



Addendum to the December 22, 2023 Development Charges Background Study

City of Richmond Hill

March 8, 2024

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Refinements to Report

It is noted that the report was released on March 8, 2024, however, the background study indicated a March 6, 2024 release date. This has been corrected on the following pages:

- Title page;
- Page 1; and
- Page 7-10 of the Amended Pages.

Further, it is noted that Page 1-3 of the Amended Pages provides the anticipated date of by-law passage as March 5, 2024. This has been updated to reflect the current anticipated date of March 27, 2024.

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



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List of Acronyms and Abbreviations

Acronym	Full Description of Acronym
B.T.E.	Benefit to Existing
D.C.	Development Charges
D.C.A.	Development Charges Act



1. Background

Commensurate with the provisions of the Development Charges Act, 1997, as amended (D.C.A.), the City has undertaken a Development Charges (D.C.) Background Study and released the study in accordance with the D.C.A. The following provides a summary of the key dates in the development charge by-law process:

- December 22, 2023 – Release of the D.C. Background Study and draft by-law
- February 13, 2024 – Public Meeting of Council
- March 8, 2024 – Addendum to December 22, 2023 report released
- March 27, 2024 – Council considers adoption of Background Study, as amended and passage of D.C. By-law

The purpose of this addendum report is to revise the capital cost deductions and reserve fund adjustments related to Parks and Recreation and Engineering services. As a result of these revisions, a recalculation of the D.C. rates has been undertaken.

2. Updates to the 2023 D.C. Background Study

This section of the addendum report provides an explanation for the above-noted refinements. It is noted that the refinements have resulted in a decrease to the calculated D.C.

2.1 Refinements to Parks and Recreation Services

Based on further review of the capital project listing for parks and recreation, it was determined that the benefit to existing (B.T.E.) development deduction was incorrectly applied to the Russell Tilt Park Revitalization project. The B.T.E. deduction has increased from \$234,900 to \$1,132,600. The net D.C.-eligible amount for this project has reduced from \$2,582,100 to \$1,684,400.

In addition, upon further review, an update to the reserve fund adjustment has been made to account for an incorrect allocation of a reserve fund commitment to engineering services. As a result, the reserve fund balance that is recognized as part of the D.C. calculation has decreased from \$38.61 million to \$37.87 million.



These refinements result in a decrease to the calculated D.C. for parks and recreation services. For single & semi-detached dwellings the D.C. decreases from \$22,750 per unit to \$22,738 per unit. For non-residential D.C.s:

- Retail decreases from \$4.07 to \$4.06 per sq.ft. (\$43.81 to \$43.70 per sq.m)
- Non-Retail decreases from \$3.08 to \$3.07 per sq.ft. (\$33.15 to \$33.05 per sq.m)

2.2 Refinements to Engineering Services

Based on a review of the Urban Master Environmental Servicing Plan (U.M.E.S.P.) projects, the following refinements have been made to the details of the wastewater projects (Table 5-4 in the Background Study):

- WW-8 and WW-9: updated remaining useful life of existing pipe. Existing pipe is past its expected useful life, and as a result the remaining useful life was incorrectly calculated as a negative value.
- WW-10 and WW-11: updated unit costing of pipes.

As a result of these changes, the net D.C.-related cost for the Sanitary Collection Network – U.M.E.S.P. has increased from \$7.41 million to \$7.60 million.

In addition to the above, an update to the reserve fund adjustment has been made to account for an incorrect allocation of a reserve fund commitment to engineering services. As a result, the reserve fund balance that is recognized as part of the D.C. calculation has increased from \$36.58 million to \$37.31 million.

These refinements result in a decrease to the calculated D.C. for engineering services. For single & semi-detached dwellings the D.C. decreases from \$15,885 per unit to \$15,790 per unit. For non-residential D.C.s:

- Retail decreases from \$9.86 to \$9.80 per sq.ft. (\$106.13 to \$105.49 per sq.m)
- Non-Retail decreases from \$8.16 to \$8.11 per sq.ft. (\$87.83 to \$87.30 per sq.m)

3. Overall Changes to the D.C. Calculations

Based on the changes noted in section 2, the calculated development charge (single/semi-detached unit) for City-wide services has decreased from \$44,950 to



\$44,843. Regarding the non-residential charges, the calculated D.C. for City-wide services has decreased as follows:

- Retail decreases from \$16.50 to \$16.43 per sq.ft. (\$177.60 to \$176.85 per sq.m)
- Non-Retail decreases from \$13.25 to \$13.19 per sq.ft. (\$142.62 to \$141.98 per sq.m)

The summary below compares the current charges (as of July 1, 2023), the charges as calculated in the December 22, 2023 D.C. background study, and the charges calculated in this addendum report.



Figure 1
City of Richmond Hill
D.C. Rate Comparison

Residential (Single Detached) Comparison

Service/Class of Service	Current	Calculated (December 22, 2023 Report)	Calculated (Addendum Report)
Municipal Wide Services/Classes:			
Engineering Services	11,024	15,885	15,790
Fire Protection Services	671	1,297	1,297
Public Works	1,258	1,849	1,849
Parks and Recreation Services	13,648	22,750	22,738
Growth Studies*	545	-	-
Library Services	1,964	3,169	3,169
Total Municipal Wide Services/Classes	29,110	44,950	44,843

*No longer eligible under Bill 23



Figure 2
City of Richmond Hill
D.C. Rate Comparison

Retail (per sq.ft.) Comparison

Service/Class of Service	Current	Calculated (December 22, 2023 Report)	Calculated (Addendum Report)
Municipal Wide Services/Classes:			
Engineering Services	8.21	9.86	9.80
Fire Protection Services	0.43	0.80	0.80
Public Works	0.86	1.20	1.20
Parks and Recreation Services	1.68	4.07	4.06
Growth Studies*	0.30	-	-
Library Services	0.24	0.57	0.57
Total Municipal Wide Services/Classes	11.72	16.50	16.43

*No longer eligible under Bill 23



Figure 3
City of Richmond Hill
D.C. Rate Comparison

Non-Retail (per sq.ft.) Comparison

Service/Class of Service	Current	Calculated (December 22, 2023 Report)	Calculated (Addendum Report)
Municipal Wide Services/Classes:			
Engineering Services	5.98	8.16	8.11
Fire Protection Services	0.29	0.67	0.67
Public Works	0.63	0.91	0.91
Parks and Recreation Services	1.25	3.08	3.07
Growth Studies*	0.23	-	-
Library Services	0.18	0.43	0.43
Total Municipal Wide Services/Classes	8.56	13.25	13.19

*No longer eligible under Bill 23



4. Changes to the Background Study

Based upon the preceding sections, the following revisions are made to the pages within the background study (new pages are appended to this report):

Page Reference	Description of Revisions
ES-v, ES-vi ES-viii, and ES-ix	Updated the write-up based on the calculated D.C.s, Table ES-2, Table ES-3, and Table ES-4.
1-3	Revised Figure 1-1 to include the release of addendum report and update Council consideration of by-law passage date.
4-9	Updated Table 4-2 to revise reserve fund balances.
5-5, 5-7, and 5-10	Updated to reflect refinements to the Parks and Recreation project list and reserve fund adjustment.
5-14 to 5-19, and 5-23	Updated to reflect refinements to the U.M.E.S.P. projects and reserve fund adjustment.
6-3 to 6-7	Updated Tables 6-1 to 6-7 to account for the adjustments to the capital needs.
7-10	Updated section 7.5 to reference the addendum report.
Appendix C	Updated the Long-Term Capital and Operating Cost tables.
Appendix F	Updated values for the Asset Management Plan calculations and associated Table.

It is noted that the draft by-law (provided under separate cover) will also be revised to reflect the updated D.C. rates.



5. Process for the Adoption of the Development Charges By-law

Sections 1, 2, 3 & 4 provide a summary of the revisions to the City's D.C. Background Study. If Council is satisfied with the above changes to the Background Study and based on the public submissions made at the public meeting, this Addendum Report #1, along with the recommendations provided in Chapter 7 of the December 22, 2023 report, and the updated by-law will be considered for approval by Council.



Amended Pages



As part of this D.C. background study process, the City is proposing to repeal or update all eight of these by-laws. Certain works included in the A.S.D.C. by-laws have been determined to provide a City-wide growth-related benefit. These works have been included in the D.C. calculations provided herein. Further detail on the approach to the A.S.D.C.s is provided in Appendix H.

9. The City-Wide D.C. currently in effect is \$29,110 for single detached dwelling units for full services. The City-Wide non-residential non-retail charge is \$8.56 per sq.ft. (\$92.11 per sq.m.) for full services, and the City-Wide non-residential retail charge is \$11.72 per sq.ft. (\$126.19 per sq.m) for full services. This report has undertaken a recalculation of the charges based on future identified needs (presented in Schedule ES-3 for residential and non-residential). Charges have been provided on a City-wide basis for all services. The corresponding residential single detached unit charge for full services is \$44,843. The non-residential, non-retail charge is \$13.19 per sq.ft. (\$141.98 per sq.m) of building area, and the non-residential retail charge is \$16.43 per sq.ft. (\$176.85 per sq.m) of building area for full services. These rates are submitted to Council for their consideration.
10. A summary of the total growth-related capital program identified by the City is provided in ES-4. The total capital program is approximately \$1.62 billion, of which \$576.74 million is considered to benefit growth beyond the forecast periods identified for the respective services. Further deductions related to ineligible works have been made in the amount of \$14.31 million, in addition to deductions related to the portion of works which provide a benefit to the existing development (\$252.77 million). This results in a total D.C. recoverable amount of \$776.52 million which has been included in the D.C. calculation. Of this amount, \$686.10 million is recoverable from residential development, and \$90.42 million is recoverable from non-residential development.
11. The D.C.A. requires a summary be provided of the gross capital costs and the net costs to be recovered over the life of the by-law. This calculation is provided by service and is presented in Table 6-7. A summary of these costs is provided below:



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

Summary of Expenditures Anticipated Over the Life of the By-law	Expenditure Amount
Total gross expenditures planned over the next ten years	\$833,449,249
Less: Benefit to existing development	\$93,860,578
Less: Post planning period benefit	\$126,027,669
Less: Ineligible	\$14,243,000
Less: Grants, subsidies and other contributions	\$0
Net costs to be recovered from development charges	\$599,318,002

This suggests that for the non-D.C. cost over the life of the D.C. by-law (benefit to existing development, and grants, subsidies and other contributions), \$108.10 million (or an annual amount of \$10.81 million) will need to be contributed from taxes and rates, or other sources. With respect to the post period benefit amount of \$126.03 million, it will be included in subsequent D.C. study updates to reflect the portion of capital that benefits growth in the post period D.C. forecasts.

Based on the above table, the City plans to spend \$833.45 million over the life of the by-law, of which \$599.32 million (72%) is recoverable from D.C.s. Of this net amount, \$538.65 million is recoverable from residential development and \$60.67 million from non-residential development. It is noted also that any exemptions or reductions in the charges would reduce this recovery further.

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

The following services are calculated based on a long-term forecast to 2041:

- Engineering Services; and
- Fire Protection Services.

The following services are calculated based on a 10-year forecast to 2032:

- Public Works (facilities and fleet);
- Parks and Recreation Services; and



Table ES-3
City of Richmond Hill
Schedule of Development Charges

Service/Class of Service	RESIDENTIAL					NON-RESIDENTIAL			
	Single and Semi-Detached Dwelling	Multiples	Apartments - Large (>= 700 sq.ft.)	Apartments - Small (<700 sq.ft.)	Special Care/Special Dwelling Units	Retail (per sq.m. of Gross Floor Area)	Non-Retail (per sq.m. of Gross Floor Area)	Retail (per sq.ft. of Gross Floor Area)	Non-Retail (per sq.ft. of Gross Floor Area)
Municipal Wide Services/Class of Service:									
Engineering Services	15,790	13,128	9,972	7,079	4,988	105.49	87.30	9.80	8.11
Public Works (Facilities and Fleet)	1,849	1,537	1,168	829	584	12.92	9.80	1.20	0.91
Fire Protection Services	1,297	1,078	819	581	410	8.61	7.21	0.80	0.67
Parks and Recreation Services	22,738	18,905	14,360	10,194	7,183	43.70	33.05	4.06	3.07
Library Services	3,169	2,635	2,001	1,421	1,001	6.14	4.63	0.57	0.43
Total Municipal Wide Services/Class of Services	44,843	37,283	28,320	20,104	14,166	176.85	141.98	16.43	13.19



Table ES-4
City of Richmond Hill
Summary of Capital Costs Included in the D.C.

Service/Class of Service	Forecast Period	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share	Non-Residential Share
Protection Services	2023-2041	46,585,885	-	-	46,585,885	15,879,000	-	30,706,885	25,486,715	5,220,170
Printing Services	2023-2041	1,022,715,300	494,961,600	-	527,753,700	154,006,539	-	373,747,161	310,210,144	63,537,017
Trucks	2023-2032	32,560,000	-	-	32,560,000	4,767,302	-	27,792,698	23,345,866	4,446,832
Parks and Recreation Services	2023-2032	474,481,530	81,783,000	14,308,000	378,390,530	76,231,606	-	302,158,924	287,050,978	15,107,946
Services	2023-2032	44,000,000	-	-	44,000,000	1,884,846	-	42,115,154	40,009,396	2,105,758
Total		1,620,342,715	576,744,600	14,308,000	1,029,290,115	252,769,293	-	776,520,822	686,103,099	90,417,723



Schedule of Study Milestone	Dates
8. Council considers adoption of background study and passage of by-law	March 27, 2024
9. Newspaper notice given of by-law passage	By 20 days after passage
10. Last day for by-law appeal	40 days after passage
11. City makes pamphlet available (where by-law not appealed)	By 60 days after in force date

1.3 Changes to the D.C.A.: *Bill 108, 138, 197, and 213*

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

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

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

- Effective January 1, 2020, rental housing and institutional developments will pay D.C.s in six equal annual payments commencing at occupancy. Interest may be charged on the instalments, and any unpaid amounts may be added to the property and collected as taxes. As per Bill 23, non-profit housing developments are now exempt from paying D.C.s, however, prior to Bill 23, and as a result of Bill 108, non-profit housing developments paid D.C.s in 21 equal annual payments. Effective January 1, 2020, the D.C. amount for all developments occurring within 2 years of a Site Plan or Zoning By-law Amendment planning approval (for application submitted after this section is proclaimed), shall be determined based on the D.C. in effect on the day of Site Plan or Zoning By-law Amendment application. If the development is not proceeding via these planning approvals, then the amount is determined as of the date of issuance of a building permit.



directing the funds to the benefit of the development that contributed them (rather than to future development, which will generate the need for additional facilities directly proportionate to future growth).

The City's City-wide D.C. Reserve Fund balances by service as of December 31, 2022, are shown below:

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

Service	Reserve Fund Balance at December 31, 2022 – Before Commitments	Adjustments	Reserve Fund Balance at December 31, 2022 – After Commitments
Engineering Services	\$75,599,069	\$(36,586,629)	\$39,012,440
Fire Protection Services	610,474	(1,668,359)	(\$1,057,885)
Public Works Services	1,610,591	(938,290)	\$672,302
Parks and Recreation Services	44,878,330	(7,005,224)	\$37,873,106
Library Services	3,139,969	(1,255,123)	\$1,884,846
Total	\$125,838,433	(\$47,453,625)	\$78,384,809

Note: Amounts in brackets are deficit balances.

4.9 Deductions

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

- the level of service ceiling;
- uncommitted excess capacity;
- benefit to existing development; and
- anticipated grants, subsidies, and other contributions.

The requirements behind each of these reductions are addressed below.



Based on the projected growth over the 10-year forecast period, the City has identified \$474.48 million in future growth capital costs for parks and recreation services, with \$38.36 million benefiting existing development, and \$81.78 million benefiting growth in the post 2032 period. These capital needs include the development and enhancement of various types of parks and trails, various vehicles, and the need for eight (8) capital projects related to recreation facilities including the North Leslie Community Centre, and the TOC Community Centre.

Further, a deduction in the amount of \$37.87 million has been made to reflect the balance in the D.C. reserve fund. Therefore, the net growth capital cost is \$302.16 million to be included in the D.C calculation.

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



Table 5-2 (Continued)
Infrastructure Cost Included in the Development Charges Calculation
Parks and Recreation Services

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions*	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share	Non- Residential Share
2023-2032									95%	5%	
15	NL West Local Park (NLMPA#11/12)	2026-2027	3,051,000	-	193,000	2,858,000	-		2,858,000	2,715,100	142,900
16	Brodie House Parkette	2027-2028	780,000	-	44,000	736,000	-		736,000	699,200	36,800
17	Bernard KDA Linear Park (NW quad)	2027-2028	229,000	-		229,000	-		229,000	217,550	11,450
18	North Leslie West Local Park (NLMPA#8)	2027-2028	1,921,000	-	106,000	1,815,000	-		1,815,000	1,724,250	90,750
19	West Gormley Local Park	2028-2029	933,000	-	69,000	864,000	-		864,000	820,800	43,200
20	North Leslie East Parkette	2028-2029	452,000	-		452,000	-		452,000	429,400	22,600
21	Bond Crescent Local Park	2028-2029	396,000	-		396,000	-		396,000	376,200	19,800
22	Richmond Hill Centre Local Park	2029-2030	1,148,000	-	31,000	1,117,000	-		1,117,000	1,061,150	55,850
23	Oneida Crescent Linear Park	2029-2030	213,000	-		213,000	-		213,000	202,350	10,650
24	CN Rail Overpass - Linear Park to Subway	2029-2030	3,042,000	-		3,042,000	-		3,042,000	2,889,900	152,100
25	Russell Tilt Park Revitalization	2030-2032	2,968,000	-	151,000	2,817,000	1,132,600		1,684,400	1,600,180	84,220
26	West Gormley Parkette	2030-2031	440,000	-		440,000	-		440,000	418,000	22,000
27	North Leslie West Local Park (NLMPA#1)	2030-2031	1,444,000	-	81,000	1,363,000	7,600		1,355,400	1,287,630	67,770
28	NL West Local Park (NLMPA#2)	2031-2032	1,470,000	-	96,000	1,374,000	-		1,374,000	1,305,300	68,700
29	NL West Local Park (NLMPA#9)	2031-2032	675,000	-	38,000	637,000	-		637,000	605,150	31,850
30	NL West Local Park (NLMPA#3)	2031-2032	2,664,000	-	144,000	2,520,000	-		2,520,000	2,394,000	126,000
31	NL West Local Park (NLMPA#4)	2031-2032	1,072,000	-	67,000	1,005,000	-		1,005,000	954,750	50,250
32	Mackenzie Common Local Park (west)	2031-2032	1,121,000	-		1,121,000	-		1,121,000	1,064,950	56,050



Table 5-2 (Continued)
Infrastructure Cost Included in the Development Charges Calculation
Parks and Recreation Services

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions*	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share	Non- Residential Share
	2023-2032									95%	5%
58	Indoor Soccer Facility - Richmond Green Park	2024-2028	1,200,000	-		1,200,000	-		1,200,000	1,140,000	60,000
59	Richvale - Conversion of Unused Daycare Space	2024-2026	425,000	-		425,000	-		425,000	403,750	21,250
60	TOC Community Centre	2031-2041	51,000,000	-		51,000,000	-		51,000,000	48,450,000	2,550,000
	Reserve Fund Adjustment	Reserve		-		-	37,873,106		(37,873,106)	(35,979,451)	(1,893,655)
	Total		474,481,530	81,783,000	14,308,000	378,390,530	76,231,606	-	302,158,924	287,050,978	15,107,946

*Other deductions relate to portion of project eligible for CBC funding



trails and bridges. The gross capital cost of these projects is \$915.79 million. Deductions to account for the benefit to existing development and development beyond the 2041 forecast period have been made in the amounts of \$85.31 million and \$468.81 million, respectively. This results in a net growth related cost related to transportation projects of \$361.67 million.

In addition to the above, the City has also identified and isolated the growth-related components of storm, sanitary, and water system improvements as part of road reconstruction works. The growth-related component of these works is \$15.90 million which has been included in the D.C. calculation.

In addition to road related works, the City has provided for the inclusion of several projects that will service the growth and intensification areas based on the U.M.E.S.P. The listing of projects includes new sanitary sewers/watermains in addition to upgrades to existing sanitary sewers and watermains. For works that are being replaced with larger sewers/mains than what currently exists, the benefit to existing was based on two components. The first component is the incremental increase in cost for larger sewers, whereas the second component is based on the number of years the pipe was in services versus the expected useful life of the pipe. The balance is then attributed to growth as the pipe is being replaced prior to its full useful life as a result of growth. The detailed calculations for the benefit to existing are provided in Tables 5-4 and 5-5 for wastewater and water, respectively. The gross capital cost of these projects is \$62.89 million, however, \$22.81 million of these costs benefit growth outside of the forecast period and \$22.55 million of the costs benefit existing development. As a result, \$17.53 million has been included in the D.C. calculations related to U.M.E.S.P. works.

Furthermore, works related to the Elgin Mills Culvert in the amount of \$15.56 million have been identified for inclusion in the D.C. \$3.34 million of the costs relate to development outside of the forecast period and \$5.43 million benefits existing development. As such, \$6.79 million has been included in the D.C. calculation.

It is noted that the City has proposed to repeal or update all eight of their existing A.S.D.C. by-laws. Through this process, a number of boundary road works and the works related to Vogell bridge (City portion only) have been determined to provide a City-wide growth-related benefit. As a result, the capital cost of these works (\$12.57 million) has been incorporated into the City-wide D.C. calculation. The details on the approach to the A.S.D.C.s and the works/reserve fund balances that have been



incorporated into the City-wide D.C. are provided in Appendix H of this Background Study.

The City-wide reserve fund balance of \$39.01 million has been deducted from the D.C. calculation, in addition to the reserve fund balance of \$1.70 million related to A.S.D.C. projects which provide a City-wide benefit. This results in a total D.C. eligible amount of \$373.75 million for engineering services.

For engineering services, an 83% residential benefit and a 17% non-residential benefit have been applied towards the capital costs provided above based on the incremental growth in population to employment, for the forecast period to 2041.



**Table 5-4
City of Richmond Hill
U.M.E.S.P. Wastewater Costing Details**

U.M.E.S.P. Project #	Anticipated Timing as per MESP	Description	Location	From	To	Existing Pipe Size (mm)	New Pipe Size (mm)	Year of Install of Existing Pipe Size	Useful Life of Existing Pipe (Years)	Remaining Life of Existing	Length (m)	Cost (2023\$)	Cost/m of Existing Pipe	Cost/m of New Pipe	Difference in Cost/m of pipe	Total Cost of Existing Pipe 2023\$	Existing Benefit of Existing Pipe 2023\$	% of pipe cost related to upsizing/new	\$ of pipe cost related to upsizing/new	\$ of pipe cost related to existing	\$ of Existing Pipe related to BTE for DC	\$ of Existing Pipe related to Growth
WW-1	2041	Sewer Upgrade	King Road and Shomberg Road	on King Street	on Schomberg Road	250	375	1988	75	40	208	\$855,092	\$2,553	\$3,009	\$456	\$532,129	\$248,327	15%	\$129,559	\$725,533	\$338,582	\$386,951
WW-1	Post 2051	Sewer Upgrade	King Road and Shomberg Road	on King Street	on Schomberg Road	250	300	1988	75	40	262	\$810,031	\$2,553	\$2,590	\$36	\$668,480	\$311,958	1%	\$11,409	\$798,622	\$372,690	\$425,932
WW-2	2041	New Pipe	Yonge Street	Muirhead Crescent	Jefferson Sideroad		450	new			559	\$2,444,174			\$0	\$0	\$0	100%	\$2,444,174	\$0	\$0	\$0
WW-3	2041	New Pipe	Yonge Street north of Harris Avenue	on Yonge Street	Harris Avenue		250	new			145	\$581,355			\$0	\$0	\$0	100%	\$581,355	\$0	\$0	\$0
WW-3	Post 2051	Sewer Upgrade	Grange Drive and townwood Drive	on Grange Drive	on Townwood Drive	250	300	2004	75	56	369	\$1,145,080	\$2,553	\$2,590	\$36	\$942,205	\$238,692	1%	\$16,128	\$1,128,952	\$286,001	\$842,951
WW-4	2041	New Pipe	Yonge Street	NA	NA		250	new			121	\$381,896			\$0	\$0	\$0	100%	\$381,896	\$0	\$0	\$0
WW-5	2041	New Pipe	Yonge Street	NA	NA		250	new			49	\$205,766			\$0	\$0	\$0	100%	\$205,766	\$0	\$0	\$0
WW-6	2041	New Pipe	Yonge Street	NA	NA		300	new			115	\$401,508			\$0	\$0	\$0	100%	\$401,508	\$0	\$0	\$0
WW-7	2041	Sewer Upgrade	Industrial Road and Beechy Drive	Yonge Street/Industrial Road	Beechy Drive/Newkirk Road	250	375	1965	75	17	816	\$3,090,110	\$2,553	\$3,009	\$456	\$2,084,086	\$1,611,693	15%	\$468,198	\$2,621,912	\$2,027,612	\$594,300
WW-8	2041	Sewer Upgrade	Yonge Street	Levendale Road	Dunlop Street	300	450	1935	75	0	197	\$629,633	\$2,590	\$2,827	\$237	\$510,465	\$510,465	8%	\$52,808	\$576,825	\$576,825	\$0
WW-8	2041	Sewer Upgrade	Yonge Street	Levendale Road	Dunlop Street	300	525	1935	75	0	230	\$828,454	\$2,590	\$3,192	\$602	\$594,895	\$594,895	19%	\$156,223	\$672,231	\$672,231	\$0
WW-8	Post 2051	Sewer Upgrade	Yonge Street	Levendale Road	Dunlop Street	300	375	1935	75	0	109	\$369,983	\$2,590	\$3,009	\$419	\$281,779	\$281,779	14%	\$51,573	\$318,410	\$318,410	\$0
WW-8	Post 2051	Sewer Upgrade	Yonge Street	Levendale Road	Dunlop Street	300	450	1935	75	0	58	\$184,961	\$2,590	\$2,827	\$237	\$149,954	\$149,954	8%	\$15,513	\$169,448	\$169,448	\$0
WW-9	Post 2041	Sewer Upgrade	Wright Street	Hall Street	Yonge Street	250	375	1935	75	0	175	\$595,442	\$2,553	\$3,009	\$456	\$447,101	\$447,101	15%	\$90,218	\$505,224	\$505,224	\$0
WW-9	Post 2051	Sewer Upgrade	Wright Street	Hall Street	Yonge Street	250	375	1935	75	0	91	\$310,133	\$2,553	\$3,009	\$456	\$232,870	\$232,870	15%	\$46,990	\$263,143	\$263,143	\$0
WW-10	2041	Sewer Upgrade	Dunlop Street and Church Street	Yonge Street	Centre Street East	375	600	1973	75	25	120	\$442,746	\$3,009	\$3,283	\$274	\$359,619	\$239,746	8%	\$36,896	\$405,851	\$270,567	\$135,284
WW-10	2041	Sewer Upgrade	Dunlop Street and Church Street	Yonge Street	Centre Street East	450	600	1973	75	25	225	\$833,576	\$2,827	\$3,283	\$456	\$635,222	\$423,482	14%	\$115,774	\$717,802	\$478,534	\$239,267
WW-11	2041	Sewer Upgrade	Centre Street East and Pugsley Avenue	Church Street	Major Mackenzie Drive East	300	525	1979	75	31	380	\$1,357,603	\$2,590	\$3,192	\$602	\$984,154	\$577,370	19%	\$256,005	\$1,101,598	\$646,271	\$455,327
WW-11	Post 2041	Sewer Upgrade	Centre Street East and Pugsley Avenue	Church Street	Major Mackenzie Drive East	450	600	1979	75	31	68	\$238,247	\$2,827	\$3,283	\$456	\$192,235	\$112,778	14%	\$33,090	\$205,157	\$120,359	\$84,798
WW-11	Post 2051	Sewer Upgrade	Centre Street East and Pugsley Avenue	Church Street	Major Mackenzie Drive East	450	600	1979	75	31	399	\$1,393,934	\$2,827	\$3,283	\$456	\$1,127,965	\$661,739	14%	\$193,602	\$1,200,332	\$704,195	\$496,137
WW-12	2041	Sewer Upgrade	Major Mackenzie Drive East	Bayview Avenue	Essex Avenue	375	525	1975	75	27	300	\$1,083,446	\$3,009	\$3,192	\$182	\$904,013	\$578,569	6%	\$61,911	\$1,021,535	\$653,782	\$367,753
WW-12	Post 2051	Sewer Upgrade	Major Mackenzie Drive East	Bayview Avenue	Essex Avenue	250	300	1975	75	27	233	\$681,889	\$2,553	\$2,590	\$36	\$594,942	\$380,763	1%	\$9,604	\$672,285	\$430,262	\$242,023
WW-12	Post 2051	Sewer Upgrade	Major Mackenzie Drive East	Bayview Avenue	Essex Avenue	250	375	1975	75	27	84	\$284,969	\$2,553	\$3,009	\$456	\$213,975	\$136,944	15%	\$43,177	\$241,792	\$154,747	\$87,045
WW-12	Post 2051	Sewer Upgrade	Major Mackenzie Drive East	Bayview Avenue	Essex Avenue	375	450	1975	75	27	223	\$712,690	\$2,572	\$2,827	\$255	\$573,733	\$367,189	9%	\$64,372	\$648,318	\$414,924	\$233,394
WW-13	2041	Sewer Upgrade	Addison Street, May Avenue, Weldrick Road West and Springhead Gardens	Addison Street	Kitsilano Crescent	250	375	1973	75	25	94	\$348,714	\$2,553	\$3,009	\$456	\$240,020	\$160,013	15%	\$52,835	\$295,879	\$197,252	\$98,626
WW-13	2041	Sewer Upgrade	Addison Street, May Avenue, Weldrick Road West and Springhead Gardens	Addison Street	Kitsilano Crescent	300	450	1973	75	25	452	\$1,442,950	\$2,590	\$2,827	\$237	\$1,169,848	\$779,899	8%	\$121,022	\$1,321,928	\$881,286	\$440,643
WW-13	2041	Sewer Upgrade	Addison Street, May Avenue, Weldrick Road West and Springhead Gardens	Addison Street	Kitsilano Crescent	375	525	1973	75	25	176	\$714,982	\$3,009	\$3,192	\$182	\$529,949	\$353,299	6%	\$40,856	\$674,126	\$449,417	\$224,709
WW-13	2051	Sewer Upgrade	Addison Street, May Avenue, Weldrick Road West and Springhead Gardens	Addison Street	Kitsilano Crescent	250	375	1973	75	25	78	\$288,988	\$2,553	\$3,009	\$456	\$198,910	\$132,607	15%	\$43,786	\$245,202	\$245,202	\$0



Table 5-4 (Cont'd)
City of Richmond Hill
U.M.E.S.P. Wastewater Costing Details

U.M.E.S.P. Project #	Anticipated Timing as per MESP	Description	Location	From	To	Existing Pipe Size (mm)	New Pipe Size (mm)	Year of Install of Existing Pipe Size	Useful Life of Existing Pipe (Years)	Remaining Life of Existing	Length (m)	Cost (2023\$)	Cost/m of Existing Pipe	Cost/m of New Pipe	Difference in Cost/m of pipe	Total Cost of Existing Pipe 2023\$	Existing Benefit of Existing Pipe 2023\$	% of pipe cost related to upsizing/new	\$ of pipe cost related to upsizing/new	\$ of pipe cost related to existing	\$ of Existing Pipe related to BTE for DC	\$ of Existing Pipe related to Growth
WW-14	2041	New Pipe	Addison Street, Yonge Street, palmer Avenue	Addison Street	Harding Blvd		375	new			462	\$1,800,114			\$0	\$0	\$0	100%	\$1,800,114	\$0	\$0	\$0
WW-15	Post 2051	Sewer Upgrade	Cedar Avenue	Fox Run Crescent	on Cedar Avenue	200	300	1974	75	26	288	\$841,679	\$1,678	\$2,590	\$912	\$482,578	\$315,284	35%	\$296,366	\$545,313	\$545,313	\$0
WW-16	Post 2051	Sewer Upgrade	Baif Boulevard	Yonge Street	Springhead Gardens	250	375	1973	75	25	273	\$929,379	\$2,553	\$3,009	\$456	\$697,844	\$465,230	15%	\$140,815	\$788,564	\$788,564	\$0
WW-16	Post 2051	Sewer Upgrade	Baif Boulevard	Yonge Street	Springhead Gardens	300	375	1973	75	25	69	\$235,320	\$2,590	\$3,009	\$419	\$179,220	\$119,480	14%	\$32,802	\$202,518	\$202,518	\$0
WW-17	Post 2051	Sewer Upgrade	Carrville Road	Yonge Street	Duncombe Lane	300	375	1977	75	29	976	\$3,320,329	\$2,590	\$3,009	\$419	\$2,528,757	\$1,550,971	14%	\$462,834	\$2,857,495	\$2,857,495	\$0
WW-18	2041	New Pipe	Dalemout Gate	Yonge Street	Ellesmere Street		300	new			33	\$148,879			\$0	\$0	\$0	100%	\$148,879	\$0	\$0	\$0
WW-18	Post 2051	Sewer Upgrade	Dalemout Gate	Yonge Street	Ellesmere Street	250	300	1997	75	49	46	\$158,796	\$2,553	\$2,590	\$36	\$117,456	\$40,718	1%	\$2,237	\$156,559	\$156,559	\$0
WW-19	Post 2051	New Pipe	Yonge Street, High Tech Road and Red Maple Road	Yonge Street	Red Maple Road			new			1,071	\$5,997,674			\$0	\$0	\$0	100%	\$5,997,674	\$0	\$0	\$0
WW-20	Post 2051	Sewer Upgrade	East Beaver Creek Road	York Blvd	East Pearce St	250	300	1982	75	43	114	\$332,457	\$2,553	\$2,590	\$36	\$290,066	\$123,762	1%	\$4,682	\$327,775	\$139,850	\$187,924
WW-20	Post 2051	Sewer Upgrade	East Beaver Creek Road	York Blvd	East Pearce St	300	450	1982	75	43	251	\$983,263	\$2,590	\$3,465	\$875	\$650,318	\$277,469	25%	\$248,403	\$734,860	\$313,540	\$421,320
Grand Total												\$41,148,532							\$15,365,008	\$25,783,524	\$18,606,362	\$7,177,162



**Table 5-5
City of Richmond Hill
U.M.E.S.P. Water Costing Details**

U.M.E.S.P. Project #	Anticipated Timing as per MESP	Description	OP Area	Location	Existing Pipe Size (mm)	New Pipe Size (mm)	Year of Install of Existing Pipe Size	Useful Life of Existing Pipe (Years)	Remaining Life of Existing	Length (m)	Cost (2023\$)	Cost/m of Existing Pipe	Cost/m of New Pipe	Difference in Cost/m of pipe	Total Cost of Existing Pipe 2023\$	Exisitng Benefit of Existing Pipe 2023\$	% of pipe cost related to upsizing/new	% of pipe cost related to existing	% of Existing Pipe related to BTE for DC	% of Existing Pipe related to Growth	\$ of pipe cost related to upsizing/ new	\$ of pipe cost related to existing	\$ of Existing Pipe related to BTE for DC	\$ of Existing Pipe related to Growth
W1	2041	New 150 mm Watermain	Oak Ridges Local Centre	Yonge Street South of Elm Grove Avenue		150	new			136	\$400,209			\$0	\$0	\$0	100%	0%	0%	0%	\$400,209	\$0	\$0	\$0
W2.1	2041	Watermain Replacement (150mm to 300mm)	Regional Mixed Used Corridor	Yonge Street & Murihead Crescent	150	300	2009	100	86	50	\$293,996	\$3,511	\$4,605	\$1,094	\$175,546	\$24,576	24%	76%	14%	86%	\$69,860	\$224,136	\$31,379	\$192,757
W2.2	2041	New 300mm Watermain	Regional Mixed Used Corridor	Yonge Street between murihead Crescent and Stouffville Road		300	new			210	\$949,595			\$0	\$0	\$0	100%	0%	0%	0%	\$949,595	\$0	\$0	\$0
W2.3	2041	New 200mm Watermain	Regional Mixed Used Corridor	Yonge Street North of Murihead Crescent		200	new			55	\$179,444			\$0	\$0	\$0	100%	0%	0%	100%	\$179,444	\$0	\$0	\$0
W3.1	2041	New 250mm Watermain	Regional Mixed Used Corridor	Harris & Yonge		250	new			55	\$226,330			\$0	\$0	\$0	100%	0%	0%	0%	\$226,330	\$0	\$0	\$0
W3.2	2041	New 300mm Watermain	Regional Mixed Used Corridor	Harris & Yonge		300	new			235	\$960,621			\$0	\$0	\$0	100%	0%	0%	0%	\$960,621	\$0	\$0	\$0
W3.3	2041	New 300mm Watermain	Regional Mixed Used Corridor	Yonge Street West Side, North of Gamble Road		300	new			135	\$547,119			\$0	\$0	\$0	100%	0%	0%	0%	\$547,119	\$0	\$0	\$0
W4	2041	New 250mm Watermain	Regional Mixed Used Corridor	Yonge Street East Side, North of Silverwood Avenue		250	new			400	\$1,666,022			\$0	\$0	\$0	100%	0%	0%	0%	\$1,666,022	\$0	\$0	\$0
W5	2041	New 300mm Watermain	Key Development Area	South of Yonge Street and Canyon Hill Avenue		300	new			345	\$1,417,573			\$0	\$0	\$0	100%	0%	0%	0%	\$1,417,573	\$0	\$0	\$0
W6.1	2051	Watermain Replacement (150mm to 300mm)	Regional Mixed Used Corridor	Yonge St. North of Oxford St.	150	300	2001	100	78	25	\$163,898	\$3,511	\$4,605	\$1,094	\$87,773	\$19,310	24%	76%	22%	78%	\$38,946	\$124,952	\$27,489	\$97,462
W6.2	2051	Watermain Replacement (150mm to 250mm)	Regional Mixed Used Corridor	Yonge St. & Oxford St.	150	250	2001	100	78	35	\$218,101	\$3,511	\$4,240	\$730	\$122,882	\$27,034	17%	83%	22%	78%	\$37,523	\$180,578	\$39,727	\$140,851
W7.1	2041	Watermain Replacement (150mm to 250mm)	Downtown Local Centre	Lorne Ave & Church St. North of Major Mackenzie	150	250	1954	75	6	465	\$1,855,100	\$1,437	\$2,961	\$1,524	\$668,216	\$614,759	51%	49%	92%	8%	\$954,736	\$900,364	\$828,335	\$72,029
W7.2	2051	Watermain Replacement (150mm to 300mm)	Downtown Local Centre/Regional Mixed Use Corridor	Church St. South of Major Mackenzie	150	300	1984	75	36	835	\$3,606,203	\$1,742	\$3,234	\$1,492	\$1,454,299	\$756,235	46%	54%	52%	48%	\$1,664,120	\$1,942,083	\$1,009,883	\$932,200
W8.1	2041	Watermain Replacement (150mm to 300mm)	Downtown Local Centre	Yonge St East Side between Major Mackenzie Dr. and elmwood Ave.	150	300	1978	75	30	220	\$848,983	\$3,511	\$4,605	\$1,094	\$772,404	\$463,442	24%	76%	60%	40%	\$201,739	\$647,245	\$388,347	\$258,898
W8.2	2041	New 300mm Watermain	Downtown Local Centre	Yonge St East Side between Major Mackenzie Dr. and elmwood Ave.		300	new			80	\$457,982			\$0	\$0	\$0	100%	0%	0%	0%	\$457,982	\$0	\$0	\$0
W8.3	2041	New 150 mm Watermain	Downtown Local Centre	Yonge St & Palmer Ave.		150	new			25	\$147,101			\$0	\$0	\$0	100%	0%	0%	0%	\$147,101	\$0	\$0	\$0
W9.1	Ultimate	Watermain Replacement (150mm to 250mm)	Local Development Area	Cedar Ave. South of Major Mackenzie Dr.	150	250	1995	75	47	140	\$622,999	\$2,078	\$2,765	\$687	\$290,905	\$108,605	25%	75%	37%	63%	\$154,832	\$468,167	\$174,782	\$293,384
W9.2	2051	Watermain Replacement (150mm to 250mm)	Local Development Area	Norfolk Ave. South of Major Mackenzie Dr	150	250	2003	75	55	110	\$522,027	\$2,102	\$3,219	\$1,117	\$231,174	\$61,646	35%	65%	27%	73%	\$181,180	\$340,847	\$90,893	\$249,954
W10	2041	Watermain Replacement (150mm to 300mm)	Local Development Area	Old Markham Rd. & Bayview Ave	150	300	1988	75	40	215	\$937,539	\$1,368	\$3,192	\$1,824	\$294,097	\$137,245	57%	43%	47%	53%	\$535,737	\$401,802	\$187,508	\$214,295
W11.1	2041	Watermain Replacement (150mm to 250mm)	Regional Mixed Used Corridor	Yonhurst Drive at Yonge Street Intersection	150	250	1992	75	44	15	\$81,305	\$1,687	\$2,918	\$1,231	\$25,306	\$10,460	42%	58%	41%	59%	\$34,300	\$47,004	\$19,428	\$27,576
W11.2	2041	New 300mm Watermain	Regional Mixed Used Corridor	Yonge Street East Side north of Clarissa Dr.		300	new			100	\$546,810			\$0	\$0	\$0	100%	0%	0%	0%	\$546,810	\$0	\$0	\$0
W11.3	2041	Watermain Replacement (150mm to 300mm)	Regional Mixed Used Corridor	Yonge Street East Side north of Clarissa Dr.	150	300	1993	75	45	55	\$346,433	\$3,511	\$4,605	\$1,094	\$193,101	\$77,240	24%	76%	40%	60%	\$82,321	\$264,112	\$105,645	\$158,467



Table 5-5 (Cont'd)
City of Richmond Hill
U.M.E.S.P. Water Costing Details

U.M.E.S.P. Project #	Anticipated Timing as per MESP	Description	OP Area	Location	Existing Pipe Size (mm)	New Pipe Size (mm)	Year of Install of Existing Pipe Size	Useful Life of Existing Pipe (Years)	Remaining Life of Existing	Length (m)	Cost (2023\$)	Cost/m of Existing Pipe	Cost/m of New Pipe	Difference in Cost/m of pipe	Total Cost of Existing Pipe 2023\$	Exisitng Benefit of Existing Pipe 2023\$	% of pipe cost related to upsizing/new	% of pipe cost related to existing	% of Existing Pipe related to BTE for DC	% of Existing Pipe related to Growth	\$ of pipe cost related to upsizing/ new	\$ of pipe cost related to existing	\$ of Existing Pipe related to BTE for DC	\$ of Existing Pipe related to Growth						
W12.1	2041	Watermain Replacement (150mm to 250mm)	Regional Mixed Used Corridor	Spruce Avenue at Yonge St. Intersection	150	250	1992	75	44	120	\$498,929	\$1,687	\$2,918	\$1,231	\$202,448	\$83,679	42%	58%	41%	59%	\$210,486	\$288,444	\$119,223	\$169,220						
W12.2	2041	Watermain Replacement (150mm to 250mm)	Regional Mixed Used Corridor	Oak Avenue at Yonge St. Intersection	150	250	1994	75	46	110	\$439,537	\$1,687	\$2,918	\$1,231	\$185,578	\$71,757	42%	58%	39%	61%	\$185,430	\$254,107	\$98,255	\$155,852						
W12.3	2041	Watermain Replacement (150mm to 250mm)	Regional Mixed Used Corridor	Edgar Avenue at Yonge St. intersection	150	250	1996	75	48	95	\$403,367	\$1,687	\$2,918	\$1,231	\$160,272	\$57,698	42%	58%	36%	64%	\$170,170	\$233,196	\$83,951	\$149,246						
W13.1	2041	Watermain Replacement (150mm to 250mm)	Regional Mixed Used Corridor/Richmond Hill Centre	Scott Drive at Yonge St. Intersection	150	250	1988	75	40	120	\$485,805	\$1,687	\$2,918	\$1,231	\$202,448	\$94,476	42%	58%	47%	53%	\$204,949	\$280,856	\$131,066	\$149,790						
W13.2	Ultimate	Watermain Replacement (150mm to 250mm)	Richmond Hill Centre	Mackay Drive at Yonge St. Intersection	150	250	1989	75	41	140	\$578,173	\$1,687	\$2,918	\$1,231	\$236,190	\$107,073	42%	58%	45%	55%	\$243,917	\$334,256	\$151,530	\$182,727						
W14.1	2041	Watermain Replacement (150mm to 300mm)	Richmond Hill Centre	High Tech Road between Yonge St. and Red Maple Rd	150	300	1999	75	51	85	\$366,785	\$1,687	\$3,192	\$1,505	\$143,401	\$45,888	47%	53%	32%	68%	\$172,913	\$193,872	\$62,039	\$131,833						
W14.2	2041	New 300mm Watermain	Richmond Hill Centre	High Tech Road between Yonge St. and Red Maple Rd		300	new			205	\$847,386			\$0	\$0	\$0	100%	0%	0%	0%	\$847,386	\$0	\$0	\$0						
W14.3	2041	Watermain Replacement (150mm to 300mm)	Richmond Hill Centre	High Tech Road between Yonge St. and Red Maple Rd	150	300	1999	75	51	150	\$627,636	\$1,687	\$3,192	\$1,505	\$253,060	\$80,979	47%	53%	32%	68%	\$295,886	\$331,751	\$106,160	\$225,590						
W15	2041	Watermain Replacement (150mm to 250mm)	Richmond Hill Centre	Garden Avenue at Yonge St. Intersection	150	250	1995	75	47	120	\$498,929	\$1,687	\$2,918	\$1,231	\$202,448	\$75,581	42%	58%	100%	0%	\$210,486	\$288,443	\$288,443	\$0						
Grand Total											\$21,741,937																			



Table 5-6 (Continued)
Infrastructure Cost Included in the Development Charges Calculation
Engineering Services

Prj.No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2023\$)	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share	Non-Residential Share
2023-2041									83%	17%	
52	Sidewalk Program	2024-2041	10,450,000	1,306,300		9,143,700	1,045,000	-	8,098,700	6,721,921	1,376,779
53	Pedestrian Crossover (PXO) Implementation	2024-2041	5,400,000	225,000		5,175,000	3,780,000	-	1,395,000	1,157,850	237,150
54	Automated Speed Enforcement (ASE) Implementation	2025-2041	7,140,000	315,000		6,825,000	4,998,000	-	1,827,000	1,516,410	310,590
55	TSOS Implementation	2024-2041	5,625,000	234,400		5,390,600	3,937,500	-	1,453,100	1,206,073	247,027
56	Annual Traffic Improvements	2024-2041	6,930,000	288,800		6,641,200	4,851,000	-	1,790,200	1,485,866	304,334
	Other										
57	Road Reconstruction - Storm Improvements	2024-2032	8,000,000	-		8,000,000	-	-	8,000,000	6,640,000	1,360,000
58	Road Reconstruction - Sanitary and Water System Improvements (Excluding U.M.E.S.P. Works)	2024-2039	7,900,000	-		7,900,000	-	-	7,900,000	6,557,000	1,343,000
	Previous A.S.D.C. Works with a City-wide Growth-Related Benefit										
59	Boundary Road Improvements	2024-2041	8,130,000	-		8,130,000	-	-	8,130,000	6,747,900	1,382,100
60	Vogell Bridge-City-Wide Share	2024-2041	4,440,000	-		4,440,000	-	-	4,440,000	3,685,200	754,800
	Water/Wastewater/Stormwater Infrastructure										
61	Elgin Mills Culvert (York Region)	2026-2027	15,560,000	3,342,600		12,217,400	5,430,800	-	6,786,600	5,632,878	1,153,722
62	Sanitary collection network - U.M.E.S.P.	2023-2041	17,590,000	2,800,000		14,790,000	7,190,000	-	7,600,000	6,308,000	1,292,000
63	Water distribution network - U.M.E.S.P.	2023-2041	16,030,000	3,650,000		12,380,000	2,450,000	-	9,930,000	8,241,900	1,688,100
64	Sanitary collection network - U.M.E.S.P.	2042+	23,560,000	12,146,000		11,414,000	11,414,000	-	-	-	-
65	Water distribution network - U.M.E.S.P.	2042+	5,711,000	4,217,000		1,494,000	1,494,000	-	-	-	-
66	Reserve Fund Adjustment	Reserve				-	39,012,440	-	(39,012,440)	(32,380,325)	(6,632,115)
67	Reserve Fund Adjustment - Adjustment for ASDC Projects	Reserve				-	1,700,599	-	(1,700,599)	(1,411,497)	(289,102)
	Total		1,022,715,300	494,961,600	-	527,753,700	154,006,539	-	373,747,161	310,210,144	63,537,017



Table 6-1
City of Richmond Hill
Development Charge Calculation
Municipal-wide Services
2023 to 2041

SERVICE/CLASS	2023\$ D.C.-Eligible Cost		2023\$ D.C.-Eligible Cost		
	Residential	Non-Residential	S.D.U.	Non-Residential (Blended)	
				per sq.m	per sq.ft.
	\$	\$	\$	\$	\$
1. <u>Engineering Services</u>					
1.1 Roads, water, wastewater & stormwater infrastructure	310,210,144	63,537,017	15,790	91.06	8.46
2. <u>Fire Protection Services</u>					
2.1 Fire facilities, vehicles & equipment	25,486,715	5,220,170	1,297	7.53	0.70
TOTAL	\$335,696,858	\$68,757,188	\$17,087	\$98.60	\$9.16
D.C.-Eligible Capital Cost	\$335,696,858	\$68,757,188			
2041 Gross Population/GFA Growth (sq.ft.)	68,408	7,510,300			
Cost Per Capita/Non-Residential GFA (sq.ft.)	\$4,907.27	\$9.16			
<u>By Residential Unit Type</u>					
	<u>P.P.U.</u>				
Single and Semi-Detached Dwelling	3.482	\$17,087			
Multiples	2.895	\$14,207			
Apartments - Large (>= 700 sq.ft.)	2.199	\$10,791			
Apartments - Small (<700 sq.ft.)	1.561	\$7,660			
Special Care/Special Dwelling Units	1.100	\$5,398			



Table 6-2
City of Richmond Hill
Development Charge Calculation
Municipal-wide Services
2023 to 2032

SERVICE/CLASS	2023\$ D.C.-Eligible Cost		2023\$ D.C.-Eligible Cost		
	Residential	Non-Residential	S.D.U.	Non-Residential (Blended)	
				per sq.m	per sq.ft.
	\$	\$	\$	\$	\$
3. <u>Public Works (Facilities and Fleet)</u>					
3.1 Public works facilities, vehicles and equipment	23,345,866	4,446,832	1,849	10.33	0.96
4. <u>Parks and Recreation Services</u>					
4.1 Park development, amenities, trails, vehicles, equipment, and recreation facilities	287,050,978	15,107,946	22,738	35.31	3.28
5. <u>Library Services</u>					
5.1 Library facilities and materials	40,009,396	2,105,758	3,169	4.95	0.46
TOTAL	\$350,406,240	\$21,660,536	\$27,756	\$50.59	\$4.70
D.C.-Eligible Capital Cost	\$350,406,240	\$21,660,536			
10-Year Gross Population/GFA Growth (sq.ft.)	43,959	4,609,400			
Cost Per Capita/Non-Residential GFA (sq.ft.)	\$7,971.21	\$4.70			
By Residential Unit Type	P.P.U.				
Single and Semi-Detached Dwelling	3.482	\$27,756			
Multiples	2.895	\$23,077			
Apartments - Large (>= 700 sq.ft.)	2.199	\$17,529			
Apartments - Small (<700 sq.ft.)	1.561	\$12,443			
Special Care/Special Dwelling Units	1.100	\$8,768			

Table 6-3
City of Richmond Hill
Development Charge Calculation
Total All Services

	2023\$ D.C.-Eligible Cost		2023\$ D.C.-Eligible Cost		
	Residential	Non-Residential	S.D.U.	per sq.m	per sq.ft.
	\$	\$	\$	\$	\$
Municipal-wide Services/Classes 2041	335,696,858	68,757,188	17,087	98.60	9.16
Municipal-wide Services/Classes 10 Year	350,406,240	21,660,536	27,756	50.59	4.70
TOTAL	\$686,103,099	\$90,417,723	\$44,843	\$149.19	\$13.86



Table 6-4
 City of Richmond Hill
 Development Charge Calculation
 Municipal-wide Services
 2023 to 2041

SERVICE/CLASS	2023\$ D.C.-Eligible Cost		2023\$ D.C.-Eligible Cost		2023\$ D.C.-Eligible Cost	
	Retail/Non-Retail		Retail/Non-Retail		Retail/Non-Retail	
	Retail	Non-Retail	Retail per sq.m.	Non-Retail per sq.m.	Retail per sq.ft.	Non-Retail per sq.ft.
1. <u>Engineering Services</u>	\$	\$	\$	\$	\$	\$
1.1 Roads, water, wastewater & stormwater infrastructure	15,229,036	48,307,982	105.49	87.30	9.80	8.11
2. <u>Fire Protection Services</u>						
2.1 Fire facilities, vehicles & equipment	1,251,210	3,968,960	8.61	7.21	0.80	0.67
TOTAL	\$16,480,246	\$52,276,942	\$114.10	\$94.51	\$10.60	\$8.78
D.C.-Eligible Capital Cost	\$16,480,246	\$52,276,942				
2041 Retail/Non-Retail GFA Growth (sq.ft.)	1,554,900	5,955,400				
Cost per Retail/Non-Retail GFA (sq.ft.)	\$10.60	\$8.78				



Table 6-5
City of Richmond Hill
Development Charge Calculation
Municipal-wide Services
2023 to 2032

SERVICE/CLASS	2023\$ D.C.-Eligible Cost		2023\$ D.C.-Eligible Cost		2023\$ D.C.-Eligible Cost	
	Retail/Non-Retail		Retail/Non-Retail		Retail/Non-Retail	
	Retail	Non-Retail	Retail per sq.m.	Non-Retail per sq.m.	Retail per sq.ft.	Non-Retail per sq.ft.
3. <u>Public Works (Facilities and Fleet)</u>	\$	\$	\$	\$	\$	\$
3.1 Public works facilities, vehicles and equipment	1,115,150	3,331,682	12.92	9.80	1.20	0.91
4. <u>Parks and Recreation Services</u>						
4.1 Park development, amenities, trails, vehicles, equipment, and recreation facilities	3,788,680	11,319,266	43.70	33.05	4.06	3.07
5. <u>Library Services</u>						
5.1 Library facilities and materials	528,069	1,577,688	6.14	4.63	0.57	0.43
TOTAL	\$5,431,899	\$16,228,637	\$62.75	\$47.47	\$5.83	\$4.41
D.C.-Eligible Capital Cost	\$5,431,899	\$16,228,637				
10-Year Retail/Non-Retail GFA Growth (sq.ft.)	932,500	3,676,900				
Cost per Retail/Non-Retail GFA (sq.ft.)	\$5.83	\$4.41				

Table 6-6
City of Richmond Hill
Development Charge Calculation
Total All Services

	2023\$ D.C.-Eligible Cost		2023\$ D.C.-Eligible Cost		2023\$ D.C.-Eligible Cost	
	Retail/Non-Retail		Retail/Non-Retail		Retail/Non-Retail	
	Retail	Non-Retail	Retail per sq.m	Non-Retail per sq.m	Retail per sq.ft.	Non-Retail per sq.ft.
Municipal-wide Services/Classes 2041	\$ 16,480,246	\$ 52,276,942	\$ 114.10	\$ 94.51	\$ 10.60	\$ 8.78
Municipal-wide Services/Classes 10 Year	5,431,899	16,228,637	62.75	47.47	5.83	4.41
TOTAL	21,912,145	68,505,578	\$176.85	\$141.98	\$16.43	\$13.19



Table 6-7
City of Richmond Hill
Gross Expenditure and Sources of Revenue Summary
For Costs to be Incurred over the Life of the By-law

Service/Class	Total Gross Cost	Sources of Financing					
		Tax Base or Other Non-D.C. Source			Post D.C. Period Benefit	D.C. Reserve Fund	
		Other Deductions	Benefit to Existing	Other Funding		Residential	Non-Residential
1. Engineering Services							
1.1 Roads, water, wastewater & stormwater infrastructure	291,298,619	0	36,494,398	0	44,244,669	174,764,428	35,795,124
2. Fire Protection Services							
2.1 Fire facilities, vehicles & equipment	35,112,000	0	15,879,000	0	0	15,963,390	3,269,610
3. Public Works (Facilities and Fleet)							
3.1 Public works facilities, vehicles and equipment	32,560,000	0	4,095,000	0	0	23,910,600	4,554,400
4. Parks and Recreation Services							
4.1 Park development, amenities, trails, vehicles, equipment, and recreation facilities	430,478,630	14,243,000	37,392,180	0	81,783,000	282,207,428	14,853,023
5. Library Services							
5.1 Library facilities and materials	44,000,000	0	0	0	0	41,800,000	2,200,000
Total Expenditures & Revenues	\$833,449,249	\$14,243,000	\$93,860,578	\$0	\$126,027,669	\$538,645,846	\$60,672,156



7.5 Other Recommendations

It is recommended that Council:

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

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

“Continue the D.C. approach to calculate the charges on a uniform City-wide basis for all services;”

“Approve the capital project listing set out in Chapter 5 of the D.C.s Background Study dated December 22, 2023, subject to further annual review during the capital budget process;”

“Approve the D.C.s Background Study dated December 22, 2023, as amended (with Addendum #1 dated March 8, 2024);”

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

“Approve the D.C. By-law as set out in Appendix H.”



Table C-2
City of Richmond Hill
Operating and Capital Expenditure Impacts for Future Capital Expenditures

SERVICE/CLASS OF SERVICE	GROSS COST LESS BENEFIT TO EXISTING	ANNUAL LIFECYCLE EXPENDITURES	ANNUAL OPERATING EXPENDITURES	TOTAL ANNUAL EXPENDITURES
1. Engineering Services				
1.1 Roads, water, wastewater & stormwater infrastructure	868,708,761	13,900,394	42,228,779	56,129,173
2. Fire Protection Services				
2.1 Fire facilities, vehicles & equipment	30,706,885	1,537,428	12,431,756	13,969,184
3. Public Works (Facilities and Fleet)				
3.1 Public works facilities, vehicles and equipment	27,792,698	1,495,161	8,583,826	10,078,987
4. Parks and Recreation Services				
4.1 Park development, amenities, trails, vehicles, equipment, and recreation facilities	398,249,924	18,498,614	9,376,836	27,875,450
5. Library Services				
5.1 Library facilities and materials	42,115,154	1,400,220	2,977,328	4,377,548
Total	1,367,573,422	36,831,817	75,598,525	112,430,342



made a concerted effort to integrate the A.M.P. with financial planning and municipal budgeting and are making full use of all available infrastructure financing tools.

Commensurate with the above, the City prepared an A.M.P. in 2022 for its existing assets; however, it did not take into account future growth-related assets for all services included in the D.C. calculations. As a result, the asset management requirement for the D.C. must be undertaken in the absence of this information.

In recognition to the schematic above, the following table (presented in 2023 \$) has been developed to provide the annualized expenditures and revenues associated with new growth. Note that the D.C.A. does not require an analysis of the non-D.C. capital needs or their associated operating costs so these are omitted from the table below. As well, as all capital costs included in the D.C.-eligible capital costs are not included in the City's A.M.P., the present infrastructure gap and associated funding plan have not been considered at this time. Hence the following does not represent a fiscal impact assessment (including future tax/rate increases) but provides insight into the potential affordability of the new assets:

1. The non-D.C. recoverable portion of the projects that will require financing from municipal financial resources (i.e., taxation, rates, fees, etc.). This amount has been presented on an annual debt charge amount based on 20-year financing.
2. Lifecycle costs for the 2023 D.C. capital works have been presented based on a sinking fund basis. The assets have been considered over their estimated useful lives.
3. Incremental operating costs for the D.C. services (only) have been included.
4. The resultant total annualized expenditures are approximately \$130.52 million.
5. Consideration was given to the potential new taxation and user fee revenues which will be generated as a result of new growth. These revenues will be available to finance the expenditures above. The new operating revenues are approximately \$48.15 million. This amount, totalled with the existing operating revenues of approximately \$306.08 million, provides annual revenues of approximately \$354.23 million by the end of the period.



6. In consideration of the above, the capital plan is deemed to be financially sustainable.

City of Richmond Hill
Asset Management – Future Expenditures and Associated Revenues
2023\$

Asset Management – Future Expenditures and Associated Revenues	2041 (Total)
Expenditures (Annualized)	
Annual Debt Payment on Non-Growth Related Capital ¹	9,873,825
Annual Debt Payment on Post Period Capital ²	8,219,059
Lifecycle:	
Annual Lifecycle	\$36,831,817
Incremental Operating Costs (for D.C. Services)	\$75,598,525
Total Expenditures	130,523,226
Revenue (Annualized)	
Total Existing Revenue ³	\$306,078,256
Incremental Tax and Non-Tax Revenue (User Fees, Fines, Licences, etc.)	\$48,154,726
Total Revenues	\$354,232,982

¹ Non-Growth Related component of Projects

² Interim Debt Financing for Post Period Benefit

³ As per Sch. 10 of FIR