,392 | |
| | | | | | | | | | |

Source: Derived from Niagara Region Municipal Comprehensive Review Strategic Growth Option November 2016, by Watson & Associates Economists Ltd. 2016.

1. Census Undercount estimated at approximately 2.6%. Note: Population including the net Census undercount has been rounded.
2. Includes townhomes and apartments in duplexes.
3. Includes bachelor/1 bedroom, 2/3 bedroom and 4+ bedroom apartments.

3. Planning Period

- Short- and longer-term time horizons are required for the D.C. process. The D.C.A. limits the planning horizon for certain services, such as E.M.S., waste diversion and social and child services, to a 10-year planning horizon. Police Services and Services Related to a Highway utilize a 25-year forecast period.

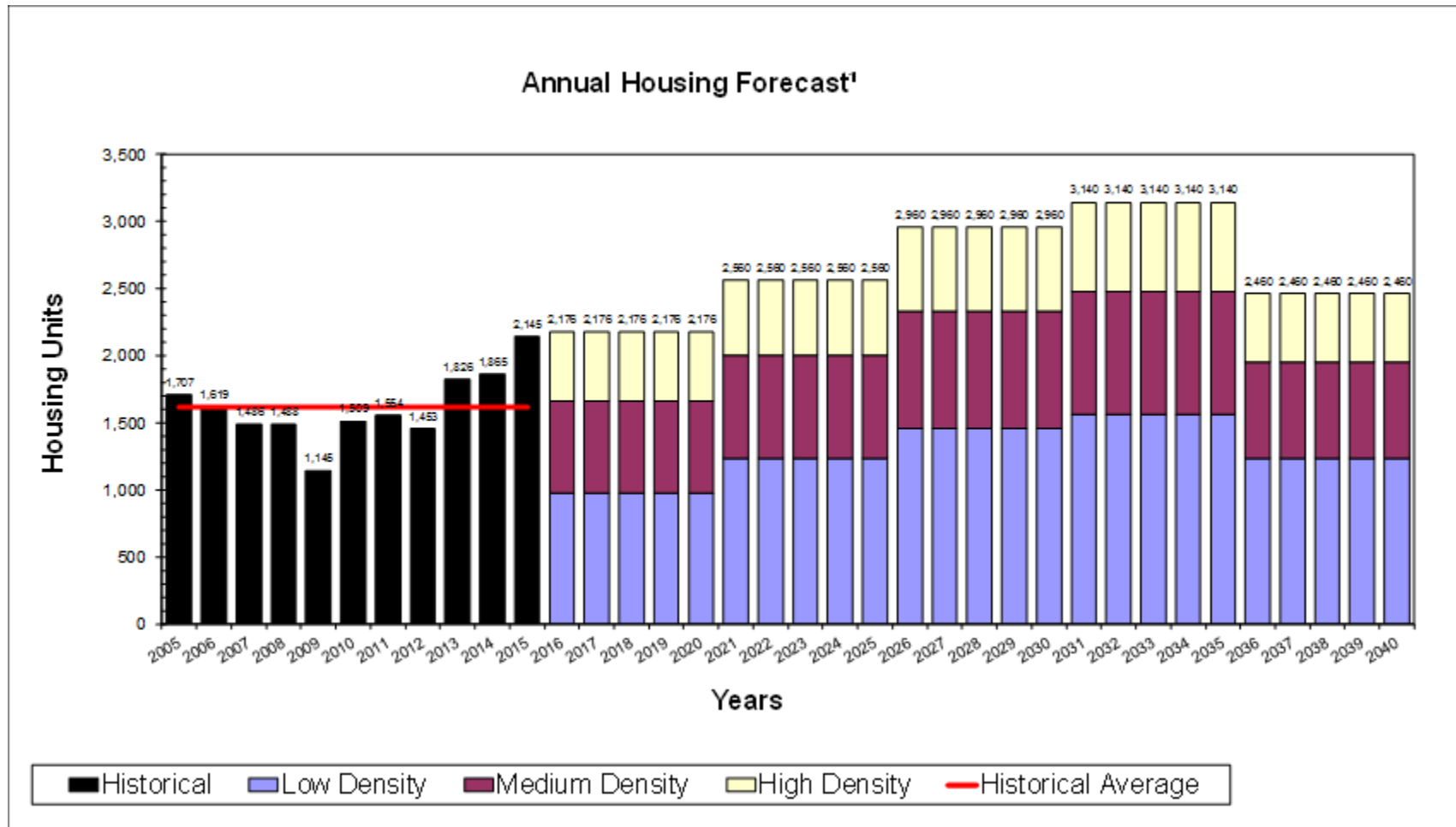
4. Population in New Units (Appendix A - Schedules 2 through 5)

- The number of housing units to be constructed in Niagara Region during the short-term and long-term periods are presented on Figure 3-2. Over the 25-year forecast periods, the Region is anticipated to average 2,616 new housing units per year.
- Population in new units is derived from Schedules 3, 4 and 5, which incorporate historical development activity, anticipated households (see household mix discussion) and average persons per unit by dwelling type for new units.
- Schedule 7 summarizes the average number of persons per unit (P.P.U.) for the new housing units by age and type of dwelling, based on 2011 custom Census data for the Region. The forecast average P.P.U. for new households over the 25-year forecast period is:
 - Low density: 2.91
 - Medium density: 2.12
 - High density: 1.62

5. Existing Units and Population Change (Appendix A - Schedules 2, 3, 4, and 5)

- Existing households as of 2017 have been derived from the Niagara Region M.C.R. Strategic Growth Option, plus recent housing development activity since 2015.
- The decline in average occupancy levels for existing housing units is calculated in Schedules 2 through 5, by aging the existing population over the forecast period. The forecast population decline in existing households over the 2017 to 2041 forecast period is estimated at approximately 3,460.

Figure 3-2



6. Employment (Appendix A, Schedules 9a through 9d)

- Employment projections are largely based on the activity rate method, which is defined as the number of jobs in the Region divided by the number of residents. Key employment sectors include primary, industrial, commercial/population-related, institutional, and work from home (W.F.H.), which are considered individually below.
- The estimated 2017 employment base for Niagara Region has been derived from the Niagara Region M.C.R. Strategic Growth Option.
- The estimated 2017 employment base for Niagara Region by place of work is outlined in Schedule 9a. The 2017 employment base is comprised of the following sectors:
 - 3,945 primary (approx. 2%);
 - 12,700 W.F.H. employment (approx. 7%);
 - 40,049 industrial (approx. 22%);
 - 84,396 commercial/population-related (approx. 46%); and
 - 41,093 institutional (approx. 23%).
- The estimated 2017 employment base for Niagara Region by usual place of work, including W.F.H., is approximately 182,180 jobs. An additional 22,400 jobs have been identified for Niagara Region as having No Fixed Place of Work (N.F.P.O.W.).¹ The total employment including N.F.P.O.W. in 2017 is approximately 204,580.
- 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. calculation. W.F.H. and N.F.P.O.W. are not captured in the non-residential gross floor area (G.F.A.) calculation. Total employment for Niagara Region (excluding W.F.H. and N.F.P.O.W. employment) is anticipated to reach approximately 185,190 by 2027 and 218,330 by 2041. This represents an employment increase of 15,707 and 48,846 additional jobs over the 10-year and 25-year forecast periods, respectively.

¹ 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 work place location at the beginning of each shift. Such persons include building and landscape contractors, travelling salespersons, independent truck drivers, etc."

7. Non-Residential Sq.ft. Estimates (Gross Floor Area (G.F.A.)), Appendix A, Schedule 9b)

- Square footage estimates were calculated in Schedule 9b based on the following employee density assumptions:¹
 - 1,200 sq.ft. per employee for industrial;
 - 500 sq.ft. per employee for commercial/population-related; and
 - 700 sq.ft. per employee for institutional employment.
- The Region-wide incremental non-residential G.F.A. increase is anticipated to be approximately 9,810,900 sq.ft. over the 10-year forecast period and 29,060,000 sq.ft. over the 25-year forecast period.
- In terms of percentage growth, the 25-year incremental G.F.A. forecast by sector is broken down as follows:
 - industrial – approx. 18.66%;
 - commercial/population-related – approx. 58.77%; and
 - institutional – approx. 22.57%.

¹ Based on Watson & Associates Economists Ltd. employment surveys.

4. The Approach to Calculation of the Charge

4.1 Introduction

This chapter addresses the requirements of s.s.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

Table 4-1 lists the full range of service categories which are provided within the Region.

A number of these services are defined in s.s.2(4) of the D.C.A., as being ineligible for inclusion in development charges. These are shown as “ineligible” on Table 4-1. Two ineligible costs defined in s.s.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 which are potentially eligible for inclusion in the Region’s development charge are indicated with a “Yes.”

4.3 Increase in the Need for Service

The development charge 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-law. 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, s.s.5(1)3, which requires that Regional 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.

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.

Figure 4-1
The Process of Calculating a Development Charge under the D.C.A.

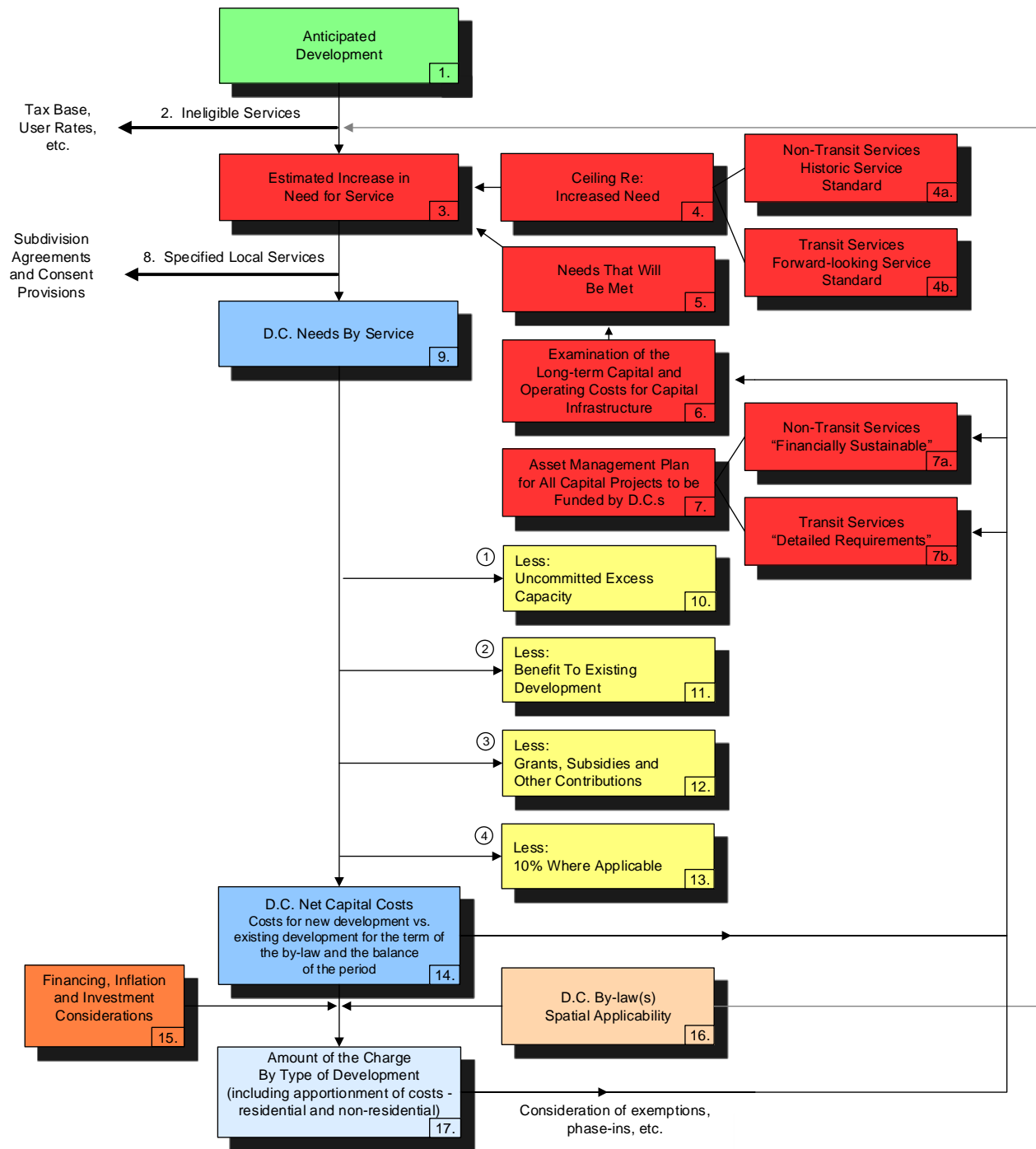


Table 4-1
Categories of Municipal Services to be Addressed as Part of the Calculation

| 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 No Yes No Yes Yes Yes | 1.1 Arterial roads 1.2 Collector roads 1.3 Bridges, Culverts and Roundabouts 1.4 Local municipal roads 1.5 Traffic signals 1.6 Sidewalks and streetlights 1.7 Active Transportation | 100 100 100 0 100 100 100 |
| 2. Other Transportation Services | No No n/a n/a Yes Yes n/a n/a | 2.1 Transit vehicles & facilities 2.2 Other transit infrastructure 2.3 Municipal parking spaces - indoor 2.4 Municipal parking spaces - outdoor 2.5 Works Yards 2.6 Rolling stock ¹ 2.7 Ferries 2.8 Airport | 90 90 90 90 100 100 90 90 |
| 3. Stormwater Drainage and Control Services | n/a n/a n/a | 3.1 Main channels and drainage trunks 3.2 Channel connections 3.3 Retention/detention ponds | 100 100 100 |
| 4. Fire Protection Services | n/a n/a n/a | 4.1 Fire stations 4.2 Fire pumpers, aerials and rescue vehicles 4.3 Small equipment and gear | 100 100 100 |
| 5. Outdoor Recreation Services (i.e. Parks and Open Space) | Ineligible n/a n/a n/a n/a n/a | 5.1 Acquisition of land for parks, woodlots and E.S.A.s 5.2 Development of area municipal parks 5.3 Development of district parks 5.4 Development of Region-wide parks 5.5 Development of special purpose parks 5.6 Parks rolling stock ¹ and yards | 0 90 90 90 90 90 |

¹with 7+ year life time

*same percentage as service component to which it pertains
computer equipment excluded throughout

| Categories of Municipal Services | Eligibility for Inclusion in the D.C. Calculation | Service Components | Maximum Potential D.C. Recovery % |
|---|---|--|-----------------------------------|
| 6. Indoor Recreation Services | n/a | 6.1 Arenas, indoor pools, fitness facilities, community centres, etc. (including land) | 90 |
| | n/a | 6.2 Recreation vehicles and equipment ¹ | 90 |
| 7. Library Services | n/a | 7.1 Public library space (incl. furniture and equipment) | 90 |
| | n/a | 7.2 Library Vehicles ¹ | 90 |
| | n/a | 7.3 Library materials | 90 |
| 8. Electrical Power Services | Ineligible | 8.1 Electrical substations | 0 |
| | Ineligible | 8.2 Electrical distribution system | 0 |
| | Ineligible | 8.3 Electrical system rolling stock ¹ | 0 |
| 9. Provision of Cultural, Entertainment and Tourism Facilities and Convention Centres | Ineligible | 9.1 Cultural space (e.g. art galleries, museums and theatres) | 0 |
| | Ineligible | 9.2 Tourism facilities and convention centres | 0 |
| 10. Wastewater Services | Yes | 10.1 Treatment plants | 100 |
| | Yes | 10.2 Sewage trunks | 100 |
| | Yes | 10.3 Lining Stations | 100 |
| | n/a | 10.4 Local systems | 0 |
| | No | 10.5 Vehicles and equipment | 100 |
| 11. Water Supply Services | Yes | 11.1 Treatment plants | 100 |
| | Yes | 11.2 Distribution systems | 100 |
| | Yes | 11.3 Pumping Stations | 100 |
| | Yes | 11.4 Storage | 100 |
| | n/a | 11.5 Local systems | 0 |
| | No | 11.6 Vehicles and equipment | 100 |
| 12. Waste Management Services | Yes | 12.1 Collection, transfer vehicles and equipment related to waste diversion | 90 |
| | Ineligible | 12.2 Collection, transfer vehicles and equipment related to landfills and incineration | 0 |

¹with 7+ year life time

| Categories of Municipal Services | Eligibility for Inclusion in the D.C. Calculation | Service Components | Maximum Potential D.C. Recovery % |
|---|---|--|-----------------------------------|
| | Ineligible Yes Yes | 12.3 Landfills and incineration facilities 12.4 Other waste diversion facilities 12.5 Waste diversion containers | 0 90 90 |
| 13. Police Services | Yes Yes Yes | 13.1 Police detachments 13.2 Police rolling stock ¹ 13.3 Small equipment and gear | 100 100 100 |
| 14. Long-term Care | Yes | 14.1 Long-term Care facility space | 90 |
| 15. Health | Yes No | 15.1 Health department space 15.2 Health department vehicles ¹ | 90 90 |
| 16. Social Housing | Yes | 16.1 Social Housing space | 90 |
| 17. Provincial Offences Act (P.O.A.) | Yes | 17.1 P.O.A. facility space | 90 |
| 18. Social and Child Services | Yes | 18.1 Social and Child Services facility space | 90 |
| 19. Ambulance | Yes Yes | 19.1 Ambulance station space 19.2 Vehicles ¹ | 90 90 |
| 20. Hospital Provision | Ineligible | 20.1 Hospital capital contributions | 0 |
| 21. Provision of Head-quarters for the General Administration of Municipalities and Area Municipal Boards | Ineligible Ineligible Ineligible | 21.1 Office space 21.2 Office furniture 21.3 Computer equipment | 0 0 0 |

¹with 7+ year life time

| Categories of Municipal Services | Eligibility for Inclusion in the D.C. Calculation | Service Components | Maximum Potential D.C. Recovery % |
|----------------------------------|---|---|-----------------------------------|
| 23. Other Services | Yes | 23.1 Studies in connection with acquiring buildings, rolling stock, materials and equipment, and improving land ² and facilities, including the D.C. background study cost | 0-100 |
| | Yes | 23.2 Interest on money borrowed to pay for growth-related capital | 0-100 |

¹with a 7+ year life time

²same percentage as service component to which it pertains

| 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. |

4.5 Capital Forecast

Paragraph 7 of s.s.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 7 or more years), furniture and equipment (other than computer equipment), materials acquired for library circulation, reference or information purposes;
- e) interest on money borrowed to pay for the above-referenced costs;
- f) costs to undertake studies in connection with the above-referenced matters; and
- g) costs of the development charge background study.

In order for an increase in need for service to be included in the D.C. calculation, Regional Council must indicate "...that it intends to ensure that such an increase in need will be met" (s.s.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 (O.Reg. 82/98 s.3). The capital program contained herein reflects the Region's approved and proposed capital budgets and master servicing/needs studies.

4.6 Treatment of Credits

Section 8 para. 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." s.s.17 para. 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 development charges. 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 included in the 2012 D.C. background study have been funded, hence there are no existing credits to be included in the current D.C. calculations.

4.7 Eligible Debt and Committed Excess Capacity

Section 66 of the D.C.A., states that, for the purposes of developing a development charge by-law, a debt incurred with respect to an eligible service may be included as a capital cost, subject to any limitations or reductions in the Act. Similarly, s.18 of O.Reg. 82/98 indicates that debt with respect to an ineligible service may be included as a capital cost, subject to several restrictions.

In order for such costs to be eligible, two conditions must apply. First, they must have funded excess capacity which is able to meet service needs attributable to the anticipated development. Second, the excess capacity must be "committed," that is, either before or at the time it was created, Council must have expressed a clear intention that it would be paid for by development charges or other similar charges; for

example, this may have been done as part of previous development charge processes. It is noted that projects which have been debentured to-date and to which the principal and interest costs need to be recovered are included within the capital detail sheets. It is also noted that there are a number of water, wastewater, and road projects that have been completed in past years but have yet to be fully funded from D.C.s. The outstanding growth-related funding of these projects has been included in the D.C. calculation.

4.8 Existing Reserve Funds

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 8 of subsection 5(1).”

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

For services which 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 next 10-year period, which underlie the D.C. calculation herein.

The alternative would involve the Region spending all reserve fund monies prior to renewing each by-law, which would not be a sound basis for capital budgeting. Thus, the Region will use these reserve funds for the Region’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 which contributed them (rather than to future development, which will generate the need for additional facilities directly proportionate to future growth).

The Region’s Development Charge Reserve Fund Balance by service at December 31, 2016 is as follows:

¹ Reserve balance to be combined with Administration Studies.

| Service | Totals |
|---------------------|---------------------|
| Roads | \$26,221,009 |
| Police Services | (\$73,926) |
| Administration | \$651,551 |
| Ambulance | \$734,936 |
| Wastewater Services | \$19,112,554 |
| Water Services | \$14,774,128 |
| Total | \$61,420,252 |

Note: Amounts in brackets are Deficit balances.

4.9 Deductions

The D.C.A., potentially requires that five 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;
- anticipated grants, subsidies and other contributions; and
- 10% reduction for certain services.

The requirements behind each of these reductions are addressed as follows:

4.9.1 Reduction Required by Level of Service Ceiling

This is designed to ensure that the increase in need included in 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 10-year period immediately preceding the preparation of the background study...” O.Reg. 82.98 (s.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 factor are multiplied together, they produce a measure of the level of service, which meets the requirements of the Act, i.e. cost per unit.

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 s.s.5(1) requires a deduction from the increase in the need for service attributable to the anticipated development that can be met using the Region's "excess capacity," other than excess capacity which is "committed" (discussed above in 4.6).

"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

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 services cap in 4.4 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 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, services related to a highway, health, social, and child services, etc., the service is typically provided on a municipal-wide system basis. For example, facilities of the same type may provide different services (i.e. leisure pool vs. competitive pool), different programs (i.e. hockey vs. figure skating) and different time availability for the same service (i.e. leisure skating available on Wednesday in one arena and Thursday 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. Further, 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 vs. 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 s.6).

4.9.5 The 10% Reduction

Paragraph 8 of s.s.(1) of the D.C.A. requires that, “the capital costs must be reduced by 10 percent.” This paragraph does not apply to water supply services, waste water services, storm water drainage and control services, services related to a highway, police, transit, and fire protection services. The primary services to which the 10% reduction does apply include services such as parks, recreation, libraries, social and child services, the Provincial Offences Act, ambulance, homes for the aged, and health.

The 10% is to be netted from the capital costs necessary to provide the increased services, once the other deductions have been made, as per the infrastructure costs sheets in Chapter 5.

5. Development Charge Eligible Cost Analysis by Service

5.1 Introduction

This chapter outlines the basis for calculating eligible costs for the development charges to be applied on a uniform basis. In each case, the required calculation process set out in s.5(1) paragraphs 2 to 8 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 timing identified in the Chapter reflects Council's current intention. However, over time, Regional projects and Council priorities change and accordingly, Council's intentions may alter and different capital projects (and timing) may be required to meet the need for services required by new growth.

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

This section evaluates the development-related capital requirements for all of the "softer" services over a 10-year planning period. Each service component is evaluated on two format sheets: the average historical 10-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.

New services have been incorporated into the D.C. study when compared to the previous D.C. study. The 10-year services included in the previous study were; E.M.S, and General Government. The additional 10-year services included in this background study are Provincial Offences Act, Long Term Care, Health Services, Social and Child Services, Social Housing, and Waste Diversion.

5.2.1 Provincial Offences Act (P.O.A.) Space

The Region currently provides facility space totalling 21,622 sq.ft. for P.O.A. space. Over the historical 10-year period, this space equates to 50 sq.ft. of space per 1,000 residents or \$29 per capita. This level of investment provides the Region with \$1,403,474 for eligible future D.C. funding over the 10-year forecast period.

It has been identified that additional space will be required in the future to provide P.O.A. services required for growth. The Region has identified a new P.O.A. facility to be constructed in Welland which will provide approximately 20,400 sq.ft. of space. The total cost identified is \$12.4 million. As this new facility will replace facilities in Welland,

Niagara Falls, and Fort Erie, which currently have a combined total of 16,709 sq.ft. of space, approximately \$10.16 million is attributable to existing benefit. A further deduction of \$1.23 million has been applied for the amount that is attributable to growth post 2026. Further, a provision of \$390,000 has been identified to expand service space in other areas of the Region to service the anticipated growth over the forecast period. Therefore, the amount, after the 10% mandatory deduction, that has been included in the D.C. calculations is \$1,259,820.

The growth-related costs for P.O.A. have been allocated based on the incremental growth in population to employment, for the 10-year forecast period at 75% residential and 25% non-residential.

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

Niagara Region

Service: Provincial Offences Act Facilities

| Prj.No | Increased Service Needs Attributable to Anticipated Development | Timing (year) | Gross Capital Cost Estimate (2017\$) | Post Period Benefit | Other Deductions | Net Capital Cost | Less: | | Subtotal | Less: Other (e.g. 10% Statutory Deduction) | Potential DC Recoverable Cost | | |
|--------|---|------------------|---|---------------------------|---------------------|---------------------|---------------------------------------|---|------------------|--|-------------------------------|---------------------------------|---|
| | | | | | | | Benefit to Existing Development | Grants, Subsidies and Other Contributions Attributable to New Development | | | Total | Residential Share 75% | Non- Residential Share 25% |
| | 2017-2026 | | | | | | | | | | | | |
| 1 | New Welland POA - 445 East Main Street Welland - Owned | 2017 | 12,400,000 | 1,234,200 | | 11,165,800 | 10,156,000 | | 1,009,800 | 100,980 | 908,820 | 684,687 | 224,133 |
| 2 | Provision for Additional Space | 2022-2026 | 390,000 | - | | 390,000 | - | | 390,000 | 39,000 | 351,000 | 264,436 | 86,564 |
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| | | | | | | | | | | | | | |
| | Total | | 12,790,000 | 1,234,200 | - | 11,555,800 | 10,156,000 | - | 1,399,800 | 139,980 | 1,259,820 | 949,123 | 310,697 |

5.2.2 General Government

The D.C.A. permits the inclusion of studies undertaken to facilitate the completion of the Region's capital works program. The Region has made provision for the inclusion of new studies undertaken to facilitate this D.C. process, as well as other studies which benefit growth (in whole or in part). The list of studies includes such studies as the following:

- Official plan;
- Peer Street Study;
- Waste Diversion Long Term Strategic Plans;
- Police Master Plan;
- Inter-Municipal Transit Plan;
- Development Charges Studies; and
- Other development related studies.

The gross capital cost of these studies is approximately \$7.5 million, of which \$1.07 million is attributable to existing benefit and 1.2 million benefits growth in the post 10 year forecast period. Other deductions in the amount of \$210,000 have been made from the waste diversion studies to account for the amount of the studies related to landfill and incineration of waste. The net growth-related capital cost, after the mandatory 10% deduction and the application of the existing reserve balance of \$651,551, is \$5,527,199 and has been included in the development charge.

These costs have been allocated 75% residential and 25% non-residential based on the incremental growth in population to employment for the 10-year forecast period.

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

Niagara Region

Service: General Government

| Prj.No | Increased Service Needs Attributable to Anticipated Development | Timing (year) | Gross Capital Cost Estimate (2017\$) | Post Period Benefit | Other Deductions | Net Capital Cost | Less: | | Subtotal | Less: | Potential DC Recoverable Cost | | |
|--------|--|---------------|---|---------------------------|---------------------|---------------------|---------------------------------------|---|------------------|---|-------------------------------|----------------------|------------------------------|
| | | | | | | | Benefit to Existing Development | Grants, Subsidies and Other Contributions Attributable to New Development | | Other (e.g. 10% Statutory Deduction) | Total | Residential Share | Non- Residential Share |
| | 2017-2026 | | | | | | | | | | | 75% | 25% |
| 1 | Development Related Studies | 2017-2021 | 1,610,000 | - | | 1,610,000 | - | | 1,610,000 | 161,000 | 1,449,000 | 1,091,647 | 357,353 |
| 2 | Development Related Studies | 2022-2026 | 1,610,000 | - | | 1,610,000 | - | | 1,610,000 | 161,000 | 1,449,000 | 1,091,647 | 357,353 |
| 3 | Official Plan | 2018 | 3,000,000 | - | | 3,000,000 | 750,000 | | 2,250,000 | 225,000 | 2,025,000 | 1,525,594 | 499,406 |
| 4 | Peer Street Study (Social Services) | 2017 | 250,000 | - | | 250,000 | - | | 250,000 | 25,000 | 225,000 | 169,510 | 55,490 |
| | Waste Diversion: | | | | | | | | | | | | |
| 5 | Long Term Strategic Plan | 2017-2019 | 400,000 | - | 140,000 | 260,000 | - | | 260,000 | 26,000 | 234,000 | 176,291 | 57,709 |
| 6 | Long Term Strategic Plan Update | 2024 | 200,000 | - | 70,000 | 130,000 | - | | 130,000 | 13,000 | 117,000 | 88,145 | 28,855 |
| 7 | Police Master Plan | 2017-2026 | 50,000 | - | | 50,000 | 25,000 | | 25,000 | | 25,000 | 18,834 | 6,166 |
| 8 | Provision for Additional Growth Studies related to EMS, Health, Long Term Care, POA, & Social Housing | 2017-2026 | 300,000 | - | | 300,000 | - | | 300,000 | 30,000 | 270,000 | 203,413 | 66,587 |
| 9 | Inter - Municipal Transit Service Plan | 2021-2041 | 1,675,000 | 1,200,000 | | 475,000 | 47,500 | | 427,500 | 42,750 | 384,750 | 289,863 | 94,887 |
| 10 | Reserve Fund Adjustment | | | | | | 651,551 | | (651,551) | | (651,551) | (490,865) | (160,686) |
| | Total | | 9,095,000 | 1,200,000 | 210,000 | 7,685,000 | 1,474,051 | - | 6,210,949 | 683,750 | 5,527,199 | 4,164,080 | 1,363,119 |

5.2.3 Long Term Care

With respect to Long Term Care homes, there are currently 16 facility spaces provided by the Region. In total the Region has 628,279 sq.ft. of building space. The facilities have provided residents with space equating to 1.45 sq.ft. or \$613 per capita over the historical 10-year period. This level of investment provides the Region with \$29,423,522 for eligible future D.C. funding over the 10-year forecast period.

The Region has identified a long-term care home redevelopment which will replace three existing facilities in Niagara-on-the-Lake, St. Catharines, and Fort Erie. The total cost of the redevelopment is estimated at \$117,435,000. The square footage of the new facility has not been identified at this time, however, an estimate has been calculated based on the construction value and average cost per sq.ft. of facilities provided in the service standard. A deduction for existing benefit of \$84.97 million and a post period benefit of \$50,000 have been applied for the replacement of the existing facilities and the amount that benefits growth outside of the forecast period. Further, it is anticipated that the Region will receive approximately \$3 million in grant funding from the Province. After the above deductions, and the 10% mandatory deduction, \$26.47 million has been included in the D.C. calculation.

An allocation of 90% residential and 10% non-residential has been attributed to services related to Long Term Care Homes.

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

Niagara Region

Space: Long Term Care Facilities

| Prj.No | Increased Service Needs Attributable to Anticipated Development | Timing (year) | Gross Capital Cost Estimate (2017\$) | Post Period Benefit | Other Deductions | Net Capital Cost | Less: | | Subtotal | Less: Other (e.g. 10% Statutory Deduction) | Potential DC Recoverable Cost | | |
|--------|---|---------------|--------------------------------------|---------------------|------------------|--------------------|---------------------------------|---|-------------------|--|-------------------------------|-------------------|-----------------------|
| | | | | | | | Benefit to Existing Development | Grants, Subsidies and Other Contributions Attributable to New Development | | | Total | Residential Share | Non-Residential Share |
| | 2017-2026 | | | | | | | | | | | 90% | 10% |
| 1 | LTC Home Redevelopment | 2019-2025 | 117,435,000 | 50,000 | | 117,385,000 | 84,970,000 | 3,000,000 | 29,415,000 | 2,941,500 | 26,473,500 | 23,826,150 | 2,647,350 |
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| | | | | | | | | | | | | | |
| | Total | | 117,435,000 | 50,000 | 0 | 117,385,000 | 84,970,000 | 3,000,000 | 29,415,000 | 2,941,500 | 26,473,500 | 23,826,150 | 2,647,350 |

5.2.4 Health

Health services are provided from 6 facilities located throughout the Region with a total of 87,498 sq.ft. of facility space. Over the 10-year historical period, these facilities provided for an average of 0.20 sq.ft./capita, equating to an investment of \$75 per capita. This level of service provides the Region with \$3,602,009 for eligible future D.C. funding over the 10-year forecast period.

The Region has provided for the capital cost to lease additional space in Niagara Falls. The gross capital cost of the project is \$6 million of which approximately \$2.2 million is attributable to existing development based on the replacement of existing facilities. A further deduction of \$188,000 has been applied to recognize the amount related to growth post-2026. The Region anticipates grant funding of approximately \$1 million. Additionally, a provision for additional facility space at a cost of \$1,000,000 has been provided to service growth anticipated over the forecast period. After the mandatory 10% deduction, \$3,232,800 has been included in D.C. calculation.

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

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

Niagara Region

Service: Health Facilities

| Prj.No | Increased Service Needs Attributable to Anticipated Development | Timing (year) | Gross Capital Cost Estimate (2017\$) | Post Period Benefit | Other Deductions | Net Capital Cost | Less: | | Subtotal | Less: Other (e.g. 10% Statutory Deduction) | Potential DC Recoverable Cost | | |
|--------|---|------------------|---|---------------------------|---------------------|---------------------|---------------------------------------|---|------------------|--|-------------------------------|----------------------|------------------------------|
| | | | | | | | Benefit to Existing Development | Grants, Subsidies and Other Contributions Attributable to New Development | | | Total | Residential Share | Non- Residential Share |
| | 2017-2026 | | | | | | | | | | | 90% | 10% |
| 1 | Niagara Falls Public Health - McLeod Square - Leased | 2016-2017 | 6,000,000 | 188,000 | | 5,812,000 | 2,220,000 | 1,000,000 | 2,592,000 | 259,200 | 2,332,800 | 2,099,520 | 233,280 |
| 2 | Provision for Additional Space | 2022-2026 | 1,000,000 | - | | 1,000,000 | - | - | 1,000,000 | 100,000 | 900,000 | 810,000 | 90,000 |
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| | | | | | | | | | | | | | |
| | Total | | 7,000,000 | 188,000 | 0 | 6,812,000 | 2,220,000 | 1,000,000 | 3,592,000 | 359,200 | 3,232,800 | 2,909,520 | 323,280 |

5.2.5 Social and Child Services

Social and Child Services are currently provided in a combination of owned and leased spaces totalling 121,465 sq.ft. of space. These facilities provide for 0.28 sq.ft. per capita, equating to \$99 per capita. This level of service provides the Region with \$4,740,142 for eligible future D.C. funding over the 10-year forecast period.

The Region has included a provision to additional space at a cost of \$4.7 million. After the 10% mandatory deduction, the net growth-related amount included in the D.C. calculation is \$4.23 million. The Peer Street Study is anticipated to be completed in 2017 which will identify more detailed needs for facility space expansion.

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

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

Niagara Region

Service: Social & Child Services Facilities

| Prj.No | Increased Service Needs Attributable to Anticipated Development | Timing (year) | Gross Capital Cost Estimate (2017\$) | Post Period Benefit | Other Deductions | Net Capital Cost | Less: | | Subtotal | Less: Other (e.g. 10% Statutory Deduction) | Potential DC Recoverable Cost | | |
|--------|---|---------------|---|---------------------------|---------------------|---------------------|---------------------------------------|---|------------------|--|-------------------------------|----------------------|------------------------------|
| | | | | | | | Benefit to Existing Development | Grants, Subsidies and Other Contributions Attributable to New Development | | | Total | Residential Share | Non- Residential Share |
| | 2017-2026 | | | | | | | | | | | 90% | 10% |
| 1 | Provision for Additional Space | 2022-2026 | 4,700,000 | - | - | 4,700,000 | - | - | 4,700,000 | 470,000 | 4,230,000 | 3,807,000 | 423,000 |
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| | Total | | 4,700,000 | - | - | 4,700,000 | - | - | 4,700,000 | 470,000 | 4,230,000 | 3,807,000 | 423,000 |

5.2.6 Emergency Medical Services (E.M.S.)

Currently, E.M.S. is provided throughout the Region with various facilities that have a combined total of 94,035 sq.ft. of space. Over the past ten years, the average level of service was 0.17 sq.ft. of space per capita or an investment of \$61 per capita. Based on this service standard, the Region would be eligible to collect approximately \$2,926,422 from D.C.s for ambulance facility space (over the 10-year period).

The Region of Niagara has identified the need for an E.M.S. Central Hub and Training Facility in Niagara-on-the-Lake. Currently, the design of the facility has not been completed, therefore it is unclear if this space may include replacement of other existing space. Future D.C. background studies may reflect a different growth component once project details are finalized. The gross capital cost identified is approximately \$30.5 million. Part of the facility will provide a training centre at an estimated cost of \$3.5 million. A deduction for benefit to existing in the amount of \$2.59 million has been made to recognize the portion of the training facility that will benefit the current population. A post period benefit of \$25.01 million has also been applied as the facility is anticipated to service the 25-year growth. Additionally, a provision for additional facility space in the amount of \$760,000 has been included to service growth over the forecast period. A reserve adjustment of \$734,936 has been included. After the 10% mandatory deduction, the net growth-related amount included in the D.C. calculation is \$2,554,961.

The Region currently has 55 ambulances. Over the past ten years, the average level of service was 0.1 vehicle per 1,000 population or an investment of \$25 per capita. Based on this service standard, the Region would be eligible to collect approximately \$1,184,196 from D.C.s for ambulance vehicles (over the 10-year period).

Based on the medium growth model identified in a recent staff report, eight additional vehicles have been provided at a cost of \$2.056 million has been identified with \$1.204 million deducted for the anticipated growth post 2026. Further, a provision for additional vehicles has also been provided at a cost of \$330,000 to service growth over the forecast period. After the 10% mandatory deduction, the net recoverable amount included in the D.C. calculations is \$1,063,800.

The growth costs have been allocated 90% residential and 10% non-residential based on the incremental growth in population to employment, for the 10-year forecast period. Population has been weighted by multiplying the figure by three to reflect the higher use of this service by residents as compared to employees based on additional time spent in the Region and age-related requirements.

| Prj.No | Increased Service Needs Attributable to Anticipated Development | Timing (year) | Gross Capital Cost Estimate (2017\$) | Post Period Benefit | Other Deductions | Net Capital Cost | Less: | | Subtotal | Less: Other (e.g. 10% Statutory Deduction) | Potential DC Recoverable Cost | | |
|--------|---|---------------|--------------------------------------|---------------------|------------------|------------------|---------------------------------|---|------------------|--|-------------------------------|-------------------|-----------------------|
| | | | | | | | Benefit to Existing Development | Grants, Subsidies and Other Contributions Attributable to New Development | | | Total | Residential Share | Non-Residential Share |
| | 2017-2026 | | | | | | | | | | | 90% | 10% |
| 1 | Provision for EMS Central Hub and Training Facility - N.O.T.L. | 2017-2020 | 30,500,000 | 25,010,000 | | 5,490,000 | 2,594,559 | | 2,895,441 | 289,544 | 2,605,897 | 2,349,523 | 256,374 |
| 2 | Provision for additional facility space | 2022-2026 | 760,000 | - | | 760,000 | - | | 760,000 | 76,000 | 684,000 | 616,707 | 67,293 |
| 3 | Reserve Fund Adjustment | | | | | | 734,936 | | (734,936) | | (734,936) | (662,631) | (72,305) |
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| | Total | | 31,260,000 | 25,010,000 | - | 6,250,000 | 3,329,495 | - | 2,920,505 | 365,544 | 2,554,961 | 2,303,598 | 251,362 |

| Prj.No | Increased Service Needs Attributable to Anticipated Development | Timing (year) | Gross Capital Cost Estimate (2017\$) | Post Period Benefit | Other Deductions | Net Capital Cost | Less: | | Subtotal | Less: Other (e.g. 10% Statutory Deduction) | Potential DC Recoverable Cost | | |
|--------|---|---------------|---|---------------------------|---------------------|---------------------|---------------------------------------|--|------------------|--|-------------------------------|----------------------|------------------------------|
| | | | | | | | Benefit to Existing Development | Grants, Subsidies, and Other Contributions Attributable to New Development | | | Total | Residential Share | Non- Residential Share |
| | 2017-2026 | | | | | | | | | | | 90% | 10% |
| 1 | Purchase of additional ambulances (8) | 2017-2026 | 2,056,000 | 1,204,000 | | 852,000 | - | | 852,000 | 85,200 | 766,800 | 691,361 | 75,439 |
| 2 | Provision for additional vehicles | 2022-2026 | 330,000 | - | | 330,000 | - | | 330,000 | 33,000 | 297,000 | 267,781 | 29,219 |
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| | Total | | 2,386,000 | 1,204,000 | - | 1,182,000 | - | - | 1,182,000 | 118,200 | 1,063,800 | 959,141 | 104,659 |

5.2.7 Social Housing

Social Housing currently provides 301 locations which include over 2,700 residential units throughout the Region for residents in need. In total these units provide approximately 2.30 million sq.ft. of facility space. These facilities provide for 5.16 sq.ft./capita or \$966 per capita on average over the historical 10-year period. This level of service provides the Region with approximately \$46.37 million for eligible future D.C. funding over the 10-year forecast period.

The capital program identified for the D.C. includes providing for an additional 85 units on Carleton Street and 64 units on Hawkins/Dell 149 units over the forecast period to accommodate existing needs as well as growth needs. The total gross capital cost for these units is \$25.86 million. It has been recognized that 30% of the costs related to the Hawkins/Dell units is a benefit to existing due to 10 existing houses that have been sold and 9 additional houses which will be demolished to allow for the new facility. This results in a benefit to existing deduction of \$843,100. The Region anticipated receiving funding in the amount of approximately \$19 million towards these projects. Further, a provision for additional units has been included at a cost of \$40.37 million to service growth over the forecast period. The net amount for inclusion in the D.C., after the mandatory 10% deduction, is \$41,730,210.

Social Housing is a residential-based service and therefore the growth-related capital costs have been allocated 100% residential and 0% non-residential.

| Prj.No | Increased Service Needs Attributable to Anticipated Development | Timing (year) | Gross Capital Cost Estimate (2017\$) | Post Period Benefit | Other Deductions | Net Capital Cost | Less: | | Subtotal | Less: Other (e.g. 10% Statutory Deduction) | Potential DC Recoverable Cost | | |
|--------|---|------------------|---|---------------------------|---------------------|---------------------|---------------------------------------|---|-------------------|--|-------------------------------|----------------------|------------------------------|
| | | | | | | | Benefit to Existing Development | Grants, Subsidies and Other Contributions Attributable to New Development | | | Total | Residential Share | Non- Residential Share |
| | 2017-2026 | | | | | | | | | | | 100% | 0% |
| 1 | 527 Carleton Street (85 Additional Units) | 2017-2018 | 14,500,000 | - | | 14,500,000 | - | 10,500,000 | 4,000,000 | 400,000 | 3,600,000 | 3,600,000 | - |
| 2 | Hawkins/Dell (56 Apartment Units & 8 Townhouse Units) | 2018 | 11,360,000 | - | | 11,360,000 | 843,100 | 8,520,000 | 1,996,900 | 199,690 | 1,797,210 | 1,797,210 | - |
| 3 | Provision for Additional Units | 2022-2026 | 40,370,000 | - | | 40,370,000 | - | - | 40,370,000 | 4,037,000 | 36,333,000 | 36,333,000 | - |
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| | | | | | | | | | | | | | |
| | Total | | 66,230,000 | - | - | 66,230,000 | 843,100 | 19,020,000 | 46,366,900 | 4,636,690 | 41,730,210 | 41,730,210 | - |

5.2.8 Waste Diversion

With respect to Waste Diversion, the Region provides a total of 249,736 sq.ft. of eligible waste diversion space (excluding land). Over the past 10 years, the average level of service was 0.58 sq.ft. of space per capita or an investment of \$157 per capita. Based on the service standard over the past ten years, the Region would be eligible to collect a total of \$7,537,492. Further, the Region provides approximately 61.4 acres of land for waste diversion services. This land includes the facilities, as well as drop-off depots and other waste diversion lands. The average service level over the past 10 years was 0.1 acres per 1,000 population or an average investment of \$11 per capita. Based on this, the Region would be eligible to collect an additional \$518,206 from development charges.

The Region has identified the need for improvements to two drop off depots. The total gross capital cost of these works is approximately \$1.365 million. Deductions have been provided for benefit to existing development in the amount of \$361,500 and \$60,000 for the portion related to landfill, which is D.C. ineligible. Additionally, a provision for additional facilities has been included at a cost of \$7.1 million to service growth to 2026. After the 10% mandatory deduction, the net growth related capital cost included in the D.C. is \$7,239,150.

The Region has an inventory of waste diversion vehicles totaling 66. These vehicles include Loaders, forklifts, tractors, and contracted vehicles. Over the past ten years, the average level of service was 0.1 items per 1,000 population or an investment of \$16 per capita. Based on this service standard, the Region would be eligible to collect \$763,394 from D.C.s for waste diversion vehicles (over the 10-year period).

Based on the projected growth over the 10-year forecast period (2017-2026), a provision of \$760,000 for additional vehicles has been identified for future capital. The net growth related capital cost to be included in the D.C. is \$684,000 (after the mandatory 10% deduction).

The Region provides waste diversion related containers to residents and businesses. These containers include blue and grey boxes, green bins, kitchen catchers, and backyard composters. Currently the Region provides a total of approximately \$6.3 million in containers. Over the historical 10-year period the average service level was 1.15 containers per capita or an investment of \$13 per capita. Based on the anticipated 10-year growth, the Region is eligible to collect \$641,040.

Based on the projected growth over the 10-year forecast period (2017-2026), a provision of \$640,000 for additional containers has been identified for future capital. The net growth related capital cost to be included in the D.C. is \$576,000 (after the mandatory 10% deduction).

Waste Diversion equipment is utilized by the Region at various facilities. In total, there are currently 120 pieces of equipment with a total value of approximately \$13 million. Over the past 10 years the average service level was 0.2 items of equipment per 1,000 population or an average investment of \$22 per capita. Based on the anticipated growth over the 10-year forecast period the Region is eligible to collect \$1,036,411.

A provision for additional equipment has been provided in the amount of \$1,030,000. After the 10% mandatory deduction, the net growth related cost included in the D.C. calculation is \$927,000.

The costs associated with waste diversion have been allocated 75% residential and 25% non-residential based on the incremental growth in population to employment for the 10-year forecast period.

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

Niagara Region

Service: Waste Diversion - Vehicles & Equipment

| Prj .No | Increased Service Needs Attributable to Anticipated Development | Timing (year) | Gross Capital Cost Estimate (2017\$) | Post Period Benefit | Other Deductions | Net Capital Cost | Less: | | Subtotal | Less: | Potential DC Recoverable Cost | | |
|---------|---|---------------|--------------------------------------|---------------------|------------------|------------------|---------------------------------|---|----------------|--------------------------------------|-------------------------------|-----------------------|---------------------------|
| | | | | | | | Benefit to Existing Development | Grants, Subsidies and Other Contributions Attributable to New Development | | Other (e.g. 10% Statutory Deduction) | Total | Residential Share 75% | Non-Residential Share 25% |
| | 2017-2026 | | | | | | | | | | | | |
| 1 | Provision for Vehicles and Equipment | 2017-2026 | 760,000 | - | | 760,000 | - | | 760,000 | 76,000 | 684,000 | 515,312 | 168,688 |
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| | Total | | 760,000 | - | - | 760,000 | - | - | 760,000 | 76,000 | 684,000 | 515,312 | 168,688 |

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

Niagara Region

Service: Waste Diversion - Containers

| Prj .No | Increased Service Needs Attributable to Anticipated Development 2017-2026 | Timing (year) | Gross Capital Cost Estimate (2017\$) | Post Period Benefit | Other Deductions | Net Capital Cost | Less: | | Subtotal | Less: | Potential DC Recoverable Cost | | |
|---------|--|---------------|--------------------------------------|---------------------|------------------|------------------|---------------------------------|---|----------------|--------------------------------------|-------------------------------|--------------------------|------------------------------|
| | | | | | | | Benefit to Existing Development | Grants, Subsidies and Other Contributions Attributable to New Development | | Other (e.g. 10% Statutory Deduction) | Total | Residential Share 75% | Non-Residential Share 25% |
| 1 | Provision for Additional Containers | 2017-2026 | 640,000 | - | | 640,000 | - | | 640,000 | 64,000 | 576,000 | 433,947 | 142,053 |
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| | Total | | 640,000 | - | - | 640,000 | - | - | 640,000 | 64,000 | 576,000 | 433,947 | 142,053 |

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

Niagara Region

Service: Waste Diversion - Other Equipment

| Prj .No | Increased Service Needs Attributable to Anticipated Development | Timing (year) | Gross Capital Cost Estimate (2017\$) | Post Period Benefit | Other Deductions | Net Capital Cost | Less: | | Subtotal | Less: Other (e.g. 10% Statutory Deduction) | Potential DC Recoverable Cost | | |
|---------|---|---------------|--------------------------------------|---------------------|------------------|------------------|---------------------------------|---|------------------|--|-------------------------------|-----------------------|---------------------------|
| | | | | | | | Benefit to Existing Development | Grants, Subsidies and Other Contributions Attributable to New Development | | | Total | Residential Share 75% | Non-Residential Share 25% |
| | 2017-2026 | | | | | | | | | | | | |
| 1 | Provision for Additional Equipment | 2017-2026 | 1,030,000 | - | | 1,030,000 | - | | 1,030,000 | 103,000 | 927,000 | 698,383 | 228,617 |
| | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | |
| | Total | | 1,030,000 | - | - | 1,030,000 | - | - | 1,030,000 | 103,000 | 927,000 | 698,383 | 228,617 |

5.3 Service Levels and 25-Year Capital Costs for Niagara's D.C. Calculation

This section evaluates the development-related capital requirements for those services with 25-year capital costs.

5.3.1 Services Related to a Highway

Niagara owns and maintains 1,732 lane km of arterial and collector roads. The replacement cost utilized includes the cost to replace a "total street", which includes sidewalks, streetlights, curbs, etc., however, it does not include costs associated with land, bridges and culverts, or the Regional component of interchanges. Over the historical 10-year period, the average service level was 3.9 lane km of roads per 1,000 population or an average level of investment of \$6,702 per capita, resulting in a D.C.-eligible recovery amount of \$1.026 billion over the 25-year forecast period.

The Region operates their Public Works service out of a number of facilities. Currently, the facilities provide 80,557 sq.ft. of building area. Over the past 10 years, the average level of service was 0.19 sq.ft. per capita or \$40 per capita. This level of service provides the Region with a maximum D.C.-eligible amount for recovery over the 25-year forecast period of \$6,131,094.

The Public Works service has a variety of vehicles and major equipment totalling approximately \$18.83 million. Over the historical 10-year period, the inventory provides for a service level of 1.2 vehicles and equipment per 1,000 population or a per capita standard of \$42. Over the forecast period, the D.C.-eligible amount for vehicles and equipment is \$6,443,390.

With respect to future needs, the identified service related to highways program was developed as part of the Transportation Master Plan undertaken by IBI Group and totals \$1,271 million. The capital projects include various works related to unfunded works previously constructed, adding capacity to the highway system including road improvements/expansions, intersection improvements, a road rehabilitation program, and other annual programs run by the Region. Expansion of both facilities and vehicles have also been identified to service the 25-year growth forecast. Of the total gross cost, \$74.96 million has been previously funded on various projects, resulting in an updated gross total of \$1.20 billion. From this adjusted gross total, the reserve fund balance of \$26,221,009 has been applied to net-down the capital program. A deduction for existing benefit of \$691.2 million has been made, along with a deduction of \$42.49 million for works that benefit development post-2041. Funding amounts have also been

identified resulting in a deduction of \$17.15 million for grants and other funding. The resulting D.C. eligible amount of \$445,670,494 which has been included in the D.C. calculations to be recovered over the current forecast period (2017-2041).

The residential/non-residential allocation for all services related to a highway is 76% residential and 24% based on the forecast population to employment anticipated over the forecast period. The population and employment figures have been adjusted for W.F.H. and N.F.P.O.W. figures (discussed in detail in Appendix H).

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

Niagara Region

Service: Services Related to a Highway - Roads

| Prj. No | Increased Service Needs Attributable to Anticipated Development | Corridor | Section | Timing (year) | Gross Capital Cost Estimate (2017\$) | Less: | Adjusted Gross Capital Cost Estimate (2017\$) | Post Period Benefit | Net Capital Cost | Less: | | Potential DC Recoverable Cost | | |
|--|---|---|--|------------------|--|-------------------|--|------------------------|--------------------|---------------------------------------|--|-------------------------------|-----------------------------|---------------------------------|
| | | | | | | Prior Funding | | | | Benefit to Existing Development | Grants, Subsidies and Other Contributions Attributable to New Development | Total | Residential Share 76% | Non-Residential Share 24% |
| | 2017-2041 | | | | | | | | | | | | | |
| Already Constructed | | | | | | | | | | | | | | |
| | | Fourth Ave | Third St to Vancsickle | | 2,669,751 | | 2,669,751 | | 2,669,751 | | | 2,669,751 | 2,029,011 | 640,740 |
| | | Thorold Stone Rd | Stanley Ave to Victoria | | 2,173,491 | | 2,173,491 | | 2,173,491 | | | 2,173,491 | 1,651,853 | 521,638 |
| | | Old Hwy 20 | Station St to Hwy 406 | | 3,805,169 | | 3,805,169 | | 3,805,169 | | | 3,805,169 | 2,891,929 | 913,241 |
| | | Woodlawn Rd | Gram Rd to Rice Rd. | | 1,150,930 | | 1,150,930 | | 1,150,930 | | | 1,150,930 | 874,707 | 276,223 |
| | | Hwy 406 | New Interchange at First/Third | | 172,953 | | 172,953 | | 172,953 | | | 172,953 | 131,445 | 41,509 |
| Sub-total Already Constructed | | | | | 9,972,296 | | 9,972,296 | - | 9,972,296 | - | - | 9,972,296 | 7,578,945 | 2,393,351 |
| Projects in Capital Budget | | | | | | | | | | | | | | |
| 1 | Capacity Improvement | Casablanca Blvd | QEW to Livingston Ave | 2017-2021 | 7,448,000 | 850,000 | 6,598,000 | - | 6,598,000 | 989,700 | - | 5,608,300 | 4,262,308 | 1,345,992 |
| 2 | Capacity Improvement | East Main St | Hwy 140 to Moyer Rd | 2022-2031 | 2,970,000 | - | 2,970,000 | - | 2,970,000 | 445,500 | - | 2,524,500 | 1,918,620 | 605,880 |
| 3 | New Road & Capacity Improvement | Merritt Rd | Rice Rd to Niagara St & Niagara St to Hwy 406 | 2017-2021 | 8,610,000 | - | 8,610,000 | - | 8,610,000 | 1,291,500 | - | 7,318,500 | 5,562,060 | 1,756,440 |
| 4 | Capacity Improvement | Martindale Rd | QEW to Vancsickle Rd, Vancsickle Rd to Fourth Ave & Bridge widening over Hwy 406 | 2017-2021 | 31,461,000 | 3,210,000 | 28,251,000 | - | 28,251,000 | 3,922,650 | 2,100,000 | 22,228,350 | 16,893,546 | 5,334,804 |
| 5 | Capacity Improvement | McLeod Rd | Phase 1 - Montrose Rd, Pin Oak Dr to Hydro Canal | 2017-2021 | 14,392,000 | 9,650,000 | 4,742,000 | - | 4,742,000 | 711,300 | - | 4,030,700 | 3,063,332 | 967,368 |
| 6 | Capacity Improvement | McLeod Rd | Phase 2 - Hydro Canal to Wilson Cr | 2017-2021 | 4,312,000 | 350,000 | 3,962,000 | - | 3,962,000 | 564,300 | 200,000 | 3,197,700 | 2,430,252 | 767,448 |
| 7 | Capacity Improvement | McLeod Rd | Phase 3 - Wilson Cr to Stanley Ave | 2022-2031 | 3,640,000 | - | 3,640,000 | - | 3,640,000 | 501,000 | 300,000 | 2,839,000 | 2,157,640 | 681,360 |
| 8 | Capacity Improvement | Rice Rd | Old Hwy 20 to Merritt Rd | 2017-2021 | 9,828,000 | 900,000 | 8,928,000 | - | 8,928,000 | 1,264,200 | 500,000 | 7,163,800 | 5,444,488 | 1,719,312 |
| 9 | Capacity Improvement | Rice Rd | Merritt Rd to Quaker Rd & Quaker Rd to Thorold Rd | 2017-2021 | 16,200,000 | - | 16,200,000 | - | 16,200,000 | 2,430,000 | - | 13,770,000 | 10,465,200 | 3,304,800 |
| 10 | Capacity Improvement | Niagara Stone Rd | Concession 6 Rd to Line 2 Rd & Penner St (Line 1 Rd) to East and West Line | 2017-2021 | 12,528,000 | 1,600,000 | 10,928,000 | - | 10,928,000 | 1,526,700 | 750,000 | 8,651,300 | 6,574,988 | 2,076,312 |
| 11 | Capacity Improvement | Collier Rd | Hwy 58 to Beaverdams Rd | 2022-2031 | 5,616,000 | - | 5,616,000 | - | 5,616,000 | 842,400 | - | 4,773,600 | 3,627,936 | 1,145,664 |
| 12 | New Road | Thorold Stone Rd | Extension east of Stanley Ave to Gale Centre | 2017-2021 | 11,088,000 | 8,300,000 | 2,788,000 | - | 2,788,000 | 418,200 | - | 2,369,800 | 1,801,048 | 568,752 |
| 13 | New Road | Thorold Stone Rd | Phase 2 - Gale Centre to Victoria Ave | 2022-2031 | 11,200,000 | - | 11,200,000 | - | 11,200,000 | 1,680,000 | - | 9,520,000 | 7,235,200 | 2,284,800 |
| 14 | Capacity Improvement | Glendale Ave | Interchange at QEW (1/3 contribution) | 2022-2031 | 3,333,000 | 1,000,000 | 2,333,000 | - | 2,333,000 | 349,950 | - | 1,983,050 | 1,507,118 | 475,932 |
| 15 | Capacity improvement | Montrose Road | Charnwood to McLeod | 2017-2021 | 1,904,000 | - | 1,904,000 | - | 1,904,000 | 285,600 | - | 1,618,400 | 1,229,984 | 388,416 |
| 16 | Highway Improvement | Hwy 406 Interchange | At Third Ave Louth (1/3 contribution) | 2022-2031 | 13,333,000 | 1,450,000 | 11,883,000 | - | 11,883,000 | 1,782,450 | - | 10,100,550 | 7,676,418 | 2,424,132 |
| 17 | New Road | Livingston Ave | Main St to Casablanca Blvd | 2022-2031 | 8,456,000 | 250,000 | 8,206,000 | - | 8,206,000 | 1,200,900 | 200,000 | 6,805,100 | 5,171,876 | 1,633,224 |
| 18 | New Road | South Niagara East-West Arterial | South Niagara East-West Arterial (1/3 contribution) | 2022-2031 | 16,275,000 | 500,000 | 15,775,000 | - | 15,775,000 | 2,366,250 | - | 13,408,750 | 10,190,650 | 3,218,100 |
| 19 | | Canadian Motor Speedway Infrastructure Improvements | | 2017-2021 | 2,625,000 | - | 2,625,000 | - | 2,625,000 | 393,750 | - | 2,231,250 | 1,695,750 | 535,500 |
| Subtotal - Projects in Capital Budget | | | | | 185,219,000 | 28,060,000 | 157,159,000 | - | 157,159,000 | 22,966,350 | 4,050,000 | 130,142,650 | 98,908,414 | 31,234,236 |

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

Niagara Region

Service: Services Related to a Highway - Roads

| Prj. No | Increased Service Needs Attributable to Anticipated Development | Corridor | Section | Timing (year) | Gross Capital Cost Estimate (2017\$) | Less: | Adjusted Gross Capital Cost Estimate (2017\$) | Post Period Benefit | Net Capital Cost | Less: | | Potential DC Recoverable Cost | | |
|---|---|---|---|------------------|--|------------------|--|------------------------|--------------------|---------------------------------------|--|-------------------------------|---------------------------------|-------------------------------------|
| | | | | | | Prior Funding | | | | Benefit to Existing Development | Grants, Subsidies and Other Contributions Attributable to New Development | Total | Residential Share 76% | Non-Residential Share 24% |
| | 2017-2041 | | | | | | | | | | | | | |
| Additional Projects Identified in TMP | | | | | | | | | | | | | | |
| 20 | New Road & Capacity Improvement | Bartlett Avenue extension & Escarpment Crossing Improvement | Muscat Dr to NE Crossing (1/3 contribution) & Bartlett St Extension to Mud St (1/3 contribution) | 2022-2031 | 38,733,000 | 2,200,000 | 36,533,000 | 7,763,263 | 28,769,738 | 5,479,950 | - | 23,289,788 | 17,700,239 | 5,589,549 |
| 21 | New Road | Highway 20 Smithville Bypass | Smithville (1/3 contribution) | 2022-2031 | 9,834,000 | - | 9,834,000 | - | 9,834,000 | 1,475,100 | - | 8,358,900 | 6,352,764 | 2,006,136 |
| 22 | Capacity Improvement | Hwy 20 | Kottmeier Rd to Davis Rd/Allanport Rd (1/3 contribution) | 2032-2041 | 25,019,000 | - | 25,019,000 | 10,633,075 | 14,385,925 | 3,752,850 | - | 10,633,075 | 8,081,137 | 2,551,938 |
| 23 | Capacity Improvement | Schisler Rd | Moyer Rd to Montrose Rd | 2032-2041 | 23,179,000 | - | 23,179,000 | 9,851,075 | 13,327,925 | 3,476,850 | - | 9,851,075 | 7,486,817 | 2,364,258 |
| 24 | Capacity Improvement | Lyons Creek Rd | Montrose Rd to Stanley Ave | 2032-2041 | 17,337,000 | - | 17,337,000 | 3,684,113 | 13,652,888 | 2,600,550 | - | 11,052,338 | 8,399,777 | 2,652,561 |
| 25 | Capacity Improvement | Lyons Creek Rd | Stanley Ave to Sodom Rd | 2022-2031 | 25,251,000 | - | 25,251,000 | - | 25,251,000 | 3,787,650 | - | 21,463,350 | 16,312,146 | 5,151,204 |
| 26 | Capacity Improvement | Niagara Stone Rd | Airport Road to Concession 6 | 2022-2031 | 7,180,000 | - | 7,180,000 | - | 7,180,000 | 1,077,000 | - | 6,103,000 | 4,638,280 | 1,464,720 |
| 27 | Protect for New Crossing | Carlton Street | Martindale Rd to Ontario St | 2032-2041 | - | - | - | - | - | - | - | - | - | - |
| 28 | New Road | Glendale Ave | York Rd to Queenston Rd | 2032-2041 | 13,732,000 | - | 13,732,000 | 2,918,050 | 10,813,950 | 2,059,800 | - | 8,754,150 | 6,653,154 | 2,100,996 |
| 29 | Capacity Improvement | Airport Road | Niagara Stone Road to York Road | 2022-2031 | 9,871,000 | - | 9,871,000 | - | 9,871,000 | 1,480,650 | - | 8,390,350 | 6,376,666 | 2,013,684 |
| 30 | Capacity Improvement | Montrose Rd | Lyons Creek Rd to Schisler Rd | 2032-2041 | 8,917,000 | - | 8,917,000 | 3,789,725 | 5,127,275 | 1,337,550 | - | 3,789,725 | 2,880,191 | 909,534 |
| 31 | Capacity Improvement | Montrose Rd | Chippawa Creek Rd to Lyons Creek Rd | 2032-2041 | 18,113,000 | - | 18,113,000 | 3,849,013 | 14,263,988 | 2,716,950 | - | 11,547,038 | 8,775,749 | 2,771,289 |
| 32 | Capacity Improvement | Stanley Ave | Ferry St to Murray St | 2022-2031 | 5,897,000 | - | 5,897,000 | - | 5,897,000 | 884,550 | - | 5,012,450 | 3,809,462 | 1,202,988 |
| 33 | Capacity Improvement | Stanley Ave | Marineland Pkwy to Lyons Creek Rd | 2022-2031 | 41,871,000 | - | 41,871,000 | - | 41,871,000 | 6,280,650 | - | 35,590,350 | 27,048,666 | 8,541,684 |
| 34 | Capacity Improvement | Sodom Rd | Lyons Creek Rd to Netherby Rd | 2022-2031 | 27,879,000 | - | 27,879,000 | - | 27,879,000 | 4,181,850 | - | 23,697,150 | 18,009,834 | 5,687,316 |
| 35 | Highway Improvement | Hwy 405 interchange | Concession 6 Rd (1/3 contribution) | 2022-2031 | 3,333,000 | - | 3,333,000 | - | 3,333,000 | 499,950 | - | 2,833,050 | 2,153,118 | 679,932 |
| 36 | Highway Improvement | Hwy 406 Extension | E Main St to NGTA corridor | 2032-2041 | - | - | - | - | - | - | - | - | - | - |
| 37 | Highway Improvement | QEW - Garden City Skyway | Bunting Road to York Rd | 2022-2031 | - | - | - | - | - | - | - | - | - | - |
| 38 | Highway Improvement | QEW | York Rd to Hwy 405 | 2022-2031 | - | - | - | - | - | - | - | - | - | - |
| 39 | Highway Improvement | QEW | Hwy 405 to Mountain Rd | 2022-2031 | - | - | - | - | - | - | - | - | - | - |
| 40 | Highway Improvement | QEW | Hamilton to Hwy 406 (HOV Lanes) | 2022-2031 | - | - | - | - | - | - | - | - | - | - |
| 41 | Highway Improvement | NGTA (Mid-Peninsula) corridor | Hwy 403 to Hwy 406 extension | 2032-2041 | - | - | - | - | - | - | - | - | - | - |
| 42 | Highway Improvement | NGTA East Area corridor | Hwy 406 extension to QEW | 2032-2041 | - | - | - | - | - | - | - | - | - | - |
| 43 | Capacity Improvement | Concession 6 Rd | York Rd to Warner Rd | 2022-2031 | 4,991,000 | - | 4,991,000 | - | 4,991,000 | 748,650 | - | 4,242,350 | 3,224,186 | 1,018,164 |
| 44 | Capacity Improvement | Mewburn Rd | Warner Rd to Mountain Rd | 2022-2031 | 1,885,000 | - | 1,885,000 | - | 1,885,000 | 282,750 | - | 1,602,250 | 1,217,710 | 384,540 |
| 45 | New structure | Mewburn Rd bridge | Bridge over CN Rail | 2022-2031 | 1,625,000 | - | 1,625,000 | - | 1,625,000 | 243,750 | - | 1,381,250 | 1,049,750 | 331,500 |
| 46 | Protect for New Crossing | Morrison St | New Crossing of QEW | 2032-2041 | - | - | - | - | - | - | - | - | - | - |
| 47 | Protect for New Crossing | Future Road | New Crossing of Welland River | 2032-2041 | - | - | - | - | - | - | - | - | - | - |
| 48 | New Road | Queenston Road realignment | Queenston Rd to York Rd | 2022-2031 | 4,045,000 | - | 4,045,000 | - | 4,045,000 | 606,750 | - | 3,438,250 | 2,613,070 | 825,180 |
| 49 | Capacity Improvement | West St. Catharines Grade Separation | Louth St / Vansickle Rd / First St Louth | 2022-2031 | 20,500,000 | 500,000 | 20,000,000 | - | 20,000,000 | - | - | 20,000,000 | 15,200,000 | 4,800,000 |
| 50 | | AT Strategic Network Grant Program | Strategic Network | 2017-2026 | 10,000,000 | - | 10,000,000 | - | 10,000,000 | 7,500,000 | - | 2,500,000 | 1,900,000 | 600,000 |
| 51 | | AT Infill Projects | Strategic Network | 2017-2021 | 7,900,000 | - | 7,900,000 | - | 7,900,000 | 5,925,000 | - | 1,975,000 | 1,501,000 | 474,000 |
| 52 | | AT Infill Projects | Strategic Network | 2022-2026 | 7,900,000 | - | 7,900,000 | - | 7,900,000 | 5,925,000 | - | 1,975,000 | 1,501,000 | 474,000 |
| Subtotal - Additional Projects Identified in TMP | | | | | 334,992,000 | 2,700,000 | 332,292,000 | 42,488,313 | 289,803,688 | 62,323,800 | - | 227,479,888 | 172,884,715 | 54,595,173 |

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

Niagara Region

Service: Services Related to a Highway - Roads

| Prj .No | Increased Service Needs Attributable to Anticipated Development | Corridor | Section | Timing (year) | Gross Capital Cost Estimate (2017\$) | Less: | Adjusted Gross Capital Cost Estimate (2017\$) | Post Period Benefit | Net Capital Cost | Less: | | Potential DC Recoverable Cost | | | |
|---|---|---|--|------------------|--|------------------|--|------------------------|------------------|---------------------------------------|--|-------------------------------|----------------------|--------------------------|-----------|
| | | | | | | Prior Funding | | | | Benefit to Existing Development | Grants, Subsidies and Other Contributions Attributable to New Development | Total | Residential Share | Non-Residential Share | |
| 2017-2041 | | | | | | | | | | | | | | | |
| Intersection Improvement Program | | | | | | | | | | | | | | | |
| 53 | Left turning lane | Thorold Stone Rd | @ Cardinal Drive | 2017-2026 | 1,500,000 | - | 1,500,000 | - | 1,500,000 | - | - | 1,500,000 | 1,140,000 | 360,000 | |
| 54 | Two way traffic reversion - Cost Sharing | Geneva St | @ St. Paul | 2017-2026 | 7,000,000 | 1,500,000 | 5,500,000 | - | 5,500,000 | 1,650,000 | 2,200,000 | 1,650,000 | 1,254,000 | 396,000 | |
| 55 | Traffic signal and turning lane | Niagara Stone Rd | @ Airport Road and Concession 4 | 2017-2026 | 3,000,000 | - | 3,000,000 | - | 3,000,000 | 3,000,000 | - | - | - | - | |
| 56 | Possible joint contract with NF | McLeod Road | @ Drummond | 2017-2026 | 2,000,000 | - | 2,000,000 | - | 2,000,000 | 1,000,000 | - | 1,000,000 | 760,000 | 240,000 | |
| 57 | New Signal and modifications | Four Mile Creek Rd | @ York Rd | 2017-2026 | 1,400,000 | - | 1,400,000 | - | 1,400,000 | 700,000 | - | 700,000 | 532,000 | 168,000 | |
| 58 | Turning lanes and signal mod | Falls Ave / Bender Intersection Improvements | | 2017-2026 | 900,000 | 900,000 | - | - | - | - | - | - | - | - | |
| 59 | New signal and turning lane | Victoria Avenue | @ RR63 Canboro Rd | 2017-2026 | 1,650,000 | - | 1,650,000 | - | 1,650,000 | 1,650,000 | - | - | - | - | |
| 60 | Roundabouts EA & Design & Imprv for new school | Int. Imprv. - Regional Road 20 between Townline Road & South Grimsby Rd 6 | | 2017-2026 | 1,100,000 | 1,100,000 | - | - | - | - | - | - | - | - | |
| 61 | Roundabout and urbanization | Regional Road 20 | Phase 1 - South Grimsby Rd 6 to Griffin | 2017-2026 | 4,250,000 | 650,000 | 3,600,000 | - | 3,600,000 | 3,400,000 | 200,000 | - | - | - | |
| 62 | Roundabout and urbanization | Regional Road 20 | Phase 2 - Industrial Pard Rd to Townline Road | 2017-2026 | 3,800,000 | 300,000 | 3,500,000 | - | 3,500,000 | 3,300,000 | 200,000 | - | - | - | |
| 63 | Cost Sharing for intersection improvement | King Street | @ Main Street and Ninetenth Street | 2017-2026 | 2,400,000 | - | 2,400,000 | | 2,400,000 | 2,400,000 | - | - | - | - | |
| 64 | Modifications and NB right Turn Lane | Fourth Ave | @ First | 2017-2026 | 600,000 | - | 600,000 | - | 600,000 | 300,000 | - | 300,000 | 228,000 | 72,000 | |
| 65 | | Intersection Improvement Program - 2027-2041 | | | 2027-2041 | 33,825,000 | - | 33,825,000 | - | 33,825,000 | 16,912,500 | - | 16,912,500 | 12,853,500 | 4,059,000 |
| Subtotal - Intersection Improvement Program | | | | | 63,425,000 | 4,450,000 | 58,975,000 | - | 58,975,000 | 34,312,500 | 2,600,000 | 22,062,500 | 16,767,500 | 5,295,000 | |
| Road Rehabilitation Program | | | | | | | | | | | | | | | |
| 66 | Embankment stabilization | Canoboro Rd | @ Warner | 2017-2021 | 5,090,000 | 5,090,000 | - | - | - | - | - | - | - | - | |
| 67 | Reconstruction - Urban | Main Street | Cabernet to Baker Rd & Nelles to Orchard | 2022-2031 | 7,560,000 | 500,000 | 7,060,000 | - | 7,060,000 | 5,904,000 | 500,000 | 656,000 | 498,560 | 157,440 | |
| 68 | Rehabilitation | York Road | Reg Rd 55 to Airport | 2017-2021 | 1,890,000 | 250,000 | 1,640,000 | - | 1,640,000 | 1,640,000 | - | - | - | - | |
| 69 | Reconstruction/ streetscaping | Old Hwy. 8 | Vinehaven Trail to 23rd Street | 2017-2021 | 5,270,000 | 470,000 | 4,800,000 | - | 4,800,000 | 1,920,000 | 1,600,000 | 1,280,000 | 972,800 | 307,200 | |
| 70 | Reconstruction - Urban - 2 Lane | Ontario Street | Lakeshore Road to Linwell Road | 2017-2021 | 8,532,000 | 500,000 | 8,032,000 | - | 8,032,000 | 5,428,800 | 2,000,000 | 603,200 | 458,432 | 144,768 | |
| 71 | Reconstruction and intersection Imprv | St. Paul Street West | Burgoyne Bridge to CNR Tracks | 2022-2031 | 9,180,000 | - | 9,180,000 | - | 9,180,000 | 8,262,000 | - | 918,000 | 697,680 | 220,320 | |
| 72 | Reconstruction - urban- 2 lane / GS | Louth Street | Between RR 81 (St. Paul W) & Crestcomb | 2017-2021 | 6,156,000 | - | 6,156,000 | - | 6,156,000 | 3,273,600 | 700,000 | 2,182,400 | 1,658,624 | 523,776 | |
| 73 | Rehabilitation c/w bike lanes | Lakeshore Rd | Townline Rd to Four Mile Creek Rd | 2017-2021 | 8,500,000 | 1,750,000 | 6,750,000 | - | 6,750,000 | 6,750,000 | - | - | - | - | |
| 74 | Rd Reconstruction / City WM | Main Street West | Prince Charles Drive to Niagara Street | 2017-2021 | 4,104,000 | - | 4,104,000 | - | 4,104,000 | 3,804,000 | 300,000 | - | - | - | |
| 75 | Upgrades to Storm Pumping Station | McLeod Road Storm P.S | @ Stanley Ave and CNR | 2017-2021 | 1,250,000 | - | 1,250,000 | - | 1,250,000 | 1,250,000 | - | - | - | - | |
| 76 | Road Reconstruct & Widening | Glendale Ave | Tremont Drive to Burliegh Hill | 2017-2021 | 9,396,000 | 1,500,000 | 7,896,000 | - | 7,896,000 | 3,537,600 | 2,000,000 | 2,358,400 | 1,792,384 | 566,016 | |
| 77 | Road Reconstruct / Download | Riverside Drive | Prince Charles Drive to Lincoln Street | 2017-2021 | 5,778,000 | 250,000 | 5,528,000 | - | 5,528,000 | 4,480,200 | 550,000 | 497,800 | 378,328 | 119,472 | |
| 78 | Reconstruction - urban-2 lane | Lakeshore Rd Phase 3 | Lake St to Geneva & Bradmon Dr to O'Mara | 2017-2021 | 8,046,000 | 7,450,000 | 596,000 | - | 596,000 | 357,600 | - | 238,400 | 181,184 | 57,216 | |
| 79 | Cost Share with City | Bridge Street | Victoria Ave to Erie | 2017-2021 | 575,000 | - | 575,000 | - | 575,000 | 575,000 | - | - | - | - | |
| 80 | Reconstruction | Lakeshore Rd West | Third Street to Seventh Street | 2017-2021 | 5,778,000 | 1,500,000 | 4,278,000 | - | 4,278,000 | 4,278,000 | - | - | - | - | |
| 81 | Embankment stab & Road Recon | Canborough Road | Baldwin Road to Coffey Bridge | 2017-2021 | 3,277,800 | 500,000 | 2,777,800 | - | 2,777,800 | 2,777,800 | - | - | - | - | |
| 82 | Reconstruction | Pelham Road Phase 2 | Effingham Rd to Wessel Drive | 2017-2021 | 9,828,000 | 800,000 | 9,028,000 | - | 9,028,000 | 8,125,200 | - | 902,800 | 686,128 | 216,672 | |
| 83 | Reconstruction | Pelham Road Phase 3 | Wessell Drive to Centre | 2017-2021 | 4,320,000 | 500,000 | 3,820,000 | - | 3,820,000 | 3,438,000 | - | 382,000 | 290,320 | 91,680 | |
| 84 | Reconstruction | Pelham Road Phase 4 | Centre to 8th | 2017-2021 | 3,240,000 | - | 3,240,000 | - | 3,240,000 | 2,916,000 | - | 324,000 | 246,240 | 77,760 | |
| 85 | Reconstruction - Urban - 2 Lane | Niagara St | Carlton to Scott | 2017-2021 | 7,344,000 | - | 7,344,000 | - | 7,344,000 | 6,609,600 | - | 734,400 | 558,144 | 176,256 | |

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

Niagara Region

Service: Services Related to a Highway - Roads

| Prj. No | Increased Service Needs Attributable to Anticipated Development | Corridor | Section | Timing (year) | Gross Capital Cost Estimate (2017\$) | Less: | | Adjusted Gross Capital Cost Estimate (2017\$) | Post Period Benefit | Net Capital Cost | Less: | | Potential DC Recoverable Cost | | |
|---|---|--|--|------------------|--|-------------------|--|--|------------------------|----------------------|---------------------------------------|--|-------------------------------|----------------------|--------------------------|
| | | | | | | Prior Funding | | | | | Benefit to Existing Development | Grants, Subsidies and Other Contributions Attributable to New Development | Total | Residential Share | Non-Residential Share |
| | 2017-2041 | | | | | | | | | | | | | 76% | 24% |
| 86 | Reconstruction - Urban - 2 Lane | St. David's Road | Hwy 406 to Collier Road | 2017-2021 | 5,290,000 | - | | 5,290,000 | - | 5,290,000 | 4,311,000 | 500,000 | 479,000 | 364,040 | 114,960 |
| 87 | Reconstruction - Urban - 2 Lane | Dominion Road | Helena to Lakeshore Rd | 2017-2021 | 7,587,000 | 1,125,000 | | 6,462,000 | - | 6,462,000 | 5,320,800 | 550,000 | 591,200 | 449,312 | 141,888 |
| 88 | Reconstruction rural - 2 Lane / Town WM | King Street | Durham Rd to Lincoln Avenue | 2017-2021 | 6,669,000 | 375,000 | | 6,294,000 | - | 6,294,000 | 5,304,600 | 400,000 | 589,400 | 447,944 | 141,456 |
| 89 | Culvert replacement | Dick's Creek crossing | @ Glendale Ave | 2017-2021 | 750,000 | 750,000 | | - | - | - | - | - | - | - | - |
| 90 | Road Rehabilitation | Regional Road 20 | Griffin St South to Industrial Park Road | 2017-2021 | 2,268,000 | - | | 2,268,000 | - | 2,268,000 | 1,951,200 | 100,000 | 216,800 | 164,768 | 52,032 |
| 91 | EA Study, Bridge Replacement & Rd Rehab | Creek Road | RR 4 (Wellandport Rd) to RR 63 Canborough | 2017-2021 | 405,000 | 375,000 | | 30,000 | - | 30,000 | 27,000 | - | 3,000 | 2,280 | 720 |
| 92 | Road Rehab - 2 Phases, incl Bridge Replacement | Creek Road | RR 4 to RR7 & RR7 to RR63 | 2017-2021 | 15,552,000 | 1,400,000 | | 14,152,000 | - | 14,152,000 | 12,736,800 | - | 1,415,200 | 1,075,552 | 339,648 |
| 93 | Road Rehabilitation | Dominion Road | Burleigh Road to Buffalo Road | 2017-2021 | 10,179,000 | 9,425,000 | | 754,000 | - | 754,000 | 678,600 | - | 75,400 | 57,304 | 18,096 |
| 94 | Road Rehabilitation | Main Street | Locke Street to Ann Street | 2017-2021 | 4,158,000 | - | | 4,158,000 | - | 4,158,000 | 3,742,200 | - | 415,800 | 316,008 | 99,792 |
| 95 | Road Rehabilitation | Glendale Ave | Welland Canal to Homer Road | 2017-2021 | 3,780,000 | 200,000 | | 3,580,000 | - | 3,580,000 | 3,222,000 | - | 358,000 | 272,080 | 85,920 |
| 96 | Reconstruction rural 2 lane | Townline Road | McLeod Road to Lundy's Lane | 2022-2031 | 6,480,000 | - | | 6,480,000 | - | 6,480,000 | 5,832,000 | - | 648,000 | 492,480 | 155,520 |
| 97 | Reconstruction rural 2 lane | Stewart Road | Lakeshore Road to Carlton Street | 2022-2031 | 7,560,000 | - | | 7,560,000 | - | 7,560,000 | 6,804,000 | - | 756,000 | 574,560 | 181,440 |
| 98 | Reconstruction rural 2 lane | Effingham Street | Webber Rd to River Road | 2017-2021 | 4,914,000 | - | | 4,914,000 | - | 4,914,000 | 4,422,600 | - | 491,400 | 373,464 | 117,936 |
| 99 | Reconstruction and Drainage Improvements | Canborough Road | RR27 Wellandport Rd to Community Centre | 2017-2021 | 3,996,000 | 200,000 | | 3,796,000 | - | 3,796,000 | 3,416,400 | - | 379,600 | 288,496 | 91,104 |
| 100 | Cost Sharing with City CIP and W/M | Lundy's Lane | Highland Ave to Montrose Road | 2017-2021 | 3,450,000 | - | | 3,450,000 | - | 3,450,000 | 3,105,000 | - | 345,000 | 262,200 | 82,800 |
| 101 | Cost Sharing with City Storm Sewer Works | Burleigh Hill | Glendale Ave to St. Davids | 2017-2021 | 2,000,000 | - | | 2,000,000 | - | 2,000,000 | 1,800,000 | - | 200,000 | 152,000 | 48,000 |
| 102 | Reconstruction - Urban - 2 Lane | Main Street Old Hwy 8 | Oakes Road North to Casablanca Blvd | 2017-2021 | 5,670,000 | - | | 5,670,000 | - | 5,670,000 | 4,833,000 | 300,000 | 537,000 | 408,120 | 128,880 |
| 103 | Reconstruction - Rural - 2lane | Twenty Mile Road | RR24 Victoria Ave to Mountain Rd | 2017-2021 | 8,856,000 | 200,000 | | 8,656,000 | - | 8,656,000 | 7,790,400 | - | 865,600 | 657,856 | 207,744 |
| 104 | Cost Sharing on MTO project | St. David's Road | @ Hwy 406 Interchange | 2017-2021 | 2,000,000 | - | | 2,000,000 | - | 2,000,000 | 600,000 | 1,000,000 | 400,000 | 304,000 | 96,000 |
| 105 | Reconstruction | Townline Road | Stanley Ave to Four Mile Creek Road | 2017-2021 | 2,052,000 | - | | 2,052,000 | - | 2,052,000 | 1,846,800 | - | 205,200 | 155,952 | 49,248 |
| 106 | Reconstruction | Sodom Road | Lyons Creek Road to Willick Road | 2017-2021 | 2,484,000 | - | | 2,484,000 | - | 2,484,000 | 2,235,600 | - | 248,400 | 188,784 | 59,616 |
| 107 | Road Reconstruction and City CIP / Watermain | Stanley Avenue | Hwy 420 to Ferry Street | 2022-2031 | 2,160,000 | - | | 2,160,000 | - | 2,160,000 | 1,944,000 | - | 216,000 | 164,160 | 51,840 |
| 108 | Road Reconstruction - Urban | Stevensville Rd | Eagle Street to Bowen Road | 2017-2021 | 2,700,000 | - | | 2,700,000 | - | 2,700,000 | 2,430,000 | - | 270,000 | 205,200 | 64,800 |
| 109 | Road Reconstruction | Bowen Road | QEW to Thompson Road | 2022-2031 | 3,780,000 | - | | 3,780,000 | - | 3,780,000 | 3,402,000 | - | 378,000 | 287,280 | 90,720 |
| 110 | Road Reconstruction | Roads Reconstruction Program - 2017-2021 | | 2017-2021 | 22,680,000 | - | | 22,680,000 | - | 22,680,000 | 20,412,000 | - | 2,268,000 | 1,723,680 | 544,320 |
| 111 | Road Reconstruction | Roads Reconstruction Program - 2022-2026 | | 2022-2026 | 58,320,000 | - | | 58,320,000 | - | 58,320,000 | 52,488,000 | - | 5,832,000 | 4,432,320 | 1,399,680 |
| 112 | Road Reconstruction | Roads Reconstruction Program - 2027-2041 | | 2027-2041 | 273,026,700 | - | | 273,026,700 | - | 273,026,700 | 245,724,030 | - | 27,302,670 | 20,750,029 | 6,552,641 |
| Subtotal - Road Rehabilitation Program | | | | | 583,881,500 | 35,110,000 | | 548,771,500 | - | 548,771,500 | 481,707,430 | 10,500,000 | 56,564,070 | 42,988,693 | 13,575,377 |
| Annual Programs | | | | | | | | | | | | | | | |
| 113 | Traffic Signal Annual Program | | | 2017-2041 | 51,290,000 | 1,690,000 | | 49,600,000 | - | 49,600,000 | 44,640,000 | - | 4,960,000 | 3,769,600 | 1,190,400 |
| 114 | Illumination Annual Program | | | 2017-2041 | 12,350,000 | 300,000 | | 12,050,000 | - | 12,050,000 | 10,845,000 | - | 1,205,000 | 915,800 | 289,200 |
| 115 | Transportation Studies | | | 2017-2041 | 9,925,000 | - | | 9,925,000 | - | 9,925,000 | 992,500 | - | 8,932,500 | 6,788,700 | 2,143,800 |
| 116 | Road Facility Program / Yards | | | 2017-2041 | 14,000,000 | 2,650,000 | | 11,350,000 | - | 11,350,000 | 7,217,400 | - | 4,132,600 | 3,140,776 | 991,824 |
| 117 | Provision for Additional Vehicles | | | 2017-2041 | 6,440,000 | - | | 6,440,000 | - | 6,440,000 | - | - | 6,440,000 | 4,894,400 | 1,545,600 |
| Subtotal - Annual Rehabilitation Program | | | | | 94,005,000 | 4,640,000 | | 89,365,000 | - | 89,365,000 | 63,694,900 | - | 25,670,100 | 19,509,276 | 6,160,824 |
| | Reserve Fund Adjustment | | | | | | | | | | 26,221,009 | | (26,221,009) | (19,927,967) | (6,293,042) |
| | Total | | | | 1,271,494,796 | 74,960,000 | | 1,196,534,796 | 42,488,313 | 1,154,046,483 | 691,225,989 | 17,150,000 | 445,670,494 | 338,709,576 | 106,960,919 |

5.3.3 Police Services

The Niagara Regional Police Service operates from several facilities, some of which are owned while others are leased. These facilities combined provide 351,045 sq.ft. of building area, providing for a per capita average level of service of 0.62 sq.ft. or \$251 per capita. This level of service provides the Region with a maximum D.C.-eligible amount for recovery over the 25-year forecast period of \$38,482,759.

To service growth over the 25-year forecast period, a new district #1 facility in St. Catharines has been identified. Based on current estimates, the new facility will not create additional space, however, it is still in the design stages, hence the total estimated cost of \$23.34 million has been deducted as benefit to existing. Should the final report, and construction of the facility, result in additional Police space, the incremental space may be recovered through development charges.

Growth related debt principal and interest for the new headquarters in Niagara Falls has been included in the D.C. calculation. The total capital cost of the debt is approximately \$20,540,000. As this debt is only the growth-related portion, no amount for benefit to existing development has been included. A provision for additional facility space has been included to service growth over the forecast period in the amount of \$22.6 million. The D.C. reserve fund balance of \$73,926 has also been incorporated for a total D.C.-eligible amount of \$43,213,960 for inclusion in the D.C. calculations including \$4,808,668 of debt interest (discounted) which is in addition to the service standard.

Equipped vehicles with a useful life of seven years or more are included in the service level calculation. The inclusion of police cruisers as part of D.C.s is considered to be permissible, based on their having an equivalent useful life of seven years or more. Police vehicles have an anticipated useful lifetime of beyond seven years, based on one shift per day use, which is the normal basis for determining use. The seven-year provision is a D.C. minimum threshold. The vehicles are actually used virtually "24/7" and, as a result, are used in a patrol function for several years. Many are subsequently used for non-patrol car functions (e.g. training) or interim vehicles while other vehicles are being repaired, or are sold and used by others. The police service currently has a fleet of 371 vehicles. Over the past 10 years, the average level of service was 0.9 vehicles per 1,000 population or an average investment of \$26 per capita. Based on the anticipated growth over the forecast period, the Region is eligible to collect \$4,009,322 in D.C. funding.

Provisions for additional vehicles have been provided in the amount of \$4.01 million. As Police services does not require a 10% mandatory deduction, the net growth-related amount included in the D.C. calculation is \$4.01 million.

The police service currently has 698 police officers, including senior officers, and 58 special constables. The police service provides equipment and gear for the officers, along with equipment for vehicles which are changed out when cruisers are replaced and therefore have a life of more than seven years. This equipment and gear provides a calculated average level of service for the historic 10-year period of \$15 per capita, providing for a D.C.-eligible amount over the forecast period of \$2,224,340.

Based on growth-related needs the Region has identified a provision for additional equipment and gear. The total capital cost included is \$2,224,000 which is the resultant D.C.-eligible amount.

The costs for the Niagara Police Service are shared 76%/24% between residential and non-residential based on the population to employment ratio over the 25-year forecast period.

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Service: Police Facilities

| Prj .No | Increased Service Needs Attributable to Anticipated Development | Timing (year) | Gross Capital Cost Estimate (2017\$) | Post Period Benefit | Other Deductions | Net Capital Cost | Less: | | Potential DC Recoverable Cost | | |
|---------|--|------------------|--------------------------------------|---------------------|------------------|-------------------|---------------------------------|---|-------------------------------|-------------------|-----------------------|
| | | | | | | | Benefit to Existing Development | Grants, Subsidies and Other Contributions Attributable to New Development | Total | Residential Share | Non-Residential Share |
| | 2017-2041 | | | | | | | | | 76% | 24% |
| 1 | New Headquarters/#2 District - 5700 Valley Way, Niagara Falls Station (Growth related Principal) | 2016-2045 | 15,731,366 | - | | 15,731,366 | - | | 15,731,366 | 11,926,054 | 3,805,312 |
| 2 | New Headquarters/#2 District - 5700 Valley Way, Niagara Falls Station (Growth related discounted Interest) | 2016-2045 | 4,808,668 | - | | 4,808,668 | - | | 4,808,668 | 3,645,483 | 1,163,185 |
| 3 | NRPS #1 District - 198 Welland Ave., St. Catharines Station | 2017-2018 | 23,341,000 | - | | 23,341,000 | 23,341,000 | | - | - | - |
| 4 | Provision for Additional Space | 2022-2041 | 22,600,000 | - | | 22,600,000 | - | | 22,600,000 | 17,133,211 | 5,466,789 |
| 5 | Reserve Fund Adjustment | | 73,926 | - | | 73,926 | - | | 73,926 | 56,044 | 17,882 |
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| | | | | | | | | | | | |
| | Total | | 66,554,960 | - | - | 66,554,960 | 23,341,000 | - | 43,213,960 | 32,760,792 | 10,453,168 |

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

Niagara Region

Service: Police Vehicles

| Prj .No | Increased Service Needs Attributable to Anticipated Development 2017-2041 | Useful Life (years) | Timing (year) From | Timing (year) To | Timing (year) | Gross Capital Cost Estimate (2017\$) | Post Period Benefit | Other Deductions | Net Capital Cost | Less: | | Potential DC Recoverable Cost | | |
|--------------|--|---------------------|--------------------|------------------|---------------|--------------------------------------|---------------------|------------------|------------------|---------------------------------|---|-------------------------------|--------------------------|------------------------------|
| | | | | | | | | | | Benefit to Existing Development | Grants, Subsidies and Other Contributions Attributable to New Development | Total | Residential Share 76% | Non-Residential Share 24% |
| 1 | Provision for Patrol and Non-Patrol Vehicles | 7 | 2017 | 2041 | 2017-2041 | 2,700,000 | - | | 2,700,000 | - | | 2,700,000 | 2,046,888 | 653,112 |
| 2 | Provision for Other Police Vehicles | 7 | 2017 | 2041 | 2017-2041 | 1,309,000 | - | | 1,309,000 | - | | 1,309,000 | 992,362 | 316,638 |
| | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | |
| Total | | | | | | 4,009,000 | - | - | 4,009,000 | - | - | 4,009,000 | 3,039,250 | 969,750 |

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

Niagara Region

Service: Police Small Equipment and Gear

| Prj .No | Increased Service Needs Attributable to Anticipated Development 2017-2041 | Timing (year) | Gross Capital Cost Estimate (2017\$) | Post Period Benefit | Other Deductions | Net Capital Cost | Less: | | Potential DC Recoverable Cost | | |
|---------|--|------------------|---|------------------------|---------------------|---------------------|---------------------------------------|--|-------------------------------|---------------------------------|-------------------------------------|
| | | | | | | | Benefit to Existing Development | Grants, Subsidies and Other Contributions Attributable to New Development | Total | Residential Share 76% | Non-Residential Share 24% |
| 1 | Provision for Equipment and Gear | 2017-2041 | 2,224,000 | - | | 2,224,000 | - | | 2,224,000 | 1,686,029 | 537,971 |
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| | Total | | 2,224,000 | - | - | 2,224,000 | - | - | 2,224,000 | 1,686,029 | 537,971 |

5.4 Service Levels and Urban 25-Year Capital Costs for Niagara's D.C. Calculation

This section evaluates the development-related capital requirements for those services with urban 25-year capital costs.

5.4.1 Water Services

GM BluePlan Engineering (GM BluePlan) is currently undertaking the Regions Water and Wastewater Master Servicing Plan to assess of the needs for water services throughout the Region over the 25-year forecast period. Appendix F provides more details on the service coverage and capital program along with their methodology towards levels of service, allocation of works between existing benefit and growth, post period/excess capacity, provisions for grants, subsidies and other contributions, etc.

In total, GM BluePlan have identified capital works totalling \$308.65 million required to service growth, including \$2 million for updates to the Master Plan over the 25-year forecast. Of this amount, \$75.79 million has been identified as benefiting existing development within the Region, \$18.5 million in grant funding has been identified, and \$5.15 million has been identified as post-period benefit. The reserve fund balance of \$14,774,128 has been applied against the capital program. This results in a net growth related amount of \$194,431,072 attributable to growth over the 25-year forecast period. In addition to their work, adjustments have been made to recognize amounts for unfunded works previously constructed. These works total an additional \$19,996,600. Therefore, the total to be included in the D.C. calculation for previous unfunded works and future works is \$214,427,672.

The costs for all water services are shared 76%/24% between residential and non-residential based on the anticipated population to employment over the 25-year forecast period. The population and employment figures have been adjusted for W.F.H. and N.F.P.O.W. figures (discussed in detail in Appendix F).

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

Niagara Region
Service: Water Services

| Master Plan ID | Increased Service Needs Attributable to Anticipated Development | MUNICIPALITY | System | Project Type | Size/ Capacity | Length (m) | Timing (year) | Gross Capital Cost Estimate (2017\$) | Post Period Benefit | Other Deductions | Net Capital Cost | Less: | | Potential DC Recoverable Cost | | |
|----------------|---|---|----------------|---------------|-------------------|------------|------------------|--|------------------------|---------------------|---------------------|---------------------------------------|---|-------------------------------|-----------------------------|---------------------------------|
| | | | | | | | | | | | | Benefit to Existing Development | Grants, Subsidies and Other Contributions Attributable to New Development | Total | Residential Share 76% | Non-Residential Share 24% |
| | 2017-2041 | | | | | | | | | | | | | | | |
| | Name | Description | | | | | | | | | | | | | | |
| W-D-001 | Decommissioning of Central Ave (Fort Erie South) ET | New Fort Erie ET to replace the Central Ave ET and Stevensville Reservoir; Central Ave ET to be decommissioned | Fort Erie | Rosehill | Storage | N/A | - | 2022-2031 | 1,979,000 | - | 1,979,000 | 1,385,300 | - | 593,700 | 451,212 | 142,488 |
| W-D-002 | Decommissioning of Stevensville Res + PS | New Fort Erie ET to replace the Central Ave ET and Stevensville Reservoir; Stevensville Reservoir and Pumping Station to be decommissioned | Fort Erie | Rosehill | Storage | N/A | - | 2022-2031 | 2,913,000 | - | 2,913,000 | 2,039,100 | - | 873,900 | 664,164 | 209,736 |
| W-D-003 | Decommissioning of Park Road Res + PS | Decommissioning of Park Road Reservoir and Pumping Station, to be replaced by new Grimsby Reservoir and additional pumping capacity at the WTP | Grimsby | Grimsby | Storage | N/A | - | 2022-2031 | 523,000 | - | 523,000 | 366,100 | - | 156,900 | 119,244 | 37,656 |
| W-D-004 | Decommissioning of Lundy's Lane ET | Lundy's Lane ET to be decommissioned and replaced by new South Niagara Falls ET | Niagara Falls | Niagara Falls | Storage | N/A | - | 2032-2041 | 1,979,000 | - | 1,979,000 | 1,385,300 | - | 593,700 | 451,212 | 142,488 |
| W-D-005 | Decommissioning of Pelham ET | Decommissioning of existing Pelham ET, to be replaced by a new ET | Pelham | Welland | Storage | N/A | - | 2022-2031 | 1,028,000 | - | 1,028,000 | 719,600 | - | 308,400 | 234,384 | 74,016 |
| W-D-006 | Decommissioning of King Street ET | Decommissioning of King Street ET, to be replaced by storage at new Barrick Road ET | Port Colborne | Port Colborne | Storage | N/A | - | 2017-2021 | 1,979,000 | - | 1,979,000 | 1,385,300 | - | 593,700 | 451,212 | 142,488 |
| W-D-007 | Decommissioning of Fielden Ave Res + PS | Decommissioning of Fielden Avenue Reservoir and Pumping Station | Port Colborne | Port Colborne | Storage | N/A | - | 2032-2041 | 2,913,000 | - | 2,913,000 | 2,039,100 | - | 873,900 | 664,164 | 209,736 |
| W-F-001 | Grimsby WTP Expansion | Provide an additional 15 MLD treatment, and new high lift pumping capacities to support feed to new Grimsby Reservoir | Grimsby | Grimsby | Treatment | 15 | - | 2022-2031 | 51,496,000 | 5,149,600 | 46,346,400 | 5,149,600 | - | 41,196,800 | 31,309,568 | 9,887,232 |
| W-F-002 | Decew inlet channel | New intake channel from Welland Canal to the Decew Water Treatment Plant. This will provide capacity above the current 147 MLD. Recommended in 2011 MSP | St. Catharines | Decew | Treatment | 0 | - | 2017-2021 | 22,969,000 | - | 22,969,000 | - | 18,500,000 | 4,469,000 | 3,396,440 | 1,072,560 |
| W-M-001 | New trunk main in Central Fort Erie | New trunk main in Central Fort Erie | Fort Erie | Rosehill | Watermain | 450 | 2,821 | 2022-2031 | 9,479,000 | - | 9,479,000 | 4,739,500 | - | 4,739,500 | 3,602,020 | 1,137,480 |
| W-M-002 | New Conveyance to Port Colborne East side | New Conveyance to East side of Port Colborne across canal | Port Colborne | Port Colborne | Watermain | 450 | 1,610 | 2017-2021 | 11,548,000 | - | 11,548,000 | 5,774,000 | - | 5,774,000 | 4,388,240 | 1,385,760 |
| W-M-003 | New trunk main from Welland WTP to North | New trunk main from Welland WTP to North service area | Welland | Welland | Watermain | 450 | 3,000 | 2032-2041 | 7,556,000 | - | 7,556,000 | 3,778,000 | - | 3,778,000 | 2,871,280 | 906,720 |
| W-M-004 | Upgrade trunk main from Grimsby WTP to Park Road | Upgrade trunk main from Grimsby WTP to Park Road | Grimsby | Grimsby | Watermain | 750 | 2,945 | 2017-2021 | 13,139,000 | - | 13,139,000 | 6,569,500 | - | 6,569,500 | 4,992,820 | 1,576,680 |
| W-M-005 | New trunk main from Grimsby WTP to New Grimsby Reservoir | New trunk main from Grimsby WTP to New Grimsby Reservoir | Grimsby | Grimsby | Watermain | 750 | 9,065 | 2022-2031 | 42,044,000 | - | 42,044,000 | 4,204,400 | - | 37,839,600 | 28,758,096 | 9,081,504 |
| W-M-006 | New trunk main in Smithville | New trunk main in Smithville | West Lincoln | Grimsby | Watermain | 400 | 5,600 | 2022-2031 | 14,357,000 | - | 14,357,000 | 1,435,700 | - | 12,921,300 | 9,820,188 | 3,101,112 |

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

Niagara Region
Service: Water Services

| Master Plan ID | Increased Service Needs Attributable to Anticipated Development | | MUNICIPALITY | System | Project Type | Size/ Capacity | Length (m) | Timing (year) | Gross Capital Cost Estimate (2017\$) | Post Period Benefit | Other Deductions | Net Capital Cost | Less: | | Potential DC Recoverable Cost | | |
|----------------|--|--|---------------------|---------------|--------------|-------------------|------------|------------------|--|------------------------|---------------------|---------------------|---------------------------------------|---|-------------------------------|----------------------|--------------------------|
| | | | | | | | | | | | | | Benefit to Existing Development | Grants, Subsidies and Other Contributions Attributable to New Development | Total | Residential Share | Non-Residential Share |
| | 2017-2041 | | | | | | | | | | | | | | | | |
| | Name | Description | | | | | | | | | | | | | | | |
| W-M-007 | New trunk main from PRV to Port Robinson Chlorine BPS in Niagara Falls | New trunk main from PRV to Port Robinson Chlorine BPS in Niagara Falls | Niagara Falls | Niagara Falls | Watermain | 450 | 1,215 | 2017-2021 | 2,543,000 | - | | 2,543,000 | 1,271,500 | - | 1,271,500 | 966,340 | 305,160 |
| W-M-008 | Trunk main from South NOTL to Virgil ET | Trunk main from South NOTL to Virgil ET with PRV in NOTL to supply Decew system from Niagara Falls system | Niagara-on-the-Lake | Decew | Watermain | 600 | 5,700 | 2032-2041 | 13,535,000 | - | | 13,535,000 | 6,767,500 | - | 6,767,500 | 5,143,300 | 1,624,200 |
| W-M-009 | New Niagara Falls South trunk main to New Elevated Tank | New Niagara Falls South trunk main to provide additional supply to new growth areas | Niagara Falls | Niagara Falls | Watermain | 750 | 1,360 | 2032-2041 | 4,858,000 | - | | 4,858,000 | - | - | 4,858,000 | 3,692,080 | 1,165,920 |
| W-M-010 | New Niagara Falls South trunk main | New Niagara Falls South trunk main to provide additional supply to new growth areas | Niagara Falls | Niagara Falls | Watermain | 400 | 7,465 | 2032-2041 | 18,316,000 | - | | 18,316,000 | - | - | 18,316,000 | 13,920,160 | 4,395,840 |
| W-M-011 | New trunk main to Fort Erie Elevated Tank | New trunk main to Fort Erie Elevated Tank | Fort Erie | Rosehill | Watermain | 450 | 955 | 2017-2021 | 4,107,000 | - | | 4,107,000 | 2,053,500 | - | 2,053,500 | 1,560,660 | 492,840 |
| W-M-012 | Upgrade watermain in Port Colborne to new Barrick Road ET | Upgrade watermain in Port Colborne to new Barrick Road ET | Port Colborne | Port Colborne | Watermain | 450 | 955 | 2017-2021 | 2,185,000 | - | | 2,185,000 | 1,092,500 | - | 1,092,500 | 830,300 | 262,200 |
| W-P-001 | Upgrade Shoalt's Drive LLPS | Replace both 3 MLD low lift pumps with 6.5 MLD pumps each | Welland | Welland | Pumping | 75 | - | 2017-2021 | 3,062,000 | - | | 3,062,000 | 306,200 | - | 2,755,800 | 2,094,408 | 661,392 |
| W-P-002 | Upgrade Shoalt's Drive HLPS | Replace all four 5.4 MLD high lift pumps with 10 MLD pumps each | Welland | Welland | Pumping | 347 | - | 2017-2021 | 7,882,000 | - | | 7,882,000 | 788,200 | - | 7,093,800 | 5,391,288 | 1,702,512 |
| W-P-003 | Upgrade Lincoln/Grimsby BPS | Add third 9.5 MLD pump | Lincoln | Grimsby | Pumping | 110 | - | 2032-2041 | 989,000 | - | | 989,000 | 98,900 | - | 890,100 | 676,476 | 213,624 |
| W-S-001 | New Fort Erie ET | New Fort Erie ET to replace the Central Ave ET and Stevensville Reservoir | Fort Erie | Rosehill | Storage | 8 | - | 2017-2021 | 12,838,000 | - | | 12,838,000 | 6,419,000 | - | 6,419,000 | 4,878,440 | 1,540,560 |
| W-S-002 | New Barrick Road ET in Port Colborne | New Barrick Road ET in Port Colborne to replace the King Street Elevated Tank | Port Colborne | Port Colborne | Storage | 6 | - | 2017-2021 | 8,022,000 | - | | 8,022,000 | 4,011,000 | - | 4,011,000 | 3,048,360 | 962,640 |
| W-S-003 | New Pelham ET | New Pelham ET to replace existing ET | Pelham | Welland | Storage | 5.8 | - | 2022-2031 | 9,307,000 | - | | 9,307,000 | 4,653,500 | - | 4,653,500 | 3,536,660 | 1,116,840 |
| W-S-004 | New South Niagara Falls ET | New South Niagara Falls ET to replace the Lundy's Lane ET and provide additional storage | Niagara Falls | Niagara Falls | Storage | 6 | - | 2032-2041 | 9,629,000 | - | | 9,629,000 | 4,814,500 | - | 4,814,500 | 3,659,020 | 1,155,480 |
| W-S-005 | New Grimsby Reservoir | New Grimsby Reservoir to provide additional storage - already designed Includes associated connection to existing Park Road facility and associated upgrades to Park Road pump station to support interim operational configuration | Grimsby | Grimsby | Storage | 15 | - | 2017-2021 | 23,474,000 | - | | 23,474,000 | 2,347,400 | - | 21,126,600 | 16,056,216 | 5,070,384 |
| Studies | | Water Master Plan Updates | | | | | | 2017-2041 | 2,000,000 | - | | 2,000,000 | 200,000 | - | 1,800,000 | 1,368,000 | 432,000 |
| | | Reserve Fund Adjustment | | | | | | | | | | | 14,774,128 | | (14,774,128) | (11,228,337) | (3,545,791) |
| | Total | | | | | | | | 308,649,000 | 5,149,600 | 0 | 303,499,400 | 90,568,328 | 18,500,000 | 194,431,072 | 147,767,615 | 46,663,457 |

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

SERVICE:

Water - Growth Related Component of Works Previously Completed

Region of Niagara

| Prj. No. | System | Type | Description | Timing | Gross Capital Cost Est. (2017 \$) | Less: | | | Potential DC Recoverable Cost | | |
|------------------------------|-------------------------|-----------------|---|--------|---|------------------------------------|---|------------------------|--|----------------------|------------------------------|
| | | | | | | Benefit to Existing Development | | Post Period Benefit | Net Costs Benefiting New Development | Residential Share | Non- Residential Share |
| | | | | | | \$ | % | | | | |
| | | | <u>Already Constructed</u> | | | | | | | | |
| ZCW0405 | Decew | Recovery of PPC | New Watermain Decew System | <2012 | 1,424,375 | - | | - | 1,424,375 | | |
| ZCW9709 | Decew Falls | Recovery of PPC | DeCew WTP Phase 3 Upgrade | <2008 | 196,320 | - | | - | 196,320 | | |
| ZCW0405 | Decew Falls | Recovery of PPC | Loop trunk system from Eastchester to Roehampton (1.3 | <2012 | 105,509 | - | | - | 105,509 | | |
| ZCW0205 | Decew Falls(# 11) | Recovery of PPC | Consolidated Storage in Vineland | <2008 | 799,177 | - | | - | 799,177 | | |
| | Decew Falls | Recovery of PPC | Decew Falls WTP Upgrade | <2004 | 165,587 | | | - | 165,587 | | |
| | Decew Falls | Recovery of PPC | Water Supply Reinforcement, Niagara Falls/NOTL | <2004 | 131,908 | | | - | 131,908 | | |
| | Subtotal | | | | 2,822,877 | | | | 2,822,877 | 1,745,229 | 1,077,648 |
| | | | | | | | | | | | |
| ZCW0504 | Fort Erie (#12, 13, 14) | Recovery of PPC | Eagle Street Watermain - From Stevensville to Bridge/Pettit | <2012 | 1,986,388 | - | | - | 1,986,388 | | |
| | Fort Erie | Recovery of PPC | Treated Water Reservoir in Stevensville | <2004 | 954,230 | | | - | 954,230 | | |
| | Fort Erie | Recovery of PPC | Trunk Watermain - Barnard St. from Dominion to Garrison | <2004 | 404,145 | | | - | 404,145 | | |
| | Fort Erie | Recovery of PPC | 10 ML/d expansion to the water plant and upgrades | <2004 | 352,724 | | | - | 352,724 | | |
| | Subtotal | | | | 3,697,486 | | | | 3,697,486 | 2,497,780 | 1,199,706 |
| | | | | | | | | | | | |
| ZCW0303 | Grimsby (# 7) | Recovery of PPC | London Road Booster Station and reservoir | <2008 | 4,417,509 | - | | - | 4,417,509 | | |
| ZCW0303 | Grimsby (#9) | Recovery of PPC | Watermain from Park Road Booster Station to new London | <2008 | 3,589,702 | - | | - | 3,589,702 | | |
| | Grimsby | Recovery of PPC | Grimsby WTP Expansion | <2004 | 1,403,280 | | | - | 1,403,280 | | |
| | Subtotal | | | | 9,410,491 | | | | 9,410,491 | 6,999,606 | 2,410,885 |
| | | | | | | | | | | | |
| ZCW9504 | Niagara Falls (#7) | Recovery of PPC | Niagara Falls WTP Upgrade and reservoir expansion | <2008 | 208,151 | - | | - | 208,151 | | |
| | Niagara Falls | Recovery of PPC | Water Supply Reinforcement, Niagara Falls/NOTL | <2004 | 131,908 | | | - | 131,908 | | |
| | Niagara Falls | Recovery of PPC | Trunk Watermain - St. Paul St. from Thorold Stone to | <2004 | 420,984 | | | - | 420,984 | | |
| | Niagara Falls | Recovery of PPC | 400mm WM across Welland River at Niagara Pkwy (water | <2004 | 16,453 | | | - | 16,453 | | |
| | Niagara Falls | Recovery of PPC | 400mm WM on Church's Lane from St. Paul Ave to Stanley | <2004 | 225,738 | | | - | 225,738 | | |
| | Niagara Falls | Recovery of PPC | 26 ML additional system storage | <2004 | 428,002 | | | - | 428,002 | | |
| | Subtotal | | | | 1,431,235 | | | | 1,431,235 | 976,049 | 455,186 |
| | | | | | | | | | | | |
| | Port Colborne | Recovery of PPC | Install a 500mm x 1km watermain on King Street from the | <2012 | 51,218 | - | | - | 51,218 | | |
| ZCW0402 | Port Colborne (# 3) | Recovery of PPC | Fielden Avenue Pumping Station | <2008 | 85,393 | - | | - | 85,393 | | |
| ZCW0203 | Port Colborne (#1) | Recovery of PPC | Elizabeth Street watermain Killally Street East to Main | <2008 | 30,549 | - | | - | 30,549 | | |
| ZCW1002 | Port Colborne (#4) | Recovery of PPC | Fielden Reservoir expansion (10ML) in lieu of tank | <2012 | 165,754 | - | | - | 165,754 | | |
| ZCW9621 | Port Colborne (#5) | Recovery of PPC | Port Colborne WTP Upgrades | <2008 | 16,309 | - | | - | 16,309 | | |
| | Port Colborne | Recovery of PPC | Bell-Elizabeth Trunk Watermain (part of) | <2004 | 58,470 | | | - | 58,470 | | |
| | Subtotal | | | | 407,693 | | | | 407,693 | 297,808 | 109,885 |
| | | | | | | | | | | | |
| ZCW9814 | Welland (# 8) | Recovery of PPC | Hwy 406 and Towpath Road watermain | <2008 | 1,853,012 | - | | - | 1,853,012 | | |
| ZCW0204 | Welland (#1, #4) | Recovery of PPC | Welland WTP Upgrade including new inground reservoir and | <2012 | 136,582 | - | | - | 136,582 | | |
| | Welland | Recovery of PPC | Welland WTP Improvement | <2004 | 56,131 | | | - | 56,131 | | |
| | Welland | Recovery of PPC | 400mm WM on Ridge Rd from Southworth to Moore | <2004 | 181,092 | | | - | 181,092 | | |
| | Subtotal | | | | 2,226,817 | | | | 2,226,817 | 1,775,950 | 450,867 |
| | | | | | | | | | | | |
| Total Estimated Capital Cost | | | | | \$ 19,996,600 | \$ - | | \$ - | \$ 19,996,600 | \$ 14,292,422 | \$ 5,704,178 |

5.4.2 Wastewater Services

As part of the Water and Wastewater Master Servicing Plan, GM BluePlan is undertaking a detailed review of the wastewater services required to service growth over the forecast period to 2041, details of their work is provided in Appendix G. In addition to the capital costs identified in the Master Plan, previous constructed unfunded works and the balance in the Region's D.C. reserve fund have been included in the tables to follow.

Based on the anticipated growth to 2041, a total gross cost of \$502,318,000 has been identified, including \$2 million for updates to the Master Plan over the 25-year forecast. Deductions to this amount include \$200,234,944 which has been identified as benefiting existing development and \$16,991,600 that has been identified as costs that benefit development post-2041. The surplus in the wastewater D.C. reserve fund of \$19,112,554 has also been deducted from the D.C. calculations. The result of these deductions is a net growth-related cost of \$265,978,902 which has been included in the D.C. calculations. In addition to these future works, adjustments have been made to recognize amounts for unfunded works previously constructed in the amount of \$36,721,668. The grand total to be included in the D.C. calculation for all of these components is \$302,700,570.

The costs for all water services are shared 76%/24% between residential and non-residential based on the anticipated population to employment over the 25-year forecast period. The population and employment figures have been adjusted for W.F.H. and N.F.P.O.W. figures (discussed in detail in Appendix G).

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

Niagara Region
Service: Wastewater Services

| Master Plan ID | Increased Service Needs Attributable to Anticipated Development 2017-2041 | MUNICIPALITY | WWTP | Project Type | Size/Capacity | Length (m) | Timing (year) | Gross Capital Cost Estimate (2017\$) | Post Period Benefit | Net Capital Cost | Less: | | Potential DC Recoverable Cost | | |
|----------------|--|--|---------------------|--------------------------|-----------------------|------------|---------------|--------------------------------------|---------------------|------------------|---------------------------------|---|-------------------------------|--------------------------|------------------------------|
| | | | | | | | | | | | Benefit to Existing Development | Grants, Subsidies and Other Contributions Attributable to New Development | Total | Residential Share 76% | Non-Residential Share 24% |
| | | | | | | | | | | | | | | | |
| Name | Description | | | | | | | | | | | | | | |
| WW-D-001 | Decommissioning of Queenston WWTP | Decommissioning of Queenston WWTP, to be replaced by new SPS and forcemain to St. David's #1 | Niagara Falls | Queenston | Treatment | N/A | - | 2022-2031 | 1,979,000 | - | 1,979,000 | 1,385,300 | 593,700 | 451,212 | 142,488 |
| WW-FM-001 | Upgrade Catherine St. SPS Forcemain | Upgrade Catherine St. SPS Forcemain in Fort Erie | Fort Erie | Anger Ave | Forcemain | 300 | 165 | 2032-2041 | 467,000 | - | 467,000 | 93,400 | 373,600 | 283,936 | 89,664 |
| WW-FM-003 | Upgrade Foss Road SPS Forcemain | Upgrade Foss Road SPS Forcemain in Welland | Welland | Welland | Forcemain | 250 | 5,720 | 2022-2031 | 4,500,000 | - | 4,500,000 | 900,000 | 3,600,000 | 2,736,000 | 864,000 |
| WW-FM-004 | Laurie Avenue SPS Forcemain Upgrade | Laurie Avenue SPS Forcemain Upgrade in Lincoln | Lincoln | Baker Road | Forcemain | 250 | 1,000 | 2017-2021 | 2,981,000 | - | 2,981,000 | 298,100 | 2,682,900 | 2,039,004 | 643,896 |
| WW-FM-005 | New Peel Street SPS Forcemain | New Peel Street SPS Forcemain in Thorold from station to Black Horse SPS | Thorold | Port Weller | Forcemain | 400 | 2,000 | 2022-2031 | 4,889,000 | - | 4,889,000 | 977,800 | 3,911,200 | 2,972,512 | 938,688 |
| WW-FM-006 | New Black Horse Forcemain to Niagara Falls | New Black Horse Forcemain to Niagara Falls | Niagara Falls | South Niagara Falls | Forcemain | 400 | 6,000 | 2022-2031 | 9,820,000 | - | 9,820,000 | 1,964,000 | 7,856,000 | 5,970,560 | 1,885,440 |
| WW-FM-008 | South Side High Lift conveyance | South Side High Lift to new South Niagara Falls WWTP | Niagara Falls | South Niagara Falls | Sewer | 900 | 3,200 | 2022-2031 | 38,039,000 | - | 38,039,000 | 7,607,800 | 30,431,200 | 23,127,712 | 7,303,488 |
| WW-FM-009 | Dorchester Forcemain twinning | Twin existing Dorchester Forcemain in Niagara Falls | Niagara Falls | Niagara Falls | Forcemain | 300 | 50 | 2022-2031 | 303,000 | - | 303,000 | 60,600 | 242,400 | 184,224 | 58,176 |
| WW-FM-010 | St. Davids #1 Forcemain twinning | Twin existing St. Davids #1 Forcemain in Niagara-on-the-Lake | Niagara-on-the-Lake | Niagara Falls | Forcemain | 300 | 2,030 | 2022-2031 | 3,923,000 | - | 3,923,000 | 784,600 | 3,138,400 | 2,385,184 | 753,216 |
| WW-FM-011 | Smithville Forcemain twinning | Twin existing Smithville Forcemain | West Lincoln | Baker Road | Forcemain | 400 | 10,786 | 2022-2031 | 18,132,000 | - | 18,132,000 | 1,813,200 | 16,318,800 | 12,402,288 | 3,916,512 |
| WW-FM-012 | New Queenston Forcemain | New Queenston Forcemain into Niagara Falls system | Niagara-on-the-Lake | Niagara Falls | Forcemain | 250 | 7,065 | 2022-2031 | 11,136,000 | - | 11,136,000 | 7,795,200 | 3,340,800 | 2,539,008 | 801,792 |
| WW-II-001 | Wet weather reduction in East Fort Erie | Wet weather reduction in East Fort Erie | Fort Erie | Anger Ave | Wet Weather Reduction | 30 | - | 2022-2031 | 4,500,000 | - | 4,500,000 | 2,250,000 | 2,250,000 | 1,710,000 | 540,000 |
| WW-II-002 | Wet weather reduction in Crystal Beach | Wet weather reduction in Crystal Beach | Fort Erie | Crystal Beach | Wet Weather Reduction | 30 | - | 2022-2031 | 4,500,000 | - | 4,500,000 | 2,250,000 | 2,250,000 | 1,710,000 | 540,000 |
| WW-II-003 | Wet weather reduction in Stevensville/Douglastown | Wet weather reduction in Stevensville/Douglastown | Fort Erie | Stevensville Douglastown | Wet Weather Reduction | 30 | - | 2022-2031 | 4,500,000 | - | 4,500,000 | 2,250,000 | 2,250,000 | 1,710,000 | 540,000 |
| WW-II-004 | Wet weather reduction in Central Welland | Wet weather reduction in Central Welland | Welland | Welland | Wet Weather Reduction | 200 | - | 2022-2031 | 30,000,000 | - | 30,000,000 | 15,000,000 | 15,000,000 | 11,400,000 | 3,600,000 |
| WW-II-005 | Wet weather reduction in West Grimsby | Wet weather reduction in West Grimsby | Grimsby | Baker Road | Wet Weather Reduction | 50 | - | 2022-2031 | 7,500,000 | - | 7,500,000 | 3,750,000 | 3,750,000 | 2,850,000 | 900,000 |
| WW-II-006 | Wet weather reduction in Beamsville | Wet weather reduction in Beamsville | West Lincoln | Baker Road | Wet Weather Reduction | 20 | - | 2022-2031 | 3,000,000 | - | 3,000,000 | 1,500,000 | 1,500,000 | 1,140,000 | 360,000 |
| WW-II-007 | Wet weather reduction in Jordan Valley | Wet weather reduction in Jordan Valley | West Lincoln | Baker Road | Wet Weather Reduction | 10 | - | 2022-2031 | 1,500,000 | - | 1,500,000 | 750,000 | 750,000 | 570,000 | 180,000 |
| WW-II-008 | Wet weather reduction in St. Catharines - Port Dalhousie | Wet weather reduction in St. Catharines - Port Dalhousie | St. Catharines | Port Dalhousie | Wet Weather Reduction | 200 | - | 2022-2031 | 30,000,000 | - | 30,000,000 | 15,000,000 | 15,000,000 | 11,400,000 | 3,600,000 |
| WW-II-009 | Wet weather reduction in North Thorold | Wet weather reduction in North Thorold | Thorold | Port Dalhousie | Wet Weather Reduction | 90 | - | 2022-2031 | 13,500,000 | - | 13,500,000 | 6,750,000 | 6,750,000 | 5,130,000 | 1,620,000 |
| WW-II-010 | Wet weather reduction in St. Catharines - Port Weller | Wet weather reduction in St. Catharines - Port Weller | St. Catharines | Port Weller | Wet Weather Reduction | 134 | - | 2017-2021 | 20,100,000 | - | 20,100,000 | 10,050,000 | 10,050,000 | 7,638,000 | 2,412,000 |
| WW-II-011 | Wet weather reduction in Central Port Colborne | Wet weather reduction in Central Port Colborne | Port Colborne | Seaway | Wet Weather Reduction | 20 | - | 2022-2031 | 3,000,000 | - | 3,000,000 | 1,500,000 | 1,500,000 | 1,140,000 | 360,000 |
| WW-II-012 | Wet weather reduction in Central Niagara Falls | Wet weather reduction in Central Niagara Falls | Niagara Falls | Niagara Falls | Wet Weather Reduction | 100 | - | 2022-2031 | 15,000,000 | - | 15,000,000 | 7,500,000 | 7,500,000 | 5,700,000 | 1,800,000 |
| WW-II-013 | Wet weather reduction in South Side Niagara Falls | Wet weather reduction in South Side Niagara Falls | Niagara Falls | Niagara Falls | Wet Weather Reduction | 100 | - | 2017-2021 | 15,000,000 | - | 15,000,000 | 7,500,000 | 7,500,000 | 5,700,000 | 1,800,000 |
| WW-II-014 | Wet weather reduction in Northeast Niagara-on-the-Lake | Wet weather reduction in Northeast Niagara-on-the-Lake | Niagara-on-the-Lake | NOTL | Wet Weather Reduction | 5 | - | 2022-2031 | 750,000 | - | 750,000 | 375,000 | 375,000 | 285,000 | 90,000 |
| WW-II-015 | Wet weather reduction in Virgil | Wet weather reduction in Virgil - NOTL | Niagara-on-the-Lake | NOTL | Wet Weather Reduction | 5 | - | 2022-2031 | 750,000 | - | 750,000 | 375,000 | 375,000 | 285,000 | 90,000 |
| WW-SPS-001 | Alliston SPS Pump Replacement - Anger Avenue | Increase station capacity from 43 L/s to 129 L/s. | Fort Erie | Anger Ave | Pumping | 86 | - | 2022-2031 | 989,000 | - | 989,000 | 197,800 | 791,200 | 601,312 | 189,888 |
| WW-SPS-002 | Catherine St. SPS Expansion - Anger Avenue | Increase station capacity from 117 L/s to 140 L/s | Fort Erie | Anger Ave | Pumping | 140 | - | 2032-2041 | 2,945,000 | - | 2,945,000 | 589,000 | 2,356,000 | 1,790,560 | 565,440 |
| WW-SPS-003 | Lakeshore SPS Upgrade - Anger Avenue | Increase station capacity from 63 L/s to 70 L/s | Fort Erie | Anger Ave | Pumping | 70 | - | 2022-2031 | 2,618,000 | - | 2,618,000 | 261,800 | 2,356,200 | 1,790,712 | 565,488 |
| WW-SPS-004 | Shirley SPS Upgrade - Crystal Beach | Increase station capacity from 29 L/s to 63 L/s; Also includes sustainability upgrades to the station | Fort Erie | Crystal Beach | Pumping | 34 | - | 2032-2041 | 2,889,000 | - | 2,889,000 | 1,444,500 | 1,444,500 | 1,097,820 | 346,680 |
| WW-SPS-005 | Nigh Rd. SPS Pump Replacement - Crystal Beach | Increase station capacity from 29 L/s to 45 L/s Use implementation plan prior to upgrade: Flow monitoring, validate wet weather flows, re-evaluate required upgrades | Fort Erie | Crystal Beach | Pumping | 16 | - | 2022-2031 | 989,000 | - | 989,000 | 494,500 | 494,500 | 375,820 | 118,680 |
| WW-SPS-006 | Stevensville SPS Upgrade - Stevensville Douglastown | Increase station capacity from 42 L/s to 69 L/s | Fort Erie | Stevensville Douglastown | Pumping | 27 | - | 2022-2031 | 1,022,000 | - | 1,022,000 | 511,000 | 511,000 | 388,360 | 122,640 |
| WW-SPS-007 | Rosemount South SPS Pump Replacement - Seaway | Increase station capacity from 9 L/s to 17 L/s | Port Colborne | Seaway | Pumping | 8 | - | 2017-2021 | 665,000 | - | 665,000 | 332,500 | 332,500 | 252,700 | 79,800 |

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

Niagara Region
Service: Wastewater Services

| Master Plan ID | Increased Service Needs Attributable to Anticipated Development | MUNICIPALITY | WWTP | Project Type | Size/Capacity | Length (m) | Timing (year) | Gross Capital Cost Estimate (2017\$) | Post Period Benefit | Net Capital Cost | Less: | | Potential DC Recoverable Cost | | | |
|----------------|---|---|---------------------|---------------------|---------------|------------|---------------|--------------------------------------|---------------------|------------------|---------------------------------|---|-------------------------------|-----------------------|---------------------------|------------|
| | | | | | | | | | | | Benefit to Existing Development | Grants, Subsidies and Other Contributions Attributable to New Development | Total | Residential Share 76% | Non-Residential Share 24% | |
| | | | | | | | | | | | | | | | | |
| 2017-2041 | | | | | | | | | | | | | | | | |
| | Name | Description | | | | | | | | | | | | | | |
| WW-SPS-008 | Oxford SPS Pump Replacement - Seaway | Increase station capacity from 7 L/s to 10 L/s | Port Colborne | Seaway | Pumping | 3 | - | 2032-2041 | 665,000 | - | 665,000 | 66,500 | 598,500 | 454,860 | 143,640 | |
| WW-SPS-009 | Steele SPS Pump Replacement - Seaway | Increase station capacity from 16 L/s to 40 L/s | Port Colborne | Seaway | Pumping | 24 | - | 2032-2041 | 989,000 | - | 989,000 | 494,500 | 494,500 | 375,820 | 118,680 | |
| WW-SPS-011 | Foss Road SPS Upgrade - Welland | Increase station capacity from 27 L/s to 76 L/s | Pelham | Welland | Pumping | 49 | - | 2022-2031 | 1,866,000 | - | 1,866,000 | 373,200 | 1,492,800 | 1,134,528 | 358,272 | |
| WW-SPS-012 | Smithville SPS Expansion - Baker Road | Increase station capacity from 120 L/s to 360 L/s | West Lincoln | Baker Road | Pumping | 360 | - | 2022-2031 | 8,241,000 | - | 8,241,000 | 824,100 | 7,416,900 | 5,636,844 | 1,780,056 | |
| WW-SPS-013 | Campden SPS Pump Replacement - Baker Road | Increase station capacity from 11 L/s to 19 L/s pumps | Lincoln | Baker Road | Pumping | 8 | - | 2022-2031 | 1,299,000 | - | 1,299,000 | 129,900 | 1,169,100 | 888,516 | 280,584 | |
| WW-SPS-014 | Laurie Avenue SPS Expansion - Baker Road | Increase station capacity from 28 L/s to 38 L/s | Lincoln | Baker Road | Pumping | 38 | - | 2017-2021 | 1,814,000 | - | 1,814,000 | 181,400 | 1,632,600 | 1,240,776 | 391,824 | |
| WW-SPS-015 | Victoria Avenue SPS Upgrade - Baker Road | Increase station capacity from 120 L/s to 230 L/s | Lincoln | Baker Road | Pumping | 110 | - | 2017-2021 | 4,051,000 | - | 4,051,000 | 810,200 | 3,240,800 | 2,463,008 | 777,792 | |
| WW-SPS-016 | Bridgeport SPS Pump Replacement - Baker Road | Increase station capacity from 11 L/s to 22 L/s Use implementation plan prior to upgrade: Flow monitoring, validate wet weather flows, re-evaluate required upgrades | Lincoln | Baker Road | Pumping | 11 | - | 2022-2031 | 834,000 | - | 834,000 | 166,800 | 667,200 | 507,072 | 160,128 | |
| WW-SPS-017 | Jordan Valley SPS Pump Replacement - Baker Road | Increase station capacity from 40 L/s to 66 L/s Use implementation plan prior to upgrade: Flow monitoring, validate wet weather flows, re-evaluate required upgrades | Lincoln | Baker Road | Pumping | 26 | - | 2022-2031 | 1,145,000 | - | 1,145,000 | 229,000 | 916,000 | 696,160 | 219,840 | |
| WW-SPS-018 | Ontario Street SPS Upgrade - Baker Road | Increase station capacity from 420 L/s to 600 L/s | Lincoln | Baker Road | Pumping | 180 | - | 2032-2041 | 3,755,000 | - | 3,755,000 | 751,000 | 3,004,000 | 2,283,040 | 720,960 | |
| WW-SPS-019 | Biggar Lagoon Pump Replacement - Baker Road | Increase station capacity from 60 L/s to 110 L/s; Also includes SOGR project as per Niagara Region capital forecast | Grimsby | Baker Road | Pumping | 50 | - | 2017-2021 | 3,902,000 | - | 3,902,000 | 1,951,000 | 1,951,000 | 1,482,760 | 468,240 | |
| WW-SPS-020 | Lake St SPS Upgrade - Baker Road | Increase station capacity from 375 L/s to 495 L/s | Grimsby | Baker Road | Pumping | 120 | - | 2017-2021 | 4,410,000 | - | 4,410,000 | 882,000 | 3,528,000 | 2,681,280 | 846,720 | |
| WW-SPS-021 | Beaverdams SPS Pump Replacement - Port Dalhousie | Increase station capacity from 10 L/s to 20 L/s | Thorold | Port Dalhousie | Pumping | 10 | - | 2017-2021 | 665,000 | - | 665,000 | 133,000 | 532,000 | 404,320 | 127,680 | |
| WW-SPS-025 | Garner Road SPS Pump Replacement - Niagara Falls | Increase station capacity from 81 L/s to 206 L/s | Niagara Falls | Niagara Falls | Pumping | 103 | - | 2032-2041 | 824,000 | - | 824,000 | 82,400 | 741,600 | 563,616 | 177,984 | |
| WW-SPS-026 | Dorchester SPS Pump Replacement - Niagara Falls | Increase station capacity from 220 L/s to 270 L/s | Niagara Falls | Niagara Falls | Pumping | 50 | - | 2022-2031 | 2,414,000 | - | 2,414,000 | 482,800 | 1,931,200 | 1,467,712 | 463,488 | |
| WW-SPS-028 | Black Horse SPS Upgrade - South Niagara Falls | Increase station capacity from 21 L/s to 180 L/s | Thorold | South Niagara Falls | Pumping | 180 | - | 2022-2031 | 4,620,000 | - | 4,620,000 | 2,310,000 | 2,310,000 | 1,755,600 | 554,400 | |
| WW-SPS-031 | St. Davids #2 SPS Expansion - Niagara Falls | Increase station capacity from 44 L/s to 104 L/s | Niagara-on-the-Lake | Niagara Falls | Pumping | 104 | - | 2022-2031 | 3,836,000 | - | 3,836,000 | 767,200 | 3,068,800 | 2,332,288 | 736,512 | |
| WW-SPS-032 | St. Davids #1 SPS Upgrade - Niagara Falls | Increase station capacity from 41 L/s to 88 L/s Use implementation plan prior to upgrade: Flow monitoring, validate wet weather flows, re-evaluate required upgrades | Niagara-on-the-Lake | Niagara Falls | Pumping | 47 | - | 2022-2031 | 1,794,000 | - | 1,794,000 | 358,800 | 1,435,200 | 1,090,752 | 344,448 | |
| WW-SPS-033 | Lakeshore Road SPS Pump Replacement - Niagara-on-the-Lake | Increase station capacity from 90 L/s to 144 L/s | Niagara-on-the-Lake | NOTL | Pumping | 54 | - | 2032-2041 | 1,512,000 | - | 1,512,000 | 151,200 | 1,360,800 | 1,034,208 | 326,592 | |
| WW-SPS-034 | Niagara Stone Road SPS Pump Replacement - Niagara-on-the-Lake | Increase station capacity from 22 L/s to 27 L/s | Niagara-on-the-Lake | NOTL | Pumping | 5 | - | 2032-2041 | 834,000 | - | 834,000 | 83,400 | 750,600 | 570,456 | 180,144 | |
| WW-SPS-035 | Line 2 SPS Pump Replacement - Niagara-on-the-Lake | Increase station capacity from 8 L/s to 16 L/s | Niagara-on-the-Lake | NOTL | Pumping | 8 | - | 2017-2021 | 665,000 | - | 665,000 | 133,000 | 532,000 | 404,320 | 127,680 | |
| WW-SPS-036 | Garrison Village SPS Pump Replacement - Niagara-on-the-Lake | Increase station capacity from 62 L/s to 72 L/s | Niagara-on-the-Lake | NOTL | Pumping | 10 | - | 2032-2041 | 1,250,000 | - | 1,250,000 | 250,000 | 1,000,000 | 760,000 | 240,000 | |
| WW-SPS-037 | Towpath SPS Pump Replacement - Welland | Increase station capacity from 150 L/s to 300 L/s | Pelham | Welland | Pumping | 150 | - | 2022-2031 | 834,000 | - | 834,000 | 83,400 | 750,600 | 570,456 | 180,144 | |
| WW-SPS-038 | Hurricane Road SPS Pump Replacement - Welland | Increase station capacity from 39 L/s to 55 L/s | Pelham | Welland | Pumping | 16 | - | 2022-2031 | 1,250,000 | - | 1,250,000 | 250,000 | 1,000,000 | 760,000 | 240,000 | |
| WW-SPS-039 | Queenston SPS | New Queenston SPS with firm capacity of 72 L/s | Niagara-on-the-Lake | Niagara Falls | Pumping | 72 | - | 2022-2031 | 2,996,000 | - | 2,996,000 | 2,097,200 | 898,800 | 683,088 | 215,712 | |
| WW-SS-001 | Highway 406 Trunk Sewer Crossing | New trunk sewer crossing of HWY 406 between Merritt Rd and recreational waterway in Thorold to support development of the Port Robinson West area. | Thorold | Welland | Sewer | 600 | - | 2017-2021 | 1,450,000 | - | 1,450,000 | - | 1,450,000 | 1,102,000 | 348,000 | |
| WW-SS-002 | Quaker Road Trunk Sewer | New sewer on Quaker Rd. between Pelham Street trunk and Rice Road trunk sewers. | Welland | Welland | Sewer | 600 | - | 2022-2031 | 1,725,000 | - | 1,725,000 | - | 1,725,000 | 1,311,000 | 414,000 | |
| WW-SS-003 | Gravity Sewer upgrade in Smithville | Upgrade gravity sewer downstream of Smithville forcemain from 375 mm to 525 mm | West Lincoln | Baker Road | Sewer | 525 | - | 2022-2031 | 5,667,000 | - | 5,667,000 | - | 5,667,000 | 4,306,920 | 1,360,080 | |
| WW-SS-004 | Gravity Sewer upgrade in Smithville | Upgrade gravity sewer downstream of Smithville forcemain from 375 mm to 525 mm | West Lincoln | Baker Road | Sewer | 525 | - | 2022-2031 | 923,000 | - | 923,000 | - | 923,000 | 701,480 | 221,520 | |
| WW-SS-005 | Gravity Sewer upgrade in Smithville | Upgrade gravity sewer upstream of Smithville SPS from 450 mm to 600 mm | West Lincoln | Baker Road | Sewer | 600 | - | 2022-2031 | 2,286,000 | - | 2,286,000 | - | 2,286,000 | 1,737,360 | 548,640 | |
| WW-TP-001 | Baker Road WWTP Upgrade | Baker Road WWTP Upgrade | Grimsby | Baker Road | Treatment | 16 | - | 2022-2031 | 41,730,000 | 4,173,000 | 37,557,000 | 4,173,000 | 33,384,000 | 25,371,840 | 8,012,160 | |
| WW-TP-002 | South Niagara Falls WWTP | New South Niagara Falls WWTP | Niagara Falls | Niagara Falls | Treatment | 30 | - | 2022-2031 | 128,186,000 | 12,818,600 | 115,367,400 | 76,911,600 | 38,455,800 | 29,226,408 | 9,229,392 | |
| Studies | Wastewater Master Plan Updates | | | | | | | 2017-2041 | 2,000,000 | - | 2,000,000 | 797,244 | 1,202,756 | 914,095 | 288,661 | |
| | | Reserve Fund Adjustment | | | | | | | | | 19,112,554 | | (19,112,554) | (14,525,541) | (4,587,013) | |
| | Total | | | | | | | | 502,318,000 | 16,991,600 | 485,326,400 | 219,347,498 | 0 | 265,978,902 | 202,143,966 | 63,834,936 |

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

SERVICE:

Wastewater - Growth Related Component of Works Previously Completed

Region of Niagara

| Prj. No. | System | Type | Description | Timing | Gross Capital Cost Est. (2017 \$) | Less: | | | Potential DC Recoverable Cost | | | | |
|----------|------------------------------------|-----------------|---|--------|-----------------------------------|---------------------------------|---|---------------------|--------------------------------------|-------------------|-------|-----------------------|--|
| | | | | | | Benefit to Existing Development | | Post Period Benefit | Net Costs Benefiting New Development | Residential Share | | Non-Residential Share | |
| | | | | | | \$ | % | \$ | | | | | |
| | System | Type | Already Constructed | | | \$ | % | \$ | | | | | |
| ZSW0716 | Anger Avenue | Recovery of PPC | Anger Avenue WWTP - P2 Project | <2012 | 234,465 | - | | - | 234,465 | - | - | | |
| | Anger Avenue (#5) | Recovery of PPC | Frenchman's Creek Trunk Sewer - PH2 | <2012 | 334,113 | - | | - | 334,113 | - | - | | |
| | Anger Avenue | Recovery of PPC | Parkway PS Replacement (Fort Erie) | <2004 | 928,036 | - | | - | 928,036 | | | | |
| | Anger Subtotal | | | | 1,496,613 | | | | 1,496,613 | 854,107 | 57.1% | 642,506 42.9% | |
| ZSW0006 | Baker Road | Recovery of PPC | Smithville PS Expansion (for growth in Smithville) | <2012 | 897,673 | - | | - | 897,673 | - | - | | |
| ZSW0006 | Baker Road | Recovery of PPC | Baker Road WWTP Capacity Expansion Stage 1 | <2012 | 4,829,981 | - | | - | 4,829,981 | - | - | | |
| ZSW0013 | Baker Road (#1) | Recovery of PPC | Replace existing Smithville pumping station | <2008 | 158,525 | - | | - | 158,525 | - | - | | |
| | Baker Road | Recovery of PPC | Smithville PS & Sewer (West Lincoln) | <2004 | 44,905 | | | | 44,905 | | | | |
| | Baker Road | Recovery of PPC | Install Forcemain on North Service - Biggar PS to Roberts | <2004 | 105,411 | | | - | 105,411 | | | | |
| | Baker Road | Recovery of PPC | Gravity Trunk Sewer Along Ontario St. @ QEW Crossing | <2004 | 577,927 | | | - | 577,927 | | | | |
| | Baker Road Subtotal | | | | 6,614,421 | | | - | 6,614,421 | 4,893,099 | 74.0% | 1,721,322 26.0% | |
| ZSW0721 | Crystal Beach Subtotal | Recovery of PPC | Crystal Beach WWTP - P2 Project | <2012 | 234,465 | - | | - | 234,465 | 226,335 | 96.5% | 8,130 3.5% | |
| ZSW0115 | Stephensville/Douglastown | Recovery of PPC | Douglastown Forcemain | <2012 | 799,233 | - | | - | 799,233 | | | | |
| ZSW0607 | Stephensville/Douglastown | Recovery of PPC | Stevensville PS capacity upgrade | <2012 | 175,849 | - | | - | 175,849 | | | | |
| | Stephensville/Douglastown Subtotal | | | | 975,082 | | | - | 975,082 | 596,096 | 61.1% | 378,986 38.9% | |
| ZSW0302 | Niagara Falls | Recovery of PPC | Alternative biosolids management program | <2008 | 749,407 | - | | - | 749,407 | - | - | | |
| ZSW0714 | Niagara Falls | Recovery of PPC | Niagara Falls WWTP - P2 project | <2012 | 213,832 | - | | - | 213,832 | - | - | | |
| | Niagara Falls | Recovery of PPC | HRT facility at NF High Lift Pumping Station | <2012 | 375,144 | - | | - | 375,144 | - | - | | |
| ZSW9305 | Niagara Falls (#2) | Recovery of PPC | Central Avenue Pumping Station and forcemain | <2008 | 492,745 | - | | - | 492,745 | - | - | | |
| | Niagara Falls | Recovery of PPC | Upgrade Niagara Falls WPCP | <2004 | 1,010,361 | | | - | 1,010,361 | | | | |
| | Niagara Falls | Recovery of PPC | Upgrade NF WPCP | <2004 | 4,319,262 | | | - | 4,319,262 | | | | |
| | Niagara Falls Subtotal | | | | 7,160,751 | | | - | 7,160,751 | 4,767,263 | 66.6% | 2,393,488 33.4% | |
| ZSW0807 | Niagara-on-the-Lake | Recovery of PPC | Niagara-on-the-Lake WWTP Capacity Upgrade from 5.7 | <2012 | 1,965,999 | - | | - | 1,965,999 | | | | |
| | Niagara-on-the-Lake | Recovery of PPC | NOTL Sewage Treatment Facility Upgrade | <2004 | 190,846 | | | - | 190,846 | | | | |
| | Niagara-on-the-Lake | Recovery of PPC | William St PS and Forcemain (NOTL) | <2004 | 62,867 | | | - | 62,867 | | | | |
| | Niagara-on-the-Lake Subtotal | | | | 2,219,712 | - | | - | 2,219,712 | 1,674,580 | 75.4% | 545,132 24.6% | |
| ZSW9816 | Port Dalhousie | Recovery of PPC | Port Dalhousie WPCP optimization study and upgrades | <2008 | 317,645 | - | | - | 317,645 | - | - | | |
| ZSW0712 | Port Dalhousie | Recovery of PPC | Port Dalhousie WWTP - P2 Project | <2012 | 410,314 | - | | - | 410,314 | - | - | | |
| | Port Dalhousie | Recovery of PPC | Port Dalhousie WPCP Upgrading | <2004 | 110,391 | | | - | 110,391 | | | | |
| | Port Dalhousie Subtotal | | | | 838,350 | | | - | 838,350 | 445,349 | 53.1% | 393,001 46.9% | |
| | Port Weller | Recovery of PPC | Upgrade Black Horse PS | <2004 | 358,995 | | | - | 358,995 | | | | |
| | Port Weller | Recovery of PPC | Peel St PS | <2004 | 2,163,175 | | | - | 2,163,175 | | | | |
| | Port Weller Subtotal | | | | 2,522,170 | | | - | 2,522,170 | 1,615,016 | 64.0% | 907,154 36.0% | |
| | Seaway | Recovery of PPC | Seaway WPCP Upgrading (Port Colborne) | <2004 | 855,439 | | | - | 855,439 | | | | |
| | Seaway | Recovery of PPC | Elm Street PS Upgrading (Port Colborne) | <2004 | 276,614 | | | - | 276,614 | | | | |
| | Seaway | Recovery of PPC | Industrial PS Upgrade | <2004 | 142,908 | | | - | 142,908 | | | | |
| | Seaway Subtotal | | | | 1,274,961 | | | - | 1,274,961 | 931,364 | 73.1% | 343,597 26.9% | |
| | Welland | Recovery of PPC | Sanitary Sewer Service to East Industrial Lands (Welland) | <2004 | 175,578 | | | - | 175,578 | | | | |
| | Welland | Recovery of PPC | North East Welland Trunk Sewer | <2004 | 1,717,614 | | | - | 1,717,614 | | | | |
| | Welland | Recovery of PPC | Dain City PS upgrade | <2004 | 254,058 | | | - | 254,058 | | | | |
| ZSW0609 | Welland | Recovery of PPC | Welland WWTP - P2 Project | <2012 | 24,150 | - | | - | 24,150 | - | - | | |
| ZSW9815 | Welland | Recovery of PPC | South Thorold PS, forcemains, sewers | <2008 | 11,213,742 | - | | - | 11,213,742 | - | - | | |
| | Welland Subtotal | | | | 13,385,143 | | | | 13,385,143 | 10,675,416 | 79.8% | 2,709,727 20.2% | |
| | Grand Total | | | | 36,721,668 | - | | - | 36,721,668 | 26,678,625 | | 10,043,043 | |

6. Development Charge Calculation

Table 6-1 and Table 6-2 calculates the proposed uniform development charges to be imposed for infrastructure services based upon an urban 25-year horizon (wastewater and water). Table 6-3 calculates the proposed uniform development charge to be imposed on anticipated development in the Region for Region-wide services over a 25-year planning horizon. Table 6-4 calculates the proposed uniform development charge to be imposed on anticipated development in the Region for Region-wide services over a 10-year planning horizon

The calculation for residential development is generated on a per capita basis and is based upon six forms of housing types (single and semi-detached, apartments 4+ bedrooms, apartments 2 & 3 bedrooms, apartments bachelor and 1 bedroom, all other multiples and special care/special dwelling units/rooms). The non-residential development charge has been calculated on a per sq.ft. of gross floor area basis for all types of non-residential development (industrial, commercial and institutional).

The D.C.-eligible costs for each service component were developed in Chapter 5 for all Regional 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 eligible D.C. cost calculations set out in Chapter 5 are based on the net anticipated population increase (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 (Appendix A, Schedule 5) to calculate the charge in Tables 6-1, 6-2, 6-3, and 6-4.

With respect to non-residential development, the total costs associated with non-residential development have been allocated to those costs associated with commercial development, industrial developments, and institutional development based on the relative share of employment anticipated for each category. These costs have then been divided by the anticipated commercial, industrial, and institutional development, respectfully, over the planning period to calculate a cost per sq.ft. of gross floor area.

Table 6-5 summarizes the total development charge that is applicable for Region-wide services and Table 6-6 summarizes the gross capital expenditures and sources of revenue for works to be undertaken during the 5-year life of the by-law.

TABLE 6-1
NIAGARA REGION
DEVELOPMENT CHARGE CALCULATION
 Urban-specific Services
 2017-2041

| SERVICE | 2017 \$ DC Eligible Cost | | 2017 \$ DC Eligible Cost | | 2017 \$ DC Eligible Cost | | | 2017 \$ DC Eligible Cost | | |
|--|--------------------------|-----------------|--------------------------|---------|--------------------------|-------------|---------------|--------------------------|------------|---------------|
| | Residential | Non-Residential | SDU | per ft² | Commercial | Industrial | Institutional | Commercial | Industrial | Institutional |
| 1. <u>Wastewater Services</u> | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| 1.1 Wastewater | 202,143,966 | 63,834,936 | 3,905 | 2.29 | 45,669,843 | 5,528,823 | 12,636,271 | 2.75 | 1.14 | 1.96 |
| 1.2 Wastewater, Previously Constructed Unfunded Works | 26,678,625 | 10,043,043 | 515 | 0.36 | 7,185,159 | 869,840 | 1,988,043 | 0.43 | 0.18 | 0.31 |
| Sub-Total | 228,822,591 | 73,877,979 | 4,420 | 2.65 | 52,855,002 | 6,398,663 | 14,624,314 | 3.18 | 1.32 | 2.27 |
| TOTAL | \$228,822,591 | \$73,877,979 | \$4,420 | \$2.65 | \$52,855,002 | \$6,398,663 | \$14,624,314 | \$3.18 | \$1.32 | \$2.27 |
| DC ELIGIBLE CAPITAL COST | \$228,822,591 | \$73,877,979 | | | \$52,855,002 | \$6,398,663 | \$14,624,314 | | | |
| Build out Gross Population / GFA Growth (ft².) | 150,665 | 27,914,500 | | | 16,636,600 | 4,833,700 | 6,444,200 | | | |
| Cost Per Capita / Non-Residential GFA (ft².) | \$1,518.75 | \$2.65 | | | \$3.18 | \$1.32 | \$2.27 | | | |
| <u>By Residential Unit Type</u> | <u>D.P.U.</u> | | | | | | | | | |
| Single and Semi-Detached Dwelling | 2.91 | \$4,420 | | | | | | | | |
| Apartments - 4 Bedrooms + | 4.00 | \$6,075 | | | | | | | | |
| Apartments - 2 & 3 Bedrooms | 1.88 | \$2,855 | | | | | | | | |
| Apartments - Bachelor and 1 Bedroom | 1.20 | \$1,823 | | | | | | | | |
| Other Multiples | 2.12 | \$3,220 | | | | | | | | |
| Special Care/Special Dwelling Units/Rooms | 1.10 | \$1,671 | | | | | | | | |

TABLE 6-2
NIAGARA REGION
DEVELOPMENT CHARGE CALCULATION
 Urban-specific Services
 2017-2041

| SERVICE | 2017 \$ DC Eligible Cost | | 2017 \$ DC Eligible Cost | | 2017 \$ DC Eligible Cost | | | 2017 \$ DC Eligible Cost | | |
|--|--------------------------|-----------------|--------------------------|---------|--------------------------|-------------|---------------|--------------------------|------------|---------------|
| | Residential | Non-Residential | SDU | per ft² | Commercial | Industrial | Institutional | Commercial | Industrial | Institutional |
| 2. <u>Water Services</u> | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| 2.1 Water | 147,767,615 | 46,663,457 | 2,853 | 1.68 | 33,384,740 | 4,041,580 | 9,237,138 | 2.00 | 0.84 | 1.43 |
| 2.2 Water, Previously Completed Unfunded Works | 14,292,422 | 5,704,178 | 276 | 0.20 | 4,080,977 | 494,046 | 1,129,155 | 0.25 | 0.10 | 0.18 |
| Sub-Total | 162,060,036 | 52,367,635 | 3,129 | 1.88 | 37,465,717 | 4,535,626 | 10,366,293 | 2.25 | 0.94 | 1.61 |
| TOTAL | \$162,060,036 | \$52,367,635 | \$3,129 | \$1.88 | \$37,465,717 | \$4,535,626 | \$10,366,293 | \$2.25 | \$0.94 | \$1.61 |
| DC ELIGIBLE CAPITAL COST | \$162,060,036 | \$52,367,635 | | | \$37,465,717 | \$4,535,626 | \$10,366,293 | | | |
| Build out Gross Population / GFA Growth (ft².) | 150,706 | 27,914,500 | | | 16,636,600 | 4,833,700 | 6,444,200 | | | |
| Cost Per Capita / Non-Residential GFA (ft².) | \$1,075.34 | \$1.88 | | | \$2.25 | \$0.94 | \$1.61 | | | |
| <u>By Residential Unit Type</u> | <u>P.P.U</u> | | | | | | | | | |
| Single and Semi-Detached Dwelling | 2.91 | \$3,129 | | | | | | | | |
| Apartments - 4 Bedrooms + | 4.00 | \$4,301 | | | | | | | | |
| Apartments - 2 & 3 Bedrooms | 1.88 | \$2,022 | | | | | | | | |
| Apartments - Bachelor and 1 Bedroom | 1.20 | \$1,290 | | | | | | | | |
| Other Multiples | 2.12 | \$2,280 | | | | | | | | |
| Special Care/Special Dwelling Units/Rooms | 1.10 | \$1,183 | | | | | | | | |

TABLE 6-3
NIAGARA REGION
DEVELOPMENT CHARGE CALCULATION
Municipal-wide Services
2017-2041

| SERVICE | 2017 \$ DC Eligible Cost | | 2017 \$ DC Eligible Cost | | 2017 \$ DC Eligible Cost | | | 2017 \$ DC Eligible Cost | | |
|--|--------------------------|-----------------|--------------------------|---------|--------------------------|--------------|---------------|--------------------------|------------|---------------|
| | Residential | Non-Residential | SDU | per ft² | Commercial | Industrial | Institutional | Commercial | Industrial | Institutional |
| 3. <u>Services Related to a Highway</u> | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| Services Related to a Highway, Related | | | | | | | | | | |
| 3.1 Facilities & Vehicles, and Previously Completed Unfunded Works | 338,709,576 | 106,960,919 | 6,297 | 3.68 | 76,036,005 | 10,057,511 | 20,867,402 | 4.45 | 1.85 | 3.18 |
| 4. <u>Police Services</u> | | | | | | | | | | |
| 4.1 Police facilities | 32,760,792 | 10,453,168 | 609 | 0.36 | 7,430,912 | 982,909 | 2,039,347 | 0.44 | 0.18 | 0.31 |
| 4.2 Police vehicles | 3,039,250 | 969,750 | 56 | 0.03 | 689,373 | 91,185 | 189,192 | 0.04 | 0.02 | 0.03 |
| 4.3 Small equipment and gear | 1,686,029 | 537,971 | 31 | 0.02 | 382,431 | 50,585 | 104,955 | 0.02 | 0.01 | 0.02 |
| Sub-Total | 37,486,071 | 11,960,889 | 696 | 0.41 | 8,502,715 | 1,124,680 | 2,333,494 | 0.50 | 0.21 | 0.36 |
| TOTAL | \$376,195,647 | \$118,921,807 | \$6,993 | \$4.09 | \$84,538,720 | \$11,182,191 | \$23,200,896 | \$4.95 | \$2.06 | \$3.54 |
| DC ELIGIBLE CAPITAL COST | \$376,195,647 | \$118,921,807 | | | \$84,538,720 | \$11,182,191 | \$23,200,896 | | | |
| 25 Year Gross Population / GFA Growth (ft².) | 156,550 | 29,062,000 | | | 17,078,600 | 5,421,700 | 6,561,700 | | | |
| Cost Per Capita / Non-Residential GFA (ft².) | \$2,403.04 | \$4.09 | | | \$4.95 | \$2.06 | \$3.54 | | | |
| By Residential Unit Type | p.p.u | | | | | | | | | |
| Single and Semi-Detached Dwelling | 2.91 | \$6,993 | | | | | | | | |
| Apartments - 4 Bedrooms + | 4.00 | \$9,612 | | | | | | | | |
| Apartments - 2 & 3 Bedrooms | 1.88 | \$4,518 | | | | | | | | |
| Apartments - Bachelor and 1 Bedroom | 1.20 | \$2,884 | | | | | | | | |
| Other Multiples | 2.12 | \$5,094 | | | | | | | | |
| Special Care/Special Dwelling Units/Rooms | 1.10 | \$2,643 | | | | | | | | |

TABLE 6-4
NIAGARA REGION
DEVELOPMENT CHARGE CALCULATION
Municipal-wide Services
2017-2026

| SERVICE | 2017 \$ DC Eligible Cost | | 2017 \$ DC Eligible Cost | | 2017 \$ DC Eligible Cost | | | 2017 \$ DC Eligible Cost | | |
|---|--------------------------|--------------------|--------------------------|---------------|--------------------------|--------------------|--------------------|--------------------------|---------------|---------------|
| | Residential | Non-Residential | SDU | per ft² | Commercial | Industrial | Institutional | Commercial | Industrial | Institutional |
| 5. <u>General Government</u> | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| 5.1 Studies | 4,164,080 | 1,363,119 | 212 | 0.14 | 944,744 | 208,947 | 209,428 | 0.19 | 0 | 0 |
| 6. <u>Long Term Care</u> | | | | | | | | | | |
| 6.1 Long Term Care facilities | 23,826,150 | 2,647,350 | 1,212 | 0.27 | 1,834,812 | 405,802 | 406,735 | 0 | 0 | 0 |
| 7. <u>Health</u> | | | | | | | | | | |
| 7.1 Health department space | 2,909,520 | 323,280 | 148 | 0.03 | 224,057 | 49,554 | 49,668 | 0.05 | 0.02 | 0.03 |
| 8. <u>Provincial Offences Act</u> | | | | | | | | | | |
| 8.1 POA facilities | 949,123 | 310,697 | 48 | 0.03 | 215,336 | 47,626 | 47,735 | 0.04 | 0.02 | 0.03 |
| 9. <u>Social and Child Services</u> | | | | | | | | | | |
| 9.1 Social and Child Services facilities | 3,807,000 | 423,000 | 194 | 0.04 | 293,171 | 64,840 | 64,989 | 0.06 | 0.02 | 0.04 |
| 10. <u>Emergency Medical Services</u> | | | | | | | | | | |
| 10.1 EMS facilities | 2,303,598 | 251,362 | 117 | 0.03 | 174,213 | 38,530 | 38,619 | 0.03 | 0.01 | 0.02 |
| 10.2 Vehicles | 959,141 | 104,659 | 49 | 0.01 | 72,536 | 16,043 | 16,080 | 0.01 | 0.01 | 0.01 |
| Sub-Total | 3,262,739 | 356,021 | 166 | 0.04 | 246,750 | 54,573 | 54,699 | 0.04 | 0.02 | 0.03 |
| 11. <u>Social Housing</u> | | | | | | | | | | |
| 11.1 Social housing facilities | 41,730,210 | 0 | 2,123 | 0.00 | 0 | 0 | 0 | - | - | - |
| 12. <u>Waste Diversion</u> | | | | | | | | | | |
| 12.1 Waste diversion facilities - Stations/Depots | 5,453,829 | 1,785,321 | 278 | 0.19 | 1,237,362 | 273,665 | 274,294 | 0.24 | 0.09 | 0.17 |
| 12.2 Waste diversion vehicles and equipment | 515,312 | 168,688 | 26 | 0.02 | 116,914 | 25,858 | 25,917 | 0.02 | 0.01 | 0.02 |
| 12.3 Waste diversion - Containers | 433,947 | 142,053 | 22 | 0.01 | 98,454 | 21,775 | 21,825 | 0.02 | 0.01 | 0.01 |
| 12.4 Waste diversion other | 698,383 | 228,617 | 36 | 0.02 | 158,449 | 35,044 | 35,124 | 0.03 | 0.01 | 0.02 |
| Sub-Total | 7,101,470 | 2,324,680 | 362 | 0.24 | 1,611,178 | 356,341 | 357,161 | 0.31 | 0.12 | 0.22 |
| TOTAL | \$87,750,292 | \$7,748,148 | \$4,465 | \$0.79 | \$5,370,048 | \$1,187,685 | \$1,190,416 | \$1.03 | \$0.41 | \$0.73 |
| DC ELIGIBLE CAPITAL COST | \$87,750,292 | \$7,748,148 | | | \$5,370,048 | \$1,187,685 | \$1,190,416 | | | |
| 10 Year Gross Population / GFA Growth (ft².) | 57,204 | 9,810,900 | | | 5,328,700 | 2,828,500 | 1,653,700 | | | |
| Cost Per Capita / Non-Residential GFA (ft².) | \$1,533.99 | \$0.79 | | | \$1.01 | \$0.42 | \$0.72 | | | |
| By Residential Unit Type | D.P.U. | | | | | | | | | |
| Single and Semi-Detached Dwelling | 2.91 | \$4,464 | | | | | | | | |
| Apartments - 4 Bedrooms + | 4.00 | \$6,136 | | | | | | | | |
| Apartments - 2 & 3 Bedrooms | 1.88 | \$2,884 | | | | | | | | |
| Apartments - Bachelor and 1 Bedroom | 1.20 | \$1,841 | | | | | | | | |
| Other Multiples | 2.12 | \$3,252 | | | | | | | | |
| Special Care/Special Dwelling Units/Rooms | 1.10 | \$1,687 | | | | | | | | |

TABLE 6-5
 NIAGARA REGION
 DEVELOPMENT CHARGE CALCULATION
 TOTAL ALL SERVICES

| | 2017 \$ DC Eligible Cost | | 2017 \$ DC Eligible Cost | | 2017 \$ DC Eligible Cost | | | 2017 \$ DC Eligible Cost | | |
|---------------------------------|--------------------------|-----------------|--------------------------|---------|--------------------------|------------|---------------|--------------------------|------------|---------------|
| | Residential | Non-Residential | SDU | per ft² | Commercial | Industrial | Institutional | Commercial | Industrial | Institutional |
| | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| Urban-wide Services 25 Year | \$390,882,627 | \$126,245,615 | \$7,549 | \$4.53 | 90,320,719 | 10,934,289 | 24,990,607 | \$5.43 | \$2.26 | \$3.88 |
| Municipal-wide Services 25 Year | 376,195,647 | 118,921,807 | 6,993 | 4.09 | 84,538,720 | 11,182,191 | 23,200,896 | \$4.95 | \$2.06 | \$3.54 |
| Municipal-wide Services 10 Year | 87,750,292 | 7,748,148 | 4,465 | 0.79 | 5,370,048 | 1,187,685 | 1,190,416 | \$1.03 | \$0.41 | \$0.73 |
| TOTAL | 854,828,566 | 252,915,570 | 19,006 | 9.41 | 180,229,487 | 23,304,164 | 49,381,919 | 11.41 | 4.73 | 8.15 |

Table 6-6
NIAGARA REGION
GROSS EXPENDITURE AND SOURCES OF REVENUE SUMMARY
FOR COSTS TO BE INCURRED OVER THE LIFE OF THE BY-LAW

| SERVICE | TOTAL GROSS COST | SOURCES OF FINANCING | | | | | | |
|---|------------------------|---------------------------------|----------------------|---------------------|----------------------|------------------------|----------------------|---------------------|
| | | TAX BASE OR OTHER NON-DC SOURCE | | | | POST DC PERIOD BENEFIT | DC RESERVE FUND | |
| | | OTHER DEDUCTIONS | BENEFIT TO EXISTING | OTHER FUNDING | LEGISLATED REDUCTION | | RESIDENTIAL | NON-RESIDENTIAL |
| 1. Wastewater Services | | | | | | | | |
| 1.1 Wastewater | 56,103,000 | 0 | 22,430,649 | 0 | 0 | 0 | 25,590,987 | 8,081,364 |
| 2. Water Services | | | | | | | | |
| 2.1 Water | 114,148,000 | 0 | 32,058,100 | 18,500,000 | 0 | 0 | 48,328,324 | 15,261,576 |
| 3. Services Related to a Highway | | | | | | | | |
| 3.1 Services Related to a Highway, Related Facilities & Vehicles, and | 700,732,496 | 0 | 384,362,915 | 15,350,000 | 0 | 21,244,156 | 212,629,323 | 67,146,102 |
| 4. Police Services | | | | | | | | |
| 4.1 Police facilities | 23,341,000 | 0 | 23,341,000 | 0 | 0 | 0 | 0 | 0 |
| 4.2 Police vehicles | 801,800 | 0 | 0 | 0 | 0 | 0 | 607,850 | 193,950 |
| 4.3 Small equipment and gear | 444,800 | 0 | 0 | 0 | 0 | 0 | 337,206 | 107,594 |
| 5. General Government | | | | | | | | |
| 5.1 Studies | 5,770,000 | 140,000 | 772,000 | 0 | 460,550 | 240,000 | 3,132,138 | 1,025,312 |
| 6. Long Term Care | | | | | | | | |
| 6.1 Long Term Care facilities | 50,329,286 | 0 | 36,415,714 | 1,285,714 | 1,260,643 | 21,429 | 10,211,207 | 1,134,579 |
| 7. Health | | | | | | | | |
| 7.1 Health department space | 6,000,000 | 0 | 2,220,000 | 1,000,000 | 259,200 | 188,000 | 2,099,520 | 233,280 |
| 8. Provincial Offences Act | | | | | | | | |
| 8.1 POA facilities | 12,400,000 | 0 | 10,156,000 | 0 | 100,980 | 1,234,200 | 684,687 | 224,133 |
| 9. Social and Child Services | | | | | | | | |
| 9.1 Social and Child Services facilities | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10. Emergency Medical Services | | | | | | | | |
| 10.1 EMS facilities | 30,500,000 | 0 | 2,594,559 | 0 | 289,544 | 25,010,000 | 2,349,523 | 256,374 |
| 10.2 Vehicles | 1,028,000 | 0 | 0 | 0 | 42,600 | 602,000 | 345,680 | 37,720 |
| 11. Social Housing | | | | | | | | |
| 11.1 Social housing facilities | 66,230,000 | 0 | 843,100 | 19,020,000 | 4,636,690 | 0 | 41,730,210 | 0 |
| 12. Waste Diversion | | | | | | | | |
| 12.1 Waste diversion facilities - Stations/Depots | 4,232,500 | 30,000 | 180,750 | 0 | 402,175 | 0 | 2,726,914 | 892,661 |
| 12.2 Waste diversion vehicles and equipment | 380,000 | 0 | 0 | 0 | 38,000 | 0 | 257,656 | 84,344 |
| 12.3 Waste diversion - Containers | 320,000 | 0 | 0 | 0 | 0 | 32,000 | 216,973 | 71,027 |
| 12.4 Waste diversion other | 515,000 | 0 | 0 | 0 | 51,500 | 0 | 349,191 | 114,309 |
| TOTAL EXPENDITURES & REVENUES | \$1,073,275,881 | \$170,000 | \$515,374,787 | \$55,155,714 | \$7,541,882 | \$48,571,785 | \$351,597,390 | \$94,864,323 |

7. Development Charge Policy Recommendations and Development Charge By-law Rules

7.1 Introduction

s.s.5(1)9 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 development charges.

s.s.5(6) establishes the following restrictions on the rules:

- the total of all development charges that would be imposed on anticipated development must not exceed the capital costs determined under 5(1) 2-8 for all services involved;
- if the rules expressly identify a type of development, they must not provide for it to pay development charges 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 development charge than is allowed, the rules for determining development charges 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 s.s.5(1) para. 9 and 10, as well as how the rules apply to the redevelopment of land.

The rules provided are based on the Region’s existing policies; however, there are items under consideration at this time and these may be refined prior to adoption of the by-law.

7.2 Development Charge By-law Structure

It is recommended that:

- water and wastewater services be imposed on the urban service areas of the Region;
- the Region uses a uniform Region-wide development charge calculation for all other services; and
- one Municipal development charge by-law be used for all services.

7.3 Development Charge By-law Rules

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

It is recommended that the following sections provide the basis for the development charges:

7.3.1 Payment in any Particular Case

In accordance with the D.C.A., s.2(2), a development charge 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 section 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 50 of the Condominium Act; or
- g) the issuing of a building permit under the Building Code Act 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 gross floor area constructed for eligible uses (i.e. industrial, commercial and institutional). Costs allocated to wind turbines will be based on a single detached residential equivalent for services related to a highway, police, E.M.S. and general government.

- 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 General Government, Provincial Offences Act space, and Waste Diversion services, the costs have been based on a population vs. employment growth ratio (75%/25%) for residential and non-residential, respectively) over the 10-year forecast period;
 - for Long-term Care, Health, and Social and Child Services facility space, a 10% non-residential attribution has been made to recognize use by the non-residential sector;
 - for Social Housing, the costs have been attributed 100% to residential development;
 - for E.M.S. services, a 90% residential/10% non-residential share has been calculated based on the forecast population (weighted times three) to employment within the Region over the 10-year forecast period;
 - for Police services and Services Related to a Highway, a 76% residential/24% non-residential allocation has been made based on the forecast population to employment growth anticipated in the Region over the 25-year forecast period; and
 - for Water and Wastewater services a 76% residential/24% non-residential allocation has been made based on serviced population vs. employment (adjusted for W.A.H and N.F.P.O.W.) growth over the 25-year forecast period.

7.3.3 Application to Redevelopment of Land (Demolition and Conversion)

If a development involves the demolition of and replacement of a building or structure on the same site, 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 development charge in place at the time the development charge is payable; and/or

- 2) the gross floor area of the building demolished/converted multiplied by the current non-residential development charge in place at the time the development charge is payable.

The demolition credit is allowed only if the land was improved by occupied structures and if the demolition permit related to the site was issued less than five years prior to the issuance of a building permit. The credit can, in no case, exceed the amount of development charges that would otherwise be payable. Where demolition takes place on a brownfield, the above conditions apply however, an application may be made to the Regional Treasurer for an extension of time for the redevelopment credit of up to three additional years if the redevelopment has not been able to proceed due to delays in completing the remediation works. This application must be received prior to the expiry of the initial five-year period as provided above. This application will be considered by Regional Council for approval.

The conversion credit is applied based on the “first use” of a building when converting to another use. The D.C. payable would be reduced by the amount calculated based on the first use, provided that such reduction shall not exceed the D.C. otherwise payable. When the first use of a premise would be exempt from D.C.s by operation of the by-law, the reduction available would be determined by assessing the first use of the premise at the institutional rate.

7.3.4 Exemptions (full or partial)

a) Statutory exemptions

- industrial building additions of up to and including 50% of the existing gross floor area (defined in O.Reg. 82/98, s.1) of the building; for industrial building additions which exceed 50% of the existing gross floor area, only the portion of the addition in excess of 50% is subject to development charges (s.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 (s.3);
- residential development that results only in the enlargement of an existing dwelling unit, or that results only in the creation of up to two additional dwelling units (based on prescribed limits set out in s.2 of O.Reg. 82/98).

b) Non-statutory exemptions

- Granny flats;
- parking structures;
- non-residential lands and buildings used for agricultural use;
- the portion of a place of worship used for religious services

- lands and buildings used or intended to be used as municipal housing project facilities
 - the proportionate share of lands and buildings used for affordable housing projects
 - charitable institutions;
 - gas station canopies; and
 - long-term care homes (reduced by 50%).
- c) Rules with Respect to Designated Exemption Areas
- Brownfield development within the Designated Exemption Areas will be reduced by 75% and may apply for the remaining 25% if the development satisfies the requisite Smart Growth Design Criteria of the D.C. reduction program;
 - Non-Brownfield development within the Designated Exemption Areas will be based on the D.C. Reduction Program approved by Council of the Region which is subject to be revised, modified and/or eliminated from time to time.

Note that the reductions shall not exceed the total cost of remediation and that for a development to be considered a Brownfield development, costs associated with remediation of brownfields may be subject to verification, third party review, or independent audit, at the expense of the applicant, if required by the Region.

- d) Rules with Respect to Urban Areas outside the Designated Exemption Areas
- Brownfield development outside the Designated Exemption Areas but within urban areas will be reduced by 50% and may apply for the remaining 50% if the development satisfies the requisite Smart Growth Design Criteria of the D.C. reduction program.

Note that the reductions shall not exceed the total cost of remediation and that for a development to be considered a Brownfield development, costs associated with remediation of brownfields may be subject to verification, third party review, or independent audit, at the expense of the applicant, if required by the Region.

7.3.5 Phasing in

No provisions for phasing in the development charge are provided in the development charge by-law.

7.3.6 Timing of Collection

A development charge that is applicable under Section 5 of the Development Charges Act shall be calculated and payable;

- where a permit is required under the Building Code Act in relation to a building or structure, the owner shall pay the development charge prior to the issuance of the first building permit prior to the commencement of development or redevelopment as the case may be; and
- Despite above, Council, from time to time, and at any time, may enter into agreements providing for all or any part of a development charge to be paid before or after it would otherwise be payable.

7.3.7 Indexing

Indexing of the development charges shall be implemented on a mandatory basis annually commencing on January 1st, 2018 and each January 1st thereafter, in accordance with the Statistics Canada Quarterly, Non-Residential Building Construction Price Index (CANSIM Table 327-0043)¹ for the most recent year-over-year period.

7.3.8 The Applicable Areas

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

- All Region-wide Services – the full residential and non-residential charge will be imposed on all lands within the Region; and
- Water and Wastewater – the full residential and non-residential charge will be imposed on the urban service areas of the Region.

7.4 Other Development Charge By-law Provisions

It is recommended that:

7.4.1 Categories of Services for Reserve Fund and Credit Purposes

The Region's development charge collections are currently reserved in six separate reserve funds: Roads, Police, Administration, E.M.S., Water, and Wastewater services. It is recommended that the Region add the following reserve funds; Long-term Care, P.O.A., Health, Social and Child Services, Social Housing, and Waste Diversion. It is also recommended that the Region rename the Roads reserve fund to Services Related to a Highway (including Related Facilities, Vehicles and Studies). Appendix D outlines

¹ O.Reg 82/98 referenced "The Statistics Canada Quarterly, Construction Price Statistics, catalogue number 62-007" as the index source. As of the end of December, 2013 this catalogue has been discontinued and replaced by this web based table.

the reserve fund policies that the Region is required to follow as per the *Development Charges Act*.

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, unless another date is set by Council.

It is recommended that the new by-law would come into force on September 1, 2017.

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 s.11 of O.Reg. 82/98).

7.5 Other Recommendations

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 Region-wide basis for all services and on a uniform urban-area basis for water and wastewater services”;

“Approve the capital project listing set out in Chapter 5 of the Development Charges Background Study dated April 28, 2017, subject to further annual review during the capital budget process;”

“Approve the Development Charges Background Study dated April 28, 2017, as amended (if applicable);”

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

“Approve the Development Charge By-law as set out in Appendix J.”

8. By-law Implementation

8.1 Public Consultation Process

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 development charge 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 development charge 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 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.

If a proposed by-law 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 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 or associated resolution. It is noted that Council's decision, once made, is final and not subject to review by a Court or the O.M.B.).

8.1.3 Other Consultation Activity

There are three broad groupings of the public who are generally the most concerned with Region development charge policy:

1. The first grouping is the residential development community, consisting of land developers and builders, who are typically responsible for generating the majority of the development charge revenues. Others, such as realtors, are directly impacted by development charge 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 Region 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 Region development charge policy. Their primary concern is frequently with the quantum of the charge, gross floor area 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

The establishment of sound development charge policy often requires the achievement of an acceptable balance between two competing realities. The first is that high non-residential development charges can, to some degree, represent a barrier to increased economic activity and sustained industrial/commercial growth, particularly for capital intensive uses. Also, in many cases, increased residential development charges can ultimately be expected to be recovered via higher housing prices and can impact project feasibility in some cases (e.g. rental apartments).

On the other hand, development charges or other Region 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, investment and wealth generation.

8.3 Implementation Requirements

8.3.1 Introduction

Once the Region has calculated the charge, prepared the complete background study, carried out the public process and passed a new by-law, 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 which follow overview the requirements in each case.

8.3.2 Notice of Passage

In accordance with s.13 of the D.C.A., when a D.C. by-law is passed, the Regional clerk shall give written notice of the passing and of the last day for appealing the by-law (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 is 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;
- s.s.10(4) lists the persons/organizations who must be given notice; and
- s.s.10(5) lists the eight items which the notice must cover.

8.3.3 By-law Pamphlet

In addition to the "notice" information, the Region must prepare a "pamphlet" explaining each development charge by-law in force, setting out:

- a description of the general purpose of the development charges;
- 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 development charges relate; and
- a general 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 O.M.B., the pamphlet must be readied within 60 days after the by-law comes into force. Later dates apply to appealed by-laws.

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

8.3.4 Appeals

Sections 13-19 of the D.C.A. set out the requirements relative to making and processing a D.C. by-law appeal and O.M.B. Hearing in response to an appeal. Any person or organization may appeal a D.C. by-law to the O.M.B. by filing a notice of appeal with the Regional 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 Region is carrying out a public consultation process, in order to address the issues which 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 development charge, or his agent, may complain to the Regional Council imposing the charge that:

- the amount of the charge was incorrectly determined;
- the reduction to be used against the development charge was incorrectly determined; or
- there was an error in the application of the development charge.

Sections 20-25 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 Regional Council to the O.M.B.

8.3.6 Credits

Sections 38-41 of the D.C.A. set out a number of credit requirements, which apply where a municipality 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 development charges 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 Region agrees to expand the credit to other services for which a development charge is payable.

8.3.7 Front-Ending Agreements

The Region and one or more landowners may enter into a front-ending agreement which provides for the costs of a project which will benefit an area in the Region 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 44-58) addresses front-ending agreements and removes some of the obstacles to their use which were contained in the D.C.A., 1989. Accordingly, the Region assesses whether this mechanism is appropriate for its use, as part of funding projects prior to Region 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 s.51 or s.53 of the *Planning Act*, except for:

- “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
- “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 s.s.59(4) of the D.C.A. requires that the municipal approval authority for a draft plan of subdivision under s.s.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 development charges related to the development, at the time the land is transferred.

In this regard, if the Region 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 Regional development charges related to the site.

If the Region 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 which can impose a development charge.

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.

Appendix A – Background Information on Residential and Non-residential Growth Forecast

**Schedule 1
Niagara Region
Residential Growth Forecast Summary**

| Year | | Population (Excluding Census Undercount) | Population (Including Census Undercount) ¹ | Housing Units | | | | | |
|------------|-------------------------|---|--|-----------------------------|------------------------------------|-------------------------|-------|---------------------|--------------------------|
| | | | | Singles & Semi- Detached | Multiple Dwellings ² | Apartments ³ | Other | Total Households | Person Per Unit (PPU) |
| Historical | Mid 2001 | 410,574 | 421,480 | 122,770 | 12,375 | 26,425 | 845 | 162,415 | 2.53 |
| | Mid 2006 | 427,421 | 438,770 | 124,025 | 15,860 | 28,445 | 1,170 | 169,500 | 2.52 |
| | Mid 2011 | 431,346 | 442,800 | 128,795 | 16,695 | 28,285 | 915 | 174,690 | 2.47 |
| Forecast | Early 2017 | 441,135 | 452,850 | 134,188 | 19,009 | 29,497 | 915 | 183,608 | 2.40 |
| | Early 2027 | 489,117 | 502,110 | 145,488 | 26,393 | 34,884 | 915 | 207,680 | 2.36 |
| | Mid 2041 | 594,221 | 610,000 | 166,008 | 38,479 | 43,599 | 915 | 249,000 | 2.39 |
| | Mid 2001 - Mid 2006 | 16,847 | 17,290 | 1,255 | 3,485 | 2,020 | 325 | 7,085 | |
| | Mid 2006 - Mid 2011 | 3,925 | 4,030 | 4,770 | 835 | -160 | -255 | 5,190 | |
| | Mid 2011 - Early 2017 | 9,789 | 10,050 | 5,393 | 2,314 | 1,212 | 0 | 8,918 | |
| | Early 2017 - Early 2027 | 47,982 | 49,260 | 11,300 | 7,384 | 5,387 | 0 | 24,072 | |
| | Early 2017 - Mid 2041 | 153,086 | 157,150 | 31,820 | 19,470 | 14,102 | 0 | 65,392 | |

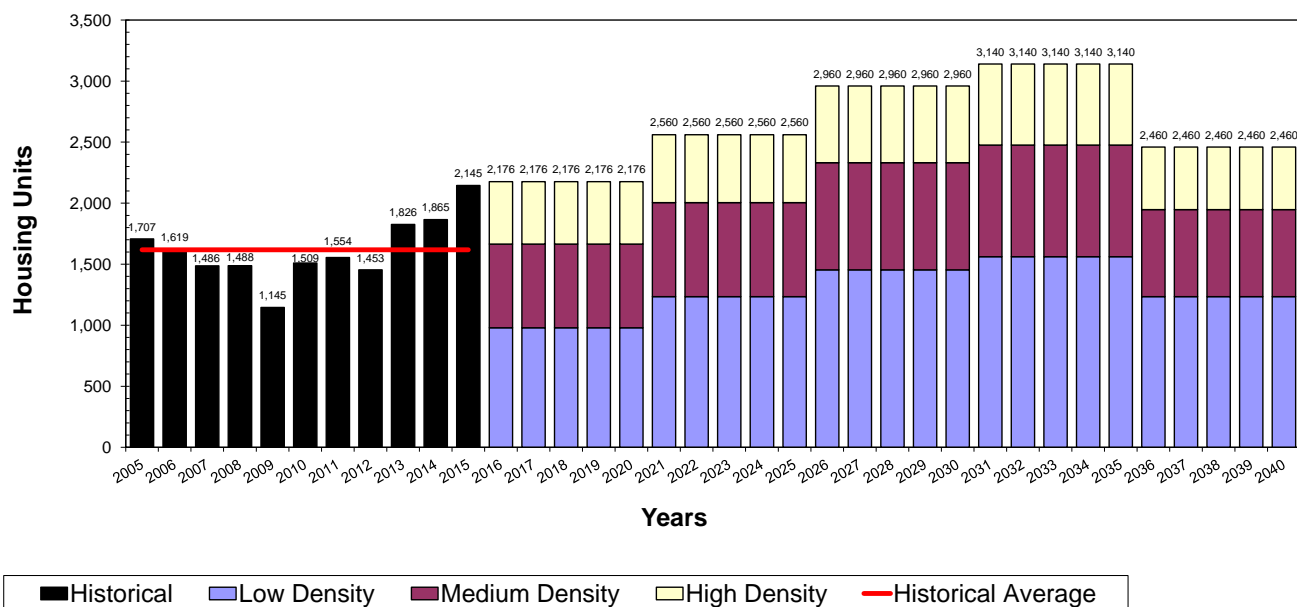
Source: Derived from Niagara Region Municipal Comprehensive Review Strategic Growth Option November 2016, by Watson & Associates Economists Ltd. 2016.

1. Census Undercount estimated at approximately 2.6%. Note: Population including the net Census undercount has been rounded.

2. Includes townhomes and apartments in duplexes.

3. Includes bachelor/1 bedroom, 2/3 bedroom and 4+ bedroom apartments.

Annual Housing Forecast¹



Source: Historical housing activity (2005-2015) based on Statistics Canada building permits, Catalogue 64-001-XIB

1. Growth Forecast represents calendar year.

Schedule 2
Niagara Region
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 ¹ | Apartments ² | Total Residential Units | Gross Population In New Units | Existing Unit Population Change | Net Population Increase |
|-----|-----------------------------|--------------------|----------------------------|------------------------|-------------------------|--------------------------------|--------------------------------------|--|--------------------------------|
| 1 | Serviced | 2017 - 2041 | 29,810 | 19,470 | 14,102 | 63,382 | 150,706 | (3,362) | 147,344 |
| 2 | <i>Water servicing</i> | <i>2017 - 2041</i> | <i>29,810</i> | <i>19,470</i> | <i>14,102</i> | <i>63,382</i> | <i>150,706</i> | <i>(3,362)</i> | <i>147,344</i> |
| 3 | <i>Wastewater Servicing</i> | <i>2017 - 2041</i> | <i>29,796</i> | <i>19,470</i> | <i>14,102</i> | <i>63,368</i> | <i>150,665</i> | <i>(3,148)</i> | <i>147,517</i> |
| 4 | Unserviced | 2017 - 2041 | 2,010 | - | - | 2,010 | 5,844 | (102) | 5,742 |
| 1+4 | Niagara Region | 2017 - 2041 | 31,820 | 19,470 | 14,102 | 65,392 | 156,550 | (3,464) | 153,086 |

Source: Derived from Niagara Region population forecast by water pressure zone and wastewater catchment area, summarized by Watson & Associates Economists Ltd., 2017

1. Includes townhomes and apartments in duplexes.

2. Includes bachelor/1 bedroom, 2/3 bedroom and 4+ bedroom apartments.

**Schedule 3
Niagara Region
Current Year Growth Forecast
Early 2011 to Early 2017**

| | | | POPULATION |
|---|---|---------|----------------|
| Mid 2011 Population | | | 431,346 |
| Occupants of New Housing Units, Mid 2011 to Early 2017 | <i>Units (2)</i> | 8,918 | |
| | <i>multiplied by persons per unit (3)</i> | 2.44 | |
| | <i>gross population increase</i> | 21,753 | 21,753 |
| Decline in Housing Unit Occupancy, Mid 2011 to Early 2017 | <i>Units (4)</i> | 174,690 | |
| | <i>multiplied by ppu decline rate (5)</i> | -0.0685 | |
| | <i>total decline in population</i> | -11,964 | -11,964 |
| Population Estimate to Mid 2017 | | | 441,135 |
| <i>Net Population Increase, Mid 2011 to Early 2017</i> | | | 9,789 |

(1) 2011 population based on StatsCan Census unadjusted for Census Undercount.

(2) Estimated residential units constructed, Mid 2011 to the beginning of the growth period, assuming a six month lag between construction and occupancy.

(3) Average number of persons per unit (ppu) is assumed to be:

| Structural Type | Persons Per Unit ¹ | % Distribution of Estimated Units ² | Weighted Persons Per Unit Average |
|------------------------------------|-------------------------------|--|-----------------------------------|
| <i>Singles & Semi Detached</i> | 2.83 | 60.5% | 1.71 |
| <i>Multiples (6)</i> | 2.02 | 25.9% | 0.52 |
| <i>Apartments (7)</i> | 1.52 | 13.6% | 0.21 |
| Total | | 100% | 2.44 |

¹ Based on 2011 Census custom database

² Based on Building permit/completion activity

(4) 2011 households taken from StatsCan Census.

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

(6) Includes townhomes and apartments in duplexes.

(7) Includes bachelor/1 bedroom, 2/3 bedroom and 4+ bedroom apartments.

**Schedule 4
Niagara Region
Ten Year Growth Forecast
Early 2017 to Early 2027**

| | | | POPULATION |
|---|---|---------|----------------|
| Early 2017 Population | | | 441,135 |
| Occupants of New Housing Units, Early 2017 to Early 2027 | <i>Units (2)</i> | 24,072 | |
| | <i>multiplied by persons per unit (3)</i> | 2.38 | |
| | <i>gross population increase</i> | 57,204 | 57,204 |
| Decline in Housing Unit Occupancy, Early 2017 to Early 2027 | <i>Units (4)</i> | 183,608 | |
| | <i>multiplied by ppu decline rate (5)</i> | -0.0502 | |
| | <i>total decline in population</i> | -9,222 | -9,222 |
| Population Estimate to Early 2027 | | | 489,117 |
| <i>Net Population Increase, Early 2017 to Early 2027</i> | | | <i>47,982</i> |

(1) Early 2017 Population based on:

2011 Population (431,346) + Mid 2011 to Early 2017 estimated housing units to beginning of forecast period (8,918 x 2.44 = 21,753)
+ (174,690 x -0.0685 = -11,964) = 441,135

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

(3) Average number of persons per unit (ppu) is assumed to be:

| Structural Type | Persons Per Unit ¹ | % Distribution of Estimated Units ² | Weighted Persons Per Unit Average |
|------------------------------------|-------------------------------|--|-----------------------------------|
| <i>Singles & Semi Detached</i> | 2.91 | 46.9% | 1.37 |
| <i>Multiples (6)</i> | 2.12 | 30.7% | 0.65 |
| <i>Apartments (7)</i> | 1.62 | 22.4% | 0.36 |
| <i>one bedroom or less</i> | 1.20 | | |
| <i>two to three bedrooms</i> | 1.88 | | |
| <i>four bedroom or more</i> | 4.00 | | |
| Total | | 100% | 2.38 |

¹ Persons per unit based on adjusted Statistics Canada Custom 2011 Census database.

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

(4) Early 2017 households based upon 174,690 (2011 Census) + 8,918 (Mid 2011 to Early 2017 unit estimate) = 183,608

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

(6) Includes townhomes and apartments in duplexes.

(7) Includes bachelor/1 bedroom, 2/3 bedroom and 4+ bedroom apartments.

Schedule 5
Niagara Region
25 year Growth Forecast
Early 2017 to Mid 2041

| | | POPULATION |
|---|--|----------------|
| Early 2017 Population | | 441,135 |
| Occupants of New Housing Units, Early 2017 to Mid 2041 | <i>Units (2)</i> | 65,392 |
| | <i>multiplied by persons per unit (3)</i> | 2.39 |
| | <i>gross population increase</i> | 156,550 |
| Decline in Housing Unit Occupancy, Early 2017 to Mid 2041 | <i>Units (4)</i> | 183,608 |
| | <i>multiplied by ppu. decline rate (5)</i> | -0.0189 |
| | <i>total decline in population</i> | -3,464 |
| Population Estimate to 2041 | | 594,221 |
| <i>Net Population Increase, Early 2017 to Mid 2041</i> | | 153,086 |

(1) Early 2017 Population based on:

2011 Population (431,346) + Mid 2011 to Early 2017 estimated housing units to beginning of forecast period (8,918 x 2.44 = 21,753)
+ (174,690 x -0.0685 = -11,964) = 441,135

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

(3) Average number of persons per unit (ppu) is assumed to be:

| Structural Type | Persons Per Unit ¹ | % Distribution of Estimated Units ² | Weighted Persons Per Unit Average |
|------------------------------------|-------------------------------|--|-----------------------------------|
| <i>Singles & Semi Detached</i> | 2.91 | 48.7% | 1.42 |
| <i>Multiples (6)</i> | 2.12 | 29.8% | 0.63 |
| <i>Apartments (7)</i> | 1.62 | 21.6% | 0.35 |
| <i>one bedroom or less</i> | 1.20 | | |
| <i>two/three bedrooms</i> | 1.88 | | |
| <i>four bedroom or more</i> | 4.00 | | |
| Total | | 100% | 2.39 |

¹ Persons per unit based on adjusted Statistics Canada Custom 2011 Census database.

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

(4) Early 2017 households based upon 174,690 (2011 Census) + 8,918 (Mid 2011 to Early 2017 unit estimate) = 183,608

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

(6) Includes townhomes and apartments in duplexes.

(7) Includes bachelor/1 bedroom, 2/3 bedroom and 4+ bedroom apartments.

Schedule 6

Niagara Region
Historical Residential Building Permits
Years 2006 - 2015

| Year | Residential Building Permits | | | |
|------------------------------|------------------------------|------------------------|-------------------------|--------------|
| | Singles & Semi Detached | Multiples ¹ | Apartments ² | Total |
| 2006 | 1,168 | 181 | 270 | 1,619 |
| 2007 | 1,107 | 270 | 109 | 1,486 |
| 2008 | 950 | 360 | 178 | 1,488 |
| 2009 | 843 | 179 | 123 | 1,145 |
| 2010 | 986 | 254 | 269 | 1,509 |
| Average (2006 - 2010) | 1,011 | 249 | 190 | 1,449 |
| % Breakdown | 69.7% | 17.2% | 13.1% | 100.0% |
| 2011 | 852 | 438 | 264 | 1,554 |
| 2012 | 867 | 296 | 290 | 1,453 |
| 2013 | 1,033 | 628 | 165 | 1,826 |
| 2014 | 1,269 | 456 | 140 | 1,865 |
| 2015 | 1,338 | 472 | 335 | 2,145 |
| Sub-total | 5,359 | 2,290 | 1,194 | 8,843 |
| Average (2011 - 2015) | 1,072 | 458 | 239 | 1,769 |
| % Breakdown | 60.6% | 25.9% | 13.5% | 100.0% |
| 2006 - 2015 | | | | |
| Total | 10,413 | 3,534 | 2,143 | 16,090 |
| Average | 1,041 | 353 | 214 | 1,609 |
| % Breakdown | 64.7% | 22.0% | 13.3% | 100.0% |

Source: Statistics Canada building permits, Catalogue 64-001-XIB

1. Includes townhomes and apartments in duplexes.

2. Includes bachelor/1 bedroom, 2/3 bedroom and 4+ bedroom apartments.

Schedule 7

Niagara Region
Persons Per Unit By Age And Type Of Dwelling
(2011 Census)

| Age of Dwelling | Singles and Semi-Detached | | | | | | 25 Year Average ¹ |
|-----------------|---------------------------|--------------|--------------|--------------|--------------|--------------|------------------------------|
| | < 1 BR | 1 BR | 2 BR | 3/4 BR | 5+ BR | Total | |
| 1-5 | - | 1.621 | 2.010 | 3.058 | 4.164 | 2.887 | |
| 6-10 | - | 2.214 | 2.060 | 3.173 | 3.672 | 3.050 | |
| 11-15 | - | 2.143 | 1.876 | 2.988 | 4.188 | 2.889 | |
| 16-20 | - | - | 1.926 | 2.960 | 4.209 | 2.908 | |
| 20-25 | - | 1.941 | 2.209 | 2.930 | 3.767 | 2.923 | 2.91 |
| 25-35 | - | 1.696 | 2.000 | 2.922 | 3.329 | 2.846 | |
| 35+ | 2.429 | 1.643 | 1.992 | 2.603 | 3.525 | 2.511 | |
| Total | 2.194 | 1.681 | 1.995 | 2.726 | 3.648 | 2.631 | |

| Age of Dwelling | Multiples ² | | | | | | 25 Year Average |
|-----------------|------------------------|--------------|--------------|--------------|--------------|--------------|-----------------|
| | < 1 BR | 1 BR | 2 BR | 3/4 BR | 5+ BR | Total | |
| 1-5 | - | 1.400 | 1.663 | 2.383 | - | 2.069 | |
| 6-10 | - | 1.520 | 1.846 | 2.273 | - | 1.988 | |
| 11-15 | - | 1.333 | 1.621 | 2.545 | - | 1.977 | |
| 16-20 | - | 1.900 | 1.790 | 2.761 | - | 2.373 | |
| 20-25 | - | - | 1.926 | 2.508 | - | 2.252 | 2.12 |
| 25-35 | - | 1.550 | 1.863 | 2.991 | - | 2.569 | |
| 35+ | 1.222 | 1.331 | 2.032 | 2.682 | 3.768 | 2.284 | |
| Total | 0.712 | 1.378 | 1.891 | 2.631 | 4.566 | 2.234 | |

| Age of Dwelling | Apartments ³ | | | | | | 25 Year Average |
|-----------------|-------------------------|--------------|--------------|--------------|--------------|--------------|-----------------|
| | < 1 BR | 1 BR | 2 BR | 3/4 BR | 5+ BR | Total | |
| 6-10 | - | 1.421 | 1.513 | - | - | 1.656 | |
| 11-15 | - | 1.254 | 1.667 | 2.531 | - | 1.701 | |
| 16-20 | - | 1.191 | 1.761 | 2.475 | - | 1.572 | |
| 20-25 | - | 1.274 | 1.755 | 2.806 | - | 1.632 | 1.62 |
| 25-35 | 1.273 | 1.352 | 1.679 | 2.800 | - | 1.592 | |
| 35+ | 1.061 | 1.230 | 1.714 | 2.629 | 2.905 | 1.577 | |
| Total | 1.029 | 1.241 | 1.710 | 2.667 | 2.905 | 1.585 | |

| Age of Dwelling | All Density Types | | | | | |
|-----------------|-------------------|--------------|--------------|--------------|--------------|--------------|
| | < 1 BR | 1 BR | 2 BR | 3/4 BR | 5+ BR | Total |
| 1-5 | 1.818 | 1.319 | 1.851 | 2.946 | 4.138 | 2.602 |
| 6-10 | - | 1.678 | 1.918 | 3.079 | 3.667 | 2.816 |
| 11-15 | - | 1.411 | 1.758 | 2.920 | 4.012 | 2.599 |
| 16-20 | - | 1.307 | 1.808 | 2.897 | 4.176 | 2.480 |
| 20-25 | - | 1.335 | 1.906 | 2.887 | 3.611 | 2.610 |
| 25-35 | 1.000 | 1.398 | 1.786 | 2.920 | 3.440 | 2.496 |
| 35+ | 1.573 | 1.318 | 1.906 | 2.606 | 3.499 | 2.338 |
| Total | 1.500 | 1.333 | 1.886 | 2.714 | 3.606 | 2.420 |

1. The Census PPU has been adjusted to account for the downward PPU trend which has been recently experienced in both new and older units, largely due to the aging of the population

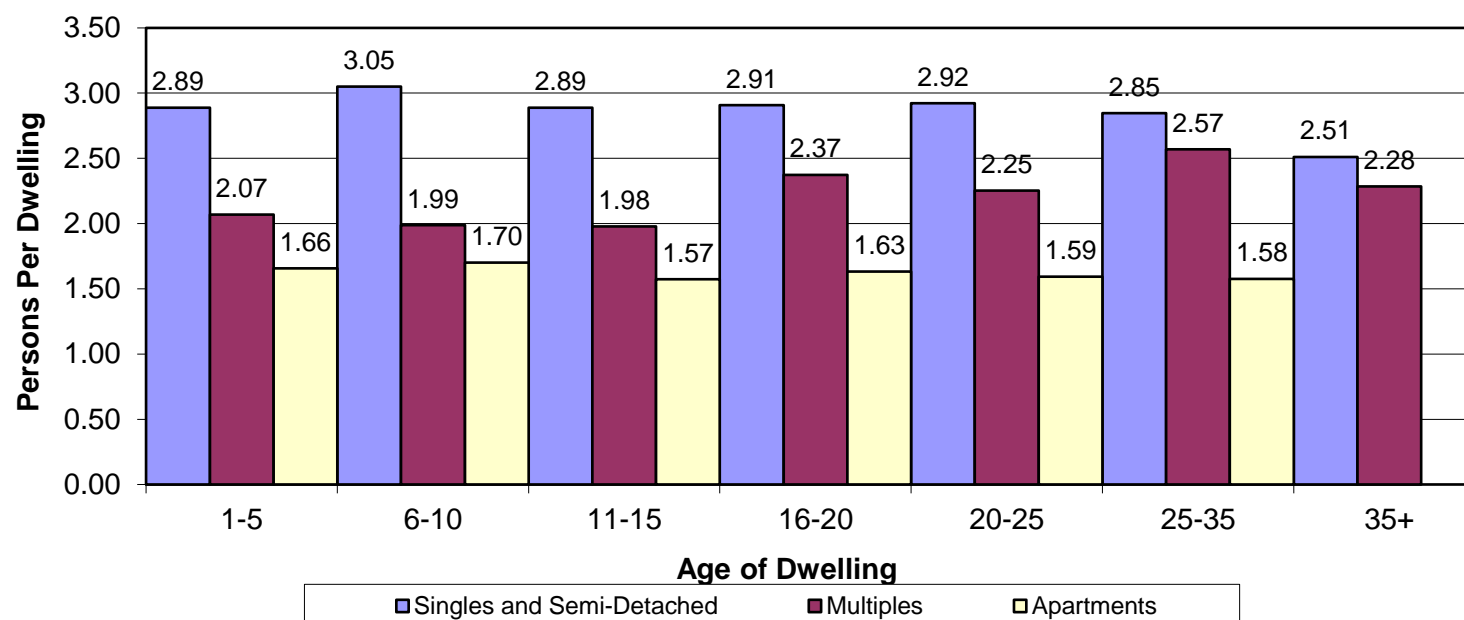
2. Includes townhomes and apartments in duplexes.

3. Includes bachelor/1 bedroom, 2/3 bedroom and 4+ bedroom apartments.

Note: Does not include Statistics Canada data classified as 'Other'

PPU Not calculated for samples less than or equal to 50 dwelling units, and does not include institutional population

**Schedule 8
Niagara Region
Persons Per Unit By Structural Type And Age Of Dwelling
(2011 Census)**

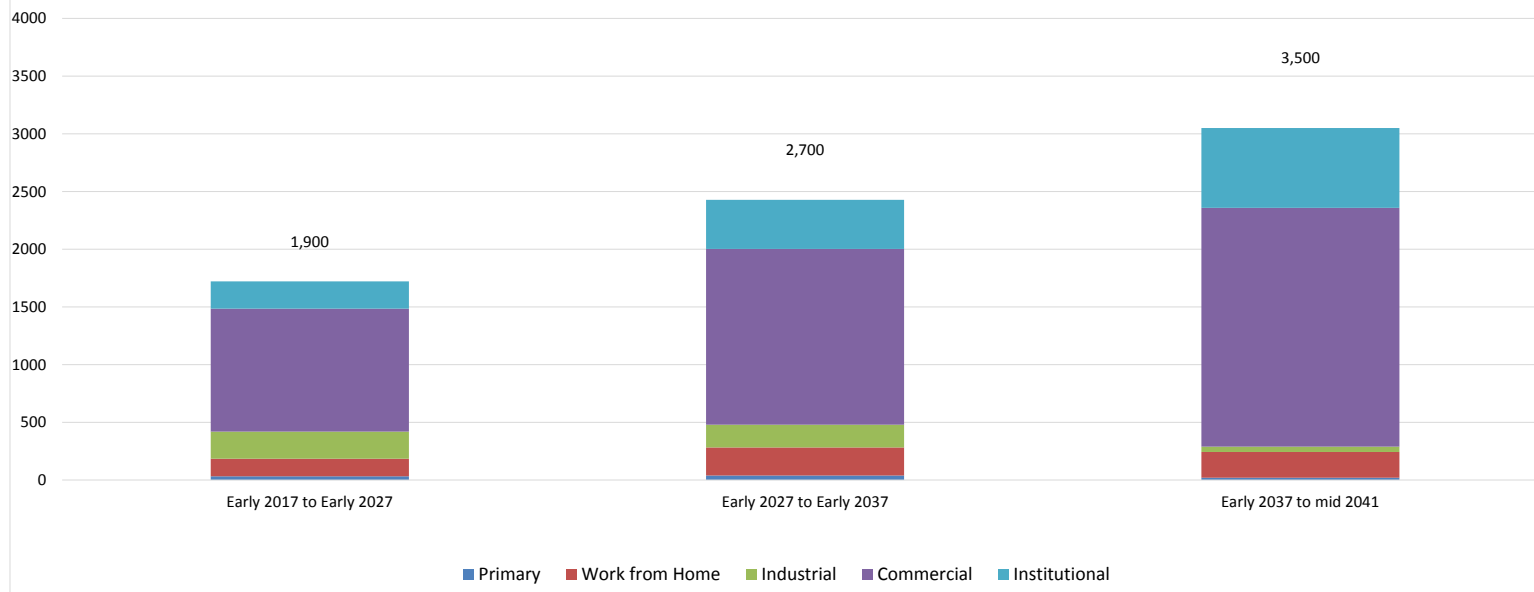


Schedule 9a
Niagara Region
Employment Forecast, 2017 to 2041

| Period | Population | Activity Rate | | | | | | | | Employment | | | | | | | | Employment |
|--------------------------------|------------|---------------|----------------|------------|--------------------------------------|---------------|----------|--------------------|-----------------------------|------------|----------------|------------|--------------------------------------|---------------|---------|--------------------|---|--|
| | | Primary | Work from Home | Industrial | Commercial/ Population Related | Institutional | Total | NFPOW ¹ | Total Including NFPOW | Primary | Work from Home | Industrial | Commercial/ Population Related | Institutional | Total | NFPOW ¹ | Total Employment (Including NFPOW) | Total (Excluding Work at Home and NFPOW) |
| Early 2017 | 441,135 | 0.008 | 0.029 | 0.091 | 0.191 | 0.093 | 0.412 | 0.051 | 0.463 | 3,945 | 12,700 | 40,049 | 84,396 | 41,093 | 182,184 | 22,400 | 204,584 | 169,484 |
| Early 2027 | 489,117 | 0.009 | 0.029 | 0.087 | 0.194 | 0.088 | 0.406 | 0.050 | 0.457 | 4,275 | 14,210 | 42,406 | 95,054 | 43,456 | 199,401 | 24,550 | 223,951 | 185,191 |
| Mid 2041 | 594,221 | 0.008 | 0.030 | 0.075 | 0.200 | 0.091 | 0.404 | 0.049 | 0.453 | 4,742 | 17,540 | 44,567 | 118,553 | 50,467 | 235,870 | 29,130 | 265,000 | 218,330 |
| Incremental Change | | | | | | | | | | | | | | | | | | |
| Mid 2011 - Early 2017 | 9,789 | 0.0000 | 0.0002 | 0.0088 | 0.0187 | 0.0017 | 0.0294 | 0.0033 | 0.0327 | 390 | 375 | 4,674 | 9,926 | 1,663 | 17,029 | 1,915 | 18,944 | 16,654 |
| Early 2017 - Early 2027 | 47,982 | 0.0005 | 0.0003 | -0.0041 | 0.0030 | -0.0056 | -0.0059 | -0.0006 | 0.0000 | 330 | 1,510 | 2,357 | 10,657 | 2,362 | 17,217 | 2,150 | 19,367 | 15,707 |
| Early 2017 - Mid 2041 | 153,086 | 0.0000 | 0.0007 | -0.0158 | 0.0082 | -0.0017 | -0.0086 | -0.0018 | -0.0104 | 797 | 4,840 | 4,518 | 34,157 | 9,374 | 53,686 | 6,730 | 60,416 | 48,846 |
| Annual Average | | | | | | | | | | | | | | | | | | |
| Early 2017 - Early 2027 | 4,798 | 0.00005 | 0.00003 | -0.00041 | 0.00030 | -0.00056 | -0.00059 | -0.00006 | 0.00000 | 33 | 151 | 236 | 1,066 | 236 | 1,722 | 215 | 1,937 | 1,571 |
| Early 2017 - Mid 2041 | 6,123 | 0.00000 | 0.00003 | -0.00064 | 0.00033 | -0.00007 | -0.00035 | -0.00007 | -0.00042 | 33 | 198 | 184 | 1,394 | 383 | 2,191 | 275 | 2,466 | 1,954 |

Source: Derived from Niagara Region Municipal Comprehensive Review Strategic Growth Option November 2016, by Watson & Associates Economists Ltd. 2016.

Figure A-2
Annual Employment Growth by Sector



Schedule 9b
Niagara Region
Employment & Gross Floor Area (GFA) Forecast, 2017 To 2041

| Period | Population | Employment | | | | | Gross Floor Area in Square Feet (Estimated) ¹ | | | |
|--------------------------------|------------|------------|------------|-----------------------------------|---------------|---------|--|-----------------------------------|---------------|------------|
| | | Primary | Industrial | Commercial/ Population Related | Institutional | Total | Industrial | Commercial/ Population Related | Institutional | Total |
| Early 2017 | 441,135 | 3,945 | 40,049 | 84,396 | 41,093 | 169,484 | | | | |
| Early 2027 | 489,117 | 4,275 | 42,406 | 95,054 | 43,456 | 185,191 | | | | |
| Mid 2041 | 594,221 | 4,742 | 44,567 | 118,553 | 50,467 | 218,330 | | | | |
| Incremental Change | | | | | | | | | | |
| Early 2017 - Early 2027 | 47,982 | 330 | 2,357 | 10,657 | 2,362 | 15,707 | 2,828,500 | 5,328,700 | 1,653,700 | 9,810,900 |
| Early 2017 - Mid 2041 | 153,086 | 797 | 4,518 | 34,157 | 9,374 | 48,846 | 5,421,700 | 17,078,600 | 6,561,700 | 29,062,000 |
| Annual Average | | | | | | | | | | |
| Early 2017 - Early 2027 | 4,798 | 33 | 236 | 1,066 | 236 | 1,571 | 282,850 | 532,870 | 165,370 | 981,090 |
| Early 2017 - Mid 2041 | 6,123 | 33 | 184 | 1,394 | 383 | 1,994 | 221,294 | 697,086 | 267,824 | 1,186,204 |

Source: Derived from Niagara Region Municipal Comprehensive Review Strategic Growth Option November 2016, by Watson & Associates Economists Ltd. 2016.

1. Square Foot Per Employee Assumptions

| | |
|--------------------------------|-------|
| Industrial | 1,200 |
| Commercial/ Population Related | 500 |
| Institutional | 700 |

Schedule 9c

Niagara Region Employment Growth by Servicing Location (Including Work from Home and No Fixed Place of Work)

| Development Location | Timing | Primary | Industrial | Work from Home | Commercial/ Population Related | Institutional | No Fixed Place of Work | Total Employment Increase |
|---|-------------|---------|------------|----------------|--------------------------------------|---------------|---------------------------|------------------------------|
| Municipally Serviced (Water and Wastewater) ¹ | 2017 - 2027 | - | 1,938 | 1,284 | 10,274 | 2,290 | 2,000 | 17,785 |
| | 2017 - 2041 | - | 4,028 | 4,114 | 33,273 | 9,206 | 6,259 | 56,880 |
| Unserviced | 2017 - 2027 | 330 | 419 | 227 | 383 | 73 | 151 | 1,582 |
| | 2017 - 2041 | 797 | 490 | 726 | 884 | 168 | 471 | 3,536 |
| Niagara Region | 2017 - 2027 | 330 | 2,357 | 1,510 | 10,657 | 2,362 | 2,150 | 19,367 |
| | 2017 - 2041 | 797 | 4,518 | 4,840 | 34,157 | 9,374 | 6,730 | 60,416 |

Source: Watson & Associates Economists Ltd., 2017

1. Employment allocated to serviced area is based on water & wastewater capacity within Niagara Region.

Schedule 9d
Estimate of the Anticipated Amount, Type and Location of
Non-Residential Development for Which Development Charges can be Imposed

| Development Location | Timing | Industrial GFA S.F | Commercial/ Population Related GFA S.F | Institutional GFA S.F. | Total Non-Res GFA S.F. | Employment Increase ¹ |
|---|-------------|---------------------------|---|-------------------------------|-------------------------------|---|
| Municipally Serviced (Water and Wasetwater) ² | 2017 - 2027 | 2,325,500 | 5,137,000 | 1,602,800 | 9,065,300 | 14,502 |
| | 2017 - 2041 | 4,833,700 | 16,636,600 | 6,444,200 | 27,914,500 | 46,507 |
| Unserviced | 2017 - 2027 | 503,000 | 191,700 | 51,000 | 745,700 | 1,205 |
| | 2017 - 2041 | 588,000 | 442,000 | 117,500 | 1,147,500 | 2,339 |
| Niagara Region | 2017 - 2027 | 2,828,500 | 5,328,700 | 1,653,700 | 9,810,900 | 15,707 |
| | 2017 - 2041 | 5,421,700 | 17,078,600 | 6,561,700 | 29,062,000 | 48,846 |

Source: Watson & Associates Economists Ltd., 2017

1. Employment Increase does not include No Fixed Place of Work.

2. Employment allocated to serviced area is based on water and wastewater capacity within Niagara Region.

Square feet per employee assumptions:

| | |
|--------------------------------|-------|
| Industrial | 1,200 |
| Commercial/ Population Related | 500 |
| Institutional | 700 |

Appendix B – Level of Service

APPENDIX B - LEVEL OF SERVICE CEILING

NIAGARA REGION

SUMMARY OF SERVICE STANDARDS AS PER DEVELOPMENT CHARGES ACT, 1997

| Service Category | Sub-Component | 10 Year Average Service Standard | | | | | Maximum Ceiling LOS |
|-------------------------------|--|----------------------------------|-----------------------|-------------------------------|----------------------|-------------|---------------------|
| | | Cost (per capita) | Quantity (per capita) | | Quality (per capita) | | |
| Services Related to a Highway | Services Related to a Highway - Roads | \$6,702 | 0.0039 | lane km of roadways | 1,718,385 | per lane km | 1,025,936,446 |
| | Services Related to a Highway - Facilities | \$40 | 0.1863 | ft² of building area | 215 | per ft² | 6,131,094 |
| | Services Related to a Highway - Vehicles & Equipment | \$42 | 0.0012 | No. of vehicles and equipment | 35,075 | per vehicle | 6,443,390 |
| Police | Police Facilities | \$251 | 0.6208 | ft² of building area | 405 | per ft² | 38,482,759 |
| | Police Vehicles | \$26 | 0.0009 | No. of vehicles and equipment | 29,100 | per vehicle | 4,009,322 |
| | Police Small Equipment and Gear | \$15 | 0.0029 | No. of equipment and gear | 5,010 | per Officer | 2,224,340 |
| E.M.S. | E.M.S. Facilities | \$61 | 0.1683 | ft² of building area | 362 | per ft² | 2,926,422 |
| | E.M.S. Vehicles | \$25 | 0.0001 | No. of vehicles and equipment | 246,800 | per vehicle | 1,184,196 |
| Long Term Care | Long Term Care Facilities | \$613 | 1.4505 | ft² of building area | 423 | per ft² | 29,423,522 |
| Social Housing | Social Housing | \$966 | 5.16 | ft² of building area | 187.26 | per ft² | 46,368,365 |
| Provincial Offences Act | Provincial Offences Act Facilities | \$29 | 0.0500 | ft² of building area | 585.0000 | per ft² | 1,403,474 |
| Health | Health Facilities | \$75 | 0.1952 | ft² of building area | 385 | per ft² | 3,602,009 |
| Social & Child Services | Social & Child Services Facilities | \$99 | 0.2809 | ft² of building area | 352 | per ft² | 4,740,142 |
| Waste Diversion | Waste Diversion - Facilities - Stations/Depots | \$157 | 0.5775 | ft² of building area | 272 | per ft² | 7,537,492 |
| | Waste Diversion - Facilities - Stations/Depots Land | \$11 | 0.0001 | ft² of building area | 108,000 | per acre | 518,206 |
| | Waste Diversion - Vehicles & Equipment | \$16 | 0.0001 | No. of vehicles and equipment | 159,100 | per vehicle | 763,394 |
| | Waste Diversion - Containers | \$13 | 1.1662 | No. of items | 11 | per Item | 641,040 |
| | Waste Diversion - Other Equipment | \$22 | 0.0002 | No. of items | 108,000 | per Item | 1,036,411 |

Niagara Region
Service Standard Calculation Sheet

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

| Description | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 Value (\$/lane km) |
|------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------------------------|
| Regional Roads - Rural | 988 | 994 | 994 | 995 | 997 | 987 | 991 | 992 | 1,039 | 1,039 | \$1,460,000 |
| Regional Roads - Urban | 659 | 663 | 663 | 664 | 665 | 658 | 661 | 662 | 693 | 693 | \$2,150,000 |
| | | | | | | | | | | | |
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| | | | | | | | | | | | |
| Total | 1,647 | 1,657 | 1,657 | 1,659 | 1,662 | 1,645 | 1,652 | 1,654 | 1,732 | 1,732 | |

| | | | | | | | | | | |
|---------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Population | 428,641 | 429,625 | 430,447 | 430,502 | 431,346 | 432,173 | 432,789 | 434,382 | 436,263 | 438,671 |
| Per Capita Standard | 0.0038 | 0.0039 | 0.0038 | 0.0039 | 0.0039 | 0.0038 | 0.0038 | 0.0038 | 0.0040 | 0.0039 |

| 10 Year Average | 2007-2016 |
|-------------------|-------------|
| Quantity Standard | 0.0039 |
| Quality Standard | \$1,718,385 |
| Service Standard | \$6,702 |

| DC Amount (before deductions) | Buildout |
|-------------------------------|-----------------|
| Forecast Population | 153,086 |
| \$ per Capita | \$6,702 |
| Eligible Amount | \$1,025,936,446 |

Niagara Region
Service Standard Calculation Sheet

Service: Services Related to a Highway - Facilities
 Unit Measure: ft² of building area

| Description | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 Bld'g Value (\$/ft²) | Value/ft² with land, site works, etc. |
|------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------------------------|---------------------------------------|
| Smithville Yard dome | 8,137 | 8,137 | 8,137 | 8,137 | 8,137 | 8,137 | 8,137 | 8,137 | 8,137 | 8,137 | \$187 | \$215 |
| Pelham Yard - 2 domes | 16,663 | 16,663 | 16,663 | 16,663 | 16,663 | 16,663 | 16,663 | 16,663 | 16,663 | 16,663 | \$187 | \$215 |
| Thorold Yard - 2 domes | 16,738 | 16,738 | 16,738 | 16,738 | 16,738 | 16,738 | 16,738 | 16,738 | 16,738 | 16,738 | \$187 | \$215 |
| Welland Yard | 39,019 | 39,019 | 39,019 | 39,019 | 39,019 | 39,019 | 39,019 | 39,019 | 39,019 | 39,019 | \$187 | \$215 |
| | | | | | | | | | | | | |
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| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Total | 80,557 | 80,557 | 80,557 | 80,557 | 80,557 | 80,557 | 80,557 | 80,557 | 80,557 | 80,557 | | |

| | | | | | | | | | | |
|---------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Population | 428,641 | 429,625 | 430,447 | 430,502 | 431,346 | 432,173 | 432,789 | 434,382 | 436,263 | 438,671 |
| Per Capita Standard | 0.1879 | 0.1875 | 0.1871 | 0.1871 | 0.1868 | 0.1864 | 0.1861 | 0.1855 | 0.1847 | 0.1836 |

| | |
|-------------------|-----------|
| 10 Year Average | 2007-2016 |
| Quantity Standard | 0.1863 |
| Quality Standard | \$215 |
| Service Standard | \$40 |

| | |
|-------------------------------|-------------|
| DC Amount (before deductions) | Buildout |
| Forecast Population | 153,086 |
| \$ per Capita | \$40 |
| Eligible Amount | \$6,131,094 |

Niagara Region
Service Standard Calculation Sheet

Service: Services Related to a Highway - Vehicles & Equipment
 Unit Measure: No. of vehicles and equipment

| Description | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 Value (\$/Vehicle) |
|--------------------------------|------|------|------|------|------|------|------|------|------|------|----------------------------|
| 21 - Truck 5000-5999 GVW | 34 | 38 | 38 | 40 | 44 | 46 | 45 | 42 | 42 | 45 | \$28,700 |
| 22 - Truck 6000-7999 GVW | 65 | 62 | 40 | 46 | 48 | 41 | 43 | 43 | 45 | 50 | \$31,100 |
| 23 - Truck 8000-9999 GVW | 33 | 31 | 49 | 49 | 52 | 52 | 53 | 54 | 58 | 58 | \$45,400 |
| 24 - Truck 10000-14999 GVW | 11 | 10 | 9 | 9 | 8 | 10 | 10 | 7 | 5 | 8 | \$46,700 |
| 25 - Truck 15000-18999 GVW | 21 | 20 | 21 | 20 | 22 | 20 | 20 | 20 | 20 | 17 | \$76,900 |
| 26 - Truck 19000-23999 GVW | - | 1 | 1 | 1 | 1 | 3 | 3 | 3 | 5 | 5 | \$122,200 |
| 29 - Truck 32000-35999 GVW | 1 | 3 | 2 | 2 | 1 | 1 | 2 | 2 | 2 | 1 | \$263,700 |
| 30 - Truck 36000-48999 GVW | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 4 | 4 | \$285,200 |
| 32 - Truck 54000-65000 GVW | 13 | 13 | 15 | 15 | 15 | 15 | 15 | 15 | 21 | 21 | \$265,700 |
| 37 - Front End Loader 1½-2½ Cy | 3 | 3 | 3 | 3 | 5 | 5 | 5 | 4 | 4 | 2 | \$141,600 |
| 40 - Grader 100-114 HP | - | - | - | - | - | - | - | 2 | 2 | 2 | \$201,900 |
| 43 - Grader >150 HP | 2 | 2 | 2 | 2 | 2 | 2 | 2 | - | - | - | \$173,400 |
| 47 - Mechanical Chipper | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | \$81,300 |
| 50 - Tractor Wheeled 21-27 HP | 2 | 2 | 2 | 2 | 3 | 4 | 4 | 4 | 4 | 4 | \$4,700 |
| 51 - Tractor Wheeled 28-37 HP | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | \$5,100 |
| 52 - Tractor Wheeled 38-45 HP | 2 | 5 | 4 | 4 | 6 | 6 | 6 | 6 | 6 | 3 | \$23,500 |
| 54 - Tractor Wheeled 56-60 HP | - | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$21,200 |
| 55 - Tractor Wheeled >60 HP | 9 | 9 | 9 | 9 | 11 | 11 | 11 | 11 | 11 | 13 | \$76,800 |
| 57 - Compressor | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | \$900 |
| 60 - Roller <3 Ton | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$39,800 |
| 68 - Trailer >10000lb | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | \$17,800 |
| 69 - Trailer 3001-10000lb | 21 | 23 | 26 | 27 | 29 | 31 | 33 | 35 | 34 | 35 | \$13,000 |
| 70 - Trailer <3000lb | 20 | 22 | 25 | 29 | 28 | 29 | 30 | 32 | 32 | 26 | \$4,800 |
| 73 - Road Breakers and Drills | 7 | 7 | 7 | 7 | 7 | 5 | 4 | 4 | 4 | 4 | \$5,200 |

Niagara Region
Service Standard Calculation Sheet

Service: Services Related to a Highway - Vehicles & Equipment
 Unit Measure: No. of vehicles and equipment

| Description | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 Value (\$/Vehicle) |
|------------------------------|------|------|------|------|------|------|------|------|------|------|-------------------------|
| 75 - Line Striper | 4 | 4 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | \$9,400 |
| 77 - Post Driver | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 7 | 8 | 5 | \$3,400 |
| 78 - Snowblowers | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | \$800 |
| 79 - Post Hole Augers | 4 | 4 | 3 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | \$9,700 |
| 80 - Chainsaws | 20 | 20 | 22 | 22 | 22 | 22 | 23 | 29 | 29 | 29 | \$800 |
| 81 - Waterpumps | 7 | 7 | 7 | 9 | 9 | 10 | 12 | 12 | 12 | 11 | \$900 |
| 82 - Concrete Saws | 10 | 10 | 11 | 10 | 10 | 10 | 10 | 8 | 8 | 10 | \$700 |
| 83 - Vibratory Tampers | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | \$3,500 |
| 84 - Generators | 17 | 17 | 18 | 17 | 17 | 19 | 21 | 21 | 21 | 21 | \$2,600 |
| 85 - Mowers | 34 | 36 | 37 | 39 | 41 | 42 | 45 | 58 | 57 | 55 | \$9,500 |
| 86 - Steam Washers | 3 | 3 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | \$21,700 |
| 87 - Water Tanks | 1 | 1 | 1 | 2 | 3 | 3 | 3 | 3 | 5 | 5 | \$5,000 |
| 88 - Power Brooms | 6 | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | \$17,400 |
| 89 - Spreader Attachments | 2 | 2 | 2 | 2 | 2 | 2 | 2 | - | - | 2 | \$7,300 |
| 90 - Miscellaneous Equipment | 2 | 2 | 3 | 3 | 4 | 4 | 5 | 5 | 5 | 5 | \$8,300 |
| 99 - Attachments | 43 | 43 | 63 | 66 | 72 | 73 | 72 | 65 | 75 | 64 | \$7,400 |
| | | | | | | | | | | | |
| Total | 427 | 437 | 463 | 479 | 508 | 511 | 523 | 532 | 549 | 537 | |

| | | | | | | | | | | |
|---------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Population | 428,641 | 429,625 | 430,447 | 430,502 | 431,346 | 432,173 | 432,789 | 434,382 | 436,263 | 438,671 |
| Per Capita Standard | 0.0010 | 0.0010 | 0.0011 | 0.0011 | 0.0012 | 0.0012 | 0.0012 | 0.0012 | 0.0013 | 0.0012 |

| | |
|-------------------|-----------|
| 10 Year Average | 2007-2016 |
| Quantity Standard | 0.0012 |
| Quality Standard | \$35,075 |
| Service Standard | \$42 |

| | |
|-------------------------------|-------------|
| DC Amount (before deductions) | Buildout |
| Forecast Population | 153,086 |
| \$ per Capita | \$42 |
| Eligible Amount | \$6,443,390 |

Niagara Region
Service Standard Calculation Sheet

Service: Police Facilities
 Contact : Facilities
 Unit Measure: ft² of building area

| Description | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 Bld'g Value (\$/ft²) | Value/ft² with land, site works, etc. |
|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------------------------|---------------------------------------|
| Operations Service Branch (3250 Schmon Pkwy) Thorold | 6,019 | 6,019 | 7,219 | 7,219 | 7,219 | 7,219 | 7,219 | 7,219 | 7,219 | - | \$356 | \$401 |
| Police Building (Thompson Road) Fort Erie | 2,800 | 2,800 | 2,800 | 2,800 | 2,800 | - | - | - | - | - | \$356 | \$401 |
| NRPS #8 District - 45 Clarke St. Grimsby - Owned | 3,600 | 3,600 | 3,600 | 8,180 | 8,180 | 8,180 | 8,180 | 8,180 | 8,180 | 8,180 | \$474 | \$531 |
| Police Building (Division 22) - 4343 Morrison Niagara Falls | 17,900 | 17,900 | 17,900 | 17,900 | 17,900 | 17,900 | 17,900 | 17,900 | 17,900 | - | \$356 | \$401 |
| NRPS #6 District - 501 Fielden Ave Port Colborne - Owned | 5,260 | 5,260 | 5,260 | 5,260 | 5,260 | 5,260 | 5,260 | 5,260 | 5,260 | 5,260 | \$356 | \$401 |
| NRPS #1 District- 68 Church Street - St. Catharines - Owned | 64,284 | 75,280 | 75,280 | 75,280 | 75,280 | 75,280 | 75,280 | 75,280 | 75,280 | 37,640 | \$356 | \$401 |
| NRPS #3 District - 5 Lincoln Ave Welland - Owned | 25,995 | 25,995 | 25,995 | 25,995 | 25,995 | 25,995 | 25,995 | 25,995 | 25,995 | 25,995 | \$356 | \$401 |
| NRPS Patrol Yard - 3551 Townline Rd Thorold - Owned | 19,050 | 19,050 | 19,050 | 19,050 | 19,050 | 19,050 | 19,050 | 19,050 | 19,050 | 19,050 | \$356 | \$401 |
| Police Building 110 James St. St. Catharines1 | 50,000 | 40,000 | 40,000 | 40,000 | 40,000 | 40,000 | 40,000 | 40,000 | 40,000 | - | \$356 | \$401 |
| Police Building 5741 River Rd. Niagara Falls | 4,500 | 4,500 | 4,500 | 4,500 | 4,500 | 4,500 | 4,500 | 4,500 | 4,500 | - | \$356 | \$401 |
| NRPS Gun Range - 107 Seneca Trail Welland - Owned | 21,480 | 21,480 | 21,480 | 21,480 | 21,480 | 21,480 | 21,480 | 21,480 | 21,480 | 21,480 | \$417 | \$468 |

**Niagara Region
Service Standard Calculation Sheet**

Service: Police Facilities
Contact : Facilities
Unit Measure: ft² of building area

| Description | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 Bld'g Value (\$/ft²) | Value/ft² with land, site works, etc. |
|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---------------------------|---------------------------------------|
| NRPS Tactical Unit - 2 Cushman Road SC - Owned | 18,352 | 18,352 | 18,352 | 18,352 | 18,352 | 18,352 | 18,352 | 18,352 | 18,352 | 18,352 | \$356 | \$401 |
| 63 Church St. St. Catharines - Server room rental space | - | - | 2,025 | 2,025 | 2,025 | 2,025 | 2,025 | 2,025 | 2,025 | - | \$356 | \$401 |
| Hwy #20 Secure storage - leased facility | - | - | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | - | \$356 | \$401 |
| NRPS #5 - 650 Gilmore Rd Fort Erie - Owned | - | - | - | - | - | 7,560 | 7,560 | 7,560 | 7,560 | 7,560 | \$466 | \$522 |
| NRPS HQ/#2 District - 5700 Valley Way NF - Owned | - | - | - | - | - | - | - | - | - | 207,528 | \$280 | \$317 |
| | | | | | | | | | | | | |
| Total | 239,240 | 240,236 | 258,461 | 263,041 | 263,041 | 267,801 | 267,801 | 267,801 | 267,801 | 351,045 | | |

| | | | | | | | | | | |
|---------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Population | 428,641 | 429,625 | 430,447 | 430,502 | 431,346 | 432,173 | 432,789 | 434,382 | 436,263 | 438,671 |
| Per Capita Standard | 0.5581 | 0.5592 | 0.6004 | 0.6110 | 0.6098 | 0.6197 | 0.6188 | 0.6165 | 0.6139 | 0.8002 |

| | |
|-------------------|-----------|
| 10 Year Average | 2007-2016 |
| Quantity Standard | 0.6208 |
| Quality Standard | 405 |
| Service Standard | \$251 |

| | |
|-------------------------------|--------------|
| DC Amount (before deductions) | Buildout |
| Forecast Population | 153,086 |
| \$ per Capita | \$251 |
| Eligible Amount | \$38,482,759 |

Niagara Region
Service Standard Calculation Sheet

Service: Police Vehicles
 Unit Measure: No. of vehicles and equipment

| Description | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2012 Value (\$/Vehicle) | 2017 Value (\$/Vehicle) |
|----------------------------------|------|------|------|------|------|------|------|------|------|------|-------------------------|-------------------------|
| Mobile Command Post | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 165,000 | \$174,400 |
| Bomb Truck | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 100,000 | \$200,000 |
| Emergency Task Unit | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 100,000 | \$200,000 |
| Boats | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 80,000 | \$54,684 |
| Medeiros | 1 | - | - | - | - | - | - | - | - | - | 235,000 | \$252,000 |
| Boat Trailers | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 10,000 | \$8,917 |
| Hike 30 Foot Command Vessel | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 250,000 | \$250,000 |
| Protector, 28 Foot Patrol Vessel | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 300,000 | \$300,000 |
| Bomb Trailer | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | - | 10,000 | \$10,600 |
| OneTon Pick-up Truck | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 2 | 35,000 | \$43,464 |
| One Ton Cube Van | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 75,000 | \$75,000 |
| Utility Trailers | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 10,000 | \$13,453 |
| One Ton Van Prisoner Transport | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 90,000 | \$92,500 |
| Personal Watercraft (See Doos) | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 10,000 | \$17,176 |
| Personal Water Craft Trailers | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 10,000 | \$2,000 |
| One Ton Van, 15 Passenger | 1 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 60,000 | \$44,136 |
| SUV, Special Service Package | 11 | 12 | 12 | 13 | 13 | 13 | 13 | 13 | 13 | 16 | 40,000 | \$39,163 |
| SUV, Tactical | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 40,000 | \$43,627 |
| Patrol Cruisers | 99 | 105 | 111 | 118 | 124 | 124 | 124 | 124 | 124 | 119 | 42,000 | \$38,630 |
| Non-Patrol Vehicles | 134 | 136 | 138 | 140 | 141 | 141 | 141 | 141 | 141 | 131 | 27,000 | \$18,648 |
| Motorcycles | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 10 | 10 | 10 | 25,000 | \$20,070 |
| Light Vans | 26 | 29 | 32 | 35 | 38 | 38 | 38 | 38 | 38 | 42 | 27,000 | \$18,459 |
| Light Truck | 5 | 7 | 9 | 11 | 12 | 12 | 12 | 12 | 12 | 9 | 35,000 | \$25,605 |
| Medium Truck | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 65,000 | \$52,736 |
| ATV | 4 | 4 | 4 | 4 | 4 | 4 | 6 | 6 | 6 | 6 | 15,000 | \$15,000 |
| Tow Motors | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 30,000 | \$24,800 |
| | | | | | | | | | | | | \$0 |
| Total | 323 | 340 | 353 | 370 | 381 | 381 | 381 | 384 | 385 | 371 | | |

| | | | | | | | | | | |
|---------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Population | 428,641 | 429,625 | 430,447 | 430,502 | 431,346 | 432,173 | 432,789 | 434,382 | 436,263 | 438,671 |
| Per Capita Standard | 0.0008 | 0.0008 | 0.0008 | 0.0009 | 0.0009 | 0.0009 | 0.0009 | 0.0009 | 0.0009 | 0.0008 |

| | |
|-------------------|-----------|
| 10 Year Average | 2007-2016 |
| Quantity Standard | 0.0009 |
| Quality Standard | \$29,100 |
| Service Standard | \$26 |

| | |
|-------------------------------|-------------|
| DC Amount (before deductions) | Buildout |
| Forecast Population | 153,086 |
| \$ per Capita | \$26 |
| Eligible Amount | \$4,009,322 |

Niagara Region
Service Standard Calculation Sheet

Service: Police Small Equipment and Gear
 Unit Measure: No. of equipment and gear

| Description | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 Value (\$/item) |
|-------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------------|
| Equipped Cadets | 13 | 13 | 13 | 13 | - | - | - | - | - | - | \$6,290 |
| Equipped Officers | 682 | 682 | 682 | 682 | 682 | 684 | 685 | 685 | 681 | 677 | \$5,626 |
| Equipped Senior Officers | 20 | 20 | 20 | 20 | 20 | 20 | 21 | 21 | 21 | 21 | \$3,355 |
| Equipped Special Constables | 78 | 78 | 78 | 78 | 60 | 60 | 60 | 58 | 58 | 58 | \$2,998 |
| Portable Radios APX6000 | 360 | 360 | 360 | 360 | 352 | 353 | 354 | 353 | 351 | 349 | \$4,692 |
| Portable Radios APX7000 | 31 | 31 | 31 | 31 | 30 | 30 | 30 | 30 | 30 | 30 | \$7,613 |
| Radar (Gensis II) | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | \$2,500 |
| Radar (Gensis II Directional) | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | \$2,500 |
| Radar (MPH Bee III) | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | \$2,500 |
| Radar (Genesis VPD) | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | \$2,500 |
| Lidar (LTI Ultralyte LRB) | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | \$6,000 |
| Lidar (LTI Ultralyte LR) | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | \$6,000 |
| Radar (Spectre RDD) | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | \$2,500 |
| Total | 1,267 | 1,267 | 1,267 | 1,267 | 1,227 | 1,230 | 1,233 | 1,230 | 1,224 | 1,218 | |

| | | | | | | | | | | |
|---------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Population | 428,641 | 429,625 | 430,447 | 430,502 | 431,346 | 432,173 | 432,789 | 434,382 | 436,263 | 438,671 |
| Per Capita Standard | 0.0030 | 0.0029 | 0.0029 | 0.0029 | 0.0028 | 0.0028 | 0.0028 | 0.0028 | 0.0028 | 0.0028 |

| | |
|------------------------|------------------|
| 10 Year Average | 2007-2016 |
| Quantity Standard | 0.0029 |
| Quality Standard | \$5,010 |
| Service Standard | \$15 |

| | |
|--------------------------------------|----------------|
| DC Amount (before deductions) | 25 Year |
| Forecast Population | 153,086 |
| \$ per Capita | \$15 |
| Eligible Amount | \$2,224,340 |

Niagara Region
Service Standard Calculation Sheet

Service: E.M.S. Facilities
Unit Measure: ft² of building area

| Description | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 Bld'g Value (\$/ft²) | Value/ft² with land, site works, etc. |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------------------|--|
| Fort Erie Ambulance - 100 Hospital Drive - Land Lease | 1,690 | 1,690 | 1,690 | 1,690 | 1,690 | 1,690 | 1,690 | 1,690 | - | - | \$338 | \$382 |
| West Lincoln/Grimsby Ambulance Base -10 Iroquois Trail - Owned | 3,358 | 3,358 | 3,358 | 3,358 | 3,358 | 3,358 | 3,358 | 3,358 | 3,358 | 3,358 | \$338 | \$382 |
| Niagara Falls Ambulance Base 5685 North St. - Leased | 5,990 | 5,990 | 5,990 | 5,990 | 5,990 | 5,990 | 5,990 | 5,990 | 5,990 | 5,990 | \$273 | \$309 |
| NOTL Ambulance Base-176 Wellington St. Land - Leased | 2,190 | 2,190 | 2,190 | 2,190 | 2,190 | 2,190 | 2,190 | 2,190 | 2,190 | 2,190 | \$271 | \$307 |
| Pelham Ambulance Base - 177 HWY. 20 W. - Owned | 3,357 | 3,357 | 3,357 | 3,357 | 3,357 | 3,357 | 3,357 | 3,357 | 3,357 | 3,357 | \$242 | \$276 |
| Port Colborne Base - 42 Dolphin St. - Owned | 4,291 | 4,291 | 4,291 | 4,291 | 4,291 | 4,291 | 4,291 | 4,291 | 4,291 | 4,291 | \$271 | \$307 |
| St. Catharines Ambulance Base-139 Ontario St - Owned | 9,408 | 9,408 | 9,408 | 9,408 | 9,408 | 9,408 | 9,408 | 9,408 | 9,408 | 9,408 | \$339 | \$383 |
| St. Catharines Ambulance Linwell Rd Base-337 Linwell Rd - Owned | 2,100 | 2,100 | 2,100 | 2,100 | 2,100 | 2,100 | 2,100 | 2,100 | 2,100 | 2,100 | \$338 | \$382 |
| Thorold Ambulance Base- 701 Allanburg Rd. - Fire Dept - Leased | 2,714 | 2,714 | 2,714 | 2,714 | 2,714 | 2,714 | 2,714 | 2,714 | 2,714 | 2,714 | \$338 | \$382 |
| Welland Ambulance Base- 580 King Street - Leased | 6,792 | 6,792 | 6,792 | 6,792 | 6,792 | 6,792 | 6,792 | 6,792 | 6,792 | 6,792 | \$338 | \$382 |
| Fort Erie/Ridgeway Ambulance Base-369 Gorham Rd - Owned | 3,360 | 3,360 | 3,360 | 3,360 | 3,360 | 3,360 | 3,360 | 3,360 | 3,360 | 3,360 | \$271 | \$307 |
| Fort Erie Ambulance Base - 650 Gilmore Rd - Owned | - | - | - | - | - | 6,440 | 6,440 | 6,440 | 6,440 | 6,440 | \$373 | \$419 |
| NOTL Ambulance -350 Townline Rd - Fire Dept -Lease | 1,970 | 1,970 | 1,970 | 1,970 | 1,970 | 1,970 | 1,970 | 1,970 | 1,970 | 1,970 | \$338 | \$382 |
| St. Catharines Ambulance - Walnut Street - Fire Dept Lease | 1,108 | 1,108 | 1,108 | 1,108 | 1,108 | 1,108 | 1,108 | 1,108 | - | - | \$338 | \$382 |
| Smithville Ambulance - 110 West St - Owned | 3,474 | 3,474 | 3,474 | 3,474 | 3,474 | 3,474 | 3,474 | 3,474 | 3,474 | 3,474 | \$271 | \$307 |
| Vineland Ambulance Base(Lincoln) 3335 Talman Dr - Fire Dept - Leased | 1,148 | 1,148 | 1,148 | 1,148 | 1,148 | 1,148 | 1,148 | 1,148 | 1,148 | 1,148 | \$338 | \$382 |
| Welland Ambulance 18 Rose Ave - Fire dept -lease | 730 | 730 | 730 | 730 | 730 | 730 | 730 | 730 | 730 | - | \$338 | \$382 |
| Niagara Falls Ambulance- 2722 St Paul Ave - Lease | 975 | 975 | 975 | 975 | 975 | 975 | 975 | 975 | 975 | 975 | \$338 | \$382 |
| Skylon Tower | | 240 | 240 | 240 | 240 | 240 | 240 | 240 | 240 | - | \$338 | \$382 |
| EMS Administration - 509 Glendale Avenue East St. Catharines - Leased | 4,673 | 4,673 | 4,673 | 4,673 | 4,673 | 4,673 | 4,673 | 4,673 | 4,673 | 4,673 | \$338 | \$382 |
| EMS Dispatch - 509 Glendale Avenue East St. Catharines - Leased | 2,139 | 2,139 | 4,000 | 4,000 | 4,000 | 4,000 | 4,000 | 4,000 | 4,000 | 4,000 | \$338 | \$382 |

Niagara Region
Service Standard Calculation Sheet

Service: E.M.S. Facilities
Unit Measure: ft² of building area

| Description | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 Bld'g Value (\$/ft²) | Value/ft² with land, site works, etc. |
|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------------------|---------------------------------------|
| EMS Quality Assurance - 509 Glendale Avenue East St. Catharines - Leased | - | - | - | - | - | - | - | - | 7,333 | 7,333 | \$338 | \$382 |
| Moveable Storage Space - Welland - Rented | - | - | - | 480 | 480 | 480 | 480 | 480 | - | - | \$338 | \$382 |
| Merrittville Ambulance Base - 3450 Merrittville Hwy . Thorold - Owned | - | - | - | - | - | - | - | - | 3,470 | 3,470 | \$493 | \$501 |
| Abbey Rd. Amulance Base - 655 Niagara St., Welland - Leased | - | - | - | - | - | - | - | - | - | 1,750 | \$338 | \$382 |
| Westwood EMS Fleet Centre - 2 Westwood Court, NOTL | - | - | - | - | - | - | - | 14,892 | 14,892 | 14,892 | \$373 | \$420 |
| Casino Space | - | - | - | - | - | - | - | - | 350 | 350 | \$271 | \$307 |
| Total | 61,467 | 61,707 | 63,568 | 64,048 | 64,048 | 70,488 | 70,488 | 85,380 | 93,255 | 94,035 | | |

| | | | | | | | | | | |
|---------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Population | 428,641 | 429,625 | 430,447 | 430,502 | 431,346 | 432,173 | 432,789 | 434,382 | 436,263 | 438,671 |
| Per Capita Standard | 0.1434 | 0.1436 | 0.1477 | 0.1488 | 0.1485 | 0.1631 | 0.1629 | 0.1966 | 0.2138 | 0.2144 |

| | |
|-------------------|-----------|
| 10 Year Average | 2007-2016 |
| Quantity Standard | 0.1683 |
| Quality Standard | \$362 |
| Service Standard | \$61 |

| | |
|-------------------------------|-------------|
| DC Amount (before deductions) | 10 Year |
| Forecast Population | 47,982 |
| \$ per Capita | \$61 |
| Eligible Amount | \$2,926,422 |

Niagara Region
Service Standard Calculation Sheet

Service: E.M.S. Vehicles
 Unit Measure: No. of vehicles and equipment

| Description | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 Value (\$/Vehicle) |
|--------------------------|------|------|------|------|------|------|------|------|------|------|-------------------------|
| Ambulance-Crestline | 16 | 16 | 13 | 12 | 12 | 15 | 15 | 15 | 13 | 13 | \$257,000 |
| Ambulance Demers | 19 | 19 | 24 | 25 | 25 | 21 | 21 | 22 | 27 | 27 | \$257,000 |
| ESUB-Super Duty Ford | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$85,000 |
| Expeditions -Supervisors | 2 | 3 | 4 | 5 | 5 | 7 | 7 | 7 | 8 | 8 | \$117,500 |
| F150-Pick-Up | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$101,900 |
| ESU-Bus | 1 | 1 | 1 | 1 | - | - | - | - | - | - | \$214,600 |
| Stock Vehicle -E350 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | \$48,300 |
| CBRN Vehicle-F350 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$75,100 |
| Gator | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$16,100 |
| ERU | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$80,500 |
| | | | | | | | | | | | |
| Total | 43 | 45 | 48 | 49 | 48 | 50 | 50 | 51 | 55 | 55 | |

| | | | | | | | | | | |
|---------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Population | 428,641 | 429,625 | 430,447 | 430,502 | 431,346 | 432,173 | 432,789 | 434,382 | 436,263 | 438,671 |
| Per Capita Standard | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 |

| | |
|-------------------|-----------|
| 10 Year Average | 2007-2016 |
| Quantity Standard | 0.0001 |
| Quality Standard | \$246,800 |
| Service Standard | \$25 |

| | |
|-------------------------------|-------------|
| DC Amount (before deductions) | 10 Year |
| Forecast Population | 47,982 |
| \$ per Capita | \$25 |
| Eligible Amount | \$1,184,196 |

**Niagara Region
Service Standard Calculation Sheet**

Service: Long Term Care Facilities
Unit Measure: ft² of building area

| Description | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 Bld'g Value (\$/ft²) | Value/ft² with land, site works, etc. |
|---|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------------------------------|--|
| Deer Park Villa Long Term Care Home - 150 Central Avenue Grimsby - Leased / Owned Addition | 56,941 | 56,941 | 56,941 | 56,941 | 56,941 | 56,941 | 56,941 | 56,941 | 56,941 | 56,941 | \$296 | \$335 |
| Northland Pointe Long Term Care Home - 2 Fielden Avenue Port Colborne - Leased | 98,361 | 98,361 | 98,361 | 98,361 | 98,361 | 98,361 | 98,361 | 98,361 | 98,361 | 98,361 | \$391 | \$439 |
| Upper Canada Lodge Long Term Care Home - 272 Wellington Street Niagara on the Lake - Owned (Leased Land) | 44,000 | 44,000 | 44,000 | 44,000 | 44,000 | 44,000 | 44,000 | 44,000 | 44,000 | 44,000 | \$304 | \$344 |
| Rapelje Lodge Long Term Care Home - 277 Plymouth Road Welland - Owned | 78,695 | 78,695 | 78,695 | 78,695 | 78,695 | 78,695 | 78,695 | 78,695 | 78,695 | 78,695 | \$390 | \$438 |
| Linhaven Long Term Care Home - 403 Ontario Street St Catharines - Owned | 121,540 | 121,540 | 121,540 | 121,540 | 121,540 | 121,540 | 121,540 | 121,540 | 121,540 | 121,540 | \$457 | \$512 |
| Gilmore Lodge Long Term Care Home - 50 Gilmore Road Fort Erie - Owned | 44,000 | 44,000 | 44,000 | 44,000 | 44,000 | 44,000 | 44,000 | 44,000 | 44,000 | 44,000 | \$465 | \$521 |
| Meadows of Dorchester Long Term Care Home - 6623 Kalar Road Niagara Falls - Owned | 78,016 | 78,016 | 78,016 | 78,016 | 78,016 | 78,016 | 78,016 | 78,016 | 78,016 | 78,016 | \$393 | \$442 |
| Woodlands of Sunset Long Term Care Home - 920 Pelham Street Welland - Owned | 75,670 | 75,670 | 75,670 | 75,670 | 75,670 | 75,670 | 75,670 | 75,670 | 75,670 | 75,670 | \$239 | \$273 |
| West Niagara Adult Day Service Long Term Care Home- 18 Livingston Avenue Grimsby - Leased | - | - | - | - | - | 1,964 | 1,964 | 1,964 | 1,964 | 1,964 | \$284 | \$322 |
| Fairhaven Adult Day Service Long Term Care Home - 3568 Montrose Road Niagara Falls - License Agreement | 4,300 | 4,300 | 4,300 | 4,300 | 4,300 | 4,300 | 4,300 | 4,300 | 4,300 | 4,300 | \$284 | \$322 |

Niagara Region
Service Standard Calculation Sheet

Service: Long Term Care Facilities
Unit Measure: ft² of building area

| Description | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 Bld'g Value (\$/ft ²) | Value/ft ² with land, site works, etc. |
|--|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--|---|
| T. Roy Adams Regional Centre for Dementia Care - 403 Ontario Street St. Catharines - Owned | 18,460 | 18,460 | 18,460 | 18,460 | 18,460 | 18,460 | 18,460 | 18,460 | 18,460 | 18,460 | \$457 | \$512 |
| Long Term Care Administration Office - 1815 Sir Isaac Brock Way Thorold - Owned | 3,179 | 3,179 | 3,179 | 3,179 | 3,179 | 3,179 | 3,179 | 3,179 | 3,179 | 3,179 | \$379 | \$427 |
| Rapelje Lodge Garage | 480 | 480 | 480 | 480 | 480 | 480 | 480 | 480 | 480 | 480 | \$93 | \$112 |
| Linhaven Garage | 768 | 768 | 768 | 768 | 768 | 768 | 768 | 768 | 768 | 768 | \$141 | \$164 |
| Meadows of Dorchester Equipment Storage | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | \$122 | \$144 |
| Gilmore Lodge Garage | 1,743 | 1,743 | 1,743 | 1,743 | 1,743 | 1,743 | 1,743 | 1,743 | 1,743 | 1,743 | \$164 | \$190 |
| | | | | | | | | | | | | |
| Total | 626,315 | 626,315 | 626,315 | 626,315 | 626,315 | 628,279 | 628,279 | 628,279 | 628,279 | 628,279 | | |

| | | | | | | | | | | |
|---------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Population | 428,641 | 429,625 | 430,447 | 430,502 | 431,346 | 432,173 | 432,789 | 434,382 | 436,263 | 438,671 |
| Per Capita Standard | 1.4612 | 1.4578 | 1.4550 | 1.4548 | 1.4520 | 1.4538 | 1.4517 | 1.4464 | 1.4401 | 1.4322 |

| | |
|-------------------|-----------|
| 10 Year Average | 2007-2016 |
| Quantity Standard | 1.4505 |
| Quality Standard | \$423 |
| Service Standard | \$613 |

| | |
|-------------------------------|--------------|
| DC Amount (before deductions) | 10 Year |
| Forecast Population | 47,982 |
| \$ per Capita | \$613 |
| Eligible Amount | \$29,423,522 |

Niagara Region
Service Standard Calculation Sheet

Service: Social Housing
Unit Measure: ft² of building area

| Description | Local Area Municipality | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 Bld'g Value (\$/ft²) | Value/ft² with land |
|-------------------|-------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------------------------|---------------------|
| 317 Albany St | Fort Erie | 32,524 | 32,524 | 32,524 | 32,524 | 32,524 | 32,524 | 32,524 | 32,524 | 32,524 | 32,524 | \$141 | \$149 |
| 132 Idylewilde St | Fort Erie | 7,692 | 7,692 | 7,692 | 7,692 | 7,692 | 7,692 | 7,692 | 7,692 | 7,692 | 7,692 | \$184 | \$188 |
| 19-31 Bowden | Fort Erie | 8,702 | 8,702 | 8,702 | 8,702 | 8,702 | 8,702 | 8,702 | 8,702 | 8,702 | 8,702 | \$159 | \$166 |
| 1-17 Bowden | Fort Erie | 9,894 | 9,894 | 9,894 | 9,894 | 9,894 | 9,894 | 9,894 | 9,894 | 9,894 | 9,894 | \$180 | \$186 |
| 1A Bowden | Fort Erie | 7,204 | 7,204 | 7,204 | 7,204 | 7,204 | 7,204 | 7,204 | 7,204 | 7,204 | 7,204 | \$191 | \$199 |
| 2-20 Bowden | Fort Erie | 11,730 | 11,730 | 11,730 | 11,730 | 11,730 | 11,730 | 11,730 | 11,730 | 11,730 | 11,730 | \$168 | \$174 |
| 82 Crooks St | Fort Erie | 983 | 983 | 983 | 983 | 983 | 983 | 983 | 983 | 983 | 983 | \$187 | \$201 |
| 84 Crooks St | Fort Erie | 947 | 947 | 947 | 947 | 947 | 947 | 947 | 947 | 947 | 947 | \$194 | \$209 |
| 17 Jessie | Fort Erie | 952 | 952 | 952 | 952 | 952 | 952 | 952 | 952 | 952 | 952 | \$193 | \$208 |
| 15 Jessie | Fort Erie | 957 | 957 | 957 | 957 | 957 | 957 | 957 | 957 | 957 | 957 | \$192 | \$207 |
| 337 Highland Ave | Fort Erie | 758 | 758 | 758 | 758 | 758 | 758 | 758 | 758 | 758 | 758 | \$242 | \$261 |
| 335 Highland Ave | Fort Erie | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | \$191 | \$212 |
| 333 Highland Ave | Fort Erie | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | \$191 | \$212 |
| 331 Highland Ave | Fort Erie | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | \$191 | \$212 |
| 329 Highland Ave | Fort Erie | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | \$191 | \$212 |
| 327 Highland Ave | Fort Erie | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | \$191 | \$212 |
| 325 Highland Ave | Fort Erie | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | \$191 | \$212 |
| 323 Highland Ave | Fort Erie | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | \$191 | \$212 |
| 321 Highland Ave. | Fort Erie | 982 | 982 | 982 | 982 | 982 | 982 | 982 | 982 | 982 | 982 | \$187 | \$202 |
| 88 Crooks St | Fort Erie | 996 | 996 | 996 | 996 | 996 | 996 | 996 | 996 | 996 | 996 | \$184 | \$203 |
| 86 Crooks St | Fort Erie | 977 | 977 | 977 | 977 | 977 | 977 | 977 | 977 | 977 | 977 | \$188 | \$207 |
| 340 Highland Ave | Fort Erie | 756 | 756 | 756 | 756 | 756 | 756 | 756 | 756 | 756 | 756 | \$243 | \$267 |
| 338 Highland Ave | Fort Erie | 983 | 983 | 983 | 983 | 983 | 983 | 983 | 983 | 983 | 983 | \$187 | \$212 |
| 336 Highland Ave | Fort Erie | 977 | 977 | 977 | 977 | 977 | 977 | 977 | 977 | 977 | 977 | \$188 | \$214 |
| 334 Highland Ave | Fort Erie | 977 | 977 | 977 | 977 | 977 | 977 | 977 | 977 | 977 | 977 | \$188 | \$214 |
| 332 Highland Ave | Fort Erie | 977 | 977 | 977 | 977 | 977 | 977 | 977 | 977 | 977 | 977 | \$188 | \$214 |
| 330 Highland Ave | Fort Erie | 1,173 | 1,173 | 1,173 | 1,173 | 1,173 | 1,173 | 1,173 | 1,173 | 1,173 | 1,173 | \$157 | \$178 |
| 328 Highland Ave | Fort Erie | 977 | 977 | 977 | 977 | 977 | 977 | 977 | 977 | 977 | 977 | \$188 | \$210 |
| 326 Highland Ave | Fort Erie | 977 | 977 | 977 | 977 | 977 | 977 | 977 | 977 | 977 | 977 | \$188 | \$214 |
| 324 Highland Ave. | Fort Erie | 996 | 996 | 996 | 996 | 996 | 996 | 996 | 996 | 996 | 996 | \$184 | \$202 |
| 24 Jessie | Fort Erie | 756 | 756 | 756 | 756 | 756 | 756 | 756 | 756 | 756 | 756 | \$243 | \$264 |
| 21 Jessie | Fort Erie | 972 | 972 | 972 | 972 | 972 | 972 | 972 | 972 | 972 | 972 | \$189 | \$209 |
| 19 Jessie | Fort Erie | 972 | 972 | 972 | 972 | 972 | 972 | 972 | 972 | 972 | 972 | \$189 | \$208 |
| 335 Bowen | Fort Erie | 996 | 996 | 996 | 996 | 996 | 996 | 996 | 996 | 996 | 996 | \$184 | \$200 |
| 67 Leaside Dr | Welland | 1,101 | 1,101 | 1,101 | 1,101 | 1,101 | 1,101 | 1,101 | 1,101 | 1,101 | 1,101 | \$180 | \$196 |
| 11 Leaside Dr | Welland | 1,101 | 1,101 | 1,101 | 1,101 | 1,101 | 1,101 | 1,101 | 1,101 | 1,101 | 1,101 | \$180 | \$198 |
| 44 Leaside Dr | Welland | 1,031 | 1,031 | 1,031 | 1,031 | 1,031 | 1,031 | 1,031 | 1,031 | 1,031 | 1,031 | \$192 | \$212 |
| 50 Mccrae Dr. | Welland | 992 | 992 | 992 | 992 | 992 | 992 | 992 | 992 | 992 | 992 | \$199 | \$219 |
| 53 New Leaf Cres | Welland | 992 | 992 | 992 | 992 | 992 | 992 | 992 | 992 | 992 | 992 | \$199 | \$218 |

Niagara Region
Service Standard Calculation Sheet

Service: Social Housing
Unit Measure: ft² of building area

| Description | Local Area Municipality | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 Bld'g Value (\$/ft²) | Value/ft² with land |
|-------------------|-------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------------------------|---------------------|
| 22 Silvan Dr | Welland | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | \$158 | \$167 |
| 24 Silvan Dr | Welland | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | \$158 | \$169 |
| 30 Silvan Dr | Welland | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | \$158 | \$168 |
| 32 Silvan Dr | Welland | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | \$158 | \$168 |
| 38 Silvan Dr | Welland | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | \$158 | \$168 |
| 40 Silvan Dr | Welland | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | \$158 | \$168 |
| 46 Silvan Dr | Welland | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | \$158 | \$168 |
| 48 Silvan Dr | Welland | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | 1,136 | \$158 | \$168 |
| 124 Elmview St | Welland | 43,592 | 43,592 | 43,592 | 43,592 | 43,592 | 43,592 | 43,592 | 43,592 | 43,592 | 43,592 | \$146 | \$148 |
| 140 Elmview St | Welland | 19,440 | 19,440 | 19,440 | 19,440 | 19,440 | 19,440 | 19,440 | 19,440 | 19,440 | 19,440 | \$165 | \$169 |
| 61 Woodcroft Cres | Welland | 19,232 | 19,232 | 19,232 | 19,232 | 19,232 | 19,232 | 19,232 | 19,232 | 19,232 | 19,232 | \$152 | \$157 |
| 235 Fitch St W | Welland | 25,112 | 25,112 | 25,112 | 25,112 | 25,112 | 25,112 | 25,112 | 25,112 | 25,112 | 25,112 | \$412 | \$422 |
| 211 King St | Welland | 78,670 | 78,670 | 78,670 | 78,670 | 78,670 | 78,670 | 78,670 | 78,670 | 78,670 | 78,670 | \$239 | \$240 |
| 235 Fitch St E | Welland | - | - | - | - | - | - | 65,868 | 65,868 | 65,868 | 65,868 | \$219 | \$223 |
| 292 Victory Ave | Welland | 806 | 806 | 806 | 806 | 806 | 806 | 806 | 806 | 806 | 806 | \$242 | \$256 |
| 294 Victory Ave | Welland | 808 | 808 | 808 | 808 | 808 | 808 | 808 | 808 | 808 | 808 | \$241 | \$252 |
| 300 Victory Ave | Welland | 807 | 807 | 807 | 807 | 807 | 807 | 807 | 807 | 807 | 807 | \$242 | \$253 |
| 302 Victory Ave | Welland | 801 | 801 | 801 | 801 | 801 | 801 | 801 | 801 | 801 | 801 | \$243 | \$255 |
| 308 Victory Ave | Welland | 807 | 807 | 807 | 807 | 807 | 807 | 807 | 807 | 807 | 807 | \$242 | \$253 |
| 310 Victory | Welland | 807 | 807 | 807 | 807 | 807 | 807 | 807 | 807 | 807 | 807 | \$242 | \$253 |
| 316 Victory | Welland | 814 | 814 | 814 | 814 | 814 | 814 | 814 | 814 | 814 | 814 | \$240 | \$251 |
| 318 Victory | Welland | 808 | 808 | 808 | 808 | 808 | 808 | 808 | 808 | 808 | 808 | \$241 | \$252 |
| 324 Victory | Welland | 810 | 810 | 810 | 810 | 810 | 810 | 810 | 810 | 810 | 810 | \$241 | \$252 |
| 326 Victory Ave | Welland | 807 | 807 | 807 | 807 | 807 | 807 | 807 | 807 | 807 | 807 | \$242 | \$253 |
| 332 Victory Ave | Welland | 807 | 807 | 807 | 807 | 807 | 807 | 807 | 807 | 807 | 807 | \$242 | \$253 |
| 334 Victory Ave | Welland | 807 | 807 | 807 | 807 | 807 | 807 | 807 | 807 | 807 | 807 | \$242 | \$253 |
| 340 Victory Ave | Welland | 807 | 807 | 807 | 807 | 807 | 807 | 807 | 807 | 807 | 807 | \$242 | \$253 |
| 342 Victory Ave | Welland | 810 | 810 | 810 | 810 | 810 | 810 | 810 | 810 | 810 | 810 | \$241 | \$252 |
| 348 Victory Ave | Welland | 808 | 808 | 808 | 808 | 808 | 808 | 808 | 808 | 808 | 808 | \$241 | \$252 |
| 350 Victory Ave | Welland | 809 | 809 | 809 | 809 | 809 | 809 | 809 | 809 | 809 | 809 | \$241 | \$255 |
| 293 Victory Ave | Welland | 1,193 | 1,193 | 1,193 | 1,193 | 1,193 | 1,193 | 1,193 | 1,193 | 1,193 | 1,193 | \$163 | \$172 |
| 295 Victory Ave | Welland | 1,197 | 1,197 | 1,197 | 1,197 | 1,197 | 1,197 | 1,197 | 1,197 | 1,197 | 1,197 | \$163 | \$171 |
| 301 Victory Ave | Welland | 1,028 | 1,028 | 1,028 | 1,028 | 1,028 | 1,028 | 1,028 | 1,028 | 1,028 | 1,028 | \$190 | \$199 |
| 303 Victory Ave | Welland | 1,030 | 1,030 | 1,030 | 1,030 | 1,030 | 1,030 | 1,030 | 1,030 | 1,030 | 1,030 | \$189 | \$198 |
| 309 Victory Ave | Welland | 1,022 | 1,022 | 1,022 | 1,022 | 1,022 | 1,022 | 1,022 | 1,022 | 1,022 | 1,022 | \$191 | \$200 |
| 311 Victory Ave | Welland | 1,018 | 1,018 | 1,018 | 1,018 | 1,018 | 1,018 | 1,018 | 1,018 | 1,018 | 1,018 | \$192 | \$201 |
| 317 Victory Ave | Welland | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | \$190 | \$199 |
| 319 Victory Ave | Welland | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | \$190 | \$199 |
| 325 Victory Ave | Welland | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | \$190 | \$199 |
| 327 Victory Ave | Welland | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | \$190 | \$199 |
| 333 Victory Ave | Welland | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | \$190 | \$199 |
| 335 Victory Ave | Welland | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | \$190 | \$199 |

Niagara Region
Service Standard Calculation Sheet

Service: Social Housing
Unit Measure: ft² of building area

| Description | Local Area Municipality | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 Bld'g Value (\$/ft²) | Value/ft² with land |
|-----------------------|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------------|---------------------|
| 341 Victory Ave | Welland | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | \$190 | \$199 |
| 343 Victory Ave | Welland | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | \$190 | \$199 |
| 349 Victory Ave | Welland | 1,216 | 1,216 | 1,216 | 1,216 | 1,216 | 1,216 | 1,216 | 1,216 | 1,216 | 1,216 | \$160 | \$168 |
| 351 Victory Ave | Welland | 1,216 | 1,216 | 1,216 | 1,216 | 1,216 | 1,216 | 1,216 | 1,216 | 1,216 | 1,216 | \$160 | \$169 |
| 292 Gatfield | Welland | 1,392 | 1,392 | 1,392 | 1,392 | 1,392 | 1,392 | 1,392 | 1,392 | 1,392 | 1,392 | \$140 | \$150 |
| 296 Gatfield | Welland | 1,226 | 1,226 | 1,226 | 1,226 | 1,226 | 1,226 | 1,226 | 1,226 | 1,226 | 1,226 | \$159 | \$168 |
| 300 Gatfield | Welland | 1,226 | 1,226 | 1,226 | 1,226 | 1,226 | 1,226 | 1,226 | 1,226 | 1,226 | 1,226 | \$159 | \$168 |
| 304 Gatfield | Welland | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | \$185 | \$196 |
| 308 Gatfield | Welland | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | \$185 | \$196 |
| 312 Gatfield | Welland | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | \$185 | \$196 |
| 316 Gatfield | Welland | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | \$185 | \$196 |
| 320 Gatfield | Welland | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | \$185 | \$196 |
| 324 Gatfield | Welland | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | \$185 | \$196 |
| 328 Gatfield | Welland | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | \$185 | \$196 |
| 332 Gatfield | Welland | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | 1,052 | \$185 | \$196 |
| 336 Gatfield | Welland | 1,226 | 1,226 | 1,226 | 1,226 | 1,226 | 1,226 | 1,226 | 1,226 | 1,226 | 1,226 | \$159 | \$168 |
| 340 Gatfield | Welland | 1,392 | 1,392 | 1,392 | 1,392 | 1,392 | 1,392 | 1,392 | 1,392 | 1,392 | 1,392 | \$140 | \$150 |
| 219-221 McLaughlin St | Welland | 2,200 | 2,200 | 2,200 | 2,200 | 2,200 | 2,200 | 2,200 | 2,200 | 2,200 | 2,200 | \$179 | \$188 |
| 215-217 McLaughlin St | Welland | 1,662 | 1,662 | 1,662 | 1,662 | 1,662 | 1,662 | 1,662 | 1,662 | 1,662 | 1,662 | \$236 | \$247 |
| 211-213 McLaughlin St | Welland | 2,216 | 2,216 | 2,216 | 2,216 | 2,216 | 2,216 | 2,216 | 2,216 | 2,216 | 2,216 | \$177 | \$185 |
| 207-209 McLaughlin St | Welland | 2,216 | 2,216 | 2,216 | 2,216 | 2,216 | 2,216 | 2,216 | 2,216 | 2,216 | 2,216 | \$177 | \$185 |
| 203-205 McLaughlin St | Welland | 1,676 | 1,676 | 1,676 | 1,676 | 1,676 | 1,676 | 1,676 | 1,676 | 1,676 | 1,676 | \$234 | \$245 |
| 199-201 McLaughlin St | Welland | 1,964 | 1,964 | 1,964 | 1,964 | 1,964 | 1,964 | 1,964 | 1,964 | 1,964 | 1,964 | \$200 | \$209 |
| 195-197 McLaughlin St | Welland | 2,220 | 2,220 | 2,220 | 2,220 | 2,220 | 2,220 | 2,220 | 2,220 | 2,220 | 2,220 | \$177 | \$185 |
| 191-193 McLaughlin St | Welland | 2,208 | 2,208 | 2,208 | 2,208 | 2,208 | 2,208 | 2,208 | 2,208 | 2,208 | 2,208 | \$178 | \$186 |
| 187-189 McLaughlin St | Welland | 1,670 | 1,670 | 1,670 | 1,670 | 1,670 | 1,670 | 1,670 | 1,670 | 1,670 | 1,670 | \$235 | \$246 |
| 183-185 McLaughlin St | Welland | 2,216 | 2,216 | 2,216 | 2,216 | 2,216 | 2,216 | 2,216 | 2,216 | 2,216 | 2,216 | \$177 | \$185 |
| 179-181 McLaughlin St | Welland | 1,672 | 1,672 | 1,672 | 1,672 | 1,672 | 1,672 | 1,672 | 1,672 | 1,672 | 1,672 | \$235 | \$246 |
| 175-177 McLaughlin St | Welland | 2,202 | 2,202 | 2,202 | 2,202 | 2,202 | 2,202 | 2,202 | 2,202 | 2,202 | 2,202 | \$178 | \$186 |
| 218-220 McLaughlin St | Welland | 1,626 | 1,626 | 1,626 | 1,626 | 1,626 | 1,626 | 1,626 | 1,626 | 1,626 | 1,626 | \$242 | \$254 |
| 214-216 McLaughlin St | Welland | 2,208 | 2,208 | 2,208 | 2,208 | 2,208 | 2,208 | 2,208 | 2,208 | 2,208 | 2,208 | \$178 | \$186 |
| 210-212 McLaughlin St | Welland | 2,200 | 2,200 | 2,200 | 2,200 | 2,200 | 2,200 | 2,200 | 2,200 | 2,200 | 2,200 | \$179 | \$187 |
| 206-208 McLaughlin St | Welland | 1,904 | 1,904 | 1,904 | 1,904 | 1,904 | 1,904 | 1,904 | 1,904 | 1,904 | 1,904 | \$206 | \$215 |
| 202-204 McLaughlin St | Welland | 2,208 | 2,208 | 2,208 | 2,208 | 2,208 | 2,208 | 2,208 | 2,208 | 2,208 | 2,208 | \$178 | \$186 |
| 198-200 McLaughlin St | Welland | 1,664 | 1,664 | 1,664 | 1,664 | 1,664 | 1,664 | 1,664 | 1,664 | 1,664 | 1,664 | \$236 | \$247 |
| 194-196 McLaughlin St | Welland | 2,200 | 2,200 | 2,200 | 2,200 | 2,200 | 2,200 | 2,200 | 2,200 | 2,200 | 2,200 | \$179 | \$187 |
| 190-192 McLaughlin St | Welland | 1,668 | 1,668 | 1,668 | 1,668 | 1,668 | 1,668 | 1,668 | 1,668 | 1,668 | 1,668 | \$235 | \$245 |
| 186-188 McLaughlin St | Welland | 1,910 | 1,910 | 1,910 | 1,910 | 1,910 | 1,910 | 1,910 | 1,910 | 1,910 | 1,910 | \$206 | \$215 |
| 182-184 McLaughlin St | Welland | 2,208 | 2,208 | 2,208 | 2,208 | 2,208 | 2,208 | 2,208 | 2,208 | 2,208 | 2,208 | \$178 | \$186 |
| 178-180 McLaughlin St | Welland | 2,208 | 2,208 | 2,208 | 2,208 | 2,208 | 2,208 | 2,208 | 2,208 | 2,208 | 2,208 | \$178 | \$186 |
| 174-176 McLaughlin St | Welland | 2,200 | 2,200 | 2,200 | 2,200 | 2,200 | 2,200 | 2,200 | 2,200 | 2,200 | 2,200 | \$179 | \$186 |
| 170-172 McLaughlin St | Welland | 1,664 | 1,664 | 1,664 | 1,664 | 1,664 | 1,664 | 1,664 | 1,664 | 1,664 | 1,664 | \$236 | \$246 |

Niagara Region
Service Standard Calculation Sheet

Service: Social Housing
Unit Measure: ft² of building area

| Description | Local Area Municipality | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 Bld'g Value (\$/ft²) | Value/ft² with land |
|------------------------|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------------|---------------------|
| 272-274 Roach Ave | Welland | 1,728 | 1,728 | 1,728 | 1,728 | 1,728 | 1,728 | 1,728 | 1,728 | 1,728 | 1,728 | \$225 | \$237 |
| 262-264 Roach Ave | Welland | 1,728 | 1,728 | 1,728 | 1,728 | 1,728 | 1,728 | 1,728 | 1,728 | 1,728 | 1,728 | \$225 | \$237 |
| 252-254 Roach Ave | Welland | 1,728 | 1,728 | 1,728 | 1,728 | 1,728 | 1,728 | 1,728 | 1,728 | 1,728 | 1,728 | \$225 | \$237 |
| 242-244 Roach Ave | Welland | 2,328 | 2,328 | 2,328 | 2,328 | 2,328 | 2,328 | 2,328 | 2,328 | 2,328 | 2,328 | \$167 | \$175 |
| 232-234 Roach Ave | Welland | 2,244 | 2,244 | 2,244 | 2,244 | 2,244 | 2,244 | 2,244 | 2,244 | 2,244 | 2,244 | \$173 | \$182 |
| 222-224 Roach Ave | Welland | 1,716 | 1,716 | 1,716 | 1,716 | 1,716 | 1,716 | 1,716 | 1,716 | 1,716 | 1,716 | \$227 | \$239 |
| 212-214 Roach Ave | Welland | 2,244 | 2,244 | 2,244 | 2,244 | 2,244 | 2,244 | 2,244 | 2,244 | 2,244 | 2,244 | \$173 | \$182 |
| 202-204 Roach Ave | Welland | 1,716 | 1,716 | 1,716 | 1,716 | 1,716 | 1,716 | 1,716 | 1,716 | 1,716 | 1,716 | \$227 | \$240 |
| 301-303 Roach Ave | Welland | 2,270 | 2,270 | 2,270 | 2,270 | 2,270 | 2,270 | 2,270 | 2,270 | 2,270 | 2,270 | \$171 | \$179 |
| 291-293 Roach Ave | Welland | 2,232 | 2,232 | 2,232 | 2,232 | 2,232 | 2,232 | 2,232 | 2,232 | 2,232 | 2,232 | \$174 | \$188 |
| 281-283 Roach Ave | Welland | 1,728 | 1,728 | 1,728 | 1,728 | 1,728 | 1,728 | 1,728 | 1,728 | 1,728 | 1,728 | \$225 | \$237 |
| 271-273 Roach Ave | Welland | 2,248 | 2,248 | 2,248 | 2,248 | 2,248 | 2,248 | 2,248 | 2,248 | 2,248 | 2,248 | \$173 | \$181 |
| 261-263 Roach Ave | Welland | 2,232 | 2,232 | 2,232 | 2,232 | 2,232 | 2,232 | 2,232 | 2,232 | 2,232 | 2,232 | \$174 | \$182 |
| 251-253 Roach Ave | Welland | 2,240 | 2,240 | 2,240 | 2,240 | 2,240 | 2,240 | 2,240 | 2,240 | 2,240 | 2,240 | \$174 | \$182 |
| 241-243 Roach Ave | Welland | 1,728 | 1,728 | 1,728 | 1,728 | 1,728 | 1,728 | 1,728 | 1,728 | 1,728 | 1,728 | \$225 | \$237 |
| 231-233 Roach Ave | Welland | 2,248 | 2,248 | 2,248 | 2,248 | 2,248 | 2,248 | 2,248 | 2,248 | 2,248 | 2,248 | \$173 | \$181 |
| 221-223 Roach Ave | Welland | 2,270 | 2,270 | 2,270 | 2,270 | 2,270 | 2,270 | 2,270 | 2,270 | 2,270 | 2,270 | \$171 | \$179 |
| 211-213 Roach Ave | Welland | 1,746 | 1,746 | 1,746 | 1,746 | 1,746 | 1,746 | 1,746 | 1,746 | 1,746 | 1,746 | \$223 | \$235 |
| 201-203 Roach Ave | Welland | 2,232 | 2,232 | 2,232 | 2,232 | 2,232 | 2,232 | 2,232 | 2,232 | 2,232 | 2,232 | \$174 | \$183 |
| 24-30 Dundonald St | St Catharines | 4,956 | 4,956 | 4,956 | 4,956 | 4,956 | 4,956 | 4,956 | 4,956 | 4,956 | 4,956 | \$168 | \$178 |
| 14-20 Dundonald Street | St Catharines | 4,956 | 4,956 | 4,956 | 4,956 | 4,956 | 4,956 | 4,956 | 4,956 | 4,956 | 4,956 | \$168 | \$178 |
| 23 Christopher | St Catharines | 9,280 | 9,280 | 9,280 | 9,280 | 9,280 | 9,280 | 9,280 | 9,280 | 9,280 | 9,280 | \$90 | \$95 |
| 8 Christopher St | St Catharines | 4,640 | 4,640 | 4,640 | 4,640 | 4,640 | 4,640 | 4,640 | 4,640 | 4,640 | 4,640 | \$180 | \$190 |
| 16 Christopher St | St Catharines | 4,640 | 4,640 | 4,640 | 4,640 | 4,640 | 4,640 | 4,640 | 4,640 | 4,640 | 4,640 | \$180 | \$190 |
| 24-30 Christpoher St | St Catharines | 4,084 | 4,084 | 4,084 | 4,084 | 4,084 | 4,084 | 4,084 | 4,084 | 4,084 | 4,084 | \$204 | \$216 |
| 32-38 Christopher St | St Catharines | 4,640 | 4,640 | 4,640 | 4,640 | 4,640 | 4,640 | 4,640 | 4,640 | 4,640 | 4,640 | \$180 | \$190 |
| 40-46 Christopher St | St Catharines | 4,640 | 4,640 | 4,640 | 4,640 | 4,640 | 4,640 | 4,640 | 4,640 | 4,640 | 4,640 | \$180 | \$190 |
| 48-54 Chistopher St | St Catharines | 4,640 | 4,640 | 4,640 | 4,640 | 4,640 | 4,640 | 4,640 | 4,640 | 4,640 | 4,640 | \$180 | \$190 |
| 56-62 Christopher St | St Catharines | 4,084 | 4,084 | 4,084 | 4,084 | 4,084 | 4,084 | 4,084 | 4,084 | 4,084 | 4,084 | \$204 | \$216 |
| 13-19 Dundonald Ave. | St Catharines | 4,320 | 4,320 | 4,320 | 4,320 | 4,320 | 4,320 | 4,320 | 4,320 | 4,320 | 4,320 | \$193 | \$204 |
| 9-15 Christopher St. | St Catharines | 4,084 | 4,084 | 4,084 | 4,084 | 4,084 | 4,084 | 4,084 | 4,084 | 4,084 | 4,084 | \$204 | \$216 |
| 17-23 Christopher | St Catharines | 4,640 | 4,640 | 4,640 | 4,640 | 4,640 | 4,640 | 4,640 | 4,640 | 4,640 | 4,640 | \$180 | \$190 |
| 25-31 Christopher St | St Catharines | 4,640 | 4,640 | 4,640 | 4,640 | 4,640 | 4,640 | 4,640 | 4,640 | 4,640 | 4,640 | \$180 | \$190 |
| 34 Powerview Ave | St Catharines | 1,426 | 1,426 | 1,426 | 1,426 | 1,426 | 1,426 | 1,426 | 1,426 | 1,426 | 1,426 | \$146 | \$157 |
| 32 Powerview Ave | St Catharines | 1,426 | 1,426 | 1,426 | 1,426 | 1,426 | 1,426 | 1,426 | 1,426 | 1,426 | 1,426 | \$146 | \$154 |
| 30 Powerview | St Catharines | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | \$208 | \$216 |
| 28 Powerview Ave | St Catharines | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | \$208 | \$218 |
| 29 Powerview Ave | St Catharines | 1,426 | 1,426 | 1,426 | 1,426 | 1,426 | 1,426 | 1,426 | 1,426 | 1,426 | 1,426 | \$146 | \$155 |
| 27 Powerview Ave | St Catharines | 1,426 | 1,426 | 1,426 | 1,426 | 1,426 | 1,426 | 1,426 | 1,426 | 1,426 | 1,426 | \$146 | \$157 |
| 19 Powerview Ave | St Catharines | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | \$208 | \$218 |
| 17 Powerview Ave | St Catharines | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | \$208 | \$218 |

Niagara Region
Service Standard Calculation Sheet

Service: Social Housing
Unit Measure: ft² of building area

| Description | Local Area Municipality | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 Bld'g Value (\$/ft²) | Value/ft² with land |
|-----------------------|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------------|---------------------|
| 26 Wallace | St Catharines | 1,433 | 1,433 | 1,433 | 1,433 | 1,433 | 1,433 | 1,433 | 1,433 | 1,433 | 1,433 | \$145 | \$154 |
| 24 Wallace | St Catharines | 1,433 | 1,433 | 1,433 | 1,433 | 1,433 | 1,433 | 1,433 | 1,433 | 1,433 | 1,433 | \$145 | \$150 |
| 25 Galbraith | St Catharines | 1,427 | 1,427 | 1,427 | 1,427 | 1,427 | 1,427 | 1,427 | 1,427 | 1,427 | 1,427 | \$146 | \$155 |
| 23 Galbraith | St Catharines | 1,427 | 1,427 | 1,427 | 1,427 | 1,427 | 1,427 | 1,427 | 1,427 | 1,427 | 1,427 | \$146 | \$151 |
| 21 Galbraith | St Catharines | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | \$204 | \$214 |
| 19 Galbraith | St Catharines | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | \$204 | \$214 |
| 17 Galbraith St. | St Catharines | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | \$204 | \$214 |
| 15 Galbraith | St Catharines | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | \$204 | \$214 |
| 13 Galbraith | St Catharines | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | \$180 | \$189 |
| 11 Galbraith | St Catharines | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | \$180 | \$189 |
| 9 Galbraith | St Catharines | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | \$180 | \$189 |
| 7 Galbraith | St Catharines | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | \$180 | \$189 |
| 28 Galbraith | St Catharines | 1,021 | 1,021 | 1,021 | 1,021 | 1,021 | 1,021 | 1,021 | 1,021 | 1,021 | 1,021 | \$204 | \$216 |
| 26 Galbraith | St Catharines | 1,021 | 1,021 | 1,021 | 1,021 | 1,021 | 1,021 | 1,021 | 1,021 | 1,021 | 1,021 | \$204 | \$213 |
| 24 Galbraith | St Catharines | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | \$180 | \$188 |
| 22 Galbraith | St Catharines | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | \$180 | \$189 |
| 20 Galbraith | St Catharines | 1,158 | 1,158 | 1,158 | 1,158 | 1,158 | 1,158 | 1,158 | 1,158 | 1,158 | 1,158 | \$180 | \$189 |
| 18 Galbraith | St Catharines | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | 1,160 | \$180 | \$189 |
| 16 Galbraith | St Catharines | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | \$204 | \$214 |
| 14 Galbraith | St Catharines | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | \$204 | \$214 |
| 12 Galbraith | St Catharines | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | \$204 | \$214 |
| 10 Galbraith | St Catharines | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | \$204 | \$214 |
| 8 Galbraith | St Catharines | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | \$204 | \$214 |
| 6 Galbraith | St Catharines | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | \$204 | \$214 |
| 4 Galbraith | St Catharines | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | \$204 | \$214 |
| 2 Galbraith | St Catharines | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | \$204 | \$214 |
| 13 Brackencrest | St Catharines | 973 | 973 | 973 | 973 | 973 | 973 | 973 | 973 | 973 | 973 | \$202 | \$211 |
| 15 Brackencrest | St Catharines | 973 | 973 | 973 | 973 | 973 | 973 | 973 | 973 | 973 | 973 | \$202 | \$211 |
| 1 Brackencrest | St Catharines | 986 | 986 | 986 | 986 | 986 | 986 | 986 | 986 | 986 | 986 | \$199 | \$210 |
| 3 Brackencrest | St Catharines | 986 | 986 | 986 | 986 | 986 | 986 | 986 | 986 | 986 | 986 | \$199 | \$210 |
| 9 Brackenrest | St Catharines | 988 | 988 | 988 | 988 | 988 | 988 | 988 | 988 | 988 | 988 | \$199 | \$209 |
| 11 Brackenrest | St Catharines | 988 | 988 | 988 | 988 | 988 | 988 | 988 | 988 | 988 | 988 | \$199 | \$209 |
| 69 Greenmaple | St Catharines | 1,006 | 1,006 | 1,006 | 1,006 | 1,006 | 1,006 | 1,006 | 1,006 | 1,006 | 1,006 | \$195 | \$204 |
| 67 Greenmaple | St Catharines | 1,006 | 1,006 | 1,006 | 1,006 | 1,006 | 1,006 | 1,006 | 1,006 | 1,006 | 1,006 | \$195 | \$204 |
| 72 Greenmaple | St Catharines | 999 | 999 | 999 | 999 | 999 | 999 | 999 | 999 | 999 | 999 | \$197 | \$208 |
| 70 Greenmaple | St Catharines | 999 | 999 | 999 | 999 | 999 | 999 | 999 | 999 | 999 | 999 | \$197 | \$208 |
| 48 Greenmaple | St Catharines | 1,012 | 1,012 | 1,012 | 1,012 | 1,012 | 1,012 | 1,012 | 1,012 | 1,012 | 1,012 | \$194 | \$204 |
| 46 Greenmaple | St Catharines | 1,012 | 1,012 | 1,012 | 1,012 | 1,012 | 1,012 | 1,012 | 1,012 | 1,012 | 1,012 | \$194 | \$204 |
| 206 St. Augustine Dr. | St Catharines | 1,006 | 1,006 | 1,006 | 1,006 | 1,006 | 1,006 | 1,006 | 1,006 | 1,006 | 1,006 | \$195 | \$204 |
| 204 St. Augustine Dr | St Catharines | 1,006 | 1,006 | 1,006 | 1,006 | 1,006 | 1,006 | 1,006 | 1,006 | 1,006 | 1,006 | \$195 | \$204 |
| 190 St Augustine Dr | St Catharines | 1,006 | 1,006 | 1,006 | 1,006 | 1,006 | 1,006 | 1,006 | 1,006 | 1,006 | 1,006 | \$195 | \$204 |
| 188 St Augustine Dr | St Catharines | 1,006 | 1,006 | 1,006 | 1,006 | 1,006 | 1,006 | 1,006 | 1,006 | 1,006 | 1,006 | \$195 | \$204 |

Niagara Region
Service Standard Calculation Sheet

Service: Social Housing
Unit Measure: ft² of building area

| Description | Local Area Municipality | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 Bld'g Value (\$/ft²) | Value/ft² with land |
|---------------------|-------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------------------------|---------------------|
| 59 Rykert | St Catharines | 123,920 | 123,920 | 123,920 | 123,920 | 123,920 | 123,920 | 123,920 | 123,920 | 123,920 | 123,920 | \$152 | \$160 |
| 15 Gale Street | St Catharines | 128,490 | 128,490 | 128,490 | 128,490 | 128,490 | 128,490 | 128,490 | 128,490 | 128,490 | 128,490 | \$235 | \$236 |
| 14 Centre St | St Catharines | 97,608 | 97,608 | 97,608 | 97,608 | 97,608 | 97,608 | 97,608 | 97,608 | 97,608 | 97,608 | \$198 | \$199 |
| 45 Manchester | St Catharines | 98,597 | 98,597 | 98,597 | 98,597 | 98,597 | 98,597 | 98,597 | 98,597 | 98,597 | 98,597 | \$173 | \$182 |
| 479A-CCarlton St | St Catharines | 143,142 | 143,142 | 143,142 | 143,142 | 143,142 | 143,142 | 143,142 | 143,142 | 143,142 | 143,142 | \$162 | \$168 |
| 10 Old Pine Trails | St Catharines | 84,740 | 84,740 | 84,740 | 84,740 | 84,740 | 84,740 | 84,740 | 84,740 | 84,740 | 84,740 | \$146 | \$154 |
| 436-442 Scott St | St Catharines | 44,672 | 44,672 | 44,672 | 44,672 | 44,672 | 44,672 | 44,672 | 44,672 | 44,672 | 44,672 | \$152 | \$159 |
| 4520 Huron | Niagara Falls | 51,393 | 51,393 | 51,393 | 51,393 | 51,393 | 51,393 | 51,393 | 51,393 | 51,393 | 51,393 | \$208 | \$209 |
| 4900 Buckley | Niagara Falls | 142,702 | 142,702 | 142,702 | 142,702 | 142,702 | 142,702 | 142,702 | 142,702 | 142,702 | 142,702 | \$205 | \$206 |
| 3896-3980 Sinnicks | Niagara Falls | 22,940 | 22,940 | 22,940 | 22,940 | 22,940 | 22,940 | 22,940 | 22,940 | 22,940 | 22,940 | \$115 | \$123 |
| 3874 Portage | Niagara Falls | 84,944 | 84,944 | 84,944 | 84,944 | 84,944 | 84,944 | 84,944 | 84,944 | 84,944 | 84,944 | \$180 | \$183 |
| 5130 Portage | Niagara Falls | 60,244 | 60,244 | 60,244 | 60,244 | 60,244 | 60,244 | 60,244 | 60,244 | 60,244 | 60,244 | \$149 | \$156 |
| 6603-6625 Kiwanis | Niagara Falls | 35,442 | 35,442 | 35,442 | 35,442 | 35,442 | 35,442 | 35,442 | 35,442 | 35,442 | 35,442 | \$163 | \$175 |
| 6858-6868 Ailanthus | Niagara Falls | 58,334 | 58,334 | 58,334 | 58,334 | 58,334 | 58,334 | 58,334 | 58,334 | 58,334 | 58,334 | \$177 | \$184 |
| 6938-7032 Ailanthus | Niagara Falls | 44,734 | 44,734 | 44,734 | 44,734 | 44,734 | 44,734 | 44,734 | 44,734 | 44,734 | 44,734 | \$142 | \$151 |
| 6165 Mcleod Rd | Niagara Falls | 29,180 | 29,180 | 29,180 | 29,180 | 29,180 | 29,180 | 29,180 | 29,180 | 29,180 | 29,180 | \$141 | \$149 |
| 7775 Jubilee Dr | Niagara Falls | - | - | - | - | - | 65,258 | 65,258 | 65,258 | 65,258 | 65,258 | \$203 | \$210 |
| 6363 Arad | Niagara Falls | 762 | 762 | 762 | 762 | 762 | 762 | 762 | 762 | 762 | 762 | \$226 | \$248 |
| 6375 Arad | Niagara Falls | 1,005 | 1,005 | 1,005 | 1,005 | 1,005 | 1,005 | 1,005 | 1,005 | 1,005 | 1,005 | \$171 | \$187 |
| 6387 Arad | Niagara Falls | 979 | 979 | 979 | 979 | 979 | 979 | 979 | 979 | 979 | 979 | \$176 | \$193 |
| 6399 Arad | Niagara Falls | 1,003 | 1,003 | 1,003 | 1,003 | 1,003 | 1,003 | 1,003 | 1,003 | 1,003 | 1,003 | \$172 | \$188 |
| 6411 Arad | Niagara Falls | 982 | 982 | 982 | 982 | 982 | 982 | 982 | 982 | 982 | 982 | \$175 | \$192 |
| 6362 Churchill | Niagara Falls | 985 | 985 | 985 | 985 | 985 | 985 | 985 | 985 | 985 | 985 | \$175 | \$192 |
| 6374 Churchill | Niagara Falls | 985 | 985 | 985 | 985 | 985 | 985 | 985 | 985 | 985 | 985 | \$175 | \$192 |
| 6386 Churchill | Niagara Falls | 739 | 739 | 739 | 739 | 739 | 739 | 739 | 739 | 739 | 739 | \$233 | \$255 |
| 6398 Churchill | Niagara Falls | 985 | 985 | 985 | 985 | 985 | 985 | 985 | 985 | 985 | 985 | \$175 | \$192 |
| 6410 Churchill | Niagara Falls | 985 | 985 | 985 | 985 | 985 | 985 | 985 | 985 | 985 | 985 | \$175 | \$192 |
| 6956 Dell Ave | Niagara Falls | 745 | 745 | 745 | 745 | 745 | 745 | 745 | 745 | 745 | 745 | \$231 | \$256 |
| 6966 Dell Ave | Niagara Falls | 996 | 996 | 996 | 996 | 996 | 996 | 996 | 996 | 996 | 996 | \$173 | \$191 |
| 6976 Dell Ave | Niagara Falls | 1,004 | 1,004 | 1,004 | 1,004 | 1,004 | 1,004 | 1,004 | 1,004 | 1,004 | 1,004 | \$172 | \$190 |
| 6986 Dell Ave | Niagara Falls | 756 | 756 | 756 | 756 | 756 | 756 | 756 | 756 | 756 | 756 | \$228 | \$252 |
| 7008 Dell Ave | Niagara Falls | 756 | 756 | 756 | 756 | 756 | 756 | 756 | 756 | 756 | 756 | \$228 | \$252 |
| 7018 Dell Ave | Niagara Falls | 1,031 | 1,031 | 1,031 | 1,031 | 1,031 | 1,031 | 1,031 | 1,031 | 1,031 | 1,031 | \$167 | \$185 |
| 7028 Dell Ave | Niagara Falls | 1,031 | 1,031 | 1,031 | 1,031 | 1,031 | 1,031 | 1,031 | 1,031 | 1,031 | 1,031 | \$167 | \$185 |
| 7038 Dell Ave | Niagara Falls | 756 | 756 | 756 | 756 | 756 | 756 | 756 | 756 | 756 | 756 | \$228 | \$252 |
| 7062 Dell Ave | Niagara Falls | 733 | 733 | 733 | 733 | 733 | 733 | 733 | 733 | 733 | 733 | \$235 | \$262 |
| 7072 Dell Ave | Niagara Falls | 991 | 991 | 991 | 991 | 991 | 991 | 991 | 991 | 991 | 991 | \$174 | \$194 |
| 7082 Dell Ave | Niagara Falls | 1,016 | 1,016 | 1,016 | 1,016 | 1,016 | 1,016 | 1,016 | 1,016 | 1,016 | 1,016 | \$170 | \$189 |
| 7092 Dell Ave | Niagara Falls | 995 | 995 | 995 | 995 | 995 | 995 | 995 | 995 | 995 | 995 | \$173 | \$193 |
| 7102 Dell Ave | Niagara Falls | 756 | 756 | 756 | 756 | 756 | 756 | 756 | 756 | 756 | 756 | \$228 | \$254 |
| 7112 Dell Ave | Niagara Falls | 980 | 980 | 980 | 980 | 980 | 980 | 980 | 980 | 980 | 980 | \$176 | \$196 |

Niagara Region
Service Standard Calculation Sheet

Service: Social Housing
Unit Measure: ft² of building area

| Description | Local Area Municipality | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 Bld'g Value (\$/ft²) | Value/ft² with land |
|------------------|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------------|---------------------|
| 7122 Dell Ave | Niagara Falls | 1,016 | 1,016 | 1,016 | 1,016 | 1,016 | 1,016 | 1,016 | 1,016 | 1,016 | 1,016 | \$170 | \$189 |
| 7132 Dell Ave | Niagara Falls | 1,016 | 1,016 | 1,016 | 1,016 | 1,016 | 1,016 | 1,016 | 1,016 | 1,016 | 1,016 | \$170 | \$189 |
| 7144 Dell Ave | Niagara Falls | 756 | 756 | 756 | 756 | 756 | 756 | 756 | 756 | 756 | 756 | \$228 | \$254 |
| 7168 Dell Ave | Niagara Falls | 756 | 756 | 756 | 756 | 756 | 756 | 756 | 756 | 756 | 756 | \$228 | \$258 |
| 7180 Dell Ave | Niagara Falls | 1,014 | 1,014 | 1,014 | 1,014 | 1,014 | 1,014 | 1,014 | 1,014 | 1,014 | 1,014 | \$170 | \$192 |
| 7194 Dell Ave | Niagara Falls | 1,014 | 1,014 | 1,014 | 1,014 | 1,014 | 1,014 | 1,014 | 1,014 | 1,014 | 1,014 | \$170 | \$193 |
| 6322 Hawkins St | Niagara Falls | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | \$168 | \$192 |
| 6332 Hawkins St | Niagara Falls | 1,037 | 1,037 | 1,037 | 1,037 | 1,037 | 1,037 | 1,037 | 1,037 | 1,037 | 1,037 | \$166 | \$190 |
| 6342 Hawkins St | Niagara Falls | 977 | 977 | 977 | 977 | 977 | 977 | 977 | 977 | 977 | 977 | \$176 | \$201 |
| 6362 Hawkins St. | Niagara Falls | 980 | 980 | 980 | 980 | 980 | 980 | 980 | 980 | 980 | 980 | \$176 | \$201 |
| 6372 Hawkins St | Niagara Falls | 1,022 | 1,022 | 1,022 | 1,022 | 1,022 | 1,022 | 1,022 | 1,022 | 1,022 | 1,022 | \$169 | \$193 |
| 6382 Hawkins St | Niagara Falls | 1,021 | 1,021 | 1,021 | 1,021 | 1,021 | 1,021 | 1,021 | 1,021 | 1,021 | 1,021 | \$169 | \$193 |
| 6392 Hawkins St | Niagara Falls | 982 | 982 | 982 | 982 | 982 | 982 | 982 | 982 | 982 | 982 | \$175 | \$200 |
| 6402 Hawkins St | Niagara Falls | 1,014 | 1,014 | 1,014 | 1,014 | 1,014 | 1,014 | 1,014 | 1,014 | 1,014 | 1,014 | \$170 | \$194 |
| 6412 Hawkins St | Niagara Falls | 1,026 | 1,026 | 1,026 | 1,026 | 1,026 | 1,026 | 1,026 | 1,026 | 1,026 | 1,026 | \$168 | \$192 |
| 6363 Skinner | Niagara Falls | 980 | 980 | 980 | 980 | 980 | 980 | 980 | 980 | 980 | 980 | \$176 | \$193 |
| 6375 Skinner | Niagara Falls | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | \$169 | \$185 |
| 6387 Skinner | Niagara Falls | 744 | 744 | 744 | 744 | 744 | 744 | 744 | 744 | 744 | 744 | \$232 | \$254 |
| 6399 Skinner | Niagara Falls | 989 | 989 | 989 | 989 | 989 | 989 | 989 | 989 | 989 | 989 | \$174 | \$191 |
| 6411 Skinner | Niagara Falls | 1,022 | 1,022 | 1,022 | 1,022 | 1,022 | 1,022 | 1,022 | 1,022 | 1,022 | 1,022 | \$169 | \$185 |
| 6362 Skinner | Niagara Falls | 985 | 985 | 985 | 985 | 985 | 985 | 985 | 985 | 985 | 985 | \$175 | \$192 |
| 6374 Skinner | Niagara Falls | 1,005 | 1,005 | 1,005 | 1,005 | 1,005 | 1,005 | 1,005 | 1,005 | 1,005 | 1,005 | \$171 | \$187 |
| 6386 Skinner | Niagara Falls | 744 | 744 | 744 | 744 | 744 | 744 | 744 | 744 | 744 | 744 | \$232 | \$254 |
| 6398 Skinner | Niagara Falls | 1,003 | 1,003 | 1,003 | 1,003 | 1,003 | 1,003 | 1,003 | 1,003 | 1,003 | 1,003 | \$172 | \$188 |
| 6410 Skinner | Niagara Falls | 1,007 | 1,007 | 1,007 | 1,007 | 1,007 | 1,007 | 1,007 | 1,007 | 1,007 | 1,007 | \$171 | \$187 |
| 6361 Churchill | Niagara Falls | 972 | 972 | 972 | 972 | 972 | 972 | 972 | 972 | 972 | 972 | \$177 | \$195 |
| 6371 Churchill | Niagara Falls | 1,025 | 1,025 | 1,025 | 1,025 | 1,025 | 1,025 | 1,025 | 1,025 | 1,025 | 1,025 | \$168 | \$185 |
| 6381 Churchill | Niagara Falls | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | 1,020 | \$169 | \$186 |
| 6391 Churchill | Niagara Falls | 976 | 976 | 976 | 976 | 976 | 976 | 976 | 976 | 976 | 976 | \$176 | \$193 |
| 6401 Churchill | Niagara Falls | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | 1,024 | \$168 | \$185 |
| 6411 Churchill | Niagara Falls | 1,040 | 1,040 | 1,040 | 1,040 | 1,040 | 1,040 | 1,040 | 1,040 | 1,040 | 1,040 | \$166 | \$182 |
| 7037 Dell Ave | Niagara Falls | 1,002 | 1,002 | 1,002 | 1,002 | 1,002 | 1,002 | 1,002 | 1,002 | 1,002 | 1,002 | \$172 | \$192 |
| 7047 Dell Ave | Niagara Falls | 1,026 | 1,026 | 1,026 | 1,026 | 1,026 | 1,026 | 1,026 | 1,026 | 1,026 | 1,026 | \$168 | \$188 |
| 7057 Dell Ave | Niagara Falls | 1,055 | 1,055 | 1,055 | 1,055 | 1,055 | 1,055 | 1,055 | 1,055 | 1,055 | 1,055 | \$163 | \$182 |
| 7067 Dell Ave | Niagara Falls | 1,026 | 1,026 | 1,026 | 1,026 | 1,026 | 1,026 | 1,026 | 1,026 | 1,026 | 1,026 | \$168 | \$188 |
| 7077 Dell Ave | Niagara Falls | 763 | 763 | 763 | 763 | 763 | 763 | 763 | 763 | 763 | 763 | \$226 | \$253 |
| 7087 Dell Ave | Niagara Falls | 1,026 | 1,026 | 1,026 | 1,026 | 1,026 | 1,026 | 1,026 | 1,026 | 1,026 | 1,026 | \$168 | \$188 |
| 7097 Dell Ave | Niagara Falls | 1,007 | 1,007 | 1,007 | 1,007 | 1,007 | 1,007 | 1,007 | 1,007 | 1,007 | 1,007 | \$171 | \$191 |
| 7107 Dell Ave | Niagara Falls | 1,026 | 1,026 | 1,026 | 1,026 | 1,026 | 1,026 | 1,026 | 1,026 | 1,026 | 1,026 | \$168 | \$188 |
| 7117 Dell Ave | Niagara Falls | 763 | 763 | 763 | 763 | 763 | 763 | 763 | 763 | 763 | 763 | \$226 | \$253 |
| 7141 Dell Ave | Niagara Falls | 763 | 763 | 763 | 763 | 763 | 763 | 763 | 763 | 763 | 763 | \$226 | \$255 |
| 7151 Dell Ave | Niagara Falls | 1,055 | 1,055 | 1,055 | 1,055 | 1,055 | 1,055 | 1,055 | 1,055 | 1,055 | 1,055 | \$163 | \$184 |

Niagara Region
Service Standard Calculation Sheet

Service: Social Housing
Unit Measure: ft² of building area

| Description | Local Area Municipality | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 Bld'g Value (\$/ft²) | Value/ft² with land |
|-------------------|-------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|---------------------------|---------------------|
| 7163 Dell Ave | Niagara Falls | 1,026 | 1,026 | 1,026 | 1,026 | 1,026 | 1,026 | 1,026 | 1,026 | 1,026 | 1,026 | \$168 | \$189 |
| 7173 Dell Ave | Niagara Falls | 1,002 | 1,002 | 1,002 | 1,002 | 1,002 | 1,002 | 1,002 | 1,002 | 1,002 | 1,002 | \$172 | \$194 |
| 7185 Dell Ave | Niagara Falls | 1,026 | 1,026 | 1,026 | 1,026 | 1,026 | 1,026 | 1,026 | 1,026 | 1,026 | 1,026 | \$168 | \$189 |
| 7195 Dell Ave | Niagara Falls | 1,011 | 1,011 | 1,011 | 1,011 | 1,011 | 1,011 | 1,011 | 1,011 | 1,011 | 1,011 | \$170 | \$192 |
| 6902-6905 Warden | Niagara Falls | 97,340 | 97,340 | 97,340 | 97,340 | 97,340 | 97,340 | 97,340 | 97,340 | 97,340 | 97,340 | \$106 | \$115 |
| 30 Robinson | Grimsby | 38,364 | 38,364 | 38,364 | 38,364 | 38,364 | 38,364 | 38,364 | 38,364 | 38,364 | 38,364 | \$230 | \$235 |
| 4278 Queen | Lincoln | 39,360 | 39,360 | 39,360 | 39,360 | 39,360 | 39,360 | 39,360 | 39,360 | 39,360 | 39,360 | \$267 | \$270 |
| 45 Ormond St | Thorold | 22,826 | 22,826 | 22,826 | 22,826 | 22,826 | 22,826 | 22,826 | 22,826 | 22,826 | 22,826 | \$149 | \$156 |
| 557 Steele Street | Port Colborne | 27,064 | 27,064 | 27,064 | 27,064 | 27,064 | 27,064 | 27,064 | 27,064 | 27,064 | 27,064 | \$151 | \$154 |
| 561 Steele Street | Port Colborne | 29,960 | 29,960 | 29,960 | 29,960 | 29,960 | 29,960 | 29,960 | 29,960 | 29,960 | 29,960 | \$163 | \$166 |
| 709 King Street | Port Colborne | 6,055 | 6,055 | 6,055 | 6,055 | 6,055 | 6,055 | 6,055 | 6,055 | 6,055 | 6,055 | \$122 | \$130 |
| 300 Davy Street | Niagara on the Lake | 32,822 | 32,822 | 32,822 | 32,822 | 32,822 | 32,822 | 32,822 | 32,822 | 32,822 | 32,822 | \$175 | \$188 |
| Total | | 2,173,164 | 2,173,164 | 2,173,164 | 2,173,164 | 2,173,164 | 2,238,422 | 2,304,290 | 2,304,290 | 2,304,290 | 2,304,290 | | |

| | | | | | | | | | | |
|---------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Population | 428,641 | 429,625 | 430,447 | 430,502 | 431,346 | 432,173 | 432,789 | 434,382 | 436,263 | 438,671 |
| Per Capita Standard | 5.0699 | 5.0583 | 5.0486 | 5.0480 | 5.0381 | 5.1795 | 5.3243 | 5.3048 | 5.2819 | 5.2529 |

| | |
|------------------------|------------------|
| 10 Year Average | 2007-2016 |
| Quantity Standard | 5.1606 |
| Quality Standard | \$187 |
| Service Standard | \$966 |

| | |
|--------------------------------------|----------------|
| DC Amount (before deductions) | 10 Year |
| Forecast Population | 47,982 |
| \$ per Capita | \$966 |
| Eligible Amount | \$46,368,365 |

**Niagara Region
Service Standard Calculation Sheet**

Service: Health Facilities
Unit Measure: ft² of building area

| Description | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 Bld'g Value (\$/ft²) | Value/ft² with land, site works, etc. |
|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------------------------|--|
| St. Catharines Public Health Sexual Health Centre - 277 Welland Avenue St. Catharines - Leased | 5,704 | 5,704 | 5,704 | 5,704 | 5,704 | 5,704 | 5,704 | 5,704 | 5,704 | 5,704 | \$284 | \$322 |
| Welland Public Health Satellite Office/Sexual Health Centre - 200 Division Street Welland - Owned | 18,030 | 18,030 | 18,030 | 18,030 | 18,030 | 18,030 | 18,030 | 18,030 | 18,030 | 18,030 | \$339 | \$383 |
| Niagara Falls Public Health Satellite Office/Sexual Health Centre - 5710 Kitchener Street Niagara Falls - Leased | 7,890 | 7,890 | 7,890 | 7,890 | 7,890 | 7,890 | 7,890 | 7,890 | 7,890 | 7,890 | \$273 | \$309 |
| Fort Erie Public Health - 1264 Garrison Road Unit 12 - Leased | - | - | - | - | - | - | - | - | - | 3,417 | \$284 | \$322 |
| Community Mental Health Program - 3550 Schmon Parkway (Units 1 B an 2) Thorold - Leased | 6,874 | 6,874 | 6,874 | 6,874 | 6,874 | 6,874 | 6,874 | 6,874 | 6,874 | 6,874 | \$284 | \$322 |
| Public Health Main Office - 1815 Sir Isaac Brock Way Thorold - Owned | 45,583 | 45,583 | 45,583 | 45,583 | 45,583 | 45,583 | 45,583 | 45,583 | 45,583 | 45,583 | \$370 | \$416 |
| | | | | | | | | | | | | |
| Total | 84,081 | 84,081 | 84,081 | 84,081 | 84,081 | 84,081 | 84,081 | 84,081 | 84,081 | 87,498 | | |

| | | | | | | | | | | |
|---------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Population | 428,641 | 429,625 | 430,447 | 430,502 | 431,346 | 432,173 | 432,789 | 434,382 | 436,263 | 438,671 |
| Per Capita Standard | 0.1962 | 0.1957 | 0.1953 | 0.1953 | 0.1949 | 0.1946 | 0.1943 | 0.1936 | 0.1927 | 0.1995 |

| | |
|-------------------|-----------|
| 10 Year Average | 2007-2016 |
| Quantity Standard | 0.1952 |
| Quality Standard | \$385 |
| Service Standard | \$75 |

| | |
|-------------------------------|-------------|
| DC Amount (before deductions) | 10 Year |
| Forecast Population | 47,982 |
| \$ per Capita | \$75 |
| Eligible Amount | \$3,602,009 |

Niagara Region
Service Standard Calculation Sheet

Service: Provincial Offences Act Facilities
 Unit Measure: ft² of building area

| Description | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 Bld'g Value (\$/ft²) | Value/ft² with land, site works, etc. |
|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------------------|---------------------------------------|
| St.Catharines POA - 71 King Street St. Catharines - Leased | 4,913 | 4,913 | 4,913 | 4,913 | 4,913 | 4,913 | 4,913 | 4,913 | 4,913 | 4,913 | \$523 | \$585 |
| Welland POA - 3 Cross Street Welland - Leased | 7,285 | 7,285 | 7,285 | 7,285 | 7,285 | 7,285 | 7,285 | 7,285 | 7,285 | 7,285 | \$523 | \$585 |
| Niagara Falls POA - 4635 Queen Street Niagara Falls - Leased | 7,024 | 7,024 | 7,024 | 7,024 | 7,024 | 7,024 | 7,024 | 7,024 | 7,024 | 7,024 | \$523 | \$585 |
| 200 Jarvis Street Fort Erie - Satellite office - License Agreement | 2,400 | 2,400 | 2,400 | 2,400 | 2,400 | 2,400 | 2,400 | 2,400 | 2,400 | 2,400 | \$523 | \$585 |
| | | | | | | | | | | | | |
| Total | 21,622 | 21,622 | 21,622 | 21,622 | 21,622 | 21,622 | 21,622 | 21,622 | 21,622 | 21,622 | | |

| | | | | | | | | | | |
|---------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Population | 428,641 | 429,625 | 430,447 | 430,502 | 431,346 | 432,173 | 432,789 | 434,382 | 436,263 | 438,671 |
| Per Capita Standard | 0.0504 | 0.0503 | 0.0502 | 0.0502 | 0.0501 | 0.0500 | 0.0500 | 0.0498 | 0.0496 | 0.0493 |

| | |
|-------------------|-----------|
| 10 Year Average | 2007-2016 |
| Quantity Standard | 0.0500 |
| Quality Standard | \$585 |
| Service Standard | \$29 |

| | |
|-------------------------------|-------------|
| DC Amount (before deductions) | 10 Year |
| Forecast Population | 47,982 |
| \$ per Capita | \$29 |
| Eligible Amount | \$1,403,474 |

Niagara Region
Service Standard Calculation Sheet

Service: Social & Child Services Facilities
Unit Measure: ft² of building area

| Description | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 Bld'g Value (\$/ft²) | Value/ft² with land, site works, etc. |
|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---------------------------|---------------------------------------|
| St. Catharines Regional Child Care Centre - 179 Carlton Street St. Catharines - Owned | 7,030 | 7,030 | 7,030 | 7,030 | 7,030 | 7,030 | 7,030 | 7,030 | 7,030 | 7,030 | \$272 | \$308 |
| Welland Regional Child Care Centre - 25 Bruce Street Welland - Owned | 4,410 | 4,410 | 4,410 | 4,410 | 4,410 | 4,410 | 4,410 | 4,410 | 4,410 | 4,410 | \$272 | \$308 |
| Branscombe Early Learning & Family Centre - 6271 Glengate St. Niagara Falls - Owned | 11,180 | 11,180 | 11,180 | 11,180 | 11,180 | 11,180 | 11,180 | 11,180 | 11,180 | 11,180 | \$340 | \$384 |
| Fort Erie Regional Child Care Centre - 94 Catharine St. Fort Erie - Owned | 4,090 | 4,090 | 4,090 | 4,090 | 4,090 | 4,090 | 4,090 | 4,090 | 4,090 | 4,090 | \$272 | \$308 |
| Port Colborne Regional Child Care Centre - 214 Steele St. Port Colborne - Leased | 2,531 | 2,531 | 2,531 | 2,531 | 2,531 | 2,531 | 2,531 | 2,531 | 2,531 | 2,531 | \$318 | \$359 |
| SAEO - St. Catharines Community Services Employment Office - 234 Bunting Road St. Catharines - Leased | 29,504 | 29,504 | 29,504 | 29,504 | 29,504 | 29,504 | 29,504 | 29,504 | 29,504 | 29,504 | \$318 | \$359 |
| SAEO - Welland Community Services Employment Office - 250 Thorold Road Welland - Owned | 25,870 | 25,870 | 25,870 | 25,870 | 25,870 | 25,870 | 25,870 | 25,870 | 25,870 | 25,870 | \$341 | \$385 |
| SAEO - Fort Erie Community Services Employment Office - 469 Central Avenue Fort Erie - Leased | 2,700 | 2,700 | 2,700 | 2,700 | 2,700 | 2,700 | 2,700 | 2,700 | 2,700 | 2,700 | \$318 | \$359 |
| SAEO - Niagara Falls Community Services Employment Office - 5853 Peer Street Niagara Falls - Owned | 21,710 | 21,710 | 21,710 | 21,710 | 21,710 | 21,710 | 21,710 | 21,710 | 21,710 | 21,710 | \$306 | \$346 |
| SAEO - Port Care Community Services Employment Office - 92 Charlotte Street Port Colborne - Leased | 3,300 | 3,300 | 3,300 | 3,300 | 3,300 | 3,300 | 3,300 | 3,300 | 3,300 | 3,300 | \$318 | \$359 |
| Child Care Centres - Headquarters Building - 1815 Sir Isaac Brock Way Thorold - Owned | 6,259 | 6,259 | 6,259 | 6,259 | 6,259 | 6,259 | 6,259 | 6,259 | 6,259 | 6,259 | \$296 | \$335 |
| Social Services - Headquarters Building - 1815 Sir Isaac Brock Way Thorold - Owned | 881 | 881 | 881 | 881 | 881 | 881 | 881 | 881 | 881 | 881 | \$296 | \$335 |
| Portable at SAEO Welland Community Services - 250 Thorold Road | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | \$50 | \$64 |
| Portable at St. Catharines Child Care Centre - 179 Carlton St. | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | \$50 | \$64 |
| Total | 121,465 | 121,465 | 121,465 | 121,465 | 121,465 | 121,465 | 121,465 | 121,465 | 121,465 | 121,465 | | |

| | | | | | | | | | | |
|---------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Population | 428,641 | 429,625 | 430,447 | 430,502 | 431,346 | 432,173 | 432,789 | 434,382 | 436,263 | 438,671 |
| Per Capita Standard | 0.2834 | 0.2827 | 0.2822 | 0.2821 | 0.2816 | 0.2811 | 0.2807 | 0.2796 | 0.2784 | 0.2769 |

| | |
|------------------------|------------------|
| 10 Year Average | 2007-2016 |
| Quantity Standard | 0.2809 |
| Quality Standard | \$352 |
| Service Standard | \$99 |

| | |
|--------------------------------------|----------------|
| DC Amount (before deductions) | 10 Year |
| Forecast Population | 47,982 |
| \$ per Capita | \$99 |
| Eligible Amount | \$4,740,142 |

Niagara Region
Service Standard Calculation Sheet

Service: Waste Diversion - Facilities - Stations/Depots
Unit Measure: ft² of building area

| Description | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 Bld'g Value (\$/ft²) | Value/ft² with land, site works, etc. |
|--|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---------------------------|---------------------------------------|
| 4935 Kent Avenue - Materials Recycling Centre (MRF) (incl. Scalehouse Building, Glass Storage & Container Storage Buildings) | | | | | | | | | | | | |
| - Office | 19,896 | 19,896 | 19,896 | 19,896 | 19,896 | 19,896 | 19,896 | 19,896 | 19,896 | 19,896 | \$260 | \$287 |
| - Plant | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | \$260 | \$287 |
| - Scalehouse | 6,550 | 6,550 | 6,550 | 6,550 | 6,550 | 6,550 | 6,550 | 6,550 | 6,550 | 6,550 | \$37 | \$40 |
| - Starlight facility | 6,613 | 6,613 | 6,613 | 6,613 | 6,613 | 6,613 | 6,613 | 6,613 | 6,613 | 6,613 | \$65 | \$71 |
| - Glass Storage | 3,534 | 3,534 | 3,534 | 3,534 | 3,534 | 3,534 | 3,534 | 3,534 | 3,534 | 3,534 | \$83 | \$91 |
| Walkers Environmental Organics Facilities: | | | | | | | | | | | | |
| - Receiving Building | 19,640 | 19,640 | 19,640 | 19,640 | 19,640 | 19,640 | 19,640 | 19,640 | 19,640 | 19,640 | \$260 | \$287 |
| - Composting Pad Building | 92,473 | 92,473 | 92,473 | 92,473 | 92,473 | 92,473 | 92,473 | 92,473 | 92,473 | 92,473 | \$260 | \$287 |
| - Composting Operations Office | 1,030 | 1,030 | 1,030 | 1,030 | 1,030 | 1,030 | 1,030 | 1,030 | 1,030 | 1,030 | \$260 | \$287 |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Total | 249,736 | 249,736 | 249,736 | 249,736 | 249,736 | 249,736 | 249,736 | 249,736 | 249,736 | 249,736 | | |

| | | | | | | | | | | |
|---------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Population | 428,641 | 429,625 | 430,447 | 430,502 | 431,346 | 432,173 | 432,789 | 434,382 | 436,263 | 438,671 |
| Per Capita Standard | 0.5826 | 0.5813 | 0.5802 | 0.5801 | 0.5790 | 0.5779 | 0.5770 | 0.5749 | 0.5724 | 0.5693 |

| | |
|-------------------|-----------|
| 10 Year Average | 2007-2016 |
| Quantity Standard | 0.5775 |
| Quality Standard | \$272 |
| Service Standard | \$157 |

| | |
|-------------------------------|-------------|
| DC Amount (before deductions) | 10 Year |
| Forecast Population | 47,982 |
| \$ per Capita | \$157 |
| Eligible Amount | \$7,537,492 |

Niagara Region
Service Standard Calculation Sheet

Service: Waste Diversion - Facilities - Stations/Depots Land
 Unit Measure: acres of land area

| Description | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 Land Value (acre) |
|---|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|------------------------|
| Humberstone: | | | | | | | | | | | |
| - Shared Area | 6.50 | 6.50 | 6.50 | 6.50 | 6.50 | 6.50 | 6.50 | 6.50 | 6.50 | 6.50 | \$50,000 |
| - Asphalt Shingles Pile | - | - | - | - | - | 0.78 | 0.78 | 0.78 | 0.78 | 0.78 | \$50,000 |
| - Wood Chip Pile | 1.88 | 1.88 | 1.88 | 1.88 | 1.88 | 1.88 | 1.88 | 1.88 | 1.88 | 1.88 | \$50,000 |
| - Reuseable Goods Drop-Off Depot | - | - | - | - | - | - | 0.21 | 0.21 | 0.21 | 0.21 | \$50,000 |
| - Household Hazardous Waste | - | - | - | - | - | - | - | - | 0.43 | 0.43 | \$50,000 |
| Niagara Road 12: | | | | | | | | | | | |
| - Shared Area | | | | | | | | | | | 50,000 |
| - Leaf/yard composting | 3.80 | 3.80 | 3.80 | 3.80 | 3.80 | 3.80 | 3.80 | 3.80 | 3.80 | 3.80 | 50,000 |
| - Drop-Off Depot | 4.57 | 4.57 | 4.57 | 4.57 | 4.57 | 4.57 | 4.57 | 4.57 | 4.57 | 4.57 | 50,000 |
| - Household Hazardous Waste | 2.18 | 2.18 | 2.18 | 2.18 | 2.18 | 2.18 | 2.18 | 2.18 | 2.18 | 2.18 | 50,000 |
| - Wood Chip Pile | 0.40 | 0.40 | 0.40 | 0.40 | 0.40 | 0.40 | 0.40 | 0.40 | 0.40 | 0.40 | 50,000 |
| - Asphalt Shingles Area | - | - | - | - | - | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 50,000 |
| Bridge Street: | | | | | | | | | | | |
| - Shared Area | | | | | | | | | | | \$119,000 |
| - Leaf/yard composting | 3.30 | 3.30 | 3.30 | 3.30 | 3.30 | 3.30 | 3.30 | 3.30 | 3.30 | 3.30 | \$119,000 |
| - Recycle Drop off Area | 3.66 | 3.66 | 3.66 | 3.66 | 3.66 | 3.66 | 3.66 | 3.66 | 3.66 | 3.66 | \$119,000 |
| - Asphalt Shingles Area | - | - | - | - | - | - | - | - | 0.10 | 0.10 | \$119,000 |
| - Wood Chip Pile | 0.61 | 0.61 | 0.61 | 0.61 | 0.61 | 0.61 | 0.61 | 0.61 | 0.61 | 0.61 | \$119,000 |
| Thorold - Household Hazardous Waste | - | - | - | - | - | - | - | - | 0.89 | 0.89 | \$50,000 |
| 4935 Kent Avenue - Materials Recycling Centre (MRF) | 18.79 | 18.79 | 18.79 | 18.79 | 18.79 | 18.79 | 18.79 | 18.79 | 18.79 | 18.79 | \$119,000 |
| Walkers Environmental Organics Facilities | - | - | 13.10 | 13.10 | 13.10 | 13.10 | 13.10 | 13.10 | 13.10 | 13.10 | \$50,000 |
| Total | 45.69 | 45.69 | 58.79 | 58.79 | 58.79 | 59.77 | 59.99 | 59.99 | 61.40 | 61.40 | |

| | | | | | | | | | | |
|---------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Population | 428,641 | 429,625 | 430,447 | 430,502 | 431,346 | 432,173 | 432,789 | 434,382 | 436,263 | 438,671 |
| Per Capita Standard | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 |

| | |
|-------------------|-----------|
| 10 Year Average | 2007-2016 |
| Quantity Standard | 0.0001 |
| Quality Standard | \$108,000 |
| Service Standard | \$11 |

| | |
|-------------------------------|-----------|
| DC Amount (before deductions) | 10 Year |
| Forecast Population | 47,982 |
| \$ per Capita | \$11 |
| Eligible Amount | \$518,206 |

| | |
|---------------|--|
| Service: | Waste Diversion - Vehicles & Equipment |
| Unit Measure: | No. of vehicles and equipment |

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Niagara Region

Service Standard Calculation Sheet

Service: Waste Diversion - Vehicles & Equipment

| Unit Measure: | No. of vehicles and equipment |
|---------------|-------------------------------|
|---------------|-------------------------------|

[illegible]

Niagara Region
Service Standard Calculation Sheet

Service: Waste Diversion - Vehicles & Equipment
Unit Measure: No. of vehicles and equipment

| Description | Waste Diversion Share (%) | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 Value (\$/Vehicle) |
|-----------------------|---------------------------|------|------|------|------|------|------|------|------|------|------|-------------------------|
| Freightliner- RLSPL | 40% | - | - | - | - | - | - | 0.4 | 0.4 | 0.4 | 0.4 | \$175,000 |
| Freightliner- RLSPL | 40% | - | - | - | - | - | - | 0.4 | 0.4 | 0.4 | 0.4 | \$175,000 |
| Modern Trucks: | | | | | | | | | | | | |
| RP-Straight | 50% | 0.5 | 0.5 | 0.5 | 0.5 | - | - | - | - | - | - | \$150,000 |
| RP-Straight | 50% | 0.5 | 0.5 | 0.5 | 0.5 | - | - | - | - | - | - | \$150,000 |
| SL-Bucket | 100% | 1.0 | 1.0 | 1.0 | 1.0 | - | - | - | - | - | - | \$150,000 |
| SL-Straight | 50% | 0.5 | 0.5 | 0.5 | 0.5 | - | - | - | - | - | - | \$150,000 |
| SL-Split | 50% | 0.5 | 0.5 | 0.5 | 0.5 | - | - | - | - | - | - | \$150,000 |
| SL-Split | 50% | 0.5 | 0.5 | 0.5 | 0.5 | - | - | - | - | - | - | \$150,000 |
| SL-Bucket | 100% | 1.0 | 1.0 | 1.0 | 1.0 | - | - | - | - | - | - | \$150,000 |
| SL-Bucket | 100% | 1.0 | 1.0 | 1.0 | 1.0 | - | - | - | - | - | - | \$150,000 |
| RP-Straight | 100% | 1.0 | 1.0 | 1.0 | 1.0 | - | - | - | - | - | - | \$150,000 |
| RP-Straight | 100% | 1.0 | 1.0 | 1.0 | 1.0 | - | - | - | - | - | - | \$150,000 |
| RP-Straight | 100% | 1.0 | 1.0 | 1.0 | 1.0 | - | - | - | - | - | - | \$150,000 |
| RP-Straight | 100% | 1.0 | 1.0 | 1.0 | 1.0 | - | - | - | - | - | - | \$150,000 |
| RP-Straight | 100% | 1.0 | 1.0 | 1.0 | 1.0 | - | - | - | - | - | - | \$150,000 |
| RP-Straight | 100% | 1.0 | 1.0 | 1.0 | 1.0 | - | - | - | - | - | - | \$150,000 |
| RP-Straight | 100% | 1.0 | 1.0 | 1.0 | 1.0 | - | - | - | - | - | - | \$150,000 |
| RP-Straight | 100% | 1.0 | 1.0 | 1.0 | 1.0 | - | - | - | - | - | - | \$150,000 |
| RP-Straight | 100% | 1.0 | 1.0 | 1.0 | 1.0 | - | - | - | - | - | - | \$150,000 |
| RP-Straight | 0% | - | - | - | - | - | - | - | - | - | - | \$150,000 |
| RP-Straight | 0% | - | - | - | - | - | - | - | - | - | - | \$150,000 |
| RP-Straight | 100% | 1.0 | 1.0 | 1.0 | 1.0 | - | - | - | - | - | - | \$150,000 |
| RP-Split | 40% | 0.4 | 0.4 | 0.4 | 0.4 | - | - | - | - | - | - | \$150,000 |
| RP-Straight | 100% | 1.0 | 1.0 | 1.0 | 1.0 | - | - | - | - | - | - | \$150,000 |
| RP-Split | 40% | 0.4 | 0.4 | 0.4 | 0.4 | - | - | - | - | - | - | \$150,000 |
| RP-Split | 0% | - | - | - | - | - | - | - | - | - | - | \$150,000 |
| RP-Straight | 100% | 1.0 | 1.0 | 1.0 | 1.0 | - | - | - | - | - | - | \$150,000 |
| RP-Straight | 50% | 0.5 | 0.5 | 0.5 | 0.5 | - | - | - | - | - | - | \$150,000 |
| RP-Straight | 100% | 1.0 | 1.0 | 1.0 | 1.0 | - | - | - | - | - | - | \$150,000 |
| RP-Split | 40% | 0.4 | 0.4 | 0.4 | 0.4 | - | - | - | - | - | - | \$150,000 |
| RP-Split | 40% | 0.4 | 0.4 | 0.4 | 0.4 | - | - | - | - | - | - | \$150,000 |
| RP-Split | 40% | 0.4 | 0.4 | 0.4 | 0.4 | - | - | - | - | - | - | \$150,000 |
| RP-Split | 40% | 0.4 | 0.4 | 0.4 | 0.4 | - | - | - | - | - | - | \$150,000 |
| RP-Split | 40% | 0.4 | 0.4 | 0.4 | 0.4 | - | - | - | - | - | - | \$150,000 |
| RP-Split | 40% | 0.4 | 0.4 | 0.4 | 0.4 | - | - | - | - | - | - | \$150,000 |
| RP-Split | 40% | 0.4 | 0.4 | 0.4 | 0.4 | - | - | - | - | - | - | \$150,000 |
| RP-Split | 40% | 0.4 | 0.4 | 0.4 | 0.4 | - | - | - | - | - | - | \$150,000 |
| RP-Split | 40% | 0.4 | 0.4 | 0.4 | 0.4 | - | - | - | - | - | - | \$150,000 |

Niagara Region
Service Standard Calculation Sheet

Service: Waste Diversion - Vehicles & Equipment
 Unit Measure: No. of vehicles and equipment

| Description | Waste Diversion Share (%) | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 Value (\$/Vehicle) |
|-----------------------------|---------------------------|------|------|------|------|------|------|------|------|------|------|-------------------------|
| RP-Straight | 50% | 0.5 | 0.5 | 0.5 | 0.5 | - | - | - | - | - | - | \$150,000 |
| RP-Straight | 0% | - | - | - | - | - | - | - | - | - | - | \$150,000 |
| RP-Straight | 100% | 1.0 | 1.0 | 1.0 | 1.0 | - | - | - | - | - | - | \$150,000 |
| RP-Straight | 100% | 1.0 | 1.0 | 1.0 | 1.0 | - | - | - | - | - | - | \$150,000 |
| RP-Split | 40% | 0.4 | 0.4 | 0.4 | 0.4 | - | - | - | - | - | - | \$150,000 |
| RP-Split | 40% | 0.4 | 0.4 | 0.4 | 0.4 | - | - | - | - | - | - | \$150,000 |
| RP-Split | 40% | 0.4 | 0.4 | 0.4 | 0.4 | - | - | - | - | - | - | \$150,000 |
| RP-Straight | 100% | 1.0 | 1.0 | 1.0 | 1.0 | - | - | - | - | - | - | \$150,000 |
| RP-Straight | 100% | 1.0 | 1.0 | 1.0 | 1.0 | - | - | - | - | - | - | \$150,000 |
| RP-Split | 40% | 0.4 | 0.4 | 0.4 | 0.4 | - | - | - | - | - | - | \$150,000 |
| RP-Split | 40% | 0.4 | 0.4 | 0.4 | 0.4 | - | - | - | - | - | - | \$150,000 |
| RP-Split | 40% | 0.4 | 0.4 | 0.4 | 0.4 | - | - | - | - | - | - | \$150,000 |
| RP-Split | 40% | 0.4 | 0.4 | 0.4 | 0.4 | - | - | - | - | - | - | \$150,000 |
| RP-Straight | 100% | 1.0 | 1.0 | 1.0 | 1.0 | - | - | - | - | - | - | \$150,000 |
| RP-Straight | 100% | 1.0 | 1.0 | 1.0 | 1.0 | - | - | - | - | - | - | \$150,000 |
| RP-Straight | 100% | 1.0 | 1.0 | 1.0 | 1.0 | - | - | - | - | - | - | \$150,000 |
| RP-Split | 0% | - | - | - | - | - | - | - | - | - | - | \$150,000 |
| RP-Straight | 0% | - | - | - | - | - | - | - | - | - | - | \$150,000 |
| Panel Van | 100% | 1.0 | 1.0 | 1.0 | 1.0 | - | - | - | - | - | - | \$50,000 |
| JWS Curbside Trucks: | | | | | - | - | - | - | - | - | - | \$150,000 |
| SL-Split | 50% | 0.5 | 0.5 | 0.5 | 0.5 | - | - | - | - | - | - | \$150,000 |
| SL-Split | 50% | 0.5 | 0.5 | 0.5 | 0.5 | - | - | - | - | - | - | \$150,000 |
| SL-Split | 50% | 0.5 | 0.5 | 0.5 | 0.5 | - | - | - | - | - | - | \$150,000 |
| SL-Split | 50% | 0.5 | 0.5 | 0.5 | 0.5 | - | - | - | - | - | - | \$150,000 |
| SL-Split | 50% | 0.5 | 0.5 | 0.5 | 0.5 | - | - | - | - | - | - | \$150,000 |
| RP-Straight | 50% | 0.5 | 0.5 | 0.5 | 0.5 | - | - | - | - | - | - | \$150,000 |
| RP-Straight | 50% | 0.5 | 0.5 | 0.5 | 0.5 | - | - | - | - | - | - | \$150,000 |
| RP-Straight | 50% | 0.5 | 0.5 | 0.5 | 0.5 | - | - | - | - | - | - | \$150,000 |
| RP-Straight | 50% | 0.5 | 0.5 | 0.5 | 0.5 | - | - | - | - | - | - | \$150,000 |
| RP-Straight | 50% | 0.5 | 0.5 | 0.5 | 0.5 | - | - | - | - | - | - | \$150,000 |
| RP-Straight | 50% | 0.5 | 0.5 | 0.5 | 0.5 | - | - | - | - | - | - | \$150,000 |

Niagara Region
Service Standard Calculation Sheet

Service: Waste Diversion - Vehicles & Equipment
 Unit Measure: No. of vehicles and equipment

| Description | Waste Diversion Share (%) | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 Value (\$/Vehicle) |
|---|---------------------------|------|------|------|------|------|------|------|------|------|------|-------------------------|
| RP-Straight | 50% | 0.5 | 0.5 | 0.5 | 0.5 | - | - | - | - | - | - | \$150,000 |
| RP-Straight | 50% | 0.5 | 0.5 | 0.5 | 0.5 | - | - | - | - | - | - | \$150,000 |
| RP-Straight | 50% | 0.5 | 0.5 | 0.5 | 0.5 | - | - | - | - | - | - | \$150,000 |
| RP-Straight | 50% | 0.5 | 0.5 | 0.5 | 0.5 | - | - | - | - | - | - | \$150,000 |
| RP-Straight | 50% | 0.5 | 0.5 | 0.5 | 0.5 | - | - | - | - | - | - | \$150,000 |
| RP-Split | 50% | 0.5 | 0.5 | 0.5 | 0.5 | - | - | - | - | - | - | \$150,000 |
| RP-Split | 50% | 0.5 | 0.5 | 0.5 | 0.5 | - | - | - | - | - | - | \$150,000 |
| Walkers Environmental Organics Facilities: | | | | | | | | | | | | |
| <u>Loaders</u> | | | | | | | | | | | | |
| 2002, Volvo L110E | 100% | - | - | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | \$240,000 |
| 2008, Volvo L110F | 100% | - | - | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | \$240,000 |
| 2008, Volvo L110F | 100% | - | - | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | \$240,000 |
| 2008, Volvo L110F | 100% | - | - | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | \$240,000 |
| 2011, Doosan DL300A | 100% | - | - | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | \$240,000 |
| 2014, Volvo L90G | 100% | - | - | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | \$240,000 |
| <u>Tractor</u> | | | | | | | | | | | | |
| 2010, New Holland T1530 | 100% | - | - | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | \$15,000 |
| <u>Water Truck</u> | | | | | | | | | | | | |
| 1989, Mack RB688 SerVan | 100% | - | - | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | \$20,000 |
| Total | | 42 | 42 | 50 | 50 | 61 | 64 | 65 | 66 | 66 | 66 | |

| | | | | | | | | | | |
|---------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Population | 428,641 | 429,625 | 430,447 | 430,502 | 431,346 | 432,173 | 432,789 | 434,382 | 436,263 | 438,671 |
| Per Capita Standard | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0002 | 0.0002 | 0.0001 |

| | |
|-------------------|-----------|
| 10 Year Average | 2007-2016 |
| Quantity Standard | 0.0001 |
| Quality Standard | \$159,100 |
| Service Standard | \$16 |

| | |
|-------------------------------|-----------|
| DC Amount (before deductions) | 10 Year |
| Forecast Population | 47,982 |
| \$ per Capita | \$16 |
| Eligible Amount | \$763,394 |

**Niagara Region
Service Standard Calculation Sheet**

Service: Waste Diversion - Containers
Unit Measure: No. of items

| Description | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 Value (\$/item) |
|------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------------|
| Residential: | | | | | | | | | | | |
| Blue Box | 155,645 | 156,616 | 158,685 | 160,807 | 165,980 | 171,153 | 175,308 | 178,940 | 182,449 | 183,955 | \$6 |
| Grey Box | 154,390 | 155,074 | 157,006 | 159,466 | 162,739 | 167,179 | 170,790 | 174,501 | 178,088 | 179,698 | \$6 |
| Green Bin | 154,534 | 154,729 | 156,081 | 157,989 | 160,996 | 163,477 | 165,905 | 168,027 | 170,432 | 171,510 | \$22 |
| Kitchen Catcher | - | - | - | 1,792 | 3,620 | 5,485 | 7,157 | 9,037 | 11,250 | 12,251 | \$4 |
| Multi-Residential: | | | | | | | | | | | |
| Blue & Grey Combined (small) | - | - | - | - | 1,237 | 1,237 | 1,237 | 1,237 | 1,237 | 1,237 | \$70 |
| Blue & Grey Combined (large) | - | - | - | - | 215 | 215 | 215 | 215 | 215 | 215 | \$70 |
| Blue Carts | - | - | - | - | - | 187 | 253 | 313 | 415 | 529 | \$70 |
| Grey Carts | - | - | - | - | - | 231 | 334 | 435 | 555 | 709 | \$70 |
| Green Carts | - | - | - | - | - | 41 | 113 | 147 | 147 | 147 | \$70 |
| Green Bin (12 Gallon) | - | - | - | - | - | - | - | - | 6 | 118 | \$22 |
| Green Carts (32 Gallon) | - | - | - | - | - | - | - | - | 73 | 74 | \$40 |
| ICI: | | | | | | | | | | | |
| Blue Box | | | | | 103 | 161 | 187 | 216 | 257 | 298 | \$70 |
| Grey Box | | | | | 55 | 89 | 109 | 146 | 195 | 236 | \$70 |
| Green Bin (12 Gallon) | | | | | - | - | - | - | - | - | \$22 |
| Green Carts (32 Gallon) | | | | | 24 | 35 | 44 | 55 | 108 | 143 | \$40 |
| Green Carts (64 Gallon) | | | | | - | - | - | 1 | 1 | 1 | \$70 |
| Backyard Composters | 258 | 279 | 395 | 553 | 690 | 894 | 894 | 894 | 894 | 894 | \$21 |
| Total | 464,827 | 466,698 | 472,167 | 480,607 | 495,659 | 510,384 | 522,546 | 534,164 | 546,322 | 552,015 | |

| | | | | | | | | | | |
|---------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Population | 428,641 | 429,625 | 430,447 | 430,502 | 431,346 | 432,173 | 432,789 | 434,382 | 436,263 | 438,671 |
| Per Capita Standard | 1.0844 | 1.0863 | 1.0969 | 1.1164 | 1.1491 | 1.1810 | 1.2074 | 1.2297 | 1.2523 | 1.2584 |

| | |
|------------------------|------------------|
| 10 Year Average | 2007-2016 |
| Quantity Standard | 1.1662 |
| Quality Standard | \$11 |
| Service Standard | \$13 |

| | |
|--------------------------------------|----------------|
| DC Amount (before deductions) | 10 Year |
| Forecast Population | 47,982 |
| \$ per Capita | \$13 |
| Eligible Amount | \$641,040 |

Niagara Region
Service Standard Calculation Sheet

Service: Waste Diversion - Other Equipment

Unit Measure: No. of items

| Description | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 Value (\$/item) |
|---|------|------|------|------|------|------|------|------|------|------|----------------------|
| Material Recovery Facility Equipment: | | | | | | | | | | | |
| Fibre Processing Line: | | | | | | | | | | | |
| In-Feed Metering Conveyor (M1) | - | - | - | - | - | 1 | 1 | 1 | 1 | 1 | \$51,000 |
| Inclined Feed Conveyor (M2) | - | - | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$101,000 |
| Metering Drum | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$40,000 |
| Pre-Sort Area Sort Conveyor (M3) | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$76,000 |
| OCC Disc Screen (M4) | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$253,000 |
| OCC Unders Collection/Transfer Conveyor to ONP Screen (M5, M6, M7) | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$121,000 |
| Fibre Line Secondary Sort Conveyors (M8, M9, M10) | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$101,000 |
| Fibre Line Secondary Sort Elevated Platforms, Chutes, Stairs/walkways | - | - | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$152,000 |
| Other - pit plates closing for conveyor, hydraulic bunker doors, etc. | - | - | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$101,000 |
| Newspaper Sort Conveyor (M205) | - | - | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$76,000 |
| Reversible OCC/OBB Transfer Conveyor (M218) | - | - | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$76,000 |
| Newspaper Transfer Conveyor (M208) | - | - | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$40,000 |
| Newspaper Transfer Conveyors (M206, M207) | - | - | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$40,000 |
| OCC/OBB Transfer Conveyors (M214, M215, M216, M217) | - | - | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$101,000 |
| Elevated Platforms, Chutes, Bunkers, Silos, Stairways and Walkways | - | - | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$606,000 |
| Electrical Controls | - | - | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$202,000 |
| Electrical and Mechanical Installation | - | - | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$505,000 |
| Fibre Baling System: | | | | | | | | | | | |
| Inclined Baler Feed Conveyor | - | - | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$253,000 |
| Baler (Nexgen model 2R-310W-84, 2 ram) | - | - | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$657,000 |
| Fibre Optical Sorting System: | | | | | | | | | | | |
| Discharge Conveyor Under OCC Separator & Splitter Roller (C10) | - | - | - | - | - | - | - | - | 1 | 1 | \$40,000 |
| Splitter Conveyor (C20) | - | - | - | - | - | - | - | - | 1 | 1 | \$27,000 |
| Incline Conveyor (C30) | - | - | - | - | - | - | - | - | 1 | 1 | \$42,000 |
| Vibratory Feeder (C40) | - | - | - | - | - | - | - | - | 1 | 1 | \$116,000 |
| Accelerator Conveyor (C50) | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$53,000 |
| Titech Optical Sorter (C60) | - | - | - | - | - | - | - | - | 1 | 1 | \$414,000 |
| Incline Conveyor (C80) | - | - | - | - | - | - | - | - | 1 | 1 | \$38,000 |
| Vibratory Feeder (C90) | - | - | - | - | - | - | - | - | 1 | 1 | \$116,000 |
| Accelerator Conveyor (C100) | - | - | - | - | - | - | - | - | 1 | 1 | \$53,000 |
| Titech Optical Sorter (C110) | - | - | - | - | - | - | - | - | 1 | 1 | \$414,000 |
| Discharge Conveyor (C120) | - | - | - | - | - | - | - | - | 1 | 1 | \$40,000 |
| Discharge Conveyor (C130) | - | - | - | - | - | - | - | - | 1 | 1 | \$40,000 |
| Transfer Conveyor (C140) | - | - | - | - | - | - | - | - | 1 | 1 | \$67,000 |
| Transfer Conveyor (C150) | - | - | - | - | - | - | - | - | 1 | 1 | \$62,000 |
| Elevated Platforms, Stairways and Walkways | - | - | - | - | - | - | - | - | 1 | 1 | \$101,000 |

Niagara Region
Service Standard Calculation Sheet

Service: Waste Diversion - Other Equipment

Unit Measure: No. of items

| Description | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 Value (\$/item) |
|--|------|------|------|------|------|------|------|------|------|------|----------------------|
| Electrical Controls | - | - | - | - | - | - | - | - | 1 | 1 | \$202,000 |
| Electrical and Mechanical Installation | - | - | - | - | - | - | - | - | 1 | 1 | \$404,000 |
| Air Compressor System for Fibre & Container Opticals: | | | | | | | | | | | |
| \$150 Boge Screw Compressors (quantity = 2) | - | - | - | - | - | - | - | - | - | 1 | \$101,000 |
| Aircell 600 Desiccant Air Dryer | - | - | - | - | - | - | - | - | - | 1 | \$15,000 |
| Tanks and Filtration | - | - | - | - | - | - | - | - | - | 1 | \$20,000 |
| HVAC Compressor Room Ventilation and Ducting | - | - | - | - | - | - | - | - | - | 1 | \$51,000 |
| Air Lines to Optical Sorters / Compressor Room Installation / Electrical | - | - | - | - | - | - | - | - | - | 1 | \$121,000 |
| Container Processing Line: | | | | | | | | | | | |
| Horizontal Feed Conveyor (C15) | - | - | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$51,000 |
| Inclined Feed Conveyor (C16) | - | - | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$101,000 |
| Pre-Sort Area Sort Conveyor (C17) | - | - | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$85,000 |
| Container Transfer Conveyor (C18) | - | - | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$40,000 |
| Steel Can Transfer Conveyor (C101A) | - | - | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$40,000 |
| Cross Belt Ferrous Separator (M101A & M101B) | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$51,000 |
| Glass Breaker Screen (GBS102 A,B & C) | - | - | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$152,000 |
| Broken Glass Conveyor (C105) | - | - | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$40,000 |
| Plastic Perforator (PP103 A & B) | - | - | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$40,000 |
| Fine Disc Screen (DS104) | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$51,000 |
| Container Transfer Conveyor (C106) | - | - | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$40,000 |
| Light Suction / Mesh Conveyor (C107) | - | - | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$76,000 |
| Light Transfer Conveyor (C108) | - | - | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$30,000 |
| Container Transfer Conveyor (C109) | - | - | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$51,000 |
| Film, Fibre and Metal Sort Conveyor (C110) | - | - | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$61,000 |
| Plastic Bag Air Vacuum | - | - | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$51,000 |
| Optical Speed Conveyor (C111) | - | - | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$40,000 |
| Pellenc Optical Sorter (OPT112) | - | - | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$455,000 |
| Split PET & Mixed Plastic QC Conveyor (C113A) | - | - | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$51,000 |
| Reversible PET Transfer Conveyor (C114) | - | - | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$30,000 |
| Reversible Mixed Plastic Transfer Conveyor (C115) | - | - | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$30,000 |
| Transfer Conveyor (C116) | - | - | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$40,000 |
| Transfer Conveyor (C117) | - | - | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$40,000 |
| Transfer Conveyor (C118) | - | - | - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$40,000 |
| Container Sorting Conveyor (C119) | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$51,000 |
| Eddy Current Rotor (M25A) and Conveyor (M25B) | - | - | - | - | - | - | - | 1 | 1 | 1 | \$121,000 |
| Aluminum Silo Blower (AB27) | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$51,000 |
| Residue Transfer Conveyor (M26) | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$40,000 |
| Elevated Platforms, Chutes, Bunkers, Silos, Stairways and Walkways | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$303,000 |
| Electrical Controls | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$202,000 |

Niagara Region
Service Standard Calculation Sheet

Service: Waste Diversion - Other Equipment

Unit Measure: No. of items

| Description | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 Value (\$/item) |
|---|------|------|------|------|------|------|------|------|------|------|----------------------|
| Electrical and Mechanical Installation | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$505,000 |
| Container and OCC Baling System | | | | | | | | | | | |
| Reclaim Conveyor | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$253,000 |
| Inclined Baler Feed Conveyor | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$354,000 |
| Elevated Quality Control Sorting Station | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$30,000 |
| Baler (IPS model TR-1388-LH-200 with pre-compression lid) | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$1,010,000 |
| Other - transition chutes, pit plates, etc. | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$76,000 |
| Polystyrene Densifer System: | | | | | | | | | | | |
| Feed Conveyor | - | - | - | - | - | - | - | - | 1 | 1 | \$61,000 |
| Sort Conveyor and Sort Platform | - | - | - | - | - | - | - | - | 1 | 1 | \$71,000 |
| Crusher | - | - | - | - | - | - | - | - | 1 | 1 | \$30,000 |
| Blower | - | - | - | - | - | - | - | - | 1 | 1 | \$20,000 |
| Compactor | - | - | - | - | - | - | - | - | 1 | 1 | \$51,000 |
| Glass Processing System: | | | | | | | | | | | |
| Feed Hopper | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$10,000 |
| Conveyor C-1 Sort Conveyor | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$15,000 |
| Sort Platform | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$5,100 |
| Magnetic Separator | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$30,000 |
| Kongsilde Air Separation System | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$40,000 |
| Primary Grinder | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$76,000 |
| Conveyor C-2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$15,000 |
| 3/4" Trommel Screen | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$20,000 |
| 3/4" Scalping Screen | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$20,000 |
| Fluidized Bed and Gas Trane/Heater | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$404,000 |
| Intersystems Bucket Elevator | - | - | - | - | - | - | - | 1 | 1 | 1 | \$35,000 |
| Aspirator | - | - | - | - | - | - | - | 1 | 1 | 1 | \$15,200 |
| Cyclone and Airlock | - | - | - | - | - | - | - | 1 | 1 | 1 | \$25,000 |
| Fan | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$9,100 |
| Bucket Elevator | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$76,000 |
| Five Deck 5x10 Screen | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$101,000 |
| Gyra-Vib Low Profile Separator | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$10,000 |
| Gyra-Vib Low Profile Separator | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$10,000 |
| Vibratory Feeders (3) | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$15,000 |
| Mini-Aspirator | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$10,000 |
| Secondary Grinder | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$101,000 |

Niagara Region
Service Standard Calculation Sheet

Service: Waste Diversion - Other Equipment
Unit Measure: No. of items

| Description | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 Value (\$/item) |
|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|----------------------|
| Five Deck 5x10 Screen | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$62,000 |
| Dust Collection Unit | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$76,000 |
| Dust Collection System for Labels | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$40,000 |
| Supersac Support Stands | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$5,100 |
| Electric Chain Hoist | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$3,000 |
| Air Compressor - Piston | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$10,100 |
| Air Compressor - Screw | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$20,000 |
| Dryer for Air Compressor | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$5,100 |
| Packaging Sealer | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$10,000 |
| Packaging Conveyor | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$5,100 |
| Packaging Bagger | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$15,200 |
| Supersac Scale: 36" x 36" | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$3,500 |
| Supersac Scale: 48" x 48" | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$2,000 |
| Shrink wrapper | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$10,100 |
| Elevated Platforms, Chutes, Silos, Stairways and Walkways | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$202,000 |
| Electrical Controls | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$202,000 |
| Electrical and Mechanical Installation | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | \$354,000 |
| Total | 54 | 54 | 54 | 89 | 89 | 90 | 90 | 94 | 115 | 120 | |

| | | | | | | | | | | |
|---------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Population | 428,641 | 429,625 | 430,447 | 430,502 | 431,346 | 432,173 | 432,789 | 434,382 | 436,263 | 438,671 |
| Per Capita Standard | 0.0001 | 0.0001 | 0.0001 | 0.0002 | 0.0002 | 0.0002 | 0.0002 | 0.0002 | 0.0003 | 0.0003 |

| 10 Year Average | 2007-2016 |
|-------------------|-----------|
| Quantity Standard | 0.0002 |
| Quality Standard | \$108,000 |
| Service Standard | \$22 |

| DC Amount (before deductions) | 10 Year |
|-------------------------------|-------------|
| Forecast Population | 47,982 |
| \$ per Capita | \$22 |
| Eligible Amount | \$1,036,411 |

Appendix C – Long Term Capital and Operating Cost Examination

Appendix C – Long Term Capital and Operating Cost Examination

Region of Niagara Annual Capital and Operating Cost Impact

As a requirement of the D.C.A. 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 saving 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 Region's approved 2015 Financial Information Return (FIR).

In addition to the operational impacts, over time the initial capital projects will require replacement. This replacement of capital is often referred to as life cycle cost. By definition, life cycle costs are all the costs which 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 life cycle 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 following factors 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:

| Asset | Lifecycle Cost Factors | |
|---|------------------------|---------|
| | TERM | FACTOR |
| Social Housing | 65 | 0.00763 |
| Wastewater and Wastewater Services | 60 | 0.00877 |
| Services Related to a Highway | 40 | 0.01656 |
| Facilities | 40 | 0.01656 |
| Waste diversion Vehicles, Equipment, Containers & Other | 25 | 0.03122 |
| EMS and Police Vehicles and Equipment | 7 | 0.13451 |

Table C-1 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 Region 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-1
NIAGARA REGION
OPERATING AND CAPITAL EXPENDITURE IMPACTS
FOR FUTURE CAPITAL EXPENDITURES

| SERVICE | GROSS COST LESS BENEFIT TO EXISTING | ANNUAL LIFECYCLE EXPENDITURES | ANNUAL OPERATING EXPENDITURES | TOTAL ANNUAL EXPENDITURES |
|---|---|----------------------------------|-------------------------------------|------------------------------|
| 1. Wastewater Services | | | | |
| 1.1 Wastewater | 282,970,502 | 15,480,080 | 17,445,208 | 32,925,288 |
| 2. Water Services | | | | |
| 2.1 Water | 218,080,672 | 11,725,830 | 7,720,587 | 19,446,417 |
| 3. Services Related to a Highway | | | | |
| 3.1 Services Related to a Highway, Related Facilities & Vehicles, and Previously Completed Unfunded Works | 505,308,807 | 27,565,467 | 7,435,894 | 35,001,361 |
| 4. Police Services | | | | |
| 4.1 Police facilities | 43,213,960 | 1,159,494 | 47,077,214 | 48,236,708 |
| 4.2 Police vehicles | 4,009,000 | 636,696 | 4,367,398 | 5,004,094 |
| 4.3 Small equipment and gear | 2,224,000 | 353,208 | 2,422,822 | 2,776,030 |
| 5. General Government | | | | |
| 5.1 Studies | 7,620,949 | | 0 | 0 |
| 6. Long Term Care | | | | |
| 6.1 Long Term Care facilities | 32,465,000 | 1,753,290 | 10,046,462 | 11,799,752 |
| 7. Health | | | | |
| 7.1 Health department space | 4,780,000 | 258,145 | 4,594,932 | 4,853,077 |
| 8. Provincial Offences Act | | | | |
| 8.1 POA facilities | 2,634,000 | 142,248 | 456,791 | 599,039 |
| 9. Social and Child Services | | | | |
| 9.1 Social and Child Services facilities | 4,700,000 | 253,825 | 0 | 253,825 |
| 10. Emergency Medical Services | | | | |
| 10.1 EMS facilities | 27,930,505 | 1,548,093 | 4,569,723 | 6,117,816 |
| 10.2 Vehicles | 2,386,000 | 394,725 | 390,375 | 785,100 |
| 11. Social Housing | | | | |
| 11.1 Social housing facilities | 65,386,900 | 3,405,814 | 3,590,812 | 6,996,626 |
| 12. Waste Diversion | | | | |
| 12.1 Waste diversion facilities - Stations/Depots | 8,103,500 | 437,640 | 2,392,723 | 2,830,363 |
| 12.2 Waste diversion vehicles and equipment | 760,000 | 49,680 | 224,405 | 274,085 |
| 12.3 Waste diversion - Containers | 640,000 | 41,840 | 188,973 | 230,813 |
| 12.4 Waste diversion other | 1,030,000 | 67,330 | 304,128 | 371,458 |
| Total | 1,214,243,794 | 65,273,405 | 113,228,446 | 178,501,851 |

Appendix D – Development Charge Reserve Fund Policy

Appendix D – Development Charge Reserve Fund Policy

D.1 Legislative Requirements

The D.C.A. requires development charge collections (and associated interest) to be placed in separate reserve funds. Sections 33 through 36 of the Act 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; s.7(1), however, allows services to be grouped into categories of services for reserve fund (and credit) purposes, although only 100% eligible and 90% eligible services may be combined (minimum of two reserve funds);
- the municipality shall pay each development charge 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 s.5(1) 2-8);
- money may be borrowed from the fund but must be paid back with interest (O.Reg. 82/98, s.11(1) defines this as the Bank of Canada rate either on the day the by-law comes into force or, if specified in the by-law, the first business day of each quarter); and
- D.C. reserve funds may not be consolidated with other municipal reserve funds for investment purposes (s.37).

Annually, the Treasurer of the Region is required to provide Council with a financial statement related to the D.C. by-law(s) and reserve funds. This statement must also be forwarded to the Minister of Municipal Affairs and Housing within 60 days of the statement being filed with Council.

O.Reg. 82/98 prescribes 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;
- transactions for the year (e.g. collections, draws);
- list of credits by service or service category (outstanding at beginning of the year, given in the year and outstanding at the end of the year by holder);

- amounts borrowed, purpose of the borrowing and interest accrued during previous year;
- amount and source of money used by the Region to repay municipal obligations to the fund;
- schedule identifying the value of credits recognized by the Region, the service to which it applies and the source of funding used to finance the credit; and
- for each draw, 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.

Based upon the above, Figure D-1 sets out the format for which annual reporting to Council should be provided.

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 8 of subsection 5(1).”

This provision clearly establishes that reserve funds collected for a specific service are only to be used for that service.

Table D-1
Niagara Region
Annual Treasurer's Statement of Development Charge Reserve Funds

| Description | Services to which the Development Charge Relates (examples) | | | | | | | | | | | | Total |
|---|---|-------------------|------------------------|--------------------|-------------------------|-------------------|-------------------------------|--------|---------------------------------|----------------------------------|--------------------------------|-------------------|-------|
| | Discounted Services | | | | Non-Discounted Services | | | | | | | | |
| | Services Related to a Highway | Water Services | Wastewater Services | Police Services | General Government | Long Term Care | Provincial Offences Act | Health | Social and Child Services | Emergency Medical Services | Waste Diversion Services | Social Housing | |
| Opening Balance, January 1, _____ | | | | | | | | | | | | | 0 |
| Plus: | | | | | | | | | | | | | |
| Development Charge Collections | | | | | | | | | | | | | 0 |
| Accrued Interest | | | | | | | | | | | | | 0 |
| Repayment of Monies Borrowed from Fund and Associated Interest ¹ | | | | | | | | | | | | | 0 |
| Sub-Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Less: | | | | | | | | | | | | | |
| Amount Transferred to Capital (or Other) Funds ² | | | | | | | | | | | | | 0 |
| Amounts Refunded | | | | | | | | | | | | | 0 |
| Amounts Loaned to Other DC Service Category for Interim Financing | | | | | | | | | | | | | 0 |
| Credits ³ | | | | | | | | | | | | | 0 |
| Sub-Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | | | | | |
| Closing Balance, December 31, _____ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

¹ Source of funds used to repay the DC reserve fund

² See Attachment 1 for details

³ 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.

Attachment 1

Niagara Region

Amount Transferred to Capital (or Other) Funds - Capital Fund Transactions

| Capital Fund Transactions | Gross Capital Cost | DC Recoverable Cost Share | | | | | Non-DC Recoverable Cost Share | | | | |
|--|--------------------|---------------------------|-------------------|---------------------------------------|--|---------------------------------------|----------------------------------|--|---|----------------|---------------------------------------|
| | | DC Forecast Period | | | Post DC Forecast Period | | Other Reserve/Reserve Fund Draws | Tax Supported Operating Fund Contributions | Rate Supported Operating Fund Contributions | Debt Financing | Grants, Subsidies Other Contributions |
| | | DC Reserve Fund Draw | DC Debt Financing | Grants, Subsidies Other Contributions | Post-Period Benefit/Capacity Interim Financing | Grants, Subsidies Other Contributions | | | | | |
| <u>Services Related to a Highway</u> | | | | | | | | | | | |
| Capital Cost A | | | | | | | | | | | |
| Capital Cost B | | | | | | | | | | | |
| Capital Cost C | | | | | | | | | | | |
| Sub-Total - Services Related to Highways | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| <u>Water Services</u> | | | | | | | | | | | |
| Capital Cost D | | | | | | | | | | | |
| Capital Cost E | | | | | | | | | | | |
| Capital Cost F | | | | | | | | | | | |
| Sub-Total - Water | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| <u>Wastewater Services</u> | | | | | | | | | | | |
| Capital Cost G | | | | | | | | | | | |
| Capital Cost H | | | | | | | | | | | |
| Capital Cost I | | | | | | | | | | | |
| Sub-Total - Wastewater | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |

Amount Transferred to Operating (or Other) Funds - Operating Fund Transactions

| Operating Fund Transactions | Annual Debt Repayment Amount | DC Reserve Fund Draw | | Post DC Forecast Period | | | Non-DC 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 | | | | | | | | | |
| Sub-Total - Services Related to Highways | \$0 | \$0 | \$0 | \$0 | \$0 | | \$0 | \$0 | |
| <u>Water Services</u> | | | | | | | | | |
| Capital Cost M | | | | | | | | | |
| Capital Cost N | | | | | | | | | |
| Capital Cost O | | | | | | | | | |
| Sub-Total - Water | \$0 | \$0 | \$0 | \$0 | \$0 | | \$0 | \$0 | |
| <u>Wastewater Services</u> | | | | | | | | | |
| Capital Cost P | | | | | | | | | |
| Capital Cost Q | | | | | | | | | |
| Capital Cost R | | | | | | | | | |
| Sub-Total - Wastewater | \$0 | \$0 | \$0 | \$0 | \$0 | | \$0 | \$0 | |

Attachment 2
Niagara Region
Statement of Credit Holder Transactions

| Credit Holder | Applicable DC 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 | | | | | |

Appendix E – Local Service Policy

Appendix E – Local Service Policy

Water and Wastewater Services

The following guideline sets out, in general, the range of infrastructure for water and wastewater services that constitutes a development charge project vs. sub-divider/developer responsibilities.

1) Watermains

i) Related to a specific development

Watermains internal to a specific development, as well as external watermains (generally less than 400 mm in size) to be connected to an existing local/regional main are considered to be the developer's responsibility through a development agreement with the local municipality.

ii) Unrelated to a specific development (transmission mains, regional distribution mains and inter-municipal mains)

Regional trunk watermains are transmission mains intended to primarily connect a well or treatment facility with a storage reservoir (generally 400 mm in size or greater). Occasionally, Regional mains (usually less than 400 mm in size) perform as an inter-municipal main or distribution mains, resulting from a joint venture project with a local municipality. All such mains, when not constructed for a specific development(s), are considered to be development charge projects in whole or part.

2) Booster Stations and Reservoirs

i) Related to a specific development

Temporary or permanent water booster pumping stations servicing a specific development(s) are considered to be the developer's responsibility through a development agreement with the local municipality.

ii) Unrelated to a specific development (associated with a Regional reservoir operation)

Water booster pumping stations not servicing a specific development(s) and relating to the operation of a reservoir facility are considered to be development charge projects.

3) Chlorination Facilities

New or upgraded chlorination facilities will be considered to be a development charge projects.

4) Wastewater Mains

i) Related to a specific development

Wastewater mains internal to a specific development, as well as external sewers with an ultimate capacity of less than 170 l/s peak dry weather flow (generally less than 600 mm in size) to connect a development to an existing local/regional main are considered to be the developer's responsibility through a development agreement with the local municipality.

ii) Unrelated to a specific development

Regional trunk wastewater mains having a peak dry weather flow capacity of 170 l/s or greater (generally 600 mm in size or greater) or 85 l/s for inter-municipal mains, are considered to be development charge projects.

5) Lift Stations

i) Related to a specific development

Temporary or permanent lift stations intended to service a specific development(s) with an ultimate capacity of less than 170 l/s peak dry weather flow and fed by wastewater mains that are the responsibility of the developer(s), are considered to be the developer's responsibility through a development agreement with the local municipality (not Regional development charge projects).

ii) Unrelated to a specific development

New or upgraded lift stations are considered to be development charge projects.

6) Noise and Odour Control Abatement Measures

i) Related to a specific development

All noise and odour control abatement measures to comply with MOE requirements and/or other engineering design standards are considered to be the developer's responsibility through an agreement with the local municipality and/or provisions of the Planning Act.

ii) Unrelated to a specific development

New or upgraded noise and/or odour control facilities unrelated to a specific development are considered to be development charge projects.

7) Treatment Facilities

New or upgraded water or wastewater treatment facilities are considered to be development charge projects.

8) Land Acquisition

(including right-of-way, utility easements and building setbacks)

i) Related to a specific development

- (a) All land acquisition associated with providing access right-of-ways and utility easements to new or existing Regional facilities, as well as property intended to accommodate the necessary building setbacks from Regional facilities, as per MOE requirements and/or other engineering design standards, are considered to be the developer's responsibility through the *Planning Act* and/or development agreement with the local municipality.

- (b) Land acquisitions deemed excessive are considered to be development charge projects (normally included as part of the capital works project).

ii) Unrelated to a specific development

Land acquisition for Regional facilities and utilities unrelated to a specific development will be considered to be development charge projects.

The above policy guidelines are general principles by which staff will be guided in considering development applications. However, each application will be considered on its own merits having regard to, among other factors, the nature, type and location of the development and any existing and proposed development in the surrounding area, these policy guidelines, the location and type of services required and their relationship to the proposed development and existing and proposed development in the area, changes in policy regarding Regional and local municipality responsibility and subsection 59(2) of the D.C.A.

Services Related to a Highway

The following guideline sets out, in general, the range of infrastructure for Services Related to a Highway that constitutes development charge projects.

ROAD RELATED WORKS

1) *Arterial, Collector and Other Roads*

i) Related to a Specific Development

- (a) All new roads, other than arterials internal to a development, as well as those primarily acting as a connection serving a development, are considered to be the developer's responsibility through a development agreement with the local municipality.
- (b) New or upgraded Regional arterial and collector roads necessitated by abutting or nearby development(s) are considered to be the developer's responsibility through an agreement with the Region.

ii) Unrelated to a Specific Development

New or upgraded arterial and collector Regional roads necessitated by increased traffic volumes and unrelated (and not abutting) to a specific development are considered to be development charge projects.

2) *Traffic Signals and Intersection Improvements*

i) Related to a Specific Development

Intersection improvements to and/or signalization of all roads, private entrances or entrances to specific developments necessitated by abutting or nearby development(s) and relating to Regional arterial or collector roads are considered to be the developer's responsibility through an agreement with the Region.

ii) Unrelated to a Specific Development

Intersection improvements to and/or signalization of Regional arterial or collector roads, necessitated by increased traffic volumes, are considered to be development charge projects.

3) *Streetlights*

i) Related to a Specific Development

- (a) Streetlights on all new roads within a specific development are considered to be the developer's responsibility through a development agreement with the local municipality.

- (b) Streetlights at new or existing intersections of Regional arterial or collector roads necessitated by a specific development (with or without intersection improvements) are considered to be the developer's responsibility through an agreement with the local municipality and/or Region.

ii) *Unrelated to a Specific Development*

- (a) Streetlights on Regional arterial or collector roads are considered to be the mandated responsibility of the local municipality.
- (b) Streetlights at intersections along Regional arterial or collector roads, necessitated by increased traffic volumes or safety concerns and unrelated to new development(s), are considered to be development charge projects.

4) *Sidewalks*

i) *Related to a Specific Development*

- (a) Sidewalks on all internal roads and abutting road frontages, whether on local or Regional roads, are considered to be the developer's responsibility through a development agreement with the local municipality.
- (b) Sidewalks external to a development, whether on local or Regional roads, which are necessary to connect the development to public spaces and/or existing sidewalks, are considered to be the developer's responsibility through a development agreement with the local municipality.

ii) *Unrelated to a Specific Development*

Sidewalks on Regional arterial or collector roads are considered to be the mandated responsibility of the local municipality.

5) *Bike Lanes/Bike Paths*

i) *Related to a Specific Development*

- (a) Bike paths/lanes within and outside road allowances within a specific development are considered to be the developer's responsibility through a development agreement with the local municipality.
- (b) Bike paths/lanes external to a development, which are necessary to connect the development to public spaces and/or other bike

infrastructure, are considered to be the developer's responsibility through a development agreement with the local municipality.

ii) *Unrelated to a Specific Development*

Bike paths/lanes within Regional road allowances located separate from or combined with the road pavement are considered to be development charge projects.

6) *Noise Abatement Measures*

i) *Related to a Specific Development*

Noise abatement measures internal to a development, related or unrelated to Regional arterial and collector roads, are considered to be the developer's responsibility through a development agreement with the local municipality.

ii) *Unrelated to a Specific Development*

Noise abatement measures unrelated to a specific development(s) on Regional arterial or collector roads are considered to be development charge projects.

7) *Traffic Control Systems*

i) *Related to a Specific Development*

New or upgraded traffic control systems intended to service a specific and/or several development(s) are considered to be the developer's responsibility through an agreement with the Region.

ii) *Unrelated to a Specific Development*

On Regional arterial or collector roads, new and upgraded traffic control systems necessitated by increased traffic volumes and unrelated to a specific development(s), are considered to be development charge projects.

8) *Transportation Studies (traffic studies, master plans, secondary corridor studies)*

i) *Related to a Specific Development*

Traffic studies undertaken for the benefit of a specific development(s) are considered to be the responsibility of the developer.

ii) *Unrelated to a Specific Development*

Master plans and secondary corridor studies are considered to be development charge projects.

9) Land Acquisition (including right-of-ways and utility easements)

i) Related to a Specific Development

- (a) Land acquisition to upgrade Regional arterial or collector roads and/or provide utility corridors to the widths required by approved engineering design standards, is considered to be the developer's responsibility and primarily provided by dedications under the Planning Act.
- (b) Land acquisition for grade separations, new Regional arterial roads or other excessive needs beyond normal dedication requirements are considered to be development charge projects (normally included as part of the capital works project).

ii) Unrelated to a Specific Development

In areas where limited or no development is anticipated and direct dedication is unlikely within the time constraints of the proposed capital works project, such land acquisitions are considered to be development charge projects (normally included as part of the capital works project).

STORM WATER MANAGEMENT WORKS

10) Storm Drainage Works

i) Related to a Specific Development

(storm sewers, culverts, ditching, outfalls)

- (a) All storm drainage works related to a specific development(s) and not providing a benefit to Regional property or infrastructure are considered to be the developer's responsibility through a development agreement with the local municipality.
- (b) All Regional costs associated with over-sizing of storm drainage works by a developer are considered to be development charge projects for which an agreement will be required between the Region and developer and/or the local municipality.

ii) Unrelated to a Specific Development

- (a) All storm drainage works relating to future Regional road construction, are considered to be development charge projects (normally included as part of the capital works project).
- (b) Storm drainage works relating to road maintenance best practises may be considered as development charge projects in whole or part.

11) Storm Water Management

(retention/detention storage, erosion remediation)

i) Related to a Specific Development

All storm water management works related to a specific development(s) and not providing a benefit to Regional property and/or infrastructure are considered to be the developer's responsibility through a development agreement with the local municipality.

ii) Unrelated to a Specific Development

All Regional costs associated with the construction of storm water management works unrelated to a specific development, including downstream erosion works control measures are considered to be development charge projects (normally included as part of the capital works project).

The above policy guidelines are general principles by which staff will be guided in considering development applications. However, each application will be considered on its own merits having regard to, among other factors, the nature, type and location of the development and any existing and proposed development in the surrounding area, these policy guidelines, the location and type of services required and their relationship to the proposed development and existing and proposed development in the area, changes in policy regarding Regional and local municipal responsibility and subsection 59(2) of the D.C.A.

Front Ending Policy

The development charge calculations incorporate the growth-related capital requirements that have been identified in accordance with the policies outlined more fully in this Background Study. The Region may require a developer(s) to enter into front-end financing or related agreements as part of the planning application approval process in order to fund specific capital projects that are required to service their development in the following circumstances:

1. Where a specific development(s) requires Regional budget approval for a capital project that has been included within the development charge calculation in advance of the project timing determined as outlined in the Region's Annual Capital Budget and Forecasting process.
2. Where a specific development(s) requires Regional budget approval for a capital project that has not been included within the development charge calculation but has been deemed to be a development charge project (as opposed to a subdivider responsibility under the Local Servicing Policy).

These front-end financing and related agreements will ensure that the complete infrastructure requirements based on Master Planning processes, phasing strategy, and other studies are provided for, and that the Region's design criteria requirements, as well as Regional and local service standards, are maintained in the project delivery. These agreements will provide for landowner financing of the full project cost where required, with repayment terms to the landowner(s) acceptable to the Region based on a supporting financial plan.

The above policy guidelines are general principles by which staff will be guided in considering development applications. However, each application will be considered on its own merits having regards to, among other factors, the Niagara Regional Policy Plan, the nature, type and location of the development and any existing and proposed development in the surrounding area, these policy guidelines, the location and type of services required and their relationship to the proposed development and existing and proposed development in the area, and subsection 59(2) of the D.C.A.

Appendix F – Water Servicing Needs – GM BluePlan Engineering Consultants Limited

Appendix F – Water Servicing Needs – GM BluePlan Engineering Consultants Limited

D.C. Calculation Planning Period

2017 - 2041

Service Coverage and Capital Program

Coverage:

The Region of Niagara is responsible for water treatment, transmission mains, storage facilities and booster pumping stations.

Capital Program:

The capital program, which covers the period 2017-2041, is comprised of:

1. Growth related works from the Region's 2017 Water and Wastewater Master Servicing Plan;
2. The portion of previously constructed, unfunded projects.
3. The 2012 study was completed, the post period time frame generally included the period from mid-2018 and beyond. As that time period is now being fully incorporated into the 2017 D.C. calculation period, the full post period capacity amount can be recovered over the forecast growth. This includes works identified in the 2012 D.C. Background Study as already constructed for which a 2014 and beyond P.P.C. share was identified and has not yet been funded from D.C. reserves. These works were first included in the 2004 D.C. Study which had a D.C. recoverable period of 2004-2014.
4. Post period capacity projects from previous development charge studies (i.e. 1999) that have not yet been fully D.C. funded and for which capacity still exists for use by future growth.
5. Other growth-related capital works in the Region's capital budget and forecast that are not included in the Master Servicing Plan.
6. Future Master Plan Study Updates (as provided for in Chapter 5).

Local Service and Developer Contribution Policy

The Region's local service policy for water projects is documented in Appendix E and indicates the type of works to be funded directly by developers.

Level of Service Measurement

The provision of potable water within the Region is governed by Provincial regulations and sound engineering practice. Further detail regarding the Region's design criteria is provided in Niagara's 2017 Master Servicing Plan.

Benefit to Existing Development Deduction (B.T.E.)

The benefit to existing development deductions for water are summarized in the following table. No B.T.E. deductions are applicable for credits or recovery of the P.P.C. share of already constructed projects, as these shares are already net of B.T.E., etc.

| Growth-Related Categories Project Type | | 1 | 2 | 3 | 4 |
|---|-------------------------------|--|---|---|------------------------|
| | | Addresses Growth and Existing Issues | Growth Driven and Addresses Known Existing Issues | Growth Driven with Likely Benefit to Existing Areas | Entirely Growth Driven |
| A | Treatment | 50% includes sustainability upgrades | 20% addresses facility age, condition or performance | 10% | 0% |
| B | Pumping Station | 50% includes sustainability upgrades | 20% addresses facility age, condition or performance | 10% | 0% |
| C | Storage | 50% includes sustainability upgrades | 20% addresses facility age, condition or performance | 10% | 0% |
| D | Distribution and Transmission | 50% includes system looping and security of supply | 20% addresses pipe age, condition or performance and level of service | 10% | 0% |

| Growth-Related Categories Project Type | | 1 | 2 | 3 | 4 |
|---|-----------------|---|---|---|------------------------|
| | | Addresses Growth and Existing Issues | Growth Driven and Addresses Known Existing Issues | Growth Driven with Likely Benefit to Existing Areas | Entirely Growth Driven |
| E | Decommissioning | 70% Addresses existing system performance | | | |
| F | Exceptions | May require unique B.T.E. allocation based on type, location or timing of project | | | |

Post Period/Excess Capacity Deduction

Deductions are made for post 2041 servicing capacity where explicit oversizing is provided for. The following table sets out the rationale for determining the deductions. The percentages shown are applied to the total project cost. No deduction is applicable for already-constructed (but not fully D.C. funded) projects, as the recovery period now extends to 2041.

| Growth-Related Categories Project Type | | 1 | 2 | 3 | 4 |
|---|-----------------|--|---|---|--------------------------------------|
| | | Strategically Sized by Additional Future Capacity | Sized for Bylaw Planning Period with Some Strategic Additional Capacity | Sized for Bylaw Planning Period with Likely Some Marginal Additional Capacity | Sized for Bylaw Planning Period Only |
| A | Treatment | 50% includes strategic, cost-effective additional capacity | 20% Some planning for future capacity | 10% | 0% |
| B | Pumping Station | 50% includes strategic, cost-effective additional capacity | 20% Some planning for future capacity | 10% | 0% |

| Growth-Related Categories Project Type | | 1 | 2 | 3 | 4 |
|---|-------------------------------|--|---|---|--------------------------------------|
| | | Strategically Sized by Additional Future Capacity | Sized for Bylaw Planning Period with Some Strategic Additional Capacity | Sized for Bylaw Planning Period with Likely Some Marginal Additional Capacity | Sized for Bylaw Planning Period Only |
| C | Storage | 50% includes strategic, cost-effective additional capacity | 20% Some planning for future capacity | 10% | 0% |
| D | Distribution and Transmission | 50% includes strategic, cost-effective additional capacity | 20% Some planning for future capacity | 10% | 0% |
| E | Decommissioning | N/A | | | |
| F | Exceptions | May require unique OBL allocation based on type, location or timing of project | | | |

Provision for Grants, Subsidies and Other Contributions

No grants, subsidies or other contributions are anticipated for most of the Master Servicing Plan projects. There is currently an established agreement for funding of the Decew Inlet Channel. This contribution has been accounted for and reduced from the gross cost to establish a net development charge eligible cost. For all other projects, the gross cost shown for credits and previously constructed works are already net of any grant or contribution received.

10% Statutory Deduction

Not applicable.

Use of Existing Reserve Funds

The December 31, 2016 uncommitted D.C. reserve fund balance has been netted in making the D.C. calculation for water works.

Residential and Non-Residential Split

The Residential and Non-Residential cost share of all projects is based on the incremental population and employment forecast in the serviced area from 2017 to 2041 for the Region.

Within the total employment forecast, No Fixed Place of Work (N.F.P.O.W.) and Work from Home (W.F.H.) employment categories have been included.

N.F.P.O.W. is defined as persons who work at various work locations or job sites and do not report to a headquarters or depot before starting work each day. N.F.P.O.W. employees are recognized to contribute to water demands and wastewater flows in both residential and employment properties but do not reflect new demands and flows already projected across residential and employment lands.

W.F.H. employees are recognized to generate water and wastewater use already accounted for in the overall residential use.

To appropriately apportion the N.F.P.O.W. and W.F.H. within the Residential and Non-Residential cost share, 50% of N.F.P.O.W. employment is assigned to residential and employment growth each, and W.F.H. employment is assigned to residential growth. This approach is completed for D.C. calculation purposes and does not impact the water and wastewater flow projections.

NIAGARA REGION - DEVELOPMENT-RELATED WATER PROJECTS

| Master Plan ID | Description | Year in Service | System | Total Component Estimated Cost | Benefit to Existing Development | Beyond 2041 Oversizing | Grants & Contributions | DC Recoverable 2017 - 2041 | Residential Share | Non-Residential Share | BTE Comment | OBL Comment |
|----------------|---|-----------------|---------------|--------------------------------|---------------------------------|------------------------|------------------------|----------------------------|-----------------------|-----------------------|-------------|-------------|
| W-D-001 | Decommissioning of Central Ave (Fort Erie South) ET | 2022 - 2031 | Rosehill | \$ 1,979,000 | \$ 1,385,300 | | | \$ 593,700 | \$ 451,212 | \$ 142,488 | E1 | |
| W-D-002 | Decommissioning of Stevensville Res + PS | 2022 - 2031 | Rosehill | \$ 2,913,000 | \$ 2,039,100 | | | \$ 873,900 | \$ 664,164 | \$ 209,736 | E1 | |
| W-D-003 | Decommissioning of Park Road Res + PS | 2022 - 2031 | Grimsby | \$ 523,000 | \$ 366,100 | | | \$ 156,900 | \$ 119,244 | \$ 37,656 | E1 | |
| W-D-004 | Decommissioning of Lundy's Lane ET | 2032 - 2041 | Niagara Falls | \$ 1,979,000 | \$ 1,385,300 | | | \$ 593,700 | \$ 451,212 | \$ 142,488 | E1 | |
| W-D-005 | Decommissioning of Pelham ET | 2022 - 2031 | Welland | \$ 1,028,000 | \$ 719,600 | | | \$ 308,400 | \$ 234,384 | \$ 74,016 | E1 | |
| W-D-006 | Decommissioning of King Street ET | 2017 - 2021 | Port Colborne | \$ 1,979,000 | \$ 1,385,300 | | | \$ 593,700 | \$ 451,212 | \$ 142,488 | E1 | |
| W-D-007 | Decommissioning of Fielden Ave Res + PS | 2032 - 2041 | Port Colborne | \$ 2,913,000 | \$ 2,039,100 | | | \$ 873,900 | \$ 664,164 | \$ 209,736 | E1 | |
| W-F-001 | Grimsby WTP Expansion | 2022 - 2031 | Grimsby | \$ 51,496,000 | \$ 5,149,600 | \$ 5,149,600 | | \$ 41,196,800 | \$ 31,309,568 | \$ 9,887,232 | A3 | A3 |
| W-F-002 | Decew inlet channel | 2017 - 2021 | Decew | \$ 22,969,000 | | | \$ 18,500,000 | \$ 4,469,000 | \$ 3,396,440 | \$ 1,072,560 | A4 | |
| W-M-001 | New trunk main in Central Fort Erie | 2022 - 2031 | Rosehill | \$ 9,479,000 | \$ 4,739,500 | | | \$ 4,739,500 | \$ 3,602,020 | \$ 1,137,480 | D1 | |
| W-M-002 | New Conveyance to Port Colborne East side | 2017 - 2021 | Port Colborne | \$ 11,548,000 | \$ 5,774,000 | | | \$ 5,774,000 | \$ 4,388,240 | \$ 1,385,760 | D1 | |
| W-M-003 | New trunk main from Welland WTP to North | 2032 - 2041 | Welland | \$ 7,556,000 | \$ 3,778,000 | | | \$ 3,778,000 | \$ 2,871,280 | \$ 906,720 | D1 | |
| W-M-004 | Upgrade trunk main from Grimsby WTP to Park Road | 2017 - 2021 | Grimsby | \$ 13,139,000 | \$ 6,569,500 | | | \$ 6,569,500 | \$ 4,992,820 | \$ 1,576,680 | D1 | |
| W-M-005 | New trunk main from Grimsby WTP to New Grimsby Reservoir | 2022 - 2031 | Grimsby | \$ 42,044,000 | \$ 4,204,400 | | | \$ 37,839,600 | \$ 28,758,096 | \$ 9,081,504 | D3 | |
| W-M-006 | New trunk main in Smithville | 2022 - 2031 | Grimsby | \$ 14,357,000 | \$ 1,435,700 | | | \$ 12,921,300 | \$ 9,820,188 | \$ 3,101,112 | D3 | |
| W-M-007 | New trunk main from PRV to Port Robinson Chlorine BPS | 2017 - 2021 | Niagara Falls | \$ 2,543,000 | \$ 1,271,500 | | | \$ 1,271,500 | \$ 966,340 | \$ 305,160 | D1 | |
| W-M-008 | Trunk main from South NOTL to Virgil ET | 2032 - 2041 | Decew | \$ 13,535,000 | \$ 6,767,500 | | | \$ 6,767,500 | \$ 5,143,300 | \$ 1,624,200 | D1 | |
| W-M-009 | New Niagara Falls South trunk main to New Elevated Tank | 2032 - 2041 | Niagara Falls | \$ 4,858,000 | | | | \$ 4,858,000 | \$ 3,692,080 | \$ 1,165,920 | D4 | |
| W-M-010 | New Niagara Falls South trunk main | 2032 - 2041 | Niagara Falls | \$ 18,316,000 | | | | \$ 18,316,000 | \$ 13,920,160 | \$ 4,395,840 | D4 | |
| W-M-011 | New trunk main to Fort Erie Elevated Tank | 2017 - 2021 | Rosehill | \$ 4,107,000 | \$ 2,053,500 | | | \$ 2,053,500 | \$ 1,560,660 | \$ 492,840 | D1 | |
| W-M-012 | Upgrade watermain in Port Colborne to new Barrick Road ET | 2017 - 2021 | Port Colborne | \$ 2,185,000 | \$ 1,092,500 | | | \$ 1,092,500 | \$ 830,300 | \$ 262,200 | D1 | |
| W-P-001 | Upgrade Shoalt's Drive LLPS | 2017 - 2021 | Welland | \$ 3,062,000 | \$ 306,200 | | | \$ 2,755,800 | \$ 2,094,408 | \$ 661,392 | B3 | |
| W-P-002 | Upgrade Shoalt's Drive HLPs | 2017 - 2021 | Welland | \$ 7,882,000 | \$ 788,200 | | | \$ 7,093,800 | \$ 5,391,288 | \$ 1,702,512 | B3 | |
| W-P-003 | Upgrade Lincoln/Grimsby BPS | 2032 - 2041 | Grimsby | \$ 989,000 | \$ 98,900 | | | \$ 890,100 | \$ 676,476 | \$ 213,624 | B3 | |
| W-S-001 | New Fort Erie ET | 2017 - 2021 | Rosehill | \$ 12,838,000 | \$ 6,419,000 | | | \$ 6,419,000 | \$ 4,878,440 | \$ 1,540,560 | C1 | |
| W-S-002 | New Barrick Road ET in Port Colborne | 2017 - 2021 | Port Colborne | \$ 8,022,000 | \$ 4,011,000 | | | \$ 4,011,000 | \$ 3,048,360 | \$ 962,640 | C1 | |
| W-S-003 | New Pelham ET | 2022 - 2031 | Welland | \$ 9,307,000 | \$ 4,653,500 | | | \$ 4,653,500 | \$ 3,536,660 | \$ 1,116,840 | C1 | |
| W-S-004 | New South Niagara Falls ET | 2032 - 2041 | Niagara Falls | \$ 9,629,000 | \$ 4,814,500 | | | \$ 4,814,500 | \$ 3,659,020 | \$ 1,155,480 | C1 | |
| W-S-005 | New Grimsby Reservoir | 2017 - 2021 | Grimsby | \$ 23,474,000 | \$ 2,347,400 | | | \$ 21,126,600 | \$ 16,056,216 | \$ 5,070,384 | C3 | |
| | Total | | | \$ 306,649,000 | \$ 75,594,200 | \$ 5,149,600 | \$ 18,500,000 | \$ 207,405,200 | \$ 157,627,952 | \$ 49,777,248 | | |

Appendix G – Wastewater Servicing Needs – GM BluePlan Engineering Consultants Limited

Appendix G – Wastewater Servicing Needs – GM BluePlan Engineering Consultants Limited

D.C. Calculation Planning Period

2017-2041

Service Coverage and Capital Program

Coverage:

The Region of Niagara is responsible for wastewater treatment, trunk sewers and pumping stations.

Capital Program:

The capital program, which covers the period 2017-2041, is comprised of:

1. Growth related works from the Region's 2017 Water and Wastewater Master Servicing Plan;
2. The portion of previously constructed, unfunded projects.
3. The P.P.C. share of projects from the 2012 D.C. study that have now been constructed. At the time that the 2012 study was completed, the post period time frame generally included the period from mid-2018 and beyond. As that time period is now being fully incorporated into the 2017 D.C. calculation period, the full post period capacity amount can be recovered over the forecast growth. This includes works identified in the 2012 D.C. Background Study as already constructed for which a 2014 and beyond P.P.C. share was identified and have not yet been funded from DC reserves. These works were included in the 2004 DC Background Study which had a DC recoverable period of 2004 - 2014.
4. Post period capacity share of projects from previous development charge studies (i.e. 1999) that have not yet been fully DC-funded and for which capacity still exists for use by future growth.
5. Other growth-related capital works in the Region's capital budget and forecast that are not included in the Master Servicing Plan.

6. Future Master Plan Study Updates (as provided for in Chapter 5).

Local Service and Developer Contribution Policy

The Region's local service policy for wastewater is documented in Appendix E and indicates the types of works to be funded directly by developers.

Level of Service Measurement

The provision of wastewater services within the Region is governed by Provincial regulations and sound engineering practice. Further detail on the Region's design criteria is found in Niagara's 2017 Master Servicing Plan.

Benefit to Existing Development Deduction (B.T.E.)

The benefit to existing development deductions for wastewater are summarized in the following table. No B.T.E. deductions are applicable for credits or recovery of the P.P.C. share of already constructed projects, as these shares are already net of B.T.E., etc.

| Growth-Related Categories Project Type | | 1 | 2 | 3 | 4 |
|---|---------------------------|---|---|---|------------------------|
| | | Addresses Growth and Existing Issues | Growth Driven and Addresses Known Existing Issues | Growth Driven with Likely Benefit to Existing Areas | Entirely Growth Driven |
| A | Treatment | 50% includes sustainability upgrades | 20% addresses facility age, condition or performance | 10% | 0% |
| B | Pumping Station | 50% includes sustainability upgrades | 20% addresses facility age, condition or performance | 10% | 0% |
| C | Collection and Conveyance | 50% includes system twinning and security of conveyance | 20% addresses pipe age, condition or performance and level of service | 10% | 0% |
| D | Decommissioning | 70% Addresses existing system performance | | | |

| Growth-Related Categories Project Type | | 1 | 2 | 3 | 4 |
|---|--------------------------------|--|---|---|------------------------|
| | | Addresses Growth and Existing Issues | Growth Driven and Addresses Known Existing Issues | Growth Driven with Likely Benefit to Existing Areas | Entirely Growth Driven |
| E | Wet Weather Management Program | 50% Addresses current deficiency in level of service, improvements located in existing service areas | | | |
| F | Exceptions | May require unique B.T.E. allocation based on type, location or timing of project | | | |

Post Period/Excess Capacity Deduction

Deductions are made for post 2041 servicing capacity where explicit oversizing is provided for. The following table sets out the rationale for determining the deductions. The percentages shown are applied to the total project cost. No deduction is applicable for already-constructed (but not fully DC funded) projects, as the recovery period now extends to 2041, with the exception of several recently constructed expansion projects which provide for growth post 2041.

| Categories Project Type | | 1 | 2 | 3 | 4 |
|--------------------------------|-----------|---|---|---|--------------------------------------|
| | | Strategically Sized by Additional Future Capacity | Sized for Bylaw Planning Period with Some Strategic Additional Capacity | Sized for Bylaw Planning Period with Likely Some Marginal Additional Capacity | Sized for Bylaw Planning Period Only |
| A | Treatment | 50% includes strategic cost effective additional capacity | 20% Some planning for future capacity | 10% | 0% |

| Categories Project Type | | 1 | 2 | 3 | 4 |
|--------------------------------|--------------------------------|---|---|---|--------------------------------------|
| | | Strategically Sized by Additional Future Capacity | Sized for Bylaw Planning Period with Some Strategic Additional Capacity | Sized for Bylaw Planning Period with Likely Some Marginal Additional Capacity | Sized for Bylaw Planning Period Only |
| B | Pumping Station | 50% includes strategic cost effective additional capacity | 20% Some planning for future capacity | 10% | 0% |
| C | Collection and Conveyance | 50% includes strategic cost effective additional capacity | 20% Some planning for future capacity | 10% | 0% |
| D | Decommissioning | N/A | | | |
| E | Wet Weather Management Program | N/A | | | |
| F | Exceptions | May require unique B.T.E. allocation based on type, location or timing of project | | | |

Provision for Grants, Subsidies and Other Contributions

No grants, subsidies or other contributions are anticipated for any of the Master Servicing Plan projects. In the case of C.S.O. control projects on the "Region-wide" schedule, the local municipal share has been excluded from the gross project cost.

10% Statutory Deduction

Not applicable.

Use of Existing Reserve Funds

The December 31, 2016 uncommitted D.C. reserve fund balance has been netted in making the D.C. calculation for wastewater works.

Residential and Non-Residential Split

The Residential and Non-Residential cost share of all projects is based on the incremental population and employment forecast in the serviced areas from 2017 to 2041 for the Region.

Within the total employment forecast, No Fixed Place of Work (N.F.P.O.W.) and Work from Home (W.F.H.) employment categories have been included.

N.F.P.O.W. is defined as persons who work at various work locations or job sites and do not report to a headquarters or depot before starting work each day. N.F.P.O.W. employees are recognized to contribute to water demands and wastewater flows in both residential and employment properties but do not reflect new demands and flows already projected across residential and employment lands.

W.F.H. employees are recognized to generate water and wastewater use already accounted for in the overall residential use.

To appropriately apportion the N.F.P.O.W. and W.F.H. within the Residential and Non-Residential cost share, 50% of N.F.P.O.W. employment is assigned to residential and employment growth each, and W.F.H. employment is assigned to residential growth. This approach is completed for D.C. calculation purposes and does not impact the water and wastewater flow projections.

NIAGARA REGION - DEVELOPMENT-RELATED WASTEWATER PROJECTS

| Master Plan ID | Description | Year in Service | System | Total Component Estimated Cost | Benefit to Existing Development | Beyond 2041 Oversizing | Grants & Contributions | DC Recoverable 2017 - 2041 | Residential Share | Non-Residential Share | BTE Comment | OBL Comment |
|----------------|--|-----------------|---------------------|--------------------------------|---------------------------------|------------------------|------------------------|----------------------------|-------------------|-----------------------|-------------|-------------|
| WW-D-001 | Decommissioning of Queenston WWTP | 2022-2031 | Queenston | \$ 1,979,000 | \$ 1,385,300 | | | \$ 593,700 | \$ 451,212 | \$ 142,488 | D1 | |
| WW-FM-001 | Upgrade Catherine St. SPS Forcemain | 2032-2041 | Anger Ave | \$ 467,000 | \$ 93,400 | | | \$ 373,600 | \$ 283,936 | \$ 89,664 | B2 | |
| WW-FM-003 | Upgrade Foss Road SPS Forcemain | 2022-2031 | Welland | \$ 4,500,000 | \$ 900,000 | | | \$ 3,600,000 | \$ 2,736,000 | \$ 864,000 | B2 | |
| WW-FM-004 | Laurie Avenue SPS Forcemain Upgrade | 2017-2021 | Baker Road | \$ 2,981,000 | \$ 298,100 | | | \$ 2,682,900 | \$ 2,039,004 | \$ 643,896 | B3 | |
| WW-FM-005 | New Peel Street SPS Forcemain | 2022-2031 | Port Weller | \$ 4,889,000 | \$ 977,800 | | | \$ 3,911,200 | \$ 2,972,512 | \$ 938,688 | B2 | |
| WW-FM-006 | New Black Horse Forcemain to Niagara Falls | 2022-2031 | South Niagara Falls | \$ 9,820,000 | \$ 1,964,000 | | | \$ 7,856,000 | \$ 5,970,560 | \$ 1,885,440 | B2 | |
| WW-FM-008 | South Side High Lift conveyance | 2022-2031 | South Niagara Falls | \$ 38,039,000 | \$ 7,607,800 | | | \$ 30,431,200 | \$ 23,127,712 | \$ 7,303,488 | B2 | |
| WW-FM-009 | Dorchester Forcemain twinning | 2022-2031 | Niagara Falls | \$ 303,000 | \$ 60,600 | | | \$ 242,400 | \$ 184,224 | \$ 58,176 | B2 | |
| WW-FM-010 | St. Davids #1 Forcemain twinning | 2022-2031 | Niagara Falls | \$ 3,923,000 | \$ 784,600 | | | \$ 3,138,400 | \$ 2,385,184 | \$ 753,216 | B2 | |
| WW-FM-011 | Smithville Forcemain twinning | 2022-2031 | Baker Road | \$ 18,132,000 | \$ 1,813,200 | | | \$ 16,318,800 | \$ 12,402,288 | \$ 3,916,512 | B3 | |
| WW-FM-012 | New Queenston Forcemain | 2022-2031 | Niagara Falls | \$ 11,136,000 | \$ 7,795,200 | | | \$ 3,340,800 | \$ 2,539,008 | \$ 801,792 | B3 | |
| WW-I-001 | Wet weather reduction in East Fort Erie | 2022-2031 | Anger Ave | \$ 4,500,000 | \$ 2,250,000 | | | \$ 2,250,000 | \$ 1,710,000 | \$ 540,000 | E1 | |
| WW-I-002 | Wet weather reduction in Crystal Beach | 2022-2031 | Crystal Beach | \$ 4,500,000 | \$ 2,250,000 | | | \$ 2,250,000 | \$ 1,710,000 | \$ 540,000 | E1 | |
| WW-I-003 | Wet weather reduction in Stevensville/Douglstown | 2022-2031 | Stev / Doug | \$ 4,500,000 | \$ 2,250,000 | | | \$ 2,250,000 | \$ 1,710,000 | \$ 540,000 | E1 | |
| WW-I-004 | Wet weather reduction in Central Welland | 2022-2031 | Welland | \$ 30,000,000 | \$ 15,000,000 | | | \$ 15,000,000 | \$ 11,400,000 | \$ 3,600,000 | E1 | |
| WW-I-005 | Wet weather reduction in West Grimsby | 2022-2031 | Baker Road | \$ 7,500,000 | \$ 3,750,000 | | | \$ 3,750,000 | \$ 2,850,000 | \$ 900,000 | E1 | |
| WW-I-006 | Wet weather reduction in Beamsville | 2022-2031 | Baker Road | \$ 3,000,000 | \$ 1,500,000 | | | \$ 1,500,000 | \$ 1,140,000 | \$ 360,000 | E1 | |
| WW-I-007 | Wet weather reduction in Jordan Valley | 2022-2031 | Baker Road | \$ 1,500,000 | \$ 750,000 | | | \$ 750,000 | \$ 570,000 | \$ 180,000 | E1 | |
| WW-I-008 | Wet weather reduction in St. Catharines - Port Dalhousie | 2022-2031 | Port Dalhousie | \$ 30,000,000 | \$ 15,000,000 | | | \$ 15,000,000 | \$ 11,400,000 | \$ 3,600,000 | E1 | |
| WW-I-009 | Wet weather reduction in North Thorold | 2022-2031 | Port Dalhousie | \$ 13,500,000 | \$ 6,750,000 | | | \$ 6,750,000 | \$ 5,130,000 | \$ 1,620,000 | E1 | |
| WW-I-010 | Wet weather reduction in St. Catharines - Port Weller | 2017-2021 | Port Weller | \$ 20,100,000 | \$ 10,050,000 | | | \$ 10,050,000 | \$ 7,638,000 | \$ 2,412,000 | E1 | |
| WW-I-011 | Wet weather reduction in Central Port Colborne | 2022-2031 | Seaway | \$ 3,000,000 | \$ 1,500,000 | | | \$ 1,500,000 | \$ 1,140,000 | \$ 360,000 | E1 | |
| WW-I-012 | Wet weather reduction in Central Niagara Falls | 2022-2031 | Niagara Falls | \$ 15,000,000 | \$ 7,500,000 | | | \$ 7,500,000 | \$ 5,700,000 | \$ 1,800,000 | E1 | |
| WW-I-013 | Wet weather reduction in South Side Niagara Falls | 2017-2021 | Niagara Falls | \$ 15,000,000 | \$ 7,500,000 | | | \$ 7,500,000 | \$ 5,700,000 | \$ 1,800,000 | E1 | |
| WW-I-014 | Wet weather reduction in Northeast Niagara-on-the-Lake | 2022-2031 | NOTL | \$ 750,000 | \$ 375,000 | | | \$ 375,000 | \$ 285,000 | \$ 90,000 | E1 | |
| WW-I-015 | Wet weather reduction in Virgil | 2022-2031 | NOTL | \$ 750,000 | \$ 375,000 | | | \$ 375,000 | \$ 285,000 | \$ 90,000 | E1 | |
| WW-SPS-001 | Alliston SPS Pump Replacement - Anger Avenue | 2022-2031 | Anger Ave | \$ 989,000 | \$ 197,800 | | | \$ 791,200 | \$ 601,312 | \$ 189,888 | B2 | |
| WW-SPS-002 | Catherine St. SPS Expansion - Anger Avenue | 2032-2041 | Anger Ave | \$ 2,945,000 | \$ 589,000 | | | \$ 2,356,000 | \$ 1,790,560 | \$ 565,440 | B2 | |
| WW-SPS-003 | Lakeshore SPS Upgrade - Anger Avenue | 2022-2031 | Anger Ave | \$ 2,618,000 | \$ 261,800 | | | \$ 2,356,200 | \$ 1,790,712 | \$ 565,488 | B3 | |
| WW-SPS-004 | Shirley SPS Upgrade - Crystal Beach | 2032-2041 | Crystal Beach | \$ 2,889,000 | \$ 1,444,500 | | | \$ 1,444,500 | \$ 1,097,820 | \$ 346,680 | B1 | |
| WW-SPS-005 | High Rd. SPS Pump Replacement - Crystal Beach | 2022-2031 | Crystal Beach | \$ 989,000 | \$ 494,500 | | | \$ 494,500 | \$ 375,820 | \$ 118,680 | B1 | |

| Master Plan ID | Description | Year in Service | System | Total Component Estimated Cost | Benefit to Existing Development | Beyond 2041 Oversizing | Grants & Contributions | DC Recoverable 2017 - 2041 | Residential Share | Non-Residential Share | BTE Comment | OBL Comment |
|----------------|---|-----------------|---------------------|--------------------------------|---------------------------------|------------------------|------------------------|----------------------------|----------------------|-----------------------|-------------|-------------|
| WW-SPS-006 | Stevensville SPS Upgrade - Stevensville Douglastown | 2022-2031 | Stev / Doug | \$ 1,022,000 | \$ 511,000 | | | \$ 511,000 | \$ 388,360 | \$ 122,640 | B1 | |
| WW-SPS-007 | Rosemount South SPS Pump Replacement - Seaway | 2017-2021 | Seaway | \$ 665,000 | \$ 332,500 | | | \$ 332,500 | \$ 252,700 | \$ 79,800 | B1 | |
| WW-SPS-008 | Oxford SPS Pump Replacement - Seaway | 2032-2041 | Seaway | \$ 665,000 | \$ 66,500 | | | \$ 598,500 | \$ 454,860 | \$ 143,640 | B3 | |
| WW-SPS-009 | Steele SPS Pump Replacement - Seaway | 2032-2041 | Seaway | \$ 989,000 | \$ 494,500 | | | \$ 494,500 | \$ 375,820 | \$ 118,680 | B1 | |
| WW-SPS-011 | Foss Road SPS Upgrade - Welland | 2022-2031 | Welland | \$ 1,866,000 | \$ 373,200 | | | \$ 1,492,800 | \$ 1,134,528 | \$ 358,272 | B2 | |
| WW-SPS-012 | Smithville SPS Expansion - Baker Road | 2022-2031 | Baker Road | \$ 8,241,000 | \$ 824,100 | | | \$ 7,416,900 | \$ 5,636,844 | \$ 1,780,056 | B3 | |
| WW-SPS-013 | Campden SPS Pump Replacement - Baker Road | 2022-2031 | Baker Road | \$ 1,299,000 | \$ 129,900 | | | \$ 1,169,100 | \$ 888,516 | \$ 280,584 | B3 | |
| WW-SPS-014 | Laurie Avenue SPS Expansion - Baker Road | 2017-2021 | Baker Road | \$ 1,814,000 | \$ 181,400 | | | \$ 1,632,600 | \$ 1,240,776 | \$ 391,824 | B3 | |
| WW-SPS-015 | Victoria Avenue SPS Upgrade - Baker Road | 2017-2021 | Baker Road | \$ 4,051,000 | \$ 810,200 | | | \$ 3,240,800 | \$ 2,463,008 | \$ 777,792 | B2 | |
| WW-SPS-016 | Bridgeport SPS Pump Replacement - Baker Road | 2022-2031 | Baker Road | \$ 834,000 | \$ 166,800 | | | \$ 667,200 | \$ 507,072 | \$ 160,128 | B2 | |
| WW-SPS-017 | Jordan Valley SPS Pump Replacement - Baker Road | 2022-2031 | Baker Road | \$ 1,145,000 | \$ 229,000 | | | \$ 916,000 | \$ 696,160 | \$ 219,840 | B2 | |
| WW-SPS-018 | Ontario Street SPS Upgrade - Baker Road | 2032-2041 | Baker Road | \$ 3,755,000 | \$ 751,000 | | | \$ 3,004,000 | \$ 2,283,040 | \$ 720,960 | B2 | |
| WW-SPS-019 | Biggar Lagoon Pump Replacement - Baker Road | 2017-2021 | Baker Road | \$ 3,902,000 | \$ 1,951,000 | | | \$ 1,951,000 | \$ 1,482,760 | \$ 468,240 | B1 | |
| WW-SPS-020 | Lake St SPS Upgrade - Baker Road | 2017-2021 | Baker Road | \$ 4,410,000 | \$ 882,000 | | | \$ 3,528,000 | \$ 2,681,280 | \$ 846,720 | B2 | |
| WW-SPS-021 | Beaverdams SPS Pump Replacement - Port Dalhousie | 2017-2021 | Port Dalhousie | \$ 665,000 | \$ 133,000 | | | \$ 532,000 | \$ 404,320 | \$ 127,680 | B2 | |
| WW-SPS-025 | Garner Road SPS Pump Replacement - Niagara Falls | 2032-2041 | Niagara Falls | \$ 824,000 | \$ 82,400 | | | \$ 741,600 | \$ 563,616 | \$ 177,984 | B3 | |
| WW-SPS-026 | Dorchester SPS Pump Replacement - Niagara Falls | 2022-2031 | Niagara Falls | \$ 2,414,000 | \$ 482,800 | | | \$ 1,931,200 | \$ 1,467,712 | \$ 463,488 | B2 | |
| WW-SPS-028 | Black Horse SPS Upgrade - South Niagara Falls | 2022-2031 | South Niagara Falls | \$ 4,620,000 | \$ 2,310,000 | | | \$ 2,310,000 | \$ 1,755,600 | \$ 554,400 | B1 | |
| WW-SPS-031 | St. Davids #2 SPS Expansion - Niagara Falls | 2022-2031 | Niagara Falls | \$ 3,836,000 | \$ 767,200 | | | \$ 3,068,800 | \$ 2,332,288 | \$ 736,512 | B2 | |
| WW-SPS-032 | St. Davids #1 SPS Upgrade - Niagara Falls | 2022-2031 | Niagara Falls | \$ 1,794,000 | \$ 358,800 | | | \$ 1,435,200 | \$ 1,090,752 | \$ 344,448 | B2 | |
| WW-SPS-033 | Lakeshore Road SPS Pump Replacement - NOTL | 2032-2041 | NOTL | \$ 1,512,000 | \$ 151,200 | | | \$ 1,360,800 | \$ 1,034,208 | \$ 326,592 | B3 | |
| WW-SPS-034 | Niagara Stone Road SPS Pump Replacement - NOTL | 2032-2041 | NOTL | \$ 834,000 | \$ 83,400 | | | \$ 750,600 | \$ 570,456 | \$ 180,144 | B3 | |
| WW-SPS-035 | Line 2 SPS Pump Replacement - NOTL | 2017-2021 | NOTL | \$ 665,000 | \$ 133,000 | | | \$ 532,000 | \$ 404,320 | \$ 127,680 | B2 | |
| WW-SPS-036 | Garrison Village SPS Pump Replacement - NOTL | 2032-2041 | NOTL | \$ 1,250,000 | \$ 250,000 | | | \$ 1,000,000 | \$ 760,000 | \$ 240,000 | B2 | |
| WW-SPS-037 | Towpath SPS Pump Replacement - Welland | 2022-2031 | Welland | \$ 834,000 | \$ 83,400 | | | \$ 750,600 | \$ 570,456 | \$ 180,144 | B3 | |
| WW-SPS-038 | Hurricane Road SPS Pump Replacement - Welland | 2022-2031 | Welland | \$ 1,250,000 | \$ 250,000 | | | \$ 1,000,000 | \$ 760,000 | \$ 240,000 | B2 | |
| WW-SPS-039 | Queenston SPS | 2022-2031 | Niagara Falls | \$ 2,996,000 | \$ 2,097,200 | | | \$ 898,800 | \$ 683,088 | \$ 215,712 | F1 | |
| WW-SS-001 | Highway 406 Trunk Sewer Crossing | 2017-2021 | Welland | \$ 1,450,000 | | | | \$ 1,450,000 | \$ 1,102,000 | \$ 348,000 | C4 | |
| WW-SS-002 | Quaker Road Trunk Sewer | 2022-2031 | Welland | \$ 1,725,000 | | | | \$ 1,725,000 | \$ 1,311,000 | \$ 414,000 | C4 | |
| WW-SS-003 | Gravity Sewer upgrade in Smithville | 2022-2031 | Baker Road | \$ 5,667,000 | | | | \$ 5,667,000 | \$ 4,306,920 | \$ 1,360,080 | C4 | |
| WW-SS-004 | Gravity Sewer upgrade in Smithville | 2022-2031 | Baker Road | \$ 923,000 | | | | \$ 923,000 | \$ 701,480 | \$ 221,520 | C4 | |
| WW-SS-005 | Gravity Sewer upgrade in Smithville | 2022-2031 | Baker Road | \$ 2,286,000 | | | | \$ 2,286,000 | \$ 1,737,360 | \$ 548,640 | C4 | |
| WW-TP-001 | Baker Road WWTP Upgrade | 2022-2031 | Baker Road | \$ 41,730,000 | \$ 4,173,000 | \$ 4,173,000 | | \$ 33,384,000 | \$ 25,371,840 | \$ 8,012,160 | A3 | A3 |
| WW-TP-002 | South Niagara Falls WWTP | 2022-2031 | Niagara Falls | \$ 128,186,000 | \$ 76,911,600 | \$ 12,818,600 | | \$ 38,455,800 | \$ 29,226,408 | \$ 9,229,392 | F1 | A3 |
| | Total | | | \$500,318,000 | \$199,437,700 | \$16,991,600 | \$0 | \$283,888,700 | \$215,755,412 | \$68,133,288 | | |

Appendix H – Services Related to a Highway Servicing Needs – IBI Group

Appendix H – Services Related to a Highway Servicing Needs – IBI Group

1. Introduction

The recommended 2041 transportation network identified through the Transportation Master Plan forms the basis of the roads and roads-related capital program for Niagara Region's Development Charge (D.C.).

This report documents the approach to the deductions, allocations and costs for the roads and related capital program for input to the Development Charge Background Study for the update of the Region's D.C. By-law.

2. Deductions

2.1 Benefit-to-Existing Development Deduction

A benefit-to-existing development deduction is applied when the proposed improvement provides a significant benefit to existing development. A percentage allocation representing the extent to which the improvement benefits existing development or new growth was determined for four categories of improvements as described below. These four categories are consistent with the approach taken in the 2012 D.C.

1. **Capacity Improvement** – Projects that add capacity to the network (e.g. road widening, new links/connections, bikeways, etc.) are considered to be primarily growth-related as the need for the improvement is to address growing demand.
2. **Intersection Improvement** – Traffic signal installation, addition of turn lanes, roundabouts and other intersection improvements that add capacity to the road network are primarily growth-related. Reconstruction of existing intersections and operational improvements at existing intersections provide benefit to both existing and new development.
3. **Road Rehabilitation** – An existing road that undergoes major reconstruction, even without increasing the number of lanes, may increase the capacity of the roadway and provide benefit to both existing and new development.

4. **Structure Rehabilitation** – Bridge or culvert reconstruction projects may increase capacity and provide benefit to both existing and new development.

The Region's Road Resurfacing Program and other maintenance-related annual programs are funded entirely from existing development and no cost is charged to growth even though new development incurs a small benefit from the improved condition of the road.

The cost allocation by project category, which has been adopted from the 2012 D.C. Background Study with some modifications, is presented in Exhibit 1.

Exhibit 1: Cost Allocation to Existing Development

| Category | Benefit to Existing | Charge to Growth | Remarks |
|--------------------------|---------------------|------------------|--|
| Capacity Improvement | 15% | 85% | Includes new roads, road widenings, structure widening/improvements as part of road projects. The 15% benefit to existing is based on cost of resurfacing the existing segment in cases of road widening, or the marginal road use benefit to existing users in the case of new road sections. |
| | 75% | 25% | Active Transportation Infill Projects, identified as part of the Region's Strategic Cycling Network, have been assigned a 75% benefit to existing share which reflects the proportion of existing and new development growth in Niagara. <i>New for 2017.</i> Other A.T. facilities that may be constructed as part of a road capital project are considered to be a road capacity improvement project. |
| Intersection Improvement | 0% | 100% | Signals and intersection improvements associated with projects that add capacity to the road network to accommodate growth. |
| | 50% | 50% | Reconstruction, minor capacity improvements or operational improvements to increase capacity and improve traffic flow at an existing intersection. |
| Road Rehabilitation | 100% | 0% | Road rehabilitation/reconstruction with no capacity improvement nor intersection improvements on a roadway not commonly used for heavy trucks serving new development. |
| | 90% | 10% | Road rehabilitation/reconstruction with minor capacity improvement (<10%) and minor intersection improvements (5% of project cost) on a roadway occasionally used by heavy trucks serving new development. |

| | | | |
|--------------------------|------|------|---|
| | 75% | 25% | Road rehabilitation/reconstruction with moderate capacity improvement (10-50%) and moderate intersection improvements (5-10% project cost) on a roadway commonly used by heavy trucks serving new development. |
| | 60% | 40% | Road rehabilitation/reconstruction with significant capacity improvement (>50%) and significant intersection improvements (>10% project cost) on a roadway frequently used by heavy trucks serving new development. |
| Structure Rehabilitation | 100% | 0% | Rehab/replace structure to existing width. |
| | 75% | 25% | Rehab or Replace 2-lane structure to a wider cross-section or 3 lanes to allow for greater capacity and/or accommodation of pedestrians and cyclists. |
| | 50% | 50% | Rehab/replace 2-lane structure to 4 lanes. |
| | 10% | 90% | New rail/road grade separation structure to replace an existing at-grade rail crossing. <i>New for 2017.</i> |
| | 0% | 100% | New structure for system expansion and accommodation of pedestrians and cyclists. |

2.2 Post-Planning Period Capacity Deduction

The capital road program identified in the T.M.P. accommodates growth to 2041. It is not the intention to over build the road network, however, some excess capacity may exist in 2041 that could accommodate a portion of future growth beyond 2041.

A post-planning period capacity deduction of 25-50% has been allocated to capacity improvement projects in the last 10 years (2032-2041) of the planning period, with the exception of the Niagara Escarpment Crossing project, identified for 2022-2031, which has been allocated a 25% deduction to reflect its significance for the current planning period and beyond.

For capacity improvement projects in the earlier phases of the D.C. planning period, the need for the capacity improvement is driven by growth within the planning period, and thus a post-period deduction was not applied to projects identified for implementation in the first 15 years (2017- 2031).

No post-planning period capacity deduction has been applied to the intersection improvement program, road rehabilitation program, or other annual programs where cost has been estimated based on annual capital expenditure.

2.3 Grants, Subsidies, Contributions and Previous Funding

Deductions for grants, subsidies and contributions are project-specific and applied only where funds from area developers, local area municipalities, provincial or federal

governments are anticipated to be collected by Niagara Region. Prior funding that the Region has already collected have also been identified on a project-specific basis.

3. Residential vs Non-residential Cost Allocation

The growth-related costs for transportation projects are split between residential and non- residential uses generally based on the proportion of residential and non-residential growth forecasted though the D.C. planning period. Exhibit 2 summarizes the anticipated growth in Niagara Region to 2041.

Exhibit 2: Anticipated Growth

| Year | Population¹ | Employment² | Work from Home (W.F.H.) | No-Fixed-Place- of-Work (N.F.P.O.W.) |
|-------------------------|-------------------------------|-------------------------------|--------------------------------|---|
| 2011 | 431,346 | 185,640 | 12,325 | 20,485 |
| 2017 | 441,135 | 204,584 | 12,700 | 22,400 |
| 2027 | 489,117 | 223,951 | 14,210 | 24,550 |
| 2037 | 565,250 | 251,082 | 16,650 | 27,410 |
| 2041 | 594,221 | 265,000 | 17,540 | 29,130 |
| Growth 2017-2041 | 153,086 | 60,416 | 4,840 | 6,730 |

1. Excludes Census undercount

2. Includes W.F.H. and N.F.P.O.W.

An issue that was identified through discussion with the study team is the appropriate consideration for work-from-home employment and no-fixed-place-of-work employment in the calculation of the cost allocation.

Work from Home (W.F.H.)

For work-from-home, the employment use is physically located in a residential unit, but to allocate the impacts of work-at-home employment to non-residential would increase the non-residential cost share but not the associated non-residential floor area to which the development charge could be applied. Additionally, the work-at-home designation implies that the individual works from home on a regular basis and it would be reasonable to assume that travel demands related to “work” would be based out of the home location. Thus, for the consideration of residential / non-residential split, the work-from-home employment is included under residential.

There was also discussion on whether a work-from-home worker makes more or less trips than a worker with a non-home usual place of work. While the commute to work trip (and the return trip) is eliminated, many work-from-home worker still generates work-related trips (i.e. travel to meet with clients) or attract work-related trips (i.e. clients meeting at worker's home office, business-related deliveries, etc.). To account for the reduced trip making for work-from-home, a 50% factor was applied.

No Fixed Place of Work (N.F.P.O.W.)

In the case of no-fixed-place-of-work, the worker travels to a number of different locations for work, such as a construction site, a client's office, an employer's office, field locations, etc., without first reporting to a headquarters or depot at the start of each work day. The issue with allocating no-fixed-place-of-work employment to non-residential is the increase of non-residential share without the ability to increase the associated floor area to which the development charge could be applied. However, to allocate no-fixed-place-of-work employment fully to residential would ignore the fact that these workers have an employer with headquarters, offices or other types of non-residential buildings, which "generate" the work for the worker. These headquarters may or may not be located in Niagara Region.

Thus, for the consideration of residential / non-residential split, the no-fixed-place-of-work employment is included under residential uses, to capture the commute to work trip. To account for the portion of the worker's trips that are not home-based, a 50% factor was applied.

Exhibit 3 summarizes the calculation of the residential / non-residential split.

Exhibit 3: Residential / Non-residential Split

| Residential | | Non-residential | | Total |
|----------------------------|---------|------------------------|--------|--------------|
| Population Growth | 153,100 | Employment Growth | 60,400 | |
| 50% Work-at-home | +2,400 | Work-at-home | -4,800 | |
| 50% No-fixed-place-of-work | +3,400 | No-fixed-place-of-work | -6,700 | |
| Total | 158,900 | Total | 48,800 | 207,700 |
| Allocation | 76% | Allocation | 24% | 100% |

4. Capital Expenditure Plan

The capital expenditure plan for the proposed improvements for the 2041 transportation system is summarized in Exhibit 4.

Exhibit 1: Capital Expenditure Plan

| Proj# | Corridor | Section | Improvement | Phasing | Capital Cost Estimate | Benefit to Existing Development | | Post Period Capacity | | Prior Funding | Grants, Subsidies and Other Contributions | Total Deductions | Net Costs Benefiting New Development | Residential Share | Non-Residential Share |
|----------------------------|---|---|----------------------|-----------|-----------------------|---------------------------------|-----|----------------------|----|---------------|---|------------------|--------------------------------------|-------------------|-----------------------|
| | | | | | | \$ | % | \$ | % | | | | | 76% | 24% |
| Projects in Capital Budget | | | | | | | | | | | | | | | |
| 10.1 | Casablanca Blvd | QEW to Livingston Ave | Capacity Improvement | 2017-2021 | \$ 7,448,000 | \$ 989,700 | 15% | \$ - | 0% | \$ 850,000 | | \$ 1,839,700 | \$ 5,608,300 | \$ 4,262,308 | \$ 1,345,992 |
| 27.2 | East Main St | Hwy 140 to Moyer Rd | Capacity Improvement | 2022-2031 | \$ 2,970,000 | \$ 445,500 | 15% | \$ - | 0% | | | \$ 445,500 | \$ 2,524,500 | \$ 1,918,620 | \$ 605,880 |
| 37.1 | Merritt Rd | Rice Rd to Niagara St | New Road | 2017-2021 | \$ 8,610,000 | \$ 1,291,500 | 15% | \$ - | 0% | | | \$ 1,291,500 | \$ 7,318,500 | \$ 5,562,060 | \$ 1,756,440 |
| 37.2 | Merritt Rd | Niagara St to Hwy 406 | Capacity Improvement | 2017-2021 | \$ 31,461,000 | \$ 3,922,650 | 15% | \$ - | 0% | \$ 3,210,000 | \$ 2,100,000 | \$ 9,232,650 | \$ 22,228,350 | \$ 16,893,546 | \$ 5,334,804 |
| 38.1 | Martindale Rd | QEW to Vansickle Rd | Capacity Improvement | 2017-2021 | | | | | | | | | | | |
| 38.2 | Martindale Rd | Vansickle Rd to Fourth Ave | Capacity Improvement | 2017-2021 | | | | | | | | | | | |
| 38.3 | Martindale Rd | Bridge widening over Hwy 406 | Capacity Improvement | 2017-2021 | | | | | | | | | | | |
| 49.1 | McLeod Rd | Phase 1 - Montrose Rd, Pin Oak Dr to Hydro Canal | Capacity Improvement | 2017-2021 | \$ 14,392,000 | \$ 711,300 | 15% | \$ - | 0% | \$ 9,650,000 | | \$ 10,361,300 | \$ 4,030,700 | \$ 3,063,332 | \$ 967,368 |
| 49.2 | McLeod Rd | Phase 2 - Hydro Canal to Wilson Cr | Capacity Improvement | 2017-2021 | \$ 4,312,000 | \$ 564,300 | 15% | \$ - | 0% | \$ 350,000 | \$ 200,000 | \$ 1,114,300 | \$ 3,197,700 | \$ 2,430,252 | \$ 767,448 |
| 49.3 | McLeod Rd | Phase 3 - Wilson Cr to Stanley Ave | Capacity Improvement | 2022-2031 | \$ 3,640,000 | \$ 501,000 | 15% | \$ - | 0% | | \$ 300,000 | \$ 801,000 | \$ 2,839,000 | \$ 2,157,640 | \$ 681,360 |
| 54.1 | Rice Rd | Old Hwy 20 to Merritt Rd | Capacity Improvement | 2017-2021 | \$ 9,828,000 | \$ 1,264,200 | 15% | \$ - | 0% | \$ 900,000 | \$ 500,000 | \$ 2,664,200 | \$ 7,163,800 | \$ 5,444,488 | \$ 1,719,312 |
| 54.2 | Rice Rd | Merritt Rd to Quaker Rd | Capacity Improvement | 2017-2021 | \$ 16,200,000 | \$ 2,430,000 | 15% | \$ - | 0% | | | \$ 2,430,000 | \$ 13,770,000 | \$ 10,465,200 | \$ 3,304,800 |
| 54.3 | Rice Rd | Quaker Rd to Thorold Rd | Capacity Improvement | 2017-2021 | | | | | | | | | | | |
| 55.2 | Niagara Stone Rd | Concession 6 Rd to Line 2 Rd | Capacity Improvement | 2017-2021 | \$ 12,528,000 | \$ 1,526,700 | 15% | \$ - | 0% | \$ 1,600,000 | \$ 750,000 | \$ 3,876,700 | \$ 8,651,300 | \$ 6,574,988 | \$ 2,076,312 |
| 55.3 | Niagara Stone Rd | Penner St (Line 1 Rd) to East and West Line | Capacity Improvement | 2017-2021 | | | | | | | | | | | |
| 56.1 | Collier Rd | Hwy 58 to Beaverdams Rd | Capacity Improvement | 2022-2031 | \$ 5,616,000 | \$ 842,400 | 15% | \$ - | 0% | | | \$ 842,400 | \$ 4,773,600 | \$ 3,627,936 | \$ 1,145,664 |
| 57.2 | Thorold Stone Rd | Extension east of Stanley Ave to Gale Centre | New Road | 2017-2021 | \$ 11,088,000 | \$ 418,200 | 15% | \$ - | 0% | \$ 8,300,000 | | \$ 8,718,200 | \$ 2,369,800 | \$ 1,801,048 | \$ 568,752 |
| 57.3 | Thorold Stone Rd | Phase 2 - Gale Centre to Victoria Ave | New Road | 2022-2031 | \$ 11,200,000 | \$ 1,680,000 | 15% | \$ - | 0% | | | \$ 1,680,000 | \$ 9,520,000 | \$ 7,235,200 | \$ 2,284,800 |
| 89.4 | Glendale Ave | Interchange at QEW (1/3 contribution) | Capacity Improvement | 2022-2031 | \$ 3,333,000 | \$ 349,950 | 15% | \$ - | 0% | \$ 1,000,000 | | \$ 1,349,950 | \$ 1,983,050 | \$ 1,507,118 | \$ 475,932 |
| 98.x | Montrose Road | Charnwood to McLeod | Capacity improvement | 2017-2021 | \$ 1,904,000 | \$ 285,600 | 15% | \$ - | 0% | \$ - | \$ - | \$ 285,600 | \$ 1,618,400 | \$ 1,229,984 | \$ 388,416 |
| 406.1 | Hwy 406 Interchange | At Third Ave Louth (1/3 contribution) | Highway Improvement | 2022-2031 | \$ 13,333,000 | \$ 1,782,450 | 15% | \$ - | 0% | \$ 1,450,000 | | \$ 3,232,450 | \$ 10,100,550 | \$ 7,676,418 | \$ 2,424,132 |
| 512.1 | Livingston Ave | Main St to Casablanca Blvd | New Road | 2022-2031 | \$ 8,456,000 | \$ 1,200,900 | 15% | \$ - | 0% | \$ 250,000 | \$ 200,000 | \$ 1,650,900 | \$ 6,805,100 | \$ 5,171,876 | \$ 1,633,224 |
| 803.1 | South Niagara East-West Arterial | South Niagara East-West Arterial (1/3 contribution) | New Road | 2022-2031 | \$ 16,275,000 | \$ 2,366,250 | 15% | \$ - | 0% | \$ 500,000 | | \$ 2,866,250 | \$ 13,408,750 | \$ 10,190,650 | \$ 3,218,100 |
| x.x | Canadian Motor Speedway Infrastructure Improvements | | | 2017-2021 | \$ 2,625,000 | \$ 393,750 | 15% | \$ - | 0% | \$ - | \$ - | \$ 393,750 | \$ 2,231,250 | \$ 1,695,750 | \$ 535,500 |
| | Subtotal - Projects in Capital Budget | | | | \$ 185,219,000 | \$ 22,966,350 | | \$ - | | \$ 28,060,000 | \$ 4,050,000 | \$ 55,076,350 | \$ 130,142,650 | \$ 98,908,414 | \$ 31,234,236 |

| Proj# | Corridor | Section | Improvement | Phasing | Capital Cost Estimate | Benefit to Existing Development | | Post Period Capacity | | Prior Funding | Grants, Subsidies and Other Contributions | Total Deductions | Net Costs Benefiting New Development | Residential Share | Non-Residential Share |
|---------------------------------------|--|--|--------------------------|-----------|-----------------------|---------------------------------|-----|----------------------|-----|---------------|---|------------------|--------------------------------------|-------------------|-----------------------|
| | | | | | | \$ | % | \$ | % | | | | | 76% | 24% |
| Additional Projects Identified in TMP | | | | | | | | | | | | | | | |
| 14.1 | Bartlett Avenue extension | Muscat Dr to Park Rd (1/3 contribution) | New Road | 2022-2031 | \$ 38,733,000 | \$ 5,479,950 | 15% | \$ 7,763,263 | 25% | \$ 2,200,000 | | \$ 15,443,213 | \$ 23,289,788 | \$ 17,700,239 | \$ 5,589,549 |
| 14.2 | Escarpment Crossing Improvement | Bartlett St Extension to Mud St (1/3 contribution) | Capacity Improvement | 2022-2031 | | | | | | | | | | | |
| 20.1 | Highway 20 Smithville | Smithville (1/3 contribution) | New Road | 2022-2031 | \$ 9,834,000 | \$ 1,475,100 | 15% | \$ - | 0% | | | \$ 1,475,100 | \$ 8,358,900 | \$ 6,352,764 | \$ 2,006,136 |
| 20.2 | Hwy 20 | Kottmeier Rd to Davis Rd/Allanport Rd (1/3 contribution) | Capacity Improvement | 2032-2041 | \$ 25,019,000 | \$ 3,752,850 | 15% | \$10,633,075 | 50% | | | \$ 14,385,925 | \$ 10,633,075 | \$ 8,081,137 | \$ 2,551,938 |
| 27.3 | Schisler Rd | Moyer Rd to Montrose Rd | Capacity Improvement | 2032-2041 | \$ 23,179,000 | \$ 3,476,850 | 15% | \$ 9,851,075 | 50% | | | \$ 13,327,925 | \$ 9,851,075 | \$ 7,486,817 | \$ 2,364,258 |
| 47.1 | Lyons Creek Rd | Montrose Rd to Stanley Ave | Capacity Improvement | 2032-2041 | \$ 17,337,000 | \$ 2,600,550 | 15% | \$ 3,684,113 | 25% | | | \$ 6,284,663 | \$ 11,052,338 | \$ 8,399,777 | \$ 2,652,561 |
| 47.2 | Lyons Creek Rd | Stanley Ave to Sodom Rd | Capacity Improvement | 2022-2031 | \$ 25,251,000 | \$ 3,787,650 | 15% | \$ - | 0% | | | \$ 3,787,650 | \$ 21,463,350 | \$ 16,312,146 | \$ 5,151,204 |
| 55.1 | Niagara Stone Rd | Airport Road to Concession 6 | Capacity Improvement | 2022-2031 | \$ 7,180,000 | \$ 1,077,000 | 15% | \$ - | 0% | | | \$ 1,077,000 | \$ 6,103,000 | \$ 4,638,280 | \$ 1,464,720 |
| 83.1 | Carlton Street | Martindale Rd to Ontario St | Protect for New Crossing | 2032-2041 | \$ - | \$ - | 15% | \$ - | 25% | | | \$ - | \$ - | \$ - | \$ - |
| 89.6 | Glendale Ave | York Rd to Queenston Rd | New Road | 2032-2041 | \$ 13,732,000 | \$ 2,059,800 | 15% | \$ 2,918,050 | 25% | | | \$ 4,977,850 | \$ 8,754,150 | \$ 6,653,154 | \$ 2,100,996 |
| 90.1 | Airport Road | Niagara Stone Road to York Road | Capacity Improvement | 2022-2031 | \$ 9,871,000 | \$ 1,480,650 | 15% | \$ - | 0% | | | \$ 1,480,650 | \$ 8,390,350 | \$ 6,376,666 | \$ 2,013,684 |
| 98.1 | Montrose Rd | Lyons Creek Rd to Schisler Rd | Capacity Improvement | 2032-2041 | \$ 8,917,000 | \$ 1,337,550 | 15% | \$ 3,789,725 | 50% | | | \$ 5,127,275 | \$ 3,789,725 | \$ 2,880,191 | \$ 909,534 |
| 98.2 | Montrose Rd | Chippawa Creek Rd to Lyons Creek Rd | Capacity Improvement | 2032-2041 | \$ 18,113,000 | \$ 2,716,950 | 15% | \$ 3,849,013 | 25% | | | \$ 6,565,963 | \$ 11,547,038 | \$ 8,775,749 | \$ 2,771,289 |
| 102.2 | Stanley Ave | Ferry St to Murray St | Capacity Improvement | 2022-2031 | \$ 5,897,000 | \$ 884,550 | 15% | \$ - | 0% | | | \$ 884,550 | \$ 5,012,450 | \$ 3,809,462 | \$ 1,202,988 |
| 102.3 | Stanley Ave | Marineland Pkwy to Lyons Creek Rd | Capacity Improvement | 2022-2031 | \$ 41,871,000 | \$ 6,280,650 | 15% | \$ - | 0% | | | \$ 6,280,650 | \$ 35,590,350 | \$ 27,048,666 | \$ 8,541,684 |
| 116.1 | Sodom Rd | Lyons Creek Rd to Netherby Rd | Capacity Improvement | 2022-2031 | \$ 27,879,000 | \$ 4,181,850 | 15% | \$ - | 0% | | | \$ 4,181,850 | \$ 23,697,150 | \$ 18,009,834 | \$ 5,687,316 |
| 405.1 | Hwy 405 interchange | Concession 6 Rd (1/3 contribution) | Highway Improvement | 2022-2031 | \$ 3,333,000 | \$ 499,950 | 15% | \$ - | 0% | | | \$ 499,950 | \$ 2,833,050 | \$ 2,153,118 | \$ 679,932 |
| 406.2 | Hwy 406 Extension | E Main St to NGTA corridor | Highway Improvement | 2032-2041 | \$ - | \$ - | | \$ - | | | | \$ - | \$ - | \$ - | \$ - |
| 451.2 | QEW - Garden City Skyway | Bunting Road to York Rd | Highway Improvement | 2022-2031 | \$ - | \$ - | | \$ - | | | | \$ - | \$ - | \$ - | \$ - |
| 451.3 | QEW | York Rd to Hwy 405 | Highway Improvement | 2022-2031 | \$ - | \$ - | | \$ - | | | | \$ - | \$ - | \$ - | \$ - |
| 451.4 | QEW | Hwy 405 to Mountain Rd | Highway Improvement | 2022-2031 | \$ - | \$ - | | \$ - | | | | \$ - | \$ - | \$ - | \$ - |
| 451.7 | QEW | Hamilton to Hwy 406 (HOV Lanes) | Highway Improvement | 2022-2031 | \$ - | \$ - | | \$ - | | | | \$ - | \$ - | \$ - | \$ - |
| 461.1 | NGTA (Mid-Peninsula) | Hwy 403 to Hwy 406 extension | Highway Improvement | 2032-2041 | \$ - | \$ - | | \$ - | | | | \$ - | \$ - | \$ - | \$ - |
| 461.2 | NGTA East Area corridor | Hwy 406 extension to QEW | Highway Improvement | 2032-2041 | \$ - | \$ - | | \$ - | | | | \$ - | \$ - | \$ - | \$ - |
| 601.1 | Concession 6 Rd | York Rd to Warner Rd | Capacity Improvement | 2022-2031 | \$ 4,991,000 | \$ 748,650 | 15% | \$ - | 0% | | | \$ 748,650 | \$ 4,242,350 | \$ 3,224,186 | \$ 1,018,164 |
| 601.2 | Mewburn Rd | Warner Rd to Mountain Rd | Capacity Improvement | 2022-2031 | \$ 1,885,000 | \$ 282,750 | 15% | \$ - | 0% | | | \$ 282,750 | \$ 1,602,250 | \$ 1,217,710 | \$ 384,540 |
| 601.3 | Mewburn Rd bridge | Bridge over CN Rail | New structure | 2022-2031 | \$ 1,625,000 | \$ 243,750 | 15% | \$ - | 0% | | | \$ 243,750 | \$ 1,381,250 | \$ 1,049,750 | \$ 331,500 |
| 605.1 | Morrison St | New Crossing of QEW | Protect for New Crossing | 2032-2041 | \$ - | \$ - | 15% | \$ - | 25% | | | \$ - | \$ - | \$ - | \$ - |
| 606.1 | Future Road | New Crossing of Welland River | Protect for New Crossing | 2032-2041 | \$ - | \$ - | 15% | \$ - | 25% | | | \$ - | \$ - | \$ - | \$ - |
| 607.1 | Queenston Road realignment | Queenston Rd to York Rd | New Road | 2022-2031 | \$ 4,045,000 | \$ 606,750 | 15% | \$ - | 0% | | | \$ 606,750 | \$ 3,438,250 | \$ 2,613,070 | \$ 825,180 |
| 901.1 | West St. Catharines Grade Separation | Louth St / Vansickle Rd / First St Louth | Capacity Improvement | 2022-2031 | \$ 20,500,000 | \$ - | 0% | \$ - | 0% | \$ 500,000 | | \$ 500,000 | \$ 20,000,000 | \$ 15,200,000 | \$ 4,800,000 |
| | AT Strategic Network Grant Program | Strategic Network | | 2017-2026 | \$ 10,000,000 | \$ 7,500,000 | 75% | \$ - | 0% | | | \$ 7,500,000 | \$ 2,500,000 | \$ 1,900,000 | \$ 600,000 |
| | AT Infill Projects | Strategic Network | | 2017-2021 | \$ 10,450,000 | \$ 7,837,500 | 75% | \$ - | 0% | | | \$ 7,837,500 | \$ 2,612,500 | \$ 1,985,500 | \$ 627,000 |
| | AT Infill Projects | Strategic Network | | 2022-2031 | \$ 10,450,000 | \$ 7,837,500 | 75% | \$ - | 0% | | | \$ 7,837,500 | \$ 2,612,500 | \$ 1,985,500 | \$ 627,000 |
| | Subtotal - Additional Projects Identified in TMP | | | | \$ 340,092,000 | \$ 66,148,800 | | \$42,488,313 | | \$ 2,700,000 | \$ - | \$ 111,337,113 | \$ 228,754,888 | \$ 173,853,715 | \$ 54,901,173 |
| | Subtotal - Capacity Improvement | | | | \$ 525,311,000 | \$ 89,115,150 | | \$42,488,313 | | \$ 30,760,000 | \$ 4,050,000 | \$ 166,413,463 | \$ 358,897,538 | \$ 272,762,129 | \$ 86,135,409 |

| Proj# | Corridor | Section | Improvement | Phasing | Capital Cost Estimate | Benefit to Existing Development | | Post Period Capacity | | Prior Funding | Grants, Subsidies and Other Contributions | Total Deductions | Net Costs Benefiting New Development | Residential Share | Non-Residential Share |
|----------------------------------|---|---|--|-----------|-----------------------|---------------------------------|------|----------------------|----|---------------|---|------------------|--------------------------------------|-------------------|-----------------------|
| | | | | | | \$ | % | \$ | % | | | | | 76% | 24% |
| Intersection Improvement Program | | | | | | | | | | | | | | | |
| | Thorold Stone Rd | @ Cardinal Drive | Left turning lane | 2017-2021 | \$ 1,500,000 | \$ - | 0% | \$ - | 0% | | | \$ - | \$ 1,500,000 | \$ 1,140,000 | \$ 360,000 |
| | Geneva St | @ St. Paul | Two way traffic reversion - Cost Sharing | 2017-2021 | \$ 7,000,000 | \$ 1,650,000 | 50% | \$ - | 0% | \$ 1,500,000 | \$ 2,200,000 | \$ 5,350,000 | \$ 1,650,000 | \$ 1,254,000 | \$ 396,000 |
| | Niagara Stone Rd | @ Airport Road and Concession 4 | Traffic signal and turning lane | 2017-2021 | \$ 3,000,000 | \$ 3,000,000 | 100% | \$ - | 0% | | | \$ 3,000,000 | \$ - | \$ - | \$ - |
| | McLeod Road | @ Drummond | Possible joint contract with NF | 2017-2021 | \$ 2,000,000 | \$ 1,000,000 | 50% | \$ - | 0% | | | \$ 1,000,000 | \$ 1,000,000 | \$ 760,000 | \$ 240,000 |
| | Four Mile Creek Rd | @ York Rd | New Signal and | 2017-2021 | \$ 1,400,000 | \$ 700,000 | 50% | \$ - | 0% | | | \$ 700,000 | \$ 700,000 | \$ 532,000 | \$ 168,000 |
| | Falls Ave / Bender Intersection Improvements | | Turnging lanes and signal mod | 2017-2021 | \$ 900,000 | \$ - | 100% | \$ - | 0% | \$ 900,000 | | \$ 900,000 | \$ - | \$ - | \$ - |
| | Victoria Avenue | @ RR63 Canboro Rd | New signal and turning lane | 2017-2021 | \$ 1,650,000 | \$ 1,650,000 | 100% | \$ - | 0% | \$ - | | \$ 1,650,000 | \$ - | \$ - | \$ - |
| | Int. Imprv. - Regional Road 20 between Townline Road & South Grimsby Rd 6 | | Roundabouts EA & Design & Imprv for new school | 2017-2021 | \$ 1,100,000 | \$ - | 100% | \$ - | 0% | \$ 1,100,000 | | \$ 1,100,000 | \$ - | \$ - | \$ - |
| | Regional Road 20 | Phase 1 - South Grimsby Rd 6 to Griffin | Roundabout and urbanization | 2017-2021 | \$ 4,250,000 | \$ 3,400,000 | 100% | \$ - | 0% | \$ 650,000 | \$ 200,000 | \$ 4,250,000 | \$ - | \$ - | \$ - |
| | Regional Road 20 | Phase 2 - Industrial Pard Rd to Townline Road | Roundabout and urbanization | 2017-2021 | \$ 3,800,000 | \$ 3,300,000 | 100% | \$ - | 0% | \$ 300,000 | \$ 200,000 | \$ 3,800,000 | \$ - | \$ - | \$ - |
| | King Street | @ Main Street and Ninetenth Street | Cost Sharing for intersection improvement | 2017-2021 | \$ 2,400,000 | \$ 2,400,000 | 100% | \$ - | 0% | \$ - | | \$ 2,400,000 | \$ - | \$ - | \$ - |
| | Fourth Ave | @ First | Modifications and NB right | 2017-2021 | \$ 600,000 | \$ 300,000 | 50% | \$ - | 0% | \$ - | | \$ 300,000 | \$ 300,000 | \$ 228,000 | \$ 72,000 |
| | Intersection Improvement Program - 2027-2041 | | | 2027-2041 | \$ 33,825,000 | \$ 16,912,500 | 50% | \$ - | 0% | \$ - | | \$ 16,912,500 | \$ 16,912,500 | \$ 12,853,500 | \$ 4,059,000 |
| | Subtotal - Intersection Improvement Program | | | | \$ 63,425,000 | \$ 34,312,500 | | \$ - | | \$ 4,450,000 | \$ 2,600,000 | \$ 41,362,500 | \$ 22,062,500 | \$ 16,767,500 | \$ 5,295,000 |
| Road Rehabilitation Program | | | | | | | | | | | | | | | |
| | Canoboro Rd | @ Warner | Embankment stabilization | 2017-2021 | \$ 5,090,000 | \$ - | 100% | \$ - | 0% | \$ 5,090,000 | \$ - | \$ 5,090,000 | \$ - | \$ - | \$ - |
| | Main Street | Cabernet to Baker Rd & Nelles to Orchard | Reconstruction - Urban | 2022-2031 | \$ 7,560,000 | \$ 5,904,000 | 90% | \$ - | 0% | \$ 500,000 | \$ 500,000 | \$ 6,904,000 | \$ 656,000 | \$ 498,560 | \$ 157,440 |
| | York Road | Reg Rd 55 to Airport | Rehabilitation | 2017-2021 | \$ 1,890,000 | \$ 1,640,000 | 100% | \$ - | 0% | \$ 250,000 | \$ - | \$ 1,890,000 | \$ - | \$ - | \$ - |
| | Old Hwy. 8 | Vinehaven Trail to 23rd Street | Reconstruction/ streetscaping | 2017-2021 | \$ 5,270,000 | \$ 1,920,000 | 60% | \$ - | 0% | \$ 470,000 | \$ 1,600,000 | \$ 3,990,000 | \$ 1,280,000 | \$ 972,800 | \$ 307,200 |
| | Ontario Street | Lakeshore Road to Linwell Road | Reconstruction - Urban - 2 La | 2017-2021 | \$ 8,532,000 | \$ 5,428,800 | 90% | \$ - | 0% | \$ 500,000 | \$ 2,000,000 | \$ 7,928,800 | \$ 603,200 | \$ 458,432 | \$ 144,768 |
| | St. Paul Street West | Burgoyne Bridge to CNR Tracks | Reconstruction and intersecti | 2022-2031 | \$ 9,180,000 | \$ 8,262,000 | 90% | \$ - | 0% | \$ - | \$ - | \$ 8,262,000 | \$ 918,000 | \$ 697,680 | \$ 220,320 |
| | Louth Street | Between RR 81 (St. Paul W) & Crestcomb | Reconstruction - urban- 2 lane | 2017-2021 | \$ 6,156,000 | \$ 3,273,600 | 60% | \$ - | 0% | \$ - | \$ 700,000 | \$ 3,973,600 | \$ 2,182,400 | \$ 1,658,624 | \$ 523,776 |
| | Lakeshore Rd | Townline Rd to Four Mile Creek Rd | Rehabilitation c/w bike lanes | 2017-2021 | \$ 8,500,000 | \$ 6,750,000 | 100% | \$ - | 0% | \$ 1,750,000 | \$ - | \$ 8,500,000 | \$ - | \$ - | \$ - |
| | Main Street West | Prince Charles Drive to Niagara Street | Rd Reconstruction / City WM | 2017-2021 | \$ 4,104,000 | \$ 3,804,000 | 100% | \$ - | 0% | \$ - | \$ 300,000 | \$ 4,104,000 | \$ - | \$ - | \$ - |
| | McLeod Road Storm P.S | @ Stanley Ave and CNR | Upgrades to Storm Pumping | 2017-2021 | \$ 1,250,000 | \$ 1,250,000 | 100% | \$ - | 0% | | \$ - | \$ 1,250,000 | \$ - | \$ - | \$ - |
| | Glendale Ave | Tremont Drive to Burliegh Hill | Road Reconstruct & Widening | 2017-2021 | \$ 9,396,000 | \$ 3,537,600 | 60% | \$ - | 0% | \$ 1,500,000 | \$ 2,000,000 | \$ 7,037,600 | \$ 2,358,400 | \$ 1,792,384 | \$ 566,016 |
| | Riverside Drive | Prince Charles Drive to Lincoln Street | Road Reconstruct / Download | 2017-2021 | \$ 5,778,000 | \$ 4,480,200 | 90% | \$ - | 0% | \$ 250,000 | \$ 550,000 | \$ 5,280,200 | \$ 497,800 | \$ 378,328 | \$ 119,472 |
| | Lakeshore Rd Phase 3 | Lake St to Geneva & Bradmon Dr to O'Mara | Reconstruction - urban-2 lane | 2017-2021 | \$ 8,046,000 | \$ 357,600 | 60% | \$ - | 0% | \$ 7,450,000 | \$ - | \$ 7,807,600 | \$ 238,400 | \$ 181,184 | \$ 57,216 |
| | Bridge Street | Victoria Ave to Erie | Cost Share with City | 2017-2021 | \$ 575,000 | \$ 575,000 | 100% | \$ - | 0% | \$ - | \$ - | \$ 575,000 | \$ - | \$ - | \$ - |
| | Lakeshore Rd West | Third Street to Seventh Street | Reconstruction | 2017-2021 | \$ 5,778,000 | \$ 4,278,000 | 100% | \$ - | 0% | \$ 1,500,000 | \$ - | \$ 5,778,000 | \$ - | \$ - | \$ - |
| | Canborough Road | Baldwin Road to Coffey Bridge | Embankment stab & Road Re | 2017-2021 | \$ 3,277,800 | \$ 2,777,800 | 100% | \$ - | 0% | \$ 500,000 | \$ - | \$ 3,277,800 | \$ - | \$ - | \$ - |
| | Pelham Road Phase 2 | Effingham Rd to Wessel Drive | Reconstruction | 2017-2021 | \$ 9,828,000 | \$ 8,125,200 | 90% | \$ - | 0% | \$ 800,000 | \$ - | \$ 8,925,200 | \$ 902,800 | \$ 686,128 | \$ 216,672 |
| | Pelham Road Phase 3 | Wessell Drive to Centre | Reconstruction | 2017-2021 | \$ 4,320,000 | \$ 3,438,000 | 90% | \$ - | 0% | \$ 500,000 | \$ - | \$ 3,938,000 | \$ 382,000 | \$ 290,320 | \$ 91,680 |
| | Pelham Road Phase 4 | Centre to 8th | Reconstruction | 2017-2021 | \$ 3,240,000 | \$ 2,916,000 | 90% | \$ - | 0% | \$ - | \$ - | \$ 2,916,000 | \$ 324,000 | \$ 246,240 | \$ 77,760 |
| | Niagara St | Carlton to Scott | Reconstruction - Urban - 2 La | 2017-2021 | \$ 7,344,000 | \$ 6,609,600 | 90% | \$ - | 0% | \$ - | \$ - | \$ 6,609,600 | \$ 734,400 | \$ 558,144 | \$ 176,256 |
| | St. David's Road | Hwy 406 to Collier Road | Reconstruction - Urban - 2 La | 2017-2021 | \$ 5,290,000 | \$ 4,311,000 | 90% | \$ - | 0% | \$ - | \$ 500,000 | \$ 4,811,000 | \$ 479,000 | \$ 364,040 | \$ 114,960 |
| | Dominion Road | Helena to Lakeshore Rd | Reconstruction - Urban - 2 La | 2017-2021 | \$ 7,587,000 | \$ 5,320,800 | 90% | \$ - | 0% | \$ 1,125,000 | \$ 550,000 | \$ 6,995,800 | \$ 591,200 | \$ 449,312 | \$ 141,888 |
| | King Street | Durham Rd to Lincoln Avenue | Reconstruction rural - 2 Lane | 2017-2021 | \$ 6,669,000 | \$ 5,304,600 | 90% | \$ - | 0% | \$ 375,000 | \$ 400,000 | \$ 6,079,600 | \$ 589,400 | \$ 447,944 | \$ 141,456 |
| | Dick's Creek crossing | @ Glendale Ave | Culvert replacement | 2017-2021 | \$ 750,000 | \$ - | 90% | \$ - | 0% | \$ 750,000 | \$ - | \$ 750,000 | \$ - | \$ - | \$ - |
| | Regional Road 20 | Griffin St South to Industrial Park Road | Road Rehabilitation | 2017-2021 | \$ 2,268,000 | \$ 1,951,200 | 90% | \$ - | 0% | \$ - | \$ 100,000 | \$ 2,051,200 | \$ 216,800 | \$ 164,768 | \$ 52,032 |
| | Creek Road | RR 4 (Wellandport Rd) to RR 63 Canborough | EA Study, Bridge Replaceme | 2017-2021 | \$ 405,000 | \$ 27,000 | 90% | \$ - | 0% | \$ 375,000 | \$ - | \$ 402,000 | \$ 3,000 | \$ 2,280 | \$ 720 |

| Proj# | Corridor | Section | Improvement | Phasing | Capital Cost Estimate | Benefit to Existing Development | | Post Period Capacity | | Prior Funding | Grants, Subsidies and Other Contributions | Total Deductions | Net Costs Benefiting New Development | Residential Share | Non-Residential Share |
|-----------------|--|---|--|-----------|-----------------------|---------------------------------|-----|----------------------|----|---------------|---|------------------|--------------------------------------|-------------------|-----------------------|
| | | | | | | \$ | % | \$ | % | | | | | 76% | 24% |
| | Creek Road | RR 4 to RR7 & RR7 to RR63 | Road Rehab - 2 Phases, incl Bridge Replacement | 2017-2021 | \$ 15,552,000 | \$ 12,736,800 | 90% | \$ - | 0% | \$ 1,400,000 | \$ - | \$ 14,136,800 | \$ 1,415,200 | \$ 1,075,552 | \$ 339,648 |
| | Dominion Road | Burleigh Road to Buffalo Road | Road Rehabilitation | 2017-2021 | \$ 10,179,000 | \$ 678,600 | 90% | \$ - | 0% | \$ 9,425,000 | \$ - | \$ 10,103,600 | \$ 75,400 | \$ 57,304 | \$ 18,096 |
| | Main Street | Locke Street to Ann Street | Road Rehabilitation | 2017-2021 | \$ 4,158,000 | \$ 3,742,200 | 90% | \$ - | 0% | \$ - | \$ - | \$ 3,742,200 | \$ 415,800 | \$ 316,008 | \$ 99,792 |
| | Glendale Ave | Welland Canal to Homer Road | Road Rehabilitation | 2017-2021 | \$ 3,780,000 | \$ 3,222,000 | 90% | \$ - | 0% | \$ 200,000 | \$ - | \$ 3,422,000 | \$ 358,000 | \$ 272,080 | \$ 85,920 |
| | Townline Road | McLeod Road to Lundy's Lane | Reconstruction rural 2 lane | 2022-2031 | \$ 6,480,000 | \$ 5,832,000 | 90% | \$ - | 0% | \$ - | \$ - | \$ 5,832,000 | \$ 648,000 | \$ 492,480 | \$ 155,520 |
| | Stewart Road | Lakeshore Road to Carlton Street | Reconstruction rural 2 lane | 2022-2031 | \$ 7,560,000 | \$ 6,804,000 | 90% | \$ - | 0% | \$ - | \$ - | \$ 6,804,000 | \$ 756,000 | \$ 574,560 | \$ 181,440 |
| | Effingham Street | Webber Rd to River Rod | Reconstruction rural 2 lane | 2017-2021 | \$ 4,914,000 | \$ 4,422,600 | 90% | \$ - | 0% | \$ - | \$ - | \$ 4,422,600 | \$ 491,400 | \$ 373,464 | \$ 117,936 |
| | Canborough Road | RR27 Wellandport Rd to Community Centre | Reconstruction and Drainage Improvements | 2017-2021 | \$ 3,996,000 | \$ 3,416,400 | 90% | \$ - | 0% | \$ 200,000 | \$ - | \$ 3,616,400 | \$ 379,600 | \$ 288,496 | \$ 91,104 |
| | Lundy's Lane | Highland Ave to Montrose Road | Cost Sharing with City CIP and W/M | 2017-2021 | \$ 3,450,000 | \$ 3,105,000 | 90% | \$ - | 0% | \$ - | \$ - | \$ 3,105,000 | \$ 345,000 | \$ 262,200 | \$ 82,800 |
| | Burleigh Hill | Glendale Ave to St. Davids | Cost Sharing with City Storm Sewer Works | 2017-2021 | \$ 2,000,000 | \$ 1,800,000 | 90% | \$ - | 0% | \$ - | \$ - | \$ 1,800,000 | \$ 200,000 | \$ 152,000 | \$ 48,000 |
| | Main Street Old Hwy 8 | Oakes Road North to Casablanca Blvd | Reconstruction - Urban - 2 Lane | 2017-2021 | \$ 5,670,000 | \$ 4,833,000 | 90% | \$ - | 0% | \$ - | \$ 300,000 | \$ 5,133,000 | \$ 537,000 | \$ 408,120 | \$ 128,880 |
| | Twenty Mile Road | RR24 Victoria Ave to Mountain Rd | Reconstruction - Rural - 2lane | 2017-2021 | \$ 8,856,000 | \$ 7,790,400 | 90% | \$ - | 0% | \$ 200,000 | \$ - | \$ 7,990,400 | \$ 865,600 | \$ 657,856 | \$ 207,744 |
| | St. David's Road | @ Hwy 406 Interchange | Cost Sharing on MTO project | 2017-2021 | \$ 2,000,000 | \$ 600,000 | 60% | \$ - | 0% | \$ - | \$ 1,000,000 | \$ 1,600,000 | \$ 400,000 | \$ 304,000 | \$ 96,000 |
| | Townline Road | Stanley Ave to Four Mile Creek Road | Reconstruction | 2017-2021 | \$ 2,052,000 | \$ 1,846,800 | 90% | \$ - | 0% | \$ - | \$ - | \$ 1,846,800 | \$ 205,200 | \$ 155,952 | \$ 49,248 |
| | Sodom Road | Lyons Creek Road to Willick Road | Reconstruction | 2017-2021 | \$ 2,484,000 | \$ 2,235,600 | 90% | \$ - | 0% | \$ - | \$ - | \$ 2,235,600 | \$ 248,400 | \$ 188,784 | \$ 59,616 |
| | Stanley Avenue | Hwy 420 to Ferry Street | Road Reconstructon and City CIP / Watermain | 2022-2031 | \$ 2,160,000 | \$ 1,944,000 | 90% | \$ - | 0% | \$ - | \$ - | \$ 1,944,000 | \$ 216,000 | \$ 164,160 | \$ 51,840 |
| | Stevensville Rd | Eagle Street to Bowen Road | Road Reconstruction - Urban | 2017-2021 | \$ 2,700,000 | \$ 2,430,000 | 90% | \$ - | 0% | \$ - | \$ - | \$ 2,430,000 | \$ 270,000 | \$ 205,200 | \$ 64,800 |
| | Bowen Road | QEW to Thompson Road | Road Reconstruction | 2022-2031 | \$ 3,780,000 | \$ 3,402,000 | 90% | \$ - | 0% | \$ - | \$ - | \$ 3,402,000 | \$ 378,000 | \$ 287,280 | \$ 90,720 |
| | Roads Reconstruction Program - 2017-2021 | | Road Reconstruction | 2017-2021 | \$ 22,680,000 | \$ 20,412,000 | 90% | \$ - | 0% | \$ - | \$ - | \$ 20,412,000 | \$ 2,268,000 | \$ 1,723,680 | \$ 544,320 |
| | Roads Reconstruction Program - 2022-2026 | | Road Reconstruction | 2022-2026 | \$ 58,320,000 | \$ 52,488,000 | 90% | \$ - | 0% | \$ - | \$ - | \$ 52,488,000 | \$ 5,832,000 | \$ 4,432,320 | \$ 1,399,680 |
| | Roads Reconstruction Program - 2027-2041 | | Road Reconstruction | 2027-2041 | \$ 273,026,700 | \$ 245,724,030 | 90% | \$ - | 0% | \$ - | \$ - | \$ 245,724,030 | \$ 27,302,670 | \$ 20,750,029 | \$ 6,552,641 |
| | Subtotal - Road Rehabilitation Program | | | | \$ 583,881,500 | \$ 481,707,430 | | \$ - | | \$ 35,110,000 | \$ 10,500,000 | \$ 527,317,430 | \$ 56,564,070 | \$ 42,988,694 | \$ 13,575,377 |
| Annual Programs | | | | | | | | | | | | | | | |
| | Traffic Signal Annual Program | | | 2017-2041 | \$ 51,290,000 | \$ 44,640,000 | 90% | \$ - | 0% | \$ 1,690,000 | | \$ 46,330,000 | \$ 4,960,000 | \$ 3,769,600 | \$ 1,190,400 |
| | Illumination Annual Program | | | 2017-2041 | \$ 12,350,000 | \$ 10,845,000 | 90% | \$ - | 0% | \$ 300,000 | | \$ 11,145,000 | \$ 1,205,000 | \$ 915,800 | \$ 289,200 |
| | Transportation Studies | | | 2017-2041 | \$ 9,925,000 | \$ 992,500 | 10% | \$ - | 0% | | | \$ 992,500 | \$ 8,932,500 | \$ 6,788,700 | \$ 2,143,800 |
| | Road Facility Program / Yards | | | 2017-2041 | \$ 33,250,000 | \$ - | 0% | \$ - | 0% | \$ 2,650,000 | | \$ 2,650,000 | \$ 30,600,000 | \$ 23,256,000 | \$ 7,344,000 |
| | Provision for Additional Vehicles | | | 2017-2041 | \$ 10,000,000 | \$ - | 0% | \$ - | 0% | | | \$ - | \$ 10,000,000 | \$ 7,600,000 | \$ 2,400,000 |
| | Subtotal - Annual Rehabilitation Program | | | | \$ 116,815,000 | \$ 56,477,500 | | \$ - | | \$ 4,640,000 | \$ - | \$ 61,117,500 | \$ 55,697,500 | \$ 42,330,100 | \$ 13,367,400 |
| | TOTAL | | | | \$ 1,289,432,500 | \$ 661,612,580 | | \$42,488,313 | | \$ 74,960,000 | \$ 17,150,000 | \$ 796,210,893 | \$ 493,221,608 | \$ 374,848,422 | \$ 118,373,186 |

Appendix I – Asset Management Plan

Appendix I – Asset Management Plan

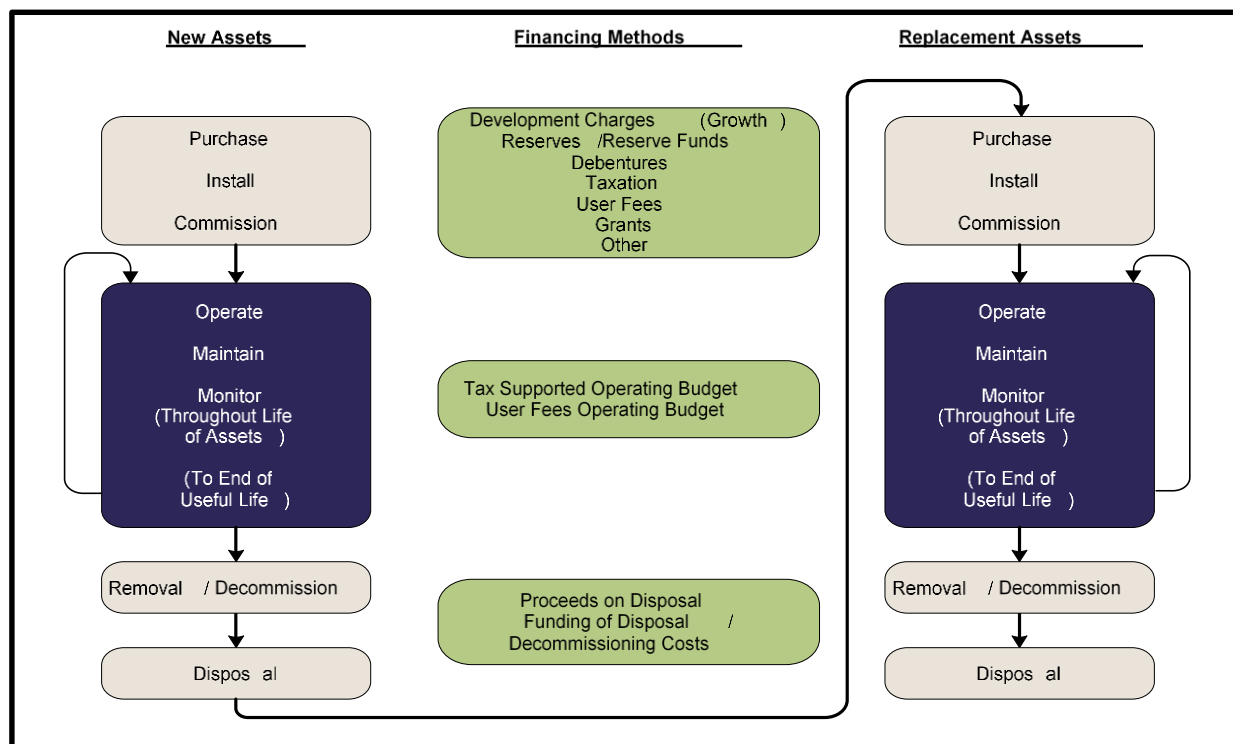
The recent changes to the D.C.A. (new section 10(2)(c.2)) require that the Background Study must include an asset management plan related to new infrastructure. Section 10 (3) of the D.C.A. provides:

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 for 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 within the Background Study.

At a broad level, the Asset Management Plan 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 lifecycle. For growth-related works, the majority of capital costs will be funded by the 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.



In 2012, the Province developed Building Together: Guide for municipal asset management plans which outlines the key elements for an asset management plan (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 Region prepared an Asset Management Plan in 2014 for its existing assets, however, the plan does not include all assets categories

that are included in the capital forecast needs of the D.C. background study and for the services included, the plan only addresses non-growth costs of capital (i.e. does not include expansionary capital). As a result, the asset management requirement for the D.C. must be undertaken in the absence of this information.

In recognition to the schematic above, the following table 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. As well, as all existing assets for the categories of assets included in the D.C. eligible capital costs are not included in the Region's Asset Management Plan, 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 which will require financing from Regional financial resources (i.e. taxation, rates, fees, etc.). This amount has been presented on an annual debt charge amount based on 10-year financing.
2. Lifecycle costs for the 2017 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 \$221.11 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 \$112.95 million. This amount, totalled with the existing operating revenues of \$933.40 million, provide annual revenues of \$1,046.35 million by the end of the period.

In consideration of the above, the capital plan is deemed to be financially sustainable for the future growth expenditures and revenues.

**Niagara Region
Asset Management
Future Expenditures and Associated Revenues**

| | 2041 (Total) |
|--|------------------------|
| Expenditures (Annualized) | |
| Annual Debt Payment on Non-Growth Related Capital ¹ | 42,608,203 |
| Annual Debt Payment on Post Period Capital ² | 2,292,694 |
| Lifecycle: | |
| Annual Lifecycle - Town Wide Services | \$65,273,405 |
| Sub-Total - Annual Lifecycle | \$65,273,405 |
| | |
| Incremental Operating Costs (for D.C. Services) | \$113,228,446 |
| | |
| Total Expenditures | \$221,110,053 |
| | |
| Revenue (Annualized) | |
| Total Existing Revenue ⁴ | \$933,397,230 |
| Incremental Tax and Non-Tax Revenue (User Fees, Fines, Licences, etc.) | \$112,948,017 |
| Total Revenues | \$1,046,345,247 |

¹ Non-Growth Related component of Projects including 10% mandatory deduction on soft services

² Interim Debt Financing for Post Period Benefit

³ All infrastructure costs included in Area Specific by-laws have been

⁴ As per Sch. 10 of FIR

Appendix J – Proposed Development Charge By-law

The Corporation of the Region of Niagara

By-law Number ____-2017

A BY-LAW TO ESTABLISH DEVELOPMENT CHARGES

FOR THE REGIONAL MUNICIPALITY OF NIAGARA AND TO REPEAL BY-LAW 62-2012

WHEREAS subsection 2(1) of the *Development Charges Act, 1997, as amended* c. 27 (hereinafter called “the Act”) provides that the council of a municipality may pass By-laws for the imposition of development charges against land for increased capital costs required because of the need for services arising from development in the area to which the by-law applies;

AND WHEREAS the Council of the Corporation of the Regional Municipality of Niagara has given Notice on April 28, 2017 according to section 12 of the *Development Charges Act, 1997, as amended*, of its intention to pass a by-law under Section 2 of the Act;

AND WHEREAS the Council of the Corporation of the Regional Municipality of Niagara has heard all persons who applied to be heard no matter whether in objection to, or in support of, the development charge proposal at a public meeting held on June 8, 2017;

AND WHEREAS the Council of the Corporation of the Regional Municipality of Niagara had before it a report entitled Development Charge Background Study dated April 28, 2017 prepared by Watson & Associates Economists Ltd., wherein it is indicated that the development of any land within the Regional Municipality of Niagara will increase the need for services as defined herein;

AND WHEREAS the Council of the Corporation of the Regional Municipality of Niagara on June 29, 2017 approved the applicable Development Charge Background Study, inclusive of the capital forecast therein, in which certain recommendations were made relating to the establishment of a development charge policy for the Regional Municipality of Niagara pursuant to the *Development Charges Act, 1997, as amended*;

AND WHEREAS the Council of the Corporation of the Regional Municipality of Niagara on June 29, 2017 determined that no additional public meeting was required to be held as part of the approval process;

NOW THEREFORE the Council of The Regional Municipality of Niagara enacts as follows:

DEFINITIONS

1. In this By-law:

"Act" means the *Development Charges Act, 1997*, S.O. 1997, c. 27, as amended;

"agricultural use" means use or intended use for bona fide farming purposes which means the proposed development will qualify as a farm business operating with a valid Farm Business Registration Number issued by the Ontario Ministry of Agriculture, Food and Rural Affairs and/or be assessed in the Farmland Realty Tax Class by the Ontario Property Assessment Corporation;

(a) including (but not limited to):

- (i) cultivation of crops, whether on open land or in greenhouses, including (but not limited to) fruit, vegetables, herbs, grains, field crops, sod, trees, shrubs, flowers, and ornamental plants;
- (ii) raising of animals, including (but not limited to) cattle, horses, pigs, poultry, livestock, fish; and
- (iii) agricultural animal husbandry, dairying, equestrian activities, horticulture, fallowing, pasturing, and market gardening;

(b) but excluding:

- (i) retail sales activities; including but not limited to restaurants, banquet facilities, hospitality facilities and gift shops;
- (ii) services related to grooming, boarding or breeding of household pets; and
- (iii) cultivation of marijuana crops and/or marijuana production facilities.

"apartment" means any residential building containing more than four dwelling units where the units are connected by an interior corridor, but does not include a special care/special need dwelling unit/room, or dormitories;

"back-to-back townhouse dwelling" means a building containing more than two dwelling units separated vertically by a common wall, including a rear common wall, that do not have rear yards;

“bedroom” means a habitable room larger than seven square metres, including a den, study, or other similar area, but does not include a living room, dining room, kitchen or bathroom.

“board of education” means a board as defined in the *Education Act*, R.S.O. 1990, c. E.2, as amended;

“brownfield” means land located within the urban areas as defined from time to time in the Regional Official Plan, upon which there has been previous agricultural, industrial, institutional or commercial use or other use as prescribed under Ontario Regulation 153/04, as amended from time to time, and for which site remediation is required, as determined by the local municipality, and a Record of Site Condition has been filed on the Province’s Brownfields Environmental Site Registry in order to permit a change of use pursuant to the Environmental Protection Act, R.S.O. 1990 and Ontario Regulation 153/04, as amended from time to time;

“building permit” means a permit pursuant to the *Building Code Act, 1992*, S.O. 1992, c. 23, as amended;

“calculation date” means the date on which the first building permit is issued by the local municipality;

“commercial purpose” means used, designed or intended for use for or in connection with the purchase and/or sale and/or rental of commodities; the provision of services for a fee; or the operation of a business office, and includes hotels and motels;

“development” means the construction, erection or placing of one or more buildings or structures on land or the making of an addition or alteration to a building or structure that has the effect of increasing the size or usability thereof, and includes redevelopment; notwithstanding the foregoing, development does not include temporary structures, including but not limited to, seasonal hoop structures, seasonal fabric structures, tents, or produce sales stands;

“dwelling room” means either

- a) each bedroom used, designed or intended for use by one or more persons living together in a lodging home, dormitories, or

- b) in the case of a special care/special dwelling unit/room, each individual room or suite of rooms used, designed or intended for use by one or two persons with or without exclusive sanitary and/or culinary facilities.

"dwelling unit" means one or more rooms used, designed or intended to be used by one or more persons as a residence and which has access to culinary and/or sanitary facilities. A "dwelling unit" does not include a Park Model Trailer conforming to National Standard of Canada #CAN/CSA - Z241.0-92 or similar standard;

"existing industrial building" means a building or buildings existing on a site in the Regional Municipality of Niagara as of July 6, 2012 came into effect or the buildings or structures constructed and occupied on a vacant site pursuant to site plan approval under section 41 of the Planning Act, R.S.O. 1990, c. P.13 (the "Planning Act") subsequent to the July 6, 2012 was passed for which development charges were exempted or paid for and means a building used for or in connection with:

- (a) manufacturing, producing, and processing, as well as storing and or distribution of the goods manufactured, produced or processed on site;
- (b) research or development in connection with manufacturing, producing or processing something;
- (c) retail sales by a manufacturer, producer or processor of something they manufactured, produced or processed, if the retail sales are at the site where the manufacturing, production or processing takes place;
- (d) office or administrative purposes, if they are:
 - (i) carried out with respect to manufacturing, producing, processing, storage or distributing of something; and
 - (ii) in or attached to the building or structure used for that manufacturing, producing, processing, storage or distribution;

"granny flat" means a one-unit detached, temporary residential structure, containing culinary and sanitary facilities that is ancillary to an existing residential structure and that is designed to be temporary;

"gross floor area" means the total floor area, measured between the outside of exterior walls, virtual walls or between the outside of exterior walls or virtual walls and the centre line of party walls dividing the building from another building, of all

floors and mezzanines, above and below the average level of finished ground adjoining the building at its exterior walls;

“group home” means a dwelling for the accommodation of three to eight residents, supervised by agency staff and funded wholly or in part by any government or its agency and approved or supervised by the Province of Ontario under any Act.

“industrial use” means land, buildings or structures used for or in connection with manufacturing by:

- (a) manufacturing, producing, and processing, as well as storing and or distribution of goods manufactured, produced or processed on site;
- (b) research or development in connection with manufacturing, producing or processing something;
- (c) retail sales by a manufacturer, producer or processor of something they manufactured, produced or processed, if the retail sales are at the site where the manufacturing, production or processing takes place;
- (d) office or administrative purposes, if it is:
 - (i) carried out with respect to manufacturing, producing, processing, storage or distributing of something; and
 - (iv) in or attached to the building or structure used for that manufacturing, producing, processing, storage or distribution;

“institutional” means lands, buildings or structures used or designed or intended for use by an organized body, society or religious group for promoting a public or non-profit purpose and offices where such uses are accessory to an institutional use.

“live/work unit” means a unit which contains separate residential and non-residential areas intended for both residential and non-residential uses concurrently, and shares a common wall or floor with direct access between the residential and non-residential areas.

“local board” means a municipal service board, transportation commission, public library board, board of health, police services board, planning board, or any other board, commission, committee, body or local authority established or exercising any power or authority under any general or special Act with respect to any of the

affairs or purposes of one or more local municipalities or the Region, but excluding a board of education, a conservation authority, any municipal services corporation that is not deemed to be a local board under O. Reg. 599/06 made under the *Municipal Act, 2001*, S.O. 2001, c. 25, as amended;

“local municipality” means any one of the municipalities of the Town of Fort Erie, Town of Grimsby, Town of Lincoln, City of Niagara Falls, Town of Niagara-on-the-Lake, Town of Pelham, City of Port Colborne, City of St. Catharines, City of Thorold, Township of Wainfleet, City of Welland, and the Township of West Lincoln;

“lodging home” means a boarding, lodging, or rooming house in which lodging is provided for more than four persons in return for remuneration or for the provision of services, or for both, and in which the lodging rooms do not have both bathrooms and kitchen facilities for the exclusive use of individual occupants.

“long term care home” means homes, nursing homes or homes for the aged where the Ministry of Health and Long Term Care funds the care provided in such homes and application for accommodation is made through a Community Care Access Centre.

“mezzanine” means an intermediate floor assembly between the floor and ceiling of any room or storey and includes an interior balcony;

“mixed-use building” means a building or structure used for both residential and non-residential use;

“multiplex dwelling” means a residential building containing three or more dwelling units, each of which unit has a separate entrance to grade;

“municipal housing project facilities” has the same meaning as that specified in the Region’s *Municipal Housing Facility By-law* (No. 34-2004), as may be amended;

"non-residential building" means a building or structure used exclusively for non-residential use;

“non-residential use” means use or intended use for any purpose other than human habitation and includes, but is not limited to, an institutional use, an industrial use, and a commercial use;

“other multiple” means all residential units other than a single detached dwelling, semi-detached dwelling, apartment dwelling or a dwelling room, including, but not

limited to, row dwellings, multiplex, back-to-back townhouse dwelling, stacked townhouse dwelling, and the residential component of live/work units;

“parking structure” means buildings or structures uses for the parking of motor vehicles;

“place of worship” means any building or part thereof that is owned by a church or religious organization that is exempt from taxation as a place of worship pursuant to the *Assessment Act*, R.S.O. 1990, c. A.31, as amended;

“premise” means one or more dwelling units and/or one or more square feet used for non-residential use;

"Region" means The Regional Municipality of Niagara;

“Regulation” means O. Reg. 82/98 under the Act, as amended;

"residential building" means a building used exclusively for residential use, including but not limited to a single detached dwelling, a semi-detached dwelling, a row dwelling, stacked townhouse dwelling, back-to-back townhouse dwelling, a multiplex dwelling, an apartment dwelling, a dwelling room; or the residential component of a live/work unit;

“residential use” means use or intended use for human habitation and ancillary purposes, and includes such use related to agricultural use, but does not include a hotel/motel use; for purposes of this definition “ancillary purposes” includes (but is not limited to) vehicle storage and equipment storage;

"row dwelling" means a residential building containing three or more dwelling units separated by vertical division, each of which units has a separate entrance to grade;

"semi-detached dwelling" means a dwelling unit in a residential building consisting of two dwelling units having one shared vertical wall, but no other parts, attached;

"single detached dwelling" means a residential building containing one dwelling unit and not attached to another structure. Where it is attached to another structure by footings or below grade walls only, it shall be considered a single detached dwelling for the purposes of this by-law; and

“special care/special dwelling unit/room” means a residence

- a) containing two or more dwelling rooms, which rooms have common entrance from street level; and
- b) where the occupants have the right to use in common with other occupants, halls, stairs, yards, common room and accessory buildings; and
- c) that is designed to accommodate persons with specific needs, including but not limited to, independent permanent living arrangements; and where support services, such as meal preparation, grocery shopping, laundry, housing, nursing, respite care and attending services are provided at various levels; and includes but is not limited to retirement homes or lodges, group homes, dormitories, and hospices.

“stacked townhouse dwelling” means a building containing two or more dwelling units where each dwelling unit is separated horizontally and/or vertically from another dwelling unit by a common wall or floor;

“use” means either residential use or non-residential use.

“wind turbine” means a part of a system that converts energy into electricity, and consists of a wind turbine, a tower and associated control or conversion electronics. A wind turbine and energy system may be connected to the electricity grid in circuits at a substation to provide electricity off-site for sale to an electrical utility or other intermediary, where there is a rated output of more than 3 kilowatts.

RULES

2. For the purposes of complying with section 6 of the Act:

- (a) The rules for determining if a development charge is payable in any particular case and for determining the amount of the charge shall be in accordance with sections 4 through 9, and 20 and 21.
- (b) The rules for determining exemptions, relief, credits and adjustments shall be in accordance with sections 10 through 17.
- (c) The rules for determining the phasing in of development charges shall be in accordance with section 8.
- (d) The rules for determining the indexing of development charges shall be in accordance with sections 20 and 21.

- (e) The rules respecting the redevelopment of land shall be in accordance with sections 18 and 19.

LANDS AFFECTED

- 3. This By-law applies to all lands in the geographic area of the Region, being all of the lands shown on Schedule "A".

APPROVALS FOR DEVELOPMENT

- 4. (1) Development charges under this By-law shall be imposed against all development if the development requires:
 - (a) the passing of a zoning by-law or of an amendment to a zoning by-law under section 34 of the *Planning Act*, R.S.O. 1990, c. P.13, as amended;
 - (b) 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 50 of the *Condominium Act*, 1998, S.O. 1998, c. 19, as amended; or
 - (g) the issuing of a permit under the *Building Code Act* in relation to a building or structure.
- (2) That nothing in this By-law prevents Council from requiring, in an agreement 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, install such local services related to or within the area to which a plan of subdivision or consent relates, as Council may require, in accordance with the Region's applicable local service policy in the effect at the time.

DESIGNATION OF SERVICES

- 5. A development charge shall include:

- (a) a charge in respect of general government, police services, emergency medical services, health services, P.O.A. services, long-term care, social housing, waste diversion, public works and services related to a highway;
- (b) if water service is available, a charge in respect of water; and
- (c) if wastewater service is available, a charge in respect of wastewater.

AMOUNT OF CHARGE

Amount of Charge – Residential

- 6. For development for residential purposes, development charges shall be imposed on all residential development, including a dwelling unit accessory to a non-residential development and the residential component of a mixed-use building, including the residential component of a live/work unit, according to the number and type of dwelling units on the lands as set out in Schedule “C”.

Amount of Charge – Non-residential

- 7. For development for non-residential purposes, development charges shall be imposed on all non-residential development and, in the case of a mixed-used building, on the non-residential component of the mixed-use building, including the non-residential component of a live/work unit, according to the type and gross floor area of the non-residential component as set out in Schedule “C”.

Phasing in of Development Charges

- 8. The development charge schedule in Schedule “C” is not phased in.

TIMING AND CALCULATION AND PAYMENT

- 9. (1) The development charge under this By-law shall be calculated using the rate effective on the calculation date with respect to such development and shall be payable on the issuance of the first building permit with respect to such development.
- (2) No Chief Building Official of any local municipality shall issue a building permit in respect of a development for which a development charge is payable pursuant to this By-law, until such development charge is paid.
- (3) The Region may, by agreement pursuant to section 38 of the Act, permit an owner to perform work that relates to a service to which this by-law applies in lieu of the payment of all or any portion of a development charge. The Region will give the

owner who performed the work a credit towards the development charge in accordance with the agreement and subject to the requirements of the Act. In addition, the Region may, in the case of development located outside of the existing service area, require payment of an appropriate share of the costs of the required infrastructure within the existing service area, in addition to the costs external to the service area.

EXEMPTIONS

10. The following are exempt from the payment of development charges under this By-law by reason of section 3 of the Act:
 - (a) lands and buildings owned by and used for the purposes of any local municipality or the Region or any local board unless such buildings or parts thereof are used, designed or intended for use primarily for or in connection with any commercial purpose; and
 - (b) land and buildings owned by and used for the purposes of a board of education unless such buildings or parts thereof are used, designed or intended for use primarily for or in connection with any commercial purpose.
11. Notwithstanding any other provision of this By-law, no development charge is imposed under this By-law respecting:
 - (a) granny flats;
 - (b) parking structures;
 - (c) non-residential lands and buildings used for agricultural use;
 - (d) that portion of a place of worship which is used exclusively as a place of worship for religious services and any reception and meeting areas used in connection with, or integral to the worship space.
 - (e) lands and buildings used or intended to be used as municipal housing project facilities, as set out in section 110 of the *Municipal Act, 2001*, S.O. 2001 c. 25, O.Reg.603/06 under the Municipal Act 2001, and the Region's Municipal Housing Facility by-law, all as may be amended;
 - (f) lands and buildings used for affordable housing projects that receive funding through an agreement with Niagara Regional Housing or a department or designated agency of the Niagara Region, provided that:

- (i) this exemption shall only apply to that proportion or number of units in a development which are designated or identified as affordable housing and
- (ii) the owner of the lands continues to use the lands and buildings for affordable housing.

If the owner ceases to use the proportionate share of the lands and buildings for affordable housing, the development charges exempted under this section shall become due and payable. The owner shall be required to enter into an agreement with the Region under section 27 of the Act respecting the timing and calculation of payment of development charges, notice of which the owner shall register on the title to the lands at its sole cost and expense with the intention that the provisions shall bind and run with title to the lands. and

- (g) gas station canopies;

Partial Exemptions

- 12. Notwithstanding any other provision of this By-law, the development charge imposed under this By-law respecting the development of a long-term care home shall be reduced by 50%.

Rules with Respect to Brownfield Development located within the Urban Areas

- 13. The rules with respect to Brownfield Development located within the Urban Areas for Regional Development Charges Reduction are set out in Schedule “D” and supporting Schedules D1-11.

Rules with Respect to Development located within the Designated Exemption Areas and Brownfield Development within the Urban Areas

- 14. The rules with respect Development located within the Designated Exemption Areas and to Brownfield Developments within the Urban Areas for Regional Development Charges Reduction are set out in Schedule “E” and supporting Schedules E1 to E10.

Rules with Respect to Exemptions for Intensification of Existing Housing

- 15. Pursuant to the Act, no development charge is payable if the development is only the enlargement of an existing dwelling unit.

16. Pursuant to the Act and Regulation, no development charge is payable if the development is only the creation of:
- (a) one or two additional dwelling units in a single detached dwelling, where the total gross floor area of the additional dwelling unit or units is less than or equal to the gross floor area of the existing dwelling unit;
 - (b) one additional dwelling unit in a semi-detached dwelling or row dwelling, where the gross floor area of the additional dwelling unit is less than or equal to the gross floor area of the existing dwelling unit; or
 - (c) one additional dwelling unit in a dwelling other than a single detached dwelling, semi-detached dwelling or row dwelling, where the gross floor area of the additional dwelling unit is less than or equal to the gross floor area of the smallest existing dwelling unit in the residential building.

Rules with Respect to Exemptions for Industrial Expansion

17. (1) Pursuant to the Act, and notwithstanding any other provision of this by-law, there shall be an exemption from the payment of development charges for one or more enlargements of an existing industrial building, up to a maximum of fifty percent of the gross floor area before the first enlargement for which an exemption from the payment of development charges was granted pursuant to the Development Charges Act or this section. Development charges shall be imposed in accordance with this by-law with respect to the amount of floor area of an enlargement that results in the gross floor area of the industrial building being increased by greater than fifty per cent of the gross floor area of all the existing industrial buildings on the site.
- (2) If the gross floor area is enlarged by more than 50 percent, the amount of the development charge in respect of the enlargement is the amount of the development charge that would otherwise be payable multiplied by the fraction determined as follows:
- 1. Determine the amount by which the enlargement exceeds 50 percent of the gross floor area before the enlargement.
 - 2. Divide the amount determined under paragraph 1 by the amount of the enlargement.

Rules With Respect to Redevelopment – Demolitions

18. (1) If application is made for a building permit in respect of a parcel of land upon which a premise existed within five years prior to the date of such application, but which premise has been demolished or destroyed before the date of such application, then the amount of development charges payable upon issuance of the said building permit shall be reduced by the net amount, calculated pursuant to this By-law at the current development charge rates, that would be payable as development charges in respect of the demolished or destroyed premise, provided that such reduction shall not exceed the development charges otherwise payable. For purposes of this subsection, “net” means the excess of the development charges for premises constructed, over the development charges for premises demolished or destroyed.
- (2) If, at the time of payment of development charges in respect of a parcel of land, the owner of the said land provides written notification of his/her intention to demolish (within five years) a premise existing on that parcel at the time of such payment, then upon the subsequent assurance by the Treasurer of the relevant local municipality (or his or her designate) to the Region’s Treasurer, within five years after such payment, that such premise on such parcel has indeed been so demolished (and the particulars of such demolished premise), the Region shall refund to such owner a reduction in the development charges paid, which reduction is the amount, calculated pursuant to this By-law or a predecessor by-law of the Region, at the development charge rates in effect at the time of such payment, that would have been payable as development charges in respect of the premise demolished, provided that such reduction shall not exceed the development charges actually paid.
- (3) Where demolition takes place on a brownfield, the above conditions apply however, an application may be made to the Regional Treasurer for an extension of time for the redevelopment credit of up to three additional years if the redevelopment has not been able to proceed due to delays in completing the remediation works. This application must be received prior to the expiry of the initial five year period as provided in section 18. (1) of this by-law. This application will be considered by Regional Council for approval.
- (4) Where the first use of a premises would be exempt from development charges by operation of s.10 of this By-law, the reduction available under 18.(1), 18(2), and 18(3) above shall be determined by assessing the first use of the premises at the Institutional rate set forth in Schedule “C” to this By-law.

Rules With Respect to Redevelopment – Conversions

19. (1) If a development includes the conversion of a premise from one use (the “first use”) to another use, then the amount of development charges payable shall be reduced by the amount, calculated pursuant to this By-law at the current development charge rates, that would be payable as development charges in respect of the first use, provided that such reduction shall not exceed the development charges otherwise payable.
- (2) Where the first use of a premises would be exempt from development charges by operation of s.10 of this By-law, the reduction available under 19.(1) above shall be determined by assessing the first use of the premises at the Institutional rate set forth in Schedule “C” to this By-law.

INDEXING

20. The amounts of development charges imposed pursuant to this By-law, as set out in Schedule “C” shall be adjusted annually without amendment to this By-law, in accordance with the Statistics Canada Quarterly Construction Price Statistics (catalogue number 62-007).
21. For greater certainty, on January 1st of each year, the annual indexation adjustment shall be applied to the development charge as set out in Schedule “C”, plus the accumulated annual indexation adjustments from previous years, if any.

GENERAL

22. The following schedules to this By-law form an integral part of this By-law:
- Schedule "A" – Map of the Regional Municipality of Niagara
 - Schedule "B" – Components of Services Designated in Section 5
 - Schedule “C” – Development Charges
 - Schedule “D” – Rules with Respect to Brownfield Development located within Urban Areas for Regional Development Charges Reduction (subject to section 13)
 - Schedule “D1” – Urban Areas for Regional Development Charges (Partial) Exemption/ Waiver (subject to section 14) – Town of Fort Erie

- Schedule “D2” – Urban Areas for Regional Development Charges (Partial) Exemption/ Waiver (subject to section 14) – Town of Grimsby
- Schedule “D3” – Urban Areas for Regional Development Charges (Partial) Exemption/ Waiver (subject to section 14) – Town of Lincoln
- Schedule “D4” – Urban Areas for Regional Development Charges (Partial) Exemption/ Waiver (subject to section 14) – City of Niagara Falls
- Schedule “D5” – Urban Areas for Regional Development Charges (Partial) Exemption/ Waiver (subject to section 14) – Town of Niagara-on-the-Lake
- Schedule “D6” – Urban Areas for Regional Development Charges (Partial) Exemption/ Waiver (subject to section 14) – Town of Pelham
- Schedule “D7” – Urban Areas for Regional Development Charges (Partial) Exemption/ Waiver (subject to section 14) – City of Port Colborne
- Schedule “D8” – Urban Areas for Regional Development Charges (Partial) Exemption/ Waiver (subject to section 14) – City of St. Catharines
- Schedule “D9” – Urban Areas for Regional Development Charges (Partial) Exemption/ Waiver (subject to section 14) – City of Thorold
- Schedule “D10” – Urban Areas for Regional Development Charges (Partial) Exemption/ Waiver (subject to section 14) – City of Welland
- Schedule “D11” – Urban Areas for Regional Development Charges (Partial) Exemption/ Waiver (subject to section 14) – Township of West Lincoln
- Schedule “E” – Rules with Respect to Development located within the Designated Exemption Areas and Brownfield Developments within the Urban Areas for Regional Development Charges Reduction Program (subject to section 14)

- Schedule “E1” – Designated Exemption Areas for Regional Development Charges (Partial) Exemption/ Waiver (subject to section 13) – Town of Fort Erie
- Schedule “E2” – Designated Exemption Areas for Regional Development Charges (Partial) Exemption/ Waiver (subject to section 13) – Town of Grimsby
- Schedule “E3” – Designated Exemption Areas for Regional Development Charges (Partial) Exemption/ Waiver (subject to section 13) – Town of Lincoln
- Schedule “E4” – Designated Exemption Areas for Regional Development Charges (Partial) Exemption/ Waiver (subject to section 13) – City of Niagara Falls
- Schedule “E5” – Designated Exemption Areas for Regional Development Charges (Partial) Exemption/ Waiver (subject to section 13) – Town of Pelham
- Schedule “E6” – Designated Exemption Areas for Regional Development Charges (Partial) Exemption/ Waiver (subject to section 13) – City of Port Colborne
- Schedule “E7” – Designated Exemption Areas for Regional Development Charges (Partial) Exemption/ Waiver (subject to section 13) – City of St. Catharines
- Schedule “E8” – Designated Exemption Areas for Regional Development Charges (Partial) Exemption/ Waiver (subject to section 13) – City of Thorold
- Schedule “E9” – Designated Exemption Areas for Regional Development Charges (Partial) Exemption/ Waiver (subject to section 13) – City of Welland
- Schedule “E10” – Designated Exemption Areas for Regional Development Charges (Partial) Exemption/ Waiver (subject to section 13) – Township of West Lincoln

23. This By-law shall come into force and effect on September 1, 2017.
24. Pursuant to the Act, and unless it is repealed earlier, this By-law shall expire five years after the date it comes into force.
25. Each of the provisions of this By-law is severable and if any provision hereof should, for any reason, be declared invalid by the Ontario Municipal Board or a court of competent jurisdiction, the remaining provisions shall remain in full force and effect.
26. By-law 62-2009 is hereby repealed effective September 1, 2017.

THE REGIONAL MUNICIPALITY OF NIAGARA

(Regional Chair)

(Regional Clerk)

Schedule "A" Niagara Region

Map of the Regional Municipality of Niagara




Schedule B
To By-Law No. __-2017
Region of Niagara
Components of Services Designated in Section 5

100% Eligible Services

Police Services

- Facilities
- Vehicles
- Equipment

Services Related to a Highway

- Services Related to a Highway
- Services Related to a Highway – Related Vehicles
- Services Related to a Highway – Related Facilities
- Services Related to a Highway – Previously Completed Unfunded Works

Water Services

- Supply
- Storage
- Treatment
- Distribution
- Previously Completed Unfunded Works

Wastewater Services

- Collection
- Treatment
- Previously Completed Unfunded Works

90% Eligible Services

Emergency Medical Services

- Ambulances
- Facilities

Health Services

- Facilities

Provincial Offences Act (P.O.A.)

- Facilities

Social and Child Services

- Facilities

Long-term Care

- Facilities

Schedule B
To By-Law No. __-2017
Region of Niagara
Components of Services Designated in Section 5

Social Housing

- Facilities

Waste Diversion

- Facilities
- Vehicles and equipment
- Other equipment
- Containers

General Government

- Growth-related Studies

Schedule C
Region of Niagara
Schedule of Development Charges

| Service | RESIDENTIAL | | | | | | NON-RESIDENTIAL | | | |
|--------------------------------------|-----------------------------------|---------------------------|-----------------------------|-------------------------------------|-----------------|---|--|--|---|---------------|
| | Single and Semi-Detached Dwelling | Apartments - 4 Bedrooms + | Apartments - 2 & 3 Bedrooms | Apartments - Bachelor and 1 Bedroom | Other Multiples | Special Care/Special Dwelling Units/Rooms | Commercial (per ft² of Gross Floor Area) | Industrial (per ft² of Gross Floor Area) | Institutional (per ft² of Gross Floor Area) | Wind Turbines |
| Municipal Wide Services: | | | | | | | | | | |
| Services Related to a Highway | 6,297 | 8,655 | 4,068 | 2,596 | 4,587 | 2,380 | 4.45 | 1.85 | 3.18 | 6,297 |
| Police Services | 696 | 957 | 450 | 287 | 507 | 263 | 0.50 | 0.21 | 0.36 | 696 |
| General Government | 212 | 291 | 137 | 87 | 154 | 80 | 0.19 | 0.07 | 0.13 | 212 |
| Long Term Care | 1,212 | 1,666 | 783 | 500 | 883 | 458 | 0.35 | 0.14 | 0.25 | - |
| Provincial Offences Act | 48 | 66 | 31 | 20 | 35 | 18 | 0.04 | 0.02 | 0.03 | - |
| Health | 148 | 203 | 96 | 61 | 108 | 56 | 0.05 | 0.02 | 0.03 | - |
| Social and Child Services | 194 | 267 | 125 | 80 | 141 | 73 | 0.06 | 0.02 | 0.04 | - |
| Emergency Medical Services | 166 | 228 | 107 | 68 | 121 | 63 | 0.04 | 0.02 | 0.03 | 166 |
| Social Housing | 2,123 | 2,918 | 1,372 | 875 | 1,547 | 803 | - | - | - | - |
| Waste Diversion | 362 | 497 | 234 | 149 | 263 | 137 | 0.31 | 0.12 | 0.22 | - |
| Total Municipal Wide Services | 11,457 | 15,748 | 7,403 | 4,723 | 8,346 | 4,331 | 5.98 | 2.47 | 4.27 | 7,371 |
| Urban Services | | | | | | | | | | |
| Wastewater Services | 4,420 | 6,076 | 2,856 | 1,823 | 3,220 | 1,671 | 3.18 | 1.32 | 2.27 | - |
| Water Services | 3,129 | 4,301 | 2,021 | 1,290 | 2,280 | 1,183 | 2.25 | 0.94 | 1.61 | - |
| Total Urban Services | 7,549 | 10,377 | 4,877 | 3,113 | 5,500 | 2,854 | 5.43 | 2.26 | 3.88 | - |
| GRAND TOTAL RURAL AREA | 11,457 | 15,748 | 7,403 | 4,723 | 8,346 | 4,331 | 5.98 | 2.47 | 4.27 | 7,371 |
| GRAND TOTAL URBAN AREA | 19,006 | 26,125 | 12,280 | 7,836 | 13,846 | 7,185 | 11.41 | 4.73 | 8.15 | 7,371 |

Schedule “D”

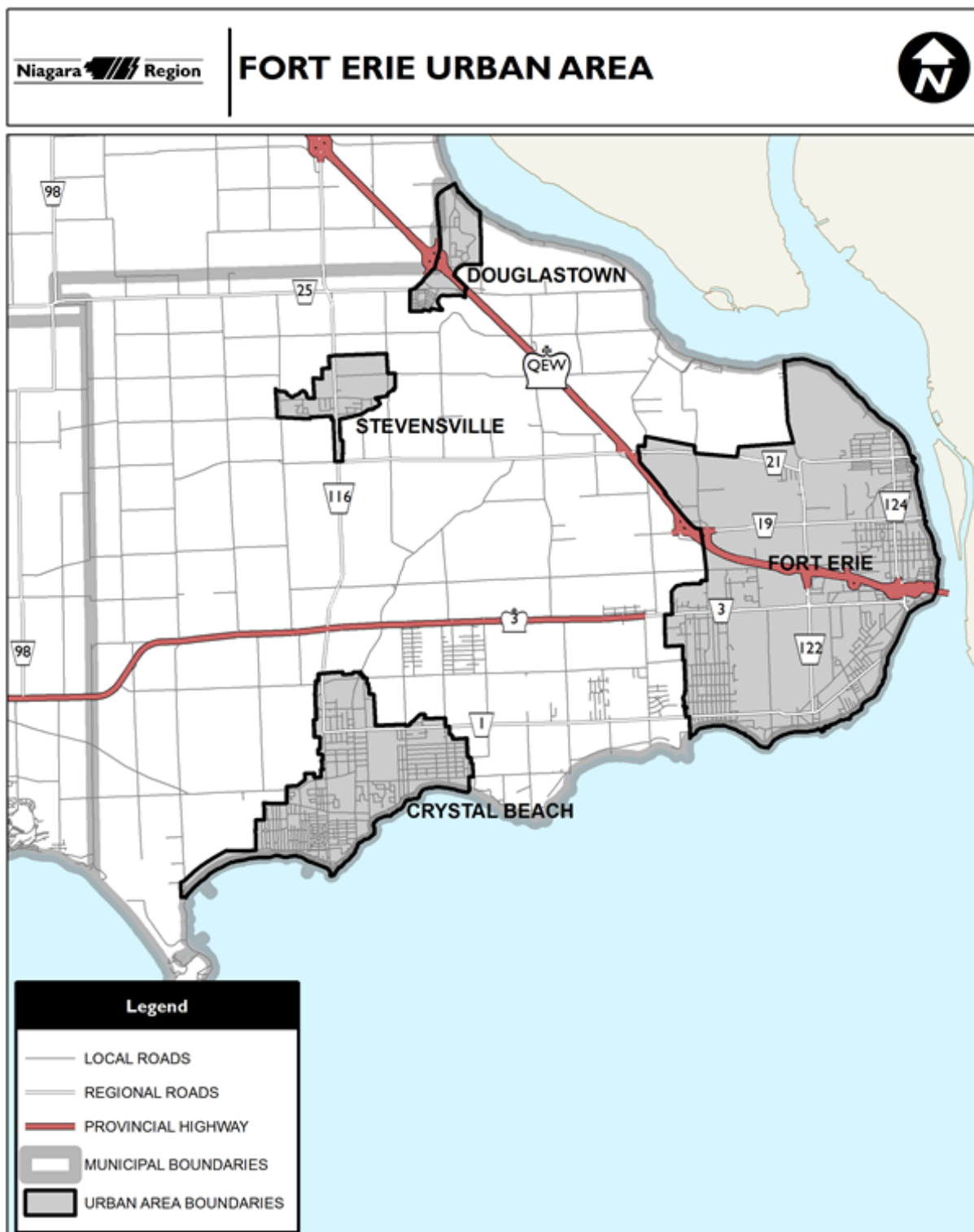
Rules with Respect to Brownfield Development located within the Urban Areas for Regional Development Charges Reduction (subject to section 13)

For all Development Charges reductions pursuant to this Schedule “D”, the total amount of the reduction shall not exceed the total cost of remediation. For confirmation that a development is to be considered a Brownfield development, costs associated with remediation of brownfields may be subject to verification, third party review, or independent audit, at the expense of the applicant, if required by the Region.

Brownfield Development Located within the Urban Areas

- (a) The applicable development charge shall be reduced by the total cost of remediation for brownfield development located within the approved Urban Area as set out in Schedule “D1 to D11” to this By-law, as may be amended from time to time; as approved by Council of the Region, without amendment to this By-law.
- (b) In the case of a qualifying project under this schedule, the costs associated with remediation may be applied to other Regional, local or Provincial programs but only for those eligible costs over and above eligible costs not paid under Schedule “D”.
- (c) Where funding for eligible costs have been or will be compensated from another funding source, those costs will be ineligible for a reduction under Schedule “D”.

Schedule "D1"
Urban Areas for Regional Development Charges Reduction (subject to section 14)
Town of Fort Erie



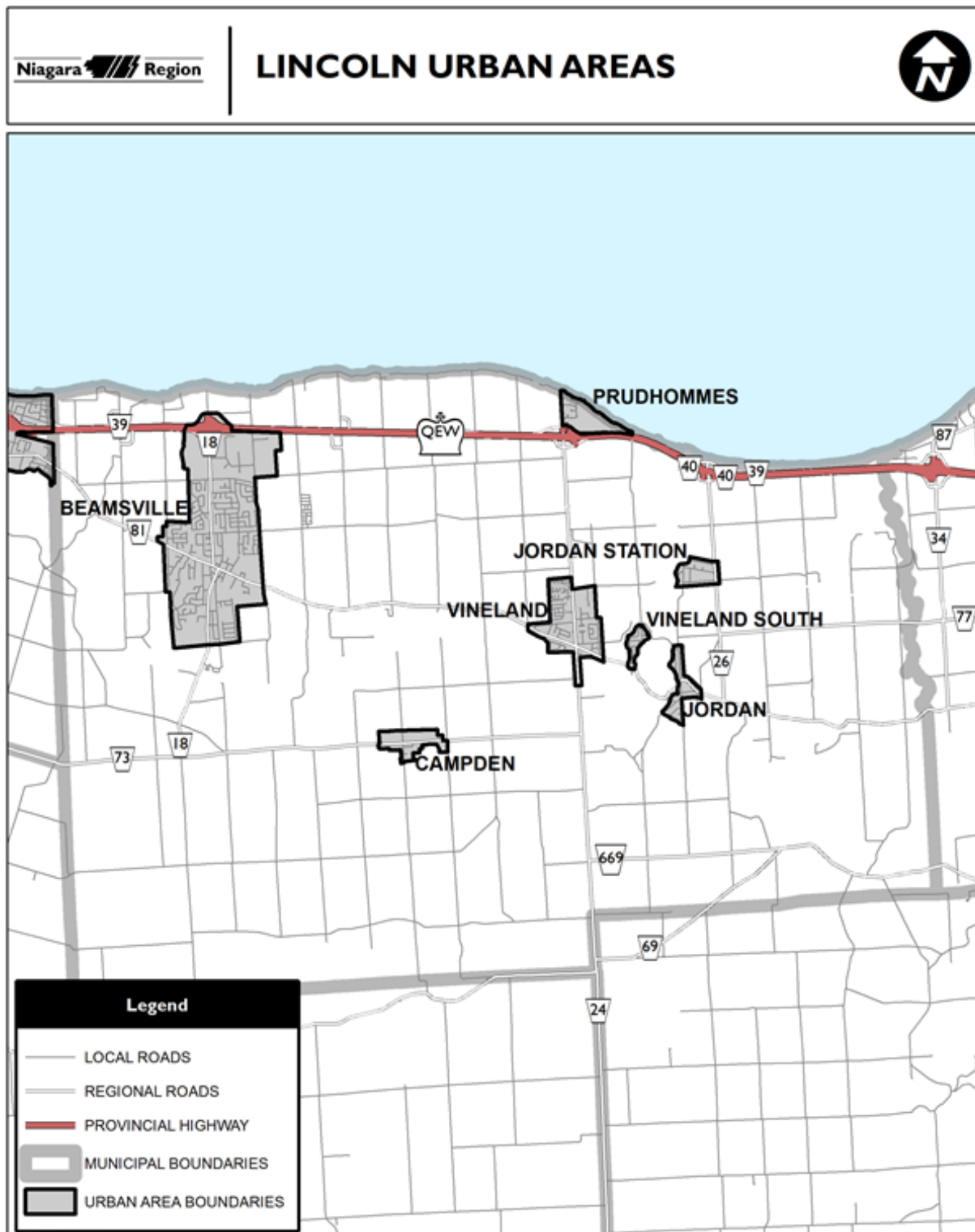
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Schedule "D2"
Urban Areas for Regional Development Charges Reduction (subject to section 14)
Town of Grimsby



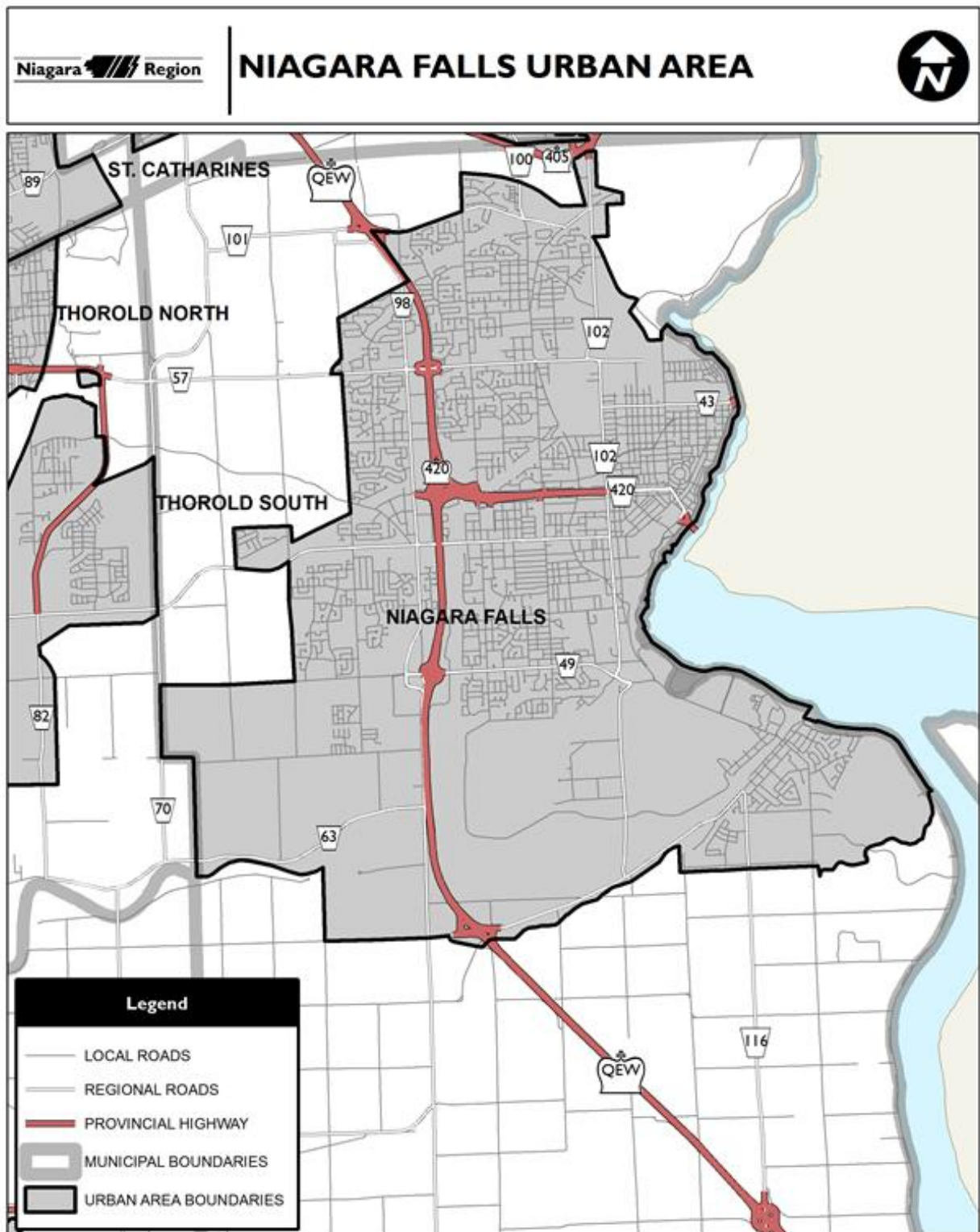
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Schedule "D3"
Urban Areas for Regional Development Charges Reduction (subject to section 14)
Town of Lincoln



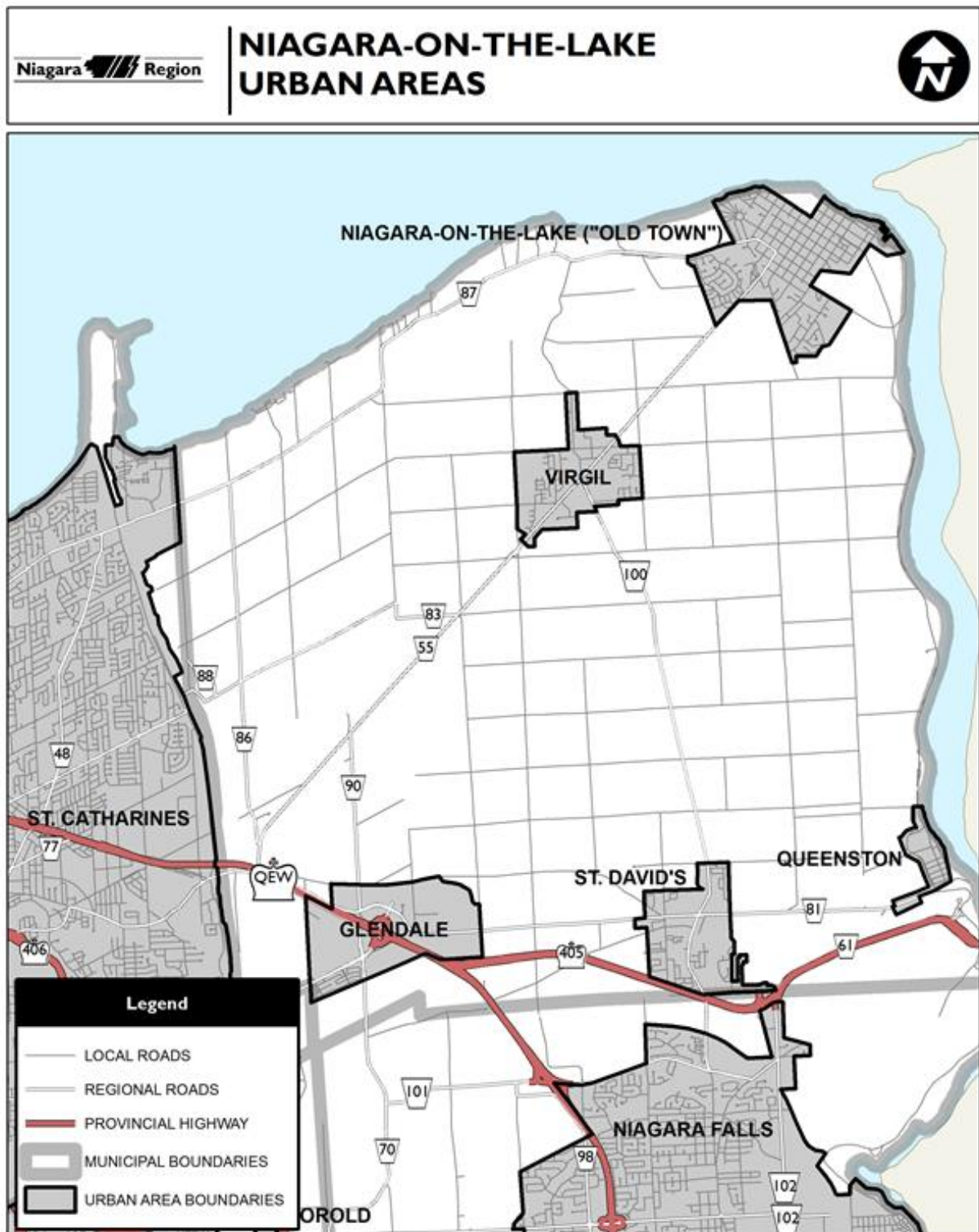
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Schedule "D4"
Urban Areas for Regional Development Charges Reduction (subject to section 14)
City of Niagara Falls



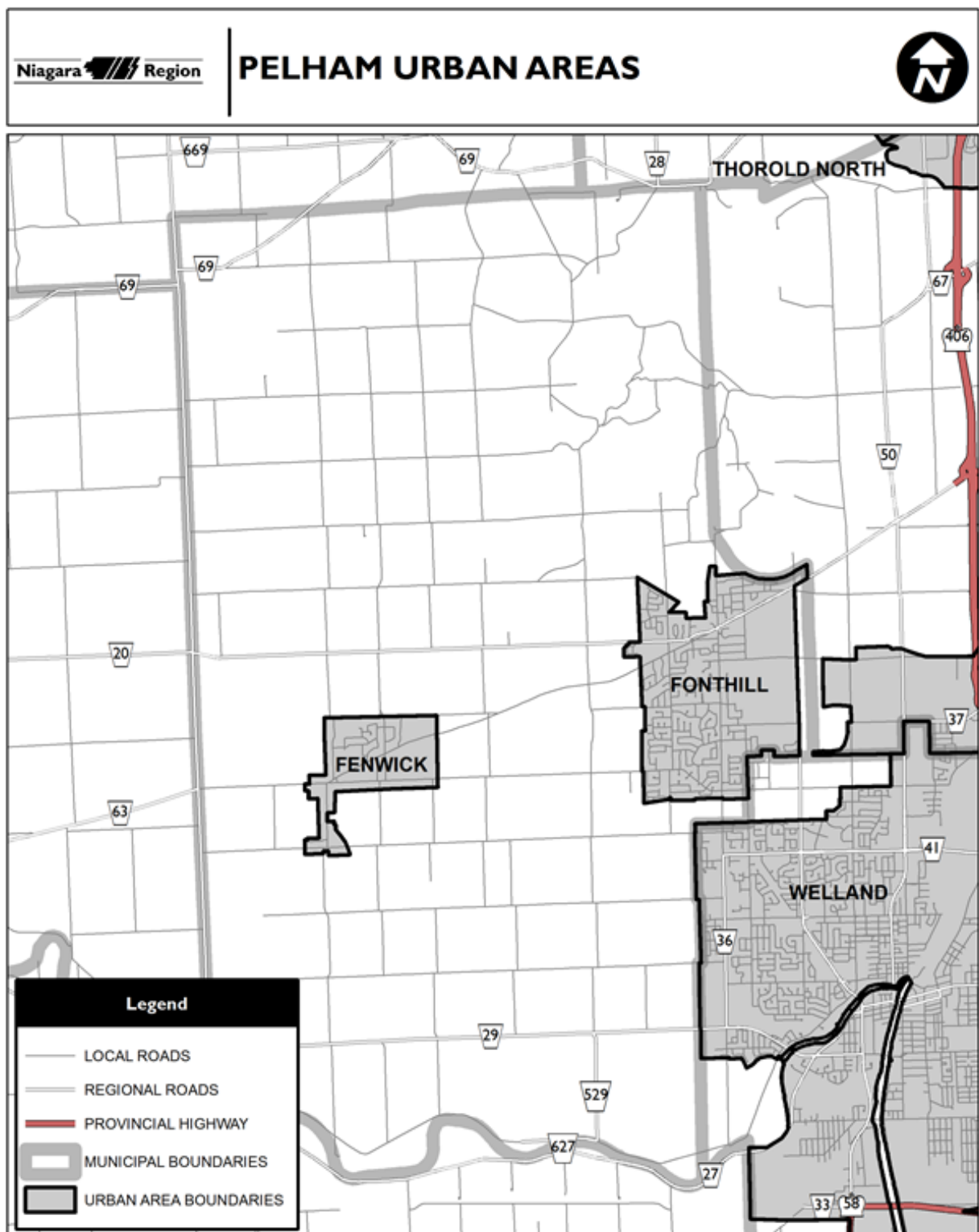
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Schedule "D5"
Urban Areas for Regional Development Charges Reduction (subject to section 14)
Town of Niagara-on-the-Lake



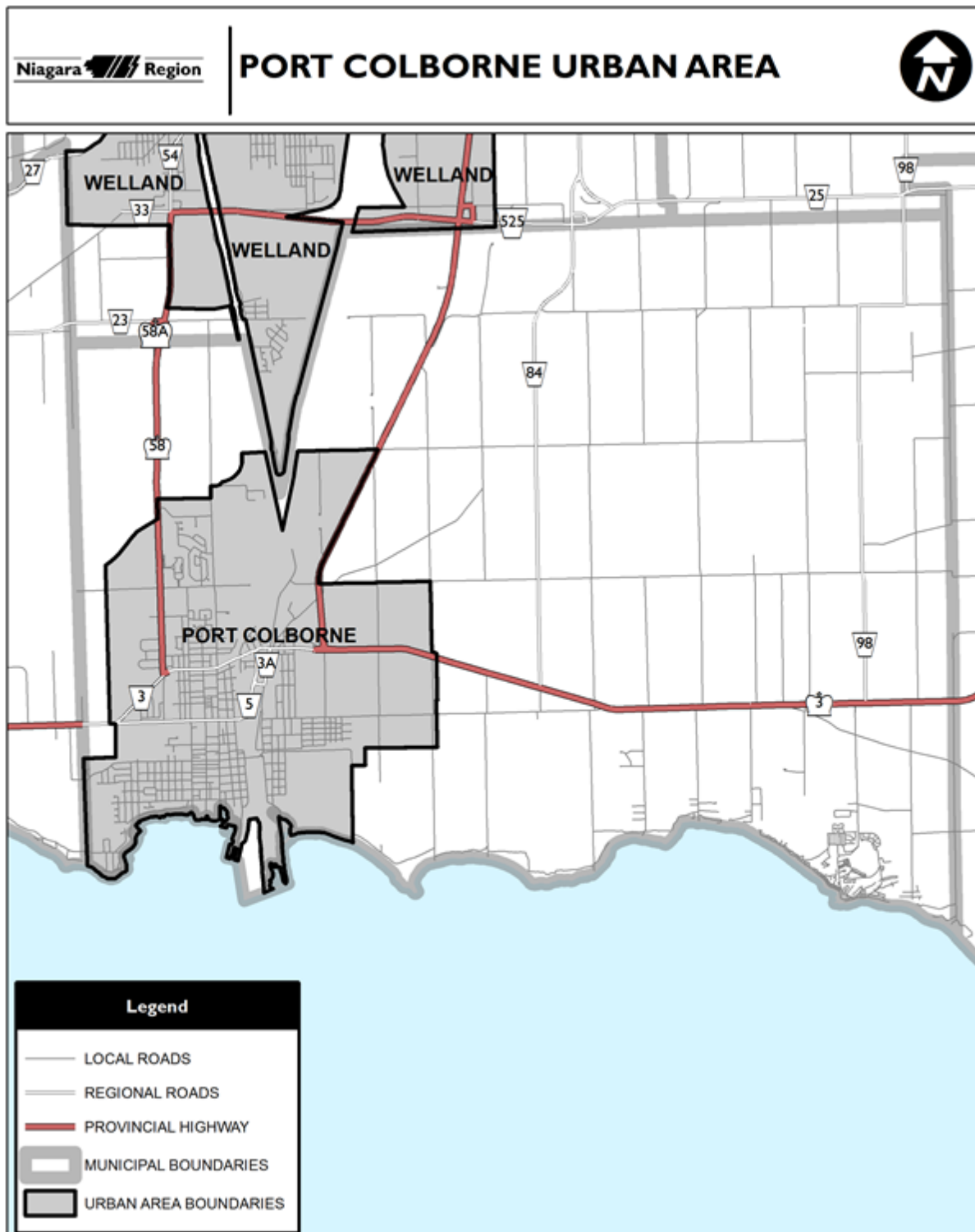
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Schedule "D6"
Urban Areas for Regional Development Charges Reduction (subject to section 14)
Town Pelham



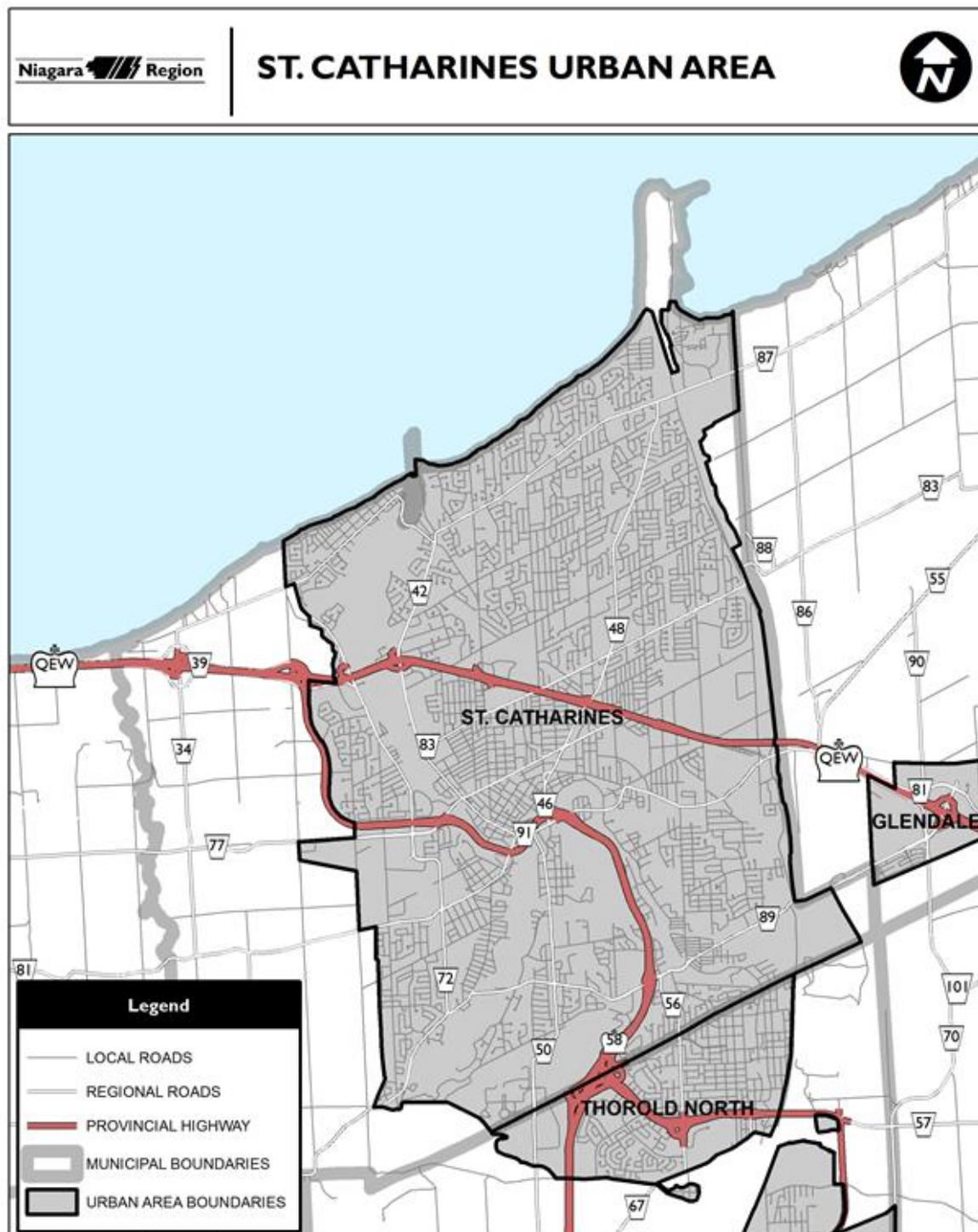
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Schedule "D7"
Urban Areas for Regional Development Charges Reduction (subject to section 14)
City of Port Colborne



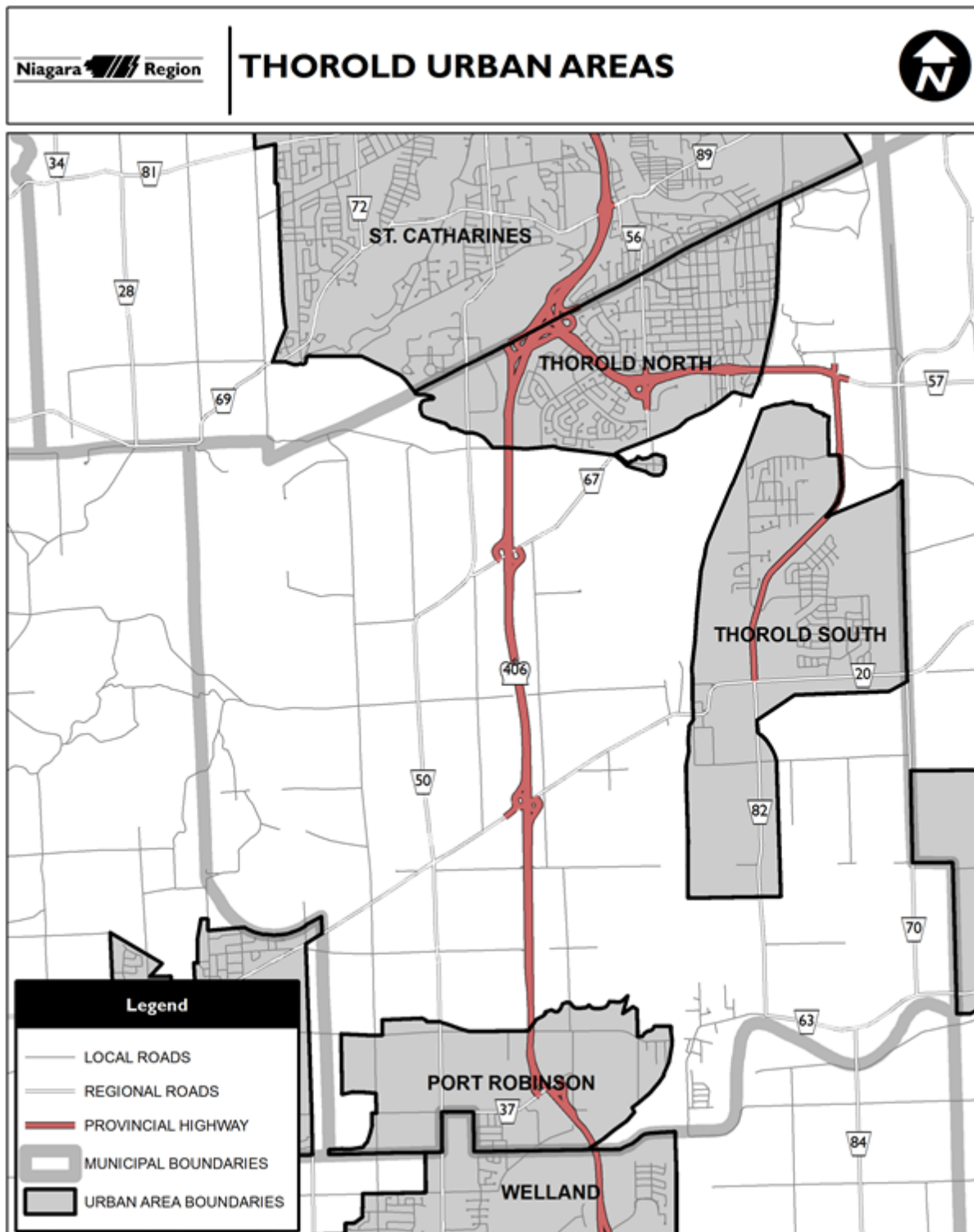
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Schedule "D8"
Urban Areas for Regional Development Charges Reduction (subject to section 14)
City of St. Catharines



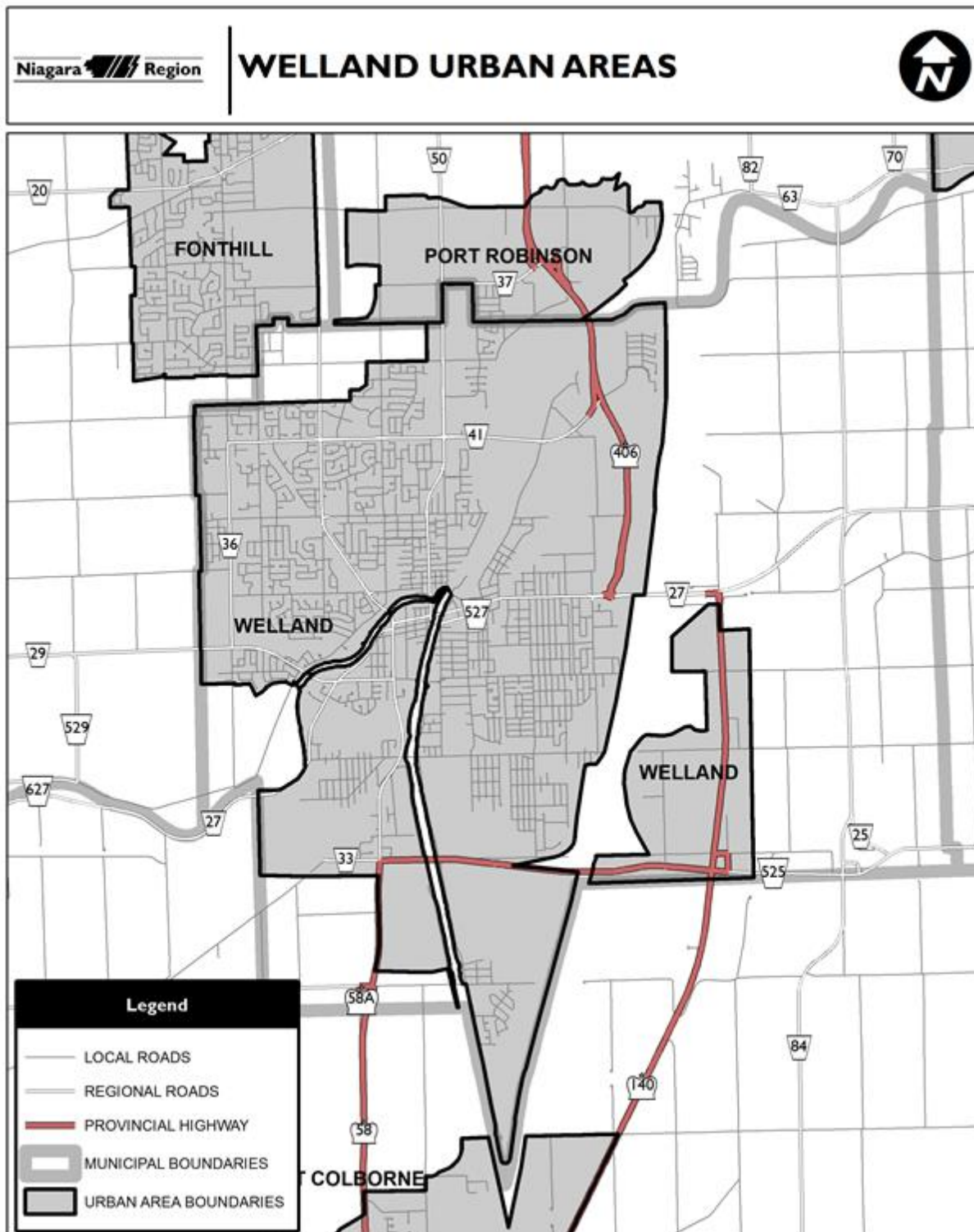
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Schedule "D9"
Urban Areas for Regional Development Charges Reduction (subject to section 14)
City of Thorold



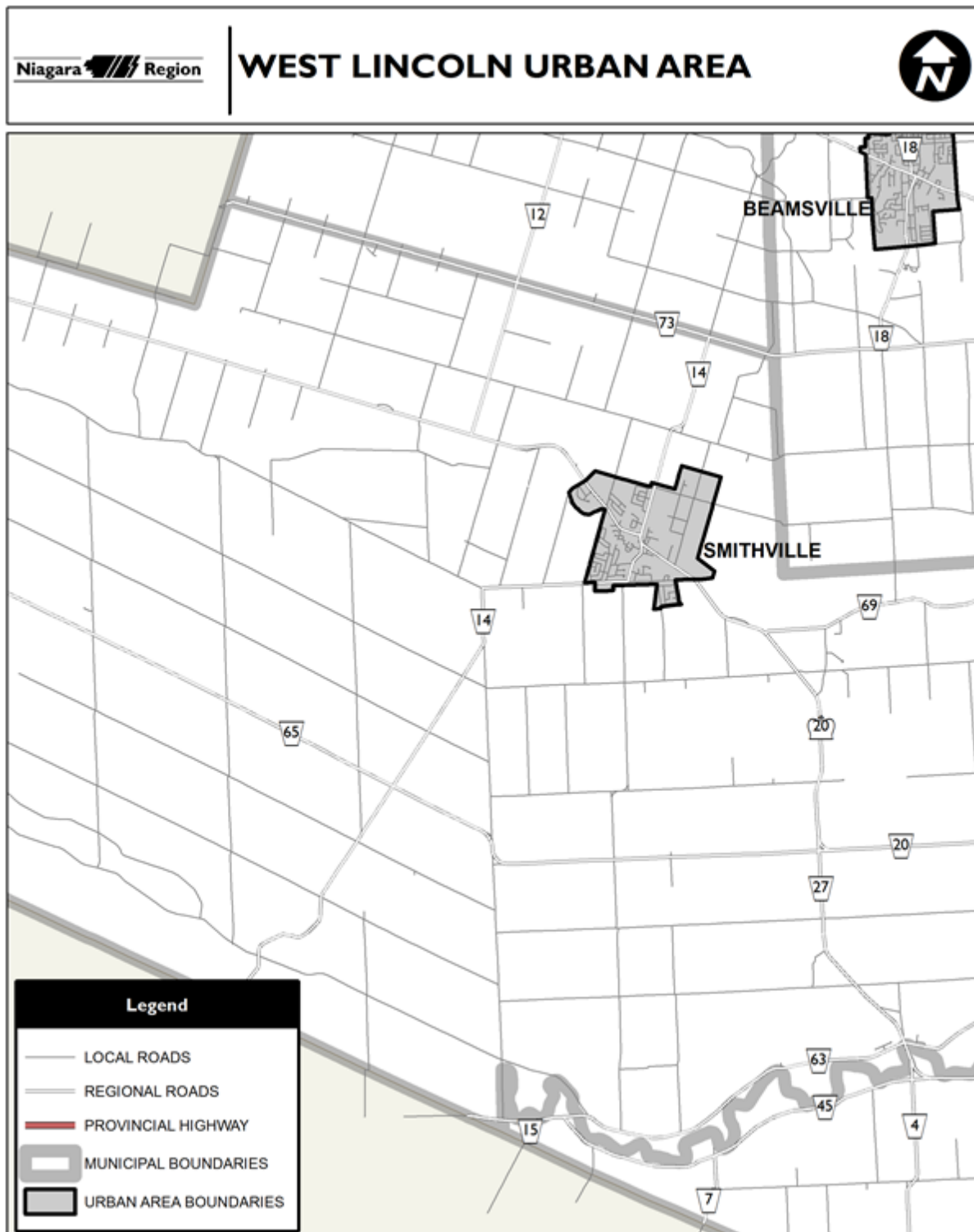
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Schedule "D10"
Urban Areas for Regional Development Charges Reduction (subject to section 14)
City of Welland



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Schedule "D11"
Urban Areas for Regional Development Charges Reduction (subject to section 14)
Township of West Lincoln



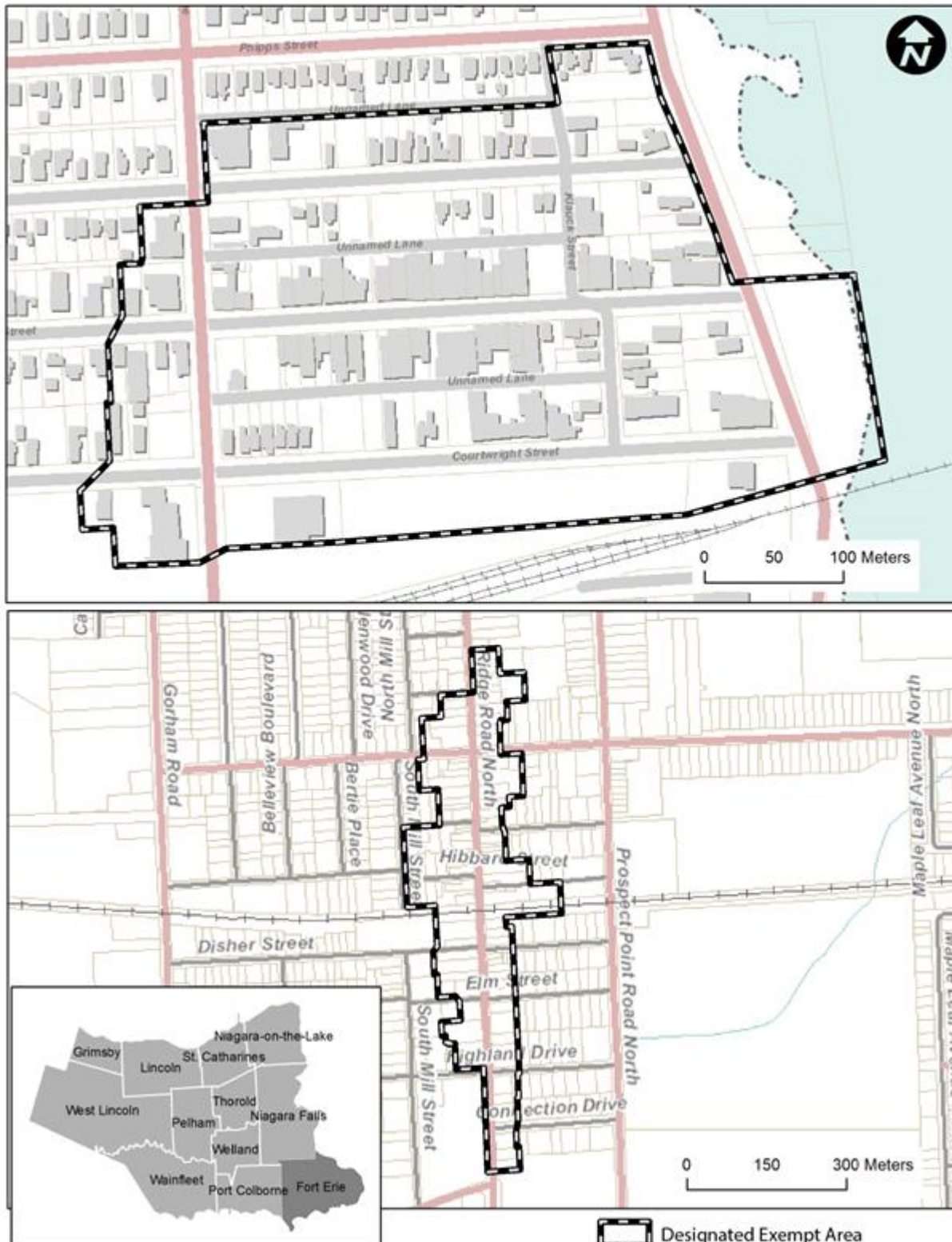
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Schedule “E”

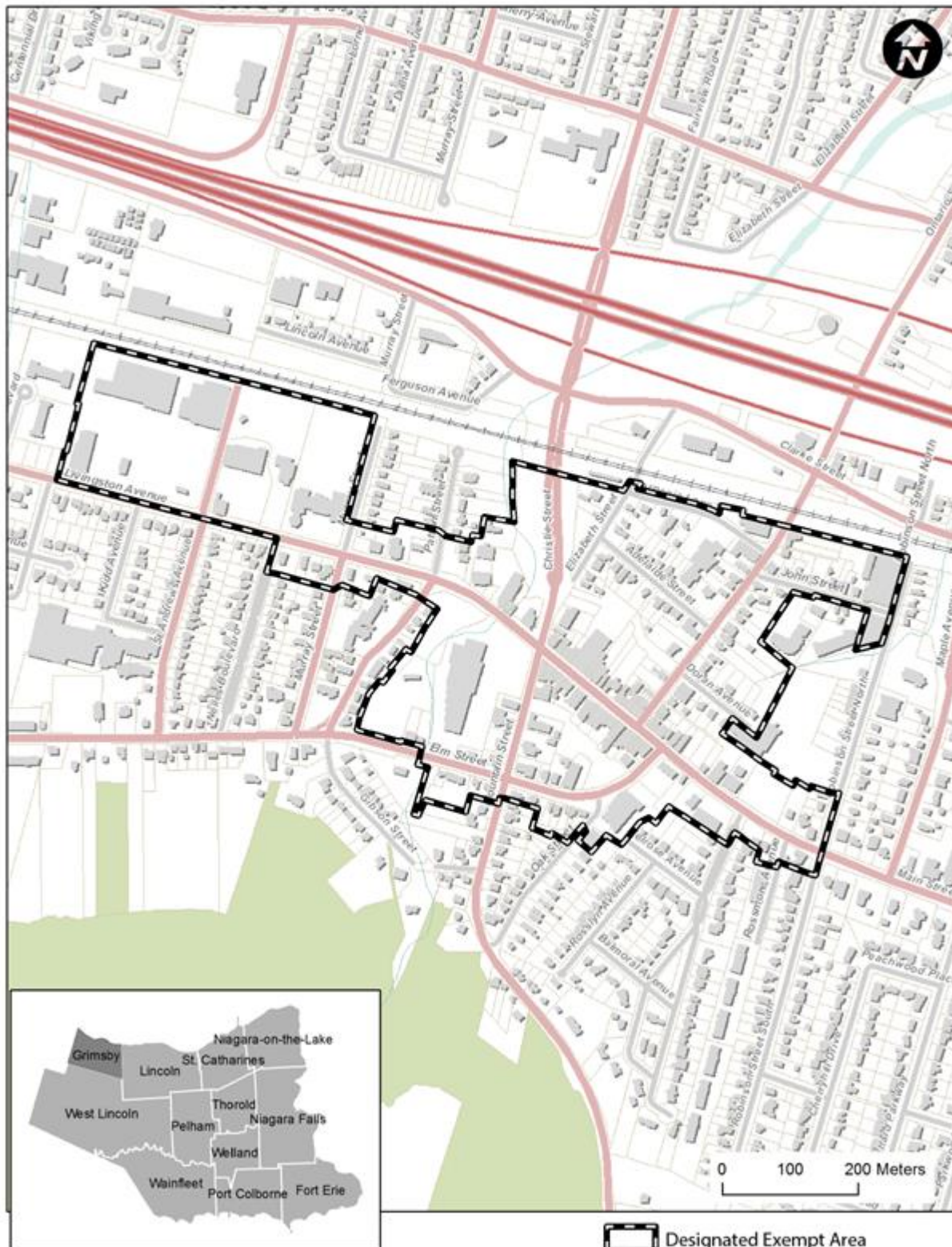
Rules with Respect to Development located within the Designated Exemption Areas and Brownfield Developments within the Urban Areas for Regional Development Charges Reduction Program (subject to section 14)

- (a) For all Development Charge reductions pursuant to this Schedule “E”, the interim Development Charge Reduction Program for development located with the Designated Exemption Areas, as set out in Schedule “E1 to E10” and to Brownfield Developments within the Urban Areas, as set out in Schedule D1 to D11 to this By-law, will provide a maximum 50% reduction in Development Charges provided the Smart Growth Design Criteria endorsed by Council of the Region on May 14, 2014 and/or any level of LEED certification are achieved.
- (b) The interim Development Charge Reduction Program will remain in effect until a revised Development Charge Reduction Program is approved by Council of the Region.
- (c) The interim Development Charge Reduction Program may be eliminated or modified as approved by Regional Council without amendment to the By-Law.
- (d) In the case of a qualifying project under Schedule D, the total benefit shall not exceed the total Development Charges payable.

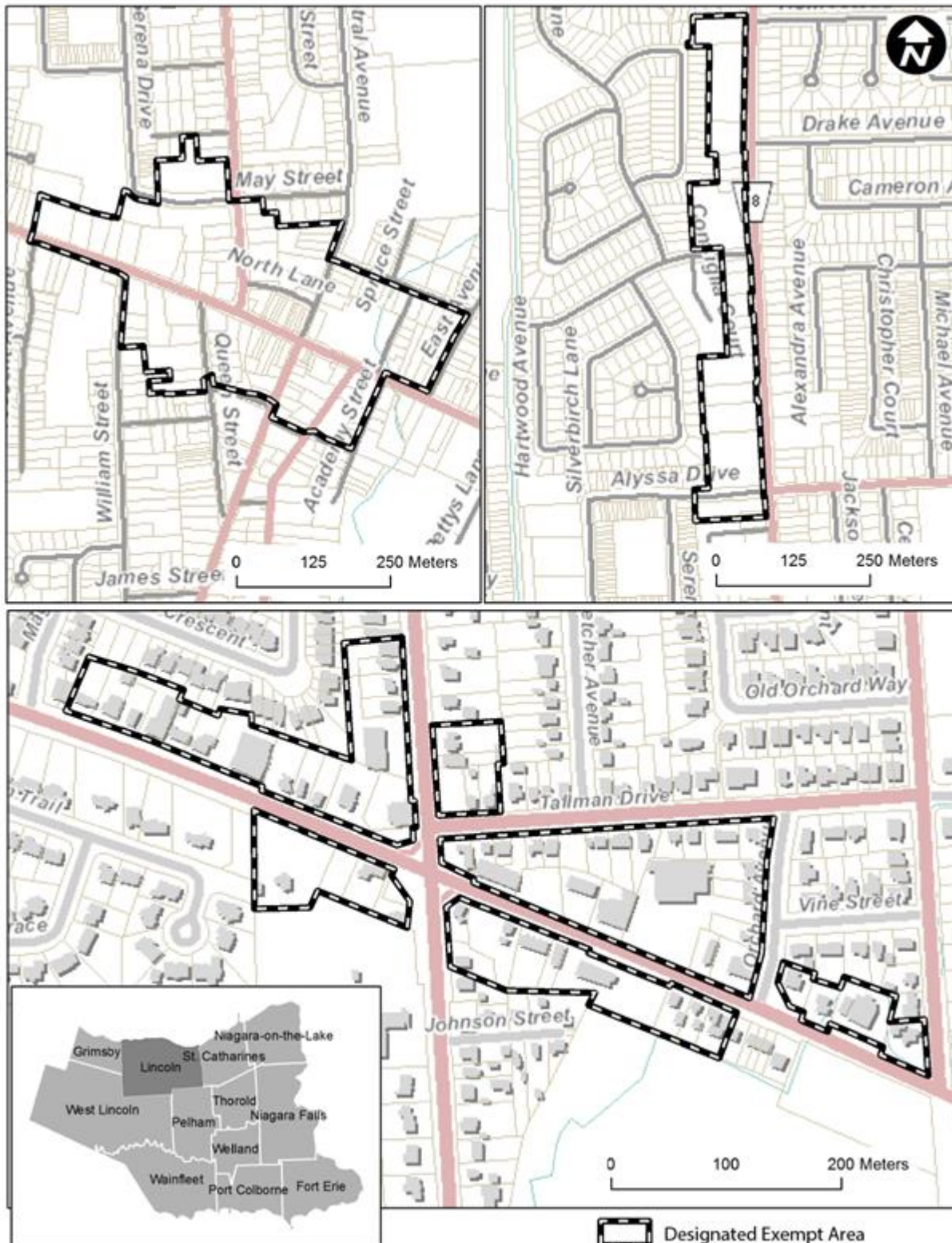
Schedule "E1"
Designated Exemption Areas for Regional Development Charges Reduction
(subject to section 13)
Town of Fort Erie



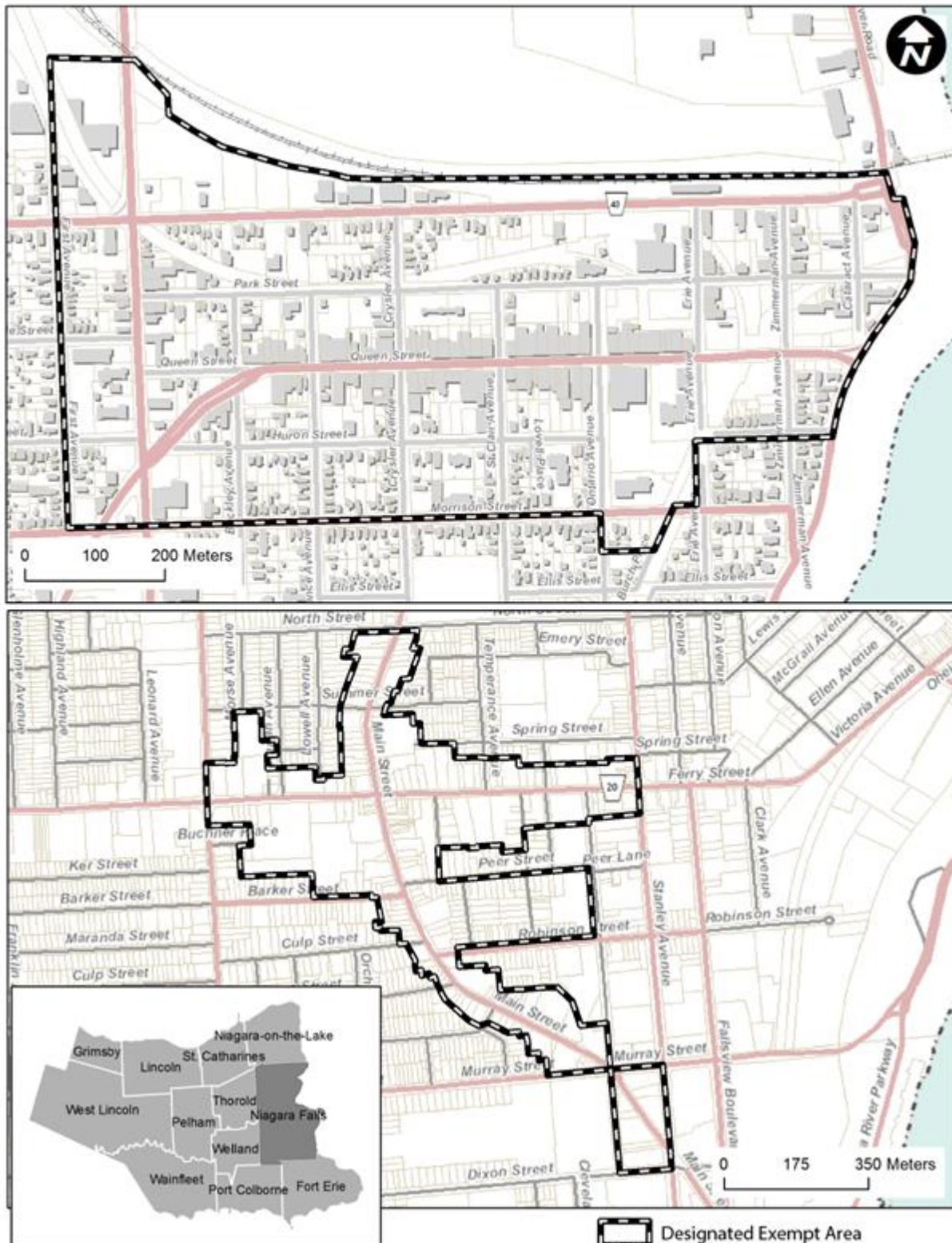
Schedule "E2"
Designated Exemption Areas for Regional Development Charges Reduction
(subject to section 13)
Town of Grimsby



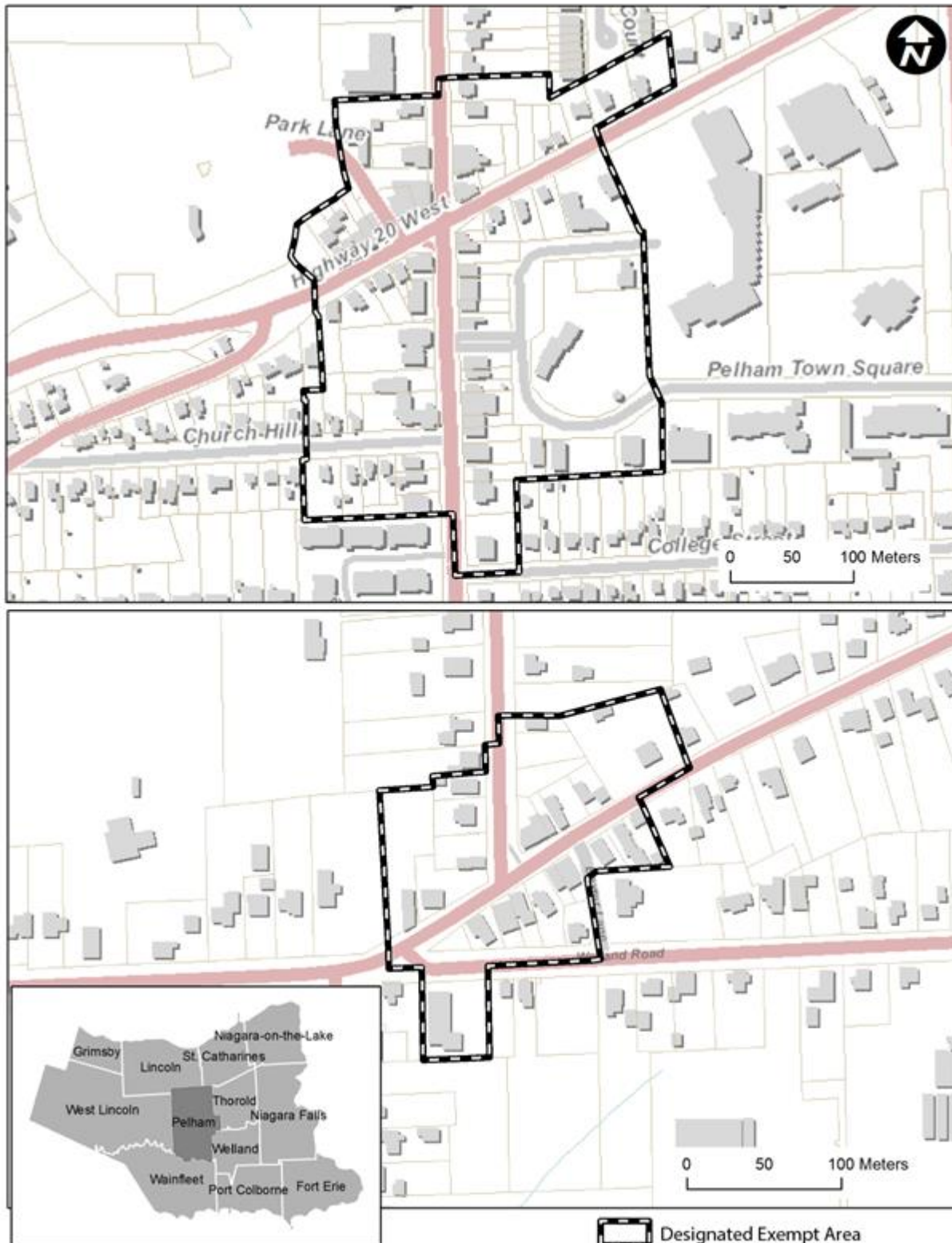
Schedule "E3"
Designated Exemption Areas for Regional Development Charges Reduction
(subject to section 13)
Town of Lincoln



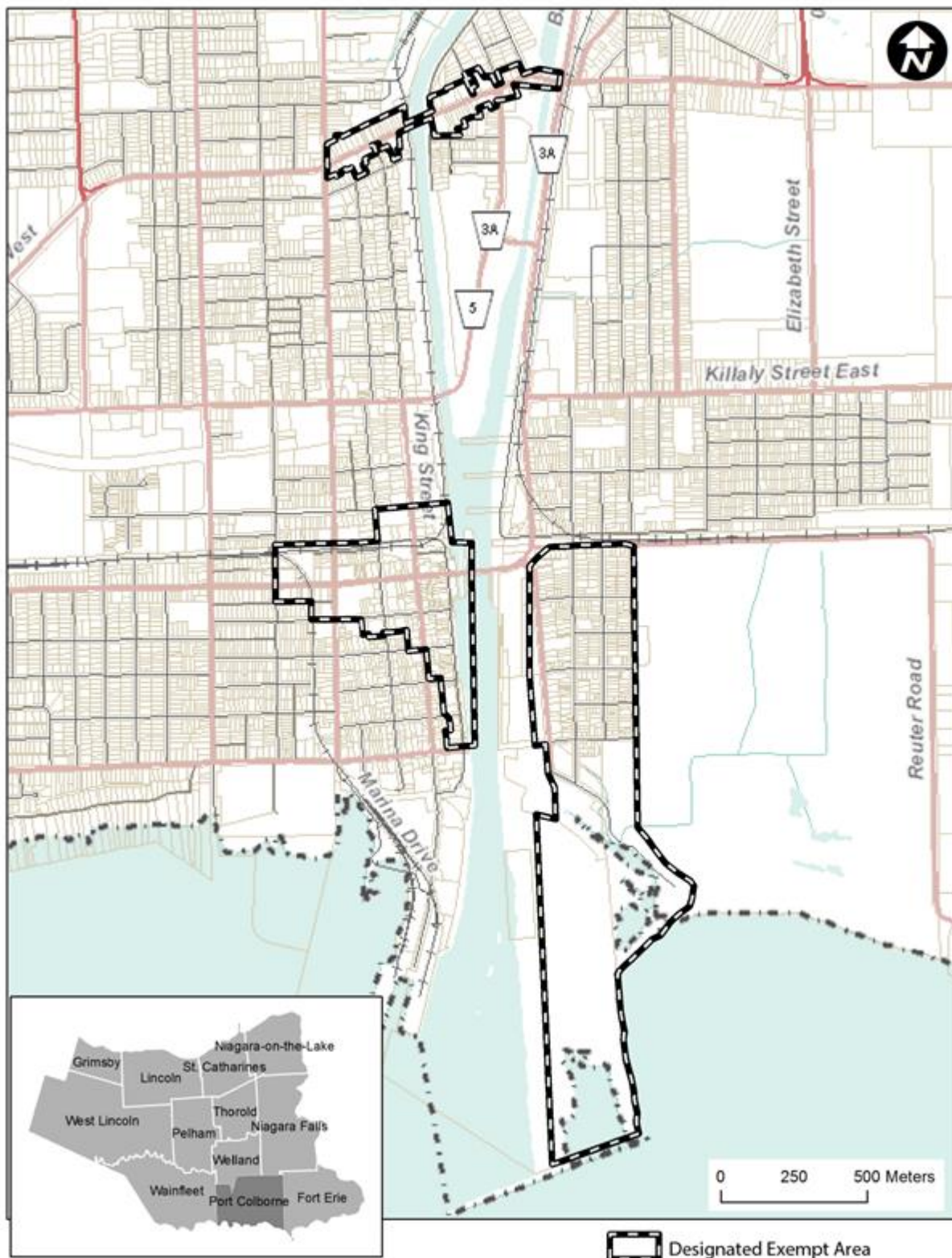
Schedule "E4"
Designated Exemption Areas for Regional Development Charges Reduction
(subject to section 13)
City of Niagara Falls



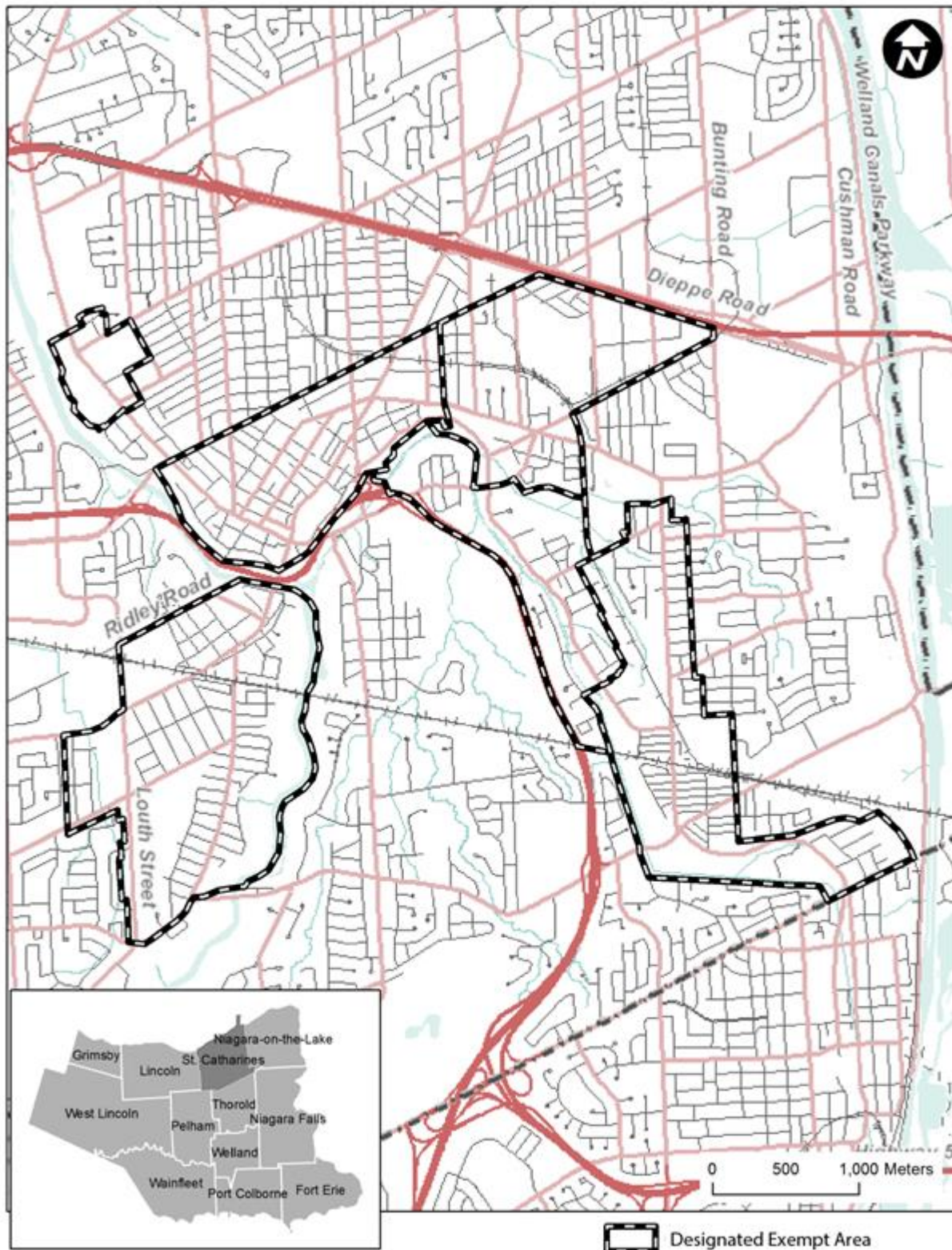
Schedule "E5"
Designated Exemption Areas for Regional Development Charges Reduction
(subject to section 13)
Town of Pelham



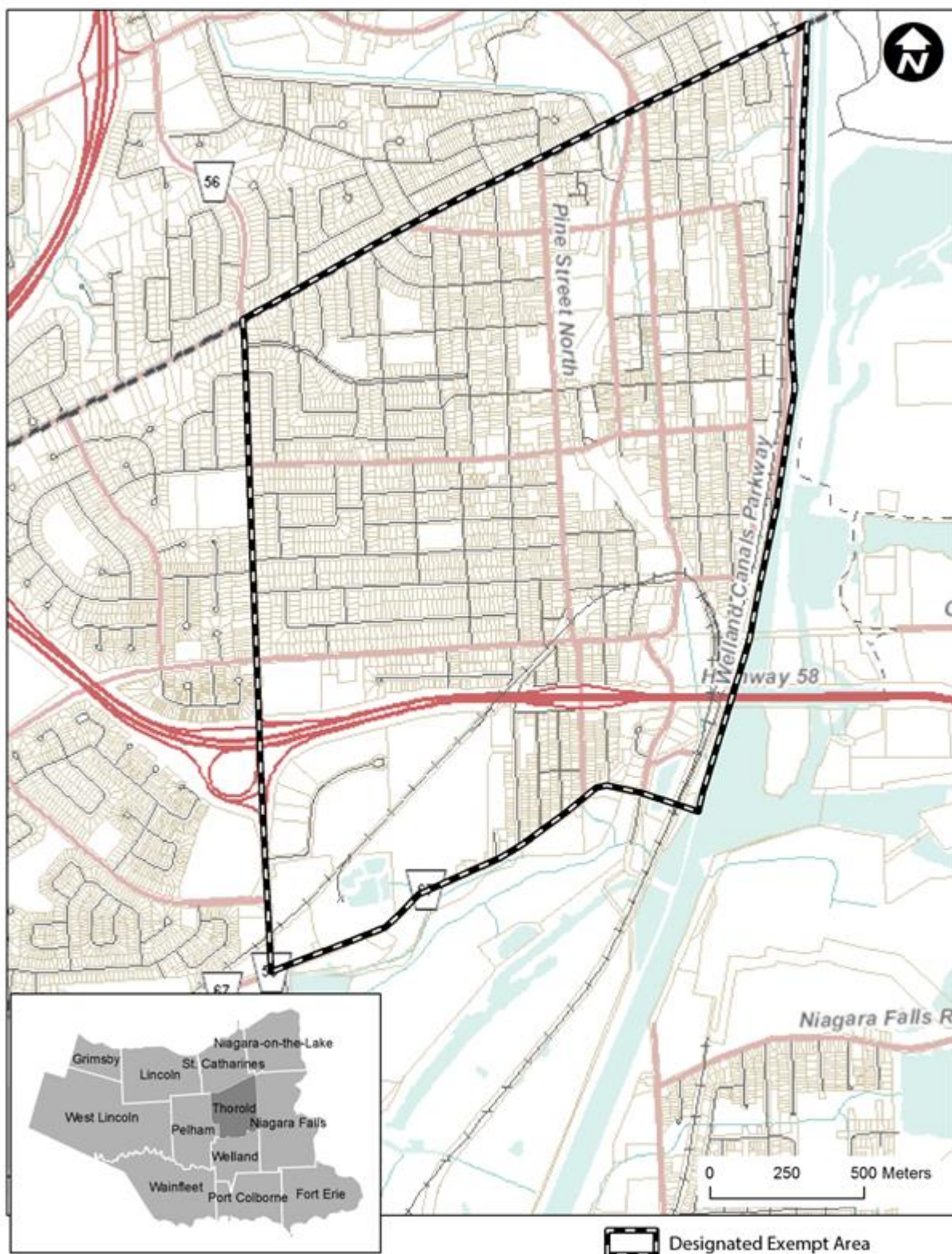
Schedule "E6"
Designated Exemption Areas for Regional Development Charges Reduction
(subject to section 13)
City of Port Colborne



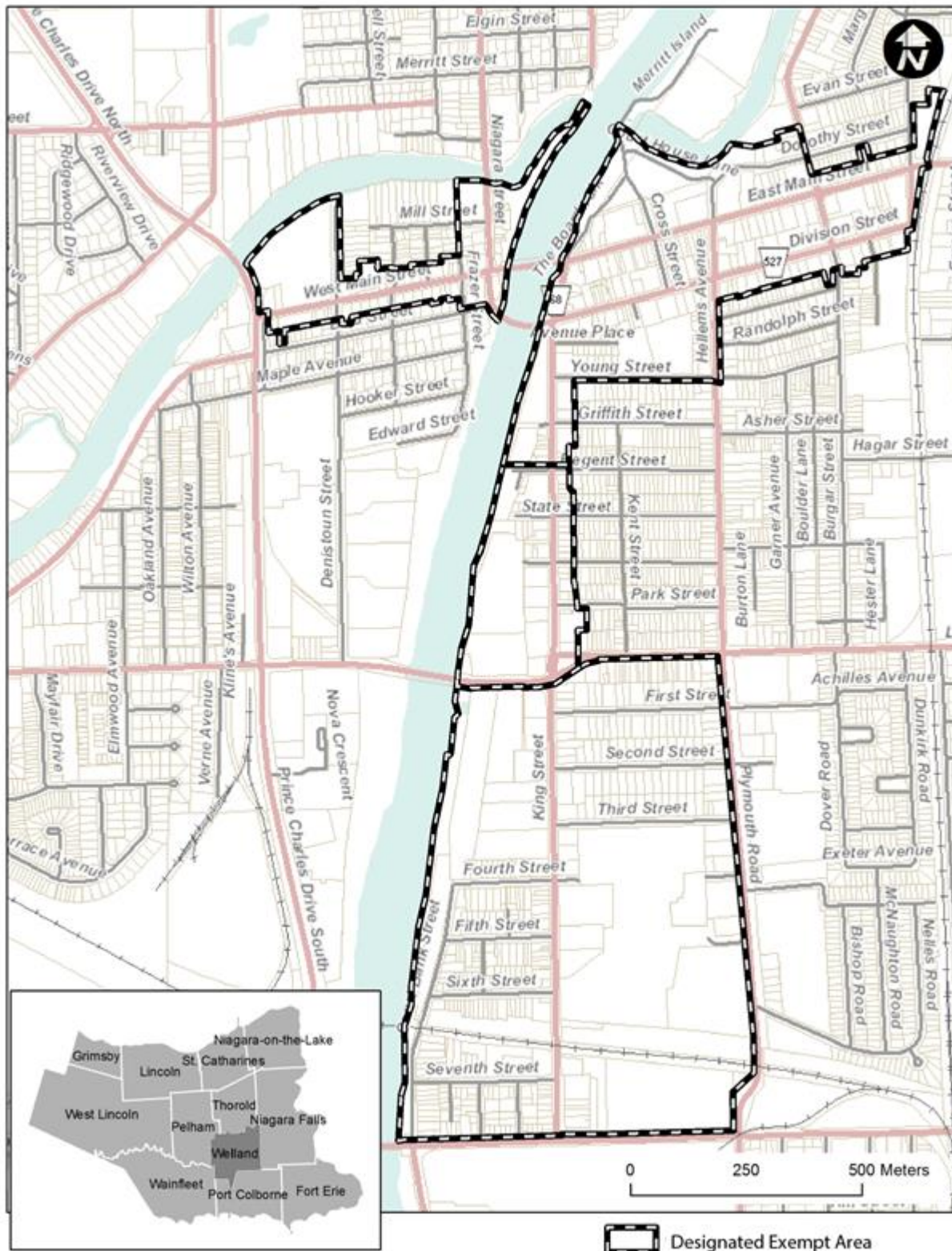
Schedule "E7"
Designated Exemption Areas for Regional Development Charges Reduction
(subject to section 13)
City of St. Catharines



Schedule "E8"
Designated Exemption Areas for Regional Development Charges Reduction
(subject to section 13)
City of Thorold



Schedule "E9"
Designated Exemption Areas for Regional Development Charges Reduction
(subject to section 13)
City of Welland



Schedule "E10"
Designated Exemption Areas for Regional Development Charges Reduction
(subject to section 13)
Township of West Lincoln

