2022 Regional Transit Service Development Charges Background Study

Region of Durham

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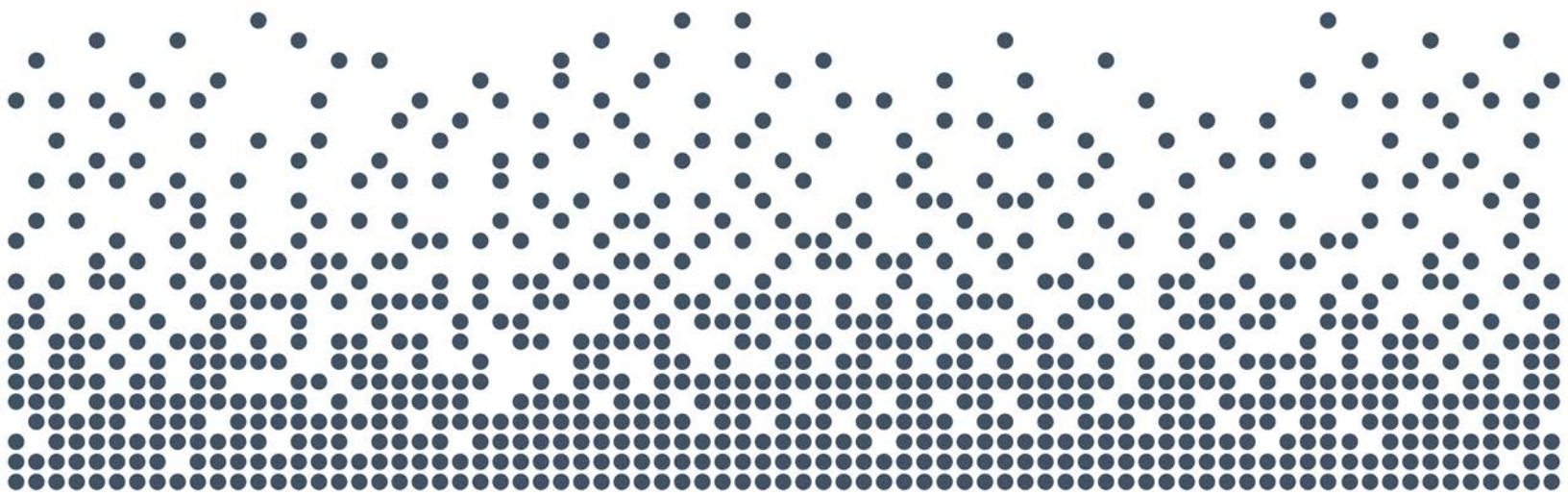
List of Acronyms and Abbreviations

Acronym	Full Description of Acronym
A.M.P.	Asset management plan
CANSIM	Canadian Socio-Economic Information Management System (Statistics Canada)
D.C.	Development charge
D.C.A.	Development Charges Act, 1997, as amended
G.F.A.	Gross floor area
OLT	Ontario Land Tribunal
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.P.U.	Persons per unit
S.D.E.	Single detached equivalent
S.D.U.	Single detached unit
sq.ft.	square foot
sq.mt.	square metre



Executive Summary

Executive Summary

1. The report provided herein represents the Regional Transit Service Development Charges (D.C.) Background Study for the Region of Durham (Region) required by the *Development Charges Act, 1997*, as amended (D.C.A.). This report has been prepared in accordance with the methodology required under the D.C.A. The contents include the following:

    - Chapter 1 – Overview of the legislative requirements of the Act;
    - Chapter 2 – Review of present D.C. policies of the Region;
    - Chapter 3 – Summary of the residential and non-residential growth forecasts for the Region;
    - Chapter 4 – Approach to calculating the D.C.;
    - Chapter 5 – Review of planned level of service and identification of future capital requirements to service growth and related deductions and allocations;
    - Chapter 6 – Calculation of the D.C.s;
    - Chapter 7 – D.C. policy recommendations and rules; and
    - Chapter 8 – By-law implementation.

2. D.C.s provide for the recovery of growth-related capital expenditures from new development. The D.C.A. is the statutory basis to recover these charges. The methodology is detailed in Chapter 4; a simplified summary is provided below.

    1. Identify amount, type and location of growth.
    2. Identify servicing needs to accommodate growth.
    3. Identify capital costs to provide services to meet the needs.
    4. Deduct:
        - Amounts in excess of the planned level of service service;
        - Grants, subsidies and other contributions;
        - Benefit to existing development; and
        - D.C. reserve funds.
    5. Net costs are then allocated between residential and non-residential benefit.
    6. Net costs divided by growth, factoring in financing costs on a cashflow basis, to provide the D.C.

3. A number of changes to the D.C. process need to be addressed as a result of the *Smart Growth for Our Communities Act, 2015* (Bill 73). These changes have been incorporated throughout the report and in the updated draft by-law, as necessary. These items include:

    - Transit Services: as a prescribed service it is limited to the planned level of service for the 10-year forecast period. The background study must also include a ridership forecast for the forecast period categorized by development type and the share from existing and planned development.
    - Area-rating: Council must consider the use of area-specific charges.
    - Asset Management Plan for New Infrastructure: The D.C. background study must include an asset management plan (A.M.P.) that deals with all assets proposed to be funded, in whole or in part, by D.C.s. The A.M.P. must show that the assets are financially sustainable over their full lifecycle. Moreover, for transit services the A.M.P. must include specific information required in O.Reg. 82/98 that resembles the requirements under the *Jobs for Infrastructure and Prosperity Act*.
    - 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.
    - Timing of Collection of Development Charges: The D.C.A. now requires D.C.s to be collected at the time of the first building permit.

4. Further changes to the D.C.A. were introduced through two bills passed in the Ontario legislature: Bill 108 and Bill 197. The following provides a brief summary of the proposed changes.

    <u>Bill 108: More Homes, More Choice: Ontario's Housing Supply Action Plan</u>

    - The More Homes, More Choice Act, 2019 was passed and given Royal Assent on June 6, 2019. The following provisions came into effect with respect to the D.C.A. on January 1, 2020:

        - Installment Payments: Rental housing and institutional developments shall pay D.C.s in six (6) equal annual payments commencing at first occupancy. Non-profit housing developments shall pay D.C.s in 21 equal annual payments.

- Interest Charges: Interest may be charged on the installments, and any unpaid amounts inclusive of interest payable shall be added to the property tax roll and collected in the same manner as taxes.
- Determination of the Charge: D.C.s payable for all developments occurring within two years of a Site Plan or Zoning By-law Amendment planning approval (for applications made after January 1, 2020), shall be determined based on the D.C. by-law in effect on the day of Site Plan or Zoning By-law Amendment application.

Bill 197: COVID-19 Economic Recovery Act, 2020

- The COVID-19 Economic Recovery Act, 2020 was passed and given Royal Assent on July 21, 2020. The following provisions came into effect with respect to the D.C.A. on September 18, 2020:

    - Eligible Services: The D.C.A. now defines the services that are eligible for inclusion in a D.C. by-law. Eligible services are listed in Section 1.4 of this report.
    - Mandatory 10% Deduction: The 10% statutory deduction of growth-related capital costs for soft services was removed.
    - Classes of Service: A D.C. by-law may provide for any eligible service or capital cost related to any eligible service to be included in a class of service as set out in the by-law.
    - Statutory Exemptions: Additional statutory exemptions were provided including secondary residential dwelling units, in prescribed classes, that are ancillary to existing residential buildings. As well as, for the creation of a second dwelling unit in prescribed classes of proposed new residential buildings, including structures ancillary to new dwellings.

5. On December 13, 2017, the Region of Durham passed By-law 81-2017 under the D.C.A. The by-law was subsquently amended by By-law 30-2018 on June 13, 2018 and By-law 22-2021 on June 23, 2021 reflect changes in the Region-wide D.C. By-Law and legislative changes since adoption in 2017. The by-law imposes D.C.s for Regional Transit Service on residential and non-residential development. This by-law, as amended, will expire on December 31, 2022.

6. The Region is undertaking a D.C. public process and anticipates passing a new by-law for transit sevices in advance of the expiry date. The mandatory public meeting has been set for April 27, 2022 with adoption of the by-law on June 29, 2022.

7. The growth forecast (Chapter 3) on which the Regional Transit Service D.C. is based, projects the following population, housing, and non-residential floor area for the 10-year (2022-2032) period.

Description	10-Year Forecast 2022-2032
Net Population	173,260
Residential Dwelling Units	64,075
Non-Residential Gross Floor Area (sq.ft.)	39,893,800

8. The increase in need for Regional Transit Service related to new development is presented in the "Regional Transit Service Development Charge Background Study" prepared by HDR Inc. (HDR Study) and contained in Appendix D. The D.C.A. requires a summary be provided of the gross capital costs and the net costs to be recovered over the life of the by-law. This calculation is presented in following table including corresponding deductions and D.C. recoverable costs.

Description	Total Gross Cost	Sources of Financing				
		Tax Base or Other Non-D.C. Source			D.C. Reserve Fund	
		Benefit to Existing Development	Grants, Subsidies and Other Contributions	Post D.C. Period Benefit	Residential	Non-Residential
Regional Transit Service (2022-2027)						
Fleet, Stops and Transfer Hubs	23,021,250	6,550,619	-	-	12,336,503	4,134,129
Facilities and Terminals	189,250,000	36,714,500	-	44,600,010	80,843,682	27,091,808
Systems	1,145,135	251,010	-	-	669,700	224,425
Studies	305,000	24,250	-	-	210,282	70,468
Subtotal	213,721,385	43,540,379	-	44,600,010	94,060,166	31,520,830
Regional Transit Service (2028-2032)						
Fleet, Stops and Transfer Hubs	46,467,250	10,319,575	-	-	27,074,609	9,073,067
Facilities and Terminals	8,000,000	1,552,000	-	-	4,829,552	1,618,448
Systems	3,044,975	670,875	-	-	1,778,201	595,899
Studies	305,000	24,250	-	-	210,282	70,468
Subtotal	57,817,225	12,566,699	-	-	33,892,644	11,357,882
Less: Current Reserve Fund Balance					(21,067,092)	(3,809,326)
Total Expenditures & Revenues	**$ 271,538,610**	**$ 56,107,078**	**$ -**	**$ 44,600,010**	**$ 106,885,719**	**$ 39,069,386**

Based on the above table, the Region plans to spend $213.7 million over the next five years, of which $125.6 million (59%) is recoverable from D.C.s. Of this net amount, $94.1 million is recoverable from residential development and $31.5

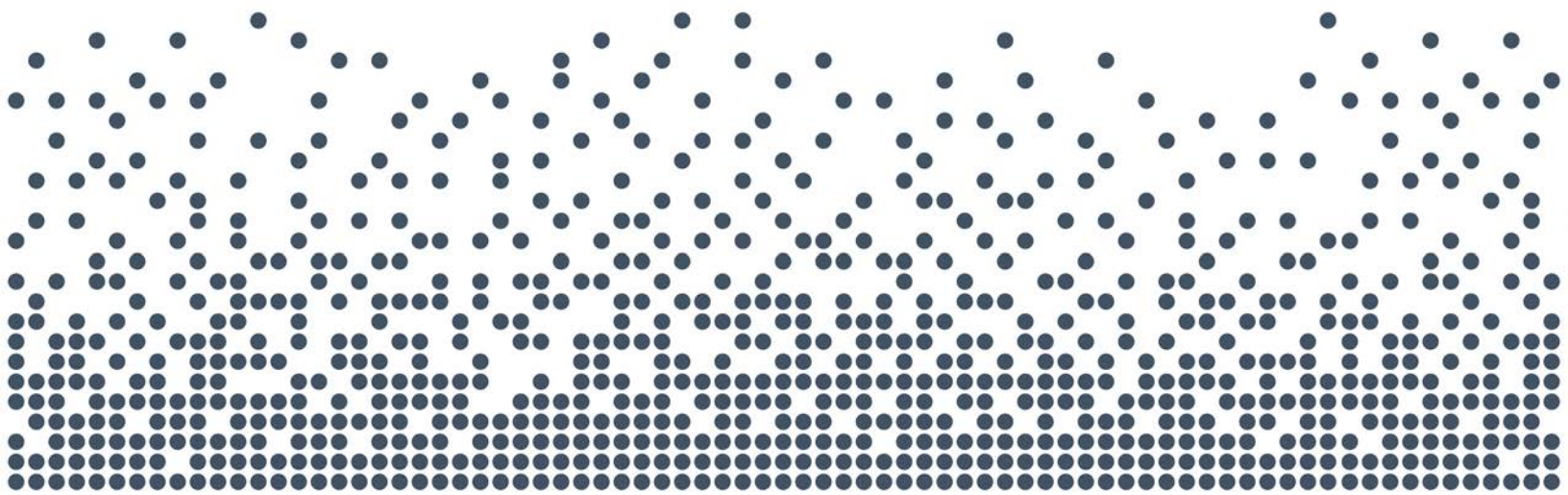
million from non-residential development. It is noted also that any exemptions or reductions in the charges would reduce this recovery further.

9. The Regional Transit D.C. currently in effect is $1,275 for single detached dwelling units. The non-residential charge is $0.61 per sq.ft. (or $6.57 per sq.mt.) of gross floor area. In accordance with the Region's Transit D.C. By-Law these charges would have be indexed on July 1, 2022 to reflect 2022 values. This report has undertaken a calculation of the charges based on future identified needs as summarized in the table above. Charges have been provided on a Region-wide basis, consistent with current practice. The corresponding single detached unit charge is $2,184. The non-residential charge is $0.99 per sq.ft. (or $10.66 per sq.mt.) of gross floor area area. These rates are submitted to Council for its consideration.

10. Considerations by Council – The background study represents the Regional transit service needs arising from residential and non-residential growth over the forecast periods. 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 F.

    These decisions may include:

    - adopting the charges and policies recommended herein;
    - considering additional exemptions to the by-law; and
    - considering reductions in the charge, in whole or by type of development, obtained by removing certain capital costs on which the charge is based and/or by a general reduction in the charge.



Report

Chapter 1
Introduction

1. Introduction

1.1 Purpose of this Document

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

The Region retained Watson & Associates Economists Ltd. (Watson), to undertake the D.C. study process throughout 2021/22. Watson worked with Region staff as well as HDR Inc. in preparing the D.C. analysis and policy recommendations.

This D.C. background study, containing the proposed D.C. 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 D.C. background study, as summarized in Chapter 4. It also addresses the forecast amount, type, and locaion of growth (Chapter 3), the increase in need and D.C. recoverable capital costs (Chapter 5 and Appendix D), the requirement for "rules" governing the imposition of the charges (Chapter 7), and the proposed by-law to be made available as part of the approval process (Appendix F).

In addition, the report is designed to set out sufficient background on the legislation, the Region's current D.C. policy for transit services (Chapter 2) and the policies underlying the proposed by-law, to make the exercise understandable to interested parties. Finally, the D.C. background study 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 April 27, 2022. 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 Regional Transit Service D.C.

In accordance with the legislation, the background study and proposed D.C. by-law will be available for public review on April 12, 2022.

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 proposed schedule to be followed with respect to the D.C. by-law adoption process.

Figure 1-1
Schedule of Key Dates for the Region of Durham Transit Services D.C.

Process Steps	Dates
1. Project initiation meeting with Region Staff	July 2021
2. Data collection, staff interviews and consultation with HDR Inc.	July 2021 – April 2022
3. Presentation of draft findings and D.C. policy discussion with Region Staff	March - April 2022
4. D.C. Background Study and draft D.C. by-law available to public	April 12, 2022
5. Public Meeting of Council	April 27, 2022

Process Steps	Dates
6. D.C. By-law passage	June 29, 2022
7. Newspaper notice given of by-law passage	By 20 days after passage
8. Last day for by-law appeal	40 days after passage
9. Region makes available D.C. pamphlet	by 60 days after in force date

1.3 Changes to the D.C.A.: Bill 73 – Smart Growth for our Communities Act, 2015

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 transit services background study and how they have been dealt with to ensure compliance with the amended legislation.

1.3.1 Prescribed Services

Transit services are a prescribed service. As a prescribed service the D.C. background study related to transit services must include:

- The calculations that were used to prepare the estimate for the planned level of service for transit services;
- An identification of the portion of the total estimated capital costs related to the transit service that would benefit the anticipated development over the ten-year D.C. period and after the ten-year D.C. period;
- An identification of the anticipated excess capacity that would exist at the end of the ten-year D.C. period;

- An assessment of ridership forecasts for all modes of transit services proposed to be funded, categorized by development types and whether the ridership will be from existing or planned development; and,
- An assessment of the ridership capacity for all modes of transit services proposed to be funded by the D.C.

1.3.2 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.

1.3.3 Asset Management Plan for New Infrastructure

The new legislation now requires that a D.C. background study must include an asset management plan (A.M.P.) (subsection 10 (2) (c.2)). The A.M.P. must deal with all assets that are proposed to be funded, in whole or in part, by D.C.s. The current regulations provide very extensive and specific requirements for the A.M.P. related to transit services; however, they are silent with respect to how the asset management plan is to be provided for all other services. As part of any A.M.P., the examination should be consistent with the municipality's existing assumptions, approaches, and policies on asset management planning. This examination may include both qualitative and quantitative measures such as examining the annual future lifecycle contributions needs (discussed further in Appendix E of this report).

The following table summarizes the A.M.P. requirements of transit services as set out in O.Reg. 82/98.

Ontario Regulation 82/98, as amended Subsection 8(3) Requirements
1. A section that sets out the state of local infrastructure and that sets out, i. the types of assets and their quantity or extent, ii. the financial accounting valuation and replacement cost valuation for all assets, iii. the asset age distribution and asset age as a proportion of expected useful life for all assets, and iv. the asset condition based on standard engineering practices for all assets.
2. A section that sets out the proposed level of service and that, i. defines the proposed level of service through timeframes and performance measures, ii. discusses any external trends or issues that may affect the proposed level of service or the municipality's ability to meet it, and iii. shows current performance relative to the targets set out.
3. An asset management strategy that, i. sets out planned actions that will enable the assets to provide the proposed level of service in a sustainable way, while managing risk, at the lowest life cycle cost, ii. is based on an assessment of potential options to achieve the proposed level of service, which assessment compares, A. life cycle costs, B. all other relevant direct and indirect costs and benefits, and C. the risks associated with the potential options, iii. contains a summary of, in relation to achieving the proposed level of service, A. non-infrastructure solutions, B. maintenance activities, C. renewal and rehabilitation activities, D. replacement activities, E. disposal activities, and F. expansion activities, iv. discusses the procurement measures that are intended to achieve the proposed level of service, and v. includes an overview of the risks associated with the strategy and any actions that will be taken in response to those risks.
4. A financial strategy that, i. shows the yearly expenditure forecasts that are proposed to achieve the proposed level of service, categorized by, A. non-infrastructure solutions, B. maintenance activities, C. renewal and rehabilitation activities,

Ontario Regulation 82/98, as amended Subsection 8(3) Requirements
D. replacement activities, E. disposal activities, and F. expansion activities, ii. provides actual expenditures in respect of the categories set out in sub-subparagraphs i A to F from the previous two years, if available, for comparison purposes, iii. gives a breakdown of yearly revenues by source, iv. discusses key assumptions and alternative scenarios where appropriate, and v. identifies any funding shortfall relative to financial requirements that cannot be eliminated by revising service levels, asset management or financing strategies, and discusses the impact of the shortfall and how the impact will be managed. O. Reg. 428/15, s. 4.

1.3.4 60-Day Circulation of the 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 further requires that the D.C. background study must be posted 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.

1.3.5 Timing of Collection of D.C.s

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. There may be instances, however, 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.

1.3.6 Other Changes

It is also noted that a number of other changes were made through Bill 73 and O. Reg. 428/15, including the removal of waste diversion as an ineligible service, and the ability for collection of additional levies. These sections however do not impact the Region's D.C. for transit services.

1.4 Changes to the Development Charges Act, 1997: More Homes, More Choice Act (Bill 108) and the COVID-19 Economic Recovery Act (Bill 197)

On May 2, 2019, the Province introduced Bill 108 (*More Homes, More Choice Act)*, which proposed changes to the D.C.A. The Bill was introduced as part of the Province's *"More Homes, More Choice: Ontario's Housing Supply Action Plan*." The Bill received Royal Assent on June 6, 2019. While having received Royal Assent, many of the amendments to the D.C.A. would not come into effect until they are proclaimed by the Lieutenant Governor. On January 1, 2020, the following provisions were proclaimed:

- A D.C. for rental housing and institutional developments will pay the charge in six equal annual installments, with the first payment commencing on the date of occupancy. A D.C. for non-profit housing developments will pay the charge in 21 equal annual installments. A municipality may charge interest on the installments. Any unpaid D.C. amounts may be added to the property and collected as taxes.
- The determination of the D.C. for all developments occurring within two years of a Site Plan or Zoning By-law Amendment planning approval shall be determined based on the D.C.s in effect on the date the planning application was submitted. These provisions only apply to Site Plan and Zoning By-law Amendment planning applications received on or after January 1, 2020. Developments arising from planning application approvals not fitting these criteria, or if the building permit arising from these planning approvals is issued two-years or more after the planning application approval, the D.C. is determined based on the provisions of the D.C. by-law.

In early 2020, the Province released Bill 197 (*COVID-19 Economic Recovery Act*), an omnibus bill amending numerous statutes, including the D.C.A. and *Planning Act*. This Bill also revised some of the proposed amendments included in the *More Homes, More Choice Act*. The *COVID-19 Economic Recovery Act* received Royal Assent on July 21, 2020 and was proclaimed on September 18, 2020. The following provides a summary of the additional changes to the D.C.A. that are now in effect:

List of D.C. Eligible Services

The D.C.A. previously defined ineligible services for D.C.s. The amendments to the D.C.A. now defined the services that are eligible for inclusion in a D.C. by-law. The following summarizes the D.C. eligible services:

- Water supply services, including distribution and treatment services;
- Wastewater services, including sewers and treatment services;
- Storm water drainage and control services;
- Services related to a highway;
- Electrical power services;
- Toronto-York subway extension, as defined in subsection 5.1 (1);
- Transit services other than the Toronto-York subway extension;
- Waste diversion services;
- Policing services;
- Fire protection services;
- Ambulance services;
- Library Services;
- Long-term care services;
- Parks and recreation services (excluding the acquisition of land for parks);
- Public health services;
- Childcare and early years services;
- Housing services;
- *Provincial Offences Act* services;
- Services related to emergency preparedness;
- Services related to airports, but only in the Regional Municipality of Waterloo; and
- Additional services as prescribed.

Removal of 10% Statutory Deduction

The D.C.A. previously required a 10% statutory deduction for all services not specifically identified in s.s. 5 (5) of the D.C.A. (i.e. soft services). This had the effect of categorizing D.C. eligible services into two groups, i.e. 90% D.C. recoverable services, and 100% D.C. recoverable services. The amendments to the D.C.A. remove the 10% statutory deduction for soft services.

Classes of D.C. Services

As noted above the D.C.A. categorized services generally into two categories. The amended D.C.A. repeals these provisions and provides the following:

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

Statutory Exemptions

The D.C.A. provides for statutory exemptions from payment of D.C.s where the development is creating additional residential dwelling units within prescribed classes of existing residential buildings or structures. This statutory exemption has been expanded to include secondary residential dwelling units, in prescribed classes, that are ancillary to existing residential buildings. Furthermore, additional statutory exemptions are provided for the creation of a second dwelling unit in prescribed classes of proposed new residential buildings, including structures ancillary to new dwellings.

Transition

Services, other than those described in paragraphs 1 to 10 of subsection 2 (4) of the D.C.A. (i.e. soft services) within an existing D.C. by-law can remain in effect, even if the by-law expires, until the earlier of the day the by-law is repealed, the day the municipality passes a Community Benefits Charge by-law under subsection 37 (2) of the *Planning Act,* or the specified date. The specified date is September 18, 2022.

1.5 Other Legislative Changes

Bill 213, the Better for People, Smarter for Business Act, received Royal Assent and came into effect on December 8, 2020. This Bill amended the Ministry of Training, Colleges and Universities Act to provide an exemption from the payment of D.C.s for universities. Specifically, the Act states:

> "Land vested in or leased to a university that receives regular and ongoing operating funds from the government for the purposes of post-secondary education is exempt from development charges imposed under the *Development Charges Act*, 1997 if the development in respect of which development charges would otherwise be payable is intended to be occupied and used by the university."

Chapter 2
Current Region of Durham Transit Services D.C. Policy

2. Current Region of Durham Transit Services D.C. Policy

2.1 Schedule of Charges

On December 13, 2017, the Region of Durham passed By-law 81-2017 under the D.C.A. for Regional Transit Services. The by-law was subsequently amended by By-law 30-2018 on June 13, 2018, and By-law 22-2021 on June 23, 2021 to reflect changes in the Region-wide D.C. By-Law and legislative changes since adoption in 2017. The by-law imposes D.C.s for residential and non-residential uses. The table below provides the rates currently in effect, as at July 1, 2021.

Table 2-1
Region of Durham
Current D.C. Rates for Regional Transit Services

Service	RESIDENTIAL				NON-RESIDENTIAL
	Single and Semi-Detached Dwelling	Other Multiples	Apartments - 2 Bedrooms +	Apartments - Bachelor and 1 Bedroom	(per sq.ft. of Gross Floor Area)
Current Development Charges (July 1, 2021)					
Transit Services	$ 1,275	$ 1,026	$ 741	$ 480	$ 0.61

2.2 Timing of D.C. Calculation and Payment

D.C.s are due and payable in full to the Region at the time a building permit is issued for any land, buildings or structures constituting development. Amendments to the by-law reflecting the legislated changes since 2017, allow for the determination of the charge at the time of planning application for building permits issued within 2 years of approval of a Site Plan or Zoning By-law Amendment (for application submitted after December 31, 2019), as well as installment payments for rental housing and institutional development over 6 years and not-for-profit housing over 21 years.

The by-law also allows the Region to enter into payment agreements with owners to either accelerate or defer the timing of payment.

2.3 Indexing

Development charges imposed pursuant to the D.C. By-Law shall be adjusted annually, on the 1st day of July, in accordance with the Statistics Canada Quarterly, Construction Price Statistics, catalogue number 62-007, for the most recently available annual period ending March 31. The charges presented in Table 2-1 would be indexed on July 1, 2022 if a new by-law was not being adopted. As presented in Table 6-4, the most recently available index for Q4 2021 would have resulted in a 15.3% increase in the charges.

2.4 Redevelopment Allowance

The current D.C. by-law for transit services provides non-statutory D.C. credits for residential and non-residential redevelopments where existing dwelling units or non-residential gross floor area is being replaced. However, where additional floor area or dwellings are being created in excess of those demolished, D.C.s are payable.

The redevelopment credit is provided if the land was improved by occupied structures, if the last use of the building being demolished would be subject to D.C.s under the Region's By-law and if the demolition permit related to the site was issued less than 10 years prior to the issuance of a building permit. The credit can, in no case, exceed the amount of D.C.s that would otherwise be payable.

2.5 Exemptions

The Region's D.C. by-law for transit services includes statutory exemptions from payment of D.C.s with respect to:

- Industrial additions of up to and including 50% of the existing gross floor area of the building – for industrial additions which exceed 50% of the existing gross floor area, only the portion of the addition in excess of 50% is subject to D.C.s;
- Land used for Municipal or Board of Education purposes;
- Residential development that results in only the enlargement of an existing dwelling unit, or that results only in the creation of up to two additional dwelling units within or ancillary to an existing residential building, as specified by O.Reg. 82/98; and

- A second residential dwelling unit within or ancillary to prescribed new buildings as specified by O.Reg. 82/98.

Although not identified in Durham Region's DC By-laws, Colleges established under the Ontario Colleges of Applied Arts and Technology Act, 2002 and Universities pursuant to the Crown Agencies Act are agents of the Crown, therefore they are exempt from paying D.C.s under the DCA when they construct buildings for their own use. The UOIT Act goes one step further and provides additional exemptions from D.C.s. If a private developer constructs a building to be leased by UOIT, D.C.s will not be paid to the Region for that development.

The D.C. by-law also provides Durham-specific non-statutory exemptions from payment of D.C.s in keeping with prior policy decisions of Regional Council with respect to Regional D.C.s, including:

- agricultural uses and farm buildings;
- places of worship;
- public hospitals receiving aid under the Public Hospitals Act, excluding such buildings or structures or parts thereof used, designed or intended for use primarily for or in connection with a commercial purpose;
- any part of a building or structure used for the parking or loading of motor vehicles; and
- free standing roof-like structures and canopies that do not have exterior walls.

Chapter 3
Anticipated Development in the Region of Durham

3. Anticipated Development in the Region of Durham

3.1 Requirement of the Act

Chapter 3 provides the methodology for calculating a D.C. as per the D.C.A. Figure 3-1 presents this methodology graphically. It is noted in the first box of the schematic that in order to determine the D.C. that may be imposed, it is a requirement of Section 5 (1) of the D.C.A. that "the anticipated amount, type and location of development, for which development charges can be imposed, must be estimated."

The growth forecast contained in this chapter (with supplemental tables in Appendix A) provides for the anticipated development for which Durham Region will be required to provide services, over a 10-year (mid-2022 to mid-2032) period.

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

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

- Envision Durham Region-Wide Growth Analysis Technical Report and Envision Durham Employment Strategy (2021);
- Durham Region Official Plan (Office Consolidation 2020);
- Official Plans of individual Area Municipalities in the Region;
- 2006, 2011 and 2016 population, household, and employment Census data; and
- Historical residential and non-residential building permit data over the 2010 to 2021 period.

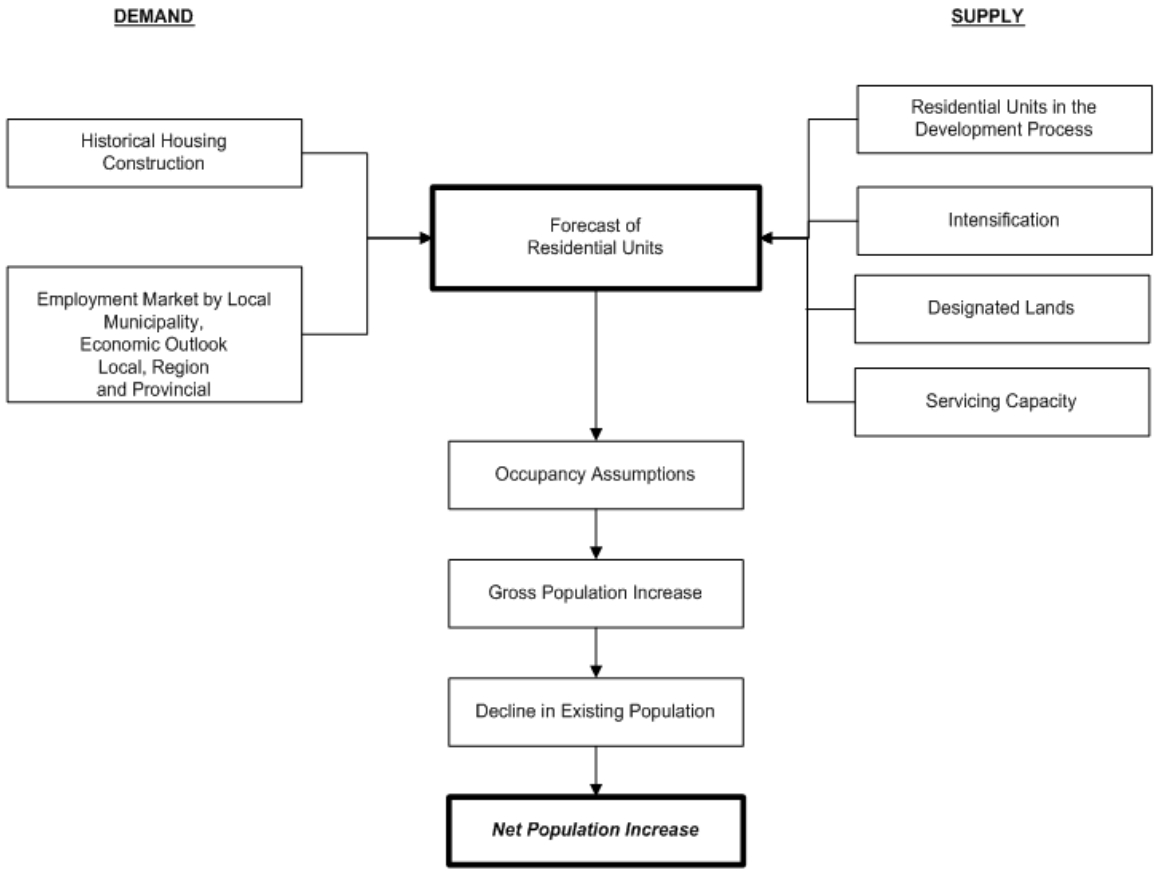
3.3 Summary of Growth Forecast

A detailed analysis of the residential and non-residential growth forecasts is provided in Appendix A and the methodology employed is illustrated in **Error! Reference source**

not found.. 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 in **Error! Reference source not found.** below, and *Schedule 1* in Appendix A.

As identified in **Error! Reference source not found.** and Appendix A, *Schedule 1*, permanent population in Durham is anticipated to reach approximately 873,730 by mid-2032, resulting in an increase of approximately 173,260 persons from mid-2022.[1]

Figure 3-1
Population and Household Forecast Model



[1] The population figures used in the calculation of the 2022 D.C. exclude the net Census undercount, which is estimated at approximately 3.8%.

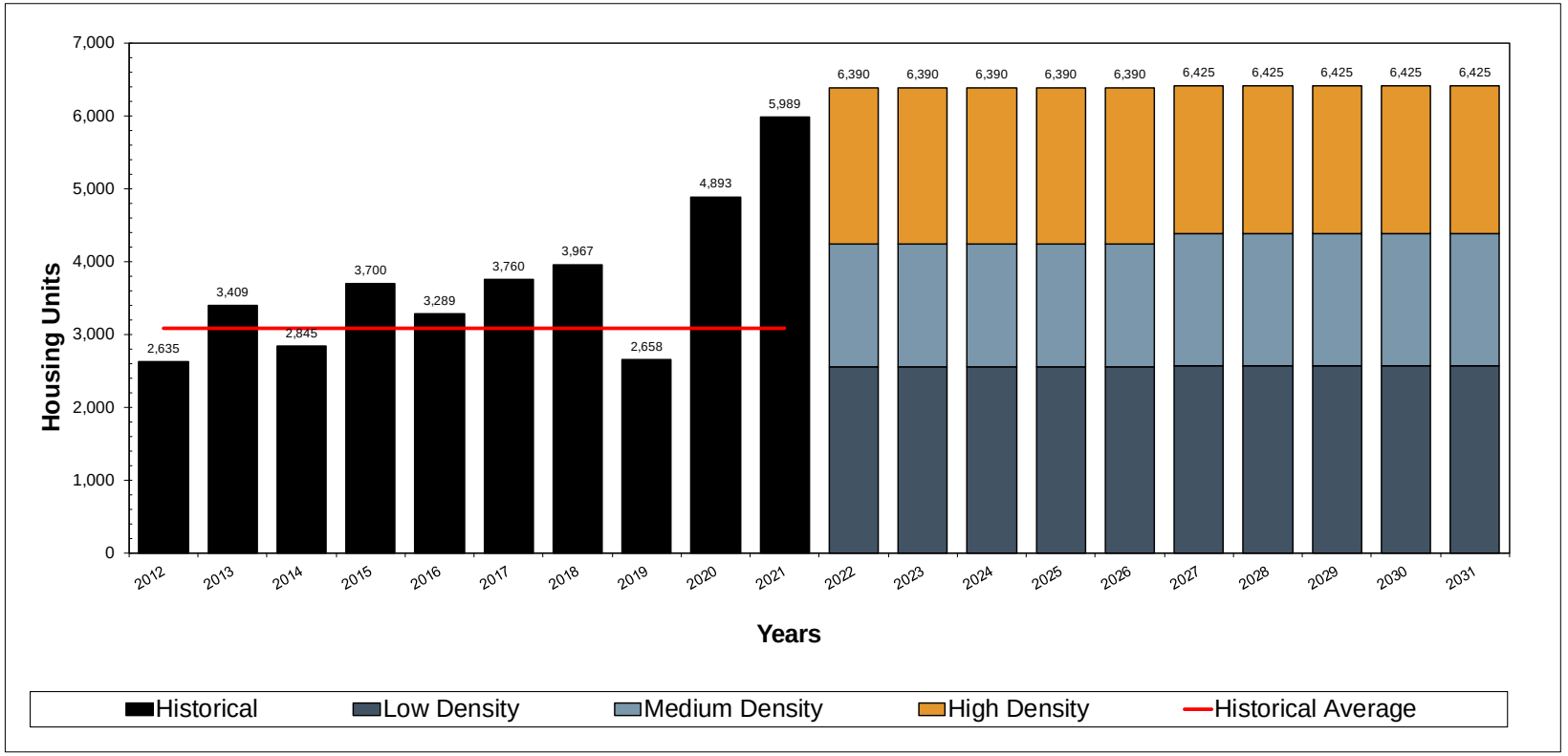
Table 3-1
Region of Durham
Residential Growth Forecast Summary

	Year	Population (Including Census Undercount)[1]	Excluding Census Undercount			Housing Units					Person Per Unit (P.P.U.): Total Population/ Total Households
			Population	Institutional Population	Population Excluding Institutional Population	Singles & Semi-Detached	Multiple Dwellings[2]	Apartments[3]	Other	Total Households	
Historical	*Mid 2006*	582,510	561,258	5,163	556,095	142,690	24,940	26,565	465	194,660	2.883
	Mid 2011	631,150	608,124	6,514	601,610	156,411	29,477	27,482	376	213,746	2.845
	Mid 2016	670,320	645,862	6,372	639,490	164,650	33,115	29,740	400	227,905	2.834
Forecast	*Mid 2022*	726,990	700,465	6,963	693,502	174,484	39,897	37,680	400	252,461	2.775
	Mid 2027	817,910	788,070	7,811	780,259	187,266	48,344	48,401	400	284,411	2.771
	Mid 2032	906,810	873,725	8,666	865,059	200,114	57,419	58,602	400	316,536	2.760
Incremental	**Mid 2006 - Mid 2011**	**48,640**	**46,866**	**1,351**	**45,515**	**13,721**	**4,537**	**917**	**-89**	**19,086**	
	Mid 2011 - Mid 2016	**39,170**	**37,738**	**-142**	**37,880**	**8,239**	**3,638**	**2,258**	**24**	**14,159**	
	Mid 2016 - Mid 2022	**56,670**	**54,603**	**591**	**54,012**	**9,834**	**6,782**	**7,940**	**0**	**24,556**	
	Mid 2022 - Mid 2027	**90,920**	**87,605**	**848**	**86,757**	**12,782**	**8,447**	**10,721**	**0**	**31,950**	
	Mid 2022 - Mid 2032	**179,820**	**173,260**	**1,703**	**171,557**	**25,630**	**17,522**	**20,922**	**0**	**64,075**	

Source : Watson & Assoicates Economists Ltd., 2022

[1] Census undercount estimated at approximately 3.8%. Note: Population including the undercount has been rounded.
[2] Includes townhouses and apartments in duplexes.
[3] Includes bachelor, 1-bedroom and 2-bedroom+ apartments.

Figure 3-2
Durham Region
Annual Housing Forecast Summary



Source: Historical housing activity derived from Statistics Canada building permit data for the Durham Region , 2012-2021.
[1] Growth forecast represents calendar year.

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

1. Housing Unit Mix (Appendix A – Schedules 1 and 5)

    - The housing unit mix for the Region was adjusted from the Envision Durham Region-Wide Growth Analysis Technical Report (July 2021);[2]
    - Based on the above indicators, the 10-year household growth forecast for the Region is comprised of a unit mix of 40% low density units (single detached and semi-detached), 27% medium density (multiples except apartments) and 33% high density (bachelor, 1-bedroom and 2-bedroom apartments).

2. 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 transit, parks, recreation and libraries, to a 10-year planning horizon. Services related to a highway, public works, fire, police, stormwater, water and wastewater services can utilize a longer planning period.

3. Population in New Housing Units (Appendix A - Schedules 2, 3, and 4)

    - The number of new housing units to be constructed in Durham Region during the forecast period is presented in **Error! Reference source not found.**. Over the 2022 to 2032 forecast period, the Region is anticipated to average 6,410 new housing units per year.
    - Institutional population[3] is anticipated to increase by approximately 1,700 people between 2022 to 2032.
    - Population in new units is derived from Schedules 2, 3, and 4 which incorporate historical development activity, anticipated units (see unit mix discussion) and average persons per unit (P.P.U.) by dwelling type for new units.

[2] The housing unit mix in the July, 2021 report is being evaluated through alternative land need scenarios and subject to Council approval. Council may choose a scenario with a different unit mix.
[3] Institutional includes special care facilities such as nursing home or residences for senior citizens. A P.P.U. of 1.100 depicts 1-bedroom and 2- or more bedroom units in these special care facilities.

- Schedule 6 summarizes the average P.P.U. assumed for the new housing units by age and type of dwelling based on a 2016 custom Census data for Durham Region. The total calculated P.P.U. for all density types represents a 25-year adjusted forecast average. Average P.P.U.s by dwelling type are as follows:
    - Low density: 3.351
    - Medium density: 2.639
    - High density[4]: 1.602

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

- Existing households for mid-2022 are based on the 2016 Census households, plus estimated residential units constructed between mid-2016 and 2021 assuming a 6-month lag between construction and occupancy (see Schedule 2).
- The decline or incline in average occupancy levels for existing housing units is calculated in Schedules 2, 3, and 4 by aging the existing population over the forecast period. The average P.P.U. in existing households in anticipated to increase as the occupants of existing dwellings turnover to accommodate growing demand from families. The forecast population incline in existing households over the 2022 to 2032 forecast period is approximately 5,910.

5. Employment (Appendix A, Schedules 8a, 8b, 9 and 10)

- The employment forecast between 2022 to 2032 has been derived from the employment land use forecast prepared as a part of the Envision Durham Employment Strategy (2021).
- 2016 employment data[5] (place of work) for Durham Region is outlined in Schedule 8a. The 2016 employment base is comprised of the following sectors:
    - 1,920 primary (1%);
    - 21,850 work at home employment (11%);
    - 47,563 industrial (24%);
    - 76,863 commercial/population related (39%); and
    - 49,020 institutional (25%).

[4] Includes bachelor, 1-bedroom and 2- or more bedroom apartments.
[5] 2016 employment is based on Statistics Canada 2016 Place of Work Employment.

- The 2016 employment by usual place of work, including work at home, is approximately 197,215. An additional 26,370 employees have been identified for the Region in 2016 that have no fixed place of work (N.F.P.O.W.).[6]
- Total employment, including work at home and N.F.P.O.W. for the Region is anticipated to reach approximately 314,030 by mid-2032. This represents an employment increase of approximately 66,170 for the 10-year forecast period.
- Schedule 8b, Appendix A, summarizes the employment forecast, excluding work at home employment and N.F.P.O.W. employment, which is the basis for the D.C. employment forecast. The need for municipal services related to N.F.P.O.W. employees has largely been included in the employment forecast by usual place of work (i.e. employment and gross floor area generated from N.F.P.O.W. construction employment). Furthermore, since these employees have no fixed work address, they cannot be captured in the non-residential gross floor area (G.F.A.) calculation.

6. Non-Residential Sq.ft. Estimates (G.F.A., Appendix A, Schedule 8b)

- Square footage per employee estimates were calculated in Schedule 8b based on the following employee density assumptions:
    - Primary: 2,000
    - Industrial: 1,310
    - Commercial: 420
    - Institutional: 670
- The Region-wide incremental Gross Floor Area (G.F.A.) is anticipated to increase by 39,893,800 sq.ft. over the 10-year forecast period.
- In terms of percentage growth, the 2022 to 2032 incremental G.F.A. forecast by sector is broken down as follows:
    - Primary – Less than 1%;
    - Industrial – 52%;
    - Commercial/population-related – 24%; and
    - Institutional – 24%.

[6] No fixed place of work is defined by Statistics Canada 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.

Chapter 4
The Approach to the Calculation of the Charge

4. The Approach to the Calculation of the Charge

4.1 Introduction

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

4.2 Services Considered

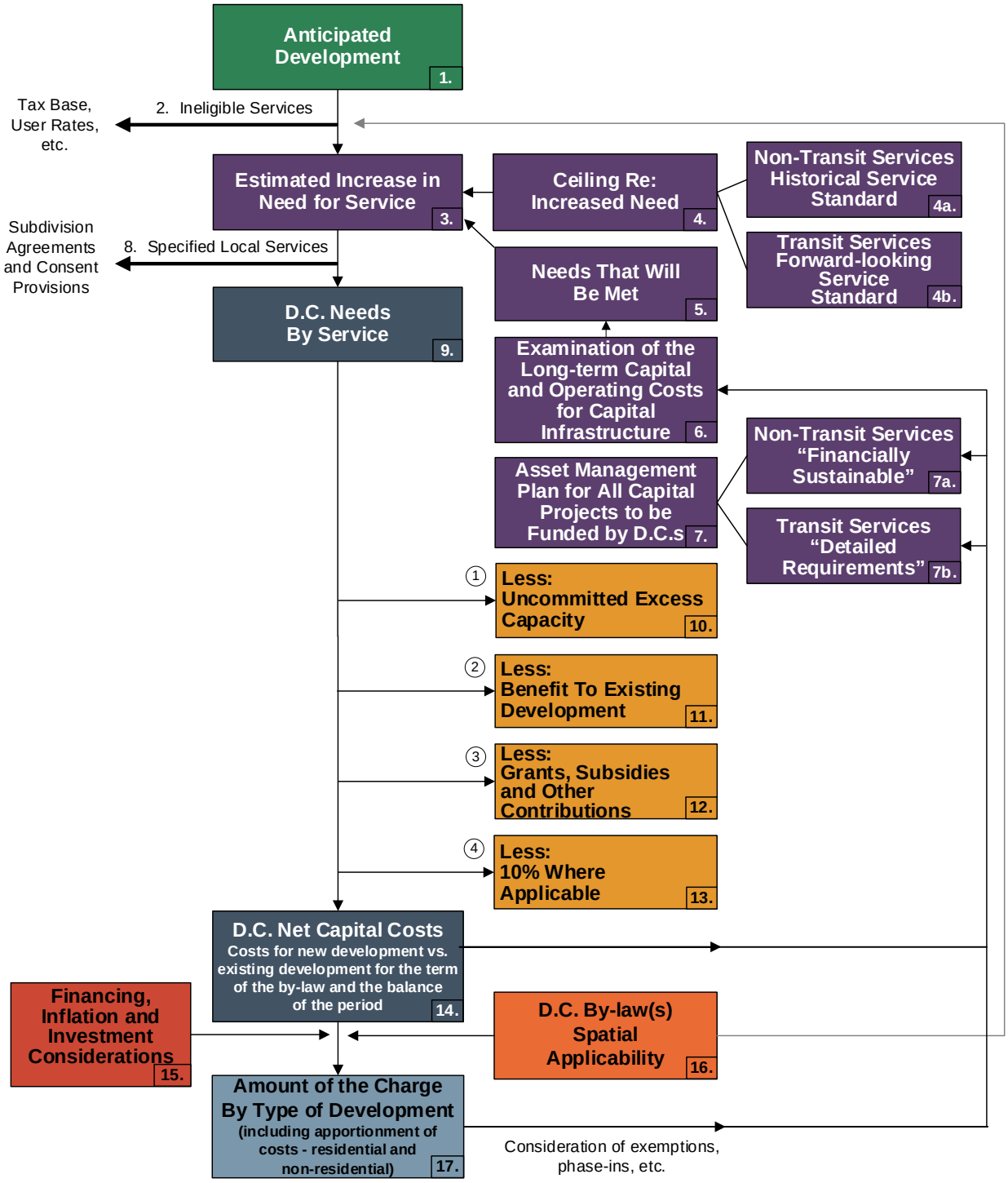
The D.C.A. amendments arising from the COVID-19 Economic Recovery Act limits the inclusion of municipal services to "eligible services" only. As summarized in Section 1.4 herein, transit services are an eligible service. The scope of this D.C. Background Study addresses the increase in need for Region of Durham Regional Transit Services exclusively.

4.3 Increase in the Need for Service

The D.C. calculation commences with an estimate of "the increase in the need for service attributable to the anticipated development," for each service to be covered by the by-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, subsection 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.

The D.C.A. further requires that the increase in need for transit services can not exceed the planned level of service. This requirement is distinct for transit services as compared to other municipal services that are limited to an average historical level of service, unless the level of service is dictated by another statute.

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



4.4 Local Service Policy

Some of the increase in need for services generated by new development consists of local services related to a plan of subdivision or consent. As such, these needs will be fulfilled as a condition of subdivision or consent agreements whereby the developer will directly emplace or fund the local services. As these needs are addressed as local services they are not included in the calculation of the D.C.

Appendix C includes the local service policy for Regional Transit Services.

4.5 Capital Forecast

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

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

The capital costs include:

a) costs to acquire land or an interest therein (including a leasehold interest);
b) costs to improve land;
c) costs to acquire, lease, construct or improve buildings and structures;
d) costs to acquire, lease or improve facilities, including rolling stock (with a useful life of 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 D.C. 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" (subsection 5 (1) 3). This can be done if the increase in service forms part

of a Council-approved Official Plan, capital forecast, or similar expression of the intention of Council (O. Reg. 82/98 section 3).

The capital program contained herein reflects the Region's approved and proposed capital budgets and master servicing/needs studies. The HDR Study contained in Appendix D provides the capital forecast to meet the anticipated increase in need for service. Chapter 5 also includes these capital costs in the determination of the D.C. recoverable capital costs.

4.6 Treatment of Credits

Section 8, paragraph 5, of O. Reg. 82/98 indicates that a D.C. background study must set out "the estimated value of credits that are being carried forward relating to the service." Subsection 17, paragraph 4, of the same regulation indicates that "the value of the credit cannot be recovered from future D.C.s," if the credit pertains to an ineligible service. This implies that a credit for eligible services can be recovered from future D.C.s. As a result, this provision should be made in the calculation, in order to avoid a funding shortfall with respect to future service needs.

There are no outstanding credit obligations for Regional Transit Service included in the D.C. calculations.

4.7 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 subsection 5 (1) to net the outstanding reserve fund balance as part of making the D.C. calculation; however, section 35 does restrict the way in which the funds are used in future.

The Region's Transit Service D.C. Reserve Funds balances, by service, are presented in Table 4-1 below. The 2021 year-end reserve fund balances have been adjusted to account for budgeted 2022 reserve fund draws, actual revenues received to March 31, 2022 and provision for revenues to mid-2022 based on the growth forecast estimates.

These balances have been applied against the D.C. recoverable capital costs in the determination of the charge.

Table 4-1
Regional Transit D.C. Reserve Fund Balance Estimate (July 1, 2022)

Regional Transit D.C. Reserve Fund	Balance Dec. 31/21	D.C. Reserve Fund Draws	Revenue to March 31/22	Est. Revenue to July 1/22	Est. Balance July 1/22
Residential Region Transit DC	$ 20,234,851	$ (1,342,000)	$ 668,911	$ 1,505,329	$ 21,067,092
Non-Residential Transit DC	$ 4,107,884	$ (603,000)	$ (27,650)	$ 332,092	$ 3,809,326
Total	**$ 24,342,736**	**$ (1,945,000)**	**$ 641,261**	**$ 1,837,421**	**$ 24,876,418**

Note: Amounts in brackets are deficit balances.

4.8 Deductions

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

- the planned level of service;
- uncommitted excess capacity;
- post-period 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 below.

4.8.1 Reduction Required for Planned Level of Service

Subsection 5.2(3) of the D.C.A. requires for transit services, "…that the estimate for the increase in need for a prescribed service (i.e. transit services) shall not exceed the planned level of service over the 10-year period immediately following the preparation of the background study…" The municipality has the ability to determine how it estimates the planned level of service.

The HDR Study contained in Appendix D summarizes the planned level of service estimate for transit services. The planned level of service for transit service in Durham Region is identified in the Durham Regional Transit (DRT) service guidelines which

incorporates service deployment, ridership productivity, service frequency and span of service, vehicle capacity, service proximity and PULSE considerations. These level of service measures are further supported by the Region's Official Plan and Transportation Master Plan and reflect Council's intent for service provision over the 10-year forecast period.

The growth-related capital program provided in the HDR Study for the 2022-2032 forecast period is within the planned level of service for the Regional Transit Service.

4.8.2 Reduction for Uncommitted Excess Capacity

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

"Excess capacity" is undefined, but in this case must be able to meet some or all of the increase in need for service, in order to potentially represent a deduction. The deduction of uncommitted excess capacity from the future increase in the need for service would normally occur as part of the conceptual planning and feasibility work associated with justifying and sizing of new asset purchases and infrastructure.

4.8.3 Reduction for Post-Period Capacity (Beyond 2032)

There is no explicit requirement in the D.C.A. to reduce capital costs so as to avoid funding "post period capacity", that is, capacity which is not fully required by development proceeding within the calculation planning period, i.e. in this case, 2022-2032.

Paragraph 2 of s.s.5(1) requires that an estimate be made of the need for service attributable to the anticipated amount, type and location of the development for which the development charges are being imposed.

Paragraph 5 requires that a deduction be made for "excess capacity", but this is the excess capacity which already exists as of the D.C. calculation and can potentially be used to meet the increase in the need for service. This requirement does not apply, where Council expressed a clear intention at the time the excess capacity was created, that it would be paid for (subsequently) by D.C.s or other similar charges.

However, s.4 of O.Reg 428/15 requires that the total estimated capital costs that would benefit anticipated development after the 10-year period immediately following the preparation of the background study as well as the anticipated excess capacity that would exist at the end of the 10-year period immediately following preparation of the background study be assessed. These requirements infer the need to assess whether a deduction for post-period capacity should be made for transit services.

The capital forecast included in Chapter 5 includes Phase 1 construction of a new bus storage and service facility. It is anticipated that the capacity of this facility will house 122 buses. Based on the forecast of incremental 40 foot-equivalent buses over the forecast period (i.e. 78.5 buses), a post-period benefit has been applied. The post period benefit has been calculated to be approximately $44.2 million.

4.8.4 Reduction for Benefit to Existing Development

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

- the repair or unexpanded replacement of existing assets that are in need of repair;
- an express improvement to the existing level of quantity or quality;
- the elimination of a chronic servicing problem not created by growth; and
- providing services where none previously existed.

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.

Municipal services are typically provided on a municipal-wide system basis. Within these municipal-wide services there may be different characteristics relating to the quality of service provided, programming and availability for the same service. As a result, residents will access the services that best meet their criteria, thus service location may not correlate directly with residence location. Even where it does,

displacing users from consuming existing assets within a service to a new service assets 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.

For the purposes of transit services, the increase in demand for service can arise from both existing development (i.e. change in transportation mode choice) and new development. The benefit to existing development deductions provided herein are based on the relative increase in ridership over the forecast period from existing and future development. This attribution is further described in Chapter 5 and the HDR Study in Appendix D.

4.8.5 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, section 6).

No anticipated grants, subsidies or other contributions for the capital costs within the transit services D.C. capital forecast have been identified at this time.

4.9 Municipal-wide vs. Area Rating

This step involves determining whether all of the subject costs are to be recovered on a uniform municipal-wide basis or whether some or all are to be recovered on an area-specific basis. Under the amended D.C.A., it is now mandatory to "consider" area rating of services (providing charges for specific areas and services), however, it is not mandatory to implement area rating. Further discussion is provided in section 7.4.4.

4.10 Allocation of Development

The D.C. calculation (paragraph 2 of s.s.5(6) of the D.C.A.) requires that each identified type of development must only pay development charges which are consistent with the applicable capital costs arising from that type of development.

The first step in complying with this requirement is to allocate the D.C. recoverable costs between residential and non-residential development (i.e. industrial, commercial and institutional). This can be done in various ways, but for services such as transit, it is typically done based on the incremental increase in population and employment over the course of the 10-year D.C. calculation period. This approach provides, on average, equal usage weighting between the needs of each additional population and each additional employee. This serves to deal with all potential development-related users and indirectly to consider the benefits of both the origin and destination of the transit trips.

The Region-wide D.C. growth forecast (as per Appendix A), results in the following residential/non-residential cost allocation for transit D.C. calculation purposes:

Description	10-Year Forecast 2022-2032	Allocation %
Net Population	173,260	74.9%
Employment	57,983	25.1%

4.11 Development Charge Cash Flow Calculations

The Regional Transit Service D.C. has been calculated on a cash flow basis, with updated financing assumptions reflecting future circumstances. This approach considers the anticipated timing of D.C. recoverable capital expenditures relative to revenues. The calculations incorporate the existing uncommitted reserve fund balances (as summarized in Table 4-1), and assumption for cost inflation (3% annually), interest earnings on positive reserve fund balanced (2.5% annually) and debt financing costs (5% annually). These calculations are provided for residential and non-residential development in Chapter 6.

4.12 Asset Management

The D.C.A. requires that a D.C. background study must include an asset management plan (A.M.P.). The A.M.P. must deal with all assets that are proposed to be funded, in whole or in part, by the D.C. The current regulations provide very extensive and specific requirements for the A.M.P. related to transit services (as noted in Subsection 1.3.3 herein). As part of any A.M.P., the examination should be consistent with the municipality's existing assumptions, approaches, and policies on the asset management planning. This examination has been included in Appendix E.

Chapter 5
D.C. Recoverable Cost Analysis for Regional Transit Services

5. D.C. Recoverable Cost Analysis for Regional Transit Services

5.1 Introduction

This chapter outlines the basis for calculating eligible costs for the Regional Transit Services D.C.s to be applied on a uniform basis. The required calculation process set out in subsection 5 (1) paragraphs 2 to 8 in the D.C.A. and described in Chapter 4 was followed in determining D.C. recoverable costs. The nature of the capital projects and timing identified in the Chapter reflects Council's current intention. Over time, however, Region projects and Council priorities change; accordingly, Council's intentions may alter and different capital projects (and timing) may be necessary to meet the need for services required by new growth.

5.2 Regional Transit Services

This section evaluates the development-related capital requirements for Regional Transit Services over a 10-year planning period. The planned level of service is summarized in Chapter 4 of the HDR Study included in Appendix D of the D.C. Background Study. The capital needs to address the increase in need for service is also summarized in Chapter 5 of the HDR Study.

The capital needs for Regional Transit service over the 2022-2032 forecast period include 132 additional fleet to provide the planned level of service. The Region currently has 64 available fleet to satisfy this increase in demand, thus requiring 68 incremental fleet purchases over the period. These purchases include:

- PULSE 40 ft. buses – 26
- PULSE 60 ft. articulated buses – 21
- Conventional 40 ft. buses – 21

The forecast also includes additional specialized fleet requirements for 5 additional vehicles. The capital cost estimates include the system infrastructure for the additional fleet, including PRESTO, fairboxes/radios, ITS/annunciators, and technology systems for specialize buses. The HDR Study also identifies infrastructure needs in the form of bus stops (inclusive of pads and shelters), transfer hubs, terminals and a new bus

storage/servicing facility (phase 1). Lastly, the forecast includes the need for future D.C. background studies based on the 5-year review period, and engineering and design studies for the terminals and transfer hubs.

In total the gross capital cost estimate over the forecast period is $271.5 million. A deduction of $56.1 million is provided for the benefit to existing (BTE) development, reflective of their increase in ridership over the forecast period. The BTE deductions are summarized in Chapter 6 of the HDR Study and include:

- A deduction for the incremental PULSE and Conventional Transit Fleet (as associated systems) purchases based on the application of the increase in ridership from existing development over the forecast period based on current ridership estimates and the respective change in mode share by 2032. This approach identifies the share of incremental buses required in service attributable to existing development, net of available fleet currently in inventory to address these requirements.
- A deduction for specialized fleet, bus stops, transfer hubs, facilities and systems (not specific to fleet purchases) based on the application of the increase in ridership from existing development over the forecast period based on 2022 trend ridership estimates from the HDR modeling and the respective change in mode share by 2032.
- No BTE deduction is provided for the future D.C. background studies.

As noted in subsection 4.8.3 herein, a deduction for post-period benefit has been acknowledged for the anticipated capacity of new bus storage/servicing facility. A deduction of $44.6 million has been applied recognizing excess capacity equivalent to approximately 43.5 40 ft. equivalent buses by 2032. This deduction is a recognition of facility oversizing to accommodate additional growth-related demands beyond 2032 that should be included in future D.C. background studies.

Accounting for these deductions, the net D.C. recoverable capital costs total $170.8 million. A further deduction of $24.9 million has been applied reflecting the uncommitted reserve fund balances available to address a portion of these needs. This results in a net D.C. recoverable cost of $145.9 million to be recovered from the anticipated development over the 2022-2032 forecast period. The net D.C. recoverable capital costs included in the calculation of the charge have been allocated between residential and non-residential development based on the incremental population and

employment over the forecast period (see subsection 4.10). The residential D.C. recoverable cost share for the forecast period totals $106.9 million and the non-residential cost share totals $39.0 million. Table 5-1 summarizes the D.C. recoverable costs.

Table 5-1
Regional Transit Service – Infrastructure Costs Included in the D.C. Calculation

Increased Service Needs Attributable to Anticipated Development 2022-2032	Timing (year)	Gross Capital Cost Estimate	Post Period Benefit	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
					Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 74.9%	Non-Residential Share 25.1%
FLEET, STOPS AND TRANSFER HUBS									
Buses - BRT (40 ft)	2023-2027	7,788,000	-	7,788,000	1,799,028		5,988,972	4,485,740	1,503,232
Buses - BRT (40 ft)	2028-2032	10,620,000	-	10,620,000	2,453,220		8,166,780	6,116,918	2,049,862
Buses - BRT (60 ft)	2023-2027	7,644,000	-	7,644,000	3,279,276		4,364,724	3,269,178	1,095,546
Buses - BRT (60 ft)	2028-2032	15,288,000	-	15,288,000	6,558,552		8,729,448	6,538,357	2,191,091
Buses – Conventional	2028-2032	13,818,000	-	13,818,000	-		13,818,000	10,349,682	3,468,318
Specialized Bus Expansion	2023-2027	991,250	-	991,250	192,303		798,948	598,412	200,536
Specialized Bus Expansion	2028-2032	991,250	-	991,250	192,303		798,948	598,412	200,536
Bus Stop Infrastructure	2023-2027	4,598,000	-	4,598,000	892,012		3,705,988	2,775,785	930,203
Bus Stop Infrastructure	2028-2032	3,350,000	-	3,350,000	649,900		2,700,100	2,022,375	677,725
Integrated Service Transfer Bus Stop Infrastructure	2023-2027	2,000,000	-	2,000,000	388,000		1,612,000	1,207,388	404,612
Integrated Service Transfer Bus Stop Infrastructure	2028-2032	2,400,000	-	2,400,000	465,600		1,934,400	1,448,866	485,534
FACILITIES AND TERMINALS									
New Bus Storage/Servicing Facility – Phase 1	2023-2027	155,000,000	44,600,010	110,399,990	30,070,000		80,329,990	60,167,163	20,162,827
Pickering Parkway Terminal Upgrade	2023-2027	8,450,000	-	8,450,000	1,639,300		6,810,700	5,101,214	1,709,486
Harmony Terminal New Location	2023-2027	15,000,000	-	15,000,000	2,910,000		12,090,000	9,055,410	3,034,590
Windfield Farms Terminal	2028-2032	2,000,000	-	2,000,000	388,000		1,612,000	1,207,388	404,612
Bowmanville Terminal	2028-2032	2,400,000	-	2,400,000	465,600		1,934,400	1,448,866	485,534
Brooklin North Terminal	2028-2032	3,600,000	-	3,600,000	698,400		2,901,600	2,173,298	728,302
Thornton's Corners GO - DRT Terminal	2023-2027	5,400,000	-	5,400,000	1,047,600		4,352,400	3,259,948	1,092,452
Central Oshawa (Ritson) GO - DRT Terminal	2023-2027	2,400,000	-	2,400,000	465,600		1,934,400	1,448,866	485,534
Courtice GO - DRT Terminal	2023-2027	3,000,000	-	3,000,000	582,000		2,418,000	1,811,082	606,918

Table 5-1(cont'd)
Regional Transit Service – Infrastructure Costs Included in the D.C. Calculation

Increased Service Needs Attributable to Anticipated Development 2022-2032	Timing (year)	Gross Capital Cost Estimate	Post Period Benefit	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
					Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 74.9%	Non-Residential Share 25.1%
SYSTEMS									
Additional PRESTO for Growth Buses	2023-2027	252,000	-	252,000	55,692		196,308	147,035	49,273
Additional PRESTO for Growth Buses	2028-2032	700,000	-	700,000	154,700		545,300	408,430	136,870
Additional Fareboxes/Radios For Growth Buses	2023-2027	378,000	-	378,000	83,538		294,462	220,552	73,910
Additional Fareboxes/Radios For Growth Buses	2028-2032	1,050,000	-	1,050,000	232,050		817,950	612,645	205,305
Additional ITS/Annunciators for Growth Buses	2023-2027	438,660	-	438,660	96,944		341,716	255,945	85,771
Additional ITS/Annunciators for Growth Buses	2028-2032	1,218,500	-	1,218,500	269,289		949,212	710,959	238,252
Gravity Farebox for Specialized Buses	2023-2027	36,000	-	36,000	6,984		29,016	21,733	7,283
Gravity Farebox for Specialized Buses	2028-2032	36,000	-	36,000	6,984		29,016	21,733	7,283
Additional PRESTO for Specialized Buses	2023-2027	15,000	-	15,000	2,910		12,090	9,055	3,035
Additional PRESTO for Specialized Buses	2028-2032	15,000	-	15,000	2,910		12,090	9,055	3,035
Technology Systems for Specialized Buses	2023-2027	25,475	-	25,475	4,942		20,533	15,379	5,154
Technology Systems for Specialized Buses	2028-2032	25,475	-	25,475	4,942		20,533	15,379	5,154
STUDIES									
Development Charges Background Study (2)	2027&2032	360,000	-	360,000	-		360,000	269,640	90,360
Engineer and Design for Terminals and Hubs	2023-2032	250,000	-	250,000	48,500		201,500	150,924	50,577
Reserve Fund Adjustment							(24,876,418)	(21,067,092)	(3,809,326)
Total (D.C. Recoverable less Uncommitted D.C. Reserve Fund Balance)		**271,538,610**	**44,600,010**	**226,938,600**	**56,107,078**	**-**	**145,955,105**	**106,885,719**	**39,069,386**

Chapter 6
D.C. Calculation

6. D.C. Calculation

Tables 6-1 and 6-2 calculates the proposed uniform D.C.s to be imposed for Regional Transit Services over a 10-year planning horizon. Table 6-1 presents the calculations for residential development, and Table 6-2 for non-residential development.

As presented in Section 4.11 herein, the calculation is undertaken on a cashflow basis to acknowledge the anticipated financing costs associated with the timing of the capital expenditures and collection of D.C. revenues. The residential development calculation is generated on a per single detached unit equivalent. This calculated rate is subsequently converted to a charge per dwelling unit type for apartments 2+ bedrooms, apartments bachelor and 1 bedroom, and all other multiples, based on the average occupancy of the new units by type (Appendix A, Schedule 4). The non-residential D.C. has been calculated on a per sq.ft. of G.F.A. basis for all types of non-residential development (industrial, commercial, and institutional) based on anticipated development over the planning period (Appendix A, Schedule 8b).

Table 6-3 summarizes the calculated D.C. that is would be applicable for Regional Transit Services. Table 6-4 compares the calculated D.C. with the charges currently in effect for Regional Transit Services and anticipated with future indexing on July 1, 2022.

Table 6-1
Regional Transit Services – Residential D.C. Calculation (2022-2032)

Year	D.C. Reserve Fund Opening Balance	Development Related Expenditures		SDE per Year	$ 2,183.83	Anticipated Revenues	Annual Surplus/ (Deficit)	2.5% / 5%	D.C. Reserve Fund Closing Balance after Interest
		Nominal Project Cost	Project Cost Inflated at 3%		D.C. per SDE per Year Inflated at 2% annually			D.C. Reserve Fund Interest Earnings/ (Cost)	
2022	21,067,092	-	-	2,456	2,183.83	5,362,504	26,429,596	660,740	27,090,336
2023	27,090,336	18,785,069	19,348,621	4,911	2,249.34	11,046,759	18,788,474	469,712	19,258,186
2024	19,258,186	18,785,069	19,929,080	4,911	2,316.82	11,378,162	10,707,267	267,682	10,974,949
2025	10,974,949	18,785,069	20,526,952	4,911	2,386.33	11,719,507	2,167,503	54,188	2,221,691
2026	2,221,691	18,785,069	21,142,761	4,913	2,457.92	12,076,356	(6,844,714)	(342,236)	(7,186,950)
2027	(7,186,950)	18,919,889	21,933,337	4,945	2,531.65	12,518,433	(16,601,854)	(830,093)	(17,431,947)
2028	(17,431,947)	6,751,565	8,061,721	4,974	2,607.60	12,970,582	(12,523,086)	(626,154)	(13,149,240)
2029	(13,149,240)	6,751,565	8,303,573	4,974	2,685.83	13,359,700	(8,093,114)	(404,656)	(8,497,769)
2030	(8,497,769)	6,751,565	8,552,680	4,974	2,766.41	13,760,491	(3,289,959)	(164,498)	(3,454,457)
2031	(3,454,457)	6,751,565	8,809,261	4,974	2,849.40	14,172,403	1,908,685	47,717	1,956,403
2032	1,956,403	6,886,385	9,254,725	2,487	2,934.88	7,298,323	(0)	(0)	-0
Total		**127,952,810**	**145,862,713**	**49,430**		**125,663,219**		**-867,598**	

Note: Numbers may not add due to rounding

Table 6-2
Regional Transit Services – Non-Residential D.C. Calculation (2022-2032)

Year	D.C. Reserve Fund Opening Balance	Development Related Expenditures		Sq. Ft. of Gross Floor Area (GFA)	$ 0.99	Anticipated Revenues	Annual Surplus/ (Deficit)	2.5% / 5%	D.C. Reserve Fund Closing Balance after Interest
		Nominal Project Cost	Project Cost Inflated at 3%		D.C. per Sq. Ft. of GFA per Year Inflated at 2% annually			D.C. Reserve Fund Interest Earnings /(Cost)	
2022	3,809,326	-	-	1,968,980	0.991	1,950,839	5,760,165	144,004	5,904,169
2023	5,904,169	6,295,130	6,483,984	3,937,960	1.021	4,018,728	3,438,913	85,973	3,524,885
2024	3,524,885	6,295,130	6,678,503	3,937,960	1.051	4,139,290	985,671	24,642	1,010,313
2025	1,010,313	6,295,130	6,878,859	3,937,960	1.083	4,263,468	(1,605,077)	(80,254)	(1,685,331)
2026	(1,685,331)	6,295,130	7,085,224	3,937,960	1.115	4,391,372	(4,379,183)	(218,959)	(4,598,142)
2027	(4,598,142)	6,340,310	7,350,157	3,989,380	1.149	4,582,174	(7,366,125)	(368,306)	(7,734,431)
2028	(7,734,431)	2,262,540	2,701,592	4,040,800	1.183	4,780,472	(5,655,551)	(282,778)	(5,938,329)
2029	(5,938,329)	2,262,540	2,782,639	4,040,800	1.219	4,923,886	(3,797,082)	(189,854)	(3,986,936)
2030	(3,986,936)	2,262,540	2,866,118	4,040,800	1.255	5,071,602	(1,781,452)	(89,073)	(1,870,525)
2031	(1,870,525)	2,262,540	2,952,102	4,040,800	1.293	5,223,751	401,124	10,028	411,152
2032	411,152	2,307,720	3,101,383	2,020,400	1.332	2,690,232	(0)	(0)	(0)
Total		**42,878,712**	**48,880,562**	**39,893,800**		**46,035,813**		**-964,577**	

Note: Numbers may not add due to rounding

Table 6-3
Region of Durham
Calculated Schedule of D.C.s for Regional Transit Services

Service/Class of Service	RESIDENTIAL				NON-RESIDENTIAL
	Single and Semi-Detached Dwelling	Other Multiples	Apartments - 2 Bedrooms +	Apartments - Bachelor and 1 Bedroom	(per sq.ft. of Gross Floor Area)
Municipal Wide Service					
Transit Services	2,184	1,720	1,221	750	0.99
Total Municipal Wide Service	**2,184**	**1,720**	**1,221**	**750**	**0.99**

Table 6-4
Region of Durham
Comparison of Current, Indexed and Calculated D.C.s for Regional Transit Services

Service	RESIDENTIAL				NON-RESIDENTIAL
	Single and Semi-Detached Dwelling	Other Multiples	Apartments - 2 Bedrooms +	Apartments - Bachelor and 1 Bedroom	(per sq.ft. of Gross Floor Area)
Current Development Charges (July 1, 2021)					
Transit Services	$ 1,275	$ 1,026	$ 741	$ 480	$ 0.61
Current Development Charges (Indexed based on Statscan 2021 Q4 +15.3%)					
Transit Services	$ 1,470	$ 1,183	$ 854	$ 553	$ 0.70
Calculated 2022 D.C. Background Study					
Transit Services	$ 2,184	$ 1,720	$ 1,221	$ 750	$ 0.99
Difference					
Calculated - Current $	$ 909	$ 694	$ 480	$ 270	$ 0.38
Calculated - Current %	71%	68%	65%	56%	62%
Calculated - 2021 Q4 Indexed $	$ 714	$ 537	$ 367	$ 197	$ 0.29
Calculated - 2021 Q4 Indexed $	49%	45%	43%	36%	41%

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

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

7.1 Introduction

Subsection 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 D.C.s.

Subsection 5 (6) establishes the following restrictions on the rules:

- the total of all D.C.s that would be imposed on anticipated development must not exceed the capital costs determined under subsection 5 (1) 2-8 for all services involved;
- if the rules expressly identify a type of development, they must not provide for it to pay D.C.s that exceed the capital costs that arise from the increase in the need for service for that type of development; however, this requirement does not relate to any particular development; and
- if the rules provide for a type of development to have a lower D.C. than is allowed, the rules for determining D.C.s may not provide for any resulting shortfall to be made up via other development.

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

The rules provided are based on the 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 D.C. By-law Structure

It is recommended that:

- the Region impose a uniform municipal-wide D.C. calculation for transit services; and
- one municipal D.C. by-law be used for transit services.

7.3 D.C. By-law Rules

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

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

7.3.1 Payment in any Particular Case

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

"(a) the passing of a zoning by-law or of an amendment to a zoning by-law under section 34 of the *Planning Act*;

(b) the approval of a minor variance under section 45 of the *Planning Act*;

(c) a conveyance of land to which a by-law passed under subsection 50 (7) of the *Planning Act* applies;

(d) the approval of a plan of subdivision under section 51 of the *Planning Act*;

(e) a consent under section 53 of the *Planning Act*;

(f) the approval of a description under section 9 of the *Condominium Act, 1998*; or

(g) the issuing of a permit under the *Building Code Act, 1992* in relation to a building or structure."

7.3.2 Determination of the Amount of the Charge

The following conventions be adopted:

1) Costs allocated to residential uses will be assigned to different types of residential units based on the average occupancy for each housing type constructed during the previous decade. Costs allocated to non-residential uses will be assigned to non-residential uses based on the gross floor area constructed.

2) Costs allocated to residential and non-residential uses are based upon the attributions described in Section 4 herein.

7.3.3 Application to Redevelopment of Land (Demolition and Conversion)

If a development involves the demolition and replacement of a building or structure on the same site, or the conversion from one principal use to another, the developer shall be allowed a credit equivalent to:

1) the number of dwelling units demolished/converted multiplied by the applicable residential D.C. in place at the time the D.C. is payable; and/or

2) the G.F.A. of the building demolished/converted multiplied by the current non-residential D.C. in place at the time the D.C. is payable.

The redevelopment credit is provided if the land was improved by occupied structures, if the last use of the building being demolished would be subject to D.C.s under the Region's By-law and if the demolition permit related to the site was issued less than 10 years prior to the issuance of a building permit. The credit can, in no case, exceed the amount of D.C.s that would otherwise be payable.

7.3.4 Exemptions (full or partial)

a) Statutory exemptions:

- industrial building additions of up to and including 50% of the existing G.F.A. (defined in O. Reg. 82/98, section 1) of the building; for industrial building additions that exceed 50% of the existing G.F.A., only the portion

of the addition in excess of 50% is subject to D.C.s (subsection 4 (3) of the D.C.A.);
- buildings or structures owned by and used for the purposes of any municipality, local board, or Board of Education (section 3);
- 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 within or ancillary to existing residential buildings (as prescribed in section 2 of O. Reg. 82/98); and
- a second residential dwelling unit within or ancillary to prescribed new buildings as specified by O.Reg. 82/98.

b) Non-statutory exemptions:

- agricultural uses and farm buildings;
- places of worship;
- public hospitals receiving aid under the Public Hospitals Act R.S.O. 1990, c. P.40, excluding such buildings or structures or parts thereof used, designed or intended for use primarily for or in connection with a commercial purpose;
- any part of a building or structure used for the parking or loading of motor vehicles;
- free standing roof-like structures and canopies that do not have exterior walls; and
- land vested in or leased to a university that receives regular and ongoing operating funds from the government for the purposes of post-secondary education.

7.3.5 Phasing in

No provisions for phasing in the D.C. are provided in the D.C. by-law.

7.3.6 Timing of Collection

A D.C. that is applicable under section 5 of the D.C.A. 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 D.C. prior to the issuance of a permit or prior to the commencement of development or redevelopment as the case may be;

- where a building permits issued within 2 years of approval of a Site Plan or Zoning By-law Amendment, for an application submitted after December 31, 2019, the D.C. will determined based on charges in effect at the time of planning application submission;
- where a building permit is required for a rental housing or institutional development, the first installment is payable on the date of occupancy, with annual installments on the anniversary date each year thereafter for 5 years;
- where a building permit is required for a not-for-profit housing development, the first installment is payable on the date of occupancy, with annual installments on the anniversary date each year thereafter for 20 years; and
- despite the above, Council, from time to time and at any time, may enter into agreements providing for all or any part of a D.C. to be paid before or after it would otherwise be payable.

7.3.7 Indexing

Indexing of the D.C.s shall be implemented on a mandatory basis annually commencing on the first anniversary date of this by-law and each anniversary date thereafter, in accordance with the Statistics Canada Quarterly, Non-Residential Building Construction Price Index (Table 18-10-0135-01)[1] for the most recent year-over-year period ending March 31st.

7.3.8 D.C. Spatial Applicability

In accordance with the D.C.A., the Region gave consideration to area specific rating (refer to section 7.4.4).

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

7.4 Other D.C. By-law Provisions

It is recommended that:

7.4.1 Categories of Services for Reserve Fund and Credit Purposes

It is recommended that the Region's D.C. collections be contributed into one (1) reserve fund for Regional transit services.

7.4.2 By-law In-force Date

The proposed by-law under the D.C.A. will come into force on July 1, 2022.

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

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

7.4.4 Area Rating

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

1. Section 2 (9) of the D.C.A. now requires a municipality to implement area-specific D.C.s for either specific services which are prescribed and/or for specific municipalities which are to be regulated (note that at this time, no municipalities or services are prescribed by the regulations).

2. Section 10 (2) c.1 of the D.C.A. requires that "the development charges background study shall include consideration of the use of more than one development charge by-law to reflect different needs for services in different areas."

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

Presently, the Region's D.C. policy is to apply charges on a uniform Region-wide basis. The only exception to this policy is for area-specific D.C.s imposed in the Seaton Area for Water Supply and Sanitary Sewerage services to reflect their unique water supply and sanitary sewer servicing needs and to facilitate the related front-ending agreements as approved by Regional Council to enable these developments.

The use of area rating within the Transit Services D.C. Background Study have been considered. However the use of area specific development charges for transit services are not recommended for several reasons:

1. Typically, Regional services provided (e.g. transit, roads, police, emergency services, etc.) are not restricted to one specific area and are available for use by all residents. The Region's practice to impose Transit Service D.C.s on a uniform Region-wide basis reflects an integrated transit network that provides availability of service for use and access to places of work by urban and rural residents, and as such should have a D.C. funding attribution. Moreover the attribution to the rural transit area is in keeping with the property tax funding of components of public transit services. In addition, transit investments considered through the Region's Transportation Master Plan and On Demand service will provide more services to rural users.

2. An area charge could potentially cause 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 and C. This may result in distortions between receipts and the level of service in each area.

3. General municipal D.C. practice reflects the use of uniform municipal-wide transit development charges. This reflects the benefits of an integrated network to a municipality as a whole even where service is not directly provided and the broader indirect benefits to unserviced areas arising from the economic growth, intensification and reduced emissions resulting from public transit investments.

4. There are economies of scale benefits associated with uniform D.C.s as well. Uniform D.C. reserve funds imposed on broader service areas provide larger

funding pools for growth-related projects. Area-specific D.C.s, imposed on smaller service areas, would have separate D.C. reserve funds limiting revenues only to development within the defined area. As such, these smaller funding pools may present delays in service enhancements until sufficient revenues can be collected from the smaller benefiting area.

For the reasons noted above, it is recommended that Council continue the D.C. approach to calculate and impose the charges on a uniform Region-wide basis.

7.5 Other Recommendations

Recommendations for Council's consideration and adoption, include the following:

"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 transit services;"

"Approve the capital project listing set out in Chapter 5 of the D.C.s Background Study dated April 12, 2022, subject to further annual review during the capital budget process;"

"Approve the D.C.s Background Study dated April 12, 2022, as amended (if applicable) as an expression of Council that it intends to meet the increase in need for transit services;"

"Determine that no further public meeting is required;" and

"Approve the D.C. By-law as set out in Appendix F."

Chapter 8
By-law Implementation

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 D.C. on development from a generic viewpoint.

8.1.2 Public Meeting of Council

Section 12 of the D.C.A. indicates that before passing a D.C. by-law, Council must hold at least one public meeting, giving at least 20 clear days' notice thereof, in accordance with the regulation. Council must also ensure that the proposed by-law and background report are made available to the public at least two weeks prior to the (first) meeting. The amended legislation further requires that the D.C. background study must be posted on the municipal website at least 60 days prior to passage of the D.C. by-law.

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 Local Planning Appeal Tribunal (LPAT) (formerly the Ontario Municipal Board (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 D.C. 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 D.C. revenues. Others, such as realtors, are directly impacted by D.C. policy. They are, therefore, potentially interested in all aspects of the charge, particularly the quantum by unit type, projects to be funded by the D.C. and the timing thereof, and 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 D.C. policy. Their primary concern is frequently with the quantum of the charge, G.F.A. exclusions such as basements, mechanical or indoor parking areas, or exemptions and phase-in or capping provisions in order to moderate the impact.

8.2 Implementation Requirements

8.2.1 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 that follow overview the requirements in each case.

8.2.2 Notice of Passage

In accordance with section 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;
- subsection 10 (4) lists the persons/organizations who must be given notice; and
- subsection 10 (5) lists the eight items that the notice must cover.

8.2.3 By-law Pamphlet

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

- a description of the general purpose of the D.C.s;
- the "rules" for determining if a charge is payable in a particular case and for determining the amount of the charge;
- the services to which the D.C.s relate; and
- a description of the general purpose of the Treasurer's statement and where it may be received by the public.

Where a by-law is not appealed to the LPAT, 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.

8.2.4 Appeals

Sections 13 to 19 of the D.C.A. set out the requirements relative to making and processing a D.C. by-law appeal and LPAT hearing in response to an appeal. Any person or organization may appeal a D.C. by-law to the LPAT by filing a notice of appeal with the Region 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 that come forward as part of that process, thereby avoiding or reducing the need for an appeal to be made.

8.2.5 Complaints

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

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

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

8.2.6 Credits

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

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

8.2.7 Front-Ending Agreements

The Region and one or more landowners may enter into a front-ending agreement that provides for the costs of a project which will benefit an area in the 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 the future with offsetting D.C. credits.

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

8.2.8 Severance and Subdivision Agreement Conditions

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

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

In this regard, if the 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 Region D.C.s 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 that can impose a D.C.

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

Appendices

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

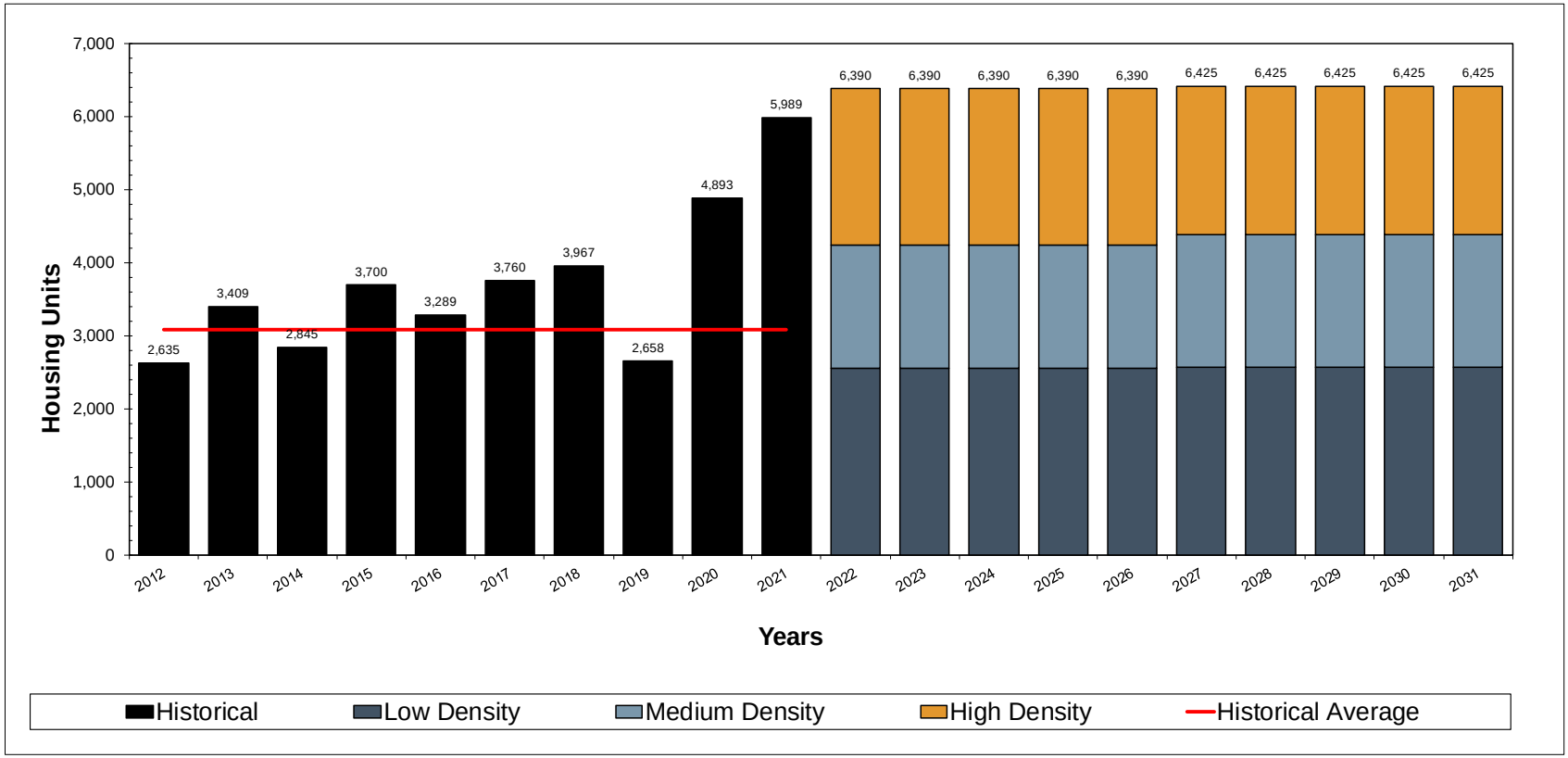
Schedule 1
Durham Region
Residential Growth Forecast Summary

	Year	Population (Including Census Undercount)[1]	Excluding Census Undercount			Housing Units					Person Per Unit (P.P.U.): Total Population/ Total Households
			Population	Institutional Population	Population Excluding Institutional Population	Singles & Semi-Detached	Multiple Dwellings[2]	Apartments[3]	Other	Total Households	
Historical	*Mid 2006*	582,510	561,258	5,163	556,095	142,690	24,940	26,565	465	194,660	2.883
	Mid 2011	631,150	608,124	6,514	601,610	156,411	29,477	27,482	376	213,746	2.845
	Mid 2016	670,320	645,862	6,372	639,490	164,650	33,115	29,740	400	227,905	2.834
Forecast	*Mid 2022*	726,990	700,465	6,963	693,502	174,484	39,897	37,680	400	252,461	2.775
	Mid 2027	817,910	788,070	7,811	780,259	187,266	48,344	48,401	400	284,411	2.771
	Mid 2032	906,810	873,725	8,666	865,059	200,114	57,419	58,602	400	316,536	2.760
Incremental	**Mid 2006 - Mid 2011**	**48,640**	**46,866**	**1,351**	**45,515**	**13,721**	**4,537**	**917**	**-89**	**19,086**	
	Mid 2011 - Mid 2016	**39,170**	**37,738**	**-142**	**37,880**	**8,239**	**3,638**	**2,258**	**24**	**14,159**	
	Mid 2016 - Mid 2022	**56,670**	**54,603**	**591**	**54,012**	**9,834**	**6,782**	**7,940**	**0**	**24,556**	
	Mid 2022 - Mid 2027	**90,920**	**87,605**	**848**	**86,757**	**12,782**	**8,447**	**10,721**	**0**	**31,950**	
	Mid 2022 - Mid 2032	**179,820**	**173,260**	**1,703**	**171,557**	**25,630**	**17,522**	**20,922**	**0**	**64,075**	

Source : Watson & Assoicates Economists Ltd., 2022

[1] Census undercount estimated at approximately 3.8%. Note: Population including the undercount has been rounded.
[2] Includes townhouses and apartments in duplexes.
[3] Includes bachelor, 1-bedroom and 2-bedroom+ apartments.

Figure A-1
Durham Region
Annual Housing Forecast



Source: Historical housing activity derived from Statistics Canada building permit data for the Durham Region , 2012-2021.
[1] Growth forecast represents calendar year.

Schedule 2
Durham Region
Current Year Growth Forecast, Mid-2016 to Mid-2022

			Population
Mid 2016 Population			645,862
Occupants of New Housing Units, Mid 2016 to Mid 2022	*Units (2)*	24,556	
	multiplied by P.P.U. (3)	2.596	
	gross population increase	63,744	63,744
Occupants of New Equivalent Institutional Units, Mid 2016 to Mid 2022	*Units*	537	
	multiplied by P.P.U. (3)	1.100	
	gross population increase	590	590
Decline in Housing Unit Occupancy, Mid 2016 to Mid 2022	*Units (4)*	227,905	
	multiplied by P.P.U. decline rate (5)	-0.043	
	total decline in population	-9,731	-9,731
Population Estimate to Mid 2022			700,465
Net Population Increase, Mid 2016 to Mid 2022			*54,603*

(1) 2016 population based on Statistics Canada Census unadjusted for Census undercount.

(2) Estimated residential units constructed, Mid-2016 to the beginning of the growth period assuming a six-month lag between construction and occupancy.

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

Structural Type	Persons Per Unit[1] (P.P.U.)	% Distribution of Estimated Units[2]	Weighted Persons Per Unit Average
Singles & Semi Detached	3.496	40%	1.400
Multiples (6)	2.635	28%	0.728
Apartments (7)	1.448	32%	0.468
Total		100%	2.596

[1] Based on 2016 Census custom database

[2] Based on Building permit/completion activity

(4) 2016 households taken from Statistics Canada Census.

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

(6) Includes townhouses and apartments in duplexes.

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

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

Schedule 3
Durham Region
Five-Year Growth Forecast, Mid-2022 to Mid-2027

			Population
Mid 2022 Population			700,465
Occupants of New Housing Units, Mid 2022 to Mid 2027	*Units (2)*	31,950	
	multiplied by P.P.U. (3)	2.576	
	gross population increase	82,301	82,301
Occupants of New Equivalent Institutional Units, Mid 2022 to Mid 2027	*Units*	771	
	multiplied by P.P.U. (3)	1.100	
	gross population increase	848	848
Incline in Housing Unit Occupancy, Mid 2022 to Mid 2027	*Units (4)*	252,461	
	multiplied by P.P.U. incline rate (5)	0.018	
	total incline in population	4,456	4,456
Population Estimate to Mid 2027			788,070
Net Population Increase, Mid 2022 to Mid 2027			*87,605*

(1) Mid 2022 Population based on:

2016 Population (645,862) + Mid 2016 to Mid 2022 estimated housing units to beginning of forecast period (24,556 x 2.596 = 63,744) + (537 x 1.1 = 590) + (227,905 x -0.043 = -9,731) = 700,465

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

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

Structural Type	Persons Per Unit[1] (P.P.U.)	% Distribution of Estimated Units[2]	Weighted Persons Per Unit Average
Singles & Semi Detached	3.351	40%	1.341
Multiples (6)	2.639	26%	0.698
Apartments (7)	1.602	34%	0.538
one bedroom or less	1.151		
two bedrooms or more	1.874		
Total		100%	2.576

[1] Persons per unit based on adjusted Statistics Canada Custom 2016 Census database.

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

(4) Mid 2022 households based upon 2016 Census (227,905 units) + Mid 2016 to Mid 2022 unit estimate (24,556 units) = 252,461 units.

(5) The Region's P.P.U. overall is declining, however, the average P.P.U. in existing households in anticipated to increase as the occupants of existing dwellings turnover to accommodate growing demand from families.

(6) Includes townhouses and apartments in duplexes.

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

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

Schedule 4
Durham Region
Ten-Year Growth Forecast, Mid-2022 to Mid-2032

			Population
Mid 2022 Population			700,465
Occupants of New Housing Units, Mid 2022 to Mid 2032	*Units (2)*	64,075	
	multiplied by P.P.U. (3)	2.585	
	gross population increase	165,652	165,652
Occupants of New Equivalent Institutional Units, Mid 2022 to Mid 2032	*Units*	1,548	
	multiplied by P.P.U. (3)	1.100	
	gross population increase	1,703	1,703
Incline in Housing Unit Occupancy, Mid 2022 to Mid 2032	*Units (4)*	252,461	
	multiplied by P.P.U. incline rate (5)	0.023	
	total incline in population	5,905	5,905
Population Estimate to Mid 2032			873,725
Net Population Increase, Mid 2022 to Mid 2032			*173,260*

(1) Mid 2022 Population based on:

2016 Population (645,862) + Mid 2016 to Mid 2022 estimated housing units to beginning of forecast period (24,556 x 2.596 = 63,744) + (537 x 1.1 = 590) + (227,905 x -0.043 = -9,731) = 700,465

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

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

Structural Type	Persons Per Unit[1] (P.P.U.)	% Distribution of Estimated Units[2]	Weighted Persons Per Unit Average
Singles & Semi Detached	3.351	40%	1.340
Multiples (6)	2.639	27%	0.722
Apartments (7)	1.602	33%	0.523
one bedroom or less	1.151		
two bedrooms or more	1.874		
Total		100%	2.585

[1] Persons per unit based on adjusted Statistics Canada Custom 2016 Census database.

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

(4) Mid 2022 households based upon 2016 Census (227,905 units) + Mid 2016 to Mid 2022 unit estimate (24,556 units) = 252,461 units.

(5) The Region's P.P.U. overall is declining, however, the average P.P.U. in existing households in anticipated to increase as the occupants of existing dwellings turnover to accommodate growing demand from families.

(6) Includes townhouses and apartments in duplexes.

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

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

Schedule 5
Durham Region
Historical Residential Building Permits
Years 2012 to 2021

Year	Residential Building Permits			
	Singles & Semi Detached	Multiples[1]	Apartments[2]	Total
2012	2,022	395	218	2,635
2013	1,586	380	1,443	3,409
2014	1,900	590	355	2,845
2015	1,862	510	1,328	3,700
2016	1,668	670	951	3,289
Sub-total	9,038	2,545	4,295	15,878
Average (2012 - 2016)	***1,808***	***509***	***859***	***3,176***
% Breakdown	56.9%	16.0%	27.1%	100.0%
2017	1,644	1,120	996	3,760
2018	1,213	1,151	1,603	3,967
2019	1,587	735	336	2,658
2020	1,566	1,052	2,275	4,893
2021	2,156	2,054	1,779	5,989
Sub-total	8,166	6,112	6,989	21,267
Average (2017 - 2021)	***1,633***	***1,222***	***1,398***	***4,253***
% Breakdown	38.4%	28.7%	32.9%	100.0%
2012 - 2021				
Total	17,204	8,657	11,284	37,145
Average	***1,720***	***866***	***1,128***	***3,715***
% Breakdown	46.3%	23.3%	30.4%	100.0%

Source: Statistics Canada Publication, 64-001XIB

[1] Includes townhouses and apartments in duplexes.

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

Schedule 6
Durham Region
Person Per Unit by Age and Type of Dwelling
(2016 Census)

Age of Dwelling	Singles and Semi-Detached						
	< 1 BR	1 BR	2 BR	3/4 BR	5+ BR	Total	25 Year Average Adjusted
1-5	-	-	2.149	3.446	4.933	**3.496**	
6-10	-	1.615	2.076	3.491	4.628	**3.534**	
11-15	-	1.737	1.954	3.359	4.525	**3.410**	
16-20	-	-	1.904	3.236	4.339	**3.262**	
20-25	-	1.417	1.978	3.183	4.313	**3.260**	3.351
25-35	-	1.606	1.929	3.002	4.072	**3.067**	
35+	-	1.492	1.900	2.651	3.797	**2.613**	
Total	**3.750**	**1.550**	**1.931**	**3.024**	**4.216**	**3.035**	

Age of Dwelling	Multiples[1]						
	< 1 BR	1 BR	2 BR	3/4 BR	5+ BR	Total	25 Year Average Adjusted
1-5	-	1.400	1.947	2.801	-	**2.635**	
6-10	-	1.333	1.694	2.957	-	**2.760**	
11-15	-	1.533	1.707	2.794	4.818	**2.728**	
16-20	-	1.400	2.060	2.690	4.360	**2.607**	
20-25	-	1.360	1.968	2.805	4.696	**2.671**	2.639
25-35	-	1.235	2.060	2.944	4.074	**2.822**	
35+	0.429	1.296	1.916	2.688	3.625	**2.462**	
Total	**1.000**	**1.320**	**1.915**	**2.794**	**4.042**	**2.628**	

Age of Dwelling	Apartments[2]						
	< 1 BR	1 BR	2 BR	3/4 BR	5+ BR	Total	25 Year Average Adjusted
1-5	-	1.113	1.713	-	-	**1.448**	
6-10	-	1.161	1.576	2.621	-	**1.548**	
11-15	-	1.215	1.593	3.276	-	**1.715**	
16-20	-	1.236	1.829	3.222	-	**1.821**	
20-25	-	1.168	1.835	2.687	-	**1.680**	1.602
25-35	-	1.181	1.807	2.576	-	**1.705**	
35+	1.333	1.200	1.871	2.675	3.452	**1.802**	
Total	**1.370**	**1.189**	**1.824**	**2.693**	**3.592**	**1.746**	

Age of Dwelling	All Density Types					
	< 1 BR	1 BR	2 BR	3/4 BR	5+ BR	Total
1-5	1.500	1.226	1.904	3.306	4.888	**3.158**
6-10	-	1.259	1.810	3.380	4.626	**3.248**
11-15	-	1.374	1.799	3.262	4.535	**3.224**
16-20	-	1.331	1.909	3.143	4.347	**3.044**
20-25	-	1.208	1.893	3.105	4.344	**2.906**
25-35	-	1.218	1.878	2.988	4.059	**2.878**
35+	1.447	1.252	1.889	2.657	3.740	**2.440**
Total	**1.607**	**1.249**	**1.880**	**2.981**	**4.183**	**2.806**

[1] Includes townhouses and apartments in duplexes.

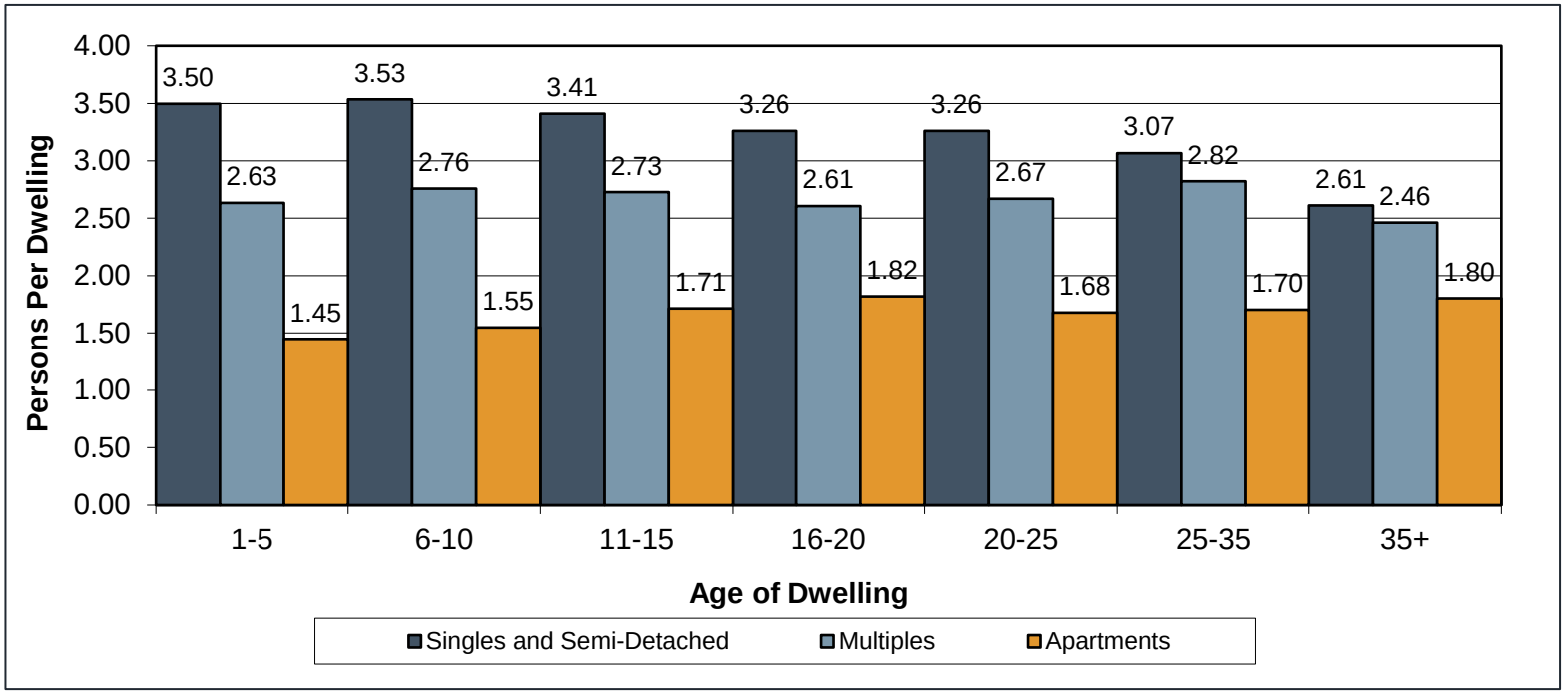
[2] Includes bachelor, 1 bedroom and 2 bedroom+ apartments.

[3] Adjusted based on 2001-2016 historical trends.

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

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

Schedule 7
Durham Region
Person Per Unit Structural Type and Age of Dwelling
(2016 Census)



Schedule 8a
Durham Region
Employment Forecast, 2022 to 2032

Period	Population	Activity Rate								Employment								Employment
		Primary	Work at Home	Industrial	Commercial/ Population Related	Institutional	Total	N.F.P.O.W.[1]	Total Including NFPOW	Primary	Work at Home	Industrial	Commercial/ Population Related	Institutional	Total	N.F.P.O.W.[1]	Total Employment (Including N.F.P.O.W.)	Total (Excluding Work at Home and N.F.P.O.W.)
Mid 2006	561,258	0.003	0.033	0.107	0.126	0.071	0.339	0.037	0.376	1,565	18,465	59,898	70,553	39,625	190,105	20,691	210,796	171,640
Mid 2011	608,124	0.002	0.031	0.079	0.121	0.077	0.312	0.038	0.350	1,425	19,105	48,323	73,623	47,070	189,545	23,278	212,823	170,440
Mid 2016	645,862	0.003	0.034	0.074	0.119	0.076	0.305	0.041	0.346	1,920	21,850	47,563	76,863	49,020	197,215	26,370	223,585	175,365
Mid 2022	700,465	0.003	0.034	0.074	0.119	0.072	0.301	0.041	0.342	2,080	24,480	51,708	85,692	54,895	218,855	29,004	247,859	194,375
Mid 2027	788,070	0.003	0.033	0.073	0.118	0.067	0.294	0.041	0.335	2,131	26,918	59,876	96,276	61,518	246,719	33,082	279,801	219,801
Mid 2032	873,725	0.002	0.033	0.072	0.116	0.064	0.288	0.040	0.327	2,175	29,734	67,450	108,235	69,244	276,838	37,188	314,026	247,104
Incremental Change																		
Mid 2006 - Mid 2011	46,866	0.000	-0.001	-0.027	-0.005	0.007	-0.027	0.001	-0.026	-140	640	-11,575	3,070	7,445	-560	2,587	2,027	-1,200
Mid 2011 - Mid 2016	37,738	0.0006	0.0024	-0.0058	-0.0021	-0.0015	-0.0063	0.0026	-0.0038	495	2,745	-760	3,240	1,950	7,670	3,092	10,762	4,925
Mid 2016 - Mid 2022	54,603	0.0000	0.0000	-0.0001	-0.0001	-0.0040	-0.0042	-0.0001	-0.0043	160	2,630	4,146	8,830	5,875	21,640	2,634	24,274	19,010
Mid 2022 - Mid 2027	87,605	-0.0003	-0.0005	-0.0001	-0.0014	-0.0050	-0.0073	-0.0001	-0.0074	51	2,438	8,168	10,584	6,623	27,864	4,078	31,942	25,426
Mid 2022 - Mid 2032	173,260	-0.0005	-0.0010	-0.0011	-0.0029	-0.0080	-0.0135	-0.0011	-0.0146	95	5,254	15,742	22,543	14,349	57,983	8,184	66,167	52,729
Annual Average																		
Mid 2006 - Mid 2011	9,373	-0.00009	-0.00030	-0.00545	-0.00093	0.00136	-0.00540	0.00028	-0.00512	-28	128	-2,315	614	1,489	-112	517	405	-240
Mid 2011 - Mid 2016	7,548	0.0001	0.0005	-0.0012	-0.0004	-0.0003	-0.0013	0.0005	-0.0008	99	549	-152	648	390	1,534	618	2,152	985
Mid 2016 - Mid 2022	9,101	0.0000	0.0000	0.0000	0.0000	-0.0007	-0.0007	0.0000	-0.0007	27	438	691	1,472	979	3,607	439	4,046	3,168
Mid 2022 - Mid 2027	17,521	-0.00005	-0.00010	-0.00002	-0.00028	-0.00100	-0.00145	-0.00002	-0.00147	10	488	1,634	2,117	1,325	5,573	816	6,388	5,085
Mid 2022 - Mid 2032	17,326	-0.00005	-0.00010	-0.00011	-0.00029	-0.00080	-0.00135	-0.00011	-0.00146	10	525	1,574	2,254	1,435	5,798	818	6,617	5,273

Source : Watson & Assoicates Economists Ltd., 2022

[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.

Schedule 8b
Durham Region
Employment and Gross Floor Area (G.F.A.) Forecast, 2022 to 2032

Period	Population	Employment						Gross Floor Area in Square Feet (Estimated)[1]				
		Primary	Work at Home	Industrial	Commercial/ Population Related	Institutional	Total	Primary	Industrial	Commercial/ Population Related	Institutional	Total
Mid 2006	561,258	1,565	18,465	59,898	70,553	39,625	190,105					
Mid 2011	608,124	1,425	19,105	48,323	73,623	47,070	189,545					
Mid 2016	645,862	1,920	21,850	47,563	76,863	49,020	197,215					
Mid 2022	700,465	2,080	24,480	51,708	85,692	54,895	218,855					
Mid 2027	788,070	2,131	26,918	59,876	96,276	61,518	246,719					
Mid 2032	873,725	2,175	29,734	67,450	108,235	69,244	276,838					
Incremental Change												
Mid 2006 - Mid 2011	46,866	-140	640	-11,575	3,070	7,445	-560					
Mid 2011 - Mid 2016	37,738	495	2,745	-760	3,240	1,950	7,670					
Mid 2016 - Mid 2022	54,603	160	2,630	4,146	8,830	5,875	21,640					
Mid 2022 - Mid 2027	87,605	51	2,438	8,168	10,584	6,623	27,864	102,000	10,688,000	4,476,300	4,423,500	19,689,800
Mid 2022 - Mid 2032	173,260	95	5,254	15,742	22,543	14,349	57,983	196,000	20,586,500	9,526,800	9,584,500	39,893,800
Annual Average												
Mid 2006 - Mid 2011	9,373	-28	128	-2,315	614	1,489	-112					
Mid 2011 - Mid 2016	7,548	99	549	-152	648	390	1,534					
Mid 2016 - Mid 2022	9,101	27	438	691	1,472	979	3,607					
Mid 2022 - Mid 2027	17,521	10	488	1,634	2,117	1,325	5,573	20,400	2,137,600	895,260	884,700	3,937,960
Mid 2022 - Mid 2032	17,326	10	525	1,574	2,254	1,435	5,798	19,600	2,058,650	952,680	958,450	3,989,380

Source : Watson & Assoicates Economists Ltd., 2022

[1] Square Foot Per Employee

Primary	2,000
Industrial	1,310
Commercial	420
Institutional	670

* Reflects Mid 2022 to Mid 2032 forecast period

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

Schedule 9
Durham Region
Non-Residential Construction Value
Years 2007 to 2016
(000's 2018 $)

YEAR	Industrial				Commercial				Institutional				Total			
	New	Improve	Additions	Total	New	Improve	Additions	Total	New	Improve	Additions	Total	New	Improve	Additions	Total
2007	40,464	94,656	2,229	137,350	116,458	44,678	5,290	166,426	48,315	13,501	81,360	143,177	205,238	152,836	88,880	446,953
2008	58,971	12,420	27,360	98,751	178,718	40,107	14,543	233,368	54,228	16,994	40,362	111,583	291,916	69,522	82,265	443,703
2009	66,456	3,127	5,822	75,405	71,979	41,933	5,198	119,110	59,227	98,357	65,726	223,311	197,662	143,417	76,746	417,825
2010	22,817	8,785	836	32,439	74,300	55,225	49,110	178,635	57,672	43,066	32,119	132,857	154,790	107,076	82,065	343,931
2012	115,855	10,867	5,009	131,732	109,639	86,418	7,921	203,978	123,033	66,043	13,672	202,748	348,528	163,328	26,603	538,458
2013	170,754	10,986	12,995	194,736	61,803	75,135	11,820	148,758	44,471	29,874	21,721	96,065	277,028	115,995	46,536	439,559
2014	68,926	13,367	21,466	103,759	155,896	49,340	144,542	349,778	68,209	28,174	12,266	108,649	293,031	90,881	178,274	562,186
2015	94,677	6,071	209	100,957	37,381	47,060	10,030	94,471	22,080	15,247	326	37,653	154,138	68,378	10,565	233,081
2016	27,861	4,332	3,760	35,953	46,000	73,112	14,032	133,145	86,521	23,729	35,162	145,411	160,382	101,173	52,955	314,509
Subtotal	728,090	172,809	82,516	983,414	#######	586,218	298,372	#######	593,926	376,076	312,850	1,282,851	2,349,751	#######	693,738	4,178,592
Percent of Total	74%	18%	8%	100%	54%	31%	16%	100%	46%	29%	24%	100%	56%	27%	17%	100%
Average	***72,809***	***17,281***	***8,252***	***98,341***	***102,774***	***58,622***	***29,837***	***191,233***	***59,393***	***37,608***	***31,285***	***128,285***	***234,975***	***113,510***	***69,374***	***417,859***
2007 - 2011																
Period Total				416,278				982,197				692,324				2,090,798
2007 - 2011 Average				***83,256***				***196,439***				***138,465***				***418,160***
% Breakdown				19.9%				47.0%				33.1%				100.0%
2012 - 2016																
Period Total				567,136				930,129				590,528				2,087,793
2012 - 2016 Average				***113,427***				***186,026***				***118,106***				***417,559***
% Breakdown				27.2%				44.6%				28.3%				100.0%
2007 - 2016																
Period Total				983,414				#######				1,282,851				4,178,592
2007 - 2016 Average				***98,341***				***191,233***				***128,285***				***417,859***
% Breakdown				23.5%				45.8%				30.7%				100.0%

Source: Statistics Canada Publication, 64-001-XIB

Note: Inflated to year-end 2017 (January, 2018) dollars using Reed Construction Cost Index

Schedule 10
Durham Region
Employment to Population Ratio by Major Employment Sector, 2006 to 2016

NAICS		Year			Change		Comments
		2006	2011	2016	06-11	11-16	
	Employment by industry						
	Primary Industry Employment						
11	*Agriculture, forestry, fishing and hunting*	2,765	2,325	2,650	-440	325	Categories which relate to local land-based resources
21	*Mining and oil and gas extraction*	210	135	370	-75	235	
	Sub-total	**2,975**	**2,460**	**3,020**	**-515**	**560**	
	Industrial and Other Employment						
22	*Utilities*	8,960	9,825	8,935	865	-890	
23	*Construction*	6,290	6,145	8,300	-145	2,155	
31-33	*Manufacturing*	30,605	19,930	17,745	-10,675	-2,185	Categories which relate primarily to industrial land supply and demand
41	*Wholesale trade*	7,790	7,820	6,440	30	-1,380	
48-49	*Transportation and warehousing*	6,600	5,975	7,265	-625	1,290	
56	*Administrative and support*	3,733	3,480	3,725	-253	245	
	Sub-total	**63,978**	**53,175**	**52,410**	**-10,803**	**-765**	
	Population Related Employment						
44-45	*Retail trade*	28,300	29,460	29,805	1,160	345	
51	*Information and cultural industries*	2,755	3,745	3,425	990	-320	
52	*Finance and insurance*	5,350	6,310	6,540	960	230	
53	*Real estate and rental and leasing*	3,935	3,945	3,885	10	-60	
54	*Professional, scientific and technical services*	9,920	10,445	12,125	525	1,680	Categories which relate primarily to population growth within the municipality
55	*Management of companies and enterprises*	125	175	250	50	75	
56	*Administrative and support*	3,733	3,480	3,725	-253	245	
71	*Arts, entertainment and recreation*	4,580	5,060	5,385	480	325	
72	*Accommodation and food services*	12,875	13,065	15,915	190	2,850	
81	*Other services (except public administration)*	9,100	8,550	9,030	-550	480	
	Sub-total	**80,673**	**84,235**	**90,085**	**3,563**	**5,850**	
	Institutional						
61	*Educational services*	14,800	16,650	17,650	1,850	1,000	
62	*Health care and social assistance*	19,170	22,340	24,315	3,170	1,975	
91	*Public administration*	8,510	10,685	9,735	2,175	-950	
	Sub-total	**42,480**	**49,675**	**51,700**	**7,195**	**2,025**	
	Total Employment	**190,105**	**189,545**	**197,215**	**-560**	**7,670**	
	Population	**561,258**	**608,124**	**645,862**	**46,866**	**37,738**	
	Employment to Population Ratio						
	Industrial and Other Employment	**0.11**	**0.09**	**0.08**	**-0.03**	**-0.01**	
	Population Related Employment	**0.14**	**0.14**	**0.14**	**-0.01**	**0.00**	
	Institutional Employment	**0.08**	**0.08**	**0.08**	**0.01**	**0.00**	
	Primary Industry Employment	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	
	Total	**0.34**	**0.31**	**0.31**	**-0.03**	**-0.01**	

Source: Statistics Canada Employment by Place of Work
Note: 2006-2016 employment figures are classified by North American Industry Classification System (NAICS) Code

Appendix B
Long-Term Capital and Operating Cost Examination

Appendix B: Long-Term Capital and Operating Cost Examination

As a requirement of the D.C.A. under s. 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 D.C. As part of this analysis, it was deemed necessary to isolate the incremental operating expenditures directly associated with these capital projects, factor in cost savings attributable to economies of scale or cost sharing where applicable and prorate the cost on a per BRT/conventional bus basis. This was undertaken through a review of the Region's 2022 Operating Budget and the A.M.P. included in Appendix E.

In addition to the operational impacts, over time the initial capital projects will require replacement. This replacement of capital is often referred to as lifecycle cost. By definition, lifecycle costs are all the costs that are incurred during the life of a physical asset, from the time its acquisition is first considered, to the time it is taken out of service for disposal or redeployment. The A.M.P. identified that the incremental growth-related assets included in the D.C. capital program would not require replacement during the 10-year forecast period. However, to acknowledge this incremental cost obligation when assets reach their useful life expectancy, condition or level of service performance, a sinking fund method is included herein. The sinking fund method 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 Type	Lifecycle Cost Factors	
	Average Useful Life	Factor
DRT Facilities and Terminals	50	0.031823226
Transit Stops and Transfer Hubs	20	0.061157500
BRT and Conventional Buses	12	0.094559579
Specialized Buses	7	0.154511980
Systems	10	0.111329365

Table B-1 depicts the annual operating impact resulting from the proposed D.C. 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 and employment, the costs associated with the new infrastructure (i.e. buses and facilities) would be delayed until the time these works are in place.

Table B-1
Region of Durham
Operating and Capital Expenditure Impacts
for Regional Transit Services D.C. Recoverable Capital Expenditures

	2022-2032 GROSS COST LESS BENEFIT TO EXISTING	ANNUAL LIFECYCLE EXPENDITURES	ANNUAL MAINTENANCE EXPENDITURES	ANNUAL OPERATING EXPENDITURES	TOTAL ANNUAL EXPENDITURES
Regional Transit Service					
Fleet, Stops and Transfer Hubs	52,618,307	4,753,245	5,181,761	14,957,165	24,892,171
Facilities and Terminals	114,383,490	3,640,051	1,751,479	5,055,649	10,447,180
Systems	3,268,225	363,844	incld. above	-	363,844
Studies	561,500	-	-	-	-
Total	**170,831,522**	**8,757,140**	**6,933,240**	**20,012,814**	**35,703,195**

Annual Operating Expenditures based on Region of Durham 2022 Operating Budget

Appendix C
Local Service Policy

Appendix C: Local Service Policy

Definitions

"Abutting service" shall include a service either existing or proposed, that is either located on a road allowance outside the limit of a development but abuts the development or located on a road allowance within the limit of a development but abuts other lands outside the development.

"External service" shall include a service, either existing or proposed, that is located outside the limit of a development but shall not include abutting service.

"Internal service" shall include a service, either existing or proposed, that is located within the limit of a development but shall not include an abutting service.

"Regional road" shall be a road and related appurtenances that form part of the road system under the jurisdiction and control of the Regional Municipality of Durham and designed in accordance with Regional standards, which may include B.R.T. corridors, transit priority measures (e.g. queue jump lanes, transit signal priority), transit lanes and lay-bys.

Oversizing/External/Abutting Services

Regional Road-related improvements required to service Regional transit will be applied in keeping with the Region's existing version of the Cost Sharing Policy for Regional Services, subject to the following amendments:

a) The definition of "Regional road" is expanded to include the words ", which may include B.R.T. corridors, transit priority measures (e.g. queue jump lanes, transit signal priority), transit lanes and lay-bys", as shown in the above definition.

b) Oversizing/External/Abutting Services

   The Region cost shares (with funding largely from development charge revenue) the portion of those services which are sized or located so as to benefit lands beyond the proposed development. These include: services which are oversized beyond the minimum size required by the development or the minimum size permitted by the Regional Design Guidelines, whichever is larger; services which

are external to, or not required by the development; and services which abut the development and provide direct service to adjacent lands.

The developer funds the minimum size of services required for the subject development, or the Regional Design Guideline minimum size, whichever is larger, in the case of internal, external or abutting service oversizing.

Transit stop-related improvements (pads, shelters, signs, etc.) required to Service Regional Transit are subject to the following policies:

a) transit stops located internal to or abutting a development are a local service and a direct responsibility of the developer to emplace or fund as a condition of development approval.

b) transit stops external to a development and benefiting lands beyond the proposed development are a Regional funding responsibility and will be funded by D.C. to the extent permitted under the D.C.A.

c) upgrades to existing transit stops are a Regional funding responsibility and will be funded by D.C. to the extent permitted under the D.C.A.

Appendix D
Technical Study for Regional Transit Service Development Charges Background Study – HDR Inc.

Technical Study for Regional Transit Service Development Charges Background Study

Regional Municipality of Durham

REPORT

April 12, 2022

Contents

1 Introduction

The Region of Durham is preparing the 2022 Background Study for the Regional Transit Service Development Charges By-Law. This technical report documents the transit service requirements for the background study, including the growth-related transit program, approach to deductions and allocations, and costs for the transit- related capital program.

2 Population and Employment Forecast

Updated population and employment projections by traffic zone for 2022, 2027, and 2032 were developed by Watson & Associates for the 2022 Development Charges study. The projections were updated to reflect the current pace of development in Durham Region and anticipated growth over the next 10 years.

The current population projections, shown in **Table 2-1**, assume that the 2031 population forecast of 960,000 in the Durham Regional Official Plan will be achieved in 2033.

Table 2-1: Population Forecasts

Municipality	DC Population Forecast		
	2022	2027	2032
Ajax	129,689	138,987	147,653
Brock	13,385	14,267	15,062
Clarington	106,766	123,198	139,413
Oshawa	177,982	194,144	209,761
Pickering	108,991	135,457	161,888
Scugog	22,651	23,806	24,856
Uxbridge	22,817	24,085	25,218
Whitby	144,708	163,969	182,957
Durham Region	**726,989**	**817,913**	**906,808**
Growth (from 2022)		**+12.5%**	**+24.7%**

Includes Census undercount.
Source: Watson & Associates Economists Ltd. (December 3, 2021).

For employment, the current projections shown in **Table 2-2** assume that the 2031 employment forecast of 350,000 in the Durham Regional Official Plan will be achieved in 2037. For the travel demand modelling, the population and employment projections are allocated to traffic zones. The employment projections allocated to traffic zones include people who work at home but excludes people that do not have a regular fixed work location, classified as No Fixed Place of Work (NFPOW).

Table 2-2: Employment Forecasts

Municipality	DC Employment Forecast (excluding NFPOW)			DC Employment Forecast (including NFPOW)		
	2022	2027	2032	2022	2027	2032
Ajax	32,575	36,974	41,545	37,950	43,085	48,377
Brock	3,658	3,858	4,057	4,163	4,382	4,602
Clarington	25,707	31,216	37,104	29,968	36,294	43,010
Oshawa	59,154	63,846	69,006	66,258	71,601	77,443
Pickering	38,301	44,545	51,472	42,508	49,553	57,297
Scugog	6,765	7,055	7,281	7,683	8,014	8,259
Uxbridge	6,476	6,750	6,980	7,377	7,673	7,923
Whitby	46,219	52,475	59,393	51,952	59,199	67,115
Durham Region	**218,855**	**246,719**	**276,838**	**247,859**	**279,801**	**314,026**
Growth (from 2022)		**+12.7%**	**+26.5%**		**+12.9%**	**+26.7%**

Source: Watson & Associates Economists Ltd. (December 22, 2021).

3 Model Assumptions and Demand Forecasts

3.1 Durham Region Transportation Planning Model

The Durham Region Transportation Planning Model (DRTPM) is a strategic planning model used by the Region to support transportation forecasting and planning, including transportation master plans, corridor planning/Environmental Assessment (EA) studies, and focused area studies such as Secondary Plans or Part II Plans, Major Transit Station Area (MTSA) studies, or transportation impact studies.

The DRTPM was recently updated and calibrated to the 2016 base year. This corresponds with the most recent available year of travel characteristics data from the Transportation Tomorrow Survey and population and employment statistics derived from the 2016 Census of Canada.

The new DRTPM includes several enhancements over earlier versions. The updated model is based on an adaptation of the multimodal activity based GTAModel version 4.1 developed by the Travel Modelling Group at the University of Toronto. The previous model was based on GTAModel version 2.5 which applied a standard four-stage approach to modelling urban travel flows in which discrete trips were predicted via the four steps of generation, distribution, mode split and assignment. In the updated DRTPM, daily activity patterns and travel choices are considered and travel is determined by the probability of a household participating in specific types of activities.

The model was customized and calibrated for Durham by incorporating the Region's more detailed zone system and adjusting calibration parameters to better reflect the prevailing travel conditions in Durham. The model covers the complete Greater Toronto and Hamilton Area (GTHA) and generates outputs for the whole coverage area, but it has been specifically

calibrated for, and thus should only be applied to, travel to, from and within Durham. As a regional model, its focus is on region-wide travel patterns.

The model includes eight main travel modes:

- Auto driver
- Auto passenger (driven by another household member)
- Rideshare (auto passenger driven by a non-household member, excluding commercial providers)
- Transit (walk access or egress)
- Transit (vehicular access or egress)
- School bus
- Active (walk or cycle)
- Vehicle for hire (passenger using a commercial taxi or ride-hailing service)

The focus of the modelling efforts for this analysis is Durham Region Transit (DRT) ridership which can reasonably be considered to be represented in the model as walk-access-transit / walk-egress-transit (WAT). A small portion of the trips in this category may be travellers that walk to a GO Station and take GO rail. On the other hand, a small portion of vehicular-access-transit may be travellers who drive or are driven to a park-and-ride lot or terminal to take local transit. For the purpose of this analysis, the walk-access-transit mode will be used to estimate DRT ridership forecasts.

3.2 Network Assumptions

Transit Network Assumptions

The DRTPM was updated and calibrated to 2016. New transit networks for 2022, 2027 and 2032 horizon years were developed with input from the study team including staff from DRT, the Regional Works Department and Planning Division. The 2027 and 2032 transit network assumptions move the network towards the recommendations of The Route Ahead Service Strategy 2022-2025 and the recommended future transit network in the Durham Region Transportation Master Plan.

Changes in travel demand as a result of the pandemic have changed how DRT provides service. The existing 2022 transit network comprises scheduled service and Demand Response (On-Demand and Specialized) service. On-demand service is available in rural areas and has been introduced in urban areas with reduced ridership as an interim measure as ridership recovers from the pandemic. To model and forecast ridership for on-demand service, scheduled routes were coded in the DRTPM to approximate on-demand service guidelines of average 15-minute wait times (i.e., equivalent of 30-minute headway for scheduled routes). This method ensures that urban areas with on-demand coverage have access to transit in the model. For 2027 and 2032, it is assumed that scheduled service will be re-introduced in these urban areas while on-demand service remains in rural areas.

Table 3-1 summarizes the transit network assumptions for the travel demand modelling. Three major changes to the transit network in Durham are:

- The 900 PULSE (Highway 2) route will transition to BRT by 2027 with dedicated median lanes from the Pickering/Toronto boundary to Waverly Street in Oshawa and dedicated curbside transit lanes from Waverly Street to Simcoe Street.
- The 901 PULSE (Simcoe) route will also transition to BRT by 2027 with dedicated lanes in the one-way sections of Simcoe Street and Centre Street and with dedicated lanes for the full route in 2032.
- GO Lakeshore East rail extension to Bowmanville with four new stations by 2027.

The future transit networks, as coded in the model, represent current estimates of future routing and schedules. DRT undertakes service planning on an annual basis to optimize transit routes to accommodate changing transit demands, provide service to new development areas, connect to schools, post-secondary institutions, and other community facilities, and accommodate changing GO Transit schedules. The intent of coding transit routes in the model is to provide sufficient network coverage and capacity as per DRT's service guidelines for existing and future development.

Road Network Assumptions

New road networks for 2022, 2027 and 2032 horizon years were developed with input from the DC study team, including staff from the Regional Works Department. The road network assumptions consider planned provincial highway improvements, Regional road improvements in the 2022 Roads Capital Forecast and planned improvements by the area municipalities.

Table 3-2 summarizes the road network assumptions for the travel demand modelling.

Table 3-1: Transit Network Assumptions

Transit	2022	2027	2032
Hwy 2 BRT	• 900 PULSE operating every 10 minutes from Downtown Oshawa to Glenanna Road in Pickering and every 20 minutes from Glenanna Road to the Pickering/Toronto boundary. • Curbside dedicated lanes in portions of Pickering and Ajax.	• 900 PULSE service operating every 7.5 minutes from Central Oshawa (Ritson) GO Station to the Pickering/Toronto boundary. • Dedicated median transit lanes from the Pickering/Toronto boundary to Waverly Street in Oshawa. • Dedicated curbside transit lanes from Waverly Street to Simcoe Street in Oshawa.	• 900 PULSE service operating at 5-minute headways. • Dedicated lanes the entire route from the Scarborough border to Simcoe Street in Oshawa.
Simcoe BRT	• 901 PULSE service operating at 10-minute headways.	• 901 PULSE service operating at a 7.5-minute headway. • Dedicated lanes in the one-way sections of Simcoe Street and Centre Street (take away lane from Olive to Adelaide) providing service between Central Oshawa (Ritson) GO Station and Simcoe Street and Windfield Farms Drive. Assumes operation in mixed traffic lanes on the remainder of corridor.	• 901 PULSE service operating at 5-minute headway, between Central Oshawa (Ritson) GO Station and Winchester Road. • Dedicated lanes on Simcoe Street from Olive Avenue to Winchester Road (same as 2027 for one-way sections of Simcoe Street and Centre Street, take away one lane in each direction from Conlin Road to Adelaide Avenue, and add dedicated transit lanes from Winchester Road to Conlin Road.)
GO Rail	• Existing service (GO rail service to Oshawa)	• GO rail service to existing Oshawa GO Station. • Expansion of Lakeshore East GO Rail to Bowmanville operating two-way 30-minute service, all day seven days a week. • Includes four new Lakeshore East GO Stations (Thornton's Corners and Central Oshawa (Ritson) in	• Same as 2027 with respect to routes and service levels

Transit	2022	2027	2032
GO Rail (cont.)		Oshawa and Courtice and Bowmanville in Clarington). • Commuter parking assumed at Central Oshawa (Ritson), Courtice, and Bowmanville stations.	
DRT Network	• Existing 2022 service with on-demand routes represented by fixed routes with 30-minute headways.	• Changes to service consistent with current 10-year budget assumptions. • Additional PULSE routes (915 Taunton, 916 Rossland, 902 King) with 12.5 to 15-minute headways. • New transit service to Seaton, north Oshawa (Kedron), Bowmanville, Newcastle, west Whitby, and new GO Stations. • Transit routes added in planned development areas. • Adjusted service levels in built up areas experiencing growth.	• Expansion of transit service to new growth areas. • Increased frequencies (15 to 20-minute headways) on higher-order transit routes. • Additional transit service to Seaton, north Whitby (Brooklin), and new GO Stations.
Transit Outside of Durham	• Highway 7 West BRT (in York Region) • Yonge BRT (North & South) • Bloomington GO Extension	2022 network plus • Eglinton Crosstown LRT • Finch West LRT • GO Expansion – including two-way service on the Barrie Line (to Aurora) and the Stouffville Line (to Unionville)	2027 network plus • Sheppard East Subway (Line 4 extension) • Scarborough Subway (Line 2 extension) • Eglinton West LRT • Yonge North Subway Extension • Yonge BRT (Phase 3) • Ontario Line

Table 3-2: Road Network Assumptions

Road	2022	2027	2032
Highway 401	• 2016 Condition + widened section (from 3 lanes to 4 lanes each direction) between Hwy. 412 and Brock Street. • Reconstructed Brock Street/Hwy. 401 interchange.	Same as 2022, plus • Harmony Road interchange reconstruction.	Same as 2027
Highways 407 / 412 / 418	• Existing highways, which include fully opened Hwy. 407 East extension to Hwy. 35/115 with two freeway links (Hwy. 412 and Hwy. 418) ○ 3 lanes per direction from Brock Road to Hwy. 412; ○ 2 lanes per direction from Hwy. 412 to Hwy. 35/115; ○ 2 lanes per direction for Hwy. 412 and Hwy. 418. • 407 ETR widening to 3 lanes per direction from York Durham Line to Brock Road. • Existing interchanges, including new Whites Road/407 ETR Interchange. • Toll removed on Hwy. 412 and Hwy. 418 (as of April 5, 2022)	Same as 2022	Same as 2027
Arterials (Regional and Area Municipal)	• 2016 network + completed road reconstruction projects between 2016 and 2022.	2022 network plus • Road reconstruction projects from the 2022 Capital Road Budget and Forecast (for those having significant construction amount before 2027). • Area municipal road improvements.	2027 network plus • Road reconstruction projects from the 2022 Capital Road Budget and Forecast for 2027-2031. • Area municipal road improvements.

Road	2022	2027	2032
Outside of Durham	• Highway 427 Extension (to Major Mackenzie) • Highway 407 at 4 lanes per direction between Highway 404 and York-Durham Line	Same as 2022	Same as 2027 plus • Highway 400 widening (Major Mackenzie to Highway 9 • Highway 404 widening (Highway 407 to Stouffville Road) • Steeles Avenue widening (Kennedy Road to York-Durham Line)

3.3 Ridership Forecasts

As noted above, the DRTPM includes eight travel modes. The two transit modes are walk-access-transit and drive-access-transit. Walk-access-transit (WAT) are trips where travellers walk to a transit stop or station. In Durham, walk-access-transit trips are primarily DRT trips. Drive-access-transit (DAT) are transit trips that access/egress transit by car, including a driver that parks at a station or vehicle passengers dropped off at a station. In Durham, drive-access-transit trips are primarily GO Rail trips. Where transit riders take DRT to a GO Station, that trip is considered a walk-access-transit trip.

Table 3-3 summarizes the travel demand forecasts from the DRTPM for trips that start or end in Durham Region. Significant growth in transit ridership is expected between 2022 and 2032. This growth occurs on both GO Transit, with the Lakeshore East expansion to Bowmanville along with other GO service improvements, and on DRT with the planned service that includes the Durham-Scarborough BRT and Simcoe BRT. Transit share varies greatly by trip destination. For example, in 2032, 70% of trips from Durham Region that are destined to downtown Toronto will be made on transit.

The 2022 travel demand forecasts represent the model's estimate of transit demand in response to the transit service assumed in the model. As discussed in **Section 3.2 (Network Assumptions)**, the pandemic has changed how DRT currently provides service and temporarily reduced transit service compared to pre-pandemic (2019) conditions. The Route Ahead Service Strategy 2022-2025 will guide DRT's service planning during the recovery phase, building on transportation investments by the Region, Metrolinx, and the Province. DRT expects ridership to recover substantially by 2025, which is in line with expectations in the broader transit industry.

The 2022 transit forecasts from the DRTPM represents suppressed demand due to the current transit service levels during the recovery phase. As transit service returns to 'normal', the initial transit ridership growth in the early years will be a result of DRT's recovery from the pandemic rather than changes in transit service and capital investments in the transit system.

Ridership estimates from the model's 2016 base year were used to determine 2022 "trend" ridership without the impacts of the pandemic to better understand the benefit to existing development and benefit to growth. The 2022 Trend ridership is shown in **Table 3-4**. Future travel demand and ridership growth based on the 2022 Trend is in line with anticipated growth in population and employment over the same period.

Table 3-3: Transit Forecasts (AM Peak Period)

Mode	2022		2027		2032	
	Trips	Share	Trips	Share	Trips	Share
All Trips (all modes)	326,632	100%	357,388	100%	408,728	100%
Growth (from 2022)	-		*+9.4%*		*+25.1%*	
Walk-access-transit (i.e., DRT)	**16,186**	**5.0%**	**21,467**	**6.0%**	**24,430**	**6.0%**
Growth (from 2022)	-		*+32.6%*		*+50.9%*	

Source: DRTPM forecasts.

Table 3-4: Transit Forecasts (AM Peak Period) – 2022 Trend Scenario

Mode	2016		2022 Trend[1]		2027		2032	
	Trips	Share	Trips	Share	Trips	Share	Trips	Share
All Trips (all modes)	292,131	100%	331,562	100%	357,388	100%	408,728	100%
Growth (from 2022)	-		-		*+7.8%*		*+23.3%*	
Walk-access-transit (i.e., DRT)	**15,327**	**5.2%**	**18,707**	**5.6%**	**21,467**	**6.0%**	**24,430**	**6.0%**
Growth (from 2022)	-		-		*+14.8%*		*+30.6%*	

1. 2022 Trend values based on linear trend using 2016, 2027 and 2032 trips.

4 Planned Level of Service

4.1 Service Guidelines

The DRT service guidelines are documented on the DRT website[1]. The service standards for the weekday peak periods are described below.

1. **Service Deployment** – The Region of Durham is committed to providing transit service options for residents and workers in Durham from early morning to late night, seven days a week.

2. **Ridership Productivity** – The ridership productivity guideline provides a measure of the effectiveness of a transit route. Each service type (PULSE, Base, GO Transit Connector and rural) has unique minimum productivity targets. Route productivity varies based on the varying built environments in which each route operates. DRT's weekday peak ridership productivity (boardings / hour) minimums are as follows:

Weekday Peak Operating Period	Service Type			
	PULSE	Base	GO Connector	Rural
Route Class Average – Average boardings per revenue hour amount all routes within the service type and operating period	40	25	25	8
Route Ridership Minimum – average boardings per revenue vehicle hour for each individual route in the service type	30	20	20	8

3. **Service Frequency and Span of Service** – In urban areas, DRT provides 24-hour transit service seven days a week. In rural areas, DRT provides service from 06:00 to 24:00 on weekdays and 07:00 to 21:00 on weekends. For scheduled service, the minimum service frequency is 30 minutes on urban routes and 90 minutes on rural routes. This results in an average wait time, assuming no prior knowledge of the schedule, of 15 minutes for a bus in the urban area and 45 minutes in the rural area. The weekday peak service frequency minimums are as follows:

Operating Period		Service Type			
Time of Day	Time Period	PULSE	Base	GO Connector	Rural
Morning peak	05:00 - 08:59	15 min	30 min	15 min	90 min
Afternoon peak	16:00 - 18:59	15 min	30 min	15 min	90 min

[1] https://www.durhamregiontransit.com/en/travelling-with-us/service-guidelines.aspx

4. **Vehicle Capacity** – Vehicle capacity considers the average number of passengers that can be accommodated on a bus during its busiest hour, and most popular point on the route. During the Peak period, design maximum capacity is 150% of seated capacity as shown below:

Vehicle type	Peak period design maximum capacity (150% of seated load)
PULSE 60-foot (Articulated) bus	78
PULSE 40-foot bus	54
Conventional 40-foot bus	54
Demand response sedan, van, minibus	4 to 18 (100% of seated load)

5. **Service Proximity** – Service proximity is a measure of service coverage. Proximity is measured as the walking distance between dwellings and the nearest bus stop. In the urban area, DRT aims to have 80% of dwellings within a 500-metre walk of a bus stop and 95% of dwellings within an 800-metre walk of a bus stop. In the rural area, 100% of dwellings are served by Demand Response transit, which provides service at the entrance to customers' properties.

   In new development areas, the aim is to introduce transit service as the community develops to provide new residents with a transit option to encourage and support transit usage.

Service Proximity	Urban Area	Rural Area
Dwellings within 500 m walk of bus stop	80%	n/a
Dwellings within 800 m walk of bus stop	90%	n/a
Dwelling served by Demand Response	n/a	100%

6. **PULSE considerations** – DRT's PULSE routes provide rapid bus service across Durham Region and typically feature dedicated lanes or transit priority measures. Transition to PULSE service type will be considered when the corridor is identified by the Region's Transportation Master Plan and/or Metrolinx Regional Transportation Plan as a future rapid transit corridor and analysis indicates that the service could sustain service minimums and ridership productivity for a PULSE service.

5 Increase in Need for Service

The transit capital required to provide the planned transit service to 2032 is described below.

5.1 Fleet

DRT provided the fleet requirements to provide planned levels of service as shown in **Table 5-1**. Estimates of fleet from the model (excluding on-demand routes) using peak-hour route speeds and headways were compared against fleet requirements provided by DRT. System-wide, the model provided a reasonable match to DRT's fleet needs to provide 2022 transit service.

Table 5-1: Fleet Requirements for Planned Service

Fleet Type		Year			Increase in Fleet (2022 – 2032)
		2022	2027	2032	
PULSE	Service	29	42	56	
	Spare	7	11	14	
	Total	**36**	**53**	**70**	**+34**
PULSE Articulated	Service	6	12	23	
	Spare	2	3	6	
	Total	**8**	**15**	**29**	**+21**
Conventional	Service	64	83	126	
	Spare	16	20	31	
	Total	**80**	**103**	**157**	**+77**
All	Service	99	137	205	
	Spare	25	34	51	
	Total	**124**	**171**	**256**	**+132**

Source: DRT

Although 124 buses are required for current 2022 service levels, DRT's actual transit fleet is 188 buses, which is based on the transit ridership and service levels that existed prior to the COVID-19 pandemic. The future fleet requirement of 256 vehicles represents a net new increase of only 68 vehicles, which accounts for the 64 available fleet currently owned by DRT. The calculation of the net new fleet is shown in **Table 5-2**.

Table 5-2: Fleet to be Acquired

Vehicle	Increase in Fleet Required for Planned Service (A)	Existing Available Fleet[1] (B)	Fleet to be Acquired (C=A-B)
PULSE	34	8	**26**
PULSE Articulated	21	0	**21**
Conventional	77	56	**21**
All Vehicles	**132**	**64**	**68**

5.2 Specialized Fleet

DRT Specialized Services provides accessible transit service for persons unable to use conventional services. Specialized Services are available to persons who meet eligibility criteria as defined in the Integrated Accessibility Standard and Accessibility for Ontarians with Disabilities Act.

As of March 2022, DRT has a fleet of 35 specialized vehicles. It is conservatively assumed that demands for specialized service will grow proportionately with population growth, or approximately 25% over the 10-year period. On average, one additional specialized transit vehicle per year is required to meet future needs.

Table 5-3: Specialize Fleet Requirements

Vehicle	2022	2027	2032
Specialized Fleet	35	40	45

5.3 Transit Stops

New transit stops are required along new routes and route extensions as DRT expands service to serve growth. Hard surface pads are required at bus stops for accessibility and shelters are provided at approximately 50% of bus stops based on ridership demands.

5.4 Facilities

To support a growing transit system, DRT requires additional facilities to store and maintain fleet as well as new transfer hubs to serve passengers connecting between services at key locations and new terminals at key destinations. DRT facilities to serve growth include:

Bus storage / servicing facilities: A new transit facility is planned for bus storage and servicing. Phase 1 of the facility will serve 122 buses with a future Phase 2 expansion planned to serve an additional 93 buses beyond the 2032 horizon.

Transfer Hubs: Transfer hubs offer transit passengers an opportunity to transfer between scheduled service and all forms of Demand Response transit, including on-demand and specialized services. Transfer hub infrastructure at key connection points support a fully integrated network allowing Demand Response ridership to grow in new communities. Transfer hubs are large bus stops with significant customer amenities at all corners of identified intersections or on-street locations. Eleven transfer hubs are planned to enable the seamless transfer between DRT services, ensuring fully accessible stops are available for customers with disabilities, as well as improving customer experience for all. As Durham Region continues to grow, transfer hub infrastructure will support ridership growth and additional vehicles.

Terminals: A series of transit terminals are planned to support new capital development and areas with significant identified growth across Durham Region. These terminals provide transfer opportunities between DRT services, and many will also support inter-agency and cross-

boundary travel. With the planned extension of the Lakeshore East GO line, terminals are planned at Central Oshawa (Ritson), Courtice, and Thornton's Corners GO Stations, while a transfer hub is currently planned at the Bowmanville GO Station. Terminals are also planned in growing communities such as Brooklin, Bowmanville, and Windfield Farms. Existing DRT infrastructure, including the Harmony Terminal and Pickering Parkway Terminal, are planned for expansion or relocation to accommodate growth in transit service. These terminals are necessary to support new or intensified transit routes with sufficient capacity to meet ridership demand.

6 Deductions

6.1 Benefit to Existing (BTE)

Transit system expansions and improvements benefit both new development growth that will occur in Durham as well as the existing residents and workers in Durham who will be able to use a more convenient, efficient, and competitive transit system. Ridership forecasts are used to estimate the benefit to existing development.

Fleet

Ridership forecasts from the DRTPM estimate mode share at 5.0% in 2022 increasing to 6.0% by 2032. The change in mode share represents an incremental increase in transit trip making by existing development. This 1% change in mode share equates to an additional 3,338 transit trips made by existing development, which is 40.5% of the total growth in transit trips over the 2022 to 2032 planning period. **Table 6-1** shows the calculation of the benefit to existing for fleet.

Table 6-1: Benefit to Existing – Fleet

Trips to/from Durham Region	2022	2032	Growth
Total Trips (all modes)	326,632 (A)	408,728	+82,096
Transit trips (WAT)	16,186 (B)	24,430	+8,245 (C)
Transit mode share (WAT)	5.0%	6.0% (D)	
Existing development transit trips based on future transit share (A * D)	19,523 (E)		
Increase in existing development transit trips (E – B)	3,338 (F)		
Non-growth share of total new transit trips (F / C)	40.5%		

WAT = walk-access-transit, primarily DRT trips

Of the132 buses required for planned service, a 40.5% BTE equates to 54 buses. As noted in Section 5.1, current ridership is recovering from the impacts of the pandemic and DRT has in inventory 64 available buses that can be used to serve existing development needs. **Table 6-2** presents the determination of BTE for net new fleet. The resulting BTE is 23.1% for PULSE vehicles (6 of 26 buses), 42.9% for PULSE Articulated vehicles (9 of 21 buses), and 0% for Conventional buses (0 of 21 buses).

Table 6-2: Allocation of Existing Fleet Inventory Towards BTE

Vehicle	Increase in Fleet Required for Planned Service	BTE 40.5%	BTE Share		Growth Share
			Available Fleet Inventory	New Fleet	New Fleet
	(A)	(B=0.405*A)	(C)	(D=B-C)	(E = A-C-D)
PULSE	34	14	8	6	20
PULSE Articulated	21	9	0	9	12
Conventional	77	31	56	0	21
All Vehicles	132	54	64	15	53

Other Transit Infrastructure

For other transit infrastructure that are intended to support the overall growth of the transit system and where planning and/or programming for such infrastructure have continued since before the pandemic, the 2022 Trend scenario was used to estimate benefit to existing development.

Transit mode share is estimated to be 5.6% in the 2022 Trends scenario and expected to increase to 6.0% by 2032. The 0.4% change in mode share represents the incremental increase in transit trip making by existing development assuming no impact due to the pandemic. This equates to an additional 1,111 transit trips made by existing development, which is 19.4% of the total growth in transit trips over the planning period. **Table 6-3** shows the calculation of benefit to existing for other transit infrastructure.

Table 6-3: Benefit to Existing – Other Transit Infrastructure

Trips to/from Durham Region	2022 Trend	2032	Growth
Total Trips (all modes)	331,562 (A)	408,728	+77,165
Transit trips (WAT)	18,707 (B)	24,430	+5,723 (C)
Transit mode share (WAT)	5.6%	6.0% (D)	
Existing development transit trips based on future transit share (A * D)	19,818 (E)		
Increase in existing development transit trips (E – B)	1,111 (F)		
Share of total new transit trips (F / C)	19.4%		

WAT = walk-access-transit, primarily DRT trips.

6.2 Post-Period Benefit

A post-planning period deduction is applied if there is anticipated excess capacity at the end of the DC planning period. In general, transit systems rarely have "excess" capacity as transit routes and service frequencies can be adjusted to accommodate higher or lower demands. However, to meet minimum service guidelines, a set number of transit vehicles are required. Reducing frequencies below the service guidelines would have a detrimental effect on transit ridership as transit would become increasingly inconvenient and uncompetitive for riders.

The capital plan includes a new indoor bus storage and servicing facility in 2023-2027. A post-period benefit provided by this facility has been calculated through consideration of the excess storage capacity the facility will have at the end of the forecast period, and the building cost of that excess capacity. Phase 1 of the facility will store 122 buses, with a future Phase 2 expansion planned beyond the 2032 horizon. The net new fleet to be acquired in the 10-year planning period is 68 vehicles. Accounting for articulated PULSE buses, an equivalent of 78.5 buses require storage using 64.3% of the Phase 1 capacity. The post-period benefit of the facility is calculated to be 35.7% of the cost of the facility.

6.3 Grants, Subsidies and Other Contributions

Deductions for grants, subsidies and contributions are project-specific and applied only where funds from the province, federal or local municipal governments, or area developers are anticipated to be collected. At this time, no specific grants or contributions are assumed for growth-related vehicles or infrastructure.

6.4 Allocation of DC-Eligible Capital Costs by Development Type

The growth-related costs for transit projects are shared between residential and non-residential uses based on the proportion of the residential and non-residential growth projected through the DC planning period as shown in **Table 6-4**. The allocation of growth by development type is 75.6% residential and 24.4% non-residential.

Table 6-4: Anticipated Residential and Non-Residential Growth

DC Horizon Year	Population (Residential, excluding Census undercount)	Employment (Non-residential, excluding NFPOW)	Total
2022	700,465	218,855	919,320
2027	788,070	246,719	1,034,789
2032	873,725	276,838	1,150,563
Growth 2022-2032	**173,260**	**57,983**	**231,243**
Allocation	74.9%	25.1%	100%

Source: Watson & Associates Economists Ltd.

7 DC-Eligible Capital Costs

The capital expenditure plan to the year 2032 is shown in **Table 7-1**.

Table 7-1: Capital Cost Estimates

Growth Related Capital	Phase	Gross Capital Cost (2022$)	Benefit to Existing		Post Period	Grants, Subsidies and Contrib.	Total Deductions	Net Costs Benefitting New Development	Residential	Non-Residential
			%	Amount					74.9%	25.1%
FLEET and BUS STOPS										
Buses – BRT (40 ft)	2023-2027	$7,788,000	23.1%	$1,799,028	$0		$1,799,028	$5,988,972	$4,485,740	$1,503,232
Buses – BRT (40 ft)	2028-2032	$10,620,000	23.1%	$2,453,220	$0		$2,453,220	$8,166,780	$6,116,918	$2,049,862
Buses – BRT Articulated (60 ft)	2023-2027	$7,644,000	42.9%	$3,279,276	$0		$3,279,276	$4,364,724	$3,269,178	$1,095,546
Buses – BRT Articulated (60 ft)	2028-2032	$15,288,000	42.9%	$6,558,552	$0		$6,558,552	$8,729,448	$6,538,357	$2,191,091
Buses – Conventional	2028-2032	$13,818,000	0.0%	$0	$0		$0	$13,818,000	$10,349,682	$3,468,318
Specialized Bus Expansion	2023-2027	$991,250	19.4%	$192,303	$0		$192,303	$798,948	$598,412	$200,536
Specialized Bus Expansion	2028-2032	$991,250	19.4%	$192,303	$0		$192,303	$798,948	$598,412	$200,536
Bus Stop Infrastructure	2023-2027	$4,598,000	19.4%	$892,012	$0		$892,012	$3,705,988	$2,775,785	$930,203
Bus Stop Infrastructure	2028-2032	$3,350,000	19.4%	$649,900	$0		$649,900	$2,700,100	$2,022,375	$677,725
Integrated Service Transfer Bus Stop Infrastructure[1]	2023-2027	$2,000,000	19.4%	$388,000	$0		$388,000	$1,612,000	$1,207,388	$404,612
Integrated Service Transfer Bus Stop Infrastructure[1]	2028-2032	$2,400,000	19.4%	$465,600	$0		$465,600	$1,934,400	$1,448,866	$485,534
Subtotal		**$69,488,500**		**$16,870,193**	**0**	**0**	**$16,870,193**	**$52,618,307**	**$39,411,112**	**$13,207,195**
FACILITIES										
New Bus Storage/Servicing Facility – Phase 1	2023-2027	$155,000,000	19.4%	$30,070,000	$44,600,010		$74,670,010	$80,329,990	$60,167,163	$20,162,827
Pickering Parkway Terminal Upgrade	2023-2027	$8,450,000	19.4%	$1,639,300	$0		$1,639,300	$6,810,700	$5,101,214	$1,709,486
Harmony Terminal New Location	2023-2027	$15,000,000	19.4%	$2,910,000	$0		$2,910,000	$12,090,000	$9,055,410	$3,034,590
Windfield Farms Terminal	2028-2032	$2,000,000	19.4%	$388,000	$0		$388,000	$1,612,000	$1,207,388	$404,612
Bowmanville Terminal	2028-2032	$2,400,000	19.4%	$465,600	$0		$465,600	$1,934,400	$1,448,866	$485,534
Brooklin North Terminal	2028-2032	$3,600,000	19.4%	$698,400	$0		$698,400	$2,901,600	$2,173,298	$728,302
Thornton's Corners GO - DRT Terminal	2023-2027	$5,400,000	19.4%	$1,047,600	$0		$1,047,600	$4,352,400	$3,259,948	$1,092,452
Central Oshawa (Ritson) GO - DRT Terminal	2023-2027	$2,400,000	19.4%	$465,600	$0		$465,600	$1,934,400	$1,448,866	$485,534
Courtice GO - DRT Terminal	2023-2027	$3,000,000	19.4%	$582,000	$0		$582,000	$2,418,000	$1,811,082	$606,918
Subtotal		**$197,250,000**		**$38,266,500**	**$44,600,010**	**$0**	**$82,866,510**	**$114,383,490**	**$85,673,234**	**$28,710,256**
SYSTEMS										
Additional PRESTO for Growth Buses	2023-2027	$252,000	22.1%	$55,692	$0		$55,692	$196,308	$147,035	$49,273
Additional PRESTO for Growth Buses	2028-2032	$700,000	22.1%	$154,700	$0		$154,700	$545,300	$408,430	$136,870
Additional Fareboxes/Radios for Growth Buses	2023-2027	$378,000	22.1%	$83,538	$0		$83,538	$294,462	$220,552	$73,910

Growth Related Capital	Phase	Gross Capital Cost (2022$)	Benefit to Existing		Post Period	Grants, Subsidies and Contrib.	Total Deductions	Net Costs Benefitting New Development	Residential	Non-Residential
			%	Amount					74.9%	25.1%
Additional Fareboxes/Radios for Growth Buses	2028-2032	$1,050,000	22.1%	$232,050	$0		$232,050	$817,950	$612,645	$205,305
Additional ITS/Annunciators for Growth Buses	2023-2027	$438,660	22.1%	$96,944	$0		$96,944	$341,716	$255,945	$85,771
Additional ITS/Annunciators for Growth Buses	2028-2032	$1,218,500	22.1%	$269,289	$0		$269,289	$949,212	$710,959	$238,252
Gravity Farebox for Specialized Buses	2023-2027	$36,000	19.4%	$6,984	$0		$6,984	$29,016	$21,733	$7,283
Gravity Farebox for Specialized Buses	2028-2032	$36,000	19.4%	$6,984	$0		$6,984	$29,016	$21,733	$7,283
Additional PRESTO for Specialized Buses	2023-2027	$15,000	19.4%	$2,910	$0		$2,910	$12,090	$9,055	$3,035
Additional PRESTO for Specialized Buses	2028-2032	$15,000	19.4%	$2,910	$0		$2,910	$12,090	$9,055	$3,035
Technology System for Specialized Buses	2023-2027	$25,475	19.4%	$4,942	$0		$4,942	$20,533	$15,379	$5,154
Technology System for Specialized Buses	2028-2032	$25,475	19.4%	$4,942	$0		$4,942	$20,533	$15,379	$5,154
Subtotal		**$4,190,110**		**$921,885**	**$0**	**$0**	**$921,885**	**$3,268,225**	**$2,447,901**	**$820,325**
STUDIES										
Development Charges Background Study (2)	2027, 2032	$360,000	0.0%	$0	$0		$0	$360,000	$269,640	$90,360
Engineering and Design for Terminals and Hubs	2022-2032	$250,000	19.4%	$48,500	$0		$48,500	$201,500	$150,924	$50,577
Subtotal		**$610,000**		**$48,500**	**$0**	**$0**	**$48,500**	**$561,500**	**$420,564**	**$140,937**
Total		**$271,538,610**		**$56,107,078**	**$44,600,010**	**$0**	**$100,707,088**	**$170,831,522**	**$127,952,810**	**$42,878,712**

1. Includes transfer hubs.

Appendix E
Asset Management Plan

Appendix E: Asset Management Plan

1. Introduction

The changes to the D.C.A. (new section 10(c.2)) in 2016 require that the background study must include an Asset Management Plan (A.M.P) related to new infrastructure. Section 10 (3) of the D.C.A. provides:

The A.M.P. 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, subsection 8(3) of the Regulations was amended to include specific detailed requirements for transit services A.M.P.s. As contained in this subsection there are specific requirements to the content of the A.M.P., particularly the state of local infrastructure, proposed level of service, asset management strategy, and financial strategy. For all services except transit, there are no prescribed requirements at this time, thus requiring municipalities to define the approach to include within the background study.

At a broad level, the A.M.P. provides for the long-term investment in an asset over its entire useful life along with the funding. 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. 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.

2. Transit Services

In regard to the D.C.A. requirements for asset management for transit services, Ontario Regulation 82/98 (as amended) provides the following:

> "8(3) If a council of a municipality proposes to impose a development charge in respect of transit services, the asset management plan referred to in subsection 10 (2) (c.2) of the Act shall include the following in respect of those services."

Provided in Table 1 are the individual items prescribed by subsection 8(3) of the Regulation (as amended), which are addressed in the following sections.

Table 1
Transit Services D.C. Background Study A.M.P. Requirements

Ontario Regulation 82/98, as amended Subsection 8(3) Requirements
1. A section that sets out the state of local infrastructure and that sets out, i. the types of assets and their quantity or extent, ii. the financial accounting valuation and replacement cost valuation for all assets, iii. the asset age distribution and asset age as a proportion of expected useful life for all assets, and iv. the asset condition based on standard engineering practices for all assets.
2. A section that sets out the proposed level of service and that, i. defines the proposed level of service through timeframes and performance measures, ii. discusses any external trends or issues that may affect the proposed level of service or the municipality's ability to meet it, and iii. shows current performance relative to the targets set out.
3. An asset management strategy that, i. sets out planned actions that will enable the assets to provide the proposed level of service in a sustainable way, while managing risk, at the lowest life cycle cost, ii. is based on an assessment of potential options to achieve the proposed level of service, which assessment compares, A. life cycle costs, B. all other relevant direct and indirect costs and benefits, and C. the risks associated with the potential options, iii. contains a summary of, in relation to achieving the proposed level of service, A. non-infrastructure solutions, B. maintenance activities, C. renewal and rehabilitation activities,

Ontario Regulation 82/98, as amended Subsection 8(3) Requirements
D. replacement activities, E. disposal activities, and F. expansion activities, iv. discusses the procurement measures that are intended to achieve the proposed level of service, and v. includes an overview of the risks associated with the strategy and any actions that will be taken in response to those risks.
4. A financial strategy that, i. shows the yearly expenditure forecasts that are proposed to achieve the proposed level of service, categorized by, A. non-infrastructure solutions, B. maintenance activities, C. renewal and rehabilitation activities, D. replacement activities, E. disposal activities, and F. expansion activities, ii. provides actual expenditures in respect of the categories set out in sub-subparagraphs i A to F from the previous two years, if available, for comparison purposes, iii. gives a breakdown of yearly revenues by source, iv. discusses key assumptions and alternative scenarios where appropriate, and v. identifies any funding shortfall relative to financial requirements that cannot be eliminated by revising service levels, asset management or financing strategies, and discusses the impact of the shortfall and how the impact will be managed. O. Reg. 428/15, s. 4.

The subsequent subsections within this Chapter comprise the A.M.P. for the Regional Transit Services D.C. Background Study. The A.M.P. is prepared in consultation of the Region's tangible capital asset inventory, 2022 Capital Budget and Forecast, 2022 Operating Budget, Canadian Urban Transit Association (CUTA) facility and vehicle maintenance costs, and 2020 Corporate Asset Management Update Report (#2020-COW-24).

2.1 State of Local Infrastructure

This section presents the capital assets for Regional Transit Services and reflects assets owned by the Region. The state of local infrastructure includes the requirements identified in section 1 of Table 1.

The Region presently owns and manages capital assets for the provision of Regional Transit Services including facilities, fleet and related assets. Table 2 presents the current asset type, quantity by component, historic and replacement values, asset age distribution and asset age as a proportion of expected useful life, and asset condition rating.

Table 2
Inventory of DRT Facilities and Fleet Assets (as Dec. 31, 2021)

Asset Type	Asset Component	Inventory Count	Unit of Measure	Expected Useful Life	Remaining Life (Years)	Remaining Life as a % of Expected Asset Life	Replacement Value ($millions)	Accounting Historic Cost ($millions)	Net Book Value ($millions)	Building Condition Assessment Rating (A-D)
Facilities	Ajax Transit Garage	34,201	sq.ft.	50	43	86%	$ 42.7	$ 15.7	$ 13.5	A
	OshawaTransit Garage	57,600	sq.ft.	50	-	0%	$ 15.4	$ 0.03	$ 0.02	B
	Transit Maintenance Facility	61,945	sq.ft.	50	47	94%	$ 33.8	$ 27.7	$ 26.1	A
	Hard Surface Stops	2,017	items	20	12.3	62%	$ 10.1	$ 9.8	$ 6.0	A
	Shelters	562	items	15	8	56%	$ 4.5	$ 4.4	$ 2.4	A
	Facilities Total						**$ 106.5**	**$ 57.6**	**$ 48.0**	

Asset Type	Asset Component	Inventory Count	Unit of Measure	Expected Useful Life	Remaining Life (Years)	Remaining Life as a % of Expected Asset Life	Replacement Value ($millions)	Accounting Historic Cost ($millions)	Net Book Value ($millions)	Fleet Condition Assessment Rating (A-D)
Fleet	PULSE 60 ft.	8	items	11.0	9.3	84%	$ 8.6	$ 7.9	$ 7.2	A
	PULSE 40 ft.	41	items	12.4	6.1	49%	$ 28.9	$ 22.9	$ 0.02	C
	Conventional	139	items	12.0	4.2	35%	$ 91.1	$ 63.2	$ 32.1	C
	Specialized	35	items	7.0	1.8	26%	$ 6.6	$ 4.2	$ 1.7	B+
	Supervisory	18	items	6.7	1.5	22%	$ 1.7	$ 1.1	$ 0.4	A-
	Fleet Total	**241**					**$ 136.9**	**$ 99.3**	**$ 41.4**	

An important element of an A.M.P. is ensuring that tools and procedures are in place to maintain accuracy and completeness of the asset data and calculations. Lifecycle events trigger changes to the asset database, as such, tools and procedures are essential to ensure the asset data remains accurate and complete. The Region's methodology in this respect includes ongoing refinements to data collection, condition ratings and replacement cost methodologies. The Region's Corporate A.M.P. establishes consistent asset management policy and data protocols

Facilities

DRT also leases facility space to provide room for crews at the Oshawa Centre. The facility space occupied by DRT is 470 sq.ft. This facility is not included in the Region's asset registry, as the Region has no capital lease obligations.

In total transit facilities have a replacement value of approximately $106.5 million. The historic cost is $57.6 million and net book value is $48.0 million accounting for amortization. The facilities are currently operating at 60% of the expected remaining

useful life. The Building Condition Assessment (BCA) for DRT facilities has been assessed by the Region accounting for factors of age, soundness, functionality and maintenance cost of the facilities. The condition rating for each facility is based on BCA results of the identified capital investment needs and associated cost and timing as a proportion to its total replacement cost. This results in a Facilities Condition Index (FCI) and is translated into a condition rating. The overall facility rating is an A- which represents a condition of Very Good.

Fleet

In total transit fleet assets have a replacement value of approximately $136.9 million. The historic cost is $99.3 million and net book value is $41.4 million. The vehicles are currently operating at 43% of the expected remaining useful life. However this is influenced by the specialized and supervisory fleet. Conventional and BRT fleet is operating at 56% of the expected remaining useful life. Condition ratings for transit fleet assets is based on kilometres driven for each bus and vehicle and inspections and assessments. The current condition rating for fleet assets is a C which represents a condition of Fair. The current condition rating for fleet assets is a C which represents a condition of Fair, with PULSE 60 ft. buses at a condition of A or Very Good.

Other Assets

In addition to the facility and fleet assets, the Region also owns the following assets for the Regional Transit Service:

- 83 radios with an estimated replacement values of $0.6 million;
- 209 conventional fare boxes and 35 diamond fare boxes on specialized buses with a total replacement value of $3.1 million; and
- Other small vehicles, equipment and information technology assets with an estimated value of approximately $7.0 million.

2.2 Proposed Levels of Service

Level of service statements are measures or relevant indicators that reflect service performance goals and are used to set targets and assess asset-related performance. Whether technical, strategic, operational, qualitative and/or quantitative, they can be used to enhance information and improve accountability and transparency through more effective reporting and analysis. Several technical and non-technical performance

measures are utilized by the Region to gauge progress toward program and broader corporate goals and objectives. Moreover, the performance measures vary by capital asset type (i.e. facilities or vehicles) or asset purpose (i.e. service enhancement/ expansion, capital replacement, capital maintenance).

One objective of asset management is to continuously improve long-term capital plans, address priority areas and risk, and ensure the sustainability of Regional assets and support. The Region's asset-related service levels are defined through a number of sources, including:

- Regional Council approved corporate plans, studies, strategic planning documents, policies, by laws, reports and goals and objectives;
- Best engineering and industry practices including climate change risk and vulnerability assessments at the asset class and individual asset level;
- Regulatory guidelines and/or requirements; and
- Other performance expectations as defined through other reports.

Asset performance targets and/or relevant benchmark indicators are set prior to actual performance measurement. Performance indicators assist staff in targeting areas for improvement and can be used to demonstrate improved efficiencies and/or effectiveness from the successful implementation of initiatives or other program changes. Regional staff use performance measures to:

- Track performance and ensure achievement of required levels of service;
- Enhance accountability;
- Permit time-based comparisons within a program; and
- Compare performance and best practice information with municipal peers.

Measures utilized include those that track service delivery performance, physical condition of assets, current versus target investment levels and energy fuel usage and climate mitigation goals. Asset-related goals and objectives will be adjusted as required to ensure they are aligned with the broader goals and objectives of the Region.

Key performance measures are reviewed continuously as part of the Region's Asset Management Plan and DRT planning processes. The following sections describe the Region's level of service and performance measurement as it pertains to DRT facilities and fleet. These subsections have been organized by capital asset type (i.e. facilities or

vehicles) and asset purpose (i.e. service enhancement/ expansion, capital replacement, capital maintenance).

2.2.1 Transit Facilities and Related Assets

There are many factors that feed into the proposed level of service for transit facilities:

- Compliance with Provincial and Federal legislation including Building Code;
- Support of the Durham Region's Strategic Plan and corporate by-laws, plans and policies;
- Allow for the delivery of services that meets the needs of staff and the public; and
- Ensure a life cycle investment to ensure state of good repair investments.

The objective is to achieve and maintain an acceptable condition standard for all Regional facilities that will meet the needs and established service level of the core user groups of each facility. This is achieved by optimizing Regional investment and providing maintenance services necessary to achieve this objective.

Overarching goals related to Regional facilities are to:

- Support the coordination of growth with the provision of both hard and soft infrastructure and services;
- Plan, supervise and implement building/ office design and/or staff relocations in a timely and professional manner with minimal effect on staff and the delivery of their programs;
- Ensure a life cycle asset management approach to prioritize capital investment, ensuring 'state of good repair' investments;
- Support diverse facility requirements, including maintenance and property needs based upon clientele and utilization; and
- Maintain the security of all facilities, including access control, parking management, emergency prevention, planning, security and response.

<u>Capital Maintenance and Replacement</u>

The Region has identified key asset-related performance measures utilized to ensure lifecycle sustainability for DRT facilities and define investments in asset maintenance and replacement activities. As presented in Table 2, these performance measures include building condition assessment ranking and asset useful life. These BCI

indicators are updated annually with the goal of limiting assets performing in a Very Poor condition. DRT assets are currently performing Very Good from a BCI perspective.

Service Enhancement/Expansion

The Region identified key service delivery related performance measures utilized to enhance and expand transit services. These performance measures include, bus route expansions, informed by service deployment, ridership productivity, service frequency and span, vehicle capacity, service proximity, and PULSE considerations. Further information on these performance measures are included in the HDR Study contained in Appendix D.

Service frequency is based on DRT's service design guidelines which include a minimum service frequency of 30 minutes on urban routes and 90 minutes on rural routes. Minimum service frequency for morning and afternoon peak period for PULSE and GO Connector routes is 15 minutes.

Area coverage is measured by service proximity. DRT aims to provide transit services within a reasonable walking distance, defined as approximately 500 metres. This is achieved by encompassing approximately 80 percent of residences and workplaces in the urbanized areas of Durham Region and taking into account development patterns and pedestrian links. Another 15 per cent of these residences and workplaces will be within 800 metres of walking distance to bus stop. In addition to service proximity, the following characteristics of the built-up area influence transit service design:

- Demographic considerations- the demographic makeup of the subject area may or may not generate a notable increase in ridership.
- Impact on existing riders - the routing change to expand service coverage may have positive or negative impacts to existing riders—both new and existing riders need to be considered.
- Road network characteristics – the nature of the road network (e.g. suburban curvilinear streets versus permeable street grid) will affect how direct transit routes could operate.
- Residential and employment density – the residential and employment density of a given community has a profound impact on the degree of ridership a route would generate.

- Socio-economic characteristics – the general socio-economic conditions of a community (e.g. household income, household car ownership) have an impact on the degree of ridership a route would generate.
- Pedestrian accessibility – a community with well maintained sidewalks provide the ability for passengers to easily access transit stops.
- Financial feasibility – the proposed expansion of service coverage needs to consider its financial cost implications.

The Region of Durham is committed to providing transit service options for residents and workers in Durham from early morning to late night, seven days a week. In addition, 24-hour service is available via Blue Night service on Hwy 2 and Simcoe, as well as On Demand service. In new development areas, the aim is to introduce transit service as the community develops to provide new residents with a transit option to encourage and support transit usages. Moreover, transition to PULSE service type will be considered when the corridor is identified by the Region's Transportation Master Plan and/or Metrolinx Regional Transportation Plan as a future rapid transit corridor and analysis indicates that the service could sustain service minimums and ridership productivity for a PULSE service.

External Trends or Issues

Changing compliance, building and energy codes, modernization and return on investment are considered including potential impacts to operational and lifecycle performance measures. Levels of service will be continually assessed and modified considering performance measurements targets, the effectiveness of ongoing strategies and financing availability.

2.2.2 Transit Fleet Assets

DRT manages its own fleet, consistent with common goals that span across the Region's fleet management divisions, including:

- Maintain fleets in a state of good repair, meeting or exceeding industry standards and manufacturers' requirements, and minimizing vehicle downtime while capturing warranty claims on new equipment;
- Provide sufficient vehicles and equipment in a safe, reliable and adequate condition to meet service requirements and adapt to changes in business needs;

- Manage and optimize parts inventories to minimize costs through procedures and guidelines that ensure competitive bidding, cost effective purchasing practices, and inventory control processes in accordance with Regional policies and the Purchasing By-Law;
- Maintain an orderly fleet turnover process, ensuring cost-effective fleet operations and participate in joint procurement projects where appropriate and beneficial; and
- Ensure where possible a consistent approach to operations, maintenance, asset management and procurement as related to energy efficiency and improve the quality of energy / fuel data to better understand variations in consumption and performance over time.

Capital Maintenance and Replacement

The Region has identified key asset-related performance measures utilized to ensure lifecycle sustainability for transit fleet and define investments in asset maintenance and replacement activities. These performance measures include:

- Asset useful life;
- Vehicle kilometers;
- Operating costs; and
- Fuel economy.

As presented in Table 2, transit buses (BRT and conventional) are expected to have a useful life of approximately 12 years with regular maintenance. Other factors that may impact the lifecycle of a vehicle (i.e. condition and mileage) are taken into account for any retirement decisions. Conventional and BRT fleet is operating at 56% of the expected remaining useful life. DRT recently replaced a number of Very Poor conventional buses through budgetary approvals and senior government funding.

The preventative maintenance schedule for DRT's fleet is based on the original equipment manufacturers (OEM's) recommended best practice and the semi-annual vehicle safety inspection process as regulated by the Ontario Ministry of Transportation (MTO), Commercial Vehicle Safety Requirements and National Safety Code 11, Part B (NSC11B). Semi-annual MTO Commercial Vehicle Safety Inspections are based on the date of the previous inspection, plus 6 months. This is a mandatory inspection subject to review by an agent of the MTO at any time. Tests are conducted by manufacturers for

a twelve-year lifecycle for consideration in maintenance and lifecycle programs related to the DRT fleet. Beyond twelve years a bus can require extensive structural refurbishment as major components begin to wear. As a result, maintenance costs may increase while bus reliability decreases. Eventually the bus becomes a 'spare' in the fleet and is used when necessary.

Service Enhancement/Expansion

The same service delivery related performance measures utilized to enhance and expand transit services for facilities are present for fleet assets, including bus route expansions, informed by service deployment, ridership productivity, service frequency and span, vehicle capacity, service proximity, and PULSE considerations.

External Trends or Issues

Changing compliance, accessibility and environmental regulations, climate change, modernization and return on investment are considered with impacts to both operational and lifecycle performance measures. These factors play an integral part in establishing levels of service and performance measure targets. In the context of the Region's broader considerations for reducing greenhouse gas emissions (mitigation) and addressing vulnerabilities and potential impacts to infrastructure due to changing weather patterns (adaptation), the Green Fleet Review and Analysis initiative for Paramedics, Police, Transit, and Works fleets has commenced. As part of this review, the Region is analyzing vehicle use and needs to develop a 20-year low carbon fleet transition plan that aligns with corporate GHG targets. Also, DRT initiated the Transit Electric Bus Strategy, which is a pilot project to trial eight battery electric buses to inform overall fleet transition to zero emission vehicles. As these trends continue levels of service will be continually assessed and modified as required.

2.3 Asset Management Strategy

The asset management strategy provides the recommended course of actions required to move towards a sustainable asset funding position while moving towards delivering the expected levels of service discussed in the previous section. The course of actions, when combined together, will form a long-term operating and capital forecast that includes:

- Non-infrastructure solutions: reduce costs and/or extend expected useful life;

- Maintenance activities: regularly scheduled activities to maintain existing useful life levels, or repairs needed due to unplanned events;
- Renewal/Rehabilitation: significant repairs or maintenance planned to increase the useful life of assets;
- Replacement/Disposal: complete disposal and replacement of assets, when renewal or rehabilitation is no longer an option; and
- Expansion: given planned growth or other expansion or due to the introduction of new services.

Regional staff through annual financial and business planning processes establish short and long-term asset management strategies to prioritize asset management needs. The goal is to ensure assets are maintained to deliver services (in accordance with corporate goals while complying with regulatory guidelines) with tolerable risks mitigated through strategies and prudent life cycle considerations. These processes consider:

- Condition and age of assets;
- Continuation and expansion of service levels;
- Optimizing the useful life and lifecycle of assets;
- Minimizing asset related risks through mitigation controls;
- Furthering climate mitigation and adaptation measures; and
- Balancing growth-related demands.

Table 3 compares the anticipated costs for the Region to expand its asset inventory to meet future needs and to maintain its existing asset inventory (replacement and maintenance activities) plus the additional maintenance costs related to the new assets acquired over the 10-year forecast period. As the overarching intent of the A.M.P. for D.C. Background Study purposes is to test if the capital plan contained herein is financially sustainable, two scenarios have been prepared.

- Scenario 1 – lifecycle plan and growth-related capital from the 2022 Capital Budget and Forecast, assumes that assets are simply replaced when they reach the end of their useful life as identified in the Region's asset registry. Under this scenario, only the age of assets is considered when making its retirement decisions, without consideration of condition. Moreover, the growth-related capital requirements reflect the Region's current forecast.

- Scenario 2 – 2022 Capital Budget and Forecast for existing transit assets and 2022 Transit D.C. Background Study growth-related capital, refines the lifecycle assessment for existing assets reflecting the application of asset management, procurement, and planning strategies from the Region's Corporate A.M.P. as reflected in annual financial and business planning for the forecast period. The growth-related capital reflects the updated needs based on the anticipated development for the forecast period and planned levels of service.

Scenario 1 provides for a replacement of $128.8 million in transit service assets based on current asset useful life assessments. By comparison, Scenario 2 which reflects the Region's current capital budget and forecast provides for $141.4 million in replacements. This reflects the broader asset management context for needs beyond useful life and reflects other planned level of service initiatives presented earlier. Similarly, Scenario 2 provides a higher amount of renewal/rehabilitation reflecting a greater amount of mid-term bus rehabilitations to meet level of service objectives. In this regard the lifecycle needs under the Region's capital forecast would be sufficiently addressed.

The growth-related capital needs (i.e. expansion activities) under Scenario 2 are approximately $15.1 million greater over the forecast period. This reflects a greater need for transit buses and associated equipment, transfer hubs and terminals in the D.C. capital forecast than provided in the 2022 Capital Budget and Forecast. This component of the forecast also reflects the deferral of the forecast plan for the construction of Phase 2 of the Bus Storage/Servicing Facility and the Seaton Facility beyond the 2032 period. The increase in growth-related assets does not directly impact the replacement and rehabilitation/renewal needs over the forecast period. However, with the greater amount of assets in service, it does increase the forecast maintenance costs. These have been projected to add $15.7 million in additional maintenance costs for additional fleet and facilities based on the CUTA benchmark costs.

Table 3
Comparison of Asset Management Strategies (Scenario 1 and 2)

	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2023-2032 Total
SCENARIO 1											
Annual Expenditures											
Non-Infrastructure Solutions	-	-	-	-	-	-	-	-	-	-	-
Maintenance Activities	20,028,435	22,621,295	22,794,132	23,510,737	23,709,831	23,846,171	23,982,511	24,118,851	26,064,433	26,200,773	236,877,168
Renewal/Rehabilitation Activities	1,890,763	831,463	893,963	818,963	368,963	368,963	368,963	443,963	368,963	706,107	7,061,071
Replacement Activities	26,847,084	22,452,000	7,286,250	21,056,041	3,146,573	4,758,067	4,813,596	16,890,804	21,243,719	280,716	128,774,850
Disposal Activities	-	-	-	-	-	-	-	-	-	-	-
Expansion Activities	7,007,545	167,007,545	26,383,545	1,583,545	9,633,545	1,383,545	1,383,545	1,383,545	38,683,545	1,383,545	255,833,450
Total Annual Expenditures	55,773,827	212,912,302	57,357,890	46,969,285	36,858,911	30,356,745	30,548,615	42,837,163	86,360,659	28,571,141	628,546,539
SCENARIO 2											
Annual Expenditures											
Non-Infrastructure Solutions	25,000	25,000	25,000	25,000	205,000	25,000	25,000	25,000	25,000	205,000	610,000
Maintenance Activities	20,309,106	23,182,637	23,636,146	24,095,870	24,575,635	25,498,205	26,424,504	27,356,396	28,278,966	29,203,401	252,560,868
Renewal/Rehabilitation Activities	1,890,763	831,463	893,963	818,963	1,718,963	368,963	368,963	1,643,963	368,963	989,440	9,894,404
Replacement Activities	20,290,724	15,433,400	20,893,400	18,177,150	10,461,252	10,241,815	10,422,227	10,382,400	10,991,325	14,143,744	141,437,437
Disposal Activities	-	-	-	-	-	-	-	-	-	-	-
Expansion Activities	9,833,277	169,833,277	4,833,277	7,033,277	13,083,277	12,302,445	13,502,445	15,302,445	12,302,445	12,902,445	270,928,610
Total Annual Expenditures	52,348,870	209,305,777	50,281,786	50,150,260	50,044,127	48,436,428	50,743,139	54,710,204	51,966,699	57,444,030	675,431,319

The Scenario 2 forecast also includes $0.6 million in additional study costs identified over the period from the D.C. capital plan.

The capital financing plan is based on Scenario 2. This scenario is selected as it best reflects the Region's Corporate A.M.P. as implemented through the 2022 Capital Budget and Forecast, and DRT's anticipated increase in need for service arising from new development as expressed in this D.C. Background Study.

2.4 Financing Strategy

The financing strategy outlines the suggested financial approach to funding the recommended asset management strategy outlined in the asset management strategy. The financing strategy forecast (including both expenditure and revenue sources) has been prepared, consistent with the Region's departmental budget structure, so that it can be used in conjunction with the annual budget process.

The financing strategy considers a wide range of financing options to address the infrastructure financing requirements. These include:

- Provincial Gas Tax
- ICIP Grants (in 2023)
- Transit Capital Reserve Fund
- Development Charges
- General Levy and Transit User Fees

Funding for asset management, excluding Expansion Activities and Non-Infrastructure Solutions, primarily comes from Durham property taxes (i.e. general levy), transit user fees, transit capital reserve fund, and grant funding. Expansion Activities and Non-Infrastructure Solutions are funded from the D.C. reserve fund based on the cashflows provided in Chapter 6. Annual Maintenance Activities are primarily funded through the Region's Operating Budget come from the general levy and transit user fees. Debentures are used for financing of Phase 1 of the Bus Storage/Servicing Facility given the significance of the capital project, timing of the project (2024), anticipated D.C. reserve fund balances, and need for interim financing of the growth-related oversizing to be considered in future D.C. Background Studies.

To reflect the full costs of assets, the annual debt payments related to the $155.0 debenture for the Bus Storage/Servicing Facility have been included within the

Expansion Activities of the Financing Strategy, assuming 5% interest and 15-year term. The D.C. recoverable cost share of the annual debenture repayment amount ($7.7 million annually) is funded from the transit D.C. reserve fund. The non-D.C. recoverable cost share ($7.2 million) is reflected in additional general levy/user fee funding.

Table 4 summarizes the financing strategy for the Scenario 2 asset management strategy with the required inclusions identified in section 4 of Table 1. This financing strategy supports the 10-year growth related capital program and the cost to replace, rehabilitate and maintain the existing infrastructure plus the incremental costs to maintain the new assets as part of the 10-year capital program. This includes additional financing from development charges to reflect the increase in both the residential and non-residential development charge quantum as presented in Chapter 6.

It should be noted, that DRT undertakes service planning on a regular basis to optimize transit routes to accommodate changing transit demands and provide service to new development areas which can serve to reduce the expansion requirements and future related on-going costs. Moreover, business plans and budgets are examined and reprioritized on an annual basis to address funding challenges and to leverage any potential grant funding to meet the future needs of the residents and businesses within Durham.

Table 4 forecasts average A.M.P. spending of $64.0 million annually over the 2023-2032 period. This compares with an average actual and budgeted amount for 2020-2022 of $37.8 million annually. The underlying financing strategy funding from the general levy and transit user fees of $39.0 million annually (61% of financing) is unchanged from the assumptions with the Region's 2022 Capital Budget and Forecast, with allocations from operating for maintenance activities and debt repayments[1]. The increase in funding for the additional growth-related capital needs arising from the D.C. capital program is reflected in the increased revenue from the higher Transit D.C. quantum. As such, the D.C. capital program is financially sustainable as the A.M.P. needs would not place an impact on non-D.C. financing sources beyond the Region's current financial forecast.

[1] By comparison the 2022 Capital Budget and Forecast identified $176.7 million in debenture financing as compared with the $155.0 million included herein.

Table 4
Asset Management Financing Strategy (Scenario 2)

	Actual		Budget	Forecast										
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2023-2032 Total
Expenditures														
Non-Infrastructure Solutions	-	100,397	-	25,000	25,000	25,000	25,000	205,000	25,000	25,000	25,000	25,000	205,000	**610,000**
Maintenance Activities	20,266,571	20,975,901	19,855,597	20,309,106	23,182,637	23,636,146	24,095,870	24,575,635	25,498,205	26,424,504	27,356,396	28,278,966	29,203,401	**252,560,868**
Renewal/Rehabilitation Activities	13,131,226	359,950	4,692,963	1,890,763	831,463	893,963	818,963	1,718,963	368,963	368,963	1,643,963	368,963	989,440	**9,894,404**
Replacement Activities	1,939,242	6,716,703	5,378,656	20,290,724	15,433,400	20,893,400	18,177,150	10,461,252	10,241,815	10,422,227	10,382,400	10,991,325	14,143,744	**141,437,437**
Disposal Activities	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Expansion Activities	6,428,176	7,559,779	6,067,880	9,833,277	14,833,277	19,766,332	21,966,332	28,016,332	27,235,500	28,435,500	30,235,500	27,235,500	27,835,500	**235,393,047**
Total Annual Expenditures	**41,765,215**	**35,712,730**	**35,995,096**	**52,348,870**	**54,305,777**	**65,214,841**	**65,083,314**	**64,977,181**	**63,369,482**	**65,676,193**	**69,643,258**	**66,899,754**	**72,377,085**	**639,895,755**
Financing (Capital Budget)														
Provincial Gas Tax			5,879,704	13,887,357	7,828,707	7,828,707	7,828,707	5,863,386	4,293,949	4,474,361	5,709,534	5,043,459	5,043,459	**67,801,627**
Non-Residential DC			602,888	1,883,241	2,894,771	2,814,244	3,259,317	4,483,268	4,361,861	4,604,628	4,968,779	4,361,861	4,483,244	**38,115,212**
Residential DC			1,341,912	5,619,711	8,638,180	8,397,883	9,726,010	13,378,358	13,016,070	13,740,503	14,827,152	13,016,070	13,378,286	**113,738,222**
ICIP Grant			3,970,732	2,874,536	-	-	-	-	-	-	-	-	-	**2,874,536**
Federal Grant			160,000	-	-	-	-	-	-	-	-	-	-	**-**
General Levy/User Fees			21,489,860	23,542,261	28,425,792	35,897,180	37,873,704	41,252,169	41,697,603	42,856,702	44,137,794	44,478,364	49,472,095	**389,633,664**
Canada Community-Building Fund (Federal Gas Tax)			2,100,000	-	-	-	-	-	-	-	-	-	-	**-**
Transit Capital Reserve Fund			-	4,541,765	6,518,327	10,276,827	6,395,577	-	-	-	-	-	-	**27,732,495**
Other Financing			450,000	-	-	-	-	-	-	-	-	-	-	**-**
Total Annual Financing			**35,995,096**	**52,348,870**	**54,305,777**	**65,214,841**	**65,083,314**	**64,977,181**	**63,369,482**	**65,676,193**	**69,643,258**	**66,899,754**	**72,377,085**	**639,895,755**

1 Other Financing in 2022 is a contribution from eCamion.

ICIP Grant, Federal Grant, Canada Community-Building Fund and Other Financing provided for existing asset replacements and renewal/rehabilitation.

3. Conclusions

Business planning and budget documentation establishes clear links between the management of assets and:

- Approved Regional Council guidelines, goals and strategies;
- Compliance standards and community expectations regarding levels of service;
- Growth demand projections and growth planning policies;
- Asset life-cycle management;
- Operating and maintenance programs; and
- Annual and long-term financial plans.

The prudent acquisition, construction, maintenance, rehabilitation and replacement or disposal of corporate assets over time enhances asset and financing efficiencies and effectiveness and promotes greater sustainability. Moreover, the plan demonstrates that all the D.C. funded growth-related assets are financially sustainable over their full life cycle.

Appendix F
Proposed D.C. By-Law

The Regional Municipality of Durham

Transit Development Charges By-law

By-law Number XX-2022

July 2022

BY-LAW NUMBER XX-2022

OF

THE REGIONAL MUNICIPALITY OF DURHAM

being a by-law regarding development charges for transit services

WHEREAS section 2(1) of the *Development Charges Act, 1997*, provides that council of a municipality may by by-law impose development charges against land to pay for increased capital costs required because of increased needs for services arising from development of the area to which the by-law applies if the development requires one or more of the approvals identified in section 2(2) of the *Development Charges Act, 1997*;

AND WHEREAS a development charge background study has been completed in support of the imposition of development charges;

AND WHEREAS the Council of The Regional Municipality of Durham has given notice and held a public meeting on April 27, 2022, in accordance with section 12(1) of the *Development Charges Act, 1997*;

AND WHEREAS the Council of The Regional Municipality of Durham has permitted any person who attended the public meeting to make representations in respect of the proposed development charges;

NOW THEREFORE THE COUNCIL OF THE REGIONAL MUNICIPALITY OF DURHAM HEREBY ENACTS AS FOLLOWS:

PART I

INTERPRETATION

Definitions

1. In this By-law,

   (a) "Act" means the *Development Charges Act, 1997*, or a successor statute;

   (b) "agricultural use" means lands, buildings or structures, excluding any portion thereof used as a dwelling unit or for a commercial use, used or designed or intended for use for the purpose of a *bona fide* farming operation including, but not limited to, animal husbandry, dairying, livestock, fallow, field crops, removal of sod, forestry, fruit farming, greenhouses, horticulture, market gardening, pasturage, poultry keeping, and equestrian facilities;

(c) “air-supported structure” means a structure consisting of a pliable membrane that achieves and maintains its shape and is supported by internal air pressure;

(d) “apartment building” means a residential building, or the residential portion of a mixed-use building, consisting of more than 3 dwelling units, which dwelling units have a common entrance to grade but does not include a triplex, semi-detached duplex, semi- detached triplex, townhouse. Despite the foregoing, an “apartment building” includes “stacked townhouses”;

(e) “apartment” means a dwelling unit in an apartment building or a single storey dwelling unit located within or above a residential garage or a commercial use;

(f) “area municipality” means a lower-tier municipality that forms part of the Region;

(g) “bedroom” means a habitable room, including a den, study, loft, or other similar area, but does not include a living room, a dining room, a bathroom or a kitchen;

(h) “building or structure” means a permanent enclosed structure and includes an air-supported structure;

(i) “commercial use” means land, buildings or structures used, or designed or intended for use for either or both of office and retail uses as defined in this by-law;

(j) “Council” means the Council of the Regional Municipality of Durham;

(k) “development” includes redevelopment;

(l) “development charges” means charges in regard to transit services imposed pursuant to this By-law in accordance with the Act;

(m) “duplex” means a building comprising, by horizontal division, two dwelling units;

(n) “dwelling unit” means a room or suite of rooms used, or designed or intended for use by one person or persons living together, in which culinary and sanitary facilities are provided for the exclusive use of such person or persons;

(o) “existing industrial building” means a building used for or in connection with,

(i) manufacturing, producing, processing, storing or distributing something,

(ii) research or development in connection with manufacturing, producing or processing something,

(iii) 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,

(iv) office or administrative purposes, if they are,

(A) carried out with respect to manufacturing, producing, processing, storage or distributing of something, and

(B) in or attached to the building or structure used for that manufacturing, producing, processing, storage or distribution;

(p) “farm building” means a building or structure used, in connection with a bona fide agricultural use and includes barns, silos, and similar structures, and includes a dwelling located on the same lot as the agricultural use or on a lot directly abutting the agricultural use, which is used exclusively for the housing of temporary or seasonal persons employed exclusively for the farming of that agricultural use, but otherwise excludes a building or structure used, or designed or intended for use for residential or commercial uses;

(p) “garden suite” means a one-unit detached, temporary residential structure containing bathroom and kitchen facilities that is ancillary to an existing residential structure and that is designed to be portable;

(q) “gross floor area” means (except for the purposes of sections 9 and 14), in the case of a non-residential building or structure or the non-residential portion of a mixed-use building or structure, the aggregate of the areas of each floor, whether above or below grade, measured between the exterior faces of the exterior walls of the building or structure or pliable membrane in the case of an air supported structure, or from the centre line of a common wall separating a non-residential and a residential use, and, for the purposes of this definition, the non-residential portion of a mixed-use building is deemed to include one-half of any area common to the residential and non-residential portions of such mixed-use building or structure;

(s) “housing services use”/ “housing services” means social housing which is rental housing provided by Durham Region Local Housing Corporation (DRLHC) or by a non-profit housing provider that receives ongoing subsidy from the Region of Durham and Affordable Housing which are rental units provided by private or non-profit housing providers that receive capital

funding through a federal and / or provincial government affordable housing program;

(t) “institutional development”, for the purposes of section 18(a) of the by-law, means development of a building or structure intended for use,

(a) as a long-term care home within the meaning of subsection 2 (1) of the Long-Term Care Homes Act, 2007;

(b) as a retirement home within the meaning of subsection 2 (1) of the Retirement Homes Act, 2010;

(c) by any of the following post-secondary institutions for the objects of the institution:

(i) a university in Ontario that receives direct, regular and ongoing operating funding from the Government of Ontario,

(ii) a college or university federated or affiliated with a university described in subclause (i), or

(iii) an Indigenous Institute prescribed for the purposes of section 6 of the Indigenous Institutes Act, 2017;

(d) as a memorial home, clubhouse or athletic grounds by an Ontario branch of the Royal Canadian Legion; or

(e) as a hospice to provide end of life care.

(t) “local board” means a local board as defined in the *Municipal Affairs Act*, other than a board defined in subsection 1(1) of the *Education Act*;

(u) “medium density multiples” includes plexes, townhouses, , and all other residential uses that are not included in the definition of “apartment building”, “apartment”, “garden suites’, “mobile homes”, “retirement residence units”, “single detached”, “single detached dwelling” or “semi-detached dwelling”;

(v) “mixed-use” means land, buildings or structures used, or designed or intended for use, for a combination of non-residential and residential uses;

(w) “mobile home” means any dwelling that is designed to be made mobile, and constructed or manufactured to provide a permanent or temporary residence for one or more persons, but does not include a travel trailer or tent trailer or trailer otherwise designed;

(y) non-profit housing development, for the purpose of section 18(b) means development of a building or structure intended for use as residential premises by,

(a) a corporation without share capital to which the Corporations Act applies, that is in good standing under that Act and whose primary object is to provide housing;

(b) a corporation without share capital to which the Canada Not-for-profit Corporations Act applies, that is in good standing under that Act and whose primary object is to provide housing; or

(c) a non-profit housing co-operative that is in good standing under the Co-operative Corporations Act.

(x) “non-residential use” means lands, buildings or structures or portions thereof used, or designed or intended for use for other than residential use;

(y) “office use” means lands, buildings or structures used or designed or intended for use for the practice of a profession, the carrying on of a business or occupation or the conduct of a non-profit organization and, for greater certainty, but without in any way limiting the generality of the foregoing, shall include but not be limited to the office of a physician, lawyer, dentist, architect, engineer, accountant, real estate or insurance agency, insurance company, veterinarian, surveyor, appraiser, financial institution, consumer loan company, employment agency, advertising agency, consulting firm, business service, investment company, security broker, mortgage company, medical clinic, contractor, builder, land developer;

(z) “place of worship” means a building or structure or part thereof that is used primarily for worship and is exempt from taxation as a place of worship under the Assessment Act;

(aa) “plex” means a duplex, a semi-detached duplex, a triplex or a semi-detached triplex;

(bb) “Region” means the Regional Municipality of Durham;

(cc) “rental housing” for the purpose of section 18(a) of the by-law, means development of a building or structure with four or more dwelling units all of which are intended for use as rented residential premises.

(dd) "residential use" means lands, buildings or structures used, or designed or intended for use as a home or residence of one or more individuals, and shall include, but is not limited to, a single detached dwelling, a semi-detached dwelling, a townhouse, a plex, a stacked townhouse, an

apartment, an apartment building, a mobile home, a retirement residence and a residential dwelling unit accessory to a non-residential use;

(ee) “retail use” means lands, buildings or structures used or designed or intended for use for the sale or rental or offer for sale or rental of goods or services for consumption or use and, for greater certainty, but without in any way limiting the generality of the foregoing, shall include, but not be limited to, food stores, pharmacies, clothing stores, furniture stores, department stores, sporting goods stores, appliance stores, garden centres, automotive dealers, automotive repair shops, gasoline service stations, government owned retail facilities, private daycare, private schools, private lodging, private recreational facilities, sports clubs, golf courses, skiing facilities, race tracks, gambling operations, medical clinics, funeral homes, motels, hotels, rooming houses, restaurants, theatres, facilities for motion picture, audio and video production and distribution, sound recording services, self-storage facilities and secure document storage;

(ff) “retirement residence” means a residential building or the residential portion of a mixed-use building which provides accommodation for persons of retirement age, where common facilities for the preparation and consumption of food are provided for the residents of the building, and where each unit or living accommodation has separate sanitary facilities, less than full culinary facilities and a separate entrance from a common hall;

(gg) “retirement residence unit” means a unit within a retirement residence;

(hh) “rooming house” means a detached building or structure which comprises rooms that are rented for lodging and where the rooms do not have both culinary and sanitary facilities for the exclusive use of individual occupants;

(ii) “semi-detached duplex” means one of a pair of attached duplexes, each duplex divided vertically from the other by a party wall;

(jj) “semi-detached dwelling” means a building divided vertically (above or below ground) into and comprising 2 dwelling units;

(kk) “semi-detached triplex” means one of a pair of triplexes divided vertically one from the other by a party wall;

(ll) “service” means the service designated in section 7 of this by-law;

(mm) “single detached dwelling” and “single detached” means a building comprising 1 dwelling unit;

(nn) “stacked townhouse” means a building, other than a plex, townhouse or apartment building, containing at least 3 dwelling units; each dwelling unit separated from the other vertically and/or horizontally and each dwelling unit having a separate entrance to grade;

(oo) “townhouse” means a building, other than a plex, stacked townhouse or apartment building, containing at least 3 dwelling units, each dwelling unit separated vertically from the other by a party wall and each dwelling unit having a separate entrance to grade;

(pp) “triplex” means a building comprising 3 dwelling units.

2. In this by-law where reference is made to a statute or a section of a statute such reference is also deemed to be a reference to any successor statute or section.

PART II

APPLICATION OF BY-LAW — RULES

Circumstances Where Development Charges are Payable

3. Development charges shall be payable in the amounts set out in sections 8 and 12 of this by-law where:

(a) the lands are located in the area described in subsection 4(1); and

(b) the development of the lands requires any of the approvals set out in subsection 5(1).

Area to Which By-law Applies

4. (1) Subject to subsection 4(2), this by-law applies to all lands in the Region.

4. (2) This by-law shall not apply to lands that are owned by and used for the purposes of:

(a) the Region or a local board thereof;

(b) a board as defined in subsection 1(1) of the *Education Act*; and

(c) an area municipality or a local board thereof in the Region.

Approvals for Development

5. (1) Development charges shall be imposed upon all lands, buildings or structures that are developed for residential or non-residential uses if the development requires,

    (a) the passing of a zoning by-law or of an amendment thereto under section 34 of the *Planning Act*;

    (b) the approval of a minor variance under section 45 of the *Planning Act*;

    (c) a conveyance of land to which a by-law passed under subsection 50(7) of the *Planning Act* applies;

    (d) the approval of a plan of subdivision under section 51 of the *Planning Act*;

    (e) a consent under section 53 of the *Planning Act*;

    (f) the approval of a description under section 9 of the *Condominium Act*; or

    (g) the issuing of a permit under the *Building Code Act, 1992* in relation to a building or structure.

5. (2) No more than one development charge for the service designated in section 7 shall be imposed on land to which this by-law applies even though two or more of the actions described in subsection 5(1) are required before the land can be developed.

6. (2) Notwithstanding subsection 6(1), if two or more of the actions described in subsection 5(1) occur at different times, additional development charges shall be imposed, if the subsequent action has the effect of increasing the need for services.

Designation of Services

7. (1) The category of service for which development charges are imposed under this by-law is transit.

7. (2) The components of the service designated in subsection 7(1) are described on Schedule “A”.

7. (3) It is hereby declared by Council that all development of land within the area to which this By-law applies will increase the need for services.

6. (4) The development charges under this By-law applicable to a development shall apply without regard to the services required or used by a particular development.

Amount of Development Charges

Residential

8. (1) The development charges described in Schedule "B" to this by-law shall be imposed upon residential uses of lands, buildings or structures, including a dwelling unit accessory to a non-residential use and, in the case of a mixed use building or structure, upon the residential uses in the mixed use building or structure, according to the type of residential unit.

Exemptions

9. (1) For the purpose of section 9, "gross floor area" means the total floor area, measured between the outside of exterior walls or between the outside of exterior walls and the centre line of party walls dividing the building from another building, of all floors above the average level of finished ground adjoining the building at its exterior walls.

9. (2) Development charges shall not be imposed in respect to:

(a) the issuance of a building permit not resulting in the creation of an additional dwelling unit;

(b) the enlargement of an existing dwelling unit;

(c) the creation of additional dwelling units in accordance with the following table:

Description of Class of Existing Residential Buildings	**Maximum Number of Additional Dwelling Units**	**Restrictions**
Existing single detached residential buildings, each of which contains a single dwelling unit, that are not attached to other buildings.	Two	The total gross floor area of the additional dwelling unit or units must be less than or equal to the gross floor area of the dwelling unit already in the building.
Existing semi-detached or row residential buildings, each of which contains a single dwelling unit, that have one or two vertical walls, but no other parts, attached to other buildings.	One	The gross floor area of the additional dwelling unit must be less than or equal to the gross floor area of the dwelling unit already in the building.

Existing rental residential buildings, each of which contains four or more dwelling units.	Greater of one and 1% of the existing units in the building	None
An existing residential building not in another class of residential building described in this table.	One	The gross floor area of the additional dwelling unit must be less than or equal to the gross floor area of the smallest dwelling unit already in the building.

(d) the creation of a second dwelling unit in accordance with the following table:

Description of Class of Proposed New Residential Buildings	Restrictions
Proposed new residential detached buildings that would not be attached to other buildings and that are permitted to contain a second dwelling unit, that being either of the two dwelling units, if the units have the same gross floor area, or the smaller of the dwelling units.	The proposed new detached dwelling must only contain two dwelling units. The proposed new detached dwelling must be located on a parcel of land on which no other detached dwelling, semi-detached dwelling or row dwelling would be located.
Proposed new semi-detached or row residential buildings that would have one or two vertical walls, but no other parts, attached to other buildings and that are permitted to contain a second dwelling unit, that being either of the two dwelling units, if the units have the same gross floor area, or the smaller of the dwelling units.	The proposed new semi-detached dwelling or row dwelling must only contain two dwelling units. The proposed new semi-detached dwelling or row dwelling must be located on a parcel of land on which no other detached dwelling, semi-detached dwelling or row dwelling would be located.
Proposed new residential buildings that would be ancillary to a proposed new detached dwelling, semi-detached dwelling or row dwelling and that are permitted to contain a single dwelling unit.	The proposed new detached dwelling, semi-detached dwelling or row dwelling, to which the proposed new residential building would be ancillary, must only contain one dwelling unit. The gross floor area of the dwelling unit in the proposed new residential building must be equal to or less than the gross floor area of the detached dwelling, semi-detached dwelling or row dwelling to which the proposed new residential building is ancillary.

Retirement Residence Unit

10. The development charges imposed on a retirement residence unit under section 8 shall be payable at the rate applicable to an apartment of one bedroom and smaller.

Non-Residential Uses

11. The development charges described in Schedule "C" to this by-law shall be imposed upon non-residential uses of lands, buildings or structures, and, in the case of a mixed use building or structure, upon the non-residential uses in the mixed use building or structure, according to the gross floor area of the non-residential use.

Exemptions

12. (1) Notwithstanding section 12 of this by-law, development charges shall not be imposed upon non-residential development if the development does not have the effect of creating gross floor area of non-residential development or of increasing existing gross floor area of non-residential development.

13. (2) Notwithstanding the provision of this by-law, development charges shall not be imposed in regard to:

(a) agricultural uses and farm buildings;
(b) places of worship;
(c) public hospitals receiving aid under *the Public Hospitals Act* R.S.O. 1990, c. P.40, excluding such buildings or structures or parts thereof used, designed or intended for use primarily for or in connection with a commercial purpose;
(d) any part of a building or structure used for the parking of motor vehicles, excluding parking spaces for display of motor vehicles for sale or lease or parking spaces associated with the servicing of motor vehicles;
(By-law #30-2018)
(e) free standing roof-like structures and canopies that do not have exterior walls.

(f) Land vested in or leased to a university that receives regular and ongoing operating funds from the government for the purposes of post-secondary education, but only if the lands are occupied and used by the university.

Exemption for Enlargement of Existing Industrial Building

14. (1) Despite any other provisions of this by-law, if a development includes the enlargement of the gross floor area of an existing industrial building, the amount of the development charge that is payable in respect of the enlargement shall be calculated as follows:

(a) if the gross floor area is enlarged by fifty percent or less, the amount of the development charge in respect of the enlargement is zero;

(b) if the gross floor area is enlarged by more than fifty 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:

(i) determine the amount by which the enlargement exceeds fifty percent of the gross floor area before the enlargement; and

(ii) divide the amount determined under paragraph (i) by the amount of the enlargement.

14. (2) For the purposes of subsection 14(1) the following provisions apply:

a. the gross floor area of an existing industrial building shall be calculated as it existed as of July 1, 2022;

b. subject to 14(2)(c) below, the enlargement need not be an attached addition or expansion of an existing industrial building, but rather may be a new standalone structure, provided it is located on the same parcel of land as the existing industrial building;

c. in the event that the enlargement is in the form of a standalone building or structure located on the same parcel of land as per 14(2)(b) above, prior to the issuance of a building permit for the standalone building or structure, 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. Such agreement will require that in the event that the lands upon which any standalone building or structure is located are the subject of an application for consent under section 53 of the Planning Act; or for which a by-law is passed under subsection 50(7) of the Planning Act, within 10 years of building permit issuance for such standalone building or structure, that the development charges that would have otherwise been payable for such standalone building or structure, shall become due and payable.

14. (3) In this section “gross floor area” means the total floor area, measured between the outside of exterior walls or between the outside of exterior walls and the centre line of party walls dividing the building from another building, of all floors above the average level of finished ground adjoining the building at its exterior walls.

Reduction of Development Charges For Redevelopment

15. (1) Despite any other provision of this by-law, where, as a result of the redevelopment of land, a building or structure existing on the land within ten years prior to the date of payment of development charges in regard to such redevelopment was, or is to be demolished, in whole or in part, or converted from one principal use to another, in order to facilitate the redevelopment, the development charges otherwise payable with respect to such redevelopment shall be reduced by the following amounts:

(a) in the case of a residential building or structure, the amount of the reduction in the applicable development charges will equal the applicable development charges under section 8 of this by-law that would have been chargeable on the type of dwelling units demolished or to be demolished or converted to another use; and

(b) in the case of a non-residential building or structure, the amount of the reduction in the applicable development charges will equal the applicable development charges under section 12 of this by-law that would have been chargeable on the gross floor area of the non-residential building or structure that was demolished or to be demolished or converted to another use;

(c) in the case of a non-residential building or structure that would have been exempt from the payment of development charges under the current Regional Development Charge By-law, the amount of the reduction in the applicable development charge will equal the applicable development charge under section 12 of this by-law that, had the building or structure not been exempt, could have been chargeable on the gross floor area of the non-residential building or structure that was demolished or to be demolished or converted to another use; and

(d) in the case of a mixed-use building or structure, the amount of the reduction in the applicable development charges will equal the applicable development charges under sections 8 or 12 of this by-law that would have been chargeable either upon the type of dwelling units or the gross floor area of non-residential use in the mixed-use building or structure that is being demolished or to be demolished or converted to another use;

provided that such amounts shall not exceed, in total, the amount of the development charges otherwise payable with respect to the redevelopment

15. (2) The ten year period referred to in subsection 15(1) of this by-law shall be calculated from the date of the issuance of the first demolition permit.

15. (3) Development charges shall not be reduced under this section where the building or structure that is to be demolished or has been demolished or

converted from one principal use to another was, or would have been, exempt from development charges under this by-law.

15. (4) The onus is on the applicant to produce evidence to the satisfaction of the Region, acting reasonably, which establishes that the applicant is entitled to the reduction in the payment of development charges claimed under this section.

PART III

ADMINISTRATION

Timing of Payment of Development Charges

16. Development charges, determined in accordance with section 19 and adjusted in accordance with section 23 of this by-law, are payable in full on the date on which a building permit is issued with respect to each dwelling unit, building or structure.

17. Notwithstanding section 16, Council, from time to time, and at any time, may enter into agreements in accordance with section 27 of the Act which provide for all or any part of a development charge to be paid before or after it would otherwise be payable.

Payment by Services

18. Notwithstanding section 16, where development charges become payable after January 1, 2020 for development of:

(a) rental housing that is not non-profit housing development and institutional development, development charges shall be paid in equal annual instalments beginning on the earlier of the date of issuance of a permit under the Building Code Act, 1992 authorizing occupation of the building and the date the building is first occupied, and continuing on the following five anniversaries of that date;

(b) non-profit housing development, development charges shall be paid in equal annual instalments beginning on the earlier of the date of issuance of a permit under the Building Code Act, 1992 authorizing occupation of the building and the date the building is first occupied, and continuing on the following twenty anniversaries of that date;

Determining Amount Payable

19. The development charges payable will be the development charge shown in the applicable Schedules to this by-law to be payable, with indexing under section 23, and, where applicable, with interest under section 24 of this by-law as of

(a) for those developments to which section 18 applies,

(i) for applications filed after December 31, 2019 the day an application for an approval of development in a site plan control area under subsection 41 (4) of the Planning Act was made, provided the first building permit is issued within two years of the date that application was approved;

(ii) if clause (i) does not apply, for applications filed after December 31, 2019, the day an application for an amendment to a by-law passed under section 34 of the Planning Act was made, provided the first building permit is issued within two years of the date that amendment comes into force and effect; or

(iii) if neither clause (i) nor clause (ii) applies, the day the development charge would be payable in accordance with section 16 of this by-law; and

(b) for those developments to which section 18 does not apply,

(i) for applications filed after December 31, 2019, the day an application for an approval of development in a site plan control area under subsection 41 (4) of the Planning Act was made, provided the date the development charge is payable is within two years of the date that application was approved;

(ii) if clause (i) does not apply, for applications filed after December 31, 2019, the day an application for an amendment to a by-law passed under section 34 of the Planning Act was made, provided the date the development charge is payable is within two years of the date that amendment comes into force and effect; or

(iii) if neither clause (i) nor clause (ii) applies, the day the development charge would be payable in accordance with section 16 of this by-law.

(By-law #22-2021)

Front-Ending Agreements

18. Council, from time to time, and at any time, may enter into front-ending agreements in accordance with the Act.

Indexing

19. Development charges imposed pursuant to this by-law shall be adjusted annually, without amendment to this by-law, as of the 1st day of July, 2019, and on each successive July 1st date in accordance with the Statistics Canada Quarterly, *Construction Price Statistics*, catalogue number 62-007, for the most recently available annual period ending March 31.

Schedules

20. The following schedules to this by-law form an integral part thereof:

Schedule "A"	—	Components of Service Designated in section 7
Schedule "B"	—	Residential Development Charges
Schedule "C"	—	Non-Residential Development Charges

Date By-law in Force

21. This by-law shall come into force on July 1, 2022.

Installment Interest

24. Development charges payable by instalment pursuant to section 18 of this by-law shall bear interest in accordance with the Region of Durham Development Charge Interest Rate Policy, as amended from time to time.

Date By-law Expires

25. This by-law will expire five years from the date it comes into force, unless it is repealed at an earlier date by a subsequent by-law.

Registration

26. A certified copy of this by-law may be registered on title to any land to which this by-law applies.

Severability

27. In the event any provision, or part thereof, of this by-law is found by a court of competent jurisdiction to be *ultra vires*, such provision, or part thereof, shall be deemed to be severed, and the remaining portion of such provision and all other provisions of this by-law shall remain in full force and effect.

Short Title

28. This By-law may be cited as the Regional Municipality of Durham Transit Development Charges By-law, 2022.

BY-LAW read and passed this X day of X 2022

Original signed by: John Henry, Regional Chair & CEO

Original signed by: Cheryl Bandel, Acting Regional Clerk

SCHEDULE "A"

DESIGNATED REGIONAL SERVICE AND SERVICE COMPONENTS THEREUNDER

CATEGORY OF REGIONAL SERVICE	**SERVICE COMPONENTS**
Transit	• PULSE, Conventional and specialized buses and non-revenue vehicles expansion and related equipment (e.g. fareboxes, radio's, Presto, etc.) • New facilities, transfer hubs, terminals, lands, buildings and related equipment • Transit stops (e.g. hard surface pads and shelters) • System improvements • Studies

SCHEDULE "B"

RESIDENTIAL DEVELOPMENT CHARGES EFFECTIVE JULY 1, 2022 — $ PER DWELLING UNIT BY TYPE

			APARTMENTS	
SERVICE CATEGORY	**SINGLE DETACHED & SEMI-DETACHED DWELLINGS**	**MEDIUM DENSITY MULTIPLES**	**TWO BEDROOMS & LARGER**	**ONE BEDROOM & SMALLER**
Regional Transit	$2,184	$1,720	$1,221	$750

NOTE: The development charges described above shall be adjusted annually pursuant to section 23 of this By-law.

SCHEDULE "C"

NON-RESIDENTIAL USE DEVELOPMENT CHARGES
EFFECTIVE JULY 1, 2022
$ PER SQUARE FOOT OF GROSS FLOOR AREA

SERVICE CATEGORY	Non-Residential Use
Regional Transit	$0.99

NOTE: The development charges described above shall be adjusted annually pursuant to section 23 of this By-law.