# CITY OF VAUGHAN
## EXTRACT FROM COUNCIL MEETING MINUTES OF JUNE 22, 2021

Item 1, Report No. 32, of the Committee of the Whole, which was adopted, as amended, by the Council of the City of Vaughan on June 22, 2021, as follows:

***By approving the following in accordance with:***

***Communication C38 memorandum from the Deputy City Manager, Corporate Services, Chief Financial Officer and City Treasurer and the City Manager, dated June 18, 2021:***

1. ***That the Development Charges Background Study for the Edgeley Pond and Park and Black Creek Channel Works prepared by Hemson, dated May 25, 2021 (the "Black Creek DC Background Study") (Attachment 1, Item #1, Report #32) be approved;***

2. ***That the Black Creek Financial Strategy Area Specific Development Charge ("Black Creek ASDC") By-law (Attachment 1 of this Memorandum) which is reflective of current rates, pending the completion of further consultation with the development community as per Council's direction, be enacted;***

3. ***That Council commit to funding the capital forecast to 2041 for the Black Creek Channel Works and Edgeley Pond and Park Works, included in the Black Creek DC Background Study, and subject to maintenance of service levels, the availability of funding and Council policies;***

4. ***That Council commit to funding the future operating costs associated with the capital forecast contained in the Black Creek DC Background Study, which are estimated to reach $1.7 million annually by 2040, and that this be addressed through future budget cycles;***

5. ***That staff be directed to further consult with landowners who provided feedback in respect of the Black Creek ASDC, and bring back a further Area Specific Development Charge By-law for the Edgeley Pond and Park and Black Creek Channel Works for Council's consideration in Q4 of 2021; and***

6. ***That staff be authorized to advertise for a Public Statutory Meeting at least twenty (20) days in advance of the date of the meeting in a method that is consistent with the requirements of the Development Charges Act, 1997; and***

…/2

***Communication C39 memorandum from the Deputy City Manager, Corporate Services, Chief Financial Officer and City Treasurer and the City Manager, dated June 18, 2021:***

1. ***That the Development Charges Background Study for the VMC West Interchange Sanitary Sewer Service Area prepared by Hemson dated April 26, 2021 ("VMC West DC Background Study") (Attachment 3, Item #1, Report #32) be approved;***

2. ***That the VMC West Interchange Sanitary Sewer Area Specific Development Charge ("VMC West ASDC") By-law, as contained in Attachment 4 of Communication C7, memorandum of the Deputy City Manager, Corporate Services, Chief Financial Officer and City Treasurer (Item 1, Report# 32 - Committee of the Whole (2), June 8, 2021), be enacted;***

3. ***That Council commit to funding the capital forecast to 2040 for the VMC West Interchange Sanitary Sewer, included in the VMC West DC Background Study, and subject to maintenance of service levels, the availability of funding and Council policies;***

4. ***That Council commit to funding the future operating costs associated with capital forecast contained in the VMC West DC Background Study, which are estimated to reach $288,000 annually by 2041, to be addressed through future budget cycles; and***

5. ***That Council confirm that no further public meetings pursuant to the Development Charges Act, 1997 are required prior to the enactment of the VMC West ASDC By- law;***

***By receiving the report of the Deputy City Manager, Corporate Services, City Treasurer and Chief Financial Officer, dated June 8, 2021; and***

***By receiving Communication C51 from Stephen Albanese, IBI GROUP, St. Clair Avenue West, Toronto, dated June 21, 2021.***

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1. **BLACK CREEK FINANCIAL STRATEGY AND VMC WEST INTERCHANGE SANITARY SEWER AREA SPECIFIC DEVELOPMENT CHARGE UPDATES**

   **The Committee of the Whole recommends:**

   **1) That further consideration of this matter be deferred to the Council meeting on June 22, 2021;**

…/3

**2) That the following recommendation in Communication C7, memorandum from the Deputy City Manager, Corporate Services, Chief Financial Officer and City Treasurer, dated June 4, 2021, be approved:**

**1. That Attachments 2 and 4 of the subject report be replaced with Attachments 2 and 4 of this Memorandum dated June 4, 2021; and**

**3) That the comments from Mr. Andrew Mirabella, Consultant on behalf of the City of Vaughan, be received; and**

**4) The following Communications be received:**

**C5. Ms. Robyn Rabinowitz, Doughton Residences Corp., PlazaCorp Investments Ltd., and Sebastian Mizzi, SigNature Communities., Wanless Avenue, Toronto, dated June 4, 2021;**
**C38. Mr. Quinto M. Annibale, Loopstra Nixon LLP, Woodbine Place, Toronto, dated June 7, 2021;**
**C47. Mr. Jack Wong, Associate, and Mr. Daryl Keleher, Senior Director, Malone Given Parsons, Renfrew Drive, Markham, dated June 7, 2021 ;**
**C48. Mr. Robert De Gasparis, Metrus, Floral Parkway, Vaughan, dated June 7, 2021, on behalf of 7800 Jane Street; and**
**C50. Mr. Joseph Sgro, ZZEN Developments Limited, Zenway Boulevard, Woodbridge, dated June 7, 2021, on behalf of 2431247 Ontario Limited, 7725 Jane Street.**

**Recommendations**

1. That the Development Charges Background Study for the Edgeley Pond and Park and Black Creek Channel Works (Attachment 1) be approved;
2. That the Black Creek Financial Strategy Area Specific Development Charge By-law (Attachment 2) be enacted;
3. That the Development Charges Background Study for the VMC West Interchange Sanitary Sewer (Attachment 3) be approved;
4. That the VMC West Interchange Sanitary Sewer Area Specific Development Charge By-law (Attachment 4) be enacted;
5. That upon substantial completion of the Black Creek Technical Assignment, staff report back to Committee of the Whole on the need, if any, for the reopening of the Area Specific Development Charge By-law due to any significant variance in costs;

…/4

6. That the capital forecast to 2041 for the Black Creek Channel Works and Edgeley Pond and Park Works, included in the Development Charge Background Study, dated May 25, 2021, and subject to maintenance of service levels, the availability of funding and Council policies, be adopted;

7. That Council commit to funding the future operating costs associated with capital forecast contained in the Development Charge Background Study, which are estimated to reach $1.7 million annually by 2040, to be addressed through future budget cycles; and

8. That Council confirm that no further public meetings pursuant to the Development Charges Act, 1997 are required prior to the enactment of the new Area Specific Development Charge By-law.

# Committee of the Whole (2) Report

**DATE:** Tuesday, June 8, 2021 **WARD(S):** 4

**TITLE: BLACK CREEK FINANCIAL STRATEGY AND VMC WEST INTERCHANGE SANITARY SEWER AREA SPECIFIC DEVELOPMENT CHARGE UPDATES**

**FROM:**
Michael Coroneos, Deputy City Manager, Corporate Services, City Treasurer and Chief Financial Officer

**ACTION:** DECISION

## Purpose
To seek Council's approval of the Black Creek Financial Strategy and VMC West Interchange Sanitary Sewer Development Charges Background Studies, and final staff recommendations related to the enactment of the ASDC By-laws for these works.

## Report Highlights
- Outline of proposed revisions to the Black Creek Financial Strategy as a result of consultation with the development industry.
- Staff are seeking approval of the Black Creek Financial Strategy and VMC West Interchange Sanitary Sewer Development Charge Background Studies, and associated Area Specific Development Charges By-laws.

## Recommendations
1. That the Development Charges Background Study for the Edgeley Pond and Park and Black Creek Channel Works (Attachment 1) be approved;

2. That the Black Creek Financial Strategy Area Specific Development Charge By-law (Attachment 2) be enacted;

3. That the Development Charges Background Study for the VMC West Interchange Sanitary Sewer (Attachment 3) be approved;

4. That the VMC West Interchange Sanitary Sewer Area Specific Development Charge By-law (Attachment 4) be enacted;

5. That upon substantial completion of the Black Creek Technical Assignment, staff report back to Committee of the Whole on the need, if any, for the reopening of the Area Specific Development Charge By-law due to any significant variance in costs;

6. That the capital forecast to 2041 for the Black Creek Channel Works and Edgeley Pond and Park Works, included in the Development Charge Background Study, dated May 25, 2021, and subject to maintenance of service levels, the availability of funding and Council policies, be adopted;

7. That Council commit to funding the future operating costs associated with capital forecast contained in the Development Charge Background Study, which are estimated to reach $1.7 million annually by 2040, to be addressed through future budget cycles; and

8. That Council confirm that no further public meetings pursuant to the Development Charges Act, 1997 are required prior to the enactment of the new Area Specific Development Charge By-law.

## Background

The Black Creek Financial Strategy and VMC West Interchange Sanitary Sewer Development Charges Background Studies were presented to the Committee of the Whole on April 7, 2021. A Public Statutory Meeting was held on May 12, 2021 as indicated in the Communication section of this report. These previous reports provided the details of the Strategy and those details are also contained in the Attachments to this report. This report serves as the final step in the approval process and includes some proposed changes to the Black Creek Financial Strategy based on feedback received from the Development Industry. Staff undertook considerable consultation with both VMC landowners and the land development industry in advance and during the public process leading to approval.

It is critical that the City undertake the Edgeley Pond and Black Creek Channel works due to the high level of investment that has already been made in the VMC towards public transit and the preliminary development of the mobility hub within the downtown. Without the mitigation of the flood risks associated with the current infrastructure, development in the area will be delayed and a significant risk of a future flood event remains which puts all of the investment that has been made in the area to date at risk.

### *Legislative Communication Requirements*

The Development Charges Act, 1997 has mandatory communication requirements which mandate the advertising of at least one public meeting and the City Clerk is mandated to carry out such advertising at least twenty (20) days in advance of the

meeting date. The Public Statutory Meeting was held on May 12, 2021 and was advertised using a number of channels to optimize public awareness. This included advertisements in the Vaughan Citizen and Vaughan Liberal on April 12, 2021. Both advertising of the meeting as well as pertinent information such as the draft Development Charge Background Studies for the Edgeley Pond and Park and Black Creek Channel Works and the VMC West Interchange Sanitary Sewer Service Area and related Area Specific Development (ASDC) By-laws which were also made available on the City's website beginning on April 7, 2021.

Two written deputations were received from VMC landowners. Staff have reviewed the communications and have provided formal responses to the deputants. Some changes to the funding strategy or allocation of cost is being recommended and staff is recommending the approval of the document with the inclusion of the revisions outlined in this report.

Some comments were received as related to the VMC West Sanitary Sewer works which resulted in some minor revisions to the Development Charges Background Study. These revisions were identified in the staff report for the Public Statutory Meeting. No further changes to the Development Charges Background Study are being recommended and staff are recommending that the study be approved in the same form presented on May 12, 2021.

## Previous Reports/Authority

Black Creek Financial Strategy and VMC West Interchange Sanitary Sewer Area Specific Development Charges Updates:
https://pub-vaughan.escribemeetings.com/filestream.ashx?DocumentId=66239

Black Creek Financial Strategy and VMC West Interchange Sanitary Sewer Public Statutory Meeting:
https://pub-vaughan.escribemeetings.com/filestream.ashx?DocumentId=68824

## Analysis and Options

### *Apportionment of Cost to City-Wide Engineering DCs*

The methodology utilized in the Black Creek Financial Strategy to allocate costs is based on a detailed engineering rationale that was developed in consultation with the development industry when the study was originally developed in 2016. This resulted in an allocation of costs on a line by line basis that considered the benefiting parties for each of the construction elements whereby the overall cost allocation of one third to be funded from ASDCs; one third funded from City-Wide DCs; and one third funded by the City from other funding sources (i.e. storm water rates).

Staff have performed a review of the methodology being used to allocate costs and conclude that the rationale is appropriate, with some potential consideration towards flexibility with the allocation of land costs. In recognition of the City-Wide benefit attributable to the broader City, staff have determined that there is rationale to move a higher portion of the land cost to City-Wide Engineering DCs than was previously contemplated. Staff have determined that increasing the allocation to City-Wide Engineering DCs for the land costs from 27% to 50% is appropriate. The timing of the land was also revised slightly to reflect ongoing discussions with Real Estate. This adjustment would result in the following revised rates:

| Area | Current Rates | Calculated Rates ($/net ha): DC Background Study April 7, 2021 | Calculated Rates ($/net ha): Revised May 2021 |
|---|---|---|---|
| Immediately Affected Landowners (Map 1) | $2,972,699 | $9,467,470 | $6,707,788 |
| Undeveloped Lands in the Black Creek Drainage Shed (Map 3) | $26,695 | $96,260 | $67,874 |

### *Revisions to the VMC Areas Draining into Edgeley Pond (Map 2)*

The site at the Northwest Corner of Jane Street. and Highway 7 is tributary to the Edgeley Park and Pond and the ultimate solution was contemplated to be conveyed by the Apple Mill Road storm sewer. Due to increased risk of flooding at the TTC station, should drainage from 7800 Jane Street be directed to the Apple Mill Road storm sewer, City Staff have recommended the storm drainage be directed to Jane Street.

Staff agree that as the lands are not currently draining into Edgeley Pond and at the ultimate state will most likely not be draining into Edgeley Pond, this property should no longer be considered for contribution towards Map 2. The ASDC mapping and rates will be revised accordingly and are reflected in the revised site-specific cost estimate (attached) and revised rate tables presented below.

The adjusted rate which removes this site would result in the following revised rate:

| Area | Current Rates | Calculated Rates ($/net ha): DC Background Study April 7, 2021 | Calculated Rates ($/net ha): Revised May 2021 |
|---|---|---|---|
| Vaughan Metropolitan Cenntre Draining to Edgeley Pond (Map 2) | $98,656 | $465,823 | $497,154 |

It should be noted that if the storm flows are deemed not acceptable to Jane Street and ultimately flow into Edgeley Pond, this site would be expected to pay the City ASDCs for Map 2.

## Financial Impact

### *Black Creek Financial Strategy*

The works related to the Edgeley Pond and Park and Black Creek storm water infrastructure in the Vaughan Metropolitan Centre (VMC) total approximately $221M. Development Charges Background Study provides the cost allocation methodology used to split the costs across several funding sources. Below is a breakdown of the various cost components of the works:

| Funding Source | % of Total |
|---|---|
| ASDC | 26.1% |
| City-Wide - DC Engineering | 34.3% |
| City-Wide - DC Community Services | 6.1% |
| Site Specific Contributions | 4.1% |
| Region/TRCA | 1.8% |
| Non-Growth | 27.7% |
| **Total** | **100%** |

These costs have been shared across various funding categories which are outlined in the table below:

| Infrastructure | $(M) | % of Total |
|---|---|---|
| Channelization | 59.5 | 26.9% |
| Land | 80.4 | 36.4% |
| Edgeley Pond | 56.7 | 25.7% |
| SE Stormwater Pond/Tank | 18.2 | 8.2% |
| Other | 6.3 | 2.9% |
| **Total** | **221** | **100%** |

The apportionment to City-Wide Engineering has increased due a further allocation of land cost to City-Wide than was contemplated in the first draft of the Background Study. A number of capital projects related to these infrastructure works have been previously approved by Council but are not fully funded. Upon implementation of the Strategy these projects will have identified sources of funding adjusted to align with the new Strategy to facilitate their scheduling and completion.

### *VMC West Interchange Sanitary Sewer*

After receiving feedback from the stakeholders that will be impacted by the VMC West Interchange Sanitary Sewer, staff had determined that some minor changes to the rates was required. These changes were outlined in the Statutory Public Meeting report which was presented to Committee of the Whole on May 12, 2021.

These changes resulted in the following ASDC Rate tables which staff are recommending for approval.

**VMC West Interchange Sanitary Sewer Residential Development Charges**

| Service | Unadjusted Charge Per Capita | Residential Charge By Unit Type (1) | | | |
|---|---|---|---|---|---|
| | | Singles & Semis | Townhouses & Multiples | Large Apartments (≥ 700 sq.ft.) | Small Apartments (< 700 sq.ft.) |
| Sanitary Sewer Improvements | $269.87 | $982 | $810 | $599 | $432 |
| *(1) Based on Persons Per Unit of:* | | *3.64* | *3.00* | *2.22* | *1.60* |

**VMC West Interchange Sanitary Sewer Non-Residential Development Charges**

| Service | Non-Residential Charge per Square Metre |
|---|---|
| Sanitary Sewer Improvements | $10.83 |
| **Charge levied per Square Meter of Gross Floor Area* | |

## Broader Regional Impacts/Considerations

The Region of York continues to be involved in discussions regarding the Black Creek and Edgeley Pond and Park Infrastructure. The City intends to apply to the Region's Municipal Streetscape Partnership Program for Streetscaping works associated with this infrastructure (Urban Plaza at the NE corner of Jane Street and Highway 7). Regional lands required for the infrastructure are a large component of the overall cost of the project and as such City staff have initiated discussions with Regional staff regarding the acquisition of the required lands.

In addition, the Black Creek Optimization study identified the need to replace the existing culvert under Highway 7. Discussions with the Region have progressed and as a result the cost of replacing the existing culvert has been included in the Black Creek Financial Strategy with a portion of the cost identified to be funded by the Region. It is

most likely that the City will undertake these works as a part of the overall construction of the project.

## Conclusion

Completion of the Edgeley Pond and Park and Black Creek and VMC West Interchange Sanitary Sewer works is a vital step towards flood relief and the development of the VMC as Vaughan's new downtown. The Development Charges Background Studies attached to this report ensures equitable cost allocation; sound methodology and a financial plan which will be in place for the long-term development of these infrastructure projects.

**For more information,** please contact:
Nelson Pereira, Manager of Development Finance, ext. 8393.
Brianne Clace, Project Manager of Development Finance, ext. 8284.

## Attachments

1. Black Creek Financial Strategy and Development Charge Background Study
2. Black Creek Financial Strategy ASDC By-Law
3. VMC West Interchange Sanitary Sewer Development Charge Background Study
4. VMC West Interchange Sanitary Sewer ASDC By-law

## Prepared by

Brianne Clace, Project Manager, Development Finance, ext. 8284.

## Approved by



Michael Coroneos, DCM, Corporate Services and City Treasurer and CFO

## Reviewed by



Jim Harnum, City Manager

**Attachment 1**

UPDATED REPORT

PREPARED BY HEMSON FOR THE CITY OF VAUGHAN

# DEVELOPMENT CHARGES BACKGROUND STUDY FOR THE EDGELEY POND AND PARK AND BLACK CREEK CHANNEL WORKS

May 25th 2021



HEMSON

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# EXECUTIVE SUMMARY

The following summarizes the finding of the City of Vaughan's Area-Specific Development Charges (ASDC) Background Study for the Edgeley Pond and Park and Black Creek Channel Works. The development charges identified in the study would be applied in addition to the City-wide DCs levied under DC By-law 083-2018.

## A. STUDY CONSISTENT WITH DEVELOPMENT CHARGES LEGISLATION

- The 2016 Black Creek Financial Strategy was developed over several years through extensive consultation with a variety of stakeholders with interests in the Black Creek and Edgeley Pond Renewal. Through this process Fabian Papa & Partners and Hemson Consulting Ltd. produced a methodology that considers the functional benefit of each component line item to each stakeholder in the funding equation. The approach is based on the premise that various groups of landowners derive varying levels of benefit depending on the flood control and urban design relative to their property.

- In June 2016, the Council of the City of Vaughan approved By-law 079-2016 to impose an Area Specific Development Charge for the Edgeley Pond and Black Creek Channel Works.

- In May 2018, the Council of the City of Vaughan approved the City-wide and Area-Specific Development Charges Background Study and passed City-wide DC By-law 083-2018 and 12 ASDC By-laws, which all thirteen by-laws came into force on September 21, 2018. This study did not address DC By-law 079-2016.

- This ASDC Background Study and associated by-law relates only to By-law 079-2016, which constitutes the works associated with Edgeley Pond and Park and Black Creek Channel Works. This study recalculates area-specific development charges in compliance with the provisions of the *Development Charges Act, 1997* (DCA) and its associated regulation (*Ontario Regulation 82/98*) and the recently amended provisions of the legislation.

- Since the approval of the ASDC by-law staff have continued working with a series of external consultants to refine the cost estimates for the Edgeley Park and Pond as the design has advanced significantly and the cost being used in the strategy is more accurate.

- Please note, as general consensus on the allocation methodology was achieved in 2016, staff have determined that the existing methodology for the allocation of costs should be maintained (for both projects) with updates only being applied to the cost components by using updated information provided from the more detailed design and costing.

- The City needs to implement development charges to fund the Edgeley Pond and Park and Black Creek Channel Works, which benefit the identified land owners so that new development pays for its capital requirements to the extent allowed by the DCA and so that new services required by growth are provided in a fiscally responsible manner.

- The DCA and Ontario Regulation (O. Reg. 82/98) require that a development charges background study be prepared in which development charges are determined with reference to:

  - A forecast of the amount, type and location of residential and non-residential development anticipated;
  - 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 to provide for the expected development, including the determination of the development and non-development-related components of the capital projects;
  - An examination of the long-term capital and operating costs for the capital infrastructure required for each service to which the development charges by-law relates; and
  - An asset management plan to deal with all assets whose capital costs are proposed to be funded under the DC by-law, and that demonstrates that all assets are financial sustainable over their full life cycle.

- This report identifies the development-related net capital costs attributable to land to be developed within the three areas to which the works relate. As permitted by the legislation and consistent with the City's existing practice, the area-specific stormwater management development charges have been calculated on a land area (per net hectare) basis.

- The calculated charges are the maximum charges the City may adopt. Lower charges may be approved; however, this will require a reduction in the capital plan and reduced service levels, or financing from other sources, likely property taxes and utility rates.

## A. ENGINEERING SERVICES WITH AREA-SPECIFIC DEVELOPMENT-RELATED COSTS INCLUDED IN THE ANALYSIS

- The following City services have been included in the development charge analysis:
    - Area-Specific Stormwater and/or Floodplain Management
    - City-wide Engineering
    - City-wide Parks and Open Space Development
- This ASDC Background Study calculates development charges related to the provision of stormwater and/or floodplain management infrastructure within the three specific benefitting land areas.
- The area-specific approach is applied to the service to align the capital costs for this service with the particular areas that will be serviced by the required infrastructure.

## B. DEVELOPMENT FORECAST

- As permitted by the legislation and consistent with the City's existing practice, the area-specific stormwater management development charges have been calculated on a land area (per net hectare) basis.
- The area-specific development charges calculated in this study are based on the development or redevelopment of three defined geographies within the Black Creek watershed and Vaughan Metropolitan Centre (VMC) areas. The applicable areas are illustrated in the Area-Specific Development Charges maps (Appendix C) and summarized in the table below.

***Development Areas Included in the Study***

| Area Description | Net Hectares |
|---|---|
| Immediately Affected Landowners (Map 1) | 5.78 (ha removed from floodplain) |
| Vaughan Metropolitan Centre Areas Draining to Edgeley Pond (Map 2) | 18.98 (developable ha) |
| Undeveloped Lands in Black Creek Drainage Shed (Map 3) | 144.58 (developable ha) |

## C. DEVELOPMENT-RELATED CAPITAL PROGRAM

- The City of Vaughan provided the capital project listing and cost estimates contained in the capital program setting out the projects that are required to facilitate development to 2041. Many of the costs were prepared by specialized consultants retained by the City.

- The development-related capital program is based on a 2041 benefiting period with the assumption that all lands will develop/redevelop over the 2021 to 2041 period.

- The total cost associated with the area-specific development-related works related to the three benefiting areas amounts to $221.0 million. The costs included in the ASDC are inclusive of the works associated with the Black Creek Channelization works and the Edgeley Pond and Park improvements.

- The *Development Charges Act* requires that gross capital costs be reduced by grants, subsidies, and recoveries from other governments, capital replacements or other benefits provided to the existing community and amounts that exceed historic service levels. Therefore, of the total $221.0 million gross program, about $57.6 million is attributed to those benefiting land owners for recovery from this ASDC. A summary of the apportionment is shown in the table below.

***Capital Cost Summary by Funding Source***

| **Description** | **Cost ($000)** | **%** |
|---|---|---|
| Immediately Affected Landowners | $38,891 | 17.6% |
| Vaughan Metropolitan Centre Areas Draining to Edgeley Pond | $9,818 | 4.4% |
| Undeveloped Land in Black Creek Drainage Shed | $8,893 | 4.0% |
| City-Wide Development Charges – Engineering | $75,838 | 34.3% |
| City-Wide Development Charges – Parks and Open Space | $13,381 | 6.1% |
| Benefit to Existing Funding (non-DC sources) | $61,185 | 27.7% |
| Local Service | $8,953 | 4.1% |
| Other Governments (York, TRCA) | $4,067 | 1.8% |
| **Totals** | **$221,026** | **100.0%** |

- Appendix A provides details on the calculation for the infrastructure works.

## D. DEVELOPMENT CHARGES ARE CALCULATED WITH FULL REFERENCE TO THE DCA

- The fully calculated ASDCs are recommended on a land area (per net hectare) basis and applicable to all net land areas (illustrated in the maps below).
- The charge for Immediately Affected Landowners is levied on the net hectares removed from the floodplain, whereas the other two area-specific charges are levied on net hectares of developable land.
- The charges shown below are not cumulative and more than one charge could apply to a given land area. See the Area-Specific Development Charges Maps in Appendix C.
- Consistent with the methodology employed in 2016, the calculated rates assume that the City would issue external debt for projects constructed in the first four years (between 2021 and 2024), while projects emplaced after 2024 were assumed to be reserve funded with long-term interest rates of 5% applied to negative balances and 3.5% applied to positive balances.

| **ASDC Areas** | **Calculated Rates ($/net ha)** |
|---|---|
| Map 1 – Immediately Affected Landowners | $6,707,788 |
| Map 2 – VMC Draining to Edgeley Pond | $497,154 |
| Map 3 – Undeveloped Land in the Black Creek Drainage Shed | $67,874 |

# 1. INTRODUCTION AND BACKGROUND

This City of Vaughan Area-Specific Development Charges (ASDC) Background Study for the Edgeley Pond and Park and Black Creek Channel Works is presented as part of a process to lead to the approval of a new ASDC by-law in compliance with the *Development Charges Act, 1997* (DCA) and its associated *Ontario Regulation 82/98* (O. Reg. 82/98).

The 2016 Black Creek Financial Strategy was developed over several years through extensive consultation with a variety of stakeholders with interests in the Black Creek and Edgeley Pond and Park Renewal. Through this process Fabian Papa & Partners and Hemson Consulting Ltd. produced a methodology that considers the functional benefit of each component line item to each stakeholder in the funding equation. The approach is based on the premise that various groups of landowners derive varying levels of benefit depending on the flood control and urban design relative to their property. Importantly, the methodology established in the 2016 study used to develop the allocation of costs based on the improvement of hydrologic capacity has been maintained in this 2021 ASDC Study.

In June 2016, the Council of the City of Vaughan approved By-law 079-2016 to impose an Area Specific Development Charge for the Edgeley Pond and Park and Black Creek Channel Works. Since the approval of the ASDC by-law staff have continued working with a series of external consultants to refine the cost estimates for the Edgeley Park and Pond as the design has advanced significantly and the cost being used in the strategy is more accurate.

In order for the City to continue collecting DCs for the required works, the City needs to update the existing ASDCs to fund development-related capital projects so that development may be serviced in a fiscally responsible manner.

The DCA and O. Reg. 82/98 require that a development charges background study be prepared in which development charges are determined with reference to:

- A forecast of the amount, type and location of development anticipated;
- A review of capital works in progress and anticipated 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 development and non-development-related components of the capital projects;

- 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; and

- An asset management plan to deal with all assets whose capital costs are proposed to be funded under the DC by-law, demonstrating that all assets included in the capital program are financially sustainable over their full life cycle.

This study presents the results of the review, which determines the net capital costs attributable to new development/redevelopment that is forecast to occur within the three benefiting land areas between 2021 and 2041. The area-specific development charges calculated in this study are based on the development or redevelopment of three defined geographies within the Black Creek watershed and Vaughan Metropolitan Centre (VMC) areas. As permitted by the legislation and consistent with the City's existing practice, the area-specific stormwater management development charges have been calculated on a land area (per net hectare) basis.

The City of Vaughan currently levies development charges on a city-wide, uniform basis in addition to other area-specific development charges. The City-wide charges recover for development-related costs for the provision of Engineering (City-wide), Public Works, Community Services, Library, Fire & Rescue, and General Government. These City-wide services as well as the remaining twelve 2018 Area-Specific development Charges by-law are not being reviewed as part of this study.

The DCA provides for a period of public review and comment regarding the proposed development charges. This process includes considering and responding to comments received by members of the public about the calculated charges and methodology used. Following completion of this process, and in accordance with the DCA and Council's review of this study, it is intended that Council will pass new ASDCs for the three defined geographies within the Black Creek watershed and Vaughan Metropolitan Centre (VMC) areas.

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

Section 2 designates the services for which the development charges are proposed and the areas within the City to which the development charges will apply. It also briefly reviews the methodology that has been used in this background study.

Section 3 presents a summary of the remaining net developable land areas to be developed over the 2021–2041 period.

Section 4 summarizes the future development-related capital costs associated with the provision of services related to development/redevelopment in within the Black Creek watershed and Vaughan Metropolitan Centre (VMC) areas.

Section 5 details the calculated ASDC rates for development or redevelopment of three defined geographies.

Section 6 provides an examination of the long-term capital and operating cost impacts for the infrastructure included in the ASDC calculation. It also addresses the asset management provisions required to maintain the development-related components of the capital projects included in the analysis.

Section 7 provides a discussion of other issues and considerations including by-law administration, rules and policies.

# 2. AREA-SPECIFIC APPROACH IS USED TO ALIGN DEVELOPMENT-RELATED COSTS AND BENEFITS

Several key steps are required when calculating any development charge. However, specific circumstances arise in each municipality that must be reflected in the calculation. Therefore, we have tailored our approach to the unique circumstances in the City of Vaughan and the specific benefitting areas to which the works apply. The approach to the calculated area-specific development charges is focused on providing a reasonable alignment of development-related costs with the development that necessitates them.

## A. AREA-SPECIFIC DEVELOPMENT CHARGES ARE CALCULATED

The DCA provides municipalities with flexibility to define services that will be included in the development charge by-laws, provided that the other provisions of the Act and its associated regulations are met. The DCA also requires that the by-laws designate the areas within which the by-laws shall be imposed. The development charges may apply to all lands in the municipality or to other designated development areas as specified in the by-laws.

The City of Vaughan currently levies development charges on both a City-wide and Area-Specific basis.

- The following City services have been included in the development charge analysis:
    - Area-Specific Stormwater and/or Floodplain Management
    - City-wide Engineering
    - City-wide Parks and Open Space Development

This ASDC Background Study calculates development charges related to the provision of stormwater and/or floodplain management infrastructure within the three specific benefitting land areas. The area-specific approach is applied to the service to align the capital costs for this service with the particular areas that will be serviced by the required infrastructure.

- As permitted by the legislation and consistent with the City's existing practice, the area-specific stormwater management development charges have been calculated on a land area (per net hectare) basis.

- The area-specific development charges calculated in this study are based on the development or redevelopment of three defined geographies within the Black Creek watershed and Vaughan Metropolitan Centre (VMC) areas. The applicable areas are illustrated in the Area-Specific Development Charges maps (Appendix C) and summarized in the following section.

No changes to the City-wide DC by-law or remaining twelve ASDC by-laws are proposed as part of this study.

- Please note that both the City-wide engineering and City-wide parks share identified in this analysis will be recovered for under the City-wide DC by-law and will be included in the subsequent update study and Community Benefit Charges study and corresponding CBC by-law.

## B. KEY STEPS IN DETERMINING AREA-SPECIFIC DEVELOPMENT CHARGES FOR FUTURE DEVELOPMENT-RELATED PROJECTS

Several key steps are required in calculating development charges for future development-related projects. These are summarized below.

### 1. Developable Land Area Forecast

Land area based development charge is proposed for the purposes of calculating an ASDC for the three benefitting land areas.

For the purposes of the ASDC calculation, the total net developable land area means the gross area of land less the area of lands conveyed or to be conveyed into public ownership for the purpose of open space, parks, woodlots, schools, storm water management facilities, buffers and road widening's along Regional Roads and Ontario Hydro utility corridors and less the area of any wood lots in private ownership if zoned as such, but shall include the area of all road allowances dedicated to the City. For the purposes of this study and by-law the net benefiting area for Map 1 shall include parkland.

## 2. Development-Related Capital Program and DC Eligible Costs to be Recovered Through the ASDCs

City staff, in collaboration with the consulting team have created a development-related capital program setting out those projects that are required to facilitate development within the three benefitting areas. The growth-related capital program is based on a 2041 benefiting period with the assumption that all lands will develop/redevelop over the period. The City of Vaughan provided the project listing and cost estimates contained in the capital program. Many of the costs were prepared by specialized consultants retained by the City.

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

> *... only if the council of the 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 in order to accommodate future anticipated development. It is not sufficient in the calculation of development charges merely to have had the service in the past. There must also be a demonstrated commitment to continue to emplace facilities or infrastructure in the future. In this regard, Ontario Regulation 82/98, s. 3 states that:

> *For the purposes of paragraph 3 of subsection 5 (1) of the Act, the council of a 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.*

As required by the DCA, s. 5. (1) 6., any portion of projects and their associated net costs that are considered to benefit existing residents are the funding responsibility of the City from non-development charges sources. Those specific shares of projects are further identified and quantified in section 4 of this report.

## 3. Attribution to Types of Development

Once the total gross capital project costs have been identified and all necessary reductions and adjustments have been made, the ASDC is calculated based on the net developable land area and expressed as a rate per net hectare.

## 4. Final Adjustment

The final determination of the development charge results from adjustments made to development-related net capital costs resulting from the application of any unallocated reserve fund balances available to finance the development-related capital costs in the capital forecast. 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*.

For the purposes of the cash-flow analysis, it has been assumed that the City would issue external debt for projects constructed between 2021 and 2024. An 18-year debenture with a current Infrastructure Ontario fixed interest rate of 2.42% is assumed. Projects emplaced after 2024 were assumed to be reserve funded with long-term interest rates of 5.5% applied to negative balances and 3.5% applied to positive balances. This approach is consistent with the methodology employed in the 2016 Study.

# 3. DEVELOPMENT FORECAST

This section provides the basis for the total net developable land area forecasts used in calculating area-specific development charges for the three benefitting areas to which the Edgeley Pond and Park and Channelization Works apply. The total developable land area was informed based on data provided by the City's engineering/design consultants and through discussions with City staff.

This practice aligns with the provisions of the DCA, which require that development charges be determined with reference to "the amount, type and location of development for which development charges can be imposed…" (s.5.(1)1.). This section portrays a summary of the results of the total developable land area, net of non-developable areas.

## A. LAND AREA FORECAST

The area-specific development charges calculated in this study are based on the development or redevelopment of three defined geographies within the Black Creek watershed and Vaughan Metropolitan Centre (VMC) areas. The applicable areas are illustrated in the Area-Specific Development Charges maps (Appendix C) and summarized in the table below.

**Table 1 – The City of Vaughan – Development Areas Included in the Study**

| Area Description | Net Hectares |
|---|---|
| Immediately Affected Landowners (Map 1) | 5.78 (ha removed from floodplain) |
| Vaughan Metropolitan Centre Areas Draining to Edgeley Pond (Map 2) | 18.98 (developable ha) |
| Undeveloped Lands in Black Creek Drainage Shed (Map 3) | 144.58 (developable ha) |

For the purposes of the ASDC calculation, the total net developable land area means the gross area of land less the area of lands conveyed or to be conveyed into public ownership for the purpose of open space, parks, woodlots, schools, storm water management facilities, buffers and road widening's along Regional Roads and Ontario Hydro utility corridors and less the area of any wood lots in private ownership if zoned as such, but shall include the area of all road allowances dedicated to the City. For the purposes of this study and by-law the net benefiting area for Map 1 includes parkland.

# 4. THE DEVELOPMENT-RELATED CAPITAL PROGRAM

The DCA requires the Council of a municipality to express its intent to provide future capital facilities at the average historical service level incorporated in the development charges calculation. As noted above in Section II, Ontario Regulation 82/98, s. 3 states that:

For the purposes of paragraph 3 of subsection 5 (1) of the Act, the council of a 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.

## A. A DEVELOPMENT-RELATED CAPITAL FORECAST IS PROVIDED FOR COUNCIL'S APPROVAL

Based on the development forecasts detailed in Section III, City staff, in collaboration with the consulting team have created a development-related capital program setting out those projects that are required to facilitate development within the three benefitting areas. The growth-related capital program is based on a 2041 benefiting period with the assumption that all lands will develop/redevelop over the period. The City of Vaughan provided the project listing and cost estimates contained in the capital program. Many of the costs were prepared by specialized consultants retained by the City, while some costs were maintained from the 2016 DC Study, but adjusted for the effects of inflation.

One of the recommendations contained in this ASDC Background Study is for Council to adopt the capital programs created for the purposes of this area-specific development charges calculation. It is assumed that future capital budgets and forecasts will continue to bring forward the development-related projects contained herein, that are consistent with the development occurring in areas. It is acknowledged that changes to the forecast presented here may occur through the City's normal capital budget process.

## B. THE DEVELOPMENT-RELATED CAPITAL FORECAST FOR SERVICES RELATED TO THE EDGELEY POND AND PARK AND BLACK CREEK CHANNEL WORKS

Table 2 provides the development-related capital recoveries for service related to the Edgeley Pond and Black Creek Channel Works.

The area-specific capital program totals $221.0 million and provides servicing for anticipated development over the planning period to 2041. One of the attributing factors to the increased cots relates to an update to the cost to acquire land along the Black Creek Channel. Land costs continue to rise in the VMC area and the revised land costs reflect a current estimation of value based on present values being seen in the area. The City now anticipates that a great deal of land will have to be acquired to complete the works in a timely manner. Of the total value, land acquisition costs represent $80.4 million (or 36%) of the total.

The *Development Charges Act* requires that gross capital costs be reduced by grants, subsidies, and recoveries from other governments, capital replacements or other benefits provided to the existing community; amounts that exceed historic service levels or considered to benefit development beyond the planning horizon. Given that the increase in need for service identified for these lands considered in the ASDC calculation relate to engineered services, the ASDC calculations are not subject to the same service level restrictions applied for general services, thus no funding level caps have been applied.

As indicated in Table 2, of the total $221.0 million gross program, about $57.6 million is attributed to those benefiting land owners and included in the calculation of the ASDC rates in this study. In addition to those costs funded from ASDCs in this study, an additional $89.2 million is anticipated to be funded through the City-wide Engineering and Community Services DCs (those rates are not considered under this study). A summary of the apportionment is shown below.

**Table 2 – Capital Cost Summary by Funding Source**

| Description | Cost ($000) | % |
|---|---|---|
| Immediately Affected Landowners | $38,891 | 17.6% |
| Vaughan Metropolitan Centre Areas Draining to Edgeley Pond | $9,818 | 4.4% |
| Undeveloped Land in Black Creek Drainage Shed | $8,893 | 4.0% |
| City-Wide Development Charges – Engineering | $75,838 | 34.3% |
| City-Wide Development Charges – Parks and Open Space | $13,381 | 6.1% |
| Benefit to Existing Funding (non-DC sources) | $61,185 | 27.7% |
| Local Service | $8,953 | 4.1% |
| Other Governments (York, TRCA) | $4,067 | 1.8% |
| **Totals** | **$221,026** | **100.0%** |

- It should be noted that development charges reserve funds, which do exist for Maps 2 and 3 for which development has already occurred, have been applied to the opening balance in the cash-flow analysis and considered in the calculation of the rates.

# 5. AREA-SPECIFIC DEVELOPMENT CHARGES ARE CALCULATED IN ACCORDANCE WITH THE DCA

This section summarizes the calculation of ASDCs for each of the benefiting land areas. The calculation of the "unadjusted" per net hectare are reviewed.

It is noted that the calculation of the ASDCs does not include any provision for exemptions required under the DCA, such as the exemption from the payment of DCs for industrial buildings. Such legislated exemptions, or other exemptions that Council may choose to provide, will result in loss of DC revenue for the affected types of development. However, any such revenue loss may not be made up by offsetting increases in other portions of the calculated charge.

## A. DEVELOPMENT CHARGES CALCULATION

A summary of the calculated ASDCs is presented in the following table, however, further details of the calculations are available in Appendix A.

**Table 3 - Calculated Area-Specific Development Charges**

| **Lands to which the ASDC is Applicable** (Maps provided in Appendix C) | **Cost ($000)** | **Area (net ha)** | **Unadjusted Charge ($/ha)** | **Adjusted Charge after Cash Flow ($/ha)** |
|---|---|---|---|---|
| Immediately Affected Landowners | $38,890.5 | 5.78 | $6,726,139 | $6,707,788 |
| Vaughan Metropolitan Centre Draining to Edgeley Pond | $9,818.4 | 18.98 | $517,411 | $497,154 |
| Undeveloped Lands in Black Creek Drainage Shed | $8,892.7 | 144.58 | $61,505 | $67,874 |
| **Totals** | **$57,601.6** | or 26.1% of the total costs | | |

- The charge for Immediately Affected Landowners is levied on the net hectares removed from the floodplain whereas the other two area-specific charges are levied on net hectares of developable land.

- The charges shown above are not cumulative, however, more than one charge could apply to a given land area. See the Area-Specific Development Charges Maps in Appendix C.

- The unadjusted charges do not consider the timing of development and the timing of infrastructure emplacement.

- The adjusted charge considers the anticipated timing of projects and land development. The timing assumptions were developed in consultation with City Staff taking into account known development applications. Specific cash flow assumptions and forecasts are detailed in Appendix A, but a summary of the key assumptions are:

    - Consistent with the 2016 methodology, it is assumed that the City would issue external debt for projects constructed in the first four years between 2021 and 2024. An 18-year debenture with a current Infrastructure Ontario fixed interest rate of 2.42% is assumed.

    - Projects emplaced after 2024 were assumed to be reserve funded with long-term interest rates of 5.5% applied to negative balances and 3.5% applied to positive balances. An inflation rate of 2% per annum is used.

## B. COMPARISON OF PROPOSED AND EXISTING DEVELOPMENT CHARGES

Tables 4 presents a comparison of total calculated Area-Specific development charges for the three benefitting areas respectively with the City's existing charges (as at January 1, 2021).

Table 4 shows that the calculated charges produce fairly substantial increase over the present development charges with increases ranging between the different areas relative to the cost drivers for each.

**Table 4 Comparison of Current vs. Calculated Area-Specific Development Charges**

| ASDC Area | Current Rates | Calculated Rates | *Difference* |
|---|---|---|---|
| Immediately Affected Landowners | $2,972,699 | $6,707,788 | *$3,735,089* |
| Vaughan Metropolitan Centre Draining to Edgeley Pond | $98,656 | $497,154 | *$398,498* |
| Undeveloped Lands in Black Creek Drainage Shed | $26,695 | $67,874 | *$41,179* |

The quantum of the rate increase is reflective of a series of factors:

- Some changes to the study that have had an impact on the overall cost include the update to the cost to acquire land along the Black Creek Channel. Land costs continue to rise in the VMC area and the revised land costs reflect a current estimation of value based on present values being seen in the area. The City now anticipates that a great deal of land will have to be acquired to complete the works in a timely manner.

- Another notable change to the strategy is with regards to the cost estimates for the Edgeley Park and Pond. In the original strategy the costs were based on a high-level concept. Now that the Edgeley Pond and Park design has advanced significantly the cost being used in the strategy are much more accurate. This has caused costs to increase in some areas, but it has also resulted in the City's ability to lower the

contingencies being applied to the park and pond related components of the infrastructure.

- Finally, the Black Creek Optimization study had identified the need to replace the existing culvert under Highway 7. As York Region is responsible for replacement of the existing culvert and had previously informed staff of their decision to defer the works until the culvert approaches its end of life cycle this component was not included in the original Financial Strategy costing. Since that time, City staff have reinitiated discussions with Regional Staff to determine how to advance these works as a part of the broader Black Creek Channel construction. This would further mitigate the added risk of potential flooding in the intersection at Jane Street and Highway 7. As a result, an additional cost for the culvert has been included in the Black Creek Financial Strategy with the assumption that a share of the cost would be borne by the Region.

# 6. Long-Term Capital and Operating Costs and Asset Management Provisions

This section provides a brief examination of the long-term capital and operating costs for the area-specific capital facilities and infrastructure to be included in the ASDC by-law. Also addressed is the required asset management provisions that must be considered.

As indicated in previous sections of this report, there are components of the development-related capital program that will require funding from non-development charges sources. Overall, the benefit to existing share amounts to $61.2 million and will require funding from non-DC Sources.

Consistent with the requirements of the *Development Charge Act*, assets that are proposed to be funded under the development charges by-law have been included in the analysis. Overall, the City will need to fund an additional $736,800 per annum in order to properly fund the life cycle replacement costs of the new assets related to all servicing costs supported under the development charges by-law. In addition to the annual contributions for asset replacement, annual maintenance activities are estimated at $997,200 which were assumed to require 4% of the initial capital costs for continuous projects and 2% for projects with finite useful lives.

Please note, although all capital assets considered in the study have been evaluated, some projects/assets are not covered by the ASDC or do not necessarily require future replacement or ongoing maintenance and therefore excluded from the analysis. Additional details regarding the long-term maintenance of assets and asset management requirements is outlined in Appendix B.

The calculated annual provisions identified in this study are considered financially sustainable as it is expected that the increased capital asset management requirements, as well as the annual maintenance requirements can be absorbed by the tax and user base over the long-term. Importantly, the City's annual operating budget review will allow staff to continue to monitor and implement mitigating measures should the program become less sustainable.

# 7. OTHER ISSUES AND CONSIDERATION

## A. DEVELOPMENT CHARGES ADMINISTRATION

No significant changes are recommended to the City's current policies and practices regarding development charge administration. In this regard:

- It is recommended that 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 exemptions within the development charges by-laws proposed for adoption.
- It is recommended that Council adopt the development-related capital program included in this background study, subject to annual review through the City's normal capital budget process.

# APPENDIX A

# AREA-SPECIFIC EDGELEY POND AND PARK AND BLACK CREEK CHANNEL WORKS

# TECHNICAL APPENDIX

# APPENDIX A – AREA SPECIFIC EDGELEY POND AND PARK AND BLACK CREEK CHANNEL WORKS

This appendix provides the detailed analysis undertaken to establish the area-specific development charge rates for the Edgeley Pond and Park and Black Creek Channel Works within the Black Creek watershed and Vaughan Metropolitan Centre (VMC) areas. This section is divided into three main components:

1) Summary of the Development-Related Capital Program and Calculation of the Rates. This includes an overview of the program and the calculation of the unadjusted and adjusted charges applicable.

2) Specific Cost Elements and Benefits related to Black Creek Channel Works (Category A)

3) Specific Cost Elements and Benefits related to the Edgeley Pond Improvements (Category B)

## A. SUMMARY OF THE DEVELOPMENT-RELATED CAPITAL PROGRAM AND CALCULATION OF THE RATES

Based on the development forecasts detailed in Section III, City staff, in collaboration with the consulting team have created a development-related capital program setting out those projects that are required to facilitate development within the three benefitting areas. The growth-related capital program is based on a 2041 benefiting period with the assumption that all lands will develop/redevelop over the 21-year period. The City of Vaughan provided the project listing and cost estimates contained in the capital program. Many of the costs were prepared by specialized consultants retained by the City. It should be noted that the City of Vaughan engaged a design team that underwent a public and stakeholder engagement process to develop design options and ultimately contract documents for the pond improvements.

Table 1 provide details of the projects included in the area-specific infrastructure development charges calculations and the allocation of costs to the various funding sources to which the works relate to. For example, certain projects would have a benefit to the specific areas to which this ASDC is applicable to (in regards to Map 1, 2 or 3), while also benefitting existing development or requiring recovery from the City-wide engineering or Community Services DCs.

## TABLE 1 - SUMMARY OF COST APPORTIONMENT

| Component | Timing | Black Creek Floodplain Reductions - Immediately | Vaughan Metropolitan Centre (VMC) | Vaughan Metropolitan Centre (VMC) Areas Draining to Edgeley | Undeveloped Lands in Black Creek Drainage Shed | City-Wide Development Charges - Engineering | City-Wide Development Charges - Parks & Open Space | Benefit to Existing Funding | Local Service | Other Governments (York, TRCA) | Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **A. BLACK CREEK CHANNELIZATION WORKS** | | | | | | | | | | | |
| **A1. Realignment, Earthworks and Restoration** | 2022 - 2027 | 49.2% | 0.0% | 0.0% | 11.25% | 13.20% | 0.0% | 26.35% | 0.0% | 0.0% | 100.0% |
| **A2. Structures** | | | | | | | | | | | |
| A2.1 Interchange Way Crossing | 2022 - 2027 | 0.0% | 0.0% | 0.0% | 0.0% | 100.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.0% |
| A2.2 Doughton Road Crossing | 2022 - 2027 | 24.6% | 0.0% | 0.0% | 5.6% | 56.6% | 0.0% | 13.2% | 0.0% | 0.0% | 100.0% |
| A2.3 Culvert Under Hwy 7 | 2022 - 2027 | 30.7% | 0.0% | 0.0% | 7.0% | 8.2% | 0.0% | 16.5% | 0.0% | 37.6% | 100.0% |
| A2.4 Peelar Road Crossing | 2022 - 2027 | 24.6% | 0.0% | 0.0% | 5.6% | 56.6% | 0.0% | 13.2% | 0.0% | 0.0% | 100.0% |
| A2.5 Mews | 2022 - 2027 | 0.0% | 0.0% | 0.0% | 0.0% | 100.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.0% |
| A2.6 Retaining Walls | 2022 - 2027 | 49.2% | 0.0% | 0.0% | 11.3% | 13.2% | 0.0% | 26.4% | 0.0% | 0.0% | 100.0% |
| A2.7 Removal of existing driveway culvert (access to arena) and restoration. | 2022 - 2027 | 49.2% | 0.0% | 0.0% | 11.3% | 13.2% | 0.0% | 26.4% | 0.0% | 0.0% | 100.0% |
| A2.8 Temporary Access to 7581 Jane Street | 2022 - 2027 | 49.2% | 0.0% | 0.0% | 11.3% | 13.2% | 0.0% | 26.4% | 0.0% | 0.0% | 100.0% |
| **A3. Bank Treatments, Urban Design and Landscape** | | | | | | | | | | | |
| A3.1 Naturalized western edge plus eastern edge south of Peelar Road (plantings, trails, lighting) | 2022 - 2027 | 41.8% | 0.0% | 0.0% | 9.6% | 11.2% | 15.0% | 22.4% | 0.0% | 0.0% | 100.0% |
| A3.2 Terraced Steps | 2022 - 2027 | 31.4% | 0.0% | 0.0% | 7.2% | 8.4% | 11.3% | 16.8% | 25.0% | 0.0% | 100.0% |
| A3.3 Urban buffer (amenitized eastern edge - promenade paving, furniture, lighting) | 2022 - 2027 | 0.0% | 0.0% | 0.0% | 0.0% | 25.0% | 25.0% | 25.0% | 25.0% | 0.0% | 100.0% |
| **Sub-Totals - Before Land Acquisitions** | | | | | | | | | | | |
| **A4. Land Acquisitions** | | | | | | | | | | | |
| A4.1 Region/Provincial Land | 2023 - 2023 | 21.3% | 0.0% | 0.0% | 4.9% | 50.0% | 0.0% | 0.0% | 23.8% | 0.0% | 100.0% |
| A4.2 Private Land | 2023 - 2023 | 21.3% | 0.0% | 0.0% | 4.9% | 50.0% | 0.0% | 0.0% | 23.8% | 0.0% | 100.0% |
| A4.3 Land Conveyance | 2023 - 2023 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.0% | 0.0% | 100.0% |
| **Total Black Creek Channelization Works** | | | | | | | | | | | |
| Allocation Distribution | | | | | | | | | | | |
| **B. EDGELEY POND IMPROVEMENTS** | | | | | | | | | | | |
| **B1 Design Components** | | | | | | | | | | | |
| B1.1 Earthworks, Erosion/Sediment Control, Site Preparation | 2022 - 2027 | 0.0% | 0.0% | 25.0% | 0.0% | 0.0% | 0.0% | 75.0% | 0.0% | 0.0% | 100.0% |
| B1.2 Natural Channel Realignment and Restoration | 2022 - 2027 | 0.0% | 0.0% | 25.0% | 0.0% | 0.0% | 0.0% | 75.0% | 0.0% | 0.0% | 100.0% |
| B1.3 Plant Material | 2022 - 2027 | 0.0% | 0.0% | 25.0% | 0.0% | 0.0% | 0.0% | 75.0% | 0.0% | 0.0% | 100.0% |
| B1.4 Inlet and Outlet Control Structures - Main Pond | 2022 - 2027 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.0% | 0.0% | 0.0% | 100.0% |
| B1.5 Structures Servicing VMC Lands | 2022 - 2027 | 0.0% | 0.0% | 100.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.0% |
| B1.6 Edge Treatments (Enhanced Design) | 2022 - 2027 | 0.0% | 0.0% | 25.0% | 0.0% | 0.0% | 0.0% | 75.0% | 0.0% | 0.0% | 100.0% |
| B1.7 Urban Design Features (Enhanced Design) | 2022 - 2027 | 0.0% | 0.0% | 25.0% | 0.0% | 0.0% | 0.0% | 75.0% | 0.0% | 0.0% | 100.0% |
| B1.8 NE Corner Culvert - North of Hwy 7 | 2021 - 2023 | 19.7% | 0.0% | 0.0% | 4.5% | 40.3% | 0.0% | 10.5% | 25.0% | 0.0% | 100.0% |
| B1.9 Urban plazas - paving, furniture, lighting (Intersection of Jane and Highway 7 & SE Platform) | 2023 - 2025 | 0.0% | 0.0% | 0.0% | 0.0% | 25.0% | 25.0% | 0.0% | 25.0% | 25.0% | 100.0% |
| B1.10 Sustainable Transitional Feature NE Corner of Jane & Hwy 7 | 2021 - 2023 | 0.0% | 0.0% | 0.0% | 0.0% | 37.5% | 37.5% | 0.0% | 25.0% | 0.0% | 100.0% |
| **B2 Enhanced Design Components** | | | | | | | | | | | |
| B2.1 Urban Design Features (Enhanced Design) | | | | | | | | | | | |
| B2.1.1 Concrete pedestrian walkways | 2022 - 2027 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.0% | 0.0% | 0.0% | 0.0% | 100.0% |
| B2.1.2 Amphitheater works | 2022 - 2027 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.0% | 0.0% | 0.0% | 0.0% | 100.0% |
| B2.1.3 Paving and fencing | 2022 - 2027 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.0% | 0.0% | 0.0% | 0.0% | 100.0% |
| B2.1.4 Shade structure | 2022 - 2027 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.0% | 0.0% | 0.0% | 0.0% | 100.0% |
| B2.2 Site Furnishing | | | | | | | | | | | |
| B2.2.1 Adult Exercise Equipment | 2022 - 2027 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.0% | 0.0% | 0.0% | 0.0% | 100.0% |
| B2.2.2 Benches, bike racks, planting pots, bollards, picnic tables | 2022 - 2027 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.0% | 0.0% | 0.0% | 0.0% | 100.0% |
| B2.2.3 Stone seat walls in valley | 2022 - 2027 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.0% | 0.0% | 0.0% | 0.0% | 100.0% |
| B2.2.4 Signage and safety | 2022 - 2027 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.0% | 0.0% | 0.0% | 0.0% | 100.0% |
| B2.2.5 Lighting | 2022 - 2027 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.0% | 0.0% | 0.0% | 0.0% | 100.0% |
| B2.2.6 Electrical | 2022 - 2027 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.0% | 0.0% | 0.0% | 0.0% | 100.0% |
| B2.3 Bridges - Long term | | | | | | | | | | | |
| B2.3.1 North and south valley bridges | 2022 - 2027 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 62.5% | 37.5% | 0.0% | 0.0% | 100.0% |
| B2.3.2 East bioswale bridge at Barnes outfall | 2022 - 2027 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 62.5% | 37.5% | 0.0% | 0.0% | 100.0% |
| B2.3.3 Pedestrian Bridge (main bridge) | 2022 - 2027 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 62.5% | 37.5% | 0.0% | 0.0% | 100.0% |
| B2.3.4 Valley Lands Bridge | 2022 - 2027 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 62.5% | 37.5% | 0.0% | 0.0% | 100.0% |
| B2.4 South Pond Enhancements (Area 'C') | | | | | | | | | | | |
| B2.4.1 Retaining wall enhancements | 2021 - 2023 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.0% | 0.0% | 100.0% |
| **Total Edgeley Pond Improvements** | | | | | | | | | | | |
| Allocation Distribution | | | | | | | | | | | |
| **C. EROSION IMPROVEMENTS, HIGHWAY 407 TO STEELES AVENUE WEST** | 2022 - 2027 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | ####### | 0.0% | 23.6% | 100.0% |
| **D. PUBLIC ART** | 2021 - 2039 | 0 | 0 | 0.0% | 0 | 0 | 0.0% | 0.0% | 100.0% | 0.0% | 100.0% |
| **E. SWM POND/TANK FOR SOUTHEAST QUADRANT OF VMC (Ultimate Solution)** | 2022 - 2027 | 0 | 0 | 0.0% | 0 | 100% | 0.0% | 0.0% | 0.0% | 0 | 100.0% |
| **F. DC AND RELATED ENGINEERING STUDIES** | 2021 - 2026 | 18.7% | 0.0% | 4.7% | 4.3% | 36.5% | 6.4% | 29.4% | | | 100.0% |
| **TOTAL ALLOCATION OF COSTS** | | | | | | | | | | | |

## SUMMARY OF CAPITAL COSTS

| Component | Timing | Component Cost Estimate | Labour Recovery | Component Cost Estimate with Labour Recovery | Component-Specific Contingency | Soft Cost and Constuction Contingency | Net HST | City Admin Fee | Totals |
|---|---|---|---|---|---|---|---|---|---|
| **A. BLACK CREEK CHANNELIZATION WORKS** | | | $ 825,000 | | | | | | |
| **A1. Realignment, Earthworks and Restoration** | 2022 - 2027 | $13,000,000 | $ 206,334 | $13,206,334 | 30.0% | 30.0% | 1.76% | 3.0% | $23,392,860 |
| **A2. Structures** | | | | | | | | | |
| A2.1 Interchange Way Crossing | 2022 - 2027 | $1,800,000 | $ 28,569 | $ 1,828,569 | 30.0% | 30.0% | 1.76% | 3.0% | $3,239,011 |
| A2.2 Doughton Road Crossing | 2022 - 2027 | $1,200,000 | $ 19,046 | $ 1,219,046 | 30.0% | 30.0% | 1.76% | 3.0% | $2,159,341 |
| A2.3 Culvert Under Hwy 7 | 2022 - 2027 | $4,319,527 | $ 68,559 | $ 4,388,086 | 30.0% | 30.0% | 1.76% | 3.0% | $7,772,775 |
| A2.4 Peelar Road Crossing | 2022 - 2027 | $1,200,000 | $ 19,046 | $ 1,219,046 | 30.0% | 30.0% | 1.76% | 3.0% | $2,159,341 |
| A2.5 Mews | 2022 - 2027 | $900,000 | $ 14,285 | $ 914,285 | 30.0% | 30.0% | 1.76% | 3.0% | $1,619,506 |
| A2.6 Retaining Walls | 2022 - 2027 | $240,000 | $ 3,809 | $ 243,809 | 30.0% | 30.0% | 1.76% | 3.0% | $431,868 |
| A2.7 Removal of existing driveway culvert (access to arena) and restoration. | 2022 - 2027 | $600,000 | $ 9,523 | $ 609,523 | 30.0% | 30.0% | 1.76% | 3.0% | $1,079,670 |
| A2.8 Temporary Access to 7581 Jane Street | 2022 - 2027 | $300,000 | $ 4,762 | $ 304,762 | 30.0% | 30.0% | 1.76% | 3.0% | $539,835 |
| **A3. Bank Treatments, Urban Design and Landscape** | | | | | | | | | |
| A3.1 Naturalized western edge plus eastern edge south of Peelar Road (plantings, trails, lighting) | 2022 - 2027 | $2,642,789 | $ 41,946 | $ 2,684,735 | 30.0% | 30.0% | 1.76% | 3.0% | $4,755,569 |
| A3.2 Terraced Steps | 2022 - 2027 | $4,200,000 | $ 66,662 | $ 4,266,662 | 30.0% | 30.0% | 1.76% | 3.0% | $7,557,693 |
| A3.3 Urban buffer (amenitized eastern edge - promenade paving, furniture, lighting) | 2022 - 2027 | $2,675,438 | $ 42,464 | $ 2,717,902 | 30.0% | 30.0% | 1.76% | 3.0% | $4,814,319 |
| **Sub-Totals - Before Land Acquisitions** | | **$33,077,754** | **$525,006** | **$33,602,759** | | | | | **$59,521,788** |
| **A4. Land Acquisitions** | | | | | | | | | |
| A4.1 Region/Provincial Land | 2023 - 2023 | $9,377,039 | | $ 9,377,039 | 25.0% | 0.0% | 1.76% | 3.0% | $12,285,422 |
| A4.2 Private Land | 2023 - 2023 | $51,992,533 | | $ 51,992,533 | 25.0% | 0.0% | 1.76% | 3.0% | $68,118,536 |
| A4.3 Land Conveyance | 2023 - 2023 | $0 | | $ - | 25.0% | 0.0% | 1.76% | 3.0% | $0 |
| **Total Black Creek Channelization Works** | | | | | | | | | **$139,925,746** |
| Allocation Distribution | | | | | | | | | |
| **B. EDGELEY POND IMPROVEMENTS** | | | | | | | | | |
| | | | $ 495,000 | | | | | | |
| **B1 Design Components** | | ***$30,340,394*** | ***$369,278*** | ***$30,709,672*** | | | | | ***$42,238,240*** |
| B1.1 Earthworks, Erosion/Sediment Control, Site Preparation | 2022 - 2027 | $9,115,953 | $ 110,952 | $ 9,226,905 | 15.0% | 14.0% | 1.76% | 3.0% | $12,678,651 |
| B1.2 Natural Channel Realignment and Restoration | 2022 - 2027 | $3,017,789 | $ 36,730 | $ 3,054,519 | 15.0% | 14.0% | 1.76% | 3.0% | $4,197,202 |
| B1.3 Plant Material | 2022 - 2027 | $1,629,123 | $ 19,828 | $ 1,648,951 | 15.0% | 14.0% | 1.76% | 3.0% | $2,265,817 |
| B1.4 Inlet and Outlet Control Structures - Main Pond | 2022 - 2027 | $4,880,673 | $ 59,403 | $ 4,940,076 | 15.0% | 14.0% | 1.76% | 3.0% | $6,788,138 |
| B1.5 Structures Servicing VMC Lands | 2022 - 2027 | $3,173,654 | $ 38,627 | $ 3,212,281 | 15.0% | 14.0% | 1.76% | 3.0% | $4,413,982 |
| B1.6 Edge Treatments (Enhanced Design) | 2022 - 2027 | $1,441,510 | $ 17,545 | $ 1,459,055 | 15.0% | 14.0% | 1.76% | 3.0% | $2,004,881 |
| B1.7 Urban Design Features (Enhanced Design) | 2022 - 2027 | $244,086 | $ 2,971 | $ 247,057 | 15.0% | 14.0% | 1.76% | 3.0% | $339,480 |
| B1.8 NE Corner Culvert - North of Hwy 7 | 2021 - 2023 | $4,768,143 | $ 58,034 | $ 4,826,177 | 15.0% | 14.0% | 1.76% | 3.0% | $6,631,629 |
| B1.9 Urban plazas - paving, furniture, lighting (Intersection of Jane and Highway 7 & SE Platform) | 2023 - 2025 | $1,404,530 | $ 17,095 | $ 1,421,625 | 15.0% | 14.0% | 1.76% | 3.0% | $1,953,449 |
| B1.10 Sustainable Transitional Feature NE Corner of Jane & Hwy 7 | 2021 - 2023 | $664,933 | $ 8,093 | $ 673,026 | 20.0% | 14.0% | 1.76% | 3.0% | $965,011 |
| **B2 Enhanced Design Components** | | | | | | | | | |
| B2.1 Urban Design Features (Enhanced Design) | | ***$1,257,988*** | ***$15,311*** | ***$1,273,299*** | | | | | ***$1,749,635*** |
| B2.1.1 Concrete pedestrian walkways | 2022 - 2027 | $339,952 | $ 4,138 | $ 344,090 | 15.0% | 14.0% | 1.76% | 3.0% | $472,812 |
| B2.1.2 Amphitheater works | 2022 - 2027 | $105,894 | $ 1,289 | $ 107,183 | 15.0% | 14.0% | 1.76% | 3.0% | $147,280 |
| B2.1.3 Paving and fencing | 2022 - 2027 | $639,235 | $ 7,780 | $ 647,015 | 15.0% | 14.0% | 1.76% | 3.0% | $889,061 |
| B2.1.4 Shade structure | 2022 - 2027 | $172,907 | $ 2,104 | $ 175,011 | 15.0% | 14.0% | 1.76% | 3.0% | $240,483 |
| B2.2 Site Furnishing | | ***$937,392*** | ***$11,409*** | ***$948,801*** | | | | | ***$1,303,744*** |
| B2.2.1 Adult Exercise Equipment | 2022 - 2027 | $130,625 | $ 1,590 | $ 132,215 | 15.0% | 14.0% | 1.76% | 3.0% | $181,676 |
| B2.2.2 Benches, bike racks, planting pots, bollards, picnic tables | 2022 - 2027 | $148,176 | $ 1,803 | $ 149,979 | 15.0% | 14.0% | 1.76% | 3.0% | $206,086 |
| B2.2.3 Stone seat walls in valley | 2022 - 2027 | $53,572 | $ 652 | $ 54,224 | 15.0% | 14.0% | 1.76% | 3.0% | $74,509 |
| B2.2.4 Signage and safety | 2022 - 2027 | $162,444 | $ 1,977 | $ 164,421 | 15.0% | 14.0% | 1.76% | 3.0% | $225,930 |
| B2.2.5 Lighting | 2022 - 2027 | $223,350 | $ 2,718 | $ 226,068 | 15.0% | 14.0% | 1.76% | 3.0% | $310,640 |
| B2.2.6 Electrical | 2022 - 2027 | $219,225 | $ 2,668 | $ 221,893 | 15.0% | 14.0% | 1.76% | 3.0% | $304,903 |
| B2.3 Bridges - Long term | | ***$7,630,842*** | ***$92,876*** | ***$7,723,718*** | | | | | ***$10,665,129*** |
| B2.3.1 North and south valley bridges | 2022 - 2027 | $1,705,784 | $ 20,761 | $ 1,726,545 | 15.0% | 14.0% | 1.76% | 3.0% | $2,372,439 |
| B2.3.2 East bioswale bridge at Barnes outfall | 2022 - 2027 | $478,840 | $ 5,828 | $ 484,668 | 15.0% | 14.0% | 1.76% | 3.0% | $665,980 |
| B2.3.3 Pedestrian Bridge (main bridge) | 2022 - 2027 | $4,059,000 | $ 49,403 | $ 4,108,403 | 20.0% | 10.0% | 1.76% | 3.0% | $5,684,094 |
| B2.3.4 Valley Lands Bridge | 2022 - 2027 | $1,387,218 | $ 16,884 | $ 1,404,102 | 20.0% | 10.0% | 1.76% | 3.0% | $1,942,616 |
| B2.4 South Pond Enhancements (Area 'C') | | ***$503,300*** | ***$6,126*** | ***$509,426*** | | | | | ***$700,000*** |
| B2.4.1 Retaining wall enhancements | 2021 - 2023 | $503,300 | $ 6,126 | $ 509,426 | 15.0% | 14.0% | 1.76% | 3.0% | $700,000 |
| **Total Edgeley Pond Improvements** | | **$ 40,669,916** | **$ 495,000** | **$ 41,164,916** | | | | | **$56,656,747** |
| Allocation Distribution | | | | | | | | | |
| **C. EROSION IMPROVEMENTS, HIGHWAY 407 TO STEELES AVENUE WEST** | 2022 - 2027 | $1,822,000 | $ 28,919 | $1,850,919 | 25.0% | 15.0% | 1.76% | 3.0% | $2,788,749 |
| **D. PUBLIC ART** | 2021 - 2039 | $2,000,000 | | | 15.0% | 15.0% | 1.76% | 3.0% | $2,772,299 |
| **E. SWM POND/TANK FOR SOUTHEAST QUADRANT OF VMC (Ultimate Solution)** | 2022 - 2027 | $17,079,000 | $ 271,076 | $ 17,350,076 | | | 1.76% | 3.0% | $18,185,100 |
| **F. DC AND RELATED ENGINEERING STUDIES** | 2021 - 2026 | $500,000 | $ 165,000 | $ 665,000 | | | 1.76% | 3.0% | $697,005 |
| **TOTAL ALLOCATION OF COSTS** | | | | | | | | | **$221,025,647** |

## SUMMARY OF CAPITAL COSTS BY FUNDING SOURCE

| Component | Timing | Black Creek Floodplain Reductions Immediately Affected Landowners | Vaughan Metropolitan Centre (VMC) | Vaughan Metropolitan Centre (VMC) Areas Draining to Edgeley Pond | Undeveloped Lands in Black Creek Drainage Shed | City-Wide Development Charges - Engineering | City-Wide Development Charges - Parks & Open Space | Benefit to Existing Funding | Local Service | Other Governments (York, TRCA) | Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **A. BLACK CREEK CHANNELIZATION WORKS** | | | | | | | | | | | |
| **A1. Realignment, Earthworks and Restoration** | 2022 - 2027 | $11,509,287 | $0 | $0 | $2,631,697 | $3,087,857 | $0 | $6,164,019 | $0 | $0 | $23,392,860 |
| **A2. Structures** | | | | | | | | | | | |
| A2.1 Interchange Way Crossing | 2022 - 2027 | $0 | $0 | $0 | $0 | $3,239,011 | $0 | $0 | $0 | $0 | $3,239,011 |
| A2.2 Doughton Road Crossing | 2022 - 2027 | $531,198 | $0 | $0 | $121,463 | $1,222,187 | $0 | $284,493 | $0 | $0 | $2,159,341 |
| A2.3 Culvert Under Hwy 7 | 2022 - 2027 | $2,387,565 | $0 | $0 | $545,937 | $640,566 | $0 | $1,278,706 | $0 | $2,920,000 | $7,772,775 |
| A2.4 Peelar Road Crossing | 2022 - 2027 | $531,198 | $0 | $0 | $121,463 | $1,222,187 | $0 | $284,493 | $0 | $0 | $2,159,341 |
| A2.5 Mews | 2022 - 2027 | $0 | $0 | $0 | $0 | $1,619,506 | $0 | $0 | $0 | $0 | $1,619,506 |
| A2.6 Retaining Walls | 2022 - 2027 | $212,479 | $0 | $0 | $48,585 | $57,007 | $0 | $113,797 | $0 | $0 | $431,868 |
| A2.7 Removal of existing driveway culvert (access to arena) and restoration. | 2022 - 2027 | $531,198 | $0 | $0 | $121,463 | $142,516 | $0 | $284,493 | $0 | $0 | $1,079,670 |
| A2.8 Temporary Access to 7581 Jane Street | 2022 - 2027 | $265,599 | $0 | $0 | $60,731 | $71,258 | $0 | $142,247 | $0 | $0 | $539,835 |
| **A3. Bank Treatments, Urban Design and Landscape** | | | | | | | | | | | |
| A3.1 Naturalized western edge plus eastern edge south of Peelar Road (plantings, trails, lighting) | 2022 - 2027 | $1,988,779 | $0 | $0 | $454,751 | $533,575 | $713,335 | $1,065,128 | $0 | $0 | $4,755,569 |
| A3.2 Terraced Steps | 2022 - 2027 | $2,370,470 | $0 | $0 | $542,028 | $635,980 | $850,240 | $1,269,551 | $1,889,423 | $0 | $7,557,693 |
| A3.3 Urban buffer (amenitized eastern edge - promenade paving, furniture, lighting) | 2022 - 2027 | $0 | $0 | $0 | $0 | $1,203,580 | $1,203,580 | $1,203,580 | $1,203,580 | $0 | $4,814,319 |
| **Sub-Totals - Before Land Acquisitions** | | **$20,327,773** | **$0** | **$0** | **$4,648,119** | **$13,675,230** | **$2,767,155** | **$12,090,507** | **$3,093,003** | **$2,920,000** | **$59,521,788** |
| **A4. Land Acquisitions** | | | | | | | | | | | |
| A4.1 Region/Provincial Land | 2023 - 2023 | $2,616,993 | $0 | $0 | $598,397.83 | $6,142,711 | $0 | $2,927,320 | $0 | $0 | $12,285,422 |
| A4.2 Private Land | 2023 - 2023 | $14,510,348 | $0 | $0 | $3,317,914.98 | $34,059,268 | $0 | $16,231,005 | $0 | $0 | $68,118,536 |
| A4.3 Land Conveyance | 2023 - 2023 | | | | | | | | $0 | | $0 |
| **Total Black Creek Channelization Works** | | **$37,455,115** | **$0** | **$0** | **$8,564,432** | **$53,877,209** | **$2,767,155** | **$31,248,832** | **$3,093,003** | **$2,920,000** | **$139,925,746** |
| Allocation Distribution | | 26.8% | 0.0% | 0.0% | 6.1% | 38.5% | 2.0% | 22.3% | 2.2% | 2.1% | 100% |
| **B. EDGELEY POND IMPROVEMENTS** | | | | | | | | | | | |
| **B1 Design Components** | | ***$1,305,105*** | ***$0*** | ***$9,785,490*** | ***$298,423*** | ***$3,521,461*** | ***$850,241*** | ***$23,601,635*** | ***$2,387,522*** | ***$488,362*** | ***$42,238,240*** |
| B1.1 Earthworks, Erosion/Sediment Control, Site Preparation | 2022 - 2027 | $0 | $0 | $3,169,663 | $0 | $0 | $0 | $9,508,988 | $0 | $0 | $12,678,651 |
| B1.2 Natural Channel Realignment and Restoration | 2022 - 2027 | $0 | $0 | $1,049,300 | $0 | $0 | $0 | $3,147,901 | $0 | $0 | $4,197,202 |
| B1.3 Plant Material | 2022 - 2027 | $0 | $0 | $566,454 | $0 | $0 | $0 | $1,699,363 | $0 | $0 | $2,265,817 |
| B1.4 Inlet and Outlet Control Structures - Main Pond | 2022 - 2027 | $0 | $0 | $0 | $0 | $0 | $0 | $6,788,138 | $0 | $0 | $6,788,138 |
| B1.5 Structures Servicing VMC Lands | 2022 - 2027 | $0 | $0 | $4,413,982 | $0 | $0 | $0 | $0 | $0 | $0 | $4,413,982 |
| B1.6 Edge Treatments (Enhanced Design) | 2022 - 2027 | $0 | $0 | $501,220 | $0 | $0 | $0 | $1,503,661 | $0 | $0 | $2,004,881 |
| B1.7 Urban Design Features (Enhanced Design) | 2022 - 2027 | $0 | $0 | $84,870 | $0 | $0 | $0 | $254,610 | $0 | $0 | $339,480 |
| B1.8 NE Corner Culvert - North of Hwy 7 | 2021 - 2023 | $1,305,105 | $0 | $0 | $298,423 | $2,671,220 | $0 | $698,974 | $1,657,907 | $0 | $6,631,629 |
| B1.9 Urban plazas - paving, furniture, lighting (Intersection of Jane and Highway 7 & SE Platform) | 2023 - 2025 | $0 | $0 | $0 | $0 | $488,362 | $488,362 | $0 | $488,362 | $488,362 | $1,953,449 |
| B1.10 Sustainable Transitional Feature NE Corner of Jane & Hwy 7 | 2021 - 2023 | $0 | $0 | $0 | $0 | $361,879 | $361,879 | $0 | $241,253 | $0 | $965,011 |
| **B2 Enhanced Design Components** | | | | | | | | | | | |
| B2.1 Urban Design Features (Enhanced Design) | | ***$0*** | ***$0*** | ***$0*** | ***$0*** | ***$0*** | ***$1,749,635*** | ***$0*** | ***$0*** | ***$0*** | ***$1,749,635*** |
| B2.1.1 Concrete pedestrian walkways | 2022 - 2027 | $0 | $0 | $0 | $0 | $0 | $472,812 | $0 | $0 | $0 | $472,812 |
| B2.1.2 Amphitheater works | 2022 - 2027 | $0 | $0 | $0 | $0 | $0 | $147,280 | $0 | $0 | $0 | $147,280 |
| B2.1.3 Paving and fencing | 2022 - 2027 | $0 | $0 | $0 | $0 | $0 | $889,061 | $0 | $0 | $0 | $889,061 |
| B2.1.4 Shade structure | 2022 - 2027 | $0 | $0 | $0 | $0 | $0 | $240,483 | $0 | $0 | $0 | $240,483 |
| B2.2 Site Furnishing | | ***$0*** | ***$0*** | ***$0*** | ***$0*** | ***$0*** | ***$1,303,744*** | ***$0*** | ***$0*** | ***$0*** | ***$1,303,744*** |
| B2.2.1 Adult Exercise Equipment | 2022 - 2027 | $0 | $0 | $0 | $0 | $0 | $181,676 | $0 | $0 | $0 | $181,676 |
| B2.2.2 Benches, bike racks, planting pots, bollards, picnic tables | 2022 - 2027 | $0 | $0 | $0 | $0 | $0 | $206,086 | $0 | $0 | $0 | $206,086 |
| B2.2.3 Stone seat walls in valley | 2022 - 2027 | $0 | $0 | $0 | $0 | $0 | $74,509 | $0 | $0 | $0 | $74,509 |
| B2.2.4 Signage and safety | 2022 - 2027 | $0 | $0 | $0 | $0 | $0 | $225,930 | $0 | $0 | $0 | $225,930 |
| B2.2.5 Lighting | 2022 - 2027 | $0 | $0 | $0 | $0 | $0 | $310,640 | $0 | $0 | $0 | $310,640 |
| B2.2.6 Electrical | 2022 - 2027 | $0 | $0 | $0 | $0 | $0 | $304,903 | $0 | $0 | $0 | $304,903 |
| B2.3 Bridges - Long term | | ***$0*** | ***$0*** | ***$0*** | ***$0*** | ***$0*** | ***$6,665,706*** | ***$3,999,423*** | ***$0*** | ***$0*** | ***$10,665,129*** |
| B2.3.1 North and south valley bridges | 2022 - 2027 | $0 | $0 | $0 | $0 | $0 | $1,482,774 | $889,665 | $0 | $0 | $2,372,439 |
| B2.3.2 East bioswale bridge at Barnes outfall | 2022 - 2027 | $0 | $0 | $0 | $0 | $0 | $416,238 | $249,743 | $0 | $0 | $665,980 |
| B2.3.3 Pedestrian Bridge (main bridge) | 2022 - 2027 | $0 | $0 | $0 | $0 | $0 | $3,552,559 | $2,131,535 | $0 | $0 | $5,684,094 |
| B2.3.4 Valley Lands Bridge | 2022 - 2027 | $0 | $0 | $0 | $0 | $0 | $1,214,135 | $728,481 | $0 | $0 | $1,942,616 |
| B2.4 South Pond Enhancements (Area 'C') | | ***$0*** | ***$0*** | ***$0*** | ***$0*** | ***$0*** | ***$0*** | ***$0*** | ***$700,000*** | ***$0*** | ***$700,000*** |
| B2.4.1 Retaining wall enhancements | 2021 - 2023 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $700,000 | $0 | $700,000 |
| **Total Edgeley Pond Improvements** | | **$1,305,105** | **$0** | **$9,785,490** | **$298,423** | **$3,521,461** | **$10,569,326** | **$27,601,059** | **$3,087,522** | **$488,362** | **$56,656,747** |
| Allocation Distribution | | 2.3% | 0.0% | 17.3% | 0.5% | 6.2% | 18.7% | 48.7% | 5.4% | 0.9% | 100% |
| **C. EROSION IMPROVEMENTS, HIGHWAY 407 TO STEELES AVENUE WEST** | 2022 - 2027 | $0 | $0 | $0 | $0 | $0 | $0 | $2,129,749 | $0 | $659,000 | $2,788,749 |
| **D. PUBLIC ART** | 2021 - 2039 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $2,772,299 | $0 | $2,772,299 |
| **E. SWM POND/TANK FOR SOUTHEAST QUADRANT OF VMC (Ultimate Solution)** | 2022 - 2027 | $0 | $0 | $0 | $0 | $18,185,100 | $0 | $0 | $0 | $0 | $18,185,100 |
| **F. DC AND RELATED ENGINEERING STUDIES** | 2021 - 2026 | $130,318 | $0 | $32,900 | $29,798 | $254,125 | $44,839 | $205,024 | $0 | $0 | $697,005 |
| **TOTAL ALLOCATION OF COSTS** | | **$38,890,538** | **$0** | **$9,818,390** | **$8,892,653** | **$75,837,896** | **$13,381,321** | **$61,184,663** | **$8,952,824** | **$4,067,362** | **$221,025,647** |

The area-specific capital program totals $221.0 million and provides servicing for anticipated development over the planning period to 2041. One of the largest cost components relates to the acquisition of land along the Black Creek Channel. Land costs continue to rise in the VMC area and the revised land costs reflect a current estimation of value based on present values being seen in the area. The City now anticipates that a great deal of land will have to be acquired to complete the works in a timely manner. Of the total value, land acquisition costs represent $80.4 million (or 36%) of the total.

The *Development Charges Act* requires that gross capital costs be reduced by grants, subsidies, and recoveries from other governments, capital replacements or other benefits provided to the existing community; amounts that exceed historic service levels or considered to benefit development beyond the planning horizon. Given that the increase in need for service identified for these lands considered in the ASDC calculation relate to engineered services, the ASDC calculations are not subject to the same service level restrictions applied for general services, thus no funding level caps have been applied.

As indicated in Table 2, of the total $221.0 million gross program, about $57.6 million is attributed to those benefiting land owners and included in the calculation of the ASDC rates in this study. A summary of the calculation of the rates is shown in Table 2 below – the table identifies the net attributable cost (to each area) relative to the net land area to which the cost applies. The attributable cost divided by the net area (in ha), yields an unadjusted charge per land area.

**Table 2 – Calculation of the Unadjusted Area-Specific Development Charge**

| **Lands to which the ASDC is Applicable** (Maps provided in Appendix C) | **Cost ($000)** | **Area (net ha)** | **Unadjusted Charge ($/ha)** |
|---|---|---|---|
| Immediately Affected Landowners | $38,890.5 | 5.78 | $6,726,139 |
| Vaughan Metropolitan Centre Draining to Edgeley Pond | $9,818.4 | 18.98 | $517,411 |
| Undeveloped Lands in Black Creek Drainage Shed | $8,892.7 | 144.58 | $61,505 |
| **Totals** | **$57,601.6** | or 26.1% of the total costs | |

### Cash-Flow Analysis

A cash flow analysis is also undertaken to account for the timing of projects and receipt of development charges. Interest earnings or borrowing costs are therefore accounted for in the calculation as allowed under the *DCA*. The cash flow analysis is displayed on Table 3.

**APPENDIX A - TABLE 3 - PAGE 1**

**CITY OF VAUGHAN**
**CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE**
**IMMEDIATELY AFFECTED LANDOWNERS**
**DEVELOPMENT CHARGE PER HECTARE**
**(in $000)**

| IMMEDIATELY AFFECTED LANDOWNERS | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OPENING CASH BALANCE | $0.0 | $2,234.0 | $4,377.4 | $5,308.0 | $3,653.9 | $5,648.2 | $7,587.3 | $9,695.2 | $9,473.7 | $9,274.4 | $10,839.3 | $12,524.9 | $14,336.8 | $12,853.3 | $11,192.1 | $9,471.6 | $7,689.8 | $5,844.3 | $3,933.0 | $1,986.0 | $248.4 | |
| 2021 - 2041 FUNDING REQUIREMENTS | | | | | | | | | | | | | | | | | | | | | | |
| - Non Inflated | $456.8 | $3,844.7 | $20,972.1 | $3,409.7 | $3,409.7 | $3,409.7 | $3,388.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | **$38,890.5** |
| - Reserve Funded (Inflated) | | | | | $3,690.7 | $3,764.6 | $3,815.4 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | **$11,270.7** |
| - Debenture Principal | $20.5 | $197.5 | $1,183.9 | $1,375.4 | $1,408.6 | $1,442.7 | $1,477.7 | $1,513.4 | $1,550.0 | $1,587.5 | $1,626.0 | $1,665.3 | $1,705.6 | $1,746.9 | $1,789.2 | $1,832.5 | $1,876.8 | $1,922.2 | $1,937.1 | $1,712.7 | $244.4 | **$29,816.1** |
| NEW DEVELOPMENT | | | | | | | | | | | | | | | | | | | | | | |
| - Hectares | 0.33 | 0.34 | 0.37 | 0.04 | 1.04 | 1.02 | 1.02 | 0.20 | 0.20 | 0.41 | 0.41 | 0.41 | 0.01 | - | - | - | - | - | - | - | - | **5.78** |
| REVENUE | | | | | | | | | | | | | | | | | | | | | | |
| - DC Receipts: Inflated | $2,227.0 | $2,330.8 | $2,565.9 | $253.9 | $7,576.8 | $7,528.4 | $7,679.0 | $1,502.5 | $1,532.6 | $3,273.8 | $3,339.3 | $3,406.0 | $121.2 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | **$43,337.0** |
| INTEREST | | | | | | | | | | | | | | | | | | | | | | |
| - Interest on Opening Balance | $0.0 | $78.2 | $153.2 | $185.8 | $127.9 | $197.7 | $265.6 | $339.3 | $331.6 | $324.6 | $379.4 | $438.4 | $501.8 | $449.9 | $391.7 | $331.5 | $269.1 | $204.6 | $137.7 | $69.5 | $8.7 | **$5,186.0** |
| - Interest on In-year Transactions | $38.6 | $37.3 | $24.2 | ($30.8) | $43.4 | $40.6 | $41.8 | ($0.3) | ($0.5) | $29.5 | $30.0 | $30.5 | ($43.6) | ($48.0) | ($49.2) | ($50.4) | ($51.6) | ($52.9) | ($53.3) | ($47.1) | ($6.7) | **($118.6)** |
| - Debenture Interest | ($11.1) | ($105.5) | ($628.7) | ($687.6) | ($654.3) | ($620.2) | ($585.3) | ($549.6) | ($513.0) | ($475.4) | ($437.0) | ($397.7) | ($357.4) | ($316.1) | ($273.8) | ($230.5) | ($186.2) | ($140.8) | ($94.2) | ($47.4) | ($5.9) | **($7,317.7)** |
| TOTAL REVENUE | $2,254.5 | $2,340.9 | $2,114.6 | ($278.8) | $7,093.7 | $7,146.4 | $7,400.9 | $1,292.0 | $1,350.7 | $3,152.4 | $3,311.6 | $3,477.2 | $222.1 | $85.7 | $68.7 | $50.6 | $31.4 | $10.9 | ($9.9) | ($25.0) | ($3.9) | **$41,086.8** |
| CLOSING CASH BALANCE | $2,234.0 | $4,377.4 | $5,308.0 | $3,653.9 | $5,648.2 | $7,587.3 | $9,695.2 | $9,473.7 | $9,274.4 | $10,839.3 | $12,524.9 | $14,336.8 | $12,853.3 | $11,192.1 | $9,471.6 | $7,689.8 | $5,844.3 | $3,933.0 | $1,986.0 | $248.4 | ($0.0) | |

| | |
|---|---|
| **2021 Adjusted Charge Per Ha** | **$6,707,788** |

| | |
|---|---|
| **Allocation of Capital Program** | |
| Residential Sector | Combined |
| Non-Residential Sector | Combined |
| **Reserve Rates for 2015** | |
| Inflation Rate | 2.0% |
| Interest Rate on Positive Balances | 3.5% |
| Interest Rate on Negative Balances | 5.5% |

**APPENDIX A - TABLE 3 - PAGE 2**

**CITY OF VAUGHAN**
**CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE**
**VMC AREAS DRAINING TO EDGELEY POND**
**DEVELOPMENT CHARGE PER HECTARE**
**(in $000)**

| VMC AREAS DRAINING TO EDGELEY PON | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OPENING CASH BALANCE | $870.4 | $2,019.4 | $3,114.3 | $4,363.7 | $4,375.1 | $2,571.1 | $444.0 | ($1,788.4) | ($1,932.8) | ($2,079.1) | ($1,870.8) | ($1,637.5) | ($1,377.7) | ($1,434.2) | ($1,873.9) | ($1,094.4) | ($248.6) | $668.9 | $689.7 | $351.2 | $119.2 | |
| 2021 - 2041 FUNDING REQUIREMENTS | | | | | | | | | | | | | | | | | | | | | | |
| - Non Inflated | $5.5 | $1,636.4 | $1,636.4 | $1,636.4 | $1,636.4 | $1,636.4 | $1,630.9 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | **$9,818.4** |
| - Reserve Funded (Inflated) | | | | | $1,771.3 | $1,806.7 | $1,836.7 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | **$5,414.7** |
| - Debenture Principal | $0.2 | $75.3 | $153.8 | $235.6 | $241.3 | $247.2 | $253.1 | $259.3 | $265.5 | $272.0 | $278.5 | $285.3 | $292.2 | $299.3 | $306.5 | $313.9 | $321.5 | $329.3 | $336.9 | $229.6 | $117.3 | **$5,113.7** |
| NEW DEVELOPMENT | | | | | | | | | | | | | | | | | | | | | | |
| - Hectares | 2.21 | 2.21 | 2.62 | 0.40 | 0.40 | - | - | 0.54 | 0.54 | 1.13 | 1.13 | 1.13 | 0.59 | 0.00 | 1.86 | 1.86 | 1.86 | 0.50 | - | - | - | **18.98** |
| REVENUE | | | | | | | | | | | | | | | | | | | | | | |
| - DC Receipts: Inflated | $1,099.8 | $1,121.7 | $1,353.1 | $213.1 | $217.3 | $0.0 | $0.0 | $306.9 | $313.0 | $669.5 | $682.9 | $696.5 | $371.6 | $1.3 | $1,220.4 | $1,243.5 | $1,268.4 | $350.9 | $0.0 | $0.0 | $0.0 | **$11,129.9** |
| INTEREST | | | | | | | | | | | | | | | | | | | | | | |
| - Interest on Opening Balance | $30.5 | $70.7 | $109.0 | $152.7 | $153.1 | $90.0 | $15.5 | ($98.4) | ($106.3) | ($114.3) | ($102.9) | ($90.1) | ($75.8) | ($78.9) | ($103.1) | ($60.2) | ($13.7) | $23.4 | $24.1 | $12.3 | $4.2 | **($158.0)** |
| - Interest on In-year Transactions | $19.2 | $18.3 | $21.0 | ($0.6) | ($49.4) | ($56.5) | ($57.5) | $0.8 | $0.8 | $7.0 | $7.1 | $7.2 | $1.4 | ($8.2) | $16.0 | $16.3 | $16.6 | $0.4 | ($9.3) | ($6.3) | ($3.2) | **($58.9)** |
| - Debenture Interest | ($0.1) | ($40.5) | ($79.9) | ($118.2) | ($112.5) | ($106.7) | ($100.7) | ($94.6) | ($88.3) | ($81.9) | ($75.3) | ($68.5) | ($61.6) | ($54.6) | ($47.3) | ($39.9) | ($32.3) | ($24.5) | ($16.5) | ($8.4) | ($2.8) | **($1,255.0)** |
| TOTAL REVENUE | $1,149.3 | $1,170.2 | $1,403.2 | $247.0 | $208.6 | ($73.2) | ($142.6) | $114.8 | $119.3 | $480.3 | $511.8 | $545.1 | $235.6 | ($140.4) | $1,086.0 | $1,159.7 | $1,239.0 | $350.1 | ($1.7) | ($2.4) | ($1.9) | **$9,658.0** |
| CLOSING CASH BALANCE | $2,019.4 | $3,114.3 | $4,363.7 | $4,375.1 | $2,571.1 | $444.0 | ($1,788.4) | ($1,932.8) | ($2,079.1) | ($1,870.8) | ($1,637.5) | ($1,377.7) | ($1,434.2) | ($1,873.9) | ($1,094.4) | ($248.6) | $668.9 | $689.7 | $351.2 | $119.2 | $0.0 | |

| | |
|---|---|
| **2021 Adjusted Charge Per Ha** | **$497,154** |

| | |
|---|---|
| **Allocation of Capital Program** | |
| Residential Sector | Combined |
| Non-Residential Sector | Combined |
| **Reserve Rates for 2015** | |
| Inflation Rate | 2.0% |
| Interest Rate on Positive Balances | 3.5% |
| Interest Rate on Negative Balances | 5.5% |

**APPENDIX A - TABLE 3 - PAGE 3**

**CITY OF VAUGHAN**
**CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE**
**UNDEVELOPED LANDS IN BLACK CREEK DRAINAGE SHED**
**DEVELOPMENT CHARGE PER HECTARE**
**(in $000)**

| UNDEVELOPED LANDS IN BLACK CREEK | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OPENING CASH BALANCE | $308.7 | $787.7 | $1,230.2 | $1,348.8 | $1,423.3 | $519.9 | ($459.5) | ($1,522.6) | ($1,538.0) | ($1,543.4) | ($1,538.1) | ($1,521.3) | ($1,492.1) | ($1,449.7) | ($1,393.0) | ($1,321.1) | ($1,232.9) | ($1,127.2) | ($1,002.8) | ($851.1) | ($614.5) | |
| 2021 - 2041 FUNDING REQUIREMENTS | | | | | | | | | | | | | | | | | | | | | | |
| - Non Inflated | $104.4 | $879.1 | $4,795.4 | $779.7 | $779.7 | $779.7 | $774.7 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | **$8,892.7** |
| - Reserve Funded (Inflated) | | | | | $965.9 | $1,019.0 | $1,068.2 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | **$3,053.0** |
| - Debenture Principal | $4.7 | $45.2 | $270.7 | $314.5 | $322.1 | $329.9 | $337.9 | $346.1 | $354.4 | $363.0 | $371.8 | $380.8 | $390.0 | $399.4 | $409.1 | $419.0 | $429.1 | $439.5 | $442.9 | $391.6 | $55.9 | **$6,817.7** |
| NEW DEVELOPMENT | | | | | | | | | | | | | | | | | | | | | | |
| - Hectares | 6.88 | 6.88 | 6.88 | 6.88 | 6.88 | 6.88 | 6.88 | 6.88 | 6.88 | 6.88 | 6.88 | 6.88 | 6.88 | 6.88 | 6.88 | 6.88 | 6.88 | 6.88 | 6.88 | 6.88 | 6.88 | **144.58** |
| REVENUE | | | | | | | | | | | | | | | | | | | | | | |
| - DC Receipts: Inflated | $467.3 | $476.7 | $486.2 | $495.9 | $505.8 | $515.9 | $526.3 | $536.8 | $547.5 | $558.5 | $569.6 | $581.0 | $592.7 | $604.5 | $616.6 | $628.9 | $641.5 | $654.3 | $667.4 | $680.8 | $694.4 | **$12,048.8** |
| INTEREST | | | | | | | | | | | | | | | | | | | | | | |
| - Interest on Opening Balance | $10.8 | $27.6 | $43.1 | $47.2 | $49.8 | $18.2 | ($25.3) | ($83.7) | ($84.6) | ($84.9) | ($84.6) | ($83.7) | ($82.1) | ($79.7) | ($76.6) | ($72.7) | ($67.8) | ($62.0) | ($55.2) | ($46.8) | ($33.8) | **($826.8)** |
| - Interest on In-year Transactions | $8.1 | $7.6 | $3.8 | $3.2 | ($21.5) | ($22.9) | ($24.2) | $3.3 | $3.4 | $3.4 | $3.5 | $3.5 | $3.5 | $3.6 | $3.6 | $3.7 | $3.7 | $3.8 | $3.9 | $5.1 | $11.2 | **$13.2** |
| - Debenture Interest | ($2.5) | ($24.1) | ($143.8) | ($157.2) | ($149.6) | ($141.8) | ($133.8) | ($125.7) | ($117.3) | ($108.7) | ($99.9) | ($90.9) | ($81.7) | ($72.3) | ($62.6) | ($52.7) | ($42.6) | ($32.2) | ($21.5) | ($10.8) | ($1.4) | **($1,673.3)** |
| TOTAL REVENUE | $483.7 | $487.7 | $389.3 | $389.1 | $384.5 | $369.4 | $343.0 | $330.7 | $349.0 | $368.3 | $388.6 | $409.9 | $432.4 | $456.1 | $481.0 | $507.2 | $534.9 | $563.9 | $594.7 | $628.2 | $670.4 | **$9,562.0** |
| CLOSING CASH BALANCE | $787.7 | $1,230.2 | $1,348.8 | $1,423.3 | $519.9 | ($459.5) | ($1,522.6) | ($1,538.0) | ($1,543.4) | ($1,538.1) | ($1,521.3) | ($1,492.1) | ($1,449.7) | ($1,393.0) | ($1,321.1) | ($1,232.9) | ($1,127.2) | ($1,002.8) | ($851.1) | ($614.5) | $0.0 | |

| | |
|---|---|
| **2021 Adjusted Charge Per Ha** | **$67,874** |

| | |
|---|---|
| **Allocation of Capital Program** | |
| Residential Sector | Combined |
| Non-Residential Sector | Combined |
| **Reserve Rates for 2015** | |
| Inflation Rate | 2.0% |
| Interest Rate on Positive Balances | 3.5% |
| Interest Rate on Negative Balances | 5.5% |

For the purposes of the cash-flow analysis, it has been assumed that the City would issue external debt for projects constructed between 2021 and 2024. An 18-year debenture with a current Infrastructure Ontario fixed interest rate of 2.42% is assumed. Projects emplaced after 2024 were assumed to be reserve funded with long-term interest rates of 5.5% applied to negative balances and 3.5% applied to positive balances.

It should be noted that development charges reserve funds, which do exist for land areas contained within Maps 2 and 3 for which some development has already occurred have been applied to the opening balance in the cash-flow analysis and considered in the calculation of the rates. Table 4 below summarizes the existing reserve funds on hand at the end of the period.

**Table 4 – Summary of Existing Reserve Funds**

| **Benefitting Area** | **Uncommitted DC Reserves:**<br>**December 31st 2020** |
|---|---|
| Map 1: Immediately Affected Landowners | $0.00 |
| Map 2: Vaughan Metropolitan Centre Draining to Edgeley Pond | $870,362.89 |
| Map 3: Undeveloped Lands in Black Creek Drainage Shed | $308,732.36 |

*Note: Reserve balances were unaudited at the time of the study*

After cash flow considerations, the development charge rates increase for Map 1 and 3, while decreasing in Map 2. The adjusted charge considers the anticipated timing of projects and land development. The timing assumptions were developed in consultation with City staff taking into account known development applications.

**Table 5 – Comparison of the Unadjusted vs. Adjusted Area-Specific Development Charge**

| **Lands to which the ASDC is Applicable** (Maps provided in Appendix C) | **Unadjusted Charge ($/ha)** | **Adjusted Charge after Cash Flow ($/ha)** | ***Difference in Charges*** |
|---|---|---|---|
| Immediately Affected Landowners | $6,726,139 | $6,707,788 | *($18,352) (or -0.3%)* |
| Vaughan Metropolitan Centre Draining to Edgeley Pond | $517,411 | $497,154 | *($20,257) (or -4%)* |
| Undeveloped Lands in Black Creek Drainage Shed | $61,505 | $67,874 | *$6,369 (or 10%)* |

## B. BLACK CREEK CHANNELIZATION WORKS (CATEGORY A)

The improvements to the stretch of Black Creek extending from Highway 7 to the Highway 407 corridor along the east side of Jane Street include a variety of elements and components that, in addition to the function of increasing hydraulic capacity and thereby containing the floodplain to within the limits of the channel, also provide benefits to individual landowners, future development within the tributary drainage shed as well as existing and future residents and employees of the City.

The subsequent sections discuss the benefitting interest groups and the allocation of costs among them associated with each of these benefits in mind.

Each of the project components will serve one or more functional benefits, which need to be treated differently in terms of beneficial interests and, in turn, funding sources. As an example, a bridge structure for a new road connection may serve a transportation function in addition to improving the hydraulic capacity of the creek at the road crossing. The approach is to firstly identify the various functional benefits to be considered, and secondly to ascribe the degree to which each component contributes to providing each of the functional benefits.

The following functional benefits have been identified as relevant for this analysis, each of which is described in detail below:

- Improvement of hydraulic capacity of Black Creek waterway (flood control);
- Transportation; and
- Open Space Network.

### 5. Immediately Affected Landowners

The implementation of the proposed improvements will result in the removal of both non-developable public and developable (private and public) lands from the regulatory floodplain, the extent to which is illustrated in Figure 2. Accordingly, benefits will accrue to private landowners whose properties will be improved as a result of the work and, similarly, the publicly owned rights-of-way will become less susceptible to flooding, resulting in a benefit to the existing development in the City (addressed below). Furthermore, the planned works will serve to “unlock” these lands and thereby allowing the development of new uses to proceed.

Consistent with the assumptions contained in the 2016 ASDC Study, the allocation to lands in the Black Creek Drainage Shed is 11.25%. The remaining amount to be allocated is thus

88.75% for which it is instructive to consider the relative amount of land removed from the floodplain as a result of the planned improvement works. Based on the floodplain modelling and as illustrated in Figure 2 and consistent with the figures identified in the 2016 Model, 49.20% of the total costs are related to hydraulic improvements. The remaining 44.59% of the 88.75% allocation, being 39.55%, is attributable to public sector improvements and is the topic of the next section.

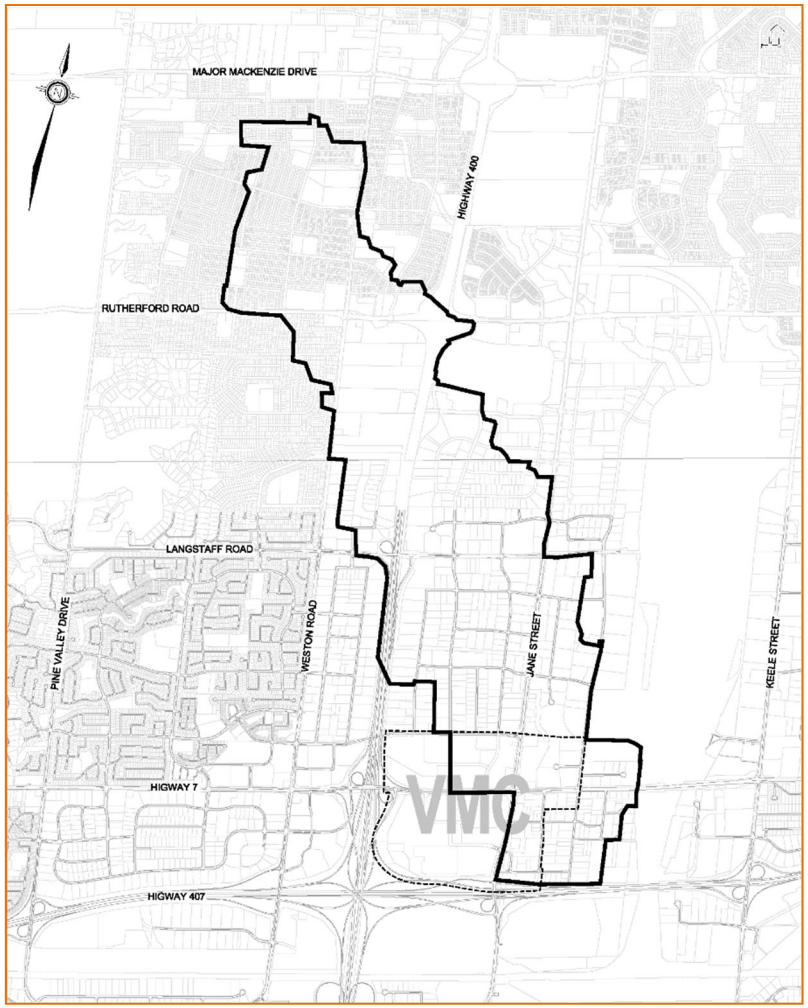



**Figure 1**
**Black Creek Drainage Shed Tributary to Improvement Works**

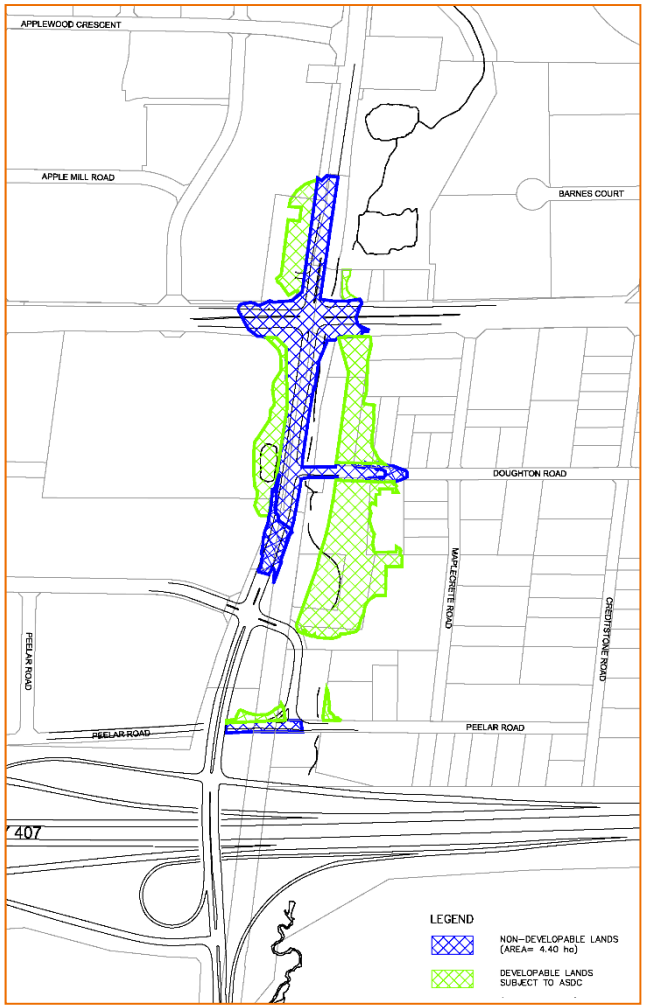



**Figure 2**
**Reduction in Floodplain during Regional Storm with Proposed Improvements**

## 6. City-Wide Future Development & Existing Development

Consistent with the approach utilized in the City's previous Development Charges By-law, certain works are deemed to provide benefits to the City as a whole which can be funded through City-wide development charges. In this regard all transportation, streetscaping and related engineered services and open space network projects have been considered at the City-wide level.

The allocation of costs related to the benefit accruing to the City as a whole may be funded through City-wide Development Charges under the 2018 by-law (083-2018) or a subsequent development charges by-law.

The allocation of costs relating to the benefit accruing to existing development (residents and employees) in the City are to be funded through the City's internal resources, such as general taxation, and utility rates (likely stormwater for this infrastructure) and other charges wherever applicable.

The distribution of the remaining 39.55% of benefits resulting from improvements in the hydraulic capacity of Black Creek between existing and future development can be apportioned based on existing and future population and employment, respectively. The 2016 Census population and employment total in Vaughan was 515,700 while the forecast future (2041) population and employment is 785,700 (Hemson estimate). Based on these figures, the existing population and employment represents 65.6% of the 2041 population and employment and new growth represents 34.4%. Applying these values to the remaining 39.55% of benefits noted above results in the following apportionment of costs related to the benefits accruing to these interest groups:

- New Development (to be recovered through City-wide Development Charges): 13.20%
- Existing Development (to be recovered through the City's internal resources): 26.35%

**Summary**

To the extent that any individual project components are deemed to provide a hydraulic benefit, the allocation of costs indicated in Table 6 is applied.

*Table 6 Allocation of Costs Related to Hydraulic (Flood Control) Benefits*

| Benefitting Interest Group | Allocation |
|---|---|
| Black Creek Drainage Shed | 11.25% |
| Immediately Affected Landowners | 49.20% |
| City-wide Future Development | 13.20% |
| Existing Development | 26.35% |
| Total | 100.00% |

## 7. Transportation

While certain bridge structures are planned on existing roads to improve the hydraulic capacity of Black Creek, certain other bridge structures, both vehicular and pedestrian, are required as part of the planned development and in support of the population and employment growth of the Vaughan Metropolitan Center (VMC) and the City in general. Following the City's policy, all growth-related transportation infrastructure is deemed to be of benefit to the City as a whole and is funded through City-wide development charges.

## 8. Open Space Network

The planned improvements to Black Creek are also intended to create value in a social dimension by virtue of the planned open space network. Maintaining consistency with the City's current practice, all new open space network projects are considered to benefit the City as whole and will now be funded 100% through City-wide development charges. Recent changes to the *Development Charges Act* legislation eliminated the 10% statutory deduction and development-related costs are entirely eligible for recovery.

# ALLOCATION OF FUNCTIONAL BENEFIT BY COMPONENT

## CATEGORY A1: CHANNEL WORKS

### A1.1 Realignment, earthworks, restoration

This component predominantly provides a flood control benefit by increasing the hydraulic capacity of this stretch of Black Creek and, accordingly, the functional benefits are allocated in accordance with Table 6.

**Category A2: Structures**

### A2.1 Interchange Way Crossing

This is an example of a crossing of the Black Creek which doesn't currently exist and is associated with the extension of a new road. Accordingly, this component's predominant function is that of transportation and its functional benefits are allocated accordingly to City-wide Engineering DC for recovery.

### A2.2 Doughton Road Crossing

The reconstruction of the Doughton Road crossing provides both a hydraulic benefit by improving conveyance capacity of the Black Creek, as well as a transportation benefit in relation to a future roadway connection extending to the west side of Jane Street. For purposes of this work, these functional benefits are allocated as follows:

- Flood Control: 50% which, in turn, is allocated in accordance with Table 6
- Transportation: 50%

### A2.3 Culvert Under Highway 7

The Black Creek Optimization study had identified the need to replace the existing culvert under Highway 7. As York Region is responsible for replacement of the existing culvert and had previously informed staff of their decision to defer the works until the culvert approaches its end of life cycle this component was not included in the original Financial Strategy costing. Since that time, City staff have reinitiated discussions with Regional Staff to determine how to advance these works as a part of the broader Black Creek Channel construction. This would further mitigate the added risk of potential flooding in the intersection at Jane Street and Highway 7. As a result, an additional cost for the culvert has been included in the Black Creek Financial Strategy with the assumption that a share of the cost would be borne by the Region. For purposes of this work, these functional benefits are allocated consistent with the shares in Table 6 after considering the Region of York commits about $2.92 million to the project.

### A2.4 Peelar Road Crossing

This component provides both a hydraulic benefit by improving conveyance capacity of the Black Creek, as well as a transportation benefit. For purposes of this work, these functional benefits are allocated the same as Doughton Road as follows:

- Flood Control: 50% which, in turn, is allocated in accordance with Table 6

- Transportation: 50%

### A2.5 Mews

The Mews identified in the VMC Secondary Plan which crosses the Black Creek and connects Jane Street with the future road network east thereof. The VMC Secondary Plan speaks to the intended purpose and function of a mews to serve as a right-of-way for transportation and utilities, amongst other matters. It is noted that the transportation function may include either or both of routine and emergency/special operations. Given these functions, this component of the work is allocated as a transportation benefit, and in turn, a City-wide DC recoverable item.

### A2.6 Retaining Walls

The predominant function of this component is that of improved hydraulic conveyance and its functional benefits are allocated in accordance with Table 6.

### A2.7 Removal of Existing Driveway Culvert (Access to Arena) and Restoration

The existing driveway providing access to the Doublerink Arenas/Vaughan Iceplex facility includes a culvert through which the Black Creek flows and which also represents a restriction to flow. In order to improve the hydraulic capacity of the Black Creek, this driveway and culvert have been identified for removal and, therefore, this component predominantly provides a flood control benefit with the functional benefits allocated in accordance with Table 6.

### A2.8 Temporary Access to 7581 Jane Street

During the construction of the works, the existing access to 7581 Jane Street will need to be removed and reinstated on a temporary basis. These works are predominantly required to improve the hydraulic conveyance function of Black Creek and its functional benefits are accordingly allocated in accordance with Table 6.

## Category A3: Bank Treatments, Urban Design and Landscape

### A3.1 Naturalized Western Edge plus Eastern Edge South of Peelar Road

Based on the City's interactions with TRCA this component was identified as part of the construction of the hydraulic improvements along Black Creek is necessary to facilitate development in the VMC. While this treatment is required, in part to create the channel itself, thus providing a hydraulic function, it is also considered an enhancement that provides additional benefit to the public through its integration with pedestrian trails and

similar functions. For purposes of this work, these functional benefits are allocated as follows:

- Flood Control: 85% which, in turn, is allocated in accordance with Table 6
- Parks and Open Space:15%

### A3.2 Terraced Steps

Similar to the above, the terraced steps along the channel provide both a hydraulic function and, by virtue of aesthetics and integration with the public realm, also provide non-engineering benefits. In addition, they also provide a local service benefit to adjacent landowners. For purposes of this work, these functional benefits are allocated as follows:

- Local Service: 25%
- Flood Control & Parks: 75% general allocation which is further allocated as follows:
    - Flood Control: 85% which, in turn, is allocated in accordance with Table 6
    - Parks and Open Space:15%

### A3.3 Urban Buffer – Amenitized eastern edge, promenade paving, furniture, lighting

Following the methodology of the City's Streetscape Implementation Manual & Financial Strategy Plan which identifies a multi-pronged approach to funding this type of work, and given that this component is located at the intersection of two arterial roads, the local development contribution is deemed to be 25%. The remainder of the costs associated with this work is allocated evenly to the City-wide Development Charges related to both Engineering and Community Services, as well as Benefit to Existing (non-dc funding share).

## Land Acquisitions

The land acquisitions required to implement the above works are to be distributed to the benefitting interest groups. The underlying rationale is that the acquisitions are a necessary element to achieving all of the other benefits noted above.

The City retained a third party appraisal firm to estimate the market values of the land required for the Black Creek Channel Revitalization Works for budgeting purposes. The estimated market value was based on existing and anticipated future land uses. The appraisal provided for a low, medium, median and high value per category and was not a property specific appraisal but rather for categories of land uses. The median value for each of the land use categories which were identified in the future VMC Secondary Plan. The categories used were as follows:

- Station Precinct
- Neighbourhood Precinct
- Major Park & Open Space
- Industrial

The established rates by category were then applied to the estimated number of hectares per category. The total value was then divided by the total estimated number of hectares required for the Black Creek Channel Revitalization Works to establish the blended rate. The resulting blended rate using this methodology is approximately $12.1 million per hectare. For comparison purposes, the blended rate per hectare used in the 2016 ASDC calculation was $2.7 million per hectare, therefore, the present day valuations are over 300% higher than those contained in the 2016 ASDC. Land costs continue to rise in the VMC area and the revised land costs reflect a current estimation of value based on present values being seen in the area. Furthermore, the City now anticipates that land will have to be acquired to complete the works in a timely manner. One of the attributing factors for the cumulative cost increases contained in this study is a direct result of the increase in land values in the VMC.

Importantly, the land acquisition costs contained in the study do assume:

- That certain parcels of land will be acquired at less than market value for parcels where discussions with Regional or Provincial agencies have already taken place. In general, the estimates contained in this study for these specific parcels still do pose a risk if the City is unable to retain those properties at the below market rate. That said, the assumption is considered to be appropriate as this ASDC Study is anticipated to be updated when the independent property specific appraisals are prepared to facilitate the acquisitions.

- For two specific properties, the City may need to acquire land outside of what is required to facilitate the works and what is included in the calculation of the rates. In this case, it is assumed the residual properties acquired may be resold by the City providing a net benefit to the landowners (which is considered in the rates).

Please note, this should not be considered to be the value of land for any specific parcel to be acquired. An independent property specific appraisal prepared by an accredited appraiser in good standing with the Appraisal Institute of Canada within 6 months of the acquisition is required. The land areas used are also estimates and require a reference plan to confirm actual land areas. Based on future acquisitions, the City reserves the right to reopen the ASDC By-law to review and adjust the land values as deemed necessary.

## C. EDGELEY POND AND PARK IMPROVEMENTS (CATEGORY B)

The planned improvement and expansion works to the existing SWM facility located at the northeast corner of Jane Street and Highway 7 (Edgeley Pond and Park) provide several functional benefits. In the absence of any development, there is a need to improve the existing pond's function and this project includes these previously identified retrofits that benefit the existing community. Beyond this, the planned facility also provides the opportunity to provide a functional benefit, particularly in terms of water quality control, for a portion of the lands within the VMC. Additional future (re-)development lands within the upstream drainage shed also benefit from the improved function of the facility. Given the strategic location of the facility and the future vision for the VMC, this project capitalizes on the opportunity to provide a meaningful enhancement to the space to be enjoyed by the public.

The City of Vaughan has engaged a design team that underwent a public and stakeholder engagement process to develop design options and ultimately contract documents for the pond improvements. The core function of Edgeley Pond, being flood control and stormwater quality management, was achieved through significant design enhancements to Black Creek, resilient ecological design, restoration and enhancements to natural heritage features, and integrated engineering solutions. These site improvements were strengthened by urban design features to make this new park a key VMC destination.

The subsequent sections discuss the benefitting interest groups and the allocation of costs among them associated with each of these benefits in mind.

### Beneficial Interests: Lands in VMC Serviced by Pond

The Edgeley Pond will collect and process flows from the contributing drainage area within the Vaughan Metropolitan Centre (see Figure 3) for purposes of water quality control. Accordingly, there is a substantial benefit accruing to these landowners noting that, in the absence of this opportunity, additional developable tablelands would have been required to satisfy this water quality control objective given the size of the catchment area in question. Moreover, it is likely that two facilities would have been required given the physical division of the entire drainage area by Jane Street, thereby reducing efficiencies related to economies of scale.

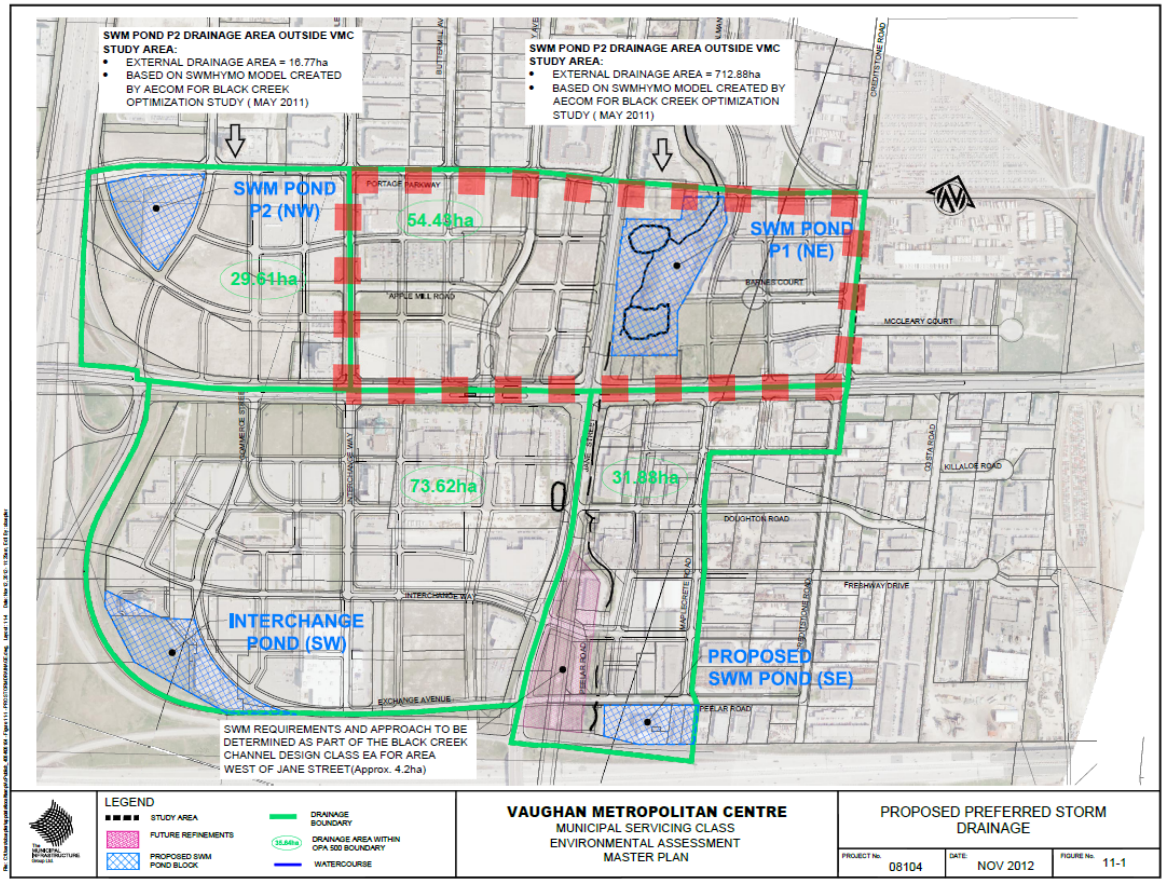
### Beneficial Interests: The City as a Whole

This facility is intended to provide an interesting and enjoyable public space and certain elements of the project contribute to this specifically.

## Beneficial Interests: Existing Development

In the absence of development in the VMC and the public realm elements noted above, it is recognized that the retrofit of this pond is desirable to improve its function as a stormwater management facility, improving downstream quality in addition to providing other related benefits. It is noted that a more streamlined "retrofit-only" design of the pond could not provide the required flood controls and broader benefit to development in the VMC as well as the City as a whole as currently envisioned.

**Figure 3: Areas in VMC Tributary to Edgeley Pond (SWM Pond P1 NE)**




*Note: 2016 ASDC Study but an annotated excerpt from VMC Municipal Servicing Class EA Master Plan prepared by TMIG, 2012.*

## Allocation of Benefit between VMC Lands Serviced by Pond and Existing Development

Wherever it is deemed that works provide benefit to both these interest groups, the allocation is weighted more heavily against existing development, in recognition of the need to retrofit this facility and the large upstream drainage area it handles. Simultaneously, the

benefit afforded to private landowners by permitting the use of this facility and avoiding loss of developable lands is quite considerable. For the purposes of this work, the allocation of benefit to these interest groups remains consistent with the 2016 ASDC Study methodology and is provided in Table 7 for reference.

***Table 7 Allocation of Costs Related to Edgeley Pond Improvements***

| Benefitting Interest Group | Allocation |
|---|---|
| Lands in VMC Serviced by Pond | 25% |
| Existing Development | 75% |

## CATEGORY B1: DESIGN COMPONENTS

One notable change to the strategy is with regards to the cost estimates for the Edgeley Park and Pond. In the original strategy the costs were based on a high-level concept. Now that the Edgeley Pond and Park design has advanced significantly the cost being used in the strategy are much more accurate. This has caused costs to increase in some areas, but it has also resulted in the City's ability to lower the contingencies being applied to the park and pond related components of the infrastructure.

### B1.1 Earthworks, Erosion/Sediment Control, Site Preparation

Significant soil removal is required to achieve stormwater quantity control as well as earthworks to ensure the pond meets safety guidelines, maintenance and human accessibility needs. This will require significant tree removal and site preparation. Due to the large site area, construction must be phased and erosion and sediment controls will be strategically implemented as the construction progresses.

### B1.2 Natural Channel Realignment and Restoration

To strengthen ecological and flood resiliency, Black Creek has been realigned using natural geomorphological design which will reduce long-term maintenance, protect against scouring and failure during storm events and provide aquatic and riparian habitat.

### B1.3 Plant Material

Due to largescale earthworks, Edgeley Pond will require tree, shrub, meadow and aquatic planting to protect against erosion and reestablish the natural open space. These components of the work (i.e., B1.1 to B1.3) are required for the construction of the pond as a whole and, as such, the allocation of costs is in accordance with Table 7.

### B1.4 Inlet and Outlet Control Structures – Main Pond

The engineered control structure provides protection from different sized storm events while the concrete structures and walls provide additional stormwater storage. The control structure also connects to the box culverts under the future north east plaza, the future widened culvert connection under Hwy 7 and will daylight Black Creek south of future south east plaza. These structures are deemed to be for the sole benefit of the existing facility and are allocated entirely to the existing development.

### B1.5 Structures Servicing VMC Lands

In order to improve stormwater quality, engineered oil grit separators provide significant treatment to the urban stormwater entering Edgeley Pond. To facilitate these structures, walls are needed to transfer grade differences between the street and pond connections. This category of costs includes those structures which convey and process stormwater drainage derived from that portion of the VMC lands which drain to this pond. Costs associated with these works are ascribed entirely to this benefitting interest group.

### B1.6 Edge Treatments (Enhanced Design)

This class of edge treatments is considered to be typical of stormwater management pond design and affects the pond as a whole. The allocation of costs is therefore in accordance with Table 7. Please note a share of the total costs associated with this line item is also related to the pond walls while the residual cost is considered to be local service and attributed to the retaining wall enhancements under line item B2.4 (south pond enhancements).

### B1.7 Urban Design Features (Enhanced Design)

Simple maintenance trails that allow safe public access to Edgeley Pond are included as a base design feature. Urban design features are common in contemporary stormwater management pond design and this component addresses the base, rather than the enhanced component of design. The allocation of costs is therefore in accordance with Table 7.

### B1.8 NE Corner Culvert – North of Highway 7

This component provides several functions in addition to the hydraulic benefit associated with flood control which can be accomplished using an open channel. Additional benefits accrue to the adjacent landowner who is able to utilize the land atop the channel enclosure. In recognition of the benefit to the City as a whole resulting from the enclosure and the increase of usable and accessible space, an allocation of the costs is assessed to the City-

wide development charge related to engineering given the engineering function of the culvert. For purposes of this work, these benefits are allocated as follows:

- Flood Control: 40% which, in turn, is allocated in accordance with Table 6
- Local Service: 25%
- The residual is allocated to City-wide engineering

### B1.9 Urban Plazas – Paving, furniture, lighting (Intersection of Jane and Highway 7)

The costs related to these works have been split across four categories. Consistent with the 2016 ASDC Study, a 25% local service share is identified based on the arterial road guidelines in the City's Streetscape Implementation Manual & Financial Strategy Plan. A 25% share has been assumed to be funded by the Region of York. For the remaining 50%, it is anticipated that this project will have equivalent parks and open space and streetscape components resulting in a 25% apportionment to City-wide parks and engineering development charges respectively. Since this is a new project no benefit to existing shares are identified.

### B1.10 Sustainable Transitional Feature NE Corner of Jane and Highway 7

This feature sits atop the proposed enclosure of the Black Creek identified in B1.8 and, similarly, provides a local service benefit which is deemed to be 25%. The remainder of the benefits are deemed to be equally divided among City-wide Development Charges related to both Engineering (based on technical function of wetlands) and Parks and Open Space (based on aesthetics and public enjoyment of space).

### Category B2: Enhanced Design Components

### B2.1 Urban Design Features (Enhanced Design)

Accent unit paving, concrete paving, pavement markings, shade structure and amphitheater stair access along with a simple chain link fence to replace the existing east fence are included the enhanced design features. These features elevate a simple stormwater pond to a park destination for the VMC.

### B2.2 Site Furnishing

To support public park related comfort for all users, benches and picnic tables, waste receptacles, bike racks, information and regulatory signage, pond safety equipment, guardrails and pedestrian lights will be provided. The works that fall into the above categories (i.e. B2.1 & B2.2) are above and beyond what would normally be expected and are provided to improve the public space. These works provide a City-wide benefit and are allocated to Parks and Open Space Development Charges.

### B2.3 Bridges

There are five key bridges included in the Edgeley Pond improvements. Two maintenance and pedestrian bridges cross over Black Creek at the north and south ends as well as a smaller bridge on the east that provides access over the east stormwater outlet. Two additional bridges are included in the calculation to provide increased pond connectivity to public space. While the bridges envisioned for the pond provide an improvement to the public space, they are designed for and serve the additional benefit of access to the pond for purposes of maintenance. This also provides benefit to the existing lands as well as future lands draining into the facility. For purposes of this work, these functional benefits are allocated as follows:

- Park and Open Space: 62.5%
- Benefit to Existing: 37.5%

### B2.4 South Pond Enhancements (Area 'C')

To accommodate increased stormwater storage, the control structure includes a large concrete wall along the south pond and a smaller wall on the east stormwater outfall. Proposed improvements to this significant feature, both in its functional performance and presence within the park, includes an ornamental treatment to the concrete surface that will provide artistic interest and beautify the urban park. This share of cost is considered to be a local contribution at an upset limit of $700,000. The remaining cost of the works is captured in line item: B1.6 Edge Design.

## ADDITIONAL WORKS

## CATEGORY C: EROSION IMPROVEMENTS

These works include improvements to the Black Creek south of Highway 407 towards Steeles Avenue West. Given that the works serve to improve existing conditions to a perceivably greater extent compared to the facilitation of future development in the upstream drainage shed, the allocation of costs related to this work are assigned to existing development. It is worth noting that funds are understood to be available through TRCA and which have been historically collected for this sort of activity. Based on this, the cost apportionment is further divided such that $659,000 is ascribed to "other government" funding sources and the remainder is deemed to benefit the existing community.

## CATEGORY D: PUBLIC ART

Any public art installation is deemed to be a Local Service that will be paid for by the specific developer as part of its development negotiation process with the City.

## CATEGORY E: SWM POND/TANK FOR SOUTHEAST QUADRANT OF VMC

The 2012 Municipal Class EA Master Plan for the Vaughan Metropolitan Centre identified the need for a stormwater management (SWM) pond to be located on the south side of Peelar Road, immediately east of the Black Creek. Since the time of the 2012 Master Plan, an alternative stormwater management strategy was presented that would eliminate the need for the SWM pond. This alternative SWM strategy consisted of implementing 15mm on-site retention via Low Impact Development (LID) measures for municipal road right of ways and within development blocks. The 2018 Black Creek Renewal Environmental Assessment, approved by MECP and supported by TRCA incorporated this SWM strategy. A feasibility assessment is being conducted to ensure the 15mm on-site retention for municipal right of ways can be achieved with LID measures. Should it be infeasible to implement the required LIDs within the municipal right of way, a means of reducing flow to the Black Creek will be required, which can include, but not limited to an underground tank along the east side of the realigned Black Creek corridor. The benefits of this work are ascribed to future re-development (growth) in the area through City-wide development charges related to engineering.

## CATEGORY F: DC AND RELATED ENGINEERING STUDIES

Similar to the methodology applied earlier to land acquisitions required in relation to the Black Creek channelization works, these studies are treated herein to be distributed to the benefitting interest groups so as to match the distribution to these groups following all the above noted allocations (i.e. Categories A to E). The underlying rationale is that the studies are a necessary element to achieving all of the other benefits noted above. Of note, the parks-related studies could also be funded though the City's general government development charges service category.

## CONTINGENCIES & SOFT COSTS

In addition to the estimated construction cost of the works, additional provisions need to be accounted for when establishing actual overall costs that may be incurred.

A component-specific contingency is carried in the analysis and accounts for the variability in the construction cost estimate provided. This variability, and the resultant contingency, can be wide and is dependent upon various factors including the degree of certainty relating to the scope of the project, the level to which designs have been advanced, the ability to cluster project components to achieve economies of scale, and timing impacts amongst other matters. For instance, given the fragmented ownership of lands associated with the Black Creek Channelization Works, it is possible that implementation of the works will occur on a piecemeal basis, however, this will be determined through the detailed design process, thereby resulting in inefficiencies which are intended to be accounted for by the contingencies applied to these works.

Also, the remaining costs to complete the design work (soft costs) as well as construction-related contingencies are included in the overall costs. Similarly, these can vary significantly depending on the extent to which detailed design work is still required, as well as the uncertainties associated with implementation of the project. For instance, the values used for this category of additional costs are lower for works related to the Edgeley Pond improvements relative to the Black Creek Channelization work since there is more knowledge (and less uncertainty) related to the pond improvements. Further, the pond works are generally self-contained within a single site whereas the channelization works will be complicated by the numerous and fragmented properties along its route, in addition to road crossings, as well as proximity to Jane Street and other actively used transportation and business elements. As well, the channelization works will occur through a narrow corridor for which the drainage function must be maintained during construction which can significantly impact the cost of construction. In contrast, within the pond there is space and opportunity to stage works in a manner that maintains functionality during construction.

# APPENDIX B

# ASSET MANAGEMENT PLAN

# APPENDIX B – ASSET MANAGEMENT PLAN

The Development Charges Act now requires that municipalities complete an Asset Management Plan before passing a development charges by-law. 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.

## 1. Asset Types

A summary of the future municipal-owned assets and estimated useful life assumptions for eligible DC services considered as part of the study are outlined in Table 1. The useful life assumptions identified herein remain consistent with those used in the 2016 ASDC Study and generally consistent with the City's Asset Management framework

Although all capital assets considered in the study have been evaluated, some projects/assets are covered by the ASDC or do not necessarily require future replacement or ongoing maintenance and therefore excluded from Table 1. The specific reasons are as follows:

- Certain assets may be covered by other funding sources (e.g. City-Wide DCs, Local Service, etc.) that are or will be addressed through other municipal/public processes. In such cases, these are identified as "Not Applicable – not part of ASDC".
- Some of the works identified herein represent one-time costs and are temporary in nature and, as such, there are no ongoing operation and maintenance costs, nor are there ultimate replacement costs related to them. These works may include matters such as grading, removals or works that are temporary in nature. These cases are identified as "Not Applicable – one-time cost; not a long-term asset".
- Some of the costs identified herein do not pertain to infrastructure (e.g., land costs) and, similarly, there are no ongoing operation and maintenance costs, nor are there ultimate replacement costs, related to them. These cases are identified as "Not Applicable – not infrastructure".

Certain assets, particularly those relating to landscaping and related matters, are considered herein to not have a "useful life" in the traditional sense, but are rather considered to provide the requisite level of service on a continuous basis through regular (annual) maintenance activities. Accordingly, the "useful life" is identified in Table 1 as "Continuous Useful Life subject to Ongoing Maintenance Activities", rather than in years.

It is noted that the cost estimates prepared for each of the projects' components as identified in this study include the "lumping" of numerous individual elements. Accordingly, some assumptions are necessary when estimating future funding requirements, which are discussed in later sub-sections.

**Table 1 – Summary of Asset Useful Covered in ASDC**

| Asset Description | Estimated Useful Life |
|---|---|
| A2.2 Doughton Road Crossing | 40 years |
| A2.3 Culvert Under Hwy 7 | 40 years |
| A2.4 Peelar Road Crossing | 40 years |
| A2.6 Retaining Walls | 50 years |
| A3.1 Naturalized western edge plus eastern edge south of Peelar Road (plantings, trails, lighting) | Continuous Useful Life subject to Ongoing Maintenance Activities |
| A3.2 Terraced Steps | 50 years |
| B1.3 Plant Material | Continuous Useful Life subject to Ongoing Maintenance Activities |
| B1.5 Structures Servicing VMC Lands | 100 years |
| B1.6 Edge Treatments | Continuous Useful Life subject to Ongoing Maintenance Activities |
| B1.7 Urban Design Features | Continuous Useful Life subject to Ongoing Maintenance Activities |
| B1.8 NE Corner Culvert – North of Hwy 7 | 40 years |

## 2. Asset Management Strategy

The purpose of the asset management strategy is to inform the activities that will enable the assets to provide the desired levels of service on a continuous basis and in a sustainable manner. For the sake of completeness, the following sub-sections identify the various components that are typically considered in such strategies, although only some are applied in this assessment.

### Non-Infrastructure Solutions

Non-infrastructure solutions are actions or policies that can lower costs or extend asset life (e.g. better integrated infrastructure planning and land use planning, demand management, insurance, process optimization, managed failures, etc.). Given that the proposed infrastructure will be new and land use plans well established, the City should diligently control development applications within the affected watershed to ensure compliance with the design intent of the infrastructure. The City should also routinely monitor the condition as well as the actual performance of the infrastructure over time to better understand these matters and adapt as necessary to ensure the continued sustainability of the infrastructure and the levels of service it provides. For purposes of this work, costs associated with these activities are not explicitly assigned and are assumed to be adequately covered in other components of the life cycle costs. Subsequent asset management plans to be developed by the City for its overall stock of infrastructure will have the opportunity to explicitly consider this for the infrastructure.

### Maintenance Activities

Maintenance activities, typically funded though operations, include regularly scheduled inspection and maintenance, or more significant repair and activities associated with unexpected events. For purposes of this work and consistent with the assumption applied in the 2016 ASDC Study, it is assumed that annual maintenance activities will amount to 2% of the initial capital cost of the work over the life of assets with finite useful lives, and 4% of the initial capital cost for those with continuous useful lives. Subsequent asset management plans to be developed by the City for its overall stock of infrastructure will have the opportunity to refine this approach.

### Renewal and Rehabilitation Activities

Renewal/rehabilitation activities include significant repairs designed to extend the life of the asset. For purposes of this exercise, it is assumed that the costs associated with these activities are included in other components of the life cycle costs. Subsequent asset

management plans to be developed by the City for its overall stock of infrastructure will have the opportunity to explicitly consider this for the infrastructure in question.

**Replacement Activities**

Replacement activities are those that are expected to occur once an asset has reached the end of its useful life and renewal/rehabilitation is no longer an option. For purposes of this work, it is assumed that replacement occurs at the end of the useful life of each asset as identified in Table 1, and the estimated cost is equal to the initial capital cost, adjusted for inflation at a rate of 2% per annum. As noted above, certain assets associated with the infrastructure considered in the Area-Specific Development Charges considered herein, particularly those relating to landscaping and related matters, are considered to not have a "useful life" in the traditional sense, but are rather considered to provide the requisite levels of service on a continuous basis through regular (annual) maintenance activities.

**Disposal Activities**

This includes activities associated with disposing of an asset once it has reached the end of its useful life, or is otherwise no longer needed by the municipality. For purposes of this exercise, it is assumed that the costs associated with these activities are negligible and/or are otherwise included in other components of the life cycle costs. Subsequent asset management plans to be developed by the City for its overall stock of infrastructure will have the opportunity to explicitly consider this for the identified infrastructure.

**Expansion Activities**

This includes planned expansion activities (if necessary) required to extend services to previously unserviced areas, or expand services to meet growth demands. This is not applicable to the infrastructure considered in the Area-Specific Development Charges by-law

## 3. Annual Provision

When assets require rehabilitation or are due for replacement, the source of funds is limited to reserves or contributions from operating. Capital expenditures to carry out the rehabilitation and replacement of aging infrastructure are not development-related and are therefore not eligible for funding through development charge revenues or other developer contributions.

Based on information obtained from City staff on the useful life, capital cost of acquiring and/or emplacing each asset, a provision for infrastructure replacement has been

calculated for the applicable assets considered within the ASDC Background Study. Provisions for infrastructure replacement are initially calculated for each asset based on their useful life and the anticipated cost of replacement. The aggregate of all individual provisions form the required annual capital provision. In calculating the annual provisions, a number of assumptions are made to account for inflation (2.0 per cent) and interest (3.5 per cent).

Consistent with the requirements of the *Development Charge Act*, assets that are proposed to be funded under the development charges by-law have been included in the analysis. As shown in Table 2, the City will need to fund an additional $736,800 per annum in order to properly fund the life cycle replacement costs of the new assets related to all servicing costs supported under the development charges by-law. In addition to the annual contributions for asset replacement, annual maintenance activities are estimated at $997,200 which were assumed to require 4% of the initial capital costs for continuous projects and 2% for projects with finite useful lives.

**Table 2 – Calculated Annual Requirements by 2040**

| Description | Initial Capital Cost | Useful Life (years) | Maintenance Activities (Fraction of Initial Cost) (1) | | Replacement Cost | Annual Contribution for Asset Replacement (1) |
|---|---|---|---|---|---|---|
| A2.2 Doughton Road Crossing | $2.159,341 | 40 | 2% | $43,200 | $5,369,411 | $61.400 |
| A2.3 Culvert Under Highway 7 | $7,772,775 | 40 | 2% | $155,500 | $19,327,871 | $220,900 |
| A2.4 Peelar Road Crossing | $2.159,341 | 40 | 2% | $43,200 | $5,369,411 | $61,400 |
| A2.6 Retaining Walls | $431,868 | 50 | 2% | $8,600 | $1,309,064 | $9,700 |
| A3.1 Naturalized W. Edge plus E. Edge S. of Peelar Road | $4,755,569 | continuous | 4% | $190,200 | $- | $- |
| A3.2 Terraced Steps | $7,557,693 | 50 | 2% | $151,200 | $22,908,617 | $169,000 |
| B1.3 Plant Material | $2,265,817 | continuous | 4% | $90,600 | $- | $- |
| B1.5 Structures Servicing VMC Lands | $4,413,982 | 100 | 2% | $88,300 | $36,012,126 | $40,300 |
| B1.6 Edge Treatments (Base Design) | $2,004,881 | continuous | 4% | $80,200 | $- | $- |
| B1.7 Urban Design Features (Base Design) | $339,480 | continuous | 4% | $13,600 | $- | $- |
| B1.8 NE Corner Culvert - North of Highway 7 | $6,631,629 | 40 | 2% | $132,600 | $15,234,474 | $174,100 |
| **Totals** | **$40,492,400** | | | **$997,200** | **$105,531,000** | **$736,800** |
| *1: figures have been rounded* | | | | | | |

## 4. Financial Sustainability of the Program

### *Future Revenue Growth*

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

### *Annual Budgetary Reviews*

In order to maintain, protect and manage the City's infrastructure and assets, staff monitor current levels of service and life cycle trends. These assessments are used to schedule appropriate activities, such as the relining of linear infrastructure.

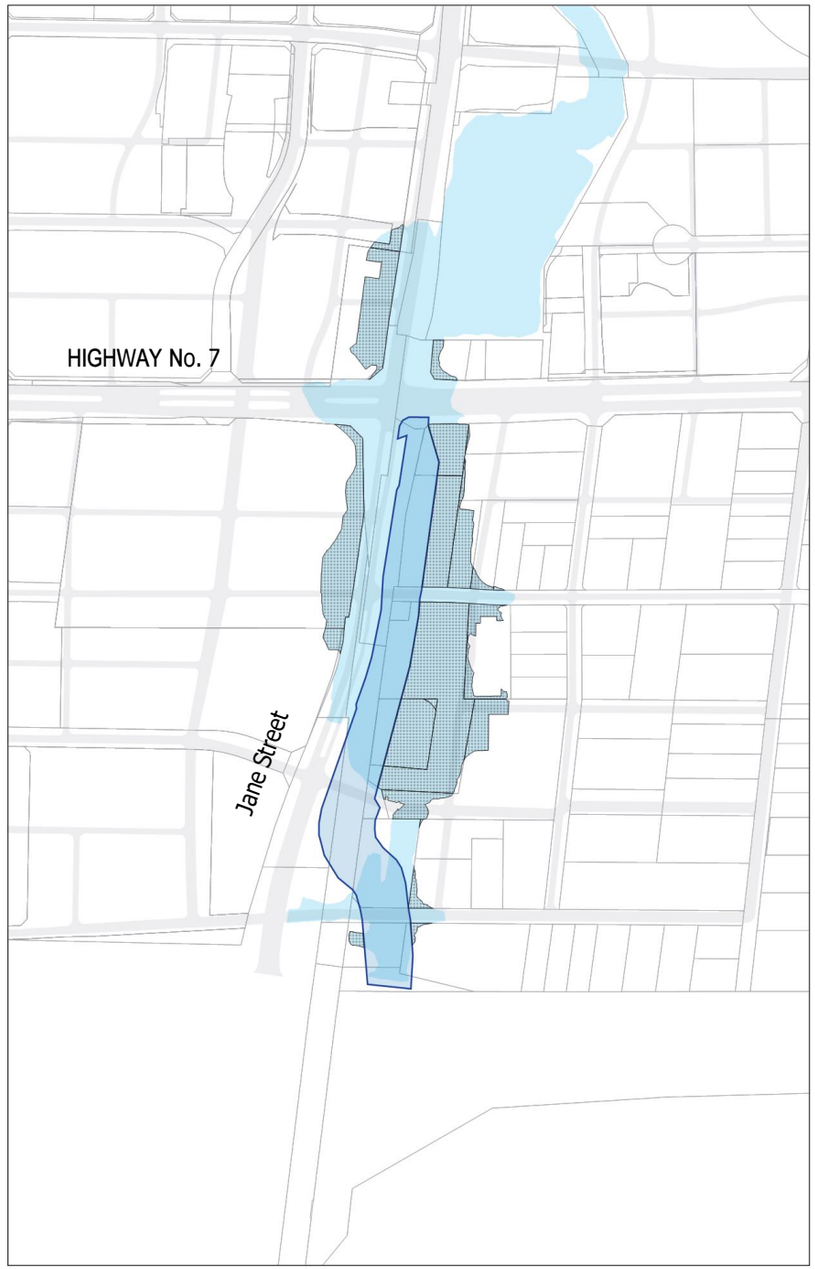
Levels of service are expected to be reviewed from time to time as routine updates to the Master Plans are undertaken, in addition to any specific studies that relate to the infrastructure in question. Among the external issues that may affect the levels of service offered by the infrastructure, perhaps the impacts of climate change are among the most important for the City to monitor.

### *The Program is Deemed Financially Sustainable*

The calculated annual provisions identified in Table 2 are considered financially sustainable as it is expected that the increased capital asset management requirements, as well as the annual maintenance requirements can be absorbed by the tax and user base over the long-term. Importantly, the City's annual operating budget review will allow staff to continue to monitor and implement mitigating measures should the program become less sustainable.

# APPENDIX C

# MAPPING




# SCHEDULE "B"
# AREA SPECIFIC DEVELOPMENT CHARGE

**BY-LAW NUMBER:** -2021

PASSED THE ____ DAY OF _____, 2021

SIGNING OFFICERS

_____
MAYOR

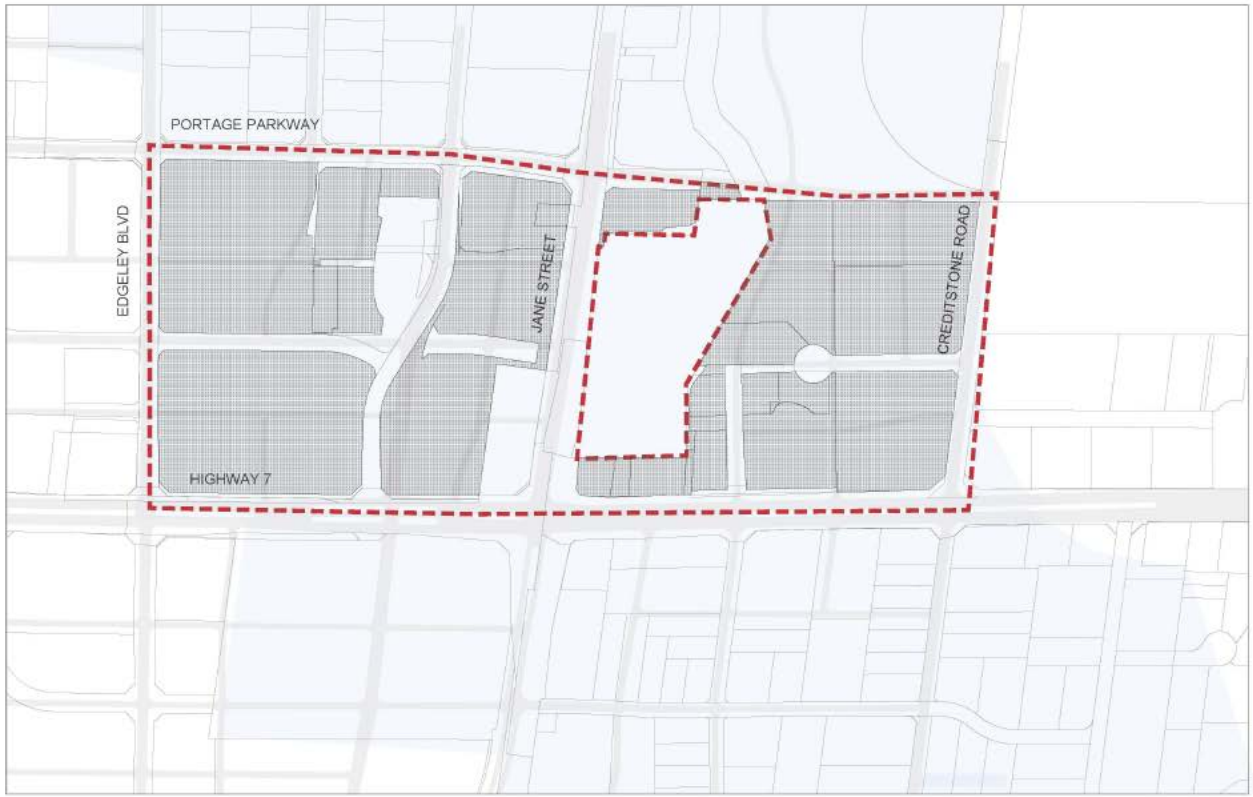
_____
CLERK

MAP 1 - EDGELEY POND AND BLACK CREEK CHANNEL WORKS - BLACK CREEK FLOODPLAIN REDUCTIONS IMMEDIATELY AFFECTED LANDOWNERS

LEGEND

BENEFITTING AREA

NOT TO SCALE




**SCHEDULE "B" CONTINUED AREA SPECIFIC DEVELOPMENT CHARGE**

**BY-LAW NUMBER:** -2021

PASSED THE ____ DAY OF _____, 2021

SIGNING OFFICERS

_____ MAYOR

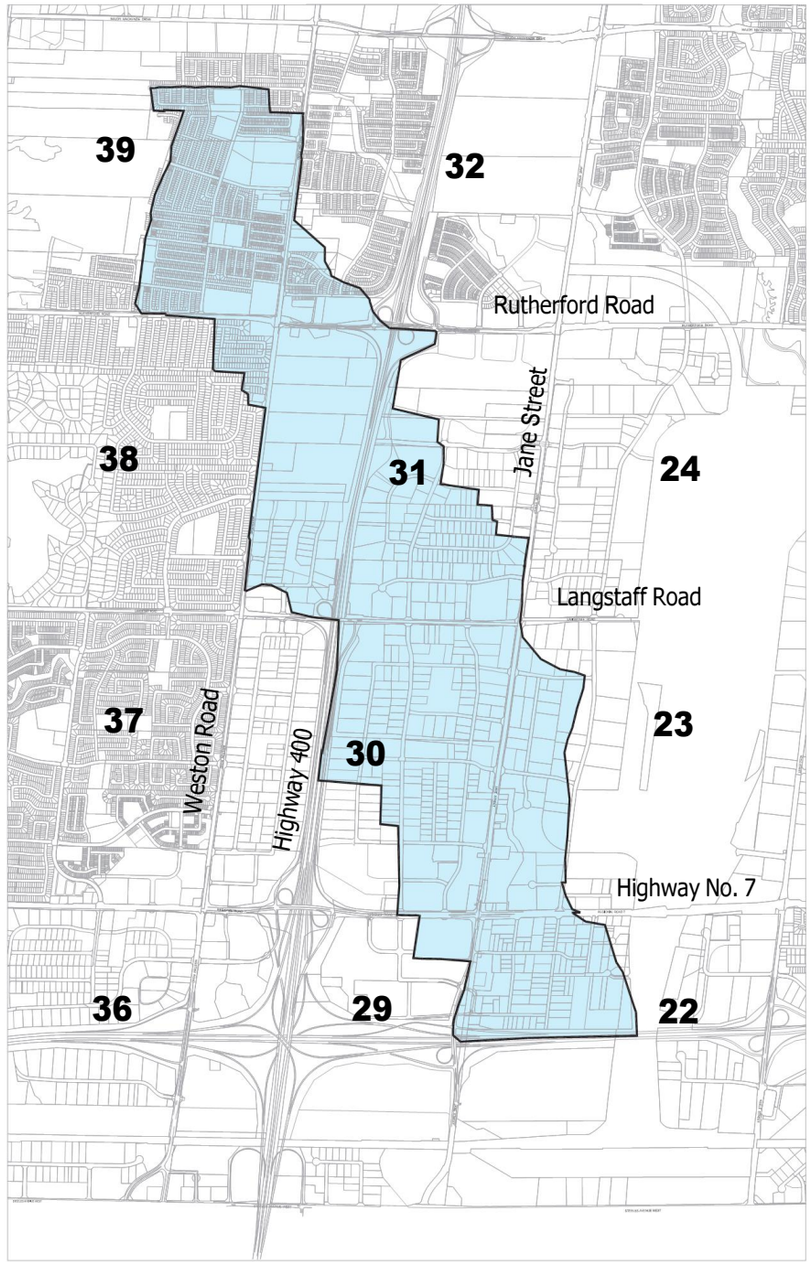
_____ CLERK

MAP 2 - EDGELEY POND AND BLACK CREEK CHANNEL WORKS - VAUGHAN METROPOLITAN CENTRE LANDS DRAINING TO EDGELEY POND

LEGEND

BENEFITTING AREA

NOT TO SCALE




# SCHEDULE "B" CONTINUED AREA SPECIFIC DEVELOPMENT CHARGE

**BY-LAW NUMBER:** -2021

PASSED THE ____ DAY OF _____, 2021

SIGNING OFFICERS

_____ MAYOR

_____ CLERK

MAP 3 - EDGELEY POND AND BLACK CREEK CHANNEL WORKS - UNDEVELOPED LANDS IN THE BLACK CREEK DRAINAGE SHED

LEGEND

**39** CITY BLOCK NUMBER

BENEFITTING AREA

NOT TO SCALE

# *THE CITY OF VAUGHAN*

# *BY-LAW*

**BY-LAW NUMBER XXX-2021**

**A By-Law to impose Area Specific Development Charges – Edgeley Pond and Black Creek Channel Works.**

**WHEREAS** subsection 2(1) of the *Development Charges Act, 1997*, S.O. 1997, c.27 ( "**Act**") provides that the council of a municipality may by By-Law impose development charges against land to pay for increased capital costs required because of increased needs for services arising from the development of the area to which the By-Law applies;

**AND WHEREAS,** at the direction of Council of The Corporation of The City of Vaughan (the "**Council"**), Hemson Consulting Ltd. has prepared an Area Specific Development Charge Background Study entitled "Development Charges Background Study for the Edgeley Pond and Black Creek Channel Works", dated May 25, 2021 (the "**Background Study**"), which indicated that the development of any land within The Corporation of The City of Vaughan will increase the need for services as defined therein;

**AND WHEREAS** as of April 7, 2021, Council made the Background Study and draft version of this By-Law available to the public in accordance with the Act;

**AND WHEREAS** on May 12, 2021, Council held a public meeting at which all persons in attendance were provided with an opportunity to make representations relating to the draft By-Law in respect of the Edgeley Pond and Black Creek Channel Works and the Background Study in accordance with the Act;

**AND WHEREAS** notice of the public meeting was given on April 15, 2021 in accordance with the Act and Ontario Regulation 82/98;

**AND WHEREAS** on June 8, 2021, Council by resolution adopted the Background Study and determined that it was not necessary to hold any further public meetings in respect of this By-Law;

**AND WHEREAS** on June 8, 2021, Council passed a By-Law to impose and provide for payment of area specific development charges for the Edgeley Pond and Black Creek Channel Works.

**NOW THEREFORE** the Council of The Corporation of The City of Vaughan enacts as follows:

## DEFINITIONS

1. For the following words and phrases if used in this By-Law:

(1) **"accessory use"** means the use of any building or structure that is naturally and normally:

(a) incidental;

(b) subordinate to; and

(c) devoted exclusively to the main use on the same lot; and for the purpose of this By-Law, detached buildings or structures which are accessory uses shall not exceed 100 square metres of gross floor area;

(2) **"agreement"** means a contract between the City and an owner and any amendment thereto;

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

(4) **"air supported structure"** means a structure consisting of a pliable membrane that achieves and maintains its shape and support by internal air pressure;

(5) **"apartment building"** means a residential use building, or the residential use portion of a mixed-use building, other than a townhouse or stacked townhouse containing four or more dwelling units each of which shall have access to above grade common halls, stairs, elevators, and yards;

(6) **"area specific development charge"** and **"special service area development charge"** mean a charge imposed with respect to growth-related net capital costs against a defined land area or per unit for specified services under the applicable By-Law;

(7) **"atrium"** means a large open space extending through several floors in a building that is open to the ceiling;

(8) **“basement”** means a storey, the floor of which is at least 0.75 metres below finished grade, provided that not more than one half of its height from the floor of the underside of the floor joist is below the finished grade;

(9) **“building or structure”** means a permanent enclosed structure occupying an area greater than 10 square metres, consisting of a wall, roof, and/or floor, or any of them, or a structural system serving the function thereof, which includes, but is not limited to, air-supported structures or industrial tents; a canopy however shall not be considered a building or structure for the purpose of this By-Law and shall not attract development charges;

(10) **“building permit”** means a permit issued under the *Building Code Act, 1992,* which permits the construction of a building or structure, or which permits the construction of the foundation of a building or structure;

(11) **“canopy”** means an overhanging, projection, or covering connected to a principal use on the lands, such as over a gas bar or outdoor storage;

(12) **“capital cost”** means costs incurred or proposed to be incurred by the City or a local board directly or by others on behalf of, and as authorized by, a Municipality or Local Board under an agreement, required for the provision of services designated in the By-Law within or outside the City:

(a) to acquire land or an interest in land, including a leasehold interest;

(b) to improve land;

(c) to acquire, lease, construct, or improve buildings and structures;

(d) to acquire, lease, construct, or improve facilities including:

(i) rolling stock with an estimated useful life of seven (7) years or more years;

(ii) furniture and equipment, other than computer equipment; and

(iii) materials acquired for circulation, reference, or information purposes by a library board as defined in the Public Libraries Act, R.S.O. 1990, c. P. 44;

(e) to undertake studies in connection with any of the matters in clauses (a) to (d);

(f) of the development charge background study required before enactment of this By-Law; and

(g) of interest on money borrowed to pay for costs described in any of the matters in clauses (a) to (d);

(13) **"cellar"** means the portion of a building below the lowest storey which has more than one-half of its height from the floor to the underside of the floor joists below the finished grade;

(14) **"City"** means The Corporation of The City of Vaughan;

(15) **"commercial parking garage"** means a building or structure, or any part thereof, which use is for the parking of motor vehicles for remuneration, or in the case where parking is provided as an accessory to a principal use on the lands, where such parking is provided in a building or structure, or part thereof, whether or not there is remuneration paid by the owner or user for the motor vehicle, the portion of parking as required by the Zoning By-Law shall not attract development charges for the purpose of this By-Law;

(16) **"development"** means the construction, erection, or placing of one or more buildings or structures on land, or the making of an addition or alteration to a building or structure that has the effect of substantially increasing the size or usability thereof, and includes redevelopment;

(17) **"development charge"** means a charge imposed with respect to growth-related net capital costs against land under this By-Law;

(18) **"duplex"** means a building comprising, by horizontal division, two dwelling units, each of which has a separate entrance to grade;

(19) **"dwelling unit"** means a room or suite of two or more rooms, designed or intended for use by a single household in which sanitary conveniences are provided, and in which facilities are provided for cooking or the installation of cooking equipment;

(20) **"engineering services"** means services related to a highway, and may include water supply services, waste water services, and storm water drainage and control services;

(21) **"existing industrial building"** means an existing building or structure to be used, or designed or intended for:

(a) manufacturing, producing, processing, storing, or distributing something;

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

(c) retail sales by a manufacturer, producer, or processor of something they manufactured, produced, or processed, if the retail sales are at the site where the manufacturing, production, or processing takes place;

(d) office or administrative purposes, if they are:

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

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

(22) **"funeral home"** means a building or structure with facilities for the preparation of dead persons for burial or cremation, for the viewing of the body and for funeral services;

(23) **"future development"** means development which requires a subsequent planning approval, in addition to a building permit, which planning approval shall include a site plan approval or the approval of a plan of condominium;

(24) **"grade finished"** means the average elevation of the finished ground level at the wall(s);

(25) **"gross floor area"** means, in the case of a non-residential building or structure, or the non-residential portion of a mixed-use building or structure, the aggregate of the areas of each floor, whether above or below grade, measured between the exterior faces of the exterior walls of the building or structure, or from the centre line of a common wall separating a non-residential and a residential use, and:

(a) includes the floor area of a mezzanine and the space occupied by interior walls and partitions; and

(b) excludes in the case of a building or structure containing an atrium, the sum of the areas of the atrium at the level of each floor surrounding the atrium above the floor level of the atrium; and

(c) excludes the area of any self-contained structural shelf and rack storage facility approved by the Building Materials Evaluation Commission; and

(d) includes any part of a building or structure above or below grade used as a commercial parking garage; and

(e) for the purposes of this definition, the non-residential portion of a mixed-use building is deemed to include one-half of any area common to the residential and non-residential portions of such mixed-use building or structure;

(26) **“growth-related net capital cost”** means the portion of the net capital cost of services that is reasonably attributable to the need for such net capital costs that results or will result from development in all or a defined part of the City;

(27) **“heritage property”** means a property that contains cultural heritage value as defined under the Ontario Heritage Act;

(28) **“home occupation”** means an occupation permitted in a dwelling unit and which:

(a) is clearly secondary to the use of the dwelling unit;

(b) does not change the external character of the dwelling unit; and

(c) does not create or become a public nuisance, in particular in respect to noise, traffic, or parking;

(29) **“household”** means one or more persons occupying or sharing all areas of the dwelling unit;

(30) **“large apartment”** means a dwelling unit in an apartment building or plex that is 700 square feet or larger in size;

(31) **“live-work unit”** means a unit intended for both residential and non-residential uses concurrently;

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

(33) **“lot”** means a parcel of land fronting on a street separate from any abutting land to the extent that a subdivision or a consent contemplated by the Planning Act would not be required for its conveyance. For the purpose of this paragraph, land defined in an application for a building permit shall be deemed to be a parcel of land and a reserve shall not form part of a street;

(34) **“medical marijuana operation”** means the cultivation, growth, harvesting, processing, composting, destruction, packaging, storage and distribution of plants or parts of plants of the genus Cannabis (marijuana) as lawfully permitted and authorized under the Government of Canada’s Marijuana for Medical Purposes Regulations;

(35) **“mid-high density mixed-use**” means a building or structure used, designed, or intended for residential and non-residential uses, where:

(a) the non-residential uses comprise not more than fifty percent (50%) of the gross floor area of the building;

(b) the non-residential uses comprise a minimum of five percent (5%) of the gross floor area of the building; and

(c) the residential portion of the building or structure is over five (5) storeys in height;

(36) **"mixed-use building"** means a building or structure containing a residential and non-residential use other than a home occupation;

(37) **"mezzanine"** means a mezzanine as defined in the Building Code Act;

(38) **"multiple unit dwelling"** includes stacked townhouses, and all other residential uses that are not included in the definition of apartment, single detached dwelling, or semi-detached dwelling;

(39) **"net area"** means the gross area of land less the area of lands conveyed or to be conveyed into public ownership for the purpose of open space, parks, woodlots, storm water management facilities, buffers and road widenings along Regional Roads, and Ontario Hydro utility corridors, and less the area of any wood lots in private ownership if zoned as such, but shall include the area of all road allowances dedicated to the City;

(40) **"net capital cost"** means the capital cost less capital grants, subsidies, and other contributions made to the City, or that the Council of the City anticipates will be made, including conveyances or payments under sections 42, 51, and 53 of the Planning Act in respect of the capital cost;

(41) **"non-commercial parking garage"** means a building or structure, or any part thereof, that is not a commercial parking garage;

(42) **"owner"** means the owner of the land or a person who has made an application for an approval of the development of the land upon which a development charge or an area specific development charge is imposed;

(43) **"plex"** means a duplex, a semi-detached duplex, a triplex, or a semi-detached triplex;

(44) **"re-development"** means the construction, erection or placing of one or more buildings or structures on land where all or part of a building or structure has previously been demolished on such land, or changing the use from a residential to non-residential use or from a non-residential to residential use or from one residential use to another form of residential use;

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

(46) **“semi-detached dwelling”** means a building divided vertically into two dwelling units;

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

(48) **“services”** means services designated in this By-Law;

(49) **“single detached dwelling”** and **“single detached”** means a residential building consisting of one dwelling unit that is not attached to another structure above grade. For greater certainty, a residential building consisting of one dwelling unit that is attached to another structure by footings only shall be considered a single-family dwelling for the purposes of this By-Law;

(50) **“small apartment”** means a dwelling unit in an apartment building or a plex that is less than 700 square feet in size;

(51) **“stacked townhouse”** means a building, other than a townhouse or apartment building, containing at least 3 dwelling units, each dwelling unit being separated from the other vertically and/or horizontally, and each dwelling unit having an entrance to grade shared with no more than 3 other units;

(52) **“storey”** means the portion of a building other than the cellar or unfinished attic which lies between the surface of the floor and the surface of the next floor above, and if there is no floor above it, then the surface next above it, provided its height is not less than 2.3 metres;

(53) **“subdivision”** includes condominium;

(54) “**temporary sales centre**” means a Building, including a trailer, that is designed or intended to be temporary, or intended to be removed from the land or demolished after use and which is used exclusively as an Office or presentation centre, or both, for new building sales;

(55) **“triplex”** means a building comprising 3 dwelling units, each of which has a separate entrance to grade;

(56) **“use, commercial”** means the use of any land, building or structure for the purpose of buying and selling commodities or supplying services as distinguished from such uses as manufacturing or assembly of goods, warehousing, and construction;

(57) **“use, industrial”** means the use of any land, building or structure for construction, warehousing, manufacturing, processing, or assembly of materials to finished products or byproducts, including the storage of such materials and products;

(58) **“use, institutional”** means the use of any land, building or structure by any organization owned or operated for religious, educational, charitable, recreational, or governmental purposes, whether or not supported in whole or in part by public funds;

(59) **“use, non-residential”** means the use of any land, building or structure, or any part thereof, for use other than a residential use, and shall include commercial use, industrial use, and institutional use;

(60) **“use, residential”** means the use of any land, building or structure for a single detached dwelling, semi-detached dwelling, multiple unit dwelling, apartment, or any other type of household or dwelling unit;

## RULES – APPLICATION, EXEMPTIONS, AND EXCEPTIONS

2.

(1) This By-Law applies to all land and to all uses of any land, building or structure within the City whether or not the land, building or structure, or use thereof, is exempt from taxation under Section 3 of the Assessment Act, R.S.O. 1990, c.A.31;

(2) Despite subsection (1), this By-Law does not apply to any land, building or structure within the City owned by and used for the purposes of:

(a) a local board;

(b) a board of education as defined in section 1(1) of the *Education Act*

(c) the City or any local board thereof and, without limiting the generality of the foregoing, including land leased from the Crown in right of Canada or Ontario located within the Parkway Belt Planning Area as defined in Regulation 744, paragraph 16 of the Revised Regulations of Ontario, 1990, provided the same is used for institutional use purposes of a not-for-profit nature;

(d) lands, buildings or structures owned by Metrolinx and used for transit related purposes;

(e) any area municipality within the Regional Municipality of York;

(f) the Regional Municipality of York or any local board thereof; and

(g) a public hospital receiving aid under the Public Hospitals Act;

(3) Development charges for the services designated in Schedule A shall be imposed upon the service area in Schedule B, specified in Schedule A, and shall be collected in accordance with this By-Law on development for residential use or non-residential use purposes;

(4) Development charges provided for in subsection (3) apply where the development requires:

(a) the passing of a zoning By-Law or of an amendment thereto under Section 34 of the Planning Act, R.S.O. 1990, c.P.13;

(b) the approval of a minor variance under Section 45 of the Planning Act, R.S.O. 1990, c.P.13;

(c) a conveyance of land to which a By-Law passed under subsection 50(7) of the Planning Act, R.S.O. 1990, c.P.13 applies;

(d) the approval of a plan of subdivision under Section 51 of the Planning Act, R.S.O. 1990, c.P.13;

(e) a consent under Section 53 of the Planning Act, R.S.O. 1990, c.P.13;

(f) the approval of a description under Section 50 of the Condominium Act, 1998, S.O. 1998, c.19; or

(g) the issuing of a permit under the Building Code Act, 1992, S.O. 1992 c.23 in relation to a building or structure;

(5) The City shall not apply more than one development charge provided for in this By-Law on land even though two or more of the actions described in paragraphs 2(4)(a) to (g) are required before the land can be developed;

(6) Despite subsection (5), if two or more of the actions described in paragraphs 3(2)(a) to (g) occur at different times and if the subsequent action or actions has the effect of increasing the need for services, a development charge shall be imposed, calculated, and collected pursuant to subsection (3) limited to the increase;

(7) Notwithstanding any other provisions of this By-Law, a building or structure shall be exempt from the payment of development charges provided that it is for:

(a) a temporary use permitted under a zoning By-Law enacted under Section 39 of the Planning Act, R.S.O. 1990, c.P.13;

(b) an accessory use and, without restricting the generality of the foregoing, including a tent or canopy used on a temporary or seasonal basis;

(c) a home occupation;

(d) an agricultural use;

(e) a renovation of an existing building which does not alter, if a residential use, the number of units, or, if a non-residential use, the gross floor area thereof;

(f) a temporary sales centre;

(g) the relocation of a built heritage structure that is listed under Section 27 of the Ontario Heritage Act or designated under Part IV or V of the Ontario Heritage Act; or

(h) Land, buildings or structures used or to be used for the purposes of a cemetery or burial ground exempt from taxation under the Assessment Act or any successor thereto, including mausoleums and columbariums, but excluding funeral homes; or

(i) Buildings or structures owned by and used for the purpose of a conservation authority, unless such buildings or structures are used primarily for, or in connection with (i) recreational purposes for which the conservation authority charges admission, or (ii) any commercial use.

(8) Area specific development charges paid hereunder shall be maintained in a separate reserve fund or funds and shall be used only for the services specified in Schedule A.

## ADMINISTRATION

### Payment of Development Charges

3.

(1) All development charges payable shall be paid by certified funds to the City Treasurer;

(2) Subject to subsections 3(3), 3(4) and 3(5) of this By-Law, development charges imposed shall be calculated as of, and shall be payable on, the date a building permit is issued in respect of a building or structure on land to which a development charge applies, and no building permit shall be issued until the development charge is paid in full;

(3) Notwithstanding subsection 3(2) of this By-Law and provided that the City and the owner(s) of the land have not entered into an agreement pursuant to subsection 3(4) of this By-Law, the development charge shall be payable, subject to any applicable exemptions or reductions contained in this By-Law:

(a) In respect of an approval of subdivision pursuant to section 51 of the *Planning Act 1990*, R.S.O. 1990, c.P.13, immediately upon entering into the subdivision agreement; and

(b) In respect of the granting of a consent pursuant to section 53 of the *Planning Act, 1990* R.S.O. 1990, c.P.13, immediately upon entering into an agreement made as a condition of the granting of such consent;

(4) Where the City and owner(s) of the land have entered into an agreement pursuant to section 27 of the Act in respect of the timing of the payment of a development charge or a portion thereof, the terms of such agreement shall prevail over the provisions of this By-Law, including subsections 3(2), 3(3) and 3(5) of this By-Law;

(5) Notwithstanding subsections 3(2) and 3(3) of this By-Law and provided that the City and the owner(s) of the land have not entered into an agreement pursuant to subsection 3(4) of this By-Law, developments that are eligible pursuant to sections 26.1 or 26.2 of the Act shall have development charges calculated and payable in accordance with section 26.1 and/or 26.2 of the Act and interest thereon shall be calculated and payable in accordance with the City's policy, entitled "DC Interest Policy Under Section 26.1 and 26.2 of the Development Charges Act, 1997", as amended from time to time;

(6) If a use of any land, building or structure that constitutes development but does not require the issuing of a building permit but requires one or more of the actions listed in subsection 2(4)(a) to (g) inclusive, a development charge shall be payable and shall be calculated and collected on the earliest of any of the actions listed in subsection 2(4)(a) to (g) required, or on a date set by agreement;

(7) Nothing in this By-Law shall prevent Council from requiring, as a condition of any approval pursuant to the *Planning Act, 1990* R.S.O. 1990, c.P.13, that the owner(s) of land install such local services as Council may require in accordance with the City's policy in respect of local services;

**Credits**

4.

(1) Where the City permits the provision of services in lieu of the payment of all or any portion of a development charge, the City shall give a credit for an amount equal to the reasonable cost to the owner of providing the services, as determined by the City,

provided such credit shall relate only to the portion of the development charge attributable to the services provided, unless otherwise agreed by the City;

(2) The City may by agreement permit an owner to provide services additional to or of a greater size or capacity than is required, and the City may give a credit for an amount up to the reasonable cost to the owner of providing the services as determined by the City, provided that no such credit may be given for any part of the cost of work that relates to an increase in the level of service that exceeds the average level of service described in Paragraph 4 of Subsection 5(1) of the Development Charges Act, 1997;

**Semi-Annual Adjustment**

5.

(1) The development charges established pursuant to Section 2 of this By-Law shall be adjusted semi-annually, without amendment to this By-Law, as of the 1st day of January and the 1st day of July in each year, commencing on July 1, 2021, in accordance with the most recent change in the Statistics Canada Quarterly, Construction Price Statistics (Catalogue No. 62-007 CANSIM II Table 327 – 0039);

**GENERAL**

**Term**

6.

(1) This By-Law shall come into force and effect on the date of enactment; ;

(2) This By-Law shall expire five years from the date that it comes into force and effect, unless it is repealed at an earlier date by a subsequent By-Law;

(3) Nothing in this By-Law shall be construed so as to commit or require the City to authorize or proceed with any specific capital project at any specific time;

**Transitional Provisions**

7.

(1) (1) If before the coming into force of this By-Law an owner or previous owner has made a payment for services described in this By-Law, or provided services in lieu thereof, no payment as required under this By-Law and no credits or refunds shall apply;

**Schedules**

(1) 8. Schedules A and B are attached hereto and form part of this By-Law;

**Repeal**

9.

(1) By-Law 079-2016 shall be and is hereby repealed effective on the date that this By-Law comes into force and effect;

**Registration**

10.

(1) A certified copy of this By-Law may be registered in the By-Law register in York Region Land Registry Office and/or against the title to any land to which this By-Law applies;

**Severability**

11,

(1) In the event that any provision of this By-Law is found by a court or tribunal of competent jurisdiction to be invalid, such provision shall be deemed to be severed, and the remaining provisions of this By-Law shall remain in full force and effect;

**Headings**

12.

(1) The headings inserted in this By-Law are for convenience of reference only and shall not affect the interpretation of this By-Law;

**Short Title**

13.

(2) (1) This By-Law may be cited as the Area Specific Development Charges By-Law - Edgeley Pond and Black Creek Channel, 2021.

Enacted by City of Vaughan Council this 8th day of June, 2021.

_____
Hon. Maurizio Bevilacqua, Mayor

_____
Todd Coles, City Clerk

Authorized by Item No. X of Report No. X
of the Committee of the Whole
Adopted by Vaughan City Council on June 8, 2021

# Schedule A
# To By-Law No. XX-XXX
# Area Specific Development Charge
# Edgeley Pond and Black Creek Channel Works

| Service | Lands to which Area Specific Development Charges Apply | Net Project Cost | Net Benefitting Area | Charge Per Hectare |
|---|---|---|---|---|
| Edgeley Pond and Black Creek Channel Works | Immediately Affected Landowners – Map 1 | $38,890,538 | 5.78 | $6,707,788 |
| | Vaughan Metropolitan Centre Draining to Edgeley Pond – Map 2 | $9,818,390 | 18.98 | $497,154[2] |
| | Undeveloped Lands in the Black Creek Drainage Shed – Map 3 | $8,892,653 | 144.58 | $67,874 |

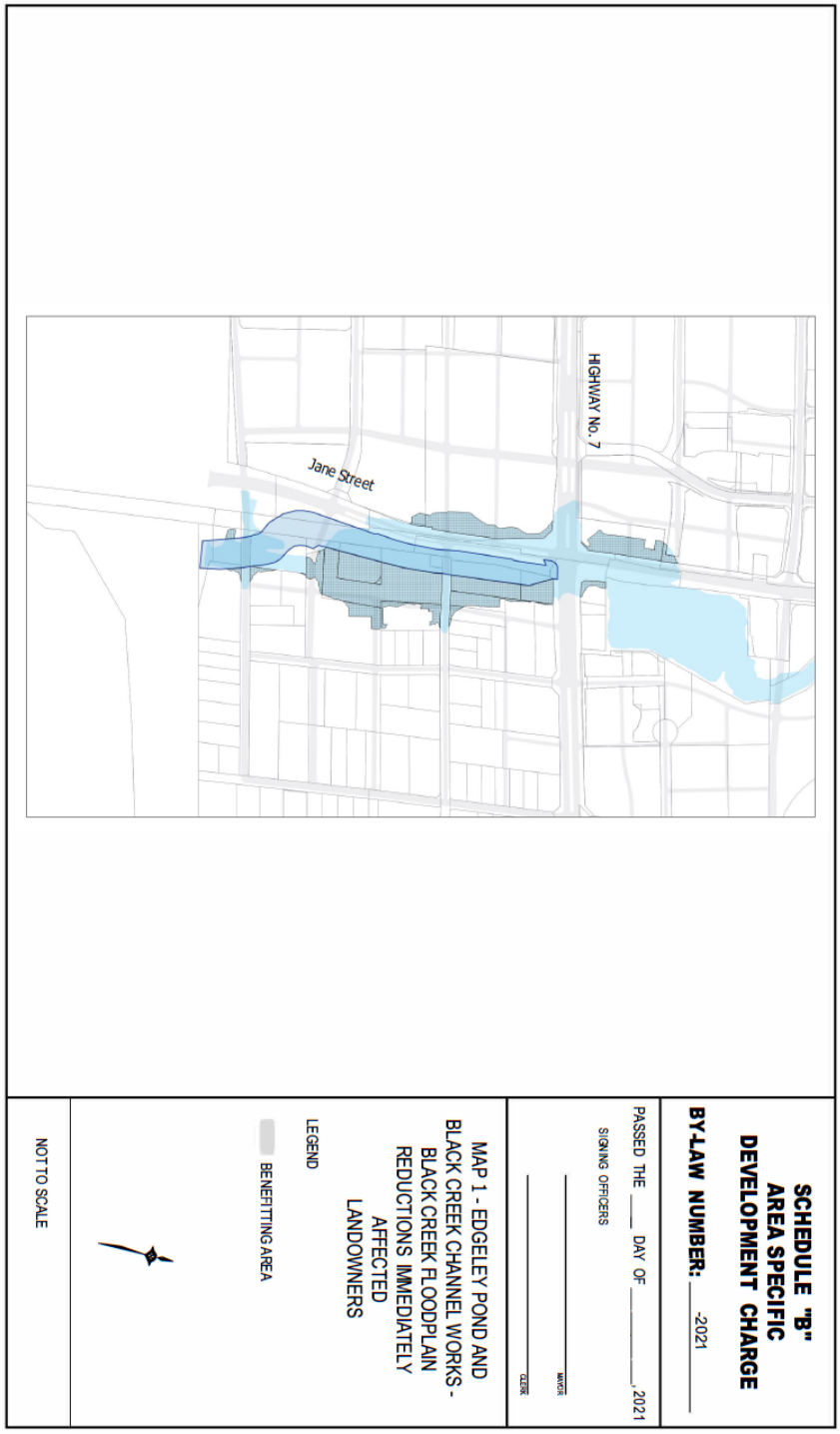
Lands that fall in more than one map area as designated in Schedule B shall be required to pay the development charges designated in Schedule A, applying to each map that the lands are included. For greater clarity, should a parcel of land be located on more than one map, the development charge associated with each map will be applied as a sum total charge per hectare.

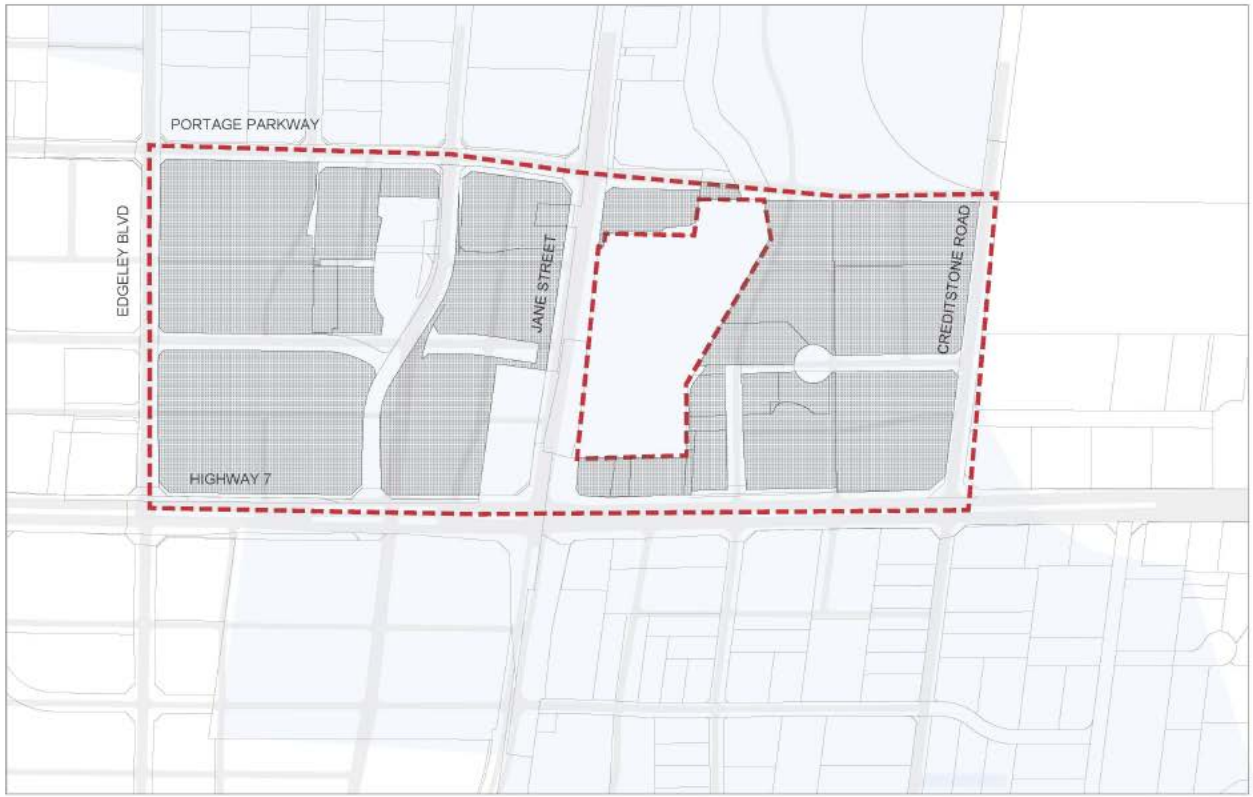
*Note 1*: The charge per hectare for the Immediately Affected Landowners (Map 1) is based on the number of hectares of developable land which will be removed from the regulatory floodplain. This land area is inclusive of park.

*Note 2*: The charge per hectare for the Vaughan Metropolitan Centre Draining to Edgeley Pond (Map 2) and the Undeveloped Lands in the Black Creek Drainage Shed (Map 3) is based on the net developable land area of the site.

## Schedule B

## Area Specific Development Charge Maps






## SCHEDULE "B" CONTINUED AREA SPECIFIC DEVELOPMENT CHARGE

**BY-LAW NUMBER:** -2021

PASSED THE ____ DAY OF _____, 2021

SIGNING OFFICERS

_____ MAYOR

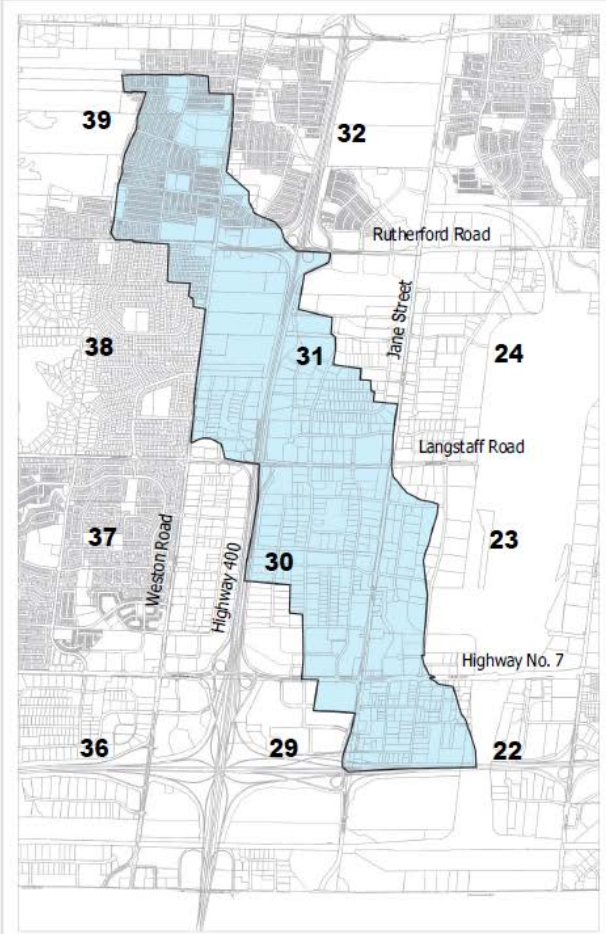
_____ CLERK

MAP 2 - EDGELEY POND AND BLACK CREEK CHANNEL WORKS - VAUGHAN METROPOLITAN CENTRE LANDS DRAINING TO EDGELEY POND

LEGEND

BENEFITTING AREA

NOT TO SCALE




**SCHEDULE "B" CONTINUED**
**AREA SPECIFIC**
**DEVELOPMENT CHARGE**

**BY-LAW NUMBER:** ___-2021_____

PASSED THE ____ DAY OF _____, 2021

SIGNING OFFICERS

_____ MAYOR

_____ CLERK

MAP 3 - EDGELEY POND AND BLACK CREEK CHANNEL WORKS - UNDEVELOPED LANDS IN THE BLACK CREEK DRAINAGE SHED

LEGEND

39 CITY BLOCK NUMBER

BENEFITTING AREA

NOT TO SCALE

**Attachment 3**

UPATED REPORT FOR PUBLIC CONSULTATION

PREPARED BY HEMSON FOR THE CITY OF VAUGHAN

# DEVELOPMENT CHARGES BACKGROUND STUDY FOR THE VMC WEST INTERCHANGE SANITARY SEWER SERVICE AREA

Updated: April 26th 2021



HEMSON

1000 - 30 St. Patrick Street, Toronto ON M5T 3A3

416 593 5090 | hemson@hemson.com | www.hemson.com

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# EXECUTIVE SUMMARY

The following summarizes the finding of the City of Vaughan's Area-Specific Development Charges (ASDC) Background Study for the Vaughan Metropolitan Centre (VMC) West Interchange Service Area. The development charges identified in the study would be applied in addition to the City-wide DCs levied under DC By-law 083-2018.

## A. STUDY CONSISTENT WITH DEVELOPMENT CHARGES LEGISLATION

- In May 2018, the Council of the City of Vaughan approved the City-wide and Area-Specific Development Charges Background Study and passed City-wide DC By-law 083-2018 and 12 ASDC By-laws, which all thirteen by-laws came into force on September 21, 2018.

- This ASDC Background Study and associated by-law relates only to By-law 094-2018, which constitutes the VMC West Interchange Sanitary Sewer Area. This study recalculates area-specific development charges in compliance with the provisions of the *Development Charges Act, 1997* (DCA) and its associated regulation (*Ontario Regulation 82/98*) and the recently amended provisions of the legislation.

- During the consultation period prior to approval of the 2018 ASDC By-laws staff acknowledged to affected landowners that the population and costing figures used to develop rates for the "VMC West Interchange Sanitary Sewer" By-law 094-2018 were based on the best information that was available at the time with the expectation that the by-law would likely require an amendment once more information was made available and prior to the existing by-law expiry in September 2023.

- Since the approval of the original ASDC by-law staff have continued working with the affected landowners to better determine the sanitary sewer needs in relation to anticipated development, affected population, revised costs and associated rates. Construction of the Interchange Way sanitary trunk sewer, from Highway 7 to Jane Street is now complete with as built costs available to be included in the revised ASDC background study. The remaining works north of Highway 7 will be front-end constructed at a future date. The costs included in this ASDC are inclusive of the sanitary sewer works both north and south of Highway 7.

- The City needs to implement development charges to fund the capital projects necessary in the Vaughan VMC West service area so that new development pays for its

capital requirements to the extent allowed by the DCA and so that new services required by growth are provided in a fiscally responsible manner. Importantly, this study and by-law will be used as the basis to help the City finalize the front-ending agreement with landowners to facilitate development in the immediate future.

- The DCA and Ontario Regulation (O. Reg.) 82/98 require that a development charges background study be prepared in which development charges are determined with reference to:
    - A forecast of the amount, type and location of residential and non-residential development anticipated;
    - 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 to provide for the expected development, including the determination of the development and non-development-related components of the capital projects;
    - An examination of the long-term capital and operating costs for the capital infrastructure required for each service to which the development charges by-law relates; and
    - An asset management plan to deal with all assets whose capital costs are proposed to be funded under the DC by-law, and that demonstrates that all assets are financial sustainable over their full life cycle.
- This report identifies the development-related net capital costs attributable to development that is forecast to occur in the VMC West service area. These costs are apportioned to types of development (residential, non-residential) in a manner that reflects the increase in the need for each service.
- The calculated charges are the maximum charges the City may adopt. Lower charges may be approved; however, this will require a reduction in the capital plan and reduced service levels, or financing from other sources, likely property taxes and utility rates.

## A. SANITARY SEWER SERVICE WITH AREA-SPECIFIC DEVELOPMENT-RELATED COSTS INCLUDED IN THE ANALYSIS

The capital costs included in this study relate to the provision of sanitary sewer service works necessary to allow development to proceed in VMC West Area.

## B. DEVELOPMENT FORECAST

- A forecast of the amount, type and location of residential and non-residential development anticipated in the VMC West area over the 2021-2040 planning period was used in the ASDC calculation.

- The development forecast was prepared by the City's planning, engineering and development finance departments as well as continued consultation with the affected land owners.

- The development forecast for the 2021 to 2040 planning period estimates that the VMC West area will accommodate about 24,700 new dwelling units by 2040. The population in these new dwelling is estimated at 46,000.

- Approximately 491,600 square metres of new, non-residential building space is anticipated between 2021 and 2040. This new non-residential space will accommodate approximately 19,400 jobs.

- The following is a summary of the projected growth for the VMC West service area in the City:

| Development Forecast | Growth Over Planning Period 2021 to 2040 |
|---|---|
| **Residential** | |
| Total Occupied Dwellings | 24,737 |
| Multiples | 928 |
| Large Apart. (> 700 sq.ft.) | 8,335 |
| Small Apart. (< 700 sq.ft) | 15,474 |
| Population in New Dwellings | 46,046 |
| **Non-Residential** | |
| Employment for DC Study | 19,408 |
| Non-Residential Building Space (sq. m.) | 491,554 |

## C. DEVELOPMENT-RELATED CAPITAL PROGRAM

- City staff, in collaboration with Hemson Consulting, have prepared a development-related capital program setting out the projects that are required to service anticipated development in the VMC West area to 2040.
- The total cost associated with the area-specific development-related work related to the sanitary sewer improvements amounts to $17.75 million. The costs included in the ASDC are inclusive of the works both north and south of Highway 7.
- The entire $17.75 million in the sanitary sewer capital program will be recovered from development charges over the 2021-2040 planning period.
- No grants, subsidies or other recoveries are anticipated.

The following is a summary of the development-related capital forecast for the sanitary sewer service:

| Area-Specific Sanitary Sewer Works (2021 to 2040) | | |
|---|---|---|
| **Project Desciption** | **Gross Cost ($000)** | **DC Eligible Cost ($000)** |
| Phase 1: Construction South of Highway 7 | $12,602 | $12,602 |
| Phase 2: Construction North of Highway 7 | $5,150 | $5,150 |
| **Total** | **$17,752** | **$17,752** |

- Appendix B provides details on the calculation for the infrastructure works.

## D. DEVELOPMENT CHARGES ARE CALCULATED WITH FULL REFERENCE TO THE DCA

- The fully calculated residential ASDCs are recommended to vary by unit type, reflecting the difference in occupancy patterns expected in various unit types and associated differences in demand placed on municipal services.

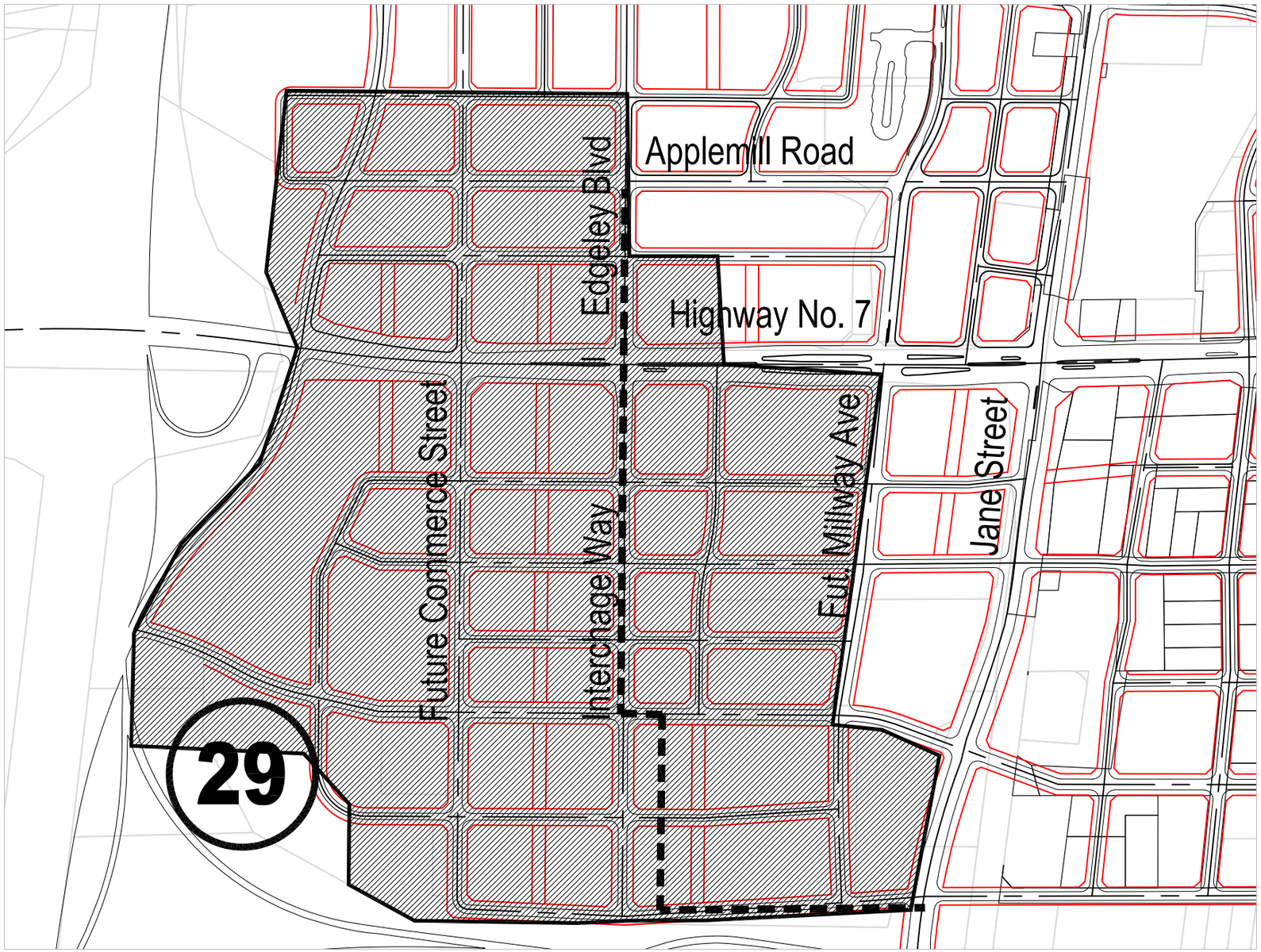
**Calculated Residential Area-Specific Development Charges**

| Service | Unadjusted Charge Per Capita | Residential Charge By Unit Type [1] | | | |
|---|---|---|---|---|---|
| | | Singles & Semis | Townhouses & Multiples | Large Apartments (≥ 700 sq.ft.) | Small Apartments (< 700 sq.ft.) |
| Sanitary Sewer Improvements | $269.87 | $982 | $810 | $599 | $432 |
| *(1) Based on Persons Per Unit of:* | | *3.64* | *3.00* | *2.22* | *1.60* |

- The calculated non-residential ASDCs are uniform and applicable to all non-residential development.

**Calculated Non-Residential Area-Specific Development Charges**

| Service | Non-Residential Charge per Square Metre |
|---|---|
| Sanitary Sewer Improvements | $10.83 |
| ***Charge levied per Square Meter of Gross Floor Area** | |




# SCHEDULE "B"
# AREA SPECIFIC DEVELOPMENT CHARGES

**BY-LAW NUMBER:** 2021

PASSED THE ____ DAY OF _____, 2021

SIGNING OFFICERS

_____
MAYOR

_____
CLERK

VMC SW - SANITARY SEWER IMPROVEMENTS

SERVICE AREA

PROPOSED SANITARY SEWER

**29** CITY BLOCK NUMBER

NOT TO SCALE

VAUGHAN

Acad File: O:\PCAM\Engineering and Infrastructure Planning\30-Development Charges\2021 [illegible]

# 1. INTRODUCTION AND BACKGROUND

This City of Vaughan Area-Specific Development Charges (ASDC) Background Study for the VMC West Interchange Service Area is presented as part of a process to lead to the approval of a new ASDC by-law in compliance with the *Development Charges Act, 1997* (DCA) and its associated *Ontario Regulation 82/98* (O. Reg. 82/98).

In May 2018, the Council of the City of Vaughan approved the City-wide and Area- Specific Development Charges Background Study and passed City-wide DC By-law 083-2018 and twelve (12) ASDC By-laws of which all thirteen (13) DC By-laws came into force on September 21st, 2018.

During the consultation period prior to approval of the 2018 ASDC By-laws staff acknowledged to affected landowners that the population and costing figures used to develop rates for the "VMC West Interchange Sanitary Sewer" By-law 094-2018 were based on the best information that was available at the time but that the by-law would most likely require an adjustment once more information was made available and prior to the existing by-law expiry, which would be in September 2023.

Since the approval of the original ASDC by-law staff have continued working with the affected landowners to better determine the sanitary sewer needs in relation to anticipated development, affected population, revised costs and associated rates. Construction of the Interchange Way sanitary trunk sewer, from Highway 7 to Jane Street is now complete with as built costs available to be included in the revised ASDC background study. The remaining works north of Highway 7 will be front-end constructed at a future date. The costs included in the ASDC are inclusive of the works both north and south of Highway 7.

Therefore, the City wishes to update the existing ASDCs to fund development-related capital projects so that development may be serviced in a fiscally responsible manner. Importantly, this ASDC Study and by-law will be used as the basis to help the City finalize the front-ending agreement with landowners to facilitate development in the immediate future.

The DCA and O. Reg. 82/98 require that a development charges background study be prepared in which development charges are determined with reference to:

- A forecast of the amount, type and location of development anticipated;
- A review of capital works in progress and anticipated 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 development and non-development-related components of the capital projects;

- 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; and

- As asset management plan to deal with all assets whose capital costs are proposed to be funded under the DC by-law, demonstrating that all assets included in the capital program are financially sustainable over their full life cycle.

This study presents the results of the review, which determines the net capital costs attributable to new development that is forecast to occur in the VMC West Interchange Sanitary Sewer Service Area between 2021 and 2040. These development-related net capital costs are apportioned to various types of development (residential; non-residential) in a manner that reflects the increase in the need for each service.

The City of Vaughan currently levies development charges on a city-wide, uniform basis in addition to other area-specific development charges. The city-wide charges recover for development-related costs for the provision of Engineering, Public Works, Community Services, Library, Fire & Rescue, and General Government. These city-wide services as well as the remaining eleven 2018 Area-Specific development Charges by-law are not being reviewed as part of this study.

The DCA provides for a period of public review and comment regarding the proposed development charges. This process includes considering and responding to comments received by members of the public about the calculated charges and methodology used. Following completion of this process, and in accordance with the DCA and Council's review of this study, it is intended that Council will pass new ASDCs for VMC West Interchange Sanitary Sewer Service Area.

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

Section II designates the services for which the development charges are proposed and the areas within the City to which the development charges will apply. It also briefly reviews the methodology that has been used in this background study.

Section III presents a summary of the forecast residential and non-residential development that is expected to occur within VMC West over the 2021–2040 period.

Section IV summarizes the future development-related capital costs associated with the provision of sanitary sewer services related to development in VMC West Interchange Sanitary Sewer Service Area.

Section V details the calculated ASDC rates by class and type of development.

Section VI provides an examination of the long-term capital and operating cost impacts for the infrastructure included in the ASDC calculation. It also addresses the asset management provisions required to maintain the development-related components of the capital projects included in the analysis.

Section VII provides a discussion of other issues and considerations including by-law administration, rules and policies.

# 2. AREA-SPECIFIC APPROACH IS USED TO ALIGN DEVELOPMENT-RELATED COSTS AND BENEFITS

Several key steps are required when calculating any development charge. However, specific circumstances arise in each municipality that must be reflected in the calculation. Therefore, we have tailored our approach to the unique circumstances in the City of Vaughan and the VMC West Sanitary Sewer Service Area. The approach to the proposed area-specific development charges is focused on providing a reasonable alignment of development-related costs with the development that necessitates them.

## A. AREA-SPECIFIC DEVELOPMENT CHARGES ARE CALCULATED

The DCA provides municipalities with flexibility to define services that will be included in the development charge by-laws, provided that the other provisions of the Act and its associated regulations are met. The DCA also requires that the by-laws designate the areas within which the by-laws shall be imposed. The development charges may apply to all lands in the municipality or to other designated development areas as specified in the by-laws.

The City of Vaughan currently levies development charges on both a City-wide and Area-Specific basis.

This ASDC Background Study calculates development charges related to the provision of engineered service related to sanitary sewers within the VMC West Service Area. The area-specific approach is applied to the service to align the capital costs for this service with the particular areas that will be serviced by the required infrastructure. No changes to the City-wide DC by-law or remaining eleven ASDC by-laws are proposed as part of this study or to the DC by-law related to the Edgeley Pond and Black Creek Channel Works.

## B. KEY STEPS IN DETERMINING AREA-SPECIFIC DEVELOPMENT CHARGES FOR FUTURE DEVELOPMENT-RELATED PROJECTS

Several key steps are required in calculating development charges for future development-related projects. These are summarized below.

## 1. Development Forecast

The first step in the methodology requires a development forecast to be prepared for the study period, in this case from 2021 to 2040. The forecast of the future residential and non-residential development used in this study was prepared by the City's planning, engineering and development finance departments as well as continued consultation with the affected land owners. The forecasts are based on the number of known applications anticipated with the planning area as well as land use designations and policies.

When calculating the development charge, the development-related net capital costs are spread over the total population that will occupy new housing units in VMC West Interchange area. This population in new units represents the population from which development charges will be collected.

The non-residential portion of the forecast estimates the Gross Floor Area (GFA) of non-residential building space to be developed in VMC West Interchange area over the planning period.

## 2. Development-Related Capital Program and DC Eligible Costs to be Recovered Through the ASDCs

A development-related capital program has been prepared by the City based on built costs for the construction of the Interchange Way sanitary trunk sewer, from Highway 7 to Jane Street. The remaining works north of Highway 7 are estimated and will be constructed at a future date. The program identifies development-related projects and their gross and net costs, after allowing for capital grants, subsidies or other contributions as required by the Act (DCA, s. 5. (2)). The capital forecast provides another cornerstone upon which development charges are based. The DCA requires that the increase in the need for service attributable to the anticipated development may include an increase:

> *... only if the council of the 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 in order to accommodate future anticipated development. It is not sufficient in the calculation of development charges merely to have had the service in the past. There must also be a demonstrated commitment to continue to emplace facilities or infrastructure in the future. In this regard, Ontario Regulation 82/98, s. 3 states that:

*For the purposes of paragraph 3 of subsection 5 (1) of the Act, the council of a 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.*

As required by the DCA, s. 5. (1) 6., any portion of projects and their associated net costs that are considered to benefit existing residents are the funding responsibility of the City from non-development charges sources. However, the projects identified in the development-related capital program for the VMC West Interchange Sanitary Sewer service area only relate to servicing new development, therefore, the entire amount will be funded through development charges.

## 3. 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 non-residential sectors. This is done using apportionments for different services in accordance with the demands placed and the benefits derived.

The apportionment is based on the expected demand for, and use of, the service by sector (e.g. shares of population in new units and employment).

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

# 3. DEVELOPMENT FORECAST

This section provides the basis for the development forecasts used in calculating the ASDCs, as well as a summary of the forecast results. A more detailed summary is provided in Appendix A.

## A. RESIDENTIAL FORECAST

Development charges are levied on residential development as a charge per new unit. Therefore, for the residential forecast, a projection of the population in new housing units is required. This population in new units represents the population from which development charges will be collected.

Table 1 provides a summary of the residential forecast over the planning period from 2021 to 2040.

The VMC West Interchange Sanitary Sewer Service Area is anticipated to see about 24,700 new housing units over the planning period. These units are anticipated to be accommodated within lands designated for residential development within the service area boundary. The forecast of population expected to reside in these new housing units over the 2021 to 2040 period is approximately 46,000 additional persons.

## B. NON-RESIDENTIAL FORECAST

Development charges are levied on non-residential development as a charge per square foot of gross floor area (GFA). As with the residential forecast, the non-residential forecast requires a projection of the employment growth associated with new floor space in the City.

The VMC West Interchange Sanitary Sewer Service Area is anticipated to accommodate 19,400 jobs within new non-residential space over the 2021 to 2040 planning period. Approximately 491,600 square metres of new non-residential building space is anticipated.

Table 1 also provides a summary of the non-residential development forecasts used in this analysis.

**Table 1 – The City of Vaughan – Vaughan Metropolitan Centre West Interchange Sanitary Sewer Service Area – Summary of Residential and Non-Residential Development Forecast**

| Development Forecast | Growth Over Planning Period 2021 to 2040 |
|---|---|
| **Residential** | |
| Total Occupied Dwellings | 24,737 |
| Multiples | 928 |
| Large Apart. (> 700 sq.ft.) | 8,335 |
| Small Apart. (< 700 sq.ft) | 15,474 |
| Population in New Dwellings | 46,046 |
| **Non-Residential** | |
| Employment for DC Study | 19,408 |
| Non-Residential Building Space (sq. m.) | 491,554 |

# 4. THE DEVELOPMENT-RELATED CAPITAL PROGRAM

The DCA requires the Council of a municipality to express its intent to provide future capital facilities at the average historical service level incorporated in the development charges calculation. As noted above in Section II, Ontario Regulation 82/98, s. 3 states that:

For the purposes of paragraph 3 of subsection 5 (1) of the Act, the council of a 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.

## A. A DEVELOPMENT-RELATED CAPITAL FORECAST IS PROVIDED FOR COUNCIL'S APPROVAL

Based on the development forecasts summarized in Section III and detailed in Appendix A, City staff, in collaboration with the consultants have created a development-related capital program setting out those projects that are required to service anticipated growth over the planning period.

One of the recommendations contained in this ASDC Background Study is for Council to adopt the capital programs created for the purposes of this area-specific development charges calculation. It is assumed that future capital budgets and forecasts will continue to bring forward the development-related projects contained herein, that are consistent with the development occurring in the VMC West Interchange Sanitary Sewer Area. It is acknowledged that changes to the forecast presented here may occur through the City's normal capital budget process.

## B. THE DEVELOPMENT-RELATED CAPITAL FORECAST FOR SANITARY SEWER SERVICE

Table 2 provides the development-related capital recoveries for the engineered service of sanitary sewers. The area-specific capital program totals $17.75 million and provides servicing for anticipated development over the planning period. It should be noted that the original ASDC approved in 2018 assumed a net capital cost of $1.80 million. The significant

cost escalation of the project is due to a more detailed analysis, which determined that some of the works could only be completed through the use of micro tunneling due to the proximity with other existing municipal infrastructure along Interchange Way. The increase in cost can also be attributed to upsizing the sanitary sewer infrastructure required for the anticipated increase in population and employment within the area.

No grants, subsidies and other recoveries have been identified for these projects and thus the net municipal cost remains at $17.75 million. The entire net capital program is associated with the infrastructure requirements for the construction of sanitary sewer works both north and south of Highway 7, therefore, the DC eligible cost included in the calculation remains at $17.75 million.

**Table 2 – Summary of Development-Related Capital Program for Area-Specific Services 2021 to 2040**

| Area-Specific Sanitary Sewer Works (2021 to 2040) | | |
|---|---|---|
| **Project Desciption** | **Gross Cost ($000)** | **DC Eligible Cost ($000)** |
| Phase 1: Construction South of Highway 7 | $12,602 | $12,602 |
| Phase 2: Construction North of Highway 7 | $5,150 | $5,150 |
| **Total** | **$17,752** | **$17,752** |

# 5. AREA-SPECIFIC DEVELOPMENT CHARGES ARE CALCULATED IN ACCORDANCE WITH THE DCA

This section summarizes the calculation of ASDCs for each service and the resulting total charges by sector. The calculation of the "unadjusted" per capita (residential) and per square metre (non-residential) charges are reviewed.

For residential development, the adjusted total per capita amount is then converted to a variable charge by housing unit type using various unit occupancy factors. For non-residential development, the charges are based on gross floor area (GFA) of building space.

It is noted that the calculation of the ASDCs does not include any provision for exemptions required under the DCA, such as the exemption from the payment of DCs for industrial buildings. Such legislated exemptions, or other exemptions that Council may choose to provide, will result in loss of DC revenue for the affected types of development. However, any such revenue loss may not be made up by offsetting increases in other portions of the calculated charge.

## A. DEVELOPMENT CHARGES CALCULATION

A summary of the calculated residential and non-residential ASDCs is presented across the following pages. Further details of the calculations are available in Appendix B.

### 1. Unadjusted Residential and Non-Residential Development Charges

Table 3 displays the calculation of the unadjusted rates for the sanitary sewer services in the VMC West Interchange area.

The total net municipal cost of the sanitary sewer development-related projects, $17.75 million, will be recovered by way of development charges. Table 3 shows the entire amount is related to development within the VMC West Interchange Sanitary Sewer service area over the 2021-2040 planning period and has been included in the area-specific development charge calculation.

Table 3

City of Vaughan - Vaughan Metropolitan Centre West Service Area
Summary of Unadjusted Residential and Non-Residential Development Charges
2021-2040 Area-Specific Capital Program

| | |
|---|---|
| 2021-2040 Year Growth in Population in New Units | 46,046 |
| 2021-2040 Year Growth in New Building Space (sq.m.) | 491,554 |

| Service | Development-Related Capital Program (2021-2040) | | | | | Residential Share | | Non-Residential Share | |
|---|---|---|---|---|---|---|---|---|---|
| | Net Municipal Cost ($000) | Replacement & Benefit to Existing ($000) | Available DC Reserves ($000) | Post 2040 ($000) | Total DC Eligible Costs for Recovery ($000) | % | ($000) | % | ($000) |
| **1.0 SANITARY SEWER SERVICES** | $17,751.8 | $0.0 | $0.0 | $0.0 | $17,751.8 | 70% | $12,426 | 30% | $5,326 |
| Unadjusted Development Charge Per Capita | | | | | | | $269.87 | | |
| Unadjusted Development Charge Per Square Metre | | | | | | | | | $10.83 |
| **TOTAL 2021-2040 SANITARY SEWER SERVICES** | **$17,751.8** | **$0.0** | **$0.0** | **$0.0** | **$17,751.8** | | **$12,426.2** | | **$5,325.5** |
| **Unadjusted Development Charge Per Capita** | | | | | | | **$269.87** | | |
| **Unadjusted Development Charge Per Square Metre** | | | | | | | | | **$10.83** |

The capital program eligible for recovery through development charges is allocated to the residential and non-residential sectors based on future shares of population in new units and employment growth over the planning period. On this basis, the allocation to the residential and non-residential sectors is calculated at 70 per cent and 30 per cent, respectively.

As a result, $12.43 million of the sanitary sewer capital program is deemed to benefit residential development. When this amount is divided by the growth in population in new dwelling units over the planning period (46,046) an unadjusted charge of $269.87 per capita is the result.

The non-residential share totals $5.33 million and, when this amount is divided by the forecast of non-residential space growth (491,554 square metres) an unadjusted charge of $10.83 per square metre is the result.

For residential development the charge per capita amount ($269.87) is then converted to a variable charge by housing unit type using various unit occupancy factors within each dwelling unit form (Table 4). The table indicates the charge for a single-semi detached unit is $982, $810 for a townhouse or other type of multiple unit, and $599 for large apartments (≥ 700 sq. ft.), and $432 for small apartments (≤ 700 sq. ft.). The unadjusted charge of $10.83 per square metre is maintained (Table 5).

Consistent with the City's current administration of Area-Specific Development Charges, the borrowing cost and interest earnings associated with the timing of expenditures and development charge receipt has not been incorporated into the calculations.

TABLE 4

CITY OF VAUGHAN
VAUGHAN METROPOLITAN CENTRE - WEST INTERCHANGE SANITARY SEWER ASDC
RESIDENTIAL DEVELOPMENT CHARGES BY UNIT TYPE

| Service | Unadjusted Charge Per Capita | Residential Charge By Unit Type [1] | | | |
|---|---|---|---|---|---|
| | | Singles & Semis | Townhouses & Multiples | Large Apartments (≥ 700 sq.ft.) | Small Apartments (< 700 sq.ft.) |
| Sanitary Sewer Improvements | $269.87 | $982 | $810 | $599 | $432 |
| *(1) Based on Persons Per Unit of:* | | *3.64* | *3.00* | *2.22* | *1.60* |

## TABLE 5

## CITY OF VAUGHAN
## VAUGHAN METROPOLITAN CENTRE - WEST INTERCHANGE SANITARY SEWER ASDC
## NON-RESIDENTIAL DEVELOPMENT CHARGES PER SQUARE METRE

| Service | Non-Residential Charge per Square Metre |
|---|---|
| Sanitary Sewer Improvements | $10.83 |
| ***Charge levied per Square Meter of Gross Floor Area*** | |

## B. COMPARISON OF PROPOSED AND EXISTING DEVELOPMENT CHARGES

Tables 6 and 7 present a comparison of total proposed residential and non-residential ASDC development charges respectively with the City's existing charges (as at January 1 2021).

Table 6 shows that the calculated charge residential units produce an increase of 72% over the present development charges with increases ranging from $411 for a SFD unit to $181 for a small apartment). Non-residential development charges are proposed to increase by $5.32 per square meter (or 97%) from the current rate of $5.51 per square meter (Table 7). The increase is reflective of the significant increase in expenditures realized with the actual construction costs of the Interchange Way sanitary trunk sewer, from Highway 7 to Jane Street relative to the original, by-law which estimated the cost of the works to be $1,803,260. Also of note, the scope of work identified in this study is more robust than what was previously identified – some of the works could only be completed through the use of micro tunneling due to the proximity with other existing municipal infrastructure along Interchange Way. The increase in cost can also be attributed to upsizing the sanitary sewer infrastructure required for the anticipated increase in population and employment in the area.

**TABLE 6**

**CITY OF VAUGHAN**
**VAUGHAN METROPOLITAN CENTRE - WEST INTERCHANGE SANITARY SEWER ASDC**
**COMPARISON OF CURRENT AND CALCULATED**
**RESIDENTIAL DEVELOPMENT CHARGES**

| Service | Current Residential Charges* | Calculated Residential Charges | Difference in Charge | |
|---|---|---|---|---|
| Single & Semi Detached | $571 | $982 | $411 | 72% |
| Townhouses & Multiples | $471 | $810 | $339 | 72% |
| Large Apartment | $348 | $599 | $251 | 72% |
| Small Apartment | $251 | $432 | $181 | 72% |

** Represents rates effective January 1 2021. DC By-law 094-2018 and adjusted for indexing.*

TABLE 7

CITY OF VAUGHAN
VAUGHAN METROPOLITAN CENTRE - WEST INTERCHANGE SANITARY SEWER ASDC
COMPARISON OF CURRENT AND CALCULATED
NON-RESIDENTIAL DEVELOPMENT CHARGES

| Service | Non-Residential ($/Square Metre) | | | |
|---|---|---|---|---|
| | Current Non-Residential Charge* | Calculated Non-Residential Charge | Difference in Charge | |
| Sanitary Sewer Improvements | $5.51 | $10.83 | $5.32 | 97% |

** Represents rates effective January 1 2021. DC By-law 094-2018 and adjusted for indexing.*

*Charge levied per Square Meter of Gross Floor Area*

# 6. Long-Term Capital and Operating Costs and Asset Management Provisions

This section provides a brief examination of the long-term capital and operating costs for the area-specific capital facilities and infrastructure to be included in the ASDC by-law. Also addressed is the required asset management provisions that must be considered.

## A. NO NET INCREASE IN OPERATING COSTS ARE ANTICIPATED OVER THE FORECAST PERIOD

The DCA requires that a background study estimate the future tax supported operating cost implications of the development-related capital program contained in the study. The capital program contained in this background study relates to the provision of sewer services in VMC West.

Funds required for operating the water and sewer systems are generated through the utility rates. Any additional operating costs as a result of the capital program will be included in the rates. Also of note, as the projects identified in the development-related capital program for the VMC West Interchange service area only relate to servicing new development, the entire amount will be funded through development charges and no component of the program will require funding from non-development charge sources.

## B. ANNUAL ASSET MANAGEMENT PLAN PROVISION REQUIREMENTS

The Development Charges Act was amended in late 2015 and, effective January 1st, 2016, municipalities are required to complete an Asset Management Plan before the passing of a development charges by-law. 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.

Table 8 summarizes the annual capital provisions required to replace the capital infrastructure proposed to be funded through ASDCs under the by-law. This estimate is based on useful life assumptions typically used by City staff and the capital cost of acquiring and/or emplacing each asset.

Table 8 illustrates that at build-out, the City will need to fund an additional $288,000 per annum in order to properly fund the full life cycle costs of the new assets supported under this by-law.

The calculated annual funding provision should be considered within the context of the City's projected growth. The VMC West Interchange sanitary sewer service area is projected to grow by approximately 24,700 new households as well as roughly 19,400 new employees. This growth will have the effect of increasing the overall assessment base to offset the capital asset provisions required to replace the infrastructure proposed to be funded through ASDCs under the by-law.

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

**Table 8 – Calculated Annual Provisions by 2040**

| Service | 2021-2040 Capital Program | | Calculated AMP Annal Provision by 2040 | |
|---|---|---|---|---|
| | DC Recoverable | Non-DC Funded | DC Related | Non-DC Related |
| Engineered Services | $17,751,773 | $0 | $288,021 | $0 |
| **Total 2040 Provisions** | **$17,751,773** | **$0** | **$288,021** | **$0** |

# 7. OTHER ISSUES AND CONSIDERATION

## A. DEVELOPMENT CHARGES ADMINISTRATION

No significant changes are recommended to the City's current policies and practices regarding development charge administration. In this regard:

- It is recommended that 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 exemptions within the development charges by-laws proposed for adoption.
- It is recommended that Council adopt the development-related capital program included in this background study, subject to annual review through the City's normal capital budget process.

# APPENDIX A

# DEVELOPMENT FORECAST

# APPENDIX A – DEVELOPMENT FORECAST

This appendix provides details of the development forecast used to prepare the 2021 Area-Specific Development Charges (ASDC) Background Study for VMC West Interchange Sanitary Sewer Service Area in Vaughan. The forecast method and assumptions are discussed herein.

## A. FORECAST APPROACH AND KEY ASSUMPTIONS

The Development Charges Act (DCA) requires an estimate of "the anticipated amount, type and location of development" for which development charges may be imposed. The forecast must cover both residential and non-residential development and be specific enough with regards to the quantum, type, location and timing of such development to assist in the preparation of a reasonable development-related capital program. For the purposes of this ASDC Background Study, a development forecast for the planning period of 2021 to 2040 has been considered in this study (2040 is considered to be the build-out horizon).

Forecasts of population, households and employment were prepared by the City's planning, engineering and development finance departments with input and consultation with the affected land owners. The forecast considers a detailed review of the land use designations and policies, active development applications within noted service area. It is noted that assumptions related to persons per unit are generally based on the most recent census data detailing historical occupancy patterns in the City and consistent with those identified in the City-wide DC Background Study.

## B. FORECAST METHOD AND RESULTS

Development charges are levied on residential development as a charge per new unit. Therefore, for the residential forecast, a projection of the population in new housing units is required. This population in new units represents the population from which development charges will be collected. For the purposes of this study, the population in new units is also considered the census population growth in this area.

Development charges are levied on non-residential development as a charge per square metre of gross floor area (GFA). As with the residential forecast, the non-residential forecast requires a projection of the employment growth associated with new floor space in the City.

## 1. Residential Forecast

The residential development forecast incorporates anticipated growth in population and occupied dwelling units by type. The residential development charges calculation is based on a forecast of population growth in new housing units in the VMC West Interchange Sanitary Sewer Service Area. The population in new units considered the overall occupancy assumptions from the most recent census results.

As detailed in Table 1, the VMC West Service Area is anticipated to see nearly 24,700 new housing units over the planning period. These units are anticipated to be accommodated within lands designated for residential development within VMC West Interchange Area. The forecast indicates that nearly all housing units constructed are anticipated to be high density - over 60% (15,474 units) of the total occupied housing units are anticipated to be small apartments with almost 35% (8,335) attributed to large apartments. Less than 5% of anticipated household unit construction is related to multiple dwelling units.

Population growth in new units is estimated by applying the following PPUs to the housing unit forecast: 3.64 for single-semi detached units, 3.00 for row units, 2.22 for large apartments (≥ 700 sq. ft.), and 1.60 for small apartments (≤ 700 sq. ft.). These PPU assumptions are generally consistent with the most recent 2016 census information regarding historical occupancy patterns and consistent with the PPU's identified in the City-wide DC Background Study. The forecast of population expected to reside in these new housing units over the 2021 to 2040 period is approximately 46,000 additional persons. This population growth by unit type is shown in Table 1, while specific details on historical occupancy patterns in the City are shown in Table 2.

## 2. Non-Residential Forecast

Table 3 shows that VMC West Interchange Sanitary Sewer Service Area is anticipated to accommodate nearly 19,400 jobs within new non-residential space over the 2021 to 2040 planning period.

Non-residential development charges are calculated on a per unit of gross floor area (GFA) basis. Therefore, as per the DCA, a forecast of future non-residential building space has been developed. As with the residential forecast, the GFA forecast covers the period from 2021 to 2040. Approximately 491,600 square metres of new non-residential building space is anticipated, most of which, is considered to be office related.

**TABLE 1**

**CITY OF VAUGHAN**
**VAUGHAN METROPOLITAN CENTRE - WEST INTERCHANGE SANITARY SEWER ASDC**
**SUMMARY OF RESIDENTIAL DEVELOPMENT FORECAST - POPULATION IN NEW HOUSEHOLDS TO BUILD-OUT**

| Landowner | Development Timing | Residential Units | | | Population in New Households |
|---|---|---|---|---|---|
| | | Multiples | Large Apart. (> 700 sq.ft.) | Small Apart. (< 700 sq.ft) | |
| Mobilio Developments | 0 - 5 Years | 397 | 40 | 711 | 2,417 |
| Icono | 0 - 5 Years | 16 | 872 | 761 | 3,201 |
| 2748355 Canada ltd. | 11 - 15 Years | - | - | - | - |
| 2748355 Canada ltd. | 11 - 15 Years | 20 | 309 | 494 | 1,536 |
| 2748355 Canada ltd. | 0 - 5 Years | - | - | 2,470 | 3,952 |
| 2748355 Canada ltd. | 6 - 10 Years | - | 750 | 750 | 2,865 |
| 2748355 Canada ltd. | 6 - 10 Years | 30 | 221 | 377 | 1,184 |
| 2748355 Canada ltd. | 11 - 15 Years | - | - | - | - |
| 2748355 Canada ltd. | 16 - 20 Years | - | - | - | - |
| 2748355 Canada ltd. | 11 - 15 Years | - | - | - | - |
| 2748355 Canada ltd. | 11 - 15 Years | 10 | 536 | 819 | 2,530 |
| 2748355 Canada ltd. | 0 - 5 Years | 200 | 550 | 1,125 | 3,621 |
| 2748355 Canada ltd. | 11 - 15 Years | 20 | 320 | 510 | 1,586 |
| Toromont Industries Ltd. | 6 - 10 Years | 33 | 631 | 996 | 3,093 |
| Toromont Industries Ltd. | 11 - 15 Years | 32 | 611 | 965 | 2,996 |
| Toromont Industries Ltd. | 11 - 15 Years | - | - | - | - |
| SmartREIT | 11 - 15 Years | 18 | 339 | 536 | 1,664 |
| SmartREIT | 11 - 15 Years | 11 | 205 | 324 | 1,007 |
| SmartREIT | 11 - 15 Years | - | 302 | 453 | 1,395 |
| SmartREIT | 6 - 10 Years | 19 | 352 | 555 | 1,726 |
| SmartREIT | 6 - 10 Years | 19 | 355 | 561 | 1,743 |
| SmartREIT | 6 - 10 Years | 10 | 184 | 290 | 902 |
| SmartREIT | 6 - 10 Years | 12 | 225 | 355 | 1,104 |
| Optech | 11 - 15 Years | 20 | 373 | 589 | 1,830 |
| Mircom | 11 - 15 Years | 10 | 187 | 295 | 917 |
| Ripple Developments | 0 - 5 Years | 12 | 227 | 359 | 1,114 |
| Mariott | 16 - 20 Years | 9 | 177 | 280 | 868 |
| Courtyard by Mariott | 16 - 20 Years | - | - | - | - |
| Ikea | 16 - 20 Years | 30 | 569 | 899 | 2,792 |
| **Total Units** | | **928** | **8,335** | **15,474** | |
| **TOTAL POPULATION IN NEW HOUSEHOLDS** | | | | | **46,046** |

***Note: Population in New Households determined using PPUs consistent with those identified in the City of Vaughan 2018 Development Charges Background Study.***

***Source: Residential unit projections/timing based on those provided by the City of Vaughan and impacted landowners.***

**TABLE 2**
**CITY OF VAUGHAN**
**HISTORICAL HOUSEHOLDS BY PERIOD OF CONSTRUCTION SHOWING HOUSEHOLD SIZE**

| | Period of Construction | | | | | | | | | | Period of Construction Summaries | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Dwelling Unit Type** | **Pre 1945** | **1946-1960** | **1961-1970** | **1971-1980** | **1981-1990** | **1991-1995** | **1996-2000** | **2001-2005** | **2006-2010** | **2011-2016** | **Pre 2006** | **2006-2016** | **Total** |
| ***Singles & Semis*** | | | | | | | | | | | | | |
| Household Population | 1,245 | 2,180 | 2,815 | 12,375 | 56,450 | 16,350 | 40,730 | 48,370 | 41,830 | 19,680 | 180,515 | 61,510 | 242,025 |
| Households | 420 | 765 | 955 | 4,020 | 17,275 | 4,615 | 11,305 | 13,080 | 11,215 | 5,385 | 52,435 | 16,600 | 69,035 |
| Household Size | 2.96 | 2.85 | 2.95 | 3.08 | 3.27 | 3.54 | 3.60 | 3.70 | 3.73 | 3.65 | 3.44 | 3.71 | 3.51 |
| ***Rows*** | | | | | | | | | | | | | |
| Household Population | 65 | 100 | 135 | 400 | 2,365 | 2,585 | 7,005 | 8,035 | 6,945 | 3,955 | 20,690 | 10,900 | 31,590 |
| Households | 25 | 50 | 45 | 160 | 790 | 860 | 2,315 | 2,425 | 2,165 | 1,410 | 6,670 | 3,575 | 10,245 |
| Household Size | 2.60 | 2.00 | 3.00 | 2.50 | 2.99 | 3.01 | 3.03 | 3.31 | 3.21 | 2.80 | 3.10 | 3.05 | 3.08 |
| ***Apartments (excl. Duplexes): Bachelor or 1BR*** | | | | | | | | | | | | | |
| Household Population | 0 | 0 | 85 | 100 | 215 | 255 | 290 | 720 | 1,880 | 2,390 | 1,180 | 2,600 | 3,780 |
| Households | 10 | 0 | 80 | 75 | 155 | 185 | 225 | 490 | 1,370 | 1,725 | 715 | 1,785 | 2,500 |
| Household Size | n/a | n/a | 1.06 | 1.33 | 1.39 | 1.38 | 1.29 | 1.47 | 1.37 | 1.39 | 1.65 | 1.46 | 1.51 |
| ***Apartments (excl. Duplexes): 2BR or more*** | | | | | | | | | | | | | |
| Household Population | 0 | 85 | 0 | 220 | 450 | 1,730 | 2,130 | 1,345 | 2,130 | 1,760 | 5,960 | 3,890 | 9,850 |
| Households | 0 | 45 | 0 | 125 | 250 | 945 | 1,185 | 705 | 1,105 | 980 | 3,255 | 2,085 | 5,340 |
| Household Size | n/a | 1.89 | n/a | 1.76 | 1.80 | 1.83 | 1.80 | 1.91 | 1.93 | 1.80 | 1.83 | 1.87 | 1.84 |
| ***Apartments (excl. Duplexes) - Total*** | | | | | | | | | | | | | |
| Household Population | 105 | 0 | 300 | 730 | 2,420 | 2,440 | 2,500 | 2,535 | 4,985 | 4,860 | 11,030 | 9,845 | 20,875 |
| Households | 60 | 20 | 180 | 330 | 1,385 | 1,385 | 1,300 | 1,355 | 2,885 | 2,990 | 6,015 | 5,875 | 11,890 |
| Household Size | 1.75 | n/a | 1.67 | 2.21 | 1.75 | 1.76 | 1.92 | 1.87 | 1.73 | 1.63 | 1.83 | 1.68 | 1.76 |
| ***Duplexes*** | | | | | | | | | | | | | |
| Household Population | 60 | 150 | 200 | 1,360 | 4,225 | 970 | 1,390 | 765 | 270 | 195 | 9,120 | 465 | 9,585 |
| Households | 20 | 55 | 80 | 485 | 1,325 | 315 | 420 | 235 | 85 | 65 | 2,935 | 150 | 3,085 |
| Household Size | 3.00 | 2.73 | 2.50 | 2.80 | 3.19 | 3.08 | 3.31 | 3.26 | 3.18 | 3.00 | 3.11 | 3.10 | 3.11 |
| ***All Units*** | | | | | | | | | | | | | |
| Household Population | 1,490 | 2,460 | 3,455 | 14,870 | 65,460 | 22,360 | 51,620 | 59,700 | 54,040 | 28,685 | 221,415 | 82,725 | 304,140 |
| Households | 520 | 890 | 1,265 | 5,000 | 20,775 | 7,170 | 15,345 | 17,090 | 16,355 | 9,850 | 68,055 | 26,205 | 94,260 |
| Household Size | 2.87 | 2.76 | 2.73 | 2.97 | 3.15 | 3.12 | 3.36 | 3.49 | 3.30 | 2.91 | 3.25 | 3.16 | 3.23 |

Note: Population and household values in this table are based on National Household Survey response rates and may differ from Census values
*Source: Statistics Canada, 2011 National Household Survey Special Run.*

TABLE 3

CITY OF VAUGHAN
VAUGHAN METROPOLITAN CENTRE - WEST INTERCHANGE SANITARY SEWER ASDC
SUMMARY OF NON-RESIDENTIAL DEVELOPMENT FORECAST - GROSS FLOOR AREA ($m^2$) TO BUILD-OUT

| Landowner | Development Timing | Office | Population Related | Institution | GFA ($m^2$) |
|---|---|---|---|---|---|
| Mobilio Developments | 0 - 5 Years | - | 112 | - | 112 |
| Icono | 0 - 5 Years | - | 20,347 | - | 20,347 |
| 2748355 Canada ltd. | 11 - 15 Years | - | - | - | - |
| 2748355 Canada ltd. | 11 - 15 Years | - | 1,383 | - | 1,383 |
| 2748355 Canada ltd. | 0 - 5 Years | - | 5,766 | - | 5,766 |
| 2748355 Canada ltd. | 6 - 10 Years | - | 2,523 | - | 2,523 |
| 2748355 Canada ltd. | 6 - 10 Years | - | - | - | - |
| 2748355 Canada ltd. | 11 - 15 Years | 87,913 | - | - | 87,913 |
| 2748355 Canada ltd. | 16 - 20 Years | 87,913 | 3,588 | - | 91,501 |
| 2748355 Canada ltd. | 11 - 15 Years | - | 3,478 | - | 3,478 |
| 2748355 Canada ltd. | 11 - 15 Years | - | - | - | - |
| 2748355 Canada ltd. | 0 - 5 Years | - | - | 7,432 | 7,432 |
| 2748355 Canada ltd. | 11 - 15 Years | 23,349 | - | - | 23,349 |
| Toromont Industries Ltd. | 6 - 10 Years | 25,013 | 5,003 | - | 30,016 |
| Toromont Industries Ltd. | 11 - 15 Years | - | 4,096 | - | 4,096 |
| Toromont Industries Ltd. | 11 - 15 Years | - | - | - | - |
| SmartREIT | 11 - 15 Years | 26,273 | 5,255 | - | 31,528 |
| SmartREIT | 11 - 15 Years | 15,870 | 3,174 | - | 19,044 |
| SmartREIT | 11 - 15 Years | 22,223 | 4,445 | - | 26,668 |
| SmartREIT | 6 - 10 Years | 27,213 | 5,443 | - | 32,656 |
| SmartREIT | 6 - 10 Years | 27,508 | 5,502 | - | 33,010 |
| SmartREIT | 6 - 10 Years | 14,234 | 2,847 | - | 17,081 |
| SmartREIT | 6 - 10 Years | 14,709 | 3,482 | - | 18,191 |
| Optech | 11 - 15 Years | - | 2,500 | - | 2,500 |
| Mircom | 11 - 15 Years | - | 828 | - | 828 |
| Ripple Developments | 0 - 5 Years | 17,599 | 3,520 | - | 21,119 |
| Mariott | 16 - 20 Years | - | - | - | - |
| Courtyard by Mariott | 16 - 20 Years | 3,581 | - | - | 3,581 |
| Ikea | 16 - 20 Years | - | - | 7,432 | 7,432 |
| **TOTAL GROSS FLOOR AREA ($m^2$)** | | | | | **491,554** |
| **TOTAL PROJECTED EMPLOYMENT** | | | | | **19,408** |

***Source: Gross Floor Area projections/timing based on those provided by the City of Vaughan and impacted landowners.***

# APPENDIX B

# AREA-SPECIFIC SANITARY SEWER SERVICES TECHNICAL APPENDIX

# APPENDIX B – AREA SPECIFIC SANITARY SEWER SERVICE

This appendix provides the detailed analysis undertaken to establish the area-specific development charge rates for the VMC West Interchange Sanitary Sewer Service Area for the provision of Sanitary Sewers.

The development-related capital program is based on as built costs for works north of Highway 7 as construction of the Interchange Way sanitary trunk sewer, from Highway 7 to Jane Street is now complete. The remaining works north of Highway 7 will be front-end constructed at a future date. The costs included in the ASDC are inclusive of the works both north and south of Highway 7. A map outlining the VMC West Interchange service area is illustrated below. The projects identified in the capital program are required to service the demands of the anticipated development in the VMC West Service Area to occur over the planning period of 2021 to 2040.

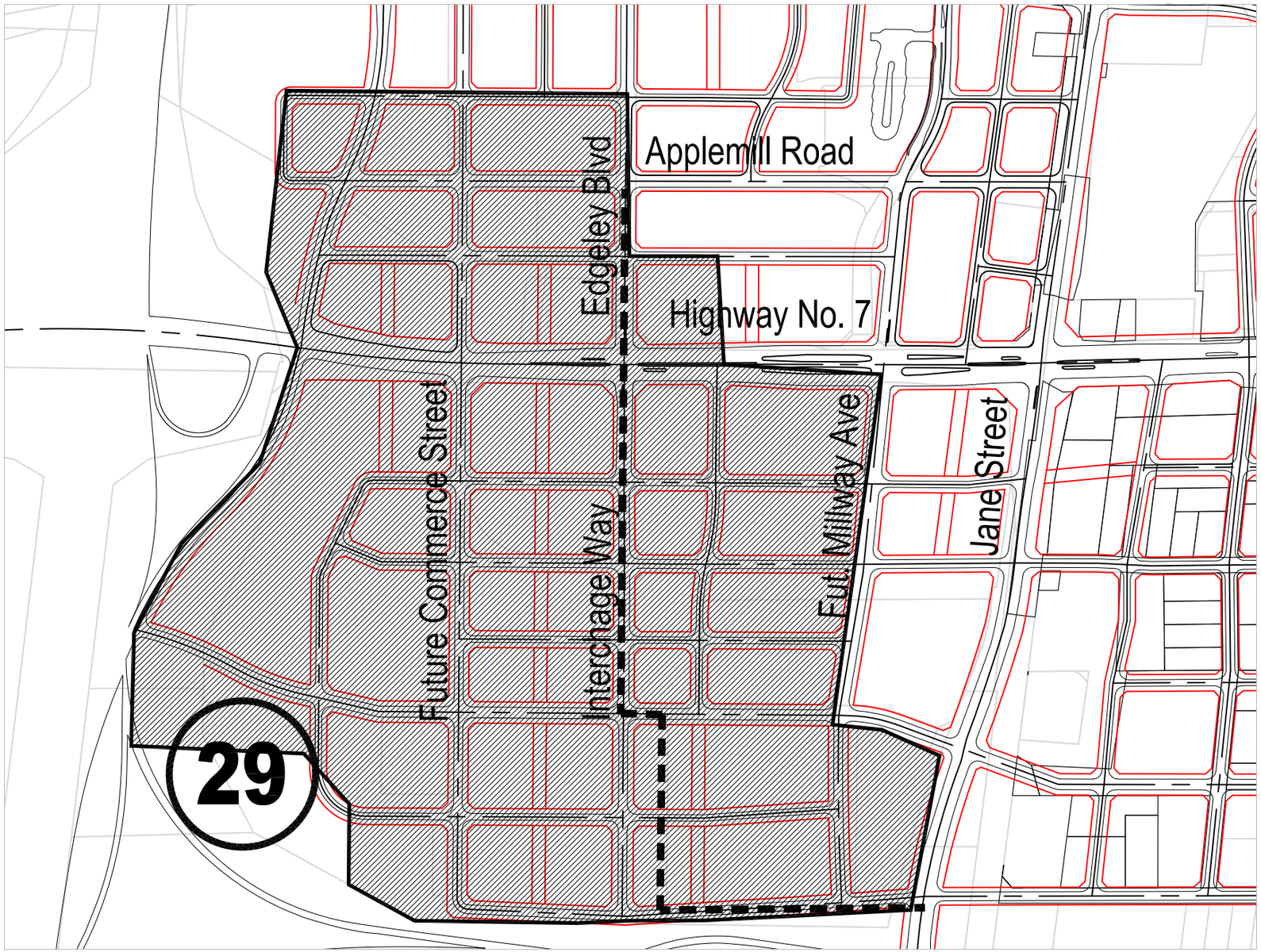
Table 1 provide details of the projects included in the area-specific infrastructure development charges calculations as well as the calculation of the Unadjusted Development Charges.

**Table 1: Development-Related Capital Program**

The 2021-2040 sanitary sewer capital program totals $17.75 million and includes for the sanitary sewer improvements on Highway 7. The details, timing, and cost breakdown of each project are shown on Table 1.

**a)** Phase 1: Construction South of Highway 7

**b)** Phase 2: Construction North of Highway 7




# SCHEDULE "B"
# AREA SPECIFIC DEVELOPMENT CHARGES

**BY-LAW NUMBER:** 2021

PASSED THE ____ DAY OF _____, 2021

SIGNING OFFICERS

_____
MAYOR

_____
CLERK

VMC SW - SANITARY SEWER IMPROVEMENTS

SERVICE AREA

PROPOSED SANITARY SEWER

**29** CITY BLOCK NUMBER

NOT TO SCALE

VAUGHAN

Acad File: C:\PCAM\Engineering and Infrastructure Planning\30-Development Charges\2021 [illegible]

The 2021-2040 development-related costs included in the capital program are entirely recovered through future development charges. As the linear sanitary sewer infrastructure is anticipated to be entirely related to servicing new development, no benefit to existing share has been applied.

The entire $17.75 million is identified as the net development-related share eligible for funding through development charges over the 2021 to 2040 planning period. Table 1 summarizes the Sanitary Services program and calculation of the unadjusted residential and non-residential development charges. The DC eligible share of $17.75 million has been allocated 70 per cent to new residential development and 30 per cent to non-residential development. The allocation of costs is based on the future shares of population in new units and employment growth in new space. The residential share of the capital program totals $12.43 million and, when divided by the forecast growth in population in new units (46,046), an unadjusted charge of $269.87 per capita is the result.

The non-residential share is applied against the forecast increase in square metres of non-residential floor space by type of development. The $5.33 million divided by the increase in square metres of non-residential building space (491,554), yields an unadjusted charge of $10.83 per square metre.

**Operating Cost Implications**

The DCA requires that a background study estimate the future tax supported operating cost implications of the development-related capital program contained in the study. The capital program contained in this background study relates to the provision of sewer services in VMC West.

Funds required for operating the water and sewer systems are generated through the utility rates. Any additional operating costs as a result of the capital program will be included in the rates.

TABLE 1

CITY OF VAUGHAN
VAUGHAN METROPOLITAN CENTRE - WEST INTERCHANGE SANITARY SEWER ASDC
REVISED: DEVELOPMENT-RELATED CAPITAL PROGRAM

| Project Description | Timing | Gross Project Cost | Grants/ Subsidies/Other Recoveries | Net Municipal Cost | Ineligible Costs Replacement & BTE Shares | Total DC Eligible Costs | Available DC Reserves | 2021-2040 | Post 2040 |
|---|---|---|---|---|---|---|---|---|---|
| **1.0 Sanitary Sewer Improvements** | | | | | | | | | |
| 1.0.1 Phase 1: Construction South of Highway 7 | 2021 | $ 12,601,773 | $ - | $ 12,601,773 | $ - | $ 12,601,773 | $ - | $ 12,601,773 | $ - |
| 1.0.2 Phase 2: Construction North of Highway 7 | 2022 | $ 5,150,000 | $ - | $ 5,150,000 | $ - | $ 5,150,000 | $ - | $ 5,150,000 | $ - |
| *Subtotal Sanitary Sewer Improvements* | | **$ 17,751,773** | **$ -** | **$ 17,751,773** | **$ -** | **$ 17,751,773** | **$ -** | **$ 17,751,773** | **$ -** |
| **TOTAL Sanitary Sewer Improvements** | | **$ 17,751,773** | **$ -** | **$ 17,751,773** | **$ -** | **$ 17,751,773** | **$ -** | **$ 17,751,773** | **$ -** |

| | | |
|---|---|---|
| **Residential Development Charge Calculation** | | |
| Residential Share of 2021 - 2040 DC Eligible Costs | 70% | $12,426,241 |
| 20-Year Growth in Population in New Units | | 46,046 |
| Unadjusted Development Charge Per Capita | | **$269.87** |
| | | |
| **Non-Residential Development Charge Calculation** | | |
| Non-Residential Share of 2021 - 2040 DC Eligible Costs | 30% | $5,325,532 |
| 20-Year Growth in Square Metres | | 491,554 |
| Unadjusted Development Charge Per Square Metre | | **$10.83** |

# APPENDIX C

# ASSET MANAGEMENT PLAN

# APPENDIX C – ASSET MANAGEMENT PLAN

The Development Charges Act now requires that municipalities complete an Asset Management Plan before passing a development charges by-law. 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.

**Asset Types**

A summary of the future municipal-owned assets and estimated useful life assumptions for eligible DC services considered as part of the study are outlined in Table 1. The useful life assumptions were informed by the City of Vaughan Asset Management Plan

**Table 1 – Summary of Municipal Assets Considered**

| Capital Projects | Estimated Useful Life |
|---|---|
| **Engineered Infrastructure** | |
| - Sanitary Sewers | 60 years |

**Annual Provision**

When assets require rehabilitation or are due for replacement, the source of funds is limited to reserves or contributions from operating. Capital expenditures to carry out the rehabilitation and replacement of aging infrastructure are not development-related and are therefore not eligible for funding through development charge revenues or other developer contributions.

Based on information obtained from City staff on the useful life, capital cost of acquiring and/or emplacing each asset, a provision for infrastructure replacement has been calculated for sanitary sewer service considered within the ASDC Background Study. Provisions for infrastructure replacement are initially calculated for each asset based on their useful life and the anticipated cost of replacement. The aggregate of all individual provisions form the required annual capital provision. In calculating the annual provisions, a number of assumptions are made to account for inflation (2.0 per cent) and interest (3.5 per cent).

Consistent with the requirements of the *Development Charge Act*, assets that are proposed to be funded under the development charges by-law have been included in the analysis.

Table 2 provides the calculated annual asset management contribution for both the gross capital expenditures and the share related to the 2021-2040 DC recoverable portion. As shown in Table 2, by 2041, the City will need to fund an additional $288,000 per annum in order to properly fund the full life cycle costs of the new assets related to all servicing costs supported under the development charges by-law for the VMC West Interchange Sanitary Sewer Area.

**Table 2 – Calculated Annual Provision by 2040**

| Service | 2021-2040 Capital Program | | Calculated AMP Annal Provision by 2040 | |
|---|---|---|---|---|
| | DC Recoverable | Non-DC Funded | DC Related | Non-DC Related |
| Engineered Services | $17,751,773 | $0 | $288,021 | $0 |
| **Total 2040 Provisions** | **$17,751,773** | **$0** | **$288,021** | **$0** |

## Financial Sustainability of the Program

### *Future Revenue Growth*

The calculated annual funding provision should be considered within the context of the City's projected growth. By 2040, the VMC West area is projected to increase by approximately 24,700 households. In addition, the VMC West area is expected to add 19,400 new employees that will result in approximately 491,600 square metres of additional non-residential building space.

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

### *Annual Budgetary Reviews*

In order to maintain, protect and manage the City's infrastructure and assets, staff monitor current levels of service and life cycle trends. These assessments are used to schedule appropriate activities, such as the relining of linear infrastructure.

### *The Program is Deemed Financially Sustainable*

The calculated annual provisions identified in Table 2 are considered financially sustainable as it is expected that the increased capital asset management requirements can be absorbed by the tax and user base over the long-term. Importantly, the City's annual

operating budget review will allow staff to continue to monitor and implement mitigating measures should the program become less sustainable.

**Attachment 4**

# *THE CITY OF VAUGHAN*

# *BY-LAW*

**BY-LAW NUMBER XXX-2021**

**A By-Law to impose Area Specific Development Charges – VMC West – Interchange Sanitary Sewer Improvements.**

**WHEREAS** subsection 2(1) of the *Development Charges Act, 1997*, S.O. 1997, c.27 (the "**Act**") provides that the council of a municipality may by By-Law impose development charges against land to pay for increased capital costs required because of increased needs for services arising from the development of the area to which the By-Law applies;

**AND WHEREAS,** at the direction of the Council of The Corporation of The City of Vaughan (the "**Council**"), Hemson Consulting Ltd. has prepared an Area Specific Development Charge Background Study entitled "Development Charges Background Study for the VMC West Interchange Sanitary Sewer Works", dated April 26, 2021 (the "**Background Study**"), which indicated that the development of any land within The Corporation of The City of Vaughan will increase the need for services as defined therein;

**AND WHEREAS** as of April 7, 2021, Council made the Background Study and draft version of this By-Law available to the public in accordance with the Act;

**AND WHEREAS** on May 12, 2021, Council held a public meeting at which all persons in attendance were provided with an opportunity to make representations relating to the draft By-Law in respect of the VMC West – Interchange Sanitary Sewer and the Background Study in accordance with the Act;

**AND WHEREAS** notice of the public meeting was given on April 15, 2021 in accordance with the Act and Ontario Regulation 82/98;

**AND WHEREAS** on June 8, 2021, Council by resolution adopted the Background Study and determined that it was not necessary to hold any further public meetings in respect of this By-Law;

**AND WHEREAS** on June 8, 2021, Council passed a By-Law to impose and provide for payment of area specific development charges for the VMC West – Interchange Sanitary Storm Improvements.

**NOW THEREFORE** the Council of The Corporation of The City of Vaughan enacts as follows:

## DEFINITIONS

1. For the following words and phrases if used in this By-Law:

(1) **"accessory use"** means the use of any building or structure that is naturally and normally:

(a) incidental;

(b) subordinate to; and

(c) devoted exclusively to the main use on the same lot; and for the purpose of this By-Law, detached buildings or structures which are accessory uses shall not exceed 100 square metres of gross floor area;

(2) **"agreement"** means a contract between the City and an owner and any amendment thereto;

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

(4) **"air supported structure"** means a structure consisting of a pliable membrane that achieves and maintains its shape and support by internal air pressure;

(5) **"apartment building"** means a residential use building, or the residential use portion of a mixed-use building, other than a townhouse or stacked townhouse containing four or more dwelling units each of which shall have access to above grade common halls, stairs, elevators, and yards;

(6) **"area specific development charge"** and **"special service area development charge"** mean a charge imposed with respect to growth-related net capital costs against a defined land area or per unit for specified services under the applicable By-Law;

(7) **“atrium”** means a large open space extending through several floors in a building that is open to the ceiling;

(8) **“basement”** means a storey, the floor of which is at least 0.75 metres below finished grade, provided that not more than one half of its height from the floor of the underside of the floor joist is below the finished grade;

(9) **“building or structure”** means a permanent enclosed structure occupying an area greater than 10 square metres, consisting of a wall, roof, and/or floor, or any of them, or a structural system serving the function thereof, which includes, but is not limited to, air-supported structures or industrial tents; a canopy however shall not be considered a building or structure for the purpose of this By-Law and shall not attract development charges;

(10) **“building permit”** means a permit issued under the *Building Code Act, 1992,* which permits the construction of a building or structure, or which permits the construction of the foundation of a building or structure;

(11) **“canopy”** means an overhanging, projection, or covering connected to a principal use on the lands, such as over a gas bar or outdoor storage;

(12) **“capital cost”** means costs incurred or proposed to be incurred by the City or a local board directly or by others on behalf of, and as authorized by, a Municipality or Local Board under an agreement, required for the provision of services designated in the By-Law within or outside the City:

(a) to acquire land or an interest in land, including a leasehold interest;

(b) to improve land;

(c) to acquire, lease, construct, or improve buildings and structures;

(d) to acquire, lease, construct, or improve facilities including:

(i) rolling stock with an estimated useful life of seven (7) years or more years;

(ii) furniture and equipment, other than computer equipment; and

(iii) materials acquired for circulation, reference, or information purposes by a library board as defined in the Public Libraries Act, R.S.O. 1990, c. P. 44;

(e) to undertake studies in connection with any of the matters in clauses (a) to (d);

(f) of the development charge background study required before enactment of this By-Law; and

(g) of interest on money borrowed to pay for costs described in any of the matters in clauses (a) to (d);

(13) **"cellar"** means the portion of a building below the lowest storey which has more than one-half of its height from the floor to the underside of the floor joists below the finished grade;

(14) **"City"** means The Corporation of The City of Vaughan;

(15) **"commercial parking garage"** means a building or structure, or any part thereof, which use is for the parking of motor vehicles for remuneration, or in the case where parking is provided as an accessory to a principal use on the lands, where such parking is provided in a building or structure, or part thereof, whether or not there is remuneration paid by the owner or user for the motor vehicle, the portion of parking as required by the Zoning By-Law shall not attract development charges for the purpose of this By-Law;

(16) **"development"** means the construction, erection, or placing of one or more buildings or structures on land, or the making of an addition or alteration to a building or structure that has the effect of substantially increasing the size or usability thereof, and includes redevelopment;

(17) **"development charge"** means a charge imposed with respect to growth-related net capital costs against land under this By-Law;

(18) **"duplex"** means a building comprising, by horizontal division, two dwelling units, each of which has a separate entrance to grade;

(19) **"dwelling unit"** means a room or suite of two or more rooms, designed or intended for use by a single household in which sanitary conveniences are provided, and in which facilities are provided for cooking or the installation of cooking equipment;

(20) **"engineering services"** means services related to a highway, and may include water supply services, waste water services, and storm water drainage and control services;

(21) **"existing industrial building"** means an existing building or structure to be used, or designed or intended for:

(a) manufacturing, producing, processing, storing, or distributing something;

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

(c) retail sales by a manufacturer, producer, or processor of something they manufactured, produced, or processed, if the retail sales are at the site where the manufacturing, production, or processing takes place;

(d) office or administrative purposes, if they are:

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

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

(22) **"funeral home"** means a building or structure with facilities for the preparation of dead persons for burial or cremation, for the viewing of the body and for funeral services;

(23) **"future development"** means development which requires a subsequent planning approval, in addition to a building permit, which planning approval shall include a site plan approval or the approval of a plan of condominium;

(24) **"grade finished"** means the average elevation of the finished ground level at the wall(s);

(25) **"gross floor area"** means, in the case of a non-residential building or structure, or the non-residential portion of a mixed-use building or structure, the aggregate of the areas of each floor, whether above or below grade, measured between the exterior faces of the exterior walls of the building or structure, or from the centre line of a common wall separating a non-residential and a residential use, and:

(a) includes the floor area of a mezzanine and the space occupied by interior walls and partitions; and

(b) excludes in the case of a building or structure containing an atrium, the sum of the areas of the atrium at the level of each floor surrounding the atrium above the floor level of the atrium; and

(c) excludes the area of any self-contained structural shelf and rack storage facility approved by the Building Materials Evaluation Commission; and

(d) includes any part of a building or structure above or below grade used as a commercial parking garage; and

(e) for the purposes of this definition, the non-residential portion of a mixed-use building is deemed to include one-half of any area common to the residential and non-residential portions of such mixed-use building or structure;

(26) **"growth-related net capital cost"** means the portion of the net capital cost of services that is reasonably attributable to the need for such net capital costs that results or will result from development in all or a defined part of the City;

(27) **"heritage property"** means a property that contains cultural heritage value as defined under the Ontario Heritage Act;

(28) **"home occupation"** means an occupation permitted in a dwelling unit and which:

(a) is clearly secondary to the use of the dwelling unit;

(b) does not change the external character of the dwelling unit; and

(c) does not create or become a public nuisance, in particular in respect to noise, traffic, or parking;

(29) **"household"** means one or more persons occupying or sharing all areas of the dwelling unit;

(30) **"large apartment"** means a dwelling unit in an apartment building or plex that is 700 square feet or larger in size;

(31) **"live-work unit"** means a unit intended for both residential and non-residential uses concurrently;

(32) **"local board"** means a local board as defined in section 1 of the Municipal Affairs Act, other than a board as defined in subsection 1(1) of the Education Act;

(33) **"lot"** means a parcel of land fronting on a street separate from any abutting land to the extent that a subdivision or a consent contemplated by the Planning Act would not be required for its conveyance. For the purpose of this paragraph, land defined in an application for a building permit shall be deemed to be a parcel of land and a reserve shall not form part of a street;

(34) **"medical marijuana operation"** means the cultivation, growth, harvesting, processing, composting, destruction, packaging, storage and distribution of plants or parts of plants of the genus Cannabis (marijuana) as lawfully permitted and authorized under the Government of Canada's Marijuana for Medical Purposes Regulations;

(35) **“mid-high density mixed-use**” means a building or structure used, designed, or intended for residential and non-residential uses, where:

(a) the non-residential uses comprise not more than fifty percent (50%) of the gross floor area of the building;

(b) the non-residential uses comprise a minimum of five percent (5%) of the gross floor area of the building; and

(c) the residential portion of the building or structure is over five (5) storeys in height;

(36) **“mixed-use building”** means a building or structure containing a residential and non-residential use other than a home occupation;

(37) **“mezzanine”** means a mezzanine as defined in the Building Code Act;

(38) **“multiple unit dwelling”** includes stacked townhouses, and all other residential uses that are not included in the definition of apartment, single detached dwelling, or semi-detached dwelling;

(39) **“net area”** means the gross area of land less the area of lands conveyed or to be conveyed into public ownership for the purpose of open space, parks, woodlots, storm water management facilities, buffers and road widenings along Regional Roads, and Ontario Hydro utility corridors, and less the area of any wood lots in private ownership if zoned as such, but shall include the area of all road allowances dedicated to the City;

(40) **“net capital cost”** means the capital cost less capital grants, subsidies, and other contributions made to the City, or that the Council of the City anticipates will be made, including conveyances or payments under sections 42, 51, and 53 of the Planning Act in respect of the capital cost;

(41) **“non-commercial parking garage”** means a building or structure, or any part thereof, that is not a commercial parking garage;

(42) **“owner”** means the owner of the land or a person who has made an application for an approval of the development of the land upon which a development charge or an area specific development charge is imposed;

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

(44) **“re-development”** means the construction, erection or placing of one or more buildings or structures on land where all or part of a building or structure has previously been demolished on such land, or changing the use from a residential to non-

residential use or from a non-residential to residential use or from one residential use to another form of residential use;

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

(46) **“semi-detached dwelling”** means a building divided vertically into two dwelling units;

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

(48) **“services”** means services designated in this By-Law;

(49) **“single detached dwelling”** and **“single detached”** means a residential building consisting of one dwelling unit that is not attached to another structure above grade. For greater certainty, a residential building consisting of one dwelling unit that is attached to another structure by footings only shall be considered a single-family dwelling for the purposes of this By-Law;

(50) **“small apartment”** means a dwelling unit in an apartment building or a plex that is less than 700 square feet in size;

(51) **“stacked townhouse”** means a building, other than a townhouse or apartment building, containing at least 3 dwelling units, each dwelling unit being separated from the other vertically and/or horizontally, and each dwelling unit having an entrance to grade shared with no more than 3 other units;

(52) **“storey”** means the portion of a building other than the cellar or unfinished attic which lies between the surface of the floor and the surface of the next floor above, and if there is no floor above it, then the surface next above it, provided its height is not less than 2.3 metres;

(53) **“subdivision”** includes condominium;

(54) “**temporary sales centre**” means a Building, including a trailer, that is designed or intended to be temporary, or intended to be removed from the land or demolished after use and which is used exclusively as an Office or presentation centre, or both, for new building sales;

(55) **“triplex”** means a building comprising 3 dwelling units, each of which has a separate entrance to grade;

(56) **“use, commercial”** means the use of any land, building or structure for the purpose of buying and selling commodities or supplying services as distinguished from such uses as manufacturing or assembly of goods, warehousing, and construction;

(57) **“use, industrial”** means the use of any land, building or structure for construction, warehousing, manufacturing, processing, or assembly of materials to finished products or byproducts, including the storage of such materials and products;

(58) **“use, institutional”** means the use of any land, building or structure by any organization owned or operated for religious, educational, charitable, recreational, or governmental purposes, whether or not supported in whole or in part by public funds;

(59) **“use, non-residential”** means the use of any land, building or structure, or any part thereof, for use other than a residential use, and shall include commercial use, industrial use, and institutional use;

(60) **“use, residential”** means the use of any land, building or structure for a single detached dwelling, semi-detached dwelling, multiple unit dwelling, apartment, or any other type of household or dwelling unit;

## RULES – APPLICATION, EXEMPTIONS, AND EXCEPTIONS

2.

(1) This By-Law applies to all land and to all uses of any land, building or structure within the City whether or not the land, building or structure, or use thereof, is exempt from taxation under Section 3 of the Assessment Act, R.S.O. 1990, c.A.31;

(2) Despite subsection (1), this By-Law does not apply to any land, building or structure within the City owned by and used for the purposes of:

(a) a local board;

(b) a board of education as defined in section 1(1) of the *Education Act*

(c) the City or any local board thereof and, without limiting the generality of the foregoing, including land leased from the Crown in right of Canada or Ontario located within the Parkway Belt Planning Area as defined in Regulation 744, paragraph 16 of the Revised Regulations of Ontario, 1990, provided the same is used for institutional use purposes of a not-for-profit nature;

(d) lands, buildings or structures owned by Metrolinx and used for transit related purposes;

(e) any area municipality within the Regional Municipality of York;

(f) the Regional Municipality of York or any local board thereof; and

(g) a public hospital receiving aid under the Public Hospitals Act;

(3) Development charges for the services designated in Schedule A shall be imposed upon the service area in Schedule B, specified in Schedule A, and shall be collected in accordance with this By-Law on development for residential use or non-residential use purposes;

(4) Development charges provided for in subsection (3) apply where the development requires:

(a) the passing of a zoning By-Law or of an amendment thereto under Section 34 of the Planning Act, R.S.O. 1990, c.P.13;

(b) the approval of a minor variance under Section 45 of the Planning Act, R.S.O. 1990, c.P.13;

(c) a conveyance of land to which a By-Law passed under subsection 50(7) of the Planning Act, R.S.O. 1990, c.P.13 applies;

(d) the approval of a plan of subdivision under Section 51 of the Planning Act, R.S.O. 1990, c.P.13;

(e) a consent under Section 53 of the Planning Act, R.S.O. 1990, c.P.13;

(f) the approval of a description under Section 50 of the Condominium Act, 1998, S.O. 1998, c.19; or

(g) the issuing of a permit under the Building Code Act, 1992, S.O. 1992 c.23 in relation to a building or structure;

(5) The City shall not apply more than one development charge provided for in this By-Law on land even though two or more of the actions described in paragraphs 2(4)(a) to (g) are required before the land can be developed;

(6) Despite subsection (5), if two or more of the actions described in paragraphs 3(2)(a) to (g) occur at different times and if the subsequent action or actions has the effect of increasing the need for services, a development charge shall be imposed, calculated, and collected pursuant to subsection (3) limited to the increase;

(7) Notwithstanding any other provisions of this By-Law, a building or structure shall be exempt from the payment of development charges provided that it is for:

(a) a temporary use permitted under a zoning By-Law enacted under Section 39 of the Planning Act, R.S.O. 1990, c.P.13;

(b) an accessory use and, without restricting the generality of the foregoing, including a tent or canopy used on a temporary or seasonal basis;

(c) a home occupation;

(d) an agricultural use;

(e) a renovation of an existing building which does not alter, if a residential use, the number of units, or, if a non-residential use, the gross floor area thereof;

(f) a temporary sales centre;

(g) the relocation of a built heritage structure that is listed under Section 27 of the Ontario Heritage Act or designated under Part IV or V of the Ontario Heritage Act; or

(h) Land, buildings or structures used or to be used for the purposes of a cemetery or burial ground exempt from taxation under the Assessment Act or any successor thereto, including mausoleums and columbariums, but excluding funeral homes; or

(i) Buildings or structures owned by and used for the purpose of a conservation authority, unless such buildings or structures are used primarily for, or in connection with (i) recreational purposes for which the conservation authority charges admission, or (ii) any commercial use;

(8) Area specific development charges paid hereunder shall be maintained in a separate reserve fund or funds and shall be used only for the services specified in Schedule A;

## ADMINISTRATION

### Payment of Development Charges

3.

(1) All development charges payable shall be paid by certified funds to the City Treasurer;

(2) Subject to subsections 3(3), 3(4) and 3(5) of this By-Law, development charges imposed shall be calculated as of, and shall be payable on, the date a building permit is issued in respect of a building or structure on land to which a development charge applies, and no building permit shall be issued until the development charge is paid in full;

(3) Notwithstanding subsection 3(2) of this By-Law and provided that the City and the owner(s) of the land have not entered into an agreement pursuant to subsection 3(4) of this By-Law, the development charge shall be payable, subject to any applicable exemptions or reductions contained in this By-Law:

(a) In respect of an approval of a plan of subdivision pursuant to section 51 of the *Planning Act*, *1990* R.S.O. 1990, c.P.13, immediately upon entering into the subdivision agreement; and

(b) In respect of the granting of a consent pursuant to section 53 of the *Planning Act, 1990* R.S.O. 1990, c.P.13, immediately upon entering into an agreement made as a condition of the granting of such consent;

(4) Where the City and owner(s) of the land have entered into an agreement pursuant to section 27 of the Act in respect of the timing of the payment of a development charge or a portion thereof, the terms of such agreement shall prevail over the provisions of this By-Law, including subsections 3(2), 3(3) and 3(5) of this By-Law;

(5) Notwithstanding subsections 3(2) and 3(3) of this By-Law and provided that the City and the owner(s) of the land have not entered into an agreement pursuant to subsection 3(4) of this By-Law, developments that are eligible pursuant to sections 26.1 or 26.2 of the Act shall have development charges calculated and payable in accordance with section 26.1 and/or 26.2 of the Act and interest thereon shall be calculated and payable in accordance with the City's policy, entitled "DC Interest Policy Under Sections 26.1 and 26.2 of the Development Charges Act, 1997", as amended from time to time;

(6) If a use of any land, building or structure that constitutes development does not require the issuing of a building permit but requires one or more of the actions listed in subsection 2(4)(a) to (g) inclusive, a development charge shall be payable and shall be calculated and collected on the earliest of any of the actions listed in subsection 2(4)(a) to (g) required, or on a date set by agreement;

(7) Nothing in this By-Law shall prevent Council from requiring, as a condition of any approval pursuant to the *Planning Act, 1990* R.S.O. 1990, c.P.13, that the owner(s) of land install such local services as Council may require in accordance with the City's policy in respect of local services;

**Credits**

4.

(1) Where the City permits the provision of services in lieu of the payment of all or any portion of a development charge, the City shall give a credit for an amount equal to the reasonable cost to the owner of providing the services, as determined by the City, provided such credit shall relate only to the portion of the development charge attributable to the services provided, unless otherwise agreed by the City;

(2) The City may by agreement permit an owner to provide services additional to or of a greater size or capacity than is required, and the City may give a credit for an amount up to the reasonable cost to the owner of providing the services as determined by the City, provided that no such credit may be given for any part of the cost of work that relates to an increase in the level of service that exceeds the average level of service described in Paragraph 4 of Subsection 5(1) of the Development Charges Act, 1997;

**Semi-Annual Adjustment**

5.

(1) The development charges established pursuant to Section 2 of this By-Law shall be adjusted semi-annually, without amendment to this By-Law, as of the 1st day of January and the 1st day of July in each year, commencing on July 1, 2021, in accordance with the most recent change in the Statistics Canada Quarterly, Construction Price Statistics (Catalogue No. 62-007 CANSIM II Table 327 – 0039);

**GENERAL**

**Term**

6.

(1) This By-Law shall come into force and effect on the date of enactment;

(2) This By-Law shall expire five years from the date that it comes into force and effect, unless it is repealed at an earlier date by a subsequent By-Law;

(3) Nothing in this By-Law shall be construed so as to commit or require the City to authorize or proceed with any specific capital project at any specific time;

**Transitional Provisions**

7.

(1) If before the coming into force of this By-Law an owner or previous owner has made a payment for services described in this By-Law, or provided services in lieu thereof, no payment as required under this By-Law and no credits or refunds shall apply;

**Schedules**

8.
(1) Schedules A and B are attached hereto and form part of this By-Law;

**Repeal**

9.
(1) By-Law 094-2018 shall be and is hereby repealed effective on the date that this By-Law comes into force and effect;

**Registration**

10.
(1) A certified copy of this By-Law may be registered in the By-Law register in the York Region Land Registry Office and/or against the title to any land to which this By-Law applies;

**Severability**

11.
(1) In the event that any provision of this By-Law is found by a court or tribunal of competent jurisdiction to be invalid, such provision shall be deemed to be severed, and the remaining provisions of this By-Law shall remain in full force and effect;

**Headings**

12.
(1) The headings inserted in this By-Law are for convenience of reference only and shall not affect the interpretation of this By-Law;

**Short Title**

13.
(1) This By-Law may be cited as the Area Specific Development Charges By-Law – VMC West – Interchange Sanitary Sewer, 2021.

Enacted by City of Vaughan Council this 8th day of June, 2021.

_____
Hon. Maurizio Bevilacqua, Mayor

_____
Todd Coles, City Clerk

Authorized by Item No. X of Report No. X
of the Committee of the Whole
Adopted by Vaughan City Council on June 8, 2021

**Schedule A:**

**Area Specific Development Charge Calculation**

| Service | Net Capital Cost |
|---|---|
| VMC West – Interchange Sanitary Sewer Improvements | $17,751,773 |

| Rate per Singles/Semis | Rate Per Townhouses & Multiples | Rate Per Large Apt | Rate Per Small Apt | Rate Per $M^2$ Non-Residential |
|---|---|---|---|---|
| $982 | $810 | $599 | $432 | $10.83 |

**Schedule B:**


29
Future Commerce Street
Interchage Way
Edgeley Blvd
Applemill Road
Highway No. 7
Fut. Millway Ave
Jane Street
SCHEDULE "B"
AREA SPECIFIC
DEVELOPMENT CHARGES
BY-LAW NUMBER 2021
PASSED THE ___ DAY OF _____, 2021
SIGNING OFFICERS
VMC SW - SANITARY SEWER
IMPROVEMENTS
SERVICE AREA
PROPOSED SANITARY SEWER
29 CITY BLOCK NUMBER
NOT TO SCALE
VAUGHAN