**Draft Study**

Prepared by Hemson for the City of Ottawa

# Amended Development Charges Background Study

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# List of Acronyms

AMP Asset Management Plan

BTE Benefit to Existing

COG Cost of Growth

DCA Development Charges Act

DC Development Charges

GFA Gross Floor Area

LRFP Long Range Financial Plan

IGB Inside the Greenbelt

IMP Infrastructure Master Plan

OGB Outside the Greenbelt

PPB Post-Period Benefit

PPU Persons Per Unit

TMP Transportation Master Plan

# 1. Introduction

The City of Ottawa released a 2024 Interim Development Charges (DC) Background Study for City-wide and Area-Specific services as part of the process to lead to the approval of a new DC By-law in compliance with the *Development Charges Act, 1997* (DCA). Since the adoption of the by-law by Council in May 2024 (By-law 2024-218), the City has adopted Part 2 of the Transportation Master Plan (TMP), which provides updated information for Roads & Related and Public Transit services. An interim update to the existing DC Background Study and By-law is required to incorporate these changes.

The DCA and O. Reg. 82/98 require that an Amended DC Background Study be prepared in which development charges are determined with reference to:

- The average capital service levels provided in the City over the 15-year period immediately preceding the preparation of the background study (if applicable);
- A review of future capital projects, including an analysis of gross expenditures, funding sources, and net expenditures incurred, or to be incurred, by the City or its local boards to provide for the expected development, including the determination of the eligible and ineligible components of the capital projects; and,
- An examination of the long-term capital and operating costs for the capital infrastructure required for each service to which the development charges by-laws would relate.

This study presents the results of the review which determines the development-related net capital costs attributable forecast to occur in the City. These development-related net capital costs are then apportioned among residential and non-residential development in a manner that reflects the increase in the need for each service attributable to each type of

development. The study arrives, therefore, at calculated development charges for various types of development.

The DCA provides for a period of public review and comment regarding the proposed development charges. Following completion of this process in accordance with the DCA, Council will review this study, and comments received regarding this study or other information brought to Council's attention about the proposed charges. Council will then pass an amended development charges by-law for the City.

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

## A. Legislative Context

The study is prepared in accordance with the DCA and associated regulations, including the amendments that came into force most recently on November 27, 2025 as per *Bill 60: Fighting Delays, Building Faster Act, 2025.* This study also considers all amendments under *Bill 23: More Homes Built Faster Act, 2022* and *Bill 185: Cutting Red Tape to Build More Homes Act, 2024*. Key legislative changes incorporated into this consolidated study include:

- Historical service level standards have been extended from a 10 to 15-year planning period;
- DC by-laws now expire every 10 years instead of 5 years;
- The amount of interest paid on DC deferrals and freeze is capped at prime plus 1%;
- Costs associated with affordable housing services are now ineligible for recovery through DCs;
- Municipalities must spend or allocate 60% of available DC reserve funds per year for roads, water and wastewater services;

- Creation of a distinct category of service for land acquisition costs;
- Establishment of a local service policy to determine the infrastructure that will be provided as a local service;
- Discounts for purpose-built rentals based on the number of bedrooms; and
- Exemptions for Affordable and Attainable housing developments which meet the definitions under the DCA.

## B. Consultation and Approval Process

The following provides a summary of the consultation and approval process to be completed as part of the DC Background Study. Following the release of the DC Background Study, consultation with the public and development industry stakeholders prior to the passage of the new DC By-law will occur.

**Timeline of Consultation and Approval Process**

| Activity | Date |
|---|---|
| Release of Amending DC Background Study | January 9, 2026 |
| Release Draft DC By-law | February 27, 2026 |
| Statutory Public Meeting | March 4, 2026 |
| Passage of Amended DC By-law | March 11, 2026 |

## C. Relevant Analysis Relating to the Amending DC Background Study

This amending study covers the updates arising from the completion of Part 2 of the City's TMP. The amending study includes changes to the City's Roads & Related and Public Transit services.

Additional details on the TMP can be found on the City's website: https://engage.ottawa.ca/transportation-master-plan.

# 2. The DC Methodology Aligns Development-Related Costs and Benefits

Several key steps are required in calculating a development charge. However, specific circumstances arise in each municipality which must be reflected in the calculation. In this study, we have tailored our approach to the City of Ottawa's unique circumstances. The approach to the calculated development charges is focused on providing a reasonable alignment of development-related costs with the development that necessitates them.

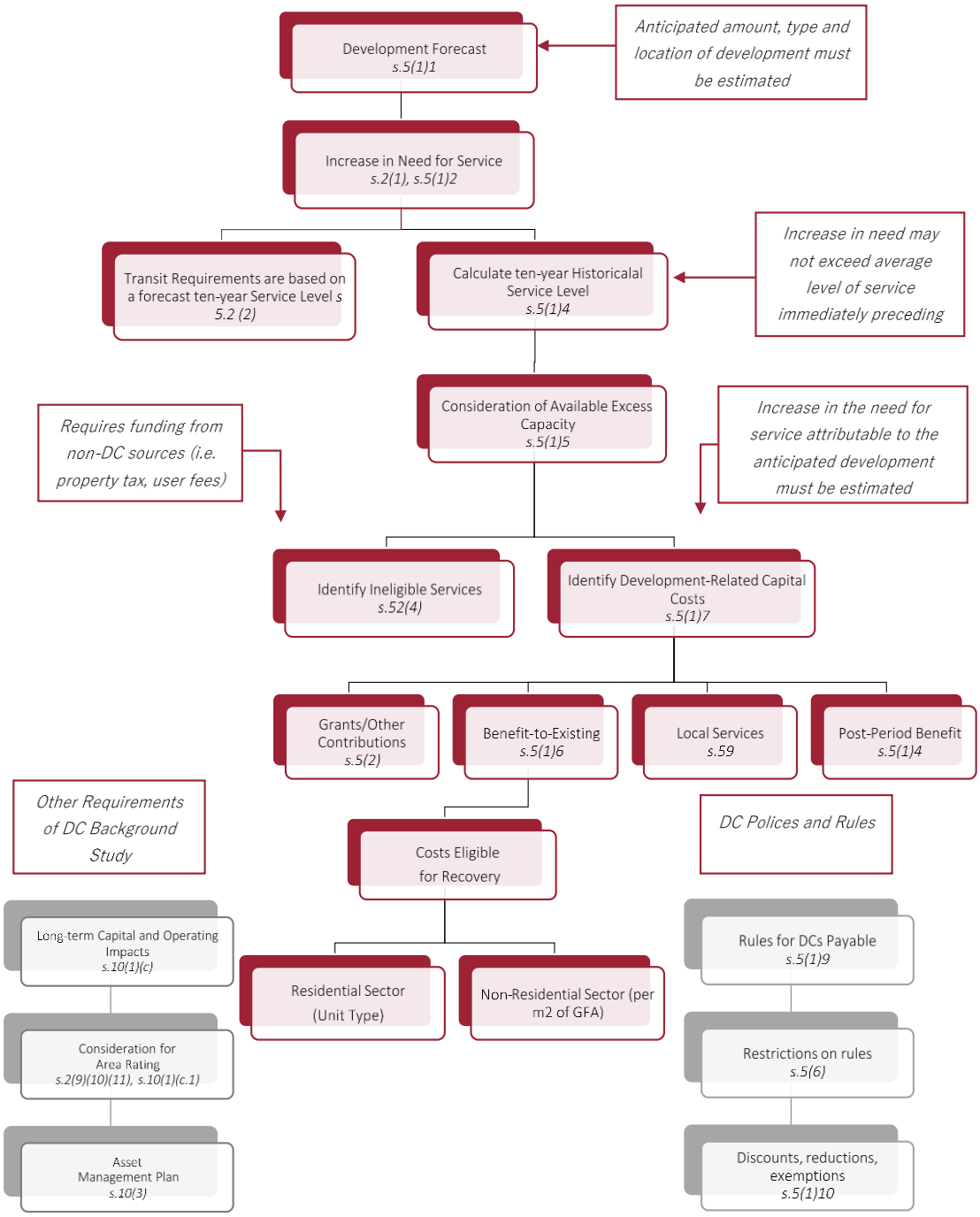
## A. Consideration for Area Rated Services

In accordance with the DCA, Council must consider the use of area rating, also known as area-specific development charges, as part of the development charges background study. Consistent with the City's historical practices, both city-wide and area-specific DCs have been calculated. The City has four primary benefitting areas: City-wide, Inside the Greenbelt (IGB), Outside the Greenbelt (OGB) and Rural. For the purposes of this amending study, Roads & Related services are calculated on a City-wide and area specific basis. Public Transit is calculated on a City-wide basis.

## B. Key Steps In Determining DCs for Future Development-Related Projects

Several key steps are required in calculating DCs for future development-related projects. These are summarized below and shown schematically in Figure 1.

## Figure 1: Statutory Requirements of Development Charge Calculation and Study Process



### i. Development Forecast

The first step in the methodology requires a development forecast to be prepared. A planning horizon of 2026-2035 has been used for Roads & Related and Public Transit services, which is consistent with the 10-year planning horizon approach used for the 2024 Interim DC Background Study update (which was from 2024 to 2033).

The forecast of the future residential and non-residential development by location is based on growth anticipated to occur in the City. For the residential portion of the forecast both the Census population growth and population growth in new units is estimated. Net population growth determines the need for additional facilities and provides the foundation for the development-related capital program.

The non-residential portion of the forecast estimates the gross floor area (GFA) of building space to be developed over the planning horizon to 2035. The forecast of GFA is based on the employment forecast for the City. Factors for floor space per worker by category are used to convert the employment forecast into gross floor areas for the purposes of the development charges study.

### ii. Service Categories and Historical Service Levels

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

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

Historical 15-year average service levels generally form the basis for development charges. Consistent with the approach employed in the City's 2024 Interim Development Charges Background Study, the quantity level of

service measurement for Roads & Related services is based on road volume/capacity by screenline for 2011 to 2031. In contrast, the quality level of service measure is based on road costs assumptions provided by IBI Group (dated September 2013) and indexed to current day dollars. This analysis is included under Appendix A.

No historical service level is provided for Public Transit services are based on a "planned level of service".

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

A development-related capital program has been prepared as part of the study. The program identifies the gross and net municipal costs, after allowing for capital grants, subsidies or other recoveries as required by the Act (DCA, s. 5. (2)). The capital program provides another cornerstone upon which development charges are based. The DCA requires that the increase in the need for service attributable to the anticipated development may include an increase:

> … only if the council of the Municipality has indicated that it intends to ensure that such an increase in need will be met. (s. 5. (1) 3.)

The development-related capital program prepared for this study ensures that development charges are only imposed to help pay for projects that have been or are intended to be purchased or built to accommodate future anticipated development. It is not sufficient in the calculation of development charges merely to have had the service in the past. There must also be a demonstrated commitment to continue to emplace facilities or infrastructure in the future. In this regard, O. Reg. 82/98, s. 3 states that:

> For the purposes of paragraph 3 of subsection 5 (1) of the *Act*, the council of a Municipality has indicated that it intends to ensure that an increase in the need for service will be met if the increase in service

forms part of an official plan, capital forecast or similar expression of the intention of the council and the plan, forecast or similar expression of the intention of the council has been approved by the council.

For some projects in the development-related capital program, a portion of the project may confer benefits to existing residents. As required by the DCA, s. 5(1)6., these portions of projects and their associated net costs are the funding responsibility of the City from non-development charges sources. The amount of municipal funding for such non-DC-eligible shares of projects is also identified as part of the preparation of the development-related capital program.

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

### iv. Attribution to Types of Development

The next step in the determination of development charges is the allocation of the development-related net capital costs between the residential and the non-residential sectors. In the City of Ottawa, the allocation is based on the projected changes in population and employment over the planning periods, the anticipated demand for services and other relevant factors.

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

### v. Final Adjustment

The final determination of the development charge results from adjustments made to development-related DC eligible costs resulting from the application of any unallocated growth-related reserve fund balances that are available to

finance the development-related capital costs in the capital program. A cash flow analysis is also undertaken to account for the timing of projects and receipt of development charges. Interest earnings or borrowing costs are therefore accounted for in the calculation as allowed under the DCA.

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

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

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

### i. Asset Management Plan

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

The requirement to include an Asset Management Plan (AMP) was part of the DCA amendments that came into effect on January 1, 2016. A key function of the Asset Management Plan is to demonstrate that all assets proposed to be

funded under the development charges by-law are financially sustainable over their full life-cycle.

# 3. Development Forecast

The *DCA* requires the City to estimate "the anticipated amount, type and location of development" for which development charges may be imposed. The development forecast must cover both residential and non-residential development and be specific enough with regards to quantum, type, location and timing of development to allow the City to prepare a reasonable development-related capital program.

## A. City-wide Development Forecast

The forecast has been adjusted slightly from the analysis contained in the City's 2024 Interim DC Background Study dated July 19, 2024. First, the forecast was updated to assume a 2025 base year. Changes were also made to the forecast to align with the forecast assumptions used in the City's TMP. In this respect, the following assumptions apply:

- A forecast to 2035 is based on the City achieving population and employment forecasts set out in its Official Plan, readily available Census data and assumptions provided by City staff.
- The population and household growth determines the need for additional facilities and provides the foundation for the development-related capital program. Table 1 summarizes the population and household development forecast. The table shows that the City's Census population is forecast to increase by roughly 111,600 people by 2035. The number of dwellings will increase by 59,000 units over the same planning period.
- In addition to the net population forecast, a forecast of "population in new units" that will result from the addition of new housing units has been made. In total, 147,000 is the forecasted population growth in new

dwelling units to 2035. Population growth in new units is estimated by applying the following PPUs to the housing unit forecast:

  - 3.36 for single and semi-detached units;
  - 2.65 for rows and multiples; and
  - 1.62 for apartments

- Non-residential development charges are calculated on a per square metre/square foot of gross floor area (GFA) basis. Therefore, as per the DCA, a forecast of non-residential building space has been developed.

- Average employment densities by employment type per employee have been used to convert the employment forecast into building space estimates.

  - Major Office – 23 $m^2$ per employee
  - Employment Land – 110 $m^2$ per employee
  - Population Related – 50 $m^2$ per employee

- A summary of the GFA forecasts is provided in Table 1. The total GFA growth is forecast at roughly 2.1 million square metres (or 22.9 million square feet) with an accompanying growth of 42,000 employees.

**TABLE 1**

**CITY OF OTTAWA**
**SUMMARY OF RESIDENTIAL AND NON-RESIDENTIAL**
**DEVELOPMENT FORECAST**
**CITY-WIDE**

| Development Forecast | 2025 Estimate | 10-Year 2026 to 2035 | |
|---|---|---|---|
| | | Growth | Total at 2035 |
| **Residential Development Forecast** | | | |
| Total Occupied Dwelling Units | 476,753 | 58,978 | 535,731 |
| *Population In New Dwellings* | | *146,995* | |
| Total Population | 1,172,477 | 111,623 | 1,284,100 |
| *Census Population* | *1,123,116* | *106,207* | *1,229,323* |
| **Non-Residential Development Forecast** | | | |
| Employment* | 623,634 | 41,962 | 665,596 |
| Non-Residential Building Space (sq.m.) | | *2,126,261* | |
| Non-Residential Building Space (sq.ft) | | *22,886,883* | |

* Excludes work at home employment but includes no fixed place of work

## B. Area-Specific Development Forecast

Like the City-wide development forecast above, the area-specific development forecast is based on the 2024 Interim DC Background Study, with adjustments to reflect the recent TMP. Table 2 below summarizes the residential development forecast to 2035 for the City's IGB, OGB and Rural areas. A non-residential forecast is not included as the services considered under this study are calculated on a City-wide basis for non-residential development.

**TABLE 2**

**CITY OF OTTAWA**
**SUMMARY OF RESIDENTIAL DEVELOPMENT FORECAST**
**AREA-SPECIFIC DEVELOPMENT FORECAST**

| AREA-SPECIFIC | 2025 Estimate | 10-Year 2026 to 2035 | |
|---|---|---|---|
| | | Growth | Total at 2035 |
| **Inside the Greenbelt** | | | |
| **Occupied Dwellings** | | | |
| Total Occupied Dwelling Units | 281,371 | 25,772 | 307,143 |
| *% of City-wide Dwelling Units* | | *44%* | |
| **Population** | | | |
| Census Population | 577,552 | 27,350 | 604,902 |
| *% of City-wide Population* | | *26%* | |
| *Population In New Dwellings* | | *46,331* | |
| **Outside the Greenbelt** | | | |
| Total Occupied Dwelling Units | 159,366 | 28,065 | 187,431 |
| *% of City-wide Dwelling Units* | | *48%* | |
| **Population** | | | |
| Census Population | 446,192 | 66,456 | 512,648 |
| *% of City-wide Population* | | *63%* | |
| *Population In New Dwellings* | | *86,632* | |
| **Rural** | | | |
| **Occupied Dwellings** | | | |
| Total Occupied Dwelling Units | 36,016 | 5,141 | 41,157 |
| *% of City-wide Dwelling Units* | | *9%* | |
| **Population** | | | |
| Census Population | 99,372 | 12,401 | 111,773 |
| *% of City-wide Population* | | *12%* | |
| *Population In New Dwellings* | | *15,596* | |

# 4. Development-Related Capital Forecast

## A. A Development-Related Capital Forecast is Provided for Council's Approval

The DCA requires the Council of a Municipality to express its intent to provide future capital facilities at the level incorporated in the development charges calculation. As noted above in Section 2, O. Reg. 82/98, s. 3 states that:

> For the purposes of paragraph 3 of subsection 5 (1) of the Act, the council of a Municipality has indicated that it intends to ensure that an increase in the need for service will be met if the increase in service forms part of an official plan, capital forecast or similar expression of the intention of the council and the plan, forecast or similar expression of the intention of the council has been approved by the council.

One of the recommendations contained in the Amendment DC Background Study is for Council to adopt the amended Roads & Related and Public Transit capital programs derived for the purposes of the development charges calculation. It is acknowledged that additional changes to the costs and/or scope of work proposed may occur through the City's normal capital budget process.

## B. Determination of Benefit to Existing (BTE)

As part of the DC Amendment Study process the City, together with Hemson, undertook a review of the approach to calculating the benefit to existing (BTE) of different types of road projects. The City presented the proposed approach to representatives of the development industry and made refinements to the approach, reflecting the feedback received.

Table 2 describes the BTE approach used in this DC Amendment Study.

**Table 2 – Roads & Related (Services Related to a Highway) BTE Allocations**

| Project Category | Proposed BTE | Description & Rationale |
|---|---|---|
| TMP Road Projects - General Purpose Lanes | 0-5% | ▪ 0% BTE applied to net new roads constructed to meet the needs of growth and includes transit lanes within new roads.<br>▪ 1-5% BTE applied to road widenings or reconstruction projects based on the cost of resurfacing/reconstruction the length of the existing road segment and sidewalks. BTE shares will be calculated on a project-by-project basis. This approach would apply to road widening required to accommodate transit and high-occupancy vehicles lanes. |
| Other Road Capacity Projects - General Purpose Lanes (Intersection Control Measures & Network Modification Program) | 0-5% | ▪ 0% BTE applied to all net new intersections (defined or undefined).<br>▪ 5% BTE for adding capacity to existing intersections for general purpose vehicles aligns with the BTE for TMP projects to widen existing roads. In some locations, the TMP recommends that full road widenings be replaced with intersection-focused widenings only. |
| TMP Roads Projects – Transit Lanes and Intersection Modifications | 4-5% | ▪ Includes continuous bus lanes (within roads right-of-way)<br>▪ 4-5% BTE applied where an existing asset is being replaced (e.g. widening existing roads to add bus lanes). The BTE is quantified based on the resurfacing or reconstruction costs of the existing roadway.<br>▪ 5% BTE for adding capacity to existing intersections for transit aligns with the BTE for adding continuous bus lanes to an existing road ("transit priority isolated measures"). |

| Project Category | Proposed BTE | Description & Rationale |
|---|---|---|
| TMP Road Urbanization & Development Sidewalks | 5% | ▪ Includes projects to add walking and cycling facilities to arterial and collector roads without sidewalks in response to growth occurring in areas that are development (were previously rural). Additional information is provided in the TMP – Road Network Development Report. |
| TMP Mainstreet Improvements | 51% | ▪ Projects to upgrade Mainstreet Corridors and roads in Design Priority Areas with new sidewalks, cycle tracks, and amenities to support intensification. Additional information is provided in the TMP – Road Network Development Report.<br>▪ 51% BTE allocation consistent with the BTE applied to cycling facilities in the 2024 DC Background Study. |
| Planning Studies | 5% | ▪ BTE share to align with allocation used for associated roads projects. |
| Pedestrian Facilities Program | 75% | ▪ Consistent with approach in previous DC Background Studies to recognize benefit to existing development |
| Cycling Facilities Program | 51% | ▪ Consistent with approach in previous DC Background Studies to recognize benefit to existing development |
| Multi-Use Pathways | 0-57% | ▪ Consistent with approach in previous DC Background Studies to recognize benefit to existing development |
| Transportation Programs | 50%-84% | ▪ Consistent with approach in previous DC Background Studies to recognize benefit to existing development |
| Public Works | 15%-80% | ▪ Additional projects included to align with TMP with BTEs ranging from 20% to 80% |

| Project Category | Proposed BTE | Description & Rationale |
|---|---|---|
| City-Wide Missing Links | 57% | ▪ Consistent with approach in previous DC Background Studies to recognize benefit to existing development |
| Debentures | 0% | ▪ 0% BTE as the City issues the DC eligible share of projects for debenture funding. |

## C. Roads & Related Development-Related Capital Forecast

Table 3 provides the amended City-wide, IGB, OGB and Rural capital program for Roads & Related services. The total gross cost of the capital program is $2.0 billion. The following summarizes the City-wide and area-specific capital programs:

- **City-wide Capital Program** – The development-related capital forecast that will benefit development occurring over the 2026 to 2035 period includes road extensions and other improvements, environmental assessments, pedestrian facilities, cycling facilities, multi-use pathways, public works equipment and facilities, intersection improvements, transit priority measures (as related to infrastructure within the roads right-of-way) as well as the recovery of outstanding debenture payments. The total gross cost of the capital program is $1.9 billion. Grants, subsidies and other recoveries of $319.2 million are identified and removed from the development charge calculation. Replacement and benefit to existing shares of $259.3 million have also been removed from the total DC eligible costs. The remaining $1.3 billion is considered eligible for recovery through development charges and included in the rate calculation.
- **Inside the Greenbelt Capital Program** – The total gross capital program related to development IGB totals $16.5 million and related to intersection control measures. No grants and subsidies or benefit to

existing and replacement shares have been identified, and therefore the total $16.5 million is included in the DC rate calculation.

- **Outside the Greenbelt Capital Program** – The total gross capital program related to development OGB totals $111.1 million and includes intersection control measures, outstanding debenture payments, and multi-use pathways. No grants and subsidies or benefit to existing and replacement shares have been identified, and therefore the total $111.1 million is included in the DC rate calculation.
- **Rural Capital Program** – The total gross capital program related to Rural development totals $16.7 million and includes intersection control measures and multi-use pathways. No grants and subsidies or benefit to existing and replacement shares have been identified, and therefore the total $16.7 million is included in the DC rate calculation.

**TABLE 3**
**CITY OF OTTAWA**
**DEVELOPMENT-RELATED CAPITAL PROGRAM**
**ROADS & RELATED SERVICES**

| Project Description | Timing | Gross Project Cost | Grants/ Subsidies/Other Recoveries | Net Municipal Cost | Ineligible Costs | | Total DC Eligible Costs | DC Eligible Costs | | | Benefitting Area |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | BTE Share (%) | Replacement & BTE Shares ($) | | Prior Growth[1] | 2026 - 2035 | Post 2035 | |
| **ROADS & RELATED SERVICES** | | | | | | | | | | | |
| **1.1 TMP Road Projects - Capacity** | | | | | | | | | | | |
| 1.1.1 Greenbank Rd (Chapman Mills to Cambrian) (6 lanes - 4 general purpose + 2 bus lanes) | 2026 - 2028 | $ 169,000,000 | $ 38,400,000 | $ 130,600,000 | 5% | $ 6,530,000 | $ 124,070,000 | $ - | $ 124,070,000 | $ - | City-wide |
| 1.1.2 Bank St (Leitrim to Blais) | 2026 - 2028 | $ 13,200,000 | $ - | $ 13,200,000 | 5% | $ 660,000 | $ 12,540,000 | $ - | $ 12,540,000 | $ - | City-wide |
| 1.1.3 Brian Coburn Extension (Renaud Road Realignment) | 2026 - 2028 | $ 45,000,000 | $ - | $ 45,000,000 | 5% | $ 2,250,000 | $ 42,750,000 | $ - | $ 42,750,000 | $ - | City-wide |
| 1.1.4 Carp Rd (Hwy 417 to Hazeldean) | 2026 - 2028 | $ 50,000,000 | $ - | $ 50,000,000 | 5% | $ 2,500,000 | $ 47,500,000 | $ - | $ 47,500,000 | $ - | City-wide |
| 1.1.5 Brian Coburn Widening (Mer Bleu to Tenth Line) | 2029 - 2031 | $ 40,000,000 | $ - | $ 40,000,000 | 3% | $ 1,200,000 | $ 38,800,000 | $ - | $ 38,800,000 | $ - | City-wide |
| 1.1.6 Stittsville Main Street Extension (Maple Grove Road to Derreen Drive) | 2029 - 2031 | $ 8,600,000 | $ - | $ 8,600,000 | 0% | $ - | $ 8,600,000 | $ - | $ 8,600,000 | $ - | City-wide |
| 1.1.7 Greenbank Road Re-Alignment (Cambrian Road to Kilbirnie Drive) (4 lanes - 2 general purpose + | 2029 - 2031 | $ 55,000,000 | $ 19,200,000 | $ 35,800,000 | 0% | $ - | $ 35,800,000 | $ - | $ 35,800,000 | $ - | City-wide |
| 1.1.8 Robert Grant Avenue Extension (Palladium Drive to Hazeldean Road) | 2032 - 2035 | $ 86,200,000 | $ - | $ 86,200,000 | 0% | $ - | $ 86,200,000 | $ - | $ 86,200,000 | $ - | City-wide |
| 1.1.9 Prince of Wales Drive Widening (Deakin Street to Amberwood Crescent) | 2032 - 2035 | $ 29,300,000 | $ - | $ 29,300,000 | 3% | $ 879,000 | $ 28,421,000 | $ - | $ 28,421,000 | $ - | City-wide |
| 1.1.10 Earl Armstrong Road Extension (Bowesville Station to Bank Street) | 2032 - 2035 | $ 98,000,000 | $ - | $ 98,000,000 | 1% | $ 1,344,000 | $ 96,656,000 | $ - | $ 96,656,000 | $ - | City-wide |
| 1.1.11 Greenbank Road Re-Alignment (Kilbirnie Drive to Barnsdale Road) | 2032 - 2035 | $ 20,000,000 | $ - | $ 20,000,000 | 0% | $ - | $ 20,000,000 | $ - | $ 20,000,000 | $ - | City-wide |
| 1.1.12 Airport Parkway Widening (Brookfield Road to Hunt Club Road) | 2035 - 2037 | $ 46,000,000 | $ - | $ 46,000,000 | 5% | $ 2,300,000 | $ 43,700,000 | $ - | $ 43,700,000 | $ - | City-wide |
| 1.1.13 Brian Coburn Boulevard Widening (Navan Road to Mer-Bleue Road) | 2032 - 2035 | $ 70,100,000 | $ - | $ 70,100,000 | 3% | $ 2,103,000 | $ 67,997,000 | $ - | $ 67,997,000 | $ - | City-wide |
| 1.1.14 New Road in the Hurdman Area | 2035 - 2037 | $ 24,700,000 | $ - | $ 24,700,000 | 0% | $ - | $ 24,700,000 | $ - | $ 24,700,000 | $ - | City-wide |
| Subtotal - TMP Road Projects - Capacity | | $ 755,100,000 | $ 57,600,000 | $ 697,500,000 | | $ 19,766,000 | $ 677,734,000 | $ - | $ 677,734,000 | $ - | |
| **1.2 Other Road-Related Capacity Projects - General Purpose Lanes** | | | | | | | | | | | |
| 1.2.1 24-26 Intersection Control Measures Outside Greenbelt | 2026 - 2035 | $ 96,500,000 | $ - | $ 96,500,000 | 0% | $ - | $ 96,500,000 | $ - | $ 96,500,000 | $ - | OGB |
| 1.2.2 24-26 Intersection Control Measures Rural | 2026 - 2035 | $ 15,000,000 | $ - | $ 15,000,000 | 0% | $ - | $ 15,000,000 | $ - | $ 15,000,000 | $ - | Rural |
| 1.2.3 24-26 Intersection Control Measures Central | 2026 - 2035 | $ 16,500,000 | $ - | $ 16,500,000 | 0% | $ - | $ 16,500,000 | $ - | $ 16,500,000 | $ - | IGB |
| 1.2.3 24-26 Intersection Control Measures (Undefined) | 2026 - 2035 | $ 22,000,000 | $ - | $ 22,000,000 | 0% | $ - | $ 22,000,000 | $ - | $ 22,000,000 | $ - | City-wide |
| 1.2.4 Network Modification Program (including Small Scale Road Projects) | 2026 - 2035 | $ 53,400,000 | $ - | $ 53,400,000 | 5% | $ 2,670,000 | $ 50,730,000 | $ - | $ 50,730,000 | $ - | City-wide |
| Subtotal - Other Road-Related Capacity Projects - General Purpose Lanes | | $ 203,400,000 | $ - | $ 203,400,000 | | $ 2,670,000 | $ 200,730,000 | $ - | $ 200,730,000 | $ - | |
| **1.3 Other Road-Related Projects - Transit Lanes and Intersection Modifications** | | | | | | | | | | | |
| 1.3.1 Blair Bus Lanes | 2026 - 2035 | $ 53,000,000 | $ 42,400,000 | $ 10,600,000 | 4% | $ 465,600 | $ 10,134,400 | $ - | $ 10,134,400 | $ - | City-wide |
| 1.3.2 Carling Bus Lanes | 2026 - 2035 | $ 154,000,000 | $ 123,200,000 | $ 30,800,000 | 5% | $ 1,613,333 | $ 29,186,667 | $ - | $ 29,186,667 | $ - | City-wide |
| 1.3.3 St Laurent Bus Lanes | 2026 - 2035 | $ 120,000,000 | $ 96,000,000 | $ 24,000,000 | 4% | $ 871,200 | $ 23,128,800 | $ - | $ 23,128,800 | $ - | City-wide |
| 1.3.4 Transit priority isolated measures | 2026 - 2035 | $ 80,000,000 | $ - | $ 80,000,000 | 5% | $ 4,000,000 | $ 76,000,000 | $ - | $ 76,000,000 | $ - | City-wide |
| Subtotal - Other Road-Related Projects - Transit Lanes and Intersection Modifications | | $ 407,000,000 | $ 261,600,000 | $ 145,400,000 | | $ 6,950,133 | $ 138,449,867 | $ - | $ 138,449,867 | $ - | |
| **1.4 TMP Road Urbanization & Development Sidewalks** | | | | | | | | | | | |
| 1.4.1 Development Sidewalks and Road Urbanizations | 2026 - 2035 | $ 116,200,000 | $ - | $ 116,200,000 | 5% | $ 5,810,000 | $ 110,390,000 | $ - | $ 110,390,000 | $ - | City-wide |
| Subtotal - TMP Road Urbanization & Development Sidewalks | | $ 116,200,000 | $ - | $ 116,200,000 | | $ 5,810,000 | $ 110,390,000 | $ - | $ 110,390,000 | $ - | |

**TABLE 3**
**CITY OF OTTAWA**
**DEVELOPMENT-RELATED CAPITAL PROGRAM**
**ROADS & RELATED SERVICES**

| Project Description | Timing | Gross Project Cost | Grants/ Subsidies/Other Recoveries | Net Municipal Cost | Ineligible Costs | | Total DC Eligible Costs | DC Eligible Costs | | | Benefitting Area |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | BTE Share (%) | Replacement & BTE Shares ($) | | Prior Growth[1] | 2026 - 2035 | Post 2035 | |
| **1.5 TMP Road Projects - Mainstreet** | | | | | | | | | | | |
| 1.5.1 Mainstreet improvements | 2026 - 2035 | $ 98,250,000 | $ - | $ 98,250,000 | 51% | $ 50,107,500 | $ 48,142,500 | $ - | $ 48,142,500 | $ - | City-wide |
| Subtotal - TMP Road Projects - Mainstreet | | $ 98,250,000 | $ - | $ 98,250,000 | | $ 50,107,500 | $ 48,142,500 | $ - | $ 48,142,500 | $ - | |
| **1.6 Planning Studies** | | | | | | | | | | | |
| 1.6.1 Arterial and Major Collector Roads - Environmental Assessment Studies | 2026 - 2035 | $ 27,500,000 | $ - | $ 27,500,000 | 5% | $ 1,375,000 | $ 26,125,000 | $ - | $ 26,125,000 | $ - | City-wide |
| Subtotal - Planning Studies | | $ 27,500,000 | $ - | $ 27,500,000 | | $ 1,375,000 | $ 26,125,000 | $ - | $ 26,125,000 | $ - | |
| **1.7 Pedestrian Facilities Program** | | | | | | | | | | | |
| 1.7.1 Pedestrian Facilities Standalone Capital Projects | 2026 - 2035 | $ 38,152,773 | $ - | $ 38,152,773 | 75% | $ 28,614,580 | $ 9,538,193 | $ - | $ 9,538,193 | $ - | City-wide |
| Subtotal - Pedestrian Facilities Program | | $ 38,152,773 | $ - | $ 38,152,773 | | $ 28,614,580 | $ 9,538,193 | $ - | $ 9,538,193 | $ - | |
| **1.8 Cycling Facilities Program** | | | | | | | | | | | |
| 1.8.1 Cycling Facilities Standalone Capital Projects | 2026 - 2035 | $ 94,877,638 | $ - | $ 94,877,638 | 51% | $ 48,387,596 | $ 46,490,043 | $ - | $ 46,490,043 | $ - | City-wide |
| Subtotal - Cycling Facilities Program | | $ 94,877,638 | $ - | $ 94,877,638 | | $ 48,387,596 | $ 46,490,043 | $ - | $ 46,490,043 | $ - | |
| **1.9 Major AT Structures Program** | | | | | | | | | | | |
| 1.9.1 Major AT Structures Standalone Capital Projects | 2026 - 2035 | $ 41,969,589 | $ - | $ 41,969,589 | 57% | $ 23,922,665 | $ 18,046,923 | $ - | $ 18,046,923 | $ - | City-wide |
| Subtotal - Major AT Structures Program | | $ 41,969,589 | $ - | $ 41,969,589 | | $ 23,922,665 | $ 18,046,923 | $ - | $ 18,046,923 | $ - | |
| **1.10 Transportation Programs** | | | | | | | | | | | |
| 1.10.1 Transportation Demand Management | 2026 - 2035 | $ 5,688,000 | $ - | $ 5,688,000 | 50% | $ 2,844,000 | $ 2,844,000 | $ - | $ 2,844,000 | $ - | City-wide |
| 1.10.2 Area Traffic Management (Neighbourhood Traffic Calming) | 2026 - 2035 | $ 30,000,000 | $ - | $ 30,000,000 | 84% | $ 25,050,000 | $ 4,950,000 | $ - | $ 4,950,000 | $ - | City-wide |
| Subtotal - Transportation Programs | | $ 35,688,000 | $ - | $ 35,688,000 | | $ 27,894,000 | $ 7,794,000 | $ - | $ 7,794,000 | $ - | |
| **1.11 Public Works** | | | | | | | | | | | |
| 1.11.1 Lifecycle Renewal - Traffic Monitoring Systems | 2026 - 2035 | $ 5,000,000 | $ - | $ 5,000,000 | 80% | $ 4,000,000 | $ 1,000,000 | $ - | $ 1,000,000 | $ - | City-wide |
| 1.11.2 New Traffic Control Devices | 2026 - 2035 | $ 30,300,000 | $ - | $ 30,300,000 | 20% | $ 6,060,000 | $ 24,240,000 | $ - | $ 24,240,000 | $ - | City-wide |
| 1.11.3 Safety Improvement Program | 2026 - 2035 | $ 12,700,000 | $ - | $ 12,700,000 | 50% | $ 6,350,000 | $ 6,350,000 | $ - | $ 6,350,000 | $ - | City-wide |
| 1.11.4 Traffic Incident Management | 2026 - 2035 | $ 5,000,000 | $ - | $ 5,000,000 | 20% | $ 1,000,000 | $ 4,000,000 | $ - | $ 4,000,000 | $ - | City-wide |
| 1.11.5 Advanced Traffic Management Program | 2026 - 2035 | $ 5,000,000 | $ - | $ 5,000,000 | 20% | $ 1,000,000 | $ 4,000,000 | $ - | $ 4,000,000 | $ - | City-wide |
| 1.11.6 New Street Lighting | 2026 - 2035 | $ 2,250,000 | $ - | $ 2,250,000 | 80% | $ 1,800,000 | $ 450,000 | $ - | $ 450,000 | $ - | City-wide |
| 1.11.7 Vehicle & Equipment | 2026 - 2035 | $ 12,000,000 | $ - | $ 12,000,000 | 15% | $ 1,800,000 | $ 10,200,000 | $ - | $ 10,200,000 | $ - | City-wide |
| 1.11.8 Various Works Yard Facilities | 2026 - 2035 | $ 35,510,000 | $ - | $ 35,510,000 | 15% | $ 5,326,500 | $ 30,183,500 | $ - | $ 30,183,500 | $ - | City-wide |
| Subtotal - Public Works | | $ 107,760,000 | $ - | $ 107,760,000 | | $ 27,336,500 | $ 80,423,500 | $ - | $ 80,423,500 | $ - | |

**TABLE 3**
**CITY OF OTTAWA**
**DEVELOPMENT-RELATED CAPITAL PROGRAM**
**ROADS & RELATED SERVICES**

| Project Description | Timing | Gross Project Cost | Grants/ Subsidies/Other Recoveries | Net Municipal Cost | Ineligible Costs | | Total DC Eligible Costs | DC Eligible Costs | | | Benefitting Area |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | BTE Share (%) | Replacement & BTE Shares ($) | | Prior Growth[1] | 2026 - 2035 | Post 2035 | |
| **1.12 Outstanding Debenture Payments - Principal and Interest - Authorized** | | | | | | | | | | | |
| 1.12.1 Hunt Club (Russell/Hwy 417) - Principal | 2026 - 2032 | $ 6,248,113 | $ - | $ 6,248,113 | 0% | $ - | $ 6,248,113 | $ - | $ 6,248,113 | $ - | City-wide |
| 1.12.2 Hunt Club (Russell/Hwy 417) - Interest | 2026 - 2032 | $ 2,800,000 | $ - | $ 2,800,000 | 0% | $ - | $ 2,800,000 | $ - | $ 2,800,000 | $ - | City-wide |
| 1.12.3 Hunt Club (Russell/Hwy 417) - Principal | 2026 - 2035 | $ 6,569,738 | $ - | $ 6,569,738 | 0% | $ - | $ 6,569,738 | $ - | $ 6,569,738 | $ - | City-wide |
| 1.12.4 Hunt Club (Russell/Hwy 417) - Interest | 2026 - 2035 | $ 15,600,783 | $ - | $ 15,600,783 | 0% | $ - | $ 15,600,783 | $ - | $ 15,600,783 | $ - | City-wide |
| 1.12.5 Trim Road (Innes to Brian Coburn) - Principal | 2026 - 2035 | $ 355,121 | $ - | $ 355,121 | 0% | $ - | $ 355,121 | $ - | $ 355,121 | $ - | City-wide |
| 1.12.6 Trim Road (Innes to Brian Coburn) - Interest | 2026 - 2035 | $ 843,286 | $ - | $ 843,286 | 0% | $ - | $ 843,286 | $ - | $ 843,286 | $ - | City-wide |
| 1.12.7 ISF-Extension of Terry Fox Drive - Principal | 2026 - 2035 | $ 621,462 | $ - | $ 621,462 | 0% | $ - | $ 621,462 | $ - | $ 621,462 | $ - | City-wide |
| 1.12.8 ISF-Extension of Terry Fox Drive - Interest | 2026 - 2035 | $ 1,475,750 | $ - | $ 1,475,750 | 0% | $ - | $ 1,475,750 | $ - | $ 1,475,750 | $ - | City-wide |
| 1.12.9 Alta Vista Corridor (Riverside-Hospital) - Principal | 2026 - 2035 | $ 340,654 | $ - | $ 340,654 | 0% | $ - | $ 340,654 | $ - | $ 340,654 | $ - | City-wide |
| 1.12.10 Alta Vista Corridor (Riverside-Hospital) - Interest | 2026 - 2035 | $ 485,775 | $ - | $ 485,775 | 0% | $ - | $ 485,775 | $ - | $ 485,775 | $ - | City-wide |
| 1.12.11 Greenbank Rd (Malvern to Strandherd) - Principal | 2026 - 2035 | $ 1,579,844 | $ - | $ 1,579,844 | 0% | $ - | $ 1,579,844 | $ - | $ 1,579,844 | $ - | City-wide |
| 1.12.12 Greenbank Rd (Malvern to Strandherd) - Interest | 2026 - 2035 | $ 2,252,870 | $ - | $ 2,252,870 | 0% | $ - | $ 2,252,870 | $ - | $ 2,252,870 | $ - | City-wide |
| 1.12.13 Tenth Line Rd (Innes to Harvest Valley) - Principal | 2026 - 2035 | $ 838,311 | $ - | $ 838,311 | 0% | $ - | $ 838,311 | $ - | $ 838,311 | $ - | City-wide |
| 1.12.14 Tenth Line Rd (Innes to Harvest Valley) - Interest | 2026 - 2035 | $ 1,195,439 | $ - | $ 1,195,439 | 0% | $ - | $ 1,195,439 | $ - | $ 1,195,439 | $ - | City-wide |
| 1.12.15 Trim Rd (Ott Rd 174 to Innes) - Principal | 2026 - 2035 | $ 223,958 | $ - | $ 223,958 | 0% | $ - | $ 223,958 | $ - | $ 223,958 | $ - | City-wide |
| 1.12.16 Trim Rd (Ott Rd 174 to Innes) - Interest | 2026 - 2035 | $ 319,366 | $ - | $ 319,366 | 0% | $ - | $ 319,366 | $ - | $ 319,366 | $ - | City-wide |
| 1.12.17 North Service Rd Sidewalk - Principal | 2026 - 2035 | $ 29,120 | $ - | $ 29,120 | 0% | $ - | $ 29,120 | $ - | $ 29,120 | $ - | City-wide |
| 1.12.18 North Service Rd Sidewalk - Interest | 2026 - 2035 | $ 41,526 | $ - | $ 41,526 | 0% | $ - | $ 41,526 | $ - | $ 41,526 | $ - | City-wide |
| 1.12.19 Rideau River Ped Bridge(Donald-Somerset) - Principal | 2026 - 2035 | $ 1,529,256 | $ - | $ 1,529,256 | 0% | $ - | $ 1,529,256 | $ - | $ 1,529,256 | $ - | City-wide |
| 1.12.20 Rideau River Ped Bridge(Donald-Somerset) - Interest | 2026 - 2035 | $ 2,180,732 | $ - | $ 2,180,732 | 0% | $ - | $ 2,180,732 | $ - | $ 2,180,732 | $ - | City-wide |
| 1.12.21 Mer Bleue Road (Innes to Navan) - Principal | 2026 - 2035 | $ 457,344 | $ - | $ 457,344 | 0% | $ - | $ 457,344 | $ - | $ 457,344 | $ - | City-wide |
| 1.12.22 Mer Bleue Road (Innes to Navan) - Interest | 2026 - 2035 | $ 351,895 | $ - | $ 351,895 | 0% | $ - | $ 351,895 | $ - | $ 351,895 | $ - | City-wide |
| 1.12.23 Alta Vista Corridor (Riverside-Hospital) - Principal | 2026 - 2035 | $ 174,186 | $ - | $ 174,186 | 0% | $ - | $ 174,186 | $ - | $ 174,186 | $ - | City-wide |
| 1.12.24 Alta Vista Corridor (Riverside-Hospital) - Interest | 2026 - 2035 | $ 287,824 | $ - | $ 287,824 | 0% | $ - | $ 287,824 | $ - | $ 287,824 | $ - | City-wide |
| 1.12.25 Trim Rd (Ott Rd 174 to Innes) - Principal | 2026 - 2035 | $ 2,259,730 | $ - | $ 2,259,730 | 0% | $ - | $ 2,259,730 | $ - | $ 2,259,730 | $ - | City-wide |
| 1.12.26 Trim Rd (Ott Rd 174 to Innes) - Interest | 2026 - 2035 | $ 3,733,969 | $ - | $ 3,733,969 | 0% | $ - | $ 3,733,969 | $ - | $ 3,733,969 | $ - | City-wide |
| 1.12.27 Strandherd Dr Ph2 (Maravista to Jockvale) - Principal | 2026 - 2035 | $ 2,028,145 | $ - | $ 2,028,145 | 0% | $ - | $ 2,028,145 | $ - | $ 2,028,145 | $ - | City-wide |
| 1.12.28 Strandherd Dr Ph2 (Maravista to Jockvale) - Interest | 2026 - 2035 | $ 3,278,699 | $ - | $ 3,278,699 | 0% | $ - | $ 3,278,699 | $ - | $ 3,278,699 | $ - | City-wide |
| 1.12.29 Strandherd Dr (Woodroffe to Pr of Wales) - Principal | 2026 - 2035 | $ 4,428,210 | $ - | $ 4,428,210 | 0% | $ - | $ 4,428,210 | $ - | $ 4,428,210 | $ - | OBG/Rural |
| 1.12.30 Strandherd Dr (Woodroffe to Pr of Wales) - Interest | 2026 - 2035 | $ 11,087,155 | $ - | $ 11,087,155 | 0% | $ - | $ 11,087,155 | $ - | $ 11,087,155 | $ - | OBG/Rural |
| Subtotal - Outstanding Debenture Payments - Principal and Interest - Authorized | | $ 73,618,260 | $ - | $ 73,618,260 | | $ - | $ 73,618,260 | $ - | $ 73,618,260 | $ - | |
| **1.13 City-Wide Missing Links** | | | | | | | | | | | |
| 1.13.1 Active Transportation | 2026 - 2035 | $ 28,900,000 | $ - | $ 28,900,000 | 57% | $ 16,473,000 | $ 12,427,000 | $ - | $ 12,427,000 | $ - | City-wide |
| Subtotal - City-Wide Missing Links | | $ 28,900,000 | $ - | $ 28,900,000 | | $ 16,473,000 | $ 12,427,000 | $ - | $ 12,427,000 | $ - | |
| **1.14 Multi-use Pathway Construction - West Urban Community** | | | | | | | | | | | |
| 1.14.1 Terry Fox Drive to Fernbank Road - Multi-Use Pathway | 2026 - 2035 | $ 799,700 | $ - | $ 799,700 | 0% | $ - | $ 799,700 | $ - | $ 799,700 | $ - | OBG/Rural |
| Subtotal - Multi-use Pathway Construction - West Urban Community | | $ 799,700 | $ - | $ 799,700 | | $ - | $ 799,700 | $ - | $ 799,700 | $ - | |
| **TOTAL - CITY-WIDE (ROADS & RELATED SERVICES)** | | **$ 1,884,900,895** | **$ 319,200,000** | **$ 1,565,700,895** | | **$ 259,306,974** | **$ 1,306,393,921** | **$ -** | **$ 1,306,393,921** | **$ -** | |
| **TOTAL - INSIDE THE GREENBELT (ROADS & RELATED SERVICES)** | | **$ 16,500,000** | **$ -** | **$ 16,500,000** | | **$ -** | **$ 16,500,000** | **$ -** | **$ 16,500,000** | **$ -** | |
| **TOTAL - OUTSIDE THE GREENBELT (ROADS & RELATED SERVICES)** | | **$ 111,128,857** | **$ -** | **$ 111,128,857** | | **$ -** | **$ 111,128,857** | **$ -** | **$ 111,128,857** | **$ -** | |
| **TOTAL - RURAL (ROADS & RELATED SERVICES)** | | **$ 16,686,208** | **$ -** | **$ 16,686,208** | | **$ -** | **$ 16,686,208** | **$ -** | **$ 16,686,208** | **$ -** | |
| **TOTAL - ROADS & RELATED SERVICES** | | **$ 2,029,215,960** | **$ 319,200,000** | **$ 1,710,015,960** | | **$ 259,306,974** | **$ 1,450,708,986** | **$ -** | **$ 1,450,708,986** | **$ -** | |

[1] Prior growth funds are adjusted through the cost allocation analysis shown below

**TABLE 3**
**CITY OF OTTAWA**
**DEVELOPMENT-RELATED CAPITAL PROGRAM**
**ROADS & RELATED SERVICES**

| Cost Allocation by Benefitting Area | | | | |
|---|---|---|---|---|
| **Residential Calculation** | | **Total Cost** | **Reserve Adjust.** | **DC Rate** |
| **Inside the Greenbelt Residential Calculation** | | | | |
| Residential Share of DC Eligible Costs (2026-2035) | 55% | $ 9,007,485 | $ (6,984,924) | $ 15,992,409 |
| 10-Year Population Growth | | 46,331 | | 46,331 |
| **Unadjusted Per Charge per Capita** | | **$ 194.42** | | **$ 345.18** |
| **Outside the Greenbelt Residential Calculation** | | | | |
| Residential Share of DC Eligible Costs (2026-2035) | 79% | $ 87,999,468 | $ 7,646,739 | $ 80,352,729 |
| 10-Year Population Growth | | 86,632 | | 86,632 |
| **Unadjusted Per Charge per Capita** | | **$ 1,015.79** | | **$ 927.52** |
| **Rural Residential Calculation** | | | | |
| Residential Share of DC Eligible Costs (2026-2035) | 88% | $ 14,627,857 | $ 1,713,791 | $ 12,914,066 |
| 10-Year Population Growth | | 15,596 | | 15,596 |
| **Unadjusted Per Charge per Capita** | | **$ 937.94** | | **$ 828.05** |
| **Non-Residential Calculation** | | | | |
| Non-Residential Share of DC Eligible Costs (2026-2035) | | $ 32,680,255 | $ (3,559,138) | $ 36,239,394 |
| **Industrial** | | | | |
| Industrial Share of DC Eligible Costs (2026-2035) | | $ 3,841,850 | $ (418,408) | $ 4,260,258 |
| 10-Year Non-Residential Growth in GFA (m2) | | 542,630 | | 542,630 |
| **Unadjusted Per Charge per Square Metre** | | **$ 7.08** | | **$ 7.85** |
| **Non-Industrial** | | | | |
| Non-Industrial Share of DC Eligible Costs (2026-2035) | | $ 28,838,406 | $ (3,140,730) | $ 31,979,136 |
| 10-Year Non-Residential Growth in GFA (m2) | | 1,619,628 | | 1,619,628 |
| **Unadjusted Per Charge per Square Metre** | | **$ 17.81** | | **$ 19.74** |

| City-wide Cost Allocations (Residential & Non-Residential) | | | | |
|---|---|---|---|---|
| **Residential Calculation** | | **Total Cost** | **Reserve Adjust.** | **DC Rate** |
| Residential Share of DC Eligible Costs (2026-2035) | 72% | $ 936,418,409 | $ 67,747,739 | $ 868,670,669 |
| 10-Year Population Growth | | 146,995 | | 146,995 |
| **Unadjusted Per Charge per Capita** | | **$ 6,370.40** | | **$ 5,909.52** |
| **Non-Residential Calculation** | | | | |
| Non-Residential Share of DC Eligible Costs (2026-2035) | 28% | $ 369,975,513 | $ 26,766,886 | $ 343,208,627 |
| **Industrial** | | | | |
| Industrial Share of DC Eligible Costs (2026-2035) | 3% | $ 43,493,856 | $ 3,146,681 | $ 40,347,175 |
| 10-Year Non-Residential Growth in GFA (m2) | | 542,630 | | 542,630 |
| **Unadjusted Per Charge per Square Metre** | | **$ 80.15** | | **$ 74.35** |
| **Non-Industrial** | | | | |
| Non-Industrial Share of DC Eligible Costs (2026-2035) | 25% | $ 326,481,656 | $ 23,620,204 | $ 302,861,452 |
| 10-Year Non-Residential Growth in GFA (m2) | | 1,619,628 | | 1,619,628 |
| **Unadjusted Per Charge per Square Metre** | | **$ 201.58** | | **$ 186.99** |

| Reserve Fund Balances | | | |
|---|---|---|---|
| **Service Area** | **Total** | **Residential** | **Non-Residential** |
| City-wide | $ 94,514,625 | $ 67,747,739 | $ 26,766,886 |
| IGB | $ (12,795,052) | $ (6,984,924) | $ (5,810,128) |
| OGB | $ 9,656,574 | $ 7,646,739 | $ 2,009,835 |
| Rural | $ 1,954,946 | $ 1,713,791 | $ 241,155 |

## C. Public Transit Capital Program

The 2024 Interim DC Study included the growth-related capital needs associated with Public Transit in the City. Public Transit is calculated on a City-wide level and is not differentiated by area. As part of this amendment study, a realignment has been made to remove transit priority measures from Public Transit to Roads & Related to better align with the delivery of service in the City.

For the purposes of this amended study, the transit priority measures ($159.1 million or 11% of the total DC eligible costs under the 2024 Interim DC Study) are removed from Public Transit and assigned to Roads & Related. This results in an 11% reduction to the Public Transit DC rate. A summary of the revised capital program is provided in Appendix B.

The transit ridership analysis and cost allocations (benefit to existing, in-period growth-related and post period benefit) have remained unchanged from the 2024 Interim DC Study. For ease of reference, the transit technical analysis from the 2024 Interim Study has been included in Appendix B of this DC Amendment Background Study.

Furthermore, the Public Transit Cost of Growth Analysis provided in the 2024 DC Background Study, Appendix B.3, is unchanged and included under Appendix B.

# 5. Calculated Development Charges

This section summarizes the calculation of DCs for each service category considered under this amendment study. For residential development, the total per capita amount is converted to a variable charge by housing unit type using various unit occupancy factors. For non-residential development, the rate per employee is divided by the related floor space per worker (FSW) assumption to arrive at a $/square metre. The non-residential charge is differentiated between industrial and non-industrial building space.

## A. City-Wide Residential ($/capita) and Non-Residential ($/square metre) DCs

Two approaches were used in calculating the residential and non-residential DCs by service under this amendment study. For Public Transit, the current DC rate is proposed to be reduced by 11% (i.e. the decrease in the DC eligible costs relative to the 2024 Interim DC Study). For Roads & Related, a cash flow analysis is undertaken to account for the timing of projects and receipt of DCs. Interest earnings or borrowing costs are therefore accounted for in the calculation as allowed under the DCA. This is consistent with the City's historical DC calculation practices.

## B. Proposed Development Charges: City-Wide and Area-Specific Residential and Non-Residential DCs (IGB, OGB, and Rural)

Residential DCs vary by dwelling unit type to reflect different occupancy factors and resulting demand for services. The proposed residential DCs for Roads & Related and Public Transit services are shown in Table 4. These rates are applied to all development occurring in the City. Table 5 includes the non-residential industrial and non-industrial City-wide rates.

Consistent with the City's current practices, the non-residential rate is calculated on a City-wide basis, as such only residential development charges are proposed to vary by benefitting area (e.g. IGB, OGB and Rural). The remainder of the rate tables include the following:

Table 6: IGB calculated residential rates

Table 7: OGB calculated residential rates

Table 8: Rural calculated residential rates

The calculated rates vary by unit type and benefitting area based on the development and services occurring within each area.

TABLE 4

CITY OF OTTAWA
CITY-WIDE DEVELOPMENT CHARGES
RESIDENTIAL DEVELOPMENT CHARGES BY UNIT TYPE

| Service | Residential Charge by Unit Type [1] | | | | |
|---|---|---|---|---|---|
| | Single-Detached and Semi-Detached Dwelling | Townhouse, Multiple, Row and Mobile Dwelling | Apartment Dwelling (2+ Bedrooms) | Apartment Dwelling (Less than 2 Bedrooms) | Dwelling Rooms |
| Roads & Related Services | $18,990 | $14,977 | $10,286 | $7,291 | $5,652 |
| Public Transit | $16,280 | $12,852 | $8,828 | $6,276 | $4,848 |
| Other DC Eligible Services (Under By-law 2024-218) | $9,565 | $7,552 | $5,184 | $3,687 | $2,848 |
| **TOTAL CITY-WIDE CHARGE** | **$44,835** | **$35,381** | **$24,298** | **$17,254** | **$13,348** |
| [1] Based on a Persons per Unit of: | 3.36 | 2.65 | 1.82 | 1.29 | 1.00 |

TABLE 5

CITY OF OTTAWA
CITY-WIDE DEVELOPMENT CHARGES
NON-RESIDENTIAL DEVELOPMENT CHARGES

| Service | Industrial | | Non-Industrial | |
|---|---|---|---|---|
| | Per Square Metre of GFA | Per Square Foot of GFA | Per Square Metre of GFA | Per Square Foot of GFA |
| Roads & Related Services | $78.96 | $7.34 | $198.56 | $18.45 |
| Public Transit | $57.57 | $5.35 | $133.88 | $12.44 |
| Other DC Eligible Services (Under By-law 2024-218) | $88.69 | $8.24 | $192.57 | $17.89 |
| **TOTAL CITY-WIDE CHARGE** | **$225.22** | **$20.92** | **$525.00** | **$48.77** |

TABLE 6

CITY OF OTTAWA
INSIDE THE GREENBELT DEVELOPMENT CHARGES
RESIDENTIAL DEVELOPMENT CHARGES BY UNIT TYPE

| Service | Residential Charge by Unit Type [1] | | | | |
|---|---|---|---|---|---|
| | Single-Detached and Semi-Detached Dwelling | Townhouse, Multiple, Row and Mobile Dwelling | Apartment Dwelling (2+ Bedrooms) | Apartment Dwelling (Less than 2 Bedrooms) | Dwelling Rooms |
| Roads & Related Services- Area-Specific | $1,148 | $962 | $676 | $479 | $371 |
| Roads & Related Services- City-wide | $18,990 | $14,977 | $10,286 | $7,291 | $5,652 |
| Public Transit | $16,280 | $12,852 | $8,828 | $6,276 | $4,848 |
| Other DC Eligible Services (Under By-law 2024-218) | $19,547 | $15,914 | $11,063 | $7,865 | $6,076 |
| **TOTAL INSIDE THE GREENBELT CHARGE** | **$55,965** | **$44,705** | **$30,854** | **$21,911** | **$16,947** |
| [1] Based on a Persons per Unit of: | 3.09 | 2.59 | 1.82 | 1.29 | 1.00 |

TABLE 7

CITY OF OTTAWA
OUTSIDE THE GREENBELT DEVELOPMENT CHARGES
RESIDENTIAL DEVELOPMENT CHARGES BY UNIT TYPE

| Service | Residential Charge by Unit Type [1] | | | | |
|---|---|---|---|---|---|
| | Single-Detached and Semi-Detached Dwelling | Townhouse, Multiple, Row and Mobile Dwelling | Apartment Dwelling (2+ Bedrooms) | Apartment Dwelling (Less than 2 Bedrooms) | Dwelling Rooms |
| Roads & Related Services- Area-Specific | $3,159 | $2,445 | $1,666 | $1,181 | $916 |
| Roads & Related Services- City-wide | $18,990 | $14,977 | $10,286 | $7,291 | $5,652 |
| Public Transit | $16,280 | $12,852 | $8,828 | $6,276 | $4,848 |
| Other DC Eligible Services (Under By-law 2024-218) | $24,280 | $18,933 | $12,945 | $9,202 | $7,110 |
| **TOTAL OUTSIDE THE GREENBELT CHARGE** | **$62,709** | **$49,207** | **$33,726** | **$23,950** | **$18,525** |
| [1] Based on a Persons per Unit of: | 3.45 | 2.67 | 1.82 | 1.29 | 1.00 |

TABLE 8

CITY OF OTTAWA
RURAL DEVELOPMENT CHARGES
RESIDENTIAL DEVELOPMENT CHARGES BY UNIT TYPE

| Service | Residential Charge by Unit Type [1] | | | | |
|---|---|---|---|---|---|
| | Single-Detached and Semi-Detached Dwelling | Townhouse, Multiple, Row and Mobile Dwelling | Apartment Dwelling (2+ Bedrooms) | Apartment Dwelling (Less than 2 Bedrooms) | Dwelling Rooms |
| Roads & Related Services- Area-Specific | $2,593 | $1,840 | $1,489 | $1,055 | $818 |
| Roads & Related Services- City-wide | $18,990 | $14,977 | $10,286 | $7,291 | $5,652 |
| Public Transit | $16,280 | $12,852 | $8,828 | $6,276 | $4,848 |
| Other DC Eligible Services (Under By-law 2024-218) | $10,000 | $7,862 | $5,435 | $3,864 | $2,985 |
| **TOTAL RURAL CHARGE** | **$47,863** | **$37,532** | **$26,038** | **$18,486** | **$14,303** |
| [1] Based on a Persons per Unit of: | 3.17 | 2.25 | 1.82 | 1.29 | 1.00 |

## A. Comparison of Calculated and Existing DCs for City-Wide and Area-Specific DCs (IGB, OGB and Rural)

Tables 9 and 10 below provide a comparison of the current and calculated DCs by area for Roads & Related and Public Transit services.

TABLE 9

CITY OF OTTAWA
CITY-WIDE DEVELOPMENT CHARGES
RESIDENTIAL: ROADS AND RELATED DEVELOPMENT CHARGES BY UNIT TYPE
CURRENT VS. CALCULATED

| CITY WIDE RATES | | | | | |
|---|---|---|---|---|---|
| **Residential $/unit** | **Single and Semi-detached** | **Multiple, Row and Mobile Dwelling** | **Apartment Dwelling, Back to Back and Stacked Townhouse (2+ bedrooms)** | **Apartment (less than 2 bedrooms)** | **Dwelling Rooms** |
| Current Roads Charge (April 1, 2025) | $17,964 | $14,180 | $9,740 | $6,924 | $5,349 |
| Calculated Roads Charge | $18,990 | $14,977 | $10,286 | $7,291 | $5,652 |
| *Difference $* | *$1,026* | *$797* | *$546* | *$367* | *$303* |
| *Difference %* | *6%* | *6%* | *6%* | *5%* | *6%* |
| Current Transit Charge (April 1, 2025) | $18,325 | $14,466 | $9,937 | $7,064 | $5,457 |
| Calculated Transit Charge | $16,280 | $12,852 | $8,828 | $6,276 | $4,848 |
| *Difference $* | *(2,045)* | *(1,614)* | *(1,109)* | *(788)* | *(609)* |
| *Difference %* | *-11%* | *-11%* | *-11%* | *-11%* | *-11%* |

| AREA 1: INSIDE THE GREENBELT | | | | | |
|---|---|---|---|---|---|
| **Residential $/unit** | **Single and Semi-detached** | **Multiple, Row and Mobile Dwelling** | **Apartment Dwelling, Back to Back and Stacked Townhouse (2+ bedrooms)** | **Apartment (less than 2 bedrooms)** | **Dwelling Rooms** |
| Current Roads Charge (April 1, 2025) | $18,527 | $14,651 | $10,071 | $7,160 | $5,531 |
| Calculated Roads Charge | $20,138 | $15,939 | $10,962 | $7,770 | $6,023 |
| *Difference $* | *$1,611* | *$1,288* | *$891* | *$610* | *$492* |
| *Difference %* | *9%* | *9%* | *9%* | *9%* | *9%* |
| Current Transit Charge (April 1, 2025) | $18,325 | $14,466 | $9,937 | $7,064 | $5,457 |
| Calculated Transit Charge | $16,280 | $12,852 | $8,828 | $6,276 | $4,848 |
| *Difference $* | *(2,045)* | *(1,614)* | *(1,109)* | *(788)* | *(609)* |
| *Difference %* | *-11%* | *-11%* | *-11%* | *-11%* | *-11%* |

| AREA 2: OUTSIDE THE GREENBELT | | | | | |
|---|---|---|---|---|---|
| **Residential $/unit** | **Single and Semi-detached** | **Multiple, Row and Mobile Dwelling** | **Apartment Dwelling, Back to Back and Stacked Townhouse (2+ bedrooms)** | **Apartment (less than 2 bedrooms)** | **Dwelling Rooms** |
| Current Roads Charge (April 1, 2025) | $21,140 | $16,635 | $11,414 | $8,115 | $6,268 |
| Calculated | $22,149 | $17,422 | $11,953 | $8,472 | $6,567 |
| *Difference $* | *$1,009* | *$787* | *$539* | *$357* | *$299* |
| *Difference %* | *5%* | *5%* | *5%* | *4%* | *5%* |
| Current Transit Charge (April 1, 2025) | $18,325 | $14,466 | $9,937 | $7,064 | $5,457 |
| Calculated Transit Charge | $16,280 | $12,852 | $8,828 | $6,276 | $4,848 |
| *Difference $* | *(2,045)* | *(1,614)* | *(1,109)* | *(788)* | *(609)* |
| *Difference %* | *-11%* | *-11%* | *-11%* | *-11%* | *-11%* |

| AREA 3: RURAL SERVICED & UNSERVICED | | | | | |
|---|---|---|---|---|---|
| **Residential $/unit** | **Single and Semi-detached** | **Multiple, Row and Mobile Dwelling** | **Apartment Dwelling, Back to Back and Stacked Townhouse (2+ bedrooms)** | **Apartment (less than 2 bedrooms)** | **Dwelling Rooms** |
| Current Roads Charge (April 1, 2025) | $19,337 | $15,152 | $10,530 | $7,485 | $5,782 |
| Calculated | $21,583 | $16,818 | $11,775 | $8,346 | $6,470 |
| *Difference $* | *$2,246* | *$1,666* | *$1,245* | *$861* | *$688* |
| *Difference %* | *12%* | *11%* | *12%* | *12%* | *12%* |
| Current Transit Charge (April 1, 2025) | $18,325 | $14,466 | $9,937 | $7,064 | $5,457 |
| Calculated Transit Charge | $16,280 | $12,852 | $8,828 | $6,276 | $4,848 |
| *Difference $* | *(2,045)* | *(1,614)* | *(1,109)* | *(788)* | *(609)* |
| *Difference %* | *-11%* | *-11%* | *-11%* | *-11%* | *-11%* |

**TABLE 10**

**CITY OF OTTAWA**
**CITY-WIDE DEVELOPMENT CHARGES**
**NON-RESIDENTIAL DEVELOPMENT CHARGES BY UNIT TYPE**
**CURRENT VS. CALCULATED**

| CITY-WIDE RATES | | |
|---|---|---|
| **Non-Residential $/square feet** | **Industrial** | **Non-Industrial** |
| Current Roads Charge (April 1, 2025) | $6.04 | $15.26 |
| Calculated | $7.34 | $18.45 |
| *Difference $* | *$1.30* | *$3.19* |
| *Difference %* | *21%* | *21%* |
| Current Transit Charge (April 1, 2025) | $6.02 | $14.00 |
| Calculated Transit Charge | $5.35 | $12.44 |
| *Difference $* | *(0.67)* | *(1.56)* |
| *Difference %* | *-11%* | *-11%* |

# 6. Cost of Growth Analysis

This section provides a brief examination of the long-term capital and operating costs as well as the asset management-related annual provisions for the capital facilities and infrastructure to be included in the DC By-law. This examination is required as one of the provisions of the *DCA*.

## A. Asset Management Plan

The summary below provides the calculated annual asset management contribution for both the gross capital expenditures and the share related to the 2026-2035 DC recoverable portion for Roads & Related services. The year 2036 has been included to calculate the annual contribution for the 2026-2035 period as the expenditures 2035 will not trigger asset management contributions until 2036. By 2036, the City should fund an additional $34.2 million per annum to fund the full life cycle costs of the Roads & Related services works. The cost of growth analysis for Public Transit services included in the 2024 Interim DC Background Study (found in Appendix B) is still applicable and not updated as part of this amendment study.

## B. Long-Term Capital and Operating Cost Impacts

The City's 2019 Interim DC Background Study provided an overview of the City's recent long-range financial plans (LRFPs) for utility services, transit services and all other property tax supported services. These reports clearly identify the fiscal impacts (operating, capital and state of good repair) of funding and operating City facilities and infrastructure, including infrastructure proposed to be funded, in whole or part, from development charges included in this study. The additional details on this report, and other relevant plans and studies, can be found in Appendix H of the City's 2019 Interim DC Background Study (pages 344 to 347).

## C. Financial Sustainability of the Program

The calculated annual provision for Roads & Related services is already or will be fully integrated in the City's ongoing Corporate Asset Management Planning and the LRFPs discussed above. The annual provisions are considered financially sustainable, as it is expected that the increased capital asset management requirements can be absorbed by the LRFP forecasted tax increases over the planning period. Importantly, the City's annual budget analysis will allow staff to continue to monitor and implement mitigating measures should the program become less sustainable.

# 7. Other Considerations and Legislative Requirements

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

## A. Development Charges Administration and Collection

The DCA requirements in respect of the collection of DCs, certification and remittance, as well as reserve fund management are outlined in this section.

### i. Development Charges Amount Payable and Date of Payment

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

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

For rental housing and institutional development, DCs must be paid in six equal annual installments beginning at building occupancy (permit or actual occupancy) and for the following five anniversaries of that date.

For required instalments, the City may charge interest from the date the DC would have been payable to the date the instalment is paid. Interest may accrue on each installment until the final payment has been made. Any skipped or late payments can be added to the tax roll (including interest). Full details on the prescribed payment plans are provided in section 26.1 of the

*DCA*. In accordance with section 26.3 the maximum interest rate a municipal can charge is prime plus 1%.

### ii. Reserve Funds

Under the DCA, a municipality that has passed a development charge by-law must establish a separate reserve fund for each service to which the development charge relates and pay each development charge it collects into the respective reserve fund. While the DCA does permit municipalities to borrow from the reserve fund, the amount borrowed is to be repaid with interest at a rate not less than the prescribed minimum interest rate. Additionally, money in the reserve fund is to be spent only on development-related capital costs.

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

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

## B. Development Charges Administration

Many of the administrative requirements of the DCA will be similar to those presently followed by the City in terms of collection practices. However, changes will likely be required in the use of and reporting on the new development charges. In this regard:

- It is recommended that the present practices regarding collection of development charges and by-law administration continue to the extent possible;
- As required under the DCA, the City should codify any rules regarding application of the by-laws and any exemptions within the development charges by-laws proposed for adoption;
- The proposed draft by-law will set out the rules to determine development charges applicable in any particular case. Rules for exemptions are also outlined in the proposed draft by-law; and
- It is recommended that Council adopt the development-related capital forecast included in this background study, subject to annual review through the City's normal capital budget process.

# Appendix A

# Roads & Related Historical Service Levels

## APPENDIX A
## TABLE A-1

## CITY OF OTTAWA
## MAJOR SCREENLINES LEVEL OF SERVICE

| Screenline | 2011 (base) | | | | | 2031 (affordable) | | | | v/c <0.9 | Post Planning Capacity | Identified Solution to v/c deficiencies at Screenlines (lanes per direction) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | V | C | V/C | v/c >0.9 | Benefit to Existing | V | ADD C | C | V/C | | | |
| **SOUTHEAST** | | | | | | | | | | | | |
| #13 CNR East | 8,268 | 9,200 | 0.90 | N | 6% | 8,668 | 1,200 | 10,400 | 0.83 | Y | 7% | +1 lane on Airport Parkway (+1200) |
| #8 Leitrim | 4,641 | 5,200 | 0.89 | N | 0 | 6,593 | - | 5,200 | 1.27 | N | 0 | none provided |
| **SOUTHWEST** | | | | | | | | | | | | |
| #12 CNR West | 10,536 | 12,000 | 0.88 | N | 0 | 11,466 | - | 12,000 | 0.96 | N | 0 | none provided |
| #9 Fallowfield | 9,333 | 11,400 | 0.82 | N | 0 | 10,762 | 1,000 | 12,400 | 0.87 | Y | 24% | +1 lane on Prince of Wales Drive (+1000) |
| **EAST** | | | | | | | | | | | | |
| #16 Green's Creek | 10,470 | 8,800 | 1.19 | Y | 0 | 11,570 | - | 8,800 | 1.31 | N | 0 | none provided |
| #45 Bilberry Creek | 6,790 | 8,000 | 0.85 | N | 0 | 7,653 | 800 | 8,800 | 0.87 | Y | 18% | +1 lane on Brian Coburn Boulevard (+800) |
| **WEST** | | | | | | | | | | | | |
| #10a Eagleson (north) | 7,911 | 8,800 | 0.90 | N | 0 | 9,254 | - | 8,800 | 1.05 | N | 0 | none provided |
| #10b Eagleson (south) | 2,718 | 3,800 | 0.72 | N | 0 | 4,251 | 800 | 4,600 | 0.92 | N | 22% | +1 lane of Hope Side Road, Old Richmond Road and West Hunt Club Road (+800) |
| #44 Terry Fox | 5,731 | 10,400 | 0.55 | N | 0 | 7,686 | 5,200 | 15,600 | 0.49 | Y | 50% with Hwy 417; excluding Hwy 417 is 35% | +2 lanes on Campeau (+1600) and 2 lanes on Hwy 417 (+3600) |

**APPENDIX A**
**TABLE A-1**

**CITY OF OTTAWA**
**ROADS AND RELATED SERVICES - REPLACEMENT COSTS**

| Type | Existing Cross-Section | Proposed Cross-Section | Unit Cost 2023 ($Millions) |
|---|---|---|---|
| New Construction | - | 2 Lane Rural, Undivided | $6.47 / km |
| | | 2 Lane Urban, Undivided | $11.77 / km |
| | | 4 Lane Urban, Divided | $15.03 / km |
| | | 6 Lane Urban, Divided | $17.21 / km |
| Widening | 2 Lane Rural, Undivided | 4 Lane Rural, Undivided (ref. B1) | $8.56 / km |
| | | 4 Lane Rural, Divided | $9.54 / km |
| | | 4 Lane Urban, Undivided (ref. B2) | $12.69 / km |
| | | 4 Lane Urban, Divided (ref. B3) | $15.19 / km |
| | | 6 Lane Urban, Divided (ref. B4) | $17.99 / km |
| | 2 Lane Urban, Undivided | 4 Lane Urban, Undivided | $11.17 / km |
| | | 4 Lane Urban, Divided | $13.64 / km |
| | 4 Lane Rural, Divided | 6 Lane Rural, Divided (ref. B5) | $8.72 / km |
| | 4 Lane Urban, Divided | 6 Lane Urban, Divided | $9.73 / km |

***Source:*** IBI GROUP FINAL DRAFT: ROAD NETWORK DEVELOPMENT REPORT THE CITY OF OTTAWA, Exhibit 5-2: Summary of Benchmark Costs for Roadway Projects

***Notes:***

(1) Preliminary cost estimates include: Property – 10%; Engineering-15%; Project Management – 10%; Miscellaneous Soft Costs (Permits, Public Art, etc.) –5%; and Project Contingency – 40%.

(2) Typical roadway cross-sections (identified as ref. B1-B5 above) are provided in Appendix B.

**APPENDIX A**
**TABLE A-2**

**CITY OF OTTAWA**
**TRANS Model (V1.13)**
**Morning Peak Hour VKT by residents only**

**Increase in Vehicle Kilometres Travelled (VKT)**

**Auto Mode**

| From | To | Vehicle Km Travelled (VKT) | | | | | % distribution of growth | DC Cost Allocation |
|---|---|---|---|---|---|---|---|---|
| | | 2011 | 2031 | change | % change | | | |
| **Inside Greenbelt** | Everywhere | 500,500 | 500,700 | 200 | 0.04% | **Inside Greenbelt** | 0% | 0% |
| **Orleans** | Everywhere | 198,700 | 239,400 | 40,700 | 20% | **Outside Greenbelt** | 16% | 91% |
| **Riverside South and Leitrim** | Everywhere | 34,000 | 79,400 | 45,400 | 134% | | 17% | |
| **South Nepean** | Everywhere | 128,000 | 190,300 | 62,300 | 49% | | 24% | |
| **Kanata-Stittsville** | Everywhere | 191,400 | 280,700 | 89,300 | 47% | | 34% | |
| **Rural** | Everywhere | 284,300 | 307,600 | 23,300 | 8% | **Rural** | 9% | 9% |
| **Total** | | **1,336,900** | **1,598,100** | **261,200** | **20%** | | **100%** | **100%** |

# Appendix B

# Public Transit Technical Analysis

# Appendix B.1

# Transit Ridership Forecast

# Public Transit Ridership Forecast

## A. Transit Service Delivery in the City of Ottawa

As demonstrated in Appendix A, Ottawa has experienced steady population and employment growth which is anticipated to continue over the forecast period. The infrastructure requirements relating to the increased need for transit services arising from new development in the City have been informed by the 2013 TMP.

As the City continues to develop, so will the need to provide adequate levels of transit service. Prior to the implementation of the 2013 TMP, Council endorsed a number of transit projects including the construction of the Confederation Line and O-Train expansion, double-decker bus acquisition, PRESTO card implementation, and access to real-time customer information[2]. The TMP also identified the implementation of the rapid transit network, including light rail transit (LRT) and bus rapid transit (BRT)[3].

Importantly, the TMP also recommended the use of an "Affordable Road and Transit Network Model" (herein referred to as the "2031 Affordable Network"). The Affordable Road and Transit Network, along with further ridership analysis completed by AECOM and City staff, have been used to inform the mode share estimates and corresponding ridership forecast for this Background Study. This approach is consistent with the 2019 DC Background Study.

For the purposes of determining the "planned level of service" for Public Transit, the City's transit service capital program has been informed by the 2013 TMP and the latest Affordability Model. The City's Affordability Model summarizes the transit operating and capital needs over a long-range

[2] 2013 TMP. Section 6.0 Transform the Ottawa Transit System, page 53

[3] 2013 TMP. Section 6.1 Expand the Rapid Transit and Transit Priority Network, page 54

financial planning horizon, and assesses the affordability of the capital plan within forecast sources of revenue from fares, transit taxes, and other sources. These forecasts are based on a variety of factors including population, ridership and assessment growth projections. As part of the 2024 DC Background Study, Stage 2 LRT costs continue to be included in the calculation. Stage 3 LRT costs have also been identified, although at the time of drafting the DC rate calculations it was anticipated that these costs would be fully funded from upper levels of government.

The purpose of the transit ridership forecast is to inform the allocation of development and non-development related costs for the transit development charge calculation.

## B. Relevant Sections from the 2019 DC Background Study

Details on the forecast methodology and key assumptions are detailed in the 2019 Interim DC Background Study as the following pages. As stated, the assumptions have been carried forward for the purposes of this DC Background Study. It is expected that the forecast and ridership analysis will be reviewed and updated as part of subsequent DC Background Studies once the new TMP is completed.

- **Forecast Methodology and Key Assumptions**, Section C, pg. 91 – provides details on the ridership modelling assumptions.
- **Ridership Forecast**, Section D, pg. 92-96 – provides details on the BTE and post-period benefit calculations.

## C. Ridership Forecast

As required by the *Development Charges Act*, the anticipated ridership forecast includes an assessment of all modes (collectively) of transit proposed to be funded by development charges over the forecast period.

The forecast includes both bus and rapid rail transit. The following provides a summary of the revised 2031 mode share estimated from the Transportation Model (unadjusted).

**Figure 1: Revised 2031 Mode Share Estimates from Transportation Model (Unadjusted)**

| Modes of Travel | 2011 Model Estimates | | 2031 Model Estimates | |
|---|---|---|---|---|
| | Person Trips | Mode Share | Person Trips | Mode Share |
| Walking/Cycling | 65,000 | 13.1% | 92,300 | 15.0% |
| Transit | 106,100 | 21.5% | 145,000 | 23.6% |
| Auto Person | 323,200 | 65.4% | 377,800 | 61.4% |
| **Total Person Trips** | **494,300** | **100.0%** | **615,100** | **100.0%** |

*Notes:*
** Includes trips to, from, and within Ottawa (excluding external and commercial trips)*
** 2011 walking/cycling demand estimated based on mode share observations from 2011 OD Survey*
** 2011 forecasts based on Model Version 1.11; 2031 forecasts based on Model Version 1.13 (updated August 2018)*
** 2031 walking/cycling demand estimated based on mode share targets from 2013 TMP*
** 2031 forecasts correspond to TMP Affordable Road and Transit networks (plus LRT extensions)*

### i. Assessment of Ridership Capacity

As detailed in the 2019 Interim DC Background Study, the infrastructure included in the Transit capital program is required to achieve the total transit person trips of 145,000 and transit mode share estimate of 23.6%. A portion of the capital costs have been deemed a post-period benefitting share relating to infrastructure improvements required to achieve the planned level of service.

## D. Transit Development Charges Capital Program Allocations

The benefit to existing (BTE) and post-period benefit shares are consistent with those used in the 2019 DC Background Study and are calculated based on anticipated ridership from existing and planned development. A summary of the forecast is provided below:

## i. Benefit to Existing Share Calculation

The benefit to existing share calculated is detailed in the city's 2019 DC Background Study based on the estimated travel demand, the calculated benefit to existing share is 33.1%. This share accounts for the benefit that will be received by existing development in achieving the identified total transit person trips and revised mode share of 23.6% (see Figure 2).

### Figure 2: BTE Calculation Results

| Person Trips by Mode of Travel | | | |
|---|---|---|---|
| Mode of Travel | Scenario A 2019 Base | Scenario B 2019 Adjusted | Scenario C 2034 Base |
| Walking/Cycling | 63,800 | 71,600 | 92,300 |
| Transit | 96,400 | 112,500 | 145,000 |
| Auto Person | 317,200 | 293,200 | 377,800 |
| **Total Person Trips** | **477,400** | **477,300** | **615,100** |

| Proportion of New Transit Demand Allocated to Existing and New Development | | |
|---|---|---|
| Existing Development | New Development | Total |
| Scen B-Scen A | Scen C-Scen B | Scen C-Scen A |
| 16,100 | 32,500 | 48,600 |
| 33% | 67% | |

| Mode Share | | | |
|---|---|---|---|
| Mode of Travel | Scenario A | Scenario B | Scenario C |
| Walking/Cycling | 13.4% | 15.0% | 15.0% |
| Transit | 20.2% | 23.6% | **23.6%** |
| Auto Person | 66.4% | 61.4% | 61.4% |
| **Total Person Trips** | **100.0%** | **100.0%** | **100.0%** |

| Mode Share: Trips Generated by New Development | | |
|---|---|---|
| Mode of Travel | Trips | Mode Share |
| Walking/Cycling | 20,700 | 15.0% |
| Transit | 32,500 | **23.6%** |
| Auto Person | 84,600 | 61.4% |
| **Total Person Trips** | **137,800** | **100.0%** |

## ii. Post-Period Benefit Calculation

For the proposed development-related transit projects, the post-period benefit calculation is consistent with the approach and analysis contained in the 2019 DC Background Study.

Post-period benefit calculation = **33.3%** (16,200 / 48,600)

For projects with outstanding debenture payments, the post-period benefit shares were calculated based on shares of transit growth. Recognizing that only the development charge eligible costs are included in the outstanding debenture payments, no benefit to existing deductions have been made. As such, the post-period benefit calculation for these projects is as follows:

Post-period benefit calculation = **49.8%** (16,200 / 35,500)

# Appendix B.2

# Public Transit Development Related Capital Program

APPENDIX B.2
TABLE B.2-1

CITY OF OTTAWA
DEVELOPMENT-RELATED CAPITAL PROGRAM
PUBLIC TRANSIT

| Project Description | Timing | Gross Project Cost | Grants/ Subsidies/Other Recoveries | Net Municipal Cost | Ineligible Costs | | Total DC Eligible Costs | DC Eligible Costs | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | BTE Share (%) | Replacement & BTE Shares ($) | | Prior Growth | 2026 - 2035 | Post 2035 |
| **PUBLIC TRANSIT** | | | | | | | | | | |
| **1.1 Recovery of Negative Reserve Fund Balance** | | | | | | | | | | |
| 1.1.12 Reserve Fund Balance as of July 31, 2023 | 2024 - 2024 | $ 122,848,531 | $ - | $ 122,848,531 | 0% | $ - | $ 122,848,531 | $ - | $ 122,848,531 | $ - |
| Subtotal - Recovery of Negative Reserve Fund Balance | | $ 122,848,531 | $ - | $ 122,848,531 | | $ - | $ 122,848,531 | $ - | $ 122,848,531 | $ - |
| **1.2 Transit Projects** | | | | | | | | | | |
| 1.2.1 Bus Growth (based on electric buses) | 2027 - 2033 | $ 58,180,000 | $ - | $ 58,180,000 | 100% | $ 58,180,000 | $ - | $ - | $ - | $ - |
| 1.2.2 Operations Support Vehicles - Growth | 2024 - 2029 | $ 2,014,000 | $ - | $ 2,014,000 | 0% | $ - | $ 2,014,000 | $ - | $ 2,014,000 | $ - |
| 1.2.3 Train Growth (O-Train Line 1) | 2024 - 2024 | $ - | $ - | $ - | 0% | $ - | $ - | $ - | $ - | $ - |
| 1.2.4 Line 2 Lifecycle to Deferred construction | 2024 - 2024 | $ 40,806,908 | $ - | $ 40,806,908 | 33% | $ 13,518,338 | $ 27,288,570 | $ - | $ 27,288,570 | $ - |
| 1.2.5 Park and Ride Facilities | 2024 - 2033 | $ 19,000,000 | $ - | $ 19,000,000 | 33% | $ 6,294,239 | $ 12,705,761 | $ - | $ 12,705,761 | $ - |
| 1.2.6 Contingency Stage 2 LRT | 2024 - 2027 | $ 152,000,000 | $ - | $ 152,000,000 | 33% | $ 50,353,909 | $ 101,646,091 | $ - | $ 101,646,091 | $ - |
| 1.2.7 Transit Corridor Protection | 2024 - 2033 | $ 27,480,670 | $ - | $ 27,480,670 | 33% | $ 9,103,679 | $ 18,376,991 | $ - | $ 18,376,991 | $ - |
| 1.2.9 Kanata North Transitway (Corkstown to Solandt) | 2027 - 2028 | $ 135,100,000 | $ 90,066,667 | $ 45,033,333 | 33% | $ 14,918,450 | $ 30,114,883 | $ - | $ - | $ 30,114,883 |
| 1.2.10 Southwest Transitway Extension (Chapman Mills to Cambrian) | 2028 - 2030 | $ 55,000,000 | $ 36,666,667 | $ 18,333,333 | 33% | $ 6,073,388 | $ 12,259,945 | $ - | $ - | $ 12,259,945 |
| 1.2.11 Baseline Transit Corridor (Baseline Station to Heron Station) | 2024 - 2028 | $ 270,000,000 | $ 180,000,000 | $ 90,000,000 | 33% | $ 29,814,815 | $ 60,185,185 | $ - | $ - | $ 60,185,185 |
| 1.2.12 Southwest Transitway Extension (Cambrian to Kilbirnie P&R) | 2031 - 2033 | $ 4,283,333 | $ 2,855,556 | $ 1,427,778 | 33% | $ 472,988 | $ 954,790 | $ - | $ - | $ 954,790 |
| 1.2.13 Riverside South Transitway (Limebank O-Train Station to Riverview P&R) | 2031 - 2033 | $ 4,200,000 | $ 2,800,000 | $ 1,400,000 | 33% | $ 463,786 | $ 936,214 | $ - | $ - | $ 936,214 |
| 1.2.14 Kanata North Transitway (Solandt to Terry Fox) | 2031 - 2033 | $ 6,150,000 | $ 4,100,000 | $ 2,050,000 | 33% | $ 679,115 | $ 1,370,885 | $ - | $ - | $ 1,370,885 |
| 1.2.15 Kanata North Transitway (Terry Fox to Maxwell Bridge) | 2031 - 2033 | $ 12,283,333 | $ 8,188,889 | $ 4,094,444 | 33% | $ 1,356,390 | $ 2,738,054 | $ - | $ - | $ 2,738,054 |
| 1.2.16 West Transitway (Hazeldean to Fernbank) | 2031 - 2033 | $ 7,350,000 | $ 4,900,000 | $ 2,450,000 | 33% | $ 811,626 | $ 1,638,374 | $ - | $ - | $ 1,638,374 |
| 1.2.17 Heron BRT (Heron Station to Walkley) | 2031 - 2033 | $ 23,466,667 | $ 15,644,444 | $ 7,822,222 | 33% | $ 2,591,312 | $ 5,230,910 | $ - | $ - | $ 5,230,910 |
| 1.2.18 Heron BRT (Walkley to Innes) | 2031 - 2033 | $ 36,866,667 | $ 24,577,778 | $ 12,288,889 | 33% | $ 4,071,011 | $ 8,217,878 | $ - | $ - | $ 8,217,878 |
| 1.2.19 Cumberland Transitway (Blair Station to Innes Road) | 2031 - 2033 | $ 21,250,000 | $ 14,166,667 | $ 7,083,333 | 33% | $ 2,346,536 | $ 4,736,797 | $ - | $ - | $ 4,736,797 |
| 1.2.20 Cumberland Transitway (Blair Road to Chapel Hill) | 2031 - 2033 | $ 38,333,333 | $ 25,555,556 | $ 12,777,778 | 33% | $ 4,232,968 | $ 8,544,810 | $ - | $ - | $ 8,544,810 |
| 1.2.21 Cumberland Transitway (Chapel Hill to Tenth Line) | 2031 - 2033 | $ 25,000,000 | $ 16,666,667 | $ 8,333,333 | 33% | $ 2,760,631 | $ 5,572,702 | $ - | $ - | $ 5,572,702 |
| 1.2.22 Cumberland Transitway (Tenth Line to Frank Kenney) | 2031 - 2033 | $ 25,000,000 | $ 16,666,667 | $ 8,333,333 | 33% | $ 2,760,631 | $ 5,572,702 | $ - | $ - | $ 5,572,702 |
| 1.2.23 Baseline BRT (Baseline Station to Bayshore Station) | 2031 - 2033 | $ 39,383,333 | $ 26,255,556 | $ 13,127,778 | 33% | $ 4,348,914 | $ 8,778,864 | $ - | $ - | $ 8,778,864 |
| 1.2.24 Chapman Mills (Greenbank to Strandherd Connection) | 2031 - 2033 | $ 2,200,000 | $ 1,466,667 | $ 733,333 | 33% | $ 242,936 | $ 490,398 | $ - | $ - | $ 490,398 |
| 1.2.25 Hospital Link (Hurdman to St. Laurent to Blair at Innes) | 2031 - 2033 | $ 30,416,667 | $ 20,277,778 | $ 10,138,889 | 33% | $ 3,358,768 | $ 6,780,121 | $ - | $ - | $ 6,780,121 |

APPENDIX B.2
TABLE B.2-1

CITY OF OTTAWA
DEVELOPMENT-RELATED CAPITAL PROGRAM
PUBLIC TRANSIT

| Project Description | Timing | Gross Project Cost | Grants/ Subsidies/Other Recoveries | Net Municipal Cost | Ineligible Costs | | Total DC Eligible Costs | DC Eligible Costs | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | BTE Share (%) | Replacement & BTE Shares ($) | | Prior Growth | 2026 - 2035 | Post 2035 |
| **PUBLIC TRANSIT** | | | | | | | | | | |
| 1.2.26 Chapman Mills (Longfields to Greenbank) | 2028 - 2030 | $ 10,000,000 | $ 6,666,667 | $ 3,333,333 | 33% | $ 1,104,252 | $ 2,229,081 | $ - | $ - | $ 2,229,081 |
| 1.2.27 Old Montreal Road BRT (Trim Road to Frank Kenney) | 2031 - 2033 | $ 11,950,000 | $ 7,966,667 | $ 3,983,333 | 33% | $ 1,319,582 | $ 2,663,752 | $ - | $ - | $ 2,663,752 |
| 1.2.28 Chapman Mills (Extension to Hwy 416) | 2031 - 2033 | $ 5,883,333 | $ 3,922,222 | $ 1,961,111 | 33% | $ 649,668 | $ 1,311,443 | $ - | $ - | $ 1,311,443 |
| 1.2.29 Carling LRT (Lincoln Fields to O-Train) | 2028 - 2033 | $ - | $ - | $ - | 0% | $ - | $ - | $ - | $ - | $ - |
| 1.2.30 Stage 3 LRT: Kanata (Moodie to Terry Fox) | 2028 - 2033 | $ 1,014,391,998 | $ 1,014,391,998 | $ - | 0% | $ - | $ - | $ - | $ - | $ - |
| 1.2.31 Stage 3 LRT: Kanata (Terry Fox to Palladium) | 2028 - 2033 | $ 826,950,000 | $ 826,950,000 | $ - | 0% | $ - | $ - | $ - | $ - | $ - |
| 1.2.32 Stage 3 LRT: Kanata (Palladium to Hazeldean) | 2028 - 2033 | $ 661,560,000 | $ 661,560,000 | $ - | 0% | $ - | $ - | $ - | $ - | $ - |
| 1.2.33 Stage 3 LRT: Barrhaven (Baseline to Fallowfield) | 2028 - 2033 | $ 2,716,999,998 | $ 2,716,999,998 | $ - | 0% | $ - | $ - | $ - | $ - | $ - |
| 1.2.34 Stage 3 LRT: Barrhaven (Fallowfield to Barrhaven Town Centre) | 2028 - 2033 | $ 1,302,000,000 | $ 1,302,000,000 | $ - | 0% | $ - | $ - | $ - | $ - | $ - |
| 1.2.35 Stage 3 LRT: Procurement & Preliminary Engineering | 2025 - 2028 | $ 220,520,000 | $ 220,520,000 | $ - | 0% | $ - | $ - | $ - | $ - | $ - |
| 1.2.36 Stage 3 LRT: Contingency and LRT Market Escalation | 2028 - 2033 | $ 675,000,000 | $ 675,000,000 | $ - | 0% | $ - | $ - | $ - | $ - | $ - |
| 1.2.37 O-Train (Alexandre Tache to Bayview) | 2024 - 2024 | $ - | $ - | $ - | 0% | $ - | $ - | $ - | $ - | $ - |
| Subtotal - Transit Projects | | $ 8,481,020,241 | $ 7,926,833,107 | $ 554,187,134 | | $ 221,827,931 | $ 332,359,202 | $ - | $ 162,031,413 | $ 170,327,789 |
| **1.3 Current Debt Payments - Principle & Interest** | | | | | | | | | | |
| 1.3.1 By-Law 2012 282 (Various Tax Projects) - Principal | 2024 - 2033 | $ 3,776,635 | $ - | $ 3,776,635 | 0% | $ - | $ 3,776,635 | $ - | $ 3,776,635 | $ - |
| 1.3.2 By-Law 2012 282 (Various Tax Projects) - Interest | 2024 - 2033 | $ 8,968,160 | $ - | $ 8,968,160 | 0% | $ - | $ 8,968,160 | $ - | $ 8,968,160 | $ - |
| 1.3.3 Woodroffe Station at Strandherd & Transitway Corridor Protection - Principal | 2024 - 2033 | $ 1,136,267 | $ - | $ 1,136,267 | 0% | $ - | $ 1,136,267 | $ - | $ 1,136,267 | $ - |
| 1.3.4 Woodroffe Station at Strandherd & Transitway Corridor Protection - Interest | 2024 - 2033 | $ 586,520 | $ - | $ 586,520 | 0% | $ - | $ 586,520 | $ - | $ 586,520 | $ - |
| 1.3.5 By-Law 2017-258 - Principal | 2024 - 2033 | $ 4,730,407 | $ - | $ 4,730,407 | 0% | $ - | $ 4,730,407 | $ - | $ 4,730,407 | $ - |
| 1.3.6 By-Law 2017-258 - Interest | 2024 - 2033 | $ 6,745,600 | $ - | $ 6,745,600 | 0% | $ - | $ 6,745,600 | $ - | $ 6,745,600 | $ - |
| 1.3.7 Confederation Line - Principal | 2024 - 2033 | $ 28,830,892 | $ - | $ 28,830,892 | 0% | $ - | $ 28,830,892 | $ - | $ 28,830,892 | $ - |
| 1.3.8 Confederation Line - Interest | 2024 - 2033 | $ 72,264,610 | $ - | $ 72,264,610 | 0% | $ - | $ 72,264,610 | $ - | $ 72,264,610 | $ - |
| 1.3.9 Stage 2 LRT - RTG MOU - Principal | 2024 - 2033 | $ 23,233,194 | $ - | $ 23,233,194 | 0% | $ - | $ 23,233,194 | $ - | $ 23,233,194 | $ - |
| 1.3.10 Stage 2 LRT - RTG MOU - Interest | 2024 - 2033 | $ 33,150,000 | $ - | $ 33,150,000 | 0% | $ - | $ 33,150,000 | $ - | $ 33,150,000 | $ - |
| 1.3.11 Transitway Corridor Protection - Principal | 2024 - 2033 | $ 1,887,823 | $ - | $ 1,887,823 | 0% | $ - | $ 1,887,823 | $ - | $ 1,887,823 | $ - |
| 1.3.12 Transitway Corridor Protection - Interest | 2024 - 2033 | $ 846,000 | $ - | $ 846,000 | 0% | $ - | $ 846,000 | $ - | $ 846,000 | $ - |
| 1.3.13 2012 Park and Ride Facilities - Principal | 2024 - 2033 | $ 25,837 | $ - | $ 25,837 | 0% | $ - | $ 25,837 | $ - | $ 25,837 | $ - |
| 1.3.14 2012 Park and Ride Facilities - Interest | 2024 - 2033 | $ 20,532 | $ - | $ 20,532 | 0% | $ - | $ 20,532 | $ - | $ 20,532 | $ - |
| 1.3.15 Stage 2 LRT-Preliminary Plan-Procurement - Principal | 2024 - 2033 | $ 22,240,528 | $ - | $ 22,240,528 | 0% | $ - | $ 22,240,528 | $ - | $ 22,240,528 | $ - |
| 1.3.16 Stage 2 LRT-Preliminary Plan-Procurement - Interest | 2024 - 2033 | $ 26,203,363 | $ - | $ 26,203,363 | 0% | $ - | $ 26,203,363 | $ - | $ 26,203,363 | $ - |
| 1.3.17 Transit Priority Corridor 2012 - Principal | 2024 - 2033 | $ 6,082 | $ - | $ 6,082 | 0% | $ - | $ 6,082 | $ - | $ 6,082 | $ - |
| 1.3.18 Transit Priority Corridor 2012 - Interest | 2024 - 2033 | $ 10,050 | $ - | $ 10,050 | 0% | $ - | $ 10,050 | $ - | $ 10,050 | $ - |
| 1.3.19 Light Rail Transit Office - Principal | 2024 - 2033 | $ 2,091 | $ - | $ 2,091 | 0% | $ - | $ 2,091 | $ - | $ 2,091 | $ - |
| 1.3.20 Light Rail Transit Office - Interest | 2024 - 2033 | $ 3,455 | $ - | $ 3,455 | 0% | $ - | $ 3,455 | $ - | $ 3,455 | $ - |
| 1.3.21 Transit Priority Measures 2012 - Principal | 2024 - 2033 | $ 4,942 | $ - | $ 4,942 | 0% | $ - | $ 4,942 | $ - | $ 4,942 | $ - |

APPENDIX B.2
TABLE B.2-1

CITY OF OTTAWA
DEVELOPMENT-RELATED CAPITAL PROGRAM
PUBLIC TRANSIT

| Project Description | Timing | Gross Project Cost | Grants/ Subsidies/Other Recoveries | Net Municipal Cost | Ineligible Costs | | Total DC Eligible Costs | DC Eligible Costs | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | BTE Share (%) | Replacement & BTE Shares ($) | | Prior Growth | 2026 - 2035 | Post 2035 |
| **PUBLIC TRANSIT** | | | | | | | | | | |
| 1.3.22 Transit Priority Measures 2012 - Interest | 2024 - 2033 | $ 8,166 | $ - | $ 8,166 | 0% | $ - | $ 8,166 | $ - | $ 8,166 | $ - |
| 1.3.23 Western Transitway (Bayshore-Moodie) - Principal | 2024 - 2033 | $ 570,203 | $ - | $ 570,203 | 0% | $ - | $ 570,203 | $ - | $ 570,203 | $ - |
| 1.3.24 Western Transitway (Bayshore-Moodie) - Interest | 2024 - 2033 | $ 942,201 | $ - | $ 942,201 | 0% | $ - | $ 942,201 | $ - | $ 942,201 | $ - |
| 1.3.25 Stage 2 LRT-Preliminary Plan-Procurement - Principal | 2024 - 2033 | $ 42,473,425 | $ - | $ 42,473,425 | 0% | $ - | $ 42,473,425 | $ - | $ 42,473,425 | $ - |
| 1.3.26 Stage 2 LRT-Preliminary Plan-Procurement - Interest | 2024 - 2033 | $ 45,600,596 | $ - | $ 45,600,596 | 0% | $ - | $ 45,600,596 | $ - | $ 45,600,596 | $ - |
| 1.3.27 Stage 2 LRT-Preliminary Plan-Procurement - Principal | 2024 - 2033 | $ 48,415,176 | $ - | $ 48,415,176 | 0% | $ - | $ 48,415,176 | $ - | $ 48,415,176 | $ - |
| 1.3.28 Stage 2 LRT-Preliminary Plan-Procurement - Interest | 2024 - 2033 | $ 60,078,277 | $ - | $ 60,078,277 | 0% | $ - | $ 60,078,277 | $ - | $ 60,078,277 | $ - |
| 1.3.29 Stage 2 LRT-Preliminary Plan-Procurement - Principal | 2024 - 2033 | $ 38,379,038 | $ - | $ 38,379,038 | 0% | $ - | $ 38,379,038 | $ - | $ 38,379,038 | $ - |
| 1.3.30 Stage 2 LRT-Preliminary Plan-Procurement - Interest | 2024 - 2033 | $ 76,722,512 | $ - | $ 76,722,512 | 0% | $ - | $ 76,722,512 | $ - | $ 76,722,512 | $ - |
| 1.3.31 Additional Stage 2 LRT Debt - Principal | 2025 - 2033 | $ 58,655,439 | $ - | $ 58,655,439 | 0% | $ - | $ 58,655,439 | $ - | $ 58,655,439 | $ - |
| 1.3.32 Additional Stage 2 LRT Debt - Interest | 2025 - 2033 | $ 194,850,000 | $ - | $ 194,850,000 | 0% | $ - | $ 194,850,000 | $ - | $ 194,850,000 | $ - |
| 1.3.33 Authorized (not issued) - Principal | 2025 - 2033 | $ 7,513,651 | $ - | $ 7,513,651 | 0% | $ - | $ 7,513,651 | $ - | $ 7,513,651 | $ - |
| 1.3.34 Authorized (not issued) - Interest | 2025 - 2033 | $ 18,304,320 | $ - | $ 18,304,320 | 0% | $ - | $ 18,304,320 | $ - | $ 18,304,320 | $ - |
| 1.3.35 Current Debt Payments Post-2033 Principal | 2033 - 2033 | $ 414,026,171 | $ - | $ 414,026,171 | 0% | $ - | $ 414,026,171 | $ - | $ 56,592,108 | $ 357,434,063 |
| 1.3.36 Current Debt Payments Post-2033 Interest | 2033 - 2033 | $ 716,079,510 | $ - | $ 716,079,510 | 0% | $ - | $ 716,079,510 | $ - | $ 97,878,955 | $ 618,200,555 |
| Subtotal - Current Debt Payments - Principle & Interest | | $ 1,957,291,672 | $ - | $ 1,957,291,672 | | $ - | $ 1,957,291,672 | $ - | $ 981,657,054 | $ 975,634,618 |
| **TOTAL - PUBLIC TRANSIT** | | **$ 10,561,160,444** | **$ 7,926,833,107** | **$ 2,634,327,337** | | **$ 221,827,931** | **$ 2,412,499,406** | **$ -** | **$ 1,266,536,998** | **$ 1,145,962,407** |

| Transit Cost Allocations - Transit Projects | | |
|---|---|---|
| | Ridership | Allocation |
| Benefit to Existing | 16,100 | 33% |
| In-period | 16,300 | 34% |
| Post-Period Benefit | 16,200 | 33% |
| **Total** | **48,600** | **100.0%** |

| Transit Cost Allocations - Debentures | | |
|---|---|---|
| | Ridership | Allocation |
| In-period | 16,300 | 50.2% |
| PPB Share for Debt Payments | 16,200 | 49.8% |
| **Total** | **32,500** | **100.0%** |

# Appendix B.3

# Public Transit Cost of Growth Analysis

# Public Transit Services Cost of Growth Analysis

This appendix addresses the capital, operating and asset management plan DC Background Study requirements for Public Transit services.

## A. Relevant Analysis and City Documents

The City of Ottawa undertakes extensive evaluations of the fiscal impacts of capital works; these analyses include an examination of the full range of costs – initial capital, operating and the long-term repair, maintenance and replacement of infrastructure. The following are key, and interrelated, documents central to the City's fiscal evaluation:

- City of Ottawa Financial Reports and Statements
- City of Ottawa 2017 Long Range Financial Plan (LRFP) V Transit. Note: the City presented an update to Council in September 2023.
- Comprehensive Asset Management (CAM) Policy
- 2017 State of Assets Report (SOAR)
- 2017 Strategic Asset Management Plan (SAMP)

The key objective of these studies is to ensure the City's financial sustainability. In addition, the City's annual budget process implements and manages the year-to-year expenditure needs and revenue requirements.

## B. Public Transit Asset Management Plan Requirements

The following provides an overview of the relevant documents and analysis that fulfills the AMP and long-term capital and operating cost requirements of the legislation.

### i. Long Range Financial Plan for Public Transit Services

At the February 24, 2017 meeting of the City of Ottawa Finance and Economic Development Committee meeting, two important staff reports regarding the City's transit services were considered and approved:

1. Stage 2 Light Rail Transit Implementation – Project Definition and Procurement Plan, Report ACS2017-TSD-OTP-0001

2. Long Range Financial Plan Transit, Report ACS2017-CSD-FIN-0002[4]

For reference, report ACS2017-CSD-FIN-0002 is attached to this appendix.

The 2017 LRFP for transit specifically examines the long-term operating and capital costs associated with delivering transit services.[5] As noted in the staff report, the LRFP – Public Transit is a financial model that "includes both operating and capital needs for the bus and light rail system over a 32-year time period to 2048, which covers the full contract period of the Confederation Line and Stage 2 of the Light Rail Transit (Stage 2 LRT)."

The City's LRFP and the separate Public Transit LRFP (sources of funding are dedicated to transit and cannot be used to fund other services) are structured to examine affordability and fiscal sustainability of transit infrastructure.

The City defines affordability from the point of view of current and future taxpayers and transit users. The parameters to determine affordability include:

- Public Transit taxes and transit fares will increase at the same rate as transit operating costs.
- Annual debt servicing will not exceed provincial and city limits.

[4] This report is also referenced in Section B of this appendix

[5] The City has a transit Affordability Model which is used as a tool to inform the Transit LRFP.

- Debt used to purchase an asset will be fully retired before the end of the asset's useful life.
- The city can operate, maintain in a good state of repair and expand the service to meet future needs.
- The future transit expansion as defined in the 2013 Transportation Master Plan (TMP) will be completed to service growth needs.

The results of the Public Transit LRFP determined that delivering, operating and maintaining the transit system is financially sustainable. Affordability and sustainability is based on the following key elements:

- Public Transit taxes and transit fares will increase at the same rate as transit costs.
- Contributions of two-thirds funding from other levels of government for LRT and BRT projects.
- Interest rates remain below 6 per cent.

These reports, and associated analysis, illustrate that the city, and Council, have fully evaluated and consider the full fiscal costs of undertaking the proposed transit capital program and determined that it is financial sustainable. The following sections provide an overview summary of the key components of the reports in the context of the DC Background Study.

Section F of this appendix references the requirements of the DCA and the Regulations and the various sections of this Background Study and source documents.

Since the release of the ACS2017-CSD-FIN-0002 report, the City has completed an update to the Transit Affordability Model to reflect the increased scope of work and costs associated with the Stage 2 LRT infrastructure as announced in February 2019. On March 6, 2019, City Council received a report entitled LRFP Transit Update which provided an update to the 2017 analysis. This report was further updated and presented to Council on September 18, 2023.

### ii. Gross Capital Costs Have Been Used for the Purposes of the AMP Analysis

It is important to note that the Public Transit LRFP and related Affordability Model include the total cost of all transit infrastructure including development charge eligible and ineligible costs.

### iii. Public Transit Assets: Condition Ratings & Useful Lives

Section 8(3) of the Regulations deal with the types of assets used to deliver the transit services and the state of existing local infrastructure. This section of the Regulations also address the principles, policies and approaches used by the municipality in asset management planning.

The City's Comprehensive Asset Management (CAM) address all of these issues fully. The CAM is an integrated business approach involving the different disciplines of planning, finance, engineering, maintenance and operations to effectively manage existing and new infrastructure. The objective of this integrated approach to infrastructure management are to maximize benefits, reduce risk and provide safe and reliable levels of service to community users in a socially, culturally, environmentally and economically conscious manner.

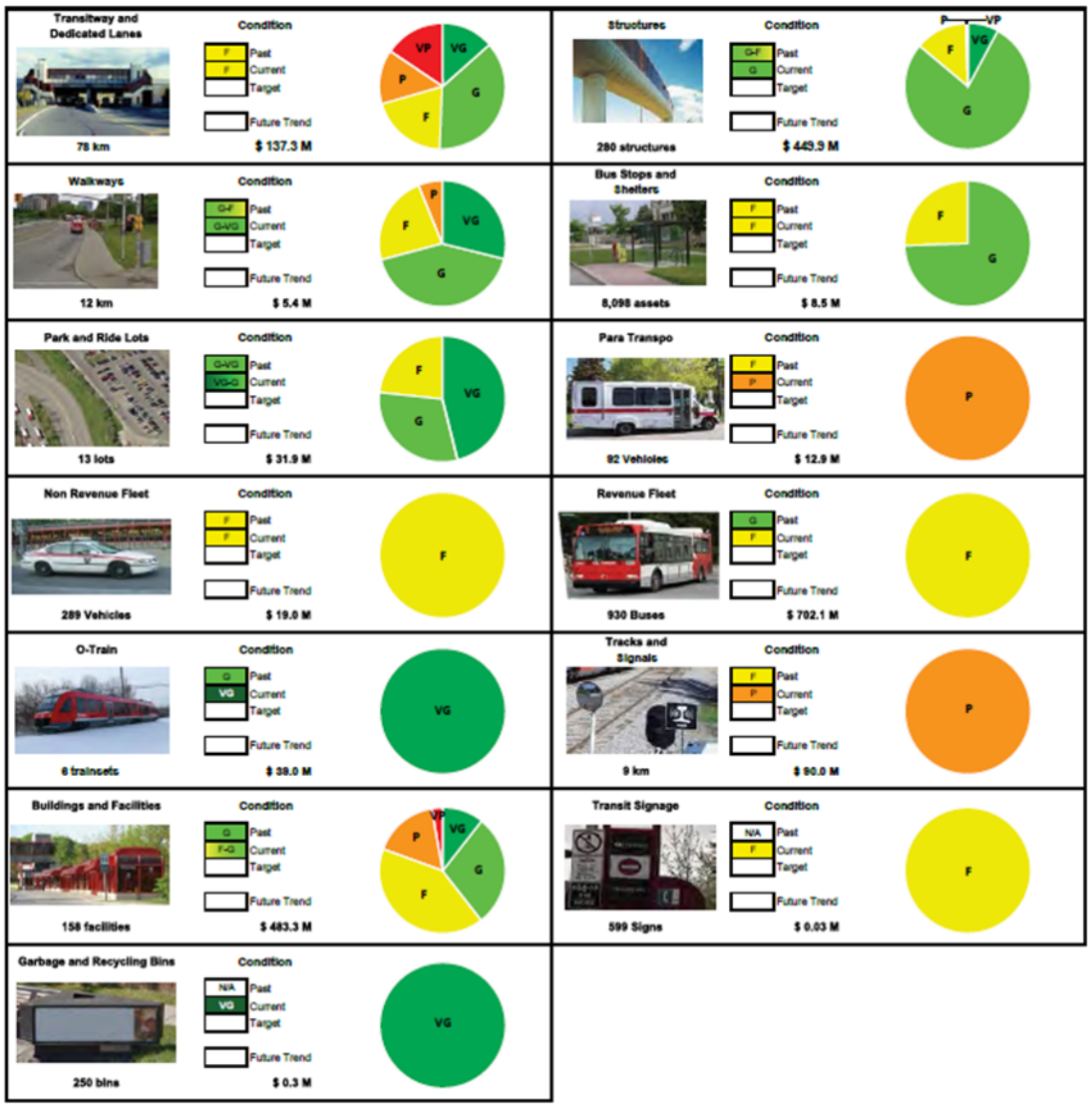
As noted on the City's website, the CAM Program encompasses all aspects of the management of each asset through its lifecycle in that it:

- Integrates with the Corporate Planning Framework to complement the strategic objectives of the City, other key business systems, legislation, and regulations;
- Creates a framework that establishes the mechanism for a clear line of sight between our AMP program and corporate objectives and strategies; and
- Commits to providing approved levels of service for present and future customers and communities, in the most effective and efficient way, through the planning, design, construction, acquisition, operation and maintenance, renewal, and disposal of assets.

In 2012 the City completed its first comprehensive report on the state of the City's physical assets, referred to as the 2012 State of Assets Report (SOAR). In 2017, the City completed an update to this document which is referenced in Section B of this report.

The 2017 SOAR (beginning on page 16) identified that the transit infrastructure has a replacement value of approximately $1.98 billion ($2017) with the majority of the assets rated as being in good or fair condition. Figure 1 shown below provides an excerpt from the 2017 SOAR which identifies the conditions of transit assets.

**Figure 1: 2017 SOAR Condition of Transit Assets (pg. 17)**



A summary of the future City-owned assets and estimated useful life assumptions considered under this Background Study is outlined in Table 1 for various types of transit assets. Although all capital assets considered in this Background Study have been identified, not all assets necessitate future replacement or ongoing maintenance activities. Some exceptions apply and the justification is as follows:

- Some projects do not relate to the emplacement of a tangible capital asset– some examples include the acquisition of land or the undertaking of development-related studies. These projects/costs do not necessarily require future replacement or ongoing maintenance. Such projects are identified as "not infrastructure" in the table.

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

**Table 1 – Summary of Conventional Assets Considered and Useful Life Assumptions**

| Estimated Useful Life | Type of Assets |
|---|---|
| Not Infrastructure | Land, Studies |
| 15 years | Vehicles, including buses but excluding LRT vehicles |
| 20 years | LRT Vehicles |
| 30 years | LRT rail and related infrastructure, Park and Ride facilities |
| 50 years | Transit way stations, maintenance facilities |
| 75 years | Overpasses, underpasses, bridges and other similar structures including Transitway infrastructure |

### iv. Summary of Capital Program

Table 2 provides a summary of future the transit projects identified in the capital program. The capital costs and 2024-2033 development charge recoverable shares are based on the analysis included in Appendix B.2.

**Table 2 – Summary of Development Related Capital Program**

| Capital Project Description | Gross Cost | 2024-2033 Development Charge Recoverable |
|---|---|---|
| Recovery of Negative DC Reserve Fund Balance | $122.8 million | $122.8 million |
| Transit Projects[1] | $8.9 billion | $321.1 million |
| Current Debt Payments – Principal and Interest | $1.9 billion | $981.7 million |
| **Total** | **$11.0 billion** | **$1.4 billion** |

1) Capital costs do not include financing costs

### v. Annual Provision

Table 3 provides a summary of the calculated annual reserve fund contributions based on the identified useful lives of the various assets and projects. As shown in the table below, the total DC recoverable 2034 contribution is $37.93 million. The year 2034 has been included to calculate the annual contribution for the 2024-2033 period as the expenditures in 2033 will not trigger asset management contributions until 2034.

**Table 3 – Summary of Calculated Full Life cycle Annual Contributions ($Millions) at 2034**

| Capital Project Description | Gross Cost 2030 Contribution | 2024-2033 DC Recoverable 2034 Contributions |
|---|---|---|
| Recovery of Negative DC Reserve Fund Balance | $0.00 | $0.00 |
| Transit Projects | $8,620.3 | $321.1 |
| Current Debt Payments – Principal and Interest | $0.00 | $0.00 |
| **Total** | **$8,620.3** | **$321.1** |

It should be noted that the City's Transit Affordability Model is used as a tool to inform the Transit LRFP. The Affordability Model is a highly integrated fiscal impact model that incorporates the full range of operating, capital and life-cycle costs. The Affordability Model includes an analysis of a long-term planning horizon to from 2030 to 2048.

## C. Transit Long-Term Capital and Operating Impacts

This section provides a brief examination of the long-term operating costs for the capital facilities and infrastructure to be included in the Development Charges By-law for Public Transit services. This examination is a requirement of the DCA. Similar to the AMP analysis, the operating cost impacts for transit infrastructure has been addressed through the outputs of the City's Public Transit LRFP analysis and related Affordability Model and is discussed below.

### i. Forecasted Revenue and Operating Costs

As stated in the Finance and Economic Development Committee Report ACS2017-CSD-FIN-0002:

> "Transit operations are primarily funded from two sources, fares and taxes. Additionally, some revenues are received from advertising and provincial gas tax revenue is applied towards operations annually. It is assumed that transit fares and transit tax rates will increase in keeping with the assumed 2.5% increase in transit costs. The model reflects the recent Provincial announcement to double gas tax contributions from $35 million in 2017 to $70 million by 2021 and is held constant thereafter. In the model, $16 million of the annual provincial gas tax is applied to operating costs and the remainder is used as capital funding" (page 9)

Based on growth in assessment, ridership and inflationary increases to taxes and fares, the model also accounts for anticipated revenue. Table 4 below provides an excerpt of the forecast revenue and costs related to transit infrastructure over the 2011-2031 and 2032-2048 planning periods as identified in the staff report.

**Table 4 – Summary of Forecasted Revenue and costs ($billions)**

| | Period 1 (2011-2031) | Period 2 (2032-2048) | Total |
|---|---|---|---|
| Total Funds Available | $10.4 | $20.7 | $31.1 |
| Bus Costs | $5.2 | $9.7 | $14.9 |
| Rail Costs | $2.1 | $5.5 | $7.6 |
| All Other Costs | $1.7 | $2.9 | $4.6 |
| **Total Operating Costs** | **$9.0** | **$18.1** | **$27.1** |
| Total Tax and Fare Revenue Available for Capital | **$1.4** | **$2.6** | **$4.0** |

Source: Report ACS2017-CSD-FIN-0002 page 13

### ii. Capital Revenue Sources and Assumptions

Public Transit infrastructure in the City of Ottawa is funded from a number of different sources including property taxes, federal and provincial funding, federal and provincial gas tax and development charges. Details of the assumed capital revenue sources is provided in pages 13-15 of staff report ACS2017-CSD-FIN-0002.

### iii. Use of Debt

The City's Public Transit LRFP includes debenture assumptions where the cost of capital investment exceeds the amount of funds available from other revenue sources. Criteria including the useful life of the asset and debt servicing limits are used in the determination of the amount and term of the debt. The City will continue to utilize long-term debt to finance transit capital needs when deemed efficient and within the financial policies of the city.

## D. Summary

In summary, the analysis completed through the city's Public Transit LRFP demonstrates that the City can afford to invest and operate transit infrastructure over the 10-year and long-term planning period.

Through the Public Transit LRFP analysis, it was concluded that the transit system will continue to be affordable if the following assumptions are built into the model and maintained going forward:

- Public Transit taxes and transit fares will increase at the same rate as transit costs at 2.5% (page 9 of Report ACS2017-CSD-FIN-0002).
- Contributions of two-thirds funding from other levels of government for LRT and BRT projects.
- Interest rates remain below 6%.

## E. AMP Checklist

The following checklist provides an overview of how the AMP analysis for Public Transit services, as required by the provisions of the DCA has been addressed.

### O.Reg. 82/98 Public Transit DC Requirement

### Background Study

| O.Reg. 82/98 Sections | Comments and Relevant Sections of this DC Background Study |
|---|---|
| 1. The calculations that were used to prepare the estimate for the planned level of service for the transit services, as mentioned in subsection 5.2 (3) of the Act. | Appendix B provides details on this calculation.<br><br>The City's transit planned level of service is the provision of a higher order transit system (bus and light rail transit), integrated with the existing, which is to be expanded, as well as a bus transit system for the residents and businesses of the City of Ottawa. |

| O.Reg. 82/98 Sections | Comments and Relevant Sections of this DC Background Study |
|---|---|
| 2. An identification of the portion of the total estimated capital cost relating to the transit services that would benefit,<br>i. the anticipated development over the 10-year period immediately following the preparation of the background study, or<br>ii. the anticipated development after the 10-year period immediately following the preparation of the background study. | Appendix A provides details on the anticipated development over the 10-year planning period.<br><br>Appendix B.1 provides details as it relates to transit ridership over the 10-year planning period. |
| 3. An identification of the anticipated excess capacity that would exist at the end of the 10-year period immediately following the preparation of the background study. | Appendix B.1 provides details on the excess capacity calculation.<br><br>The analysis arising from the ridership forecast is applied to the Public Transit development charge calculations is contained in Appendix B.2. |
| 4. An assessment of ridership forecasts for all modes of transit services proposed to be funded by the development charge over the 10-year period immediately following the preparation of the background study, categorized by development types, and whether the forecasted ridership will be from existing or planned development. | Appendix B.1 provides details on the excess capacity calculation.<br><br>The analysis arising from the ridership forecast is applied to the Public Transit development charge calculations is contained in Appendix B. |
| 5. An assessment of the ridership capacity for all modes of transit services proposed to be funded by the development charge over the 10-year period immediately following the preparation of the background study. O. Reg. 428/15, s. 4. | Appendix B.2 provides details on the ridership capacity calculation. |

## Assessment Management Plan

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:

### 1. A section that sets out the state of local infrastructure and that sets out,

| O.Reg. 82/98 Sections | Comments and Relevant Sections of this DC Background Study |
|---|---|
| i. the types of assets and their quantity or extent | Appendix B.3 provides a discussion of the AMP requirements and how they are met.<br>Relevant City documents that also address these requirements include:<br>▪ City of Ottawa Financial Reports and Statements<br>▪ City of Ottawa 2017 Long Range Financial Plan (LRFP) V Transit<br>▪ Comprehensive Asset Management (CAM) Policy<br>▪ 2017 State of Assets Report (SOAR)<br>▪ 2017 Strategic Asset Management Plan (SAMP) |
| 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,

| O.Reg. 82/98 Sections | Comments and Relevant Sections of this DC Background Study |
|---|---|
| i. defines the proposed level of service through timeframes and performance measures, | Appendix B.1 and B.2 provide details on the proposed level of service in the City of Ottawa and current ridership performance relatives to targets.<br>Relevant City documents that also address these requirements include: |
| ii. discusses any external trends or issues that may affect the proposed level of service or the municipality's ability to meet it, and | |

| O.Reg. 82/98 Sections | Comments and Relevant Sections of this DC Background Study |
|---|---|
| iii. shows current performance relative to the targets set out. | City's Public Transit Long Range Financial Plan.<br><br>The City's Affordability Model is used to analysis external trends such as changes in the rate of development, transportation mode shares and fiscal/financing changes.<br><br>The transit system is part of the City's overall transportation planning. The provision of the planned transit infrastructure and service is a critical component of achieving the City's growth management targets. Investment in transit infrastructure, together with other strategies, is required to reduce private automobile usage, increase use of public transit, and encourage more active transportation options. |

**3. An asset management strategy that,**

| O.Reg. 82/98 Sections | Comments and Relevant Sections of this DC Background Study |
|---|---|
| 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, | Appendix B.3 provide details on the actions to implement a sustainable transit system.<br><br>Relevant City documents that also address these requirements include:<br>▪ City's Public Transit Long Range Financial Plan |
| ii. is based on an assessment of potential options to achieve the proposed level of service, which assessment compares,<br>A. life cycle costs,<br>B. all other relevant direct and indirect costs and benefits, and<br>C. the risks associated with the potential options, | Appendix B.3 provide details on the actions to implement a sustainable transit system.<br><br>Relevant City documents that also address these requirements include:<br>▪ City's Public Transit Long Range Financial Plan |

| O.Reg. 82/98 Sections | Comments and Relevant Sections of this DC Background Study |
|---|---|
| iii. contains a summary of, in relation to achieving the proposed level of service,<br>A. non-infrastructure solutions<br>B. maintenance activities,<br>C. renewal and rehabilitation activities,<br>D. replacement activities,<br>E. disposal activities, and<br>F. expansion activities, | Appendix B.3 provide details on the actions to implement a sustainable transit system.<br><br>Relevant City documents that also address these requirements include:<br>▪ City's Public Transit Long Range Financial Plan<br><br>In particular, disposal activities are addressed through vehicles replacement/management – no revenue is generated from vehicles that are disposed of.<br><br>Appendix B provides details on expansion plans. |
| iv. discusses the procurement measures that are intended to achieve the proposed level of service | Appendix B.3 (including report ACS2017-CSD-FIN-0002) provides details on the procurement measures for Stage 2 LRT infrastructure.<br><br>Relevant City documents that also address these requirements include:<br>▪ City's annual budget<br>▪ RFP policies and practices |
| v. includes an overview of the risks associated with the strategy and any actions that will be taken in response to those risks | Appendix B.3 provides details on the Public Transit Long Range Financial Plan and Affordability Model analysis.<br><br>Ottawa uses an Affordability Model to guide capital program decision and to ensure that projects are financial sustainable. The model summarizes transit operating and capital needs over a long-range financial planning horizon, and assesses the affordability of the capital plan within forecast sources of revenue from fares, transit taxes, and other sources. These forecasts are based on a variety of factors including population, ridership and assessment growth projections. This allows the City to mitigate financial risks. The model is also updated regularly and allows for staff/Council to make informed capital program decisions. |

**4. A financial strategy that,**

| O.Reg. 82/98 Sections | Comments and Relevant Sections of this DC Background Study |
|---|---|
| i. shows the yearly expenditure forecasts that are proposed to achieve the proposed level of service, categorized by,<br>A. non-infrastructure solutions,<br>B. maintenance activities,<br>C. renewal and rehabilitation activities,<br>D. replacement activities,<br>E. disposal activities, and<br>F. expansion activities, | Appendix B.3 provide details on the relevant expenditure forecasts, where applicable.<br>Relevant City documents that also address these requirements include:<br>▪ City's Public Transit Long Range Financial Plan<br>▪ Corporate Asset Management Plan<br>In particular, disposal activities are addressed through the Corporate Asset Management and are generally minimal. |
| 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, | This information is not available and has not been provided. |
| iii. gives a breakdown of yearly revenues by source | Appendix B.3 (Table 4) provide details on the yearly revenues.<br>Relevant City documents that also address this requirement includes:<br>▪ City's Public Transit Long Range Financial Plan |
| iv. discusses key assumptions and alternative scenarios where appropriate, and | Alternative scenarios have not been examined and is therefore not applicable. |
| 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. | Appendix B.3 provides details on funding sources.<br>The City's Affordability Model is intended to address revenue shortfalls. This analysis is then used to inform the findings of the City's LRFP.<br>Relevant City documents that also address these requirements include:<br>▪ City's Public Transit Long Range Financial Plan |

**8 (4) For the purposes of subsection (3), the proposed level of service may relate to a time after the 10-year period immediately following the preparation of the background study. O. Reg. 428/15, s. 4.**