



Municipality of North Cowichan **Kingsview Development Project**

Fiscal Impact Analysis

2026-04-22



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Executive Summary

This Fiscal Impact Analysis evaluates the upper phases of the Kingsview development (Phases 4–8) to help Council consider an OCP amendment and a possible extension of the Phased Development Agreement. The scope includes 622 dwellings (single-family and multi-family) with no non-residential development, resulting in an estimated 1,926 new residents (**section 1.2**).

On an ongoing basis, the development is projected to generate a net annual operating surplus of approximately **\$731,500** for the Municipality. Recurring revenues comprise approximately \$1.7 million from municipal residential taxation (**section 3.1**), approximately \$0.8 million from non-tax sources (**section 3.2**), and approximately \$0.6 million from utility fees (**section 3.3**). Incremental costs to serve the development are estimated at approximately \$1.7 million for operating expenditures (**section 4.1**), plus a lifecycle renewal allowance of approximately \$0.7 million to reflect annualized long-term asset renewal needs (**section 4.2**). Amounts collected and remitted on behalf of other entities (e.g., regional and education taxes) are excluded from these results. Overall, the analysis indicates the development is expected to cover its incremental costs.

In addition to the ongoing results, the Municipality is expected to realize a positive net one-time funding position of approximately **\$21.6 million** (**section 6**), reflecting one-time revenues and developer-delivered works.

1. Introduction

1.1 Overview

The Municipality of North Cowichan (“the Municipality”) is weighing an Official Community Plan (OCP) amendment and a possible extension of the Kingsview Phased Development Agreement (PDA) for the upper phases of the Kingsview development. To support prudent and transparent decision-making, this Fiscal Impact Analysis (FIA) assesses whether the development’s ongoing municipal revenues will be sufficient to offset the incremental costs required to serve new residents. Prepared at the Municipality’s request, the FIA intends to inform Council, municipal staff, and the public as they evaluate the fiscal implications of growth.

An FIA is a forward-looking financial assessment that compares new revenues attributable to a development (e.g., municipal property taxes, non-tax revenues, utility user fees, and parcel taxes) against the incremental municipal costs required to serve that development (e.g., operating expenditures and lifecycle rehabilitation allowances). It helps to ensure that the full cost of growth is weighed against the full set of municipal revenue sources. Results are reported as a net fiscal impact (surplus/shortfall). The key objectives of the FIA are to:

- Quantify the infrastructure costs the Municipality would incur to support the upper phases of the Kingsview development.
- Determine whether anticipated development will generate sufficient municipal revenues to offset incremental operating and lifecycle costs.
- Inform Council and municipal staff and support prudent financial planning to mitigate the risk of undue taxpayer burden associated with the development.

The FIA focuses on the municipal-level fiscal impact. Revenues that the Municipality collects and remits on behalf of other entities (e.g., school district or regional district requisitions) are excluded from the net municipal impact. Where developer-built infrastructure is reimbursed via DCC credits, those transactions are treated in the one-time funding comparison to avoid overstating municipal gains. The analysis relies on current bylaws, financial statements, and available data at the time of writing; certain inputs (e.g., DCC rate updates, CAC policy parameters, and final servicing designs) may evolve.

1.2 Development Assumptions

The FIA evaluates the upper phases of the Kingsview development only (Phases 4-8). The lower phases (Phases 1-3) are outside the scope of this analysis. Based on the proposed plan of subdivision, the upper phases include 622 dwellings comprising 241 single-detached units and 381 multi-family units. The single-detached total is further split into 110 lots under 500 m² and 131 lots over 500 m². The

development assumptions for the upper phases do not include new non-residential floor area. **Table 1** details the distribution of dwellings by phase.

Table 1 - Housing Units Assumption

Dwelling Type	Single-Family (<500 sq.m.)	Single-Family (>500 sq.m.)	Total Single-Family	Multi-Family
Phase 4	0	0	0	57
Phase 5	7	46	53	148
Phase 6	10	46	56	68
Phase 7	47	0	47	76
Phase 8	46	39	85	32
Total	110	131	241	381

The upper phases of the Kingsview development are expected to increase the Municipality's population. Population growth is estimated by applying persons-per-unit (PPU) factors to the planned dwelling counts by type. The PPU assumptions are highlighted in **Table 2**. For this exercise, all single-family lots are assumed to include suites to align with the sewer and water modeling assumptions.

Table 2 - Population Growth Assumptions

Dwelling Type	Persons per Unit
Single-Family Unit	4.18
Multi-Family Unit	2.41

The FIA uses 2024 baseline population and employment to calibrate per-capita allocations of municipal revenues and service costs. Applying the PPU factors to the Kingsview upper-phase dwelling mix yields an estimated increase of 1,926 residents. As the current plan excludes non-residential development, employment growth is modeled at zero. The population and employment assumptions are detailed in **Table 3**.

Table 3 - Population and Employment Assumptions

Variable	Unit	Value
Population (2024)	persons	34,495
Employment (2024)	jobs	14,025
Projected Population Growth	persons	1,926
Projected Employment Growth	jobs	0

2. One-Time Revenues

An important component of the fiscal analysis is the estimation of one-time revenues for the Municipality of North Cowichan generated by new development. These revenues are primarily derived from development cost charges, building permit fees, and community amenity contributions.

2.1 Development Cost Charges

Development cost charges (DCC) are levied to fund the initial capital costs of growth-related infrastructure. For the purposes of this analysis, the development charge rates have been drawn from the Development Cost Charges Bylaw (Bylaw 3460) applicable in the South End area and have been applied in accordance with clarifications provided by the Municipality. Consistent with the Interim Community Amenity Contribution Policy, DCC contributions are assumed to be calculated as a multiple of the applicable DCC bylaw rates. The final contribution levels are subject to confirmation and negotiation between the project proponent and the Municipality of North Cowichan. Note that no DCC are projected for the Cowichan Valley Regional District (CVRD). Additionally, School Site Acquisition Charges (SSAC) are allowed under the Local Government Act (Division 20) and are implemented only if the local school board passes a resolution and the municipality adopts a bylaw. For the Cowichan Valley School District (SD79), which covers North Cowichan, there is no publicly available bylaw currently in force for SSACs. Charges levied by the regional district and the school boards would have been excluded from the conclusion, as they have no marginal impact on the Municipality's financial statements. Following the provincial Local Government Act, the DCCs are developed for each infrastructure category, including water, sewer, drainage, roads, and parks. The DCC Bylaw is undergoing review, with updates anticipated in the near term. Rates may change from current levels. **Table 4** shows the development charge rates and the projected development charge revenues from the upper phases of the Kingsview development.

Table 4 - Projected Development Charge Revenues from the Development

Development Cost Charge Rates				
	Municipal	Regional District	Education	Total
Residential				
Single-family	37,568.00	0.00	0.00	\$37,568
Multi-family	28,212.00	0.00	0.00	\$28,212
Non-Residential				
		<i>Dollars / Unit</i>		
Non-Retail	60.75	0.00	0.00	\$60.75
Industrial	24.30	0.00	0.00	\$24.30
		<i>Dollars / Square Metre</i>		
Non-Retail	60.75	0.00	0.00	\$60.75
Industrial	24.30	0.00	0.00	\$24.30
		<i>Dollars / Gross Ha</i>		
Non-Retail	17,439.00	0.00	0.00	\$17,439
Industrial	17,439.00	0.00	0.00	\$17,439
		<i>Dollars / Parking Space</i>		
Non-Retail	3,654.00	0.00	0.00	\$3,654
Industrial	3,654.00	0.00	0.00	\$3,654
Projected Development Charge Revenues				
	Municipal	Regional District	Education	Total
Residential				
Single-family	\$9,053,888	\$0	\$0	\$9,053,888
Multi-family	\$10,748,772	\$0	\$0	\$10,748,772
Total Residential	\$19,802,660	\$0	\$0	\$19,802,660
Non-Residential				
Retail	\$0	\$0	\$0	\$0
Industrial	\$0	\$0	\$0	\$0
Total Non-Residential	\$0	\$0	\$0	\$0
Grand Total	\$19,802,660	\$0	\$0	\$19,802,660

2.2 Building Permits

In addition to development charges, building permit fees represent a significant source of one-time revenue for the Municipality (i.e., they are paid to the Municipality one time and are not recurring once the development has occurred). These fees are calculated per unit based on the construction value of new units and the Municipality's published 2025 rates (Bylaw 3784). Building permit revenues are used to offset the direct and indirect operational costs of administering the permitting process. The number of units per dwelling type, applicable permit rates, and resulting revenue estimates are presented in **Table 5**.

Table 5 - Estimated Building Permit Revenues from the Development

	Units	First 100K\$ of construction value	For each 1K\$ of additional construction value	Total
	<i>number</i>	\$	\$	\$
Residential				
Single-family	241	\$1,050	\$7	\$1,265,250
Multi-family	381	\$1,050	\$7	\$1,200,150
Total Residential	622			\$2,465,400
Non-Residential				
Retail	-	\$1,050	\$7	\$0
Industrial	-	\$1,050	\$7	\$0
Total Non-Residential	-			\$0
Grand Total				\$2,465,400

2.3 Community Amenity Contributions

Community Amenity Contributions (CAC) are one-time cash or in-kind contributions to support infrastructure needs and fund affordable housing. Affordable housing contributions are calculated in accordance with the Interim CAC Policy. The table below presents the number of units and the contributions for the affordable housing and the water quality initiative per unit type and unit size.

Table 6 - Estimated Community Amenity Contributions from the Development

	Units	Affordable Housing Contribution	Water Quality Initiative	Total
	<i>number</i>	<i>\$ per unit</i>	<i>\$ per unit</i>	\$
Residential				
Single-family >500 sq.m.	131	\$4,000	\$500	\$589,500
Single-family <500 sq.m.	110	\$4,000	\$250	\$467,500
Multi-family	381	\$2,000	\$250	\$857,250
Total Other Contributions	622			\$1,914,250

3. Ongoing Revenues

Ongoing revenues form the foundation of long-term fiscal sustainability for the Municipality. The upper phases of Kingsview will generate recurring municipal revenues once built. In this FIA, ongoing revenues comprise property tax income, non-tax revenue, and utility fees from water and sewer services. Amounts collected and remitted on behalf of other entities (e.g., regional requisitions or education taxes) are shown, but only the revenues accruing to the Municipality are included in the net operating impact.

3.1 Assessment and Property Taxes

The ongoing fiscal sustainability of the development depends heavily on the property tax base generated by new development. Assessment values for residential properties are set by phase and dwelling type. The analysis assumes average assessment values of \$750,000 for multi-family units, and from \$1,100,000 to \$1,500,000 for single-family houses.

Current municipal, regional, and education tax rates have been applied to these assessment values. Regional and education taxes are collected by the Municipality on behalf of Cowichan Valley Regional District and the Cowichan Valley School District and are fully remitted; they do not accrue as revenue to the Municipality. Total property tax revenues generated for the Municipality, the regional district and the school district are projected at approximately \$3.4 million annually. **Table 7** outlines the assumptions and the methodology used to calculate residential tax revenues.

Table 7 – Annual Residential Tax Revenues Assumptions and Calculations

Residential	Units	Assessment Value
Single-family >500 sq.m.	131	\$1,500,000
Single-family <500 sq.m.	110	\$1,100,000
Multi-family	381	\$750,000
Assessment Value		
Total Assessment Value	\$603,250,000	
Tax Rates		
Municipal	0.279%	
Regional District	0.163%	
Education	0.130%	
Total	0.572%	
Estimated Tax Revenues		
Municipal	\$1,680,679	
Regional District	\$980,842	
Education	\$787,000	
Total	\$3,448,521	

3.2 Non-Tax Revenues

Beyond property taxes, the Municipality derives a portion of its annual revenue from non-tax sources. These include sales of services, other revenue from own sources, return on investments, grants and public transfers, collections from developers, and other miscellaneous sources. For the purposes of this analysis, non-tax revenues have been allocated between residential and non-residential sectors based on historical patterns and applied on a per capita basis to the projected development. Only the revenue categories expected to be impacted by the proposed development have been included in the calculation. Projected non-tax revenues are derived from the Municipality's 2024 financial statements and escalated in line with the revenue growth rates set out in the *2024 – 2028 Financial Plan Bylaw No. 3953, 2024*. Water and sewer revenues, reported within the sales of services revenue category, are excluded from this subsection, as they are modeled separately under section 3.3.

Table 8 – Annual Non-Tax Revenues Assumptions and Calculations

Revenue Category	Projected Revenues (2025)	Residential		Non-Residential		Per Capita	Per Employee	Total from Development
	\$	Percent	\$	Percent	\$	\$/Capita	\$/Employee	Dollars
Sale of Services	8,585,424	71.1	6,103,755	28.9	2,481,669	176.95	176.95	340,798
Other Revenue from Own Sources	4,431,179	71.1	3,150,320	28.9	1,280,859	91.33	91.33	175,896
Return on Investments	2,703,950	71.1	1,922,357	28.9	781,593	-	-	-
Grants and Government Transfers	5,003,069	71.1	3,556,902	28.9	1,446,167	-	-	-
Collections from Developers and Others	8,392,303	71.1	5,966,457	28.9	2,425,846	172.97	172.97	333,132
Actuarial Adjustments to Debt	713,437	71.1	507,214	28.9	206,223	-	-	-
Total	29,829,362		21,207,004		8,622,358	441.24	441.24	849,826

As shown in **Table 8**, the total non-tax revenue attributable to the development is estimated at \$0.8 million annually. Although non-tax revenues provide valuable support for municipal operations, their role in this analysis is focused on capturing the supplementary financial contributions associated with the new development. These sources remain a component of the Municipality’s overall fiscal framework and are essential to understanding the full revenue picture tied to growth.

3.3 Utility Fees

The Municipality levies utility fees to recover the costs of providing water and sewer services. For each service, the Municipality uses two revenue mechanisms:

- User fees, to cover the day-to-day operations and maintenance (O&M).
- Parcel taxes, to fund capital rehabilitation, replacement, and service upgrades.

Table 9 – Annual Utility Fees Assumptions and Calculations

	Units	User Fees	Parcel Taxes	Total
Residential	<i>number</i>	<i>\$ per unit</i>	<i>\$ per unit</i>	<i>\$</i>
Sewer		\$222	\$301	\$325,306
Water		\$213	\$281	\$307,268
Total	622	\$435	\$582	\$632,574

As summarized in **Table 9**, utility revenues are calculated by service (water, sewer) and by purpose (user fees, parcel taxes), per unit, using the 2027 rates. Water and sewer revenues are treated separately from other non-tax revenues to avoid double counting (see Section 3.2). The Kingsview upper phases are expected to generate approximately \$0.6 million per year in utility revenues.

4. Implications for Operating Expenditures

4.1 Operating Expenditures

The incremental operating costs associated with the development have been estimated using the Municipality's most recent financial statements, escalated at the expense budget growth rate and adjusted to exclude user fees and debt charges. These costs have been allocated between residential and non-residential sectors, calculated on a per capita basis, and applied to the projected population growth from the development.

The analysis indicates that the total incremental operating expenditure required to service the new development will be approximately \$1.7 million per year. This figure encompasses a wide range of municipal services, including general government, protection services, engineering and public works, environmental health services, forestry, community development, parks, recreation and culture, water services, and sewer services. **Table 10** reports a comprehensive overview of the operating expenditures, beginning with financial information on the left, followed by residential and non-residential shares in the center, and concluding with the potential impact of the development and the calculated incremental costs per service category on the right.

Table 10 - Operating Expenditures Assumptions and Calculations

Operating Cost Category	Projected Operating Expenditures (2025)	Interest on Debt	User Fees and Service Charges	Net Operating Expenditures	Residential Share		Non-Residential Share		Potential Impact	Per Capita Impact	Per Employee Impact	Incremental Costs for Development
	\$	\$	\$	\$	Percent	\$	Percent	\$		\$/Capita	\$/Employee	Dollars
General Government Services	7,684,037	67,800	726,033	6,890,204	71.1	4,898,549	28.9	1,991,655	50%	71.00	71.00	136,753
Protective Services	15,922,598	939,500	1,392,501	13,590,597	71.1	9,662,153	28.9	3,928,445	100%	280.10	280.10	539,478
Engineering and Public Works	11,798,545	164,272	936,716	10,697,557	71.1	7,605,363	28.9	3,092,194	100%	220.48	220.48	424,639
Environmental Health Services	2,835,209	-	2,297,755	537,454	71.1	382,100	28.9	155,354	100%	11.08	11.08	21,334
Forestry	441,599	-	121,919	319,680	71.1	227,274	28.9	92,405	100%	6.59	6.59	12,690
Community Development	1,961,445	-	-	1,961,445	71.1	1,394,477	28.9	566,968	30%	12.13	12.13	23,358
Parks, Recreation & Culture	13,763,081	715,549	2,686,709	10,360,823	71.1	7,365,964	28.9	2,994,859	90%	192.18	192.18	370,145
Water Services	5,769,812	58,911	3,567,102	2,143,799	71.1	1,524,121	28.9	619,678	100%	44.18	44.18	85,098
Sewer Services	5,747,406	7,293	2,518,897	3,221,216	71.1	2,290,104	28.9	931,112	100%	66.39	66.39	127,866
Total	65,923,732	1,953,325	14,247,632	49,722,775		35,350,106		14,372,669		904.13	904.13	1,741,362

4.2 Capital Expenditures (Lifecycle Renewal Allowance)

To account for the ongoing capital requirements associated with the new development, this analysis incorporates an explicit lifecycle renewal allowance for the municipal infrastructure assumed as a result of the upper phases of Kingsview. While growth-related infrastructure is delivered through developer-provided works, the Municipality remains responsible for the ongoing rehabilitation and eventual replacement of municipal assets once they are assumed. This ongoing obligation is a key consideration in assessing the long-term fiscal sustainability of growth.



The lifecycle renewal allowance is calculated using an asset-based approach. For each relevant asset class, present-day replacement cost estimates and assumed useful lives are used to derive an average annual renewal requirement (i.e., a straight-line annual renewal allowance). This provides a transparent estimate of the annual funding capacity that would need to be set aside over time to support infrastructure renewal and avoid shifting long-term costs to existing taxpayers.

Consistent with the Municipality's utility funding framework, water and sewer services are funded through utility user fees (to cover day-to-day operations and maintenance) and parcel taxes (to fund capital rehabilitation, replacement, and service upgrades), as described in Section 3.3¹.

Based on the lifecycle cost estimates embedded in the financial model, derived using assumed useful lives and supporting replacement cost estimates, the total lifecycle renewal allowance attributable to the upper phases of Kingsview is estimated at approximately \$0.7 million per year (see **Table 11**). Consistent with the rest of this FIA, the lifecycle cost estimates are presented on a point-in-time, constant-dollar basis and exclude escalation and financing costs. This allowance is an annualized estimate of long-term renewal needs (i.e., an annual average). For additional detail on the lifecycle assumptions, please refer to **Appendix A**, which provides asset-level inputs.

Table 11 - Lifecycle Renewal Allowance Calculations

Asset Classes	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8	Watermain / Reservoir / Pumpstation	Total
	\$	\$	\$	\$	\$	\$	\$
General	\$400	\$9,630	\$4,926	\$4,576	\$8,500	\$0	\$28,032
Water System	\$1,238	\$36,701	\$16,713	\$15,293	\$27,219	\$0	\$97,165
Sanitary Sewer	\$3,100	\$21,870	\$10,639	\$11,547	\$16,185	\$0	\$63,341
Storm Drainage	\$15,643	\$35,413	\$16,019	\$22,802	\$35,670	\$0	\$125,547
Road Works	\$7,291	\$94,767	\$41,284	\$31,479	\$70,327	\$0	\$245,150
Electrical	\$1,333	\$12,933	\$6,533	\$6,000	\$11,600	\$0	\$38,400
Watermain	\$0	\$0	\$0	\$0	\$0	\$31,428	\$31,428
Reservoir	\$0	\$0	\$0	\$0	\$0	\$23,803	\$23,803
Pumpstation	\$0	\$0	\$0	\$0	\$0	\$37,303	\$37,303
Total	29,005	211,315	96,115	91,697	169,502	92,535	690,168

¹ The lifecycle renewal allowance is reported as a single annualized total (covering both tax-supported and utility assets), with utility parcel taxes presented separately as the Municipality's primary mechanism intended to support ongoing capital renewal for water and sewer services.

5. Net Operating Impact

The core objective of this FIA is to evaluate whether the revenues generated by the new development are sufficient to offset the incremental costs associated with servicing and supporting that growth over time. The analysis demonstrates that, on an annual basis, the proposed development is expected to generate a net operating surplus for the Municipality. When all new annual revenues, including property taxes, non-tax sources, and utility fees are compared to the combined incremental operating and lifecycle renewal allowance, the result is a projected annual surplus of \$731,500. Results reflect the municipal share only as amounts collected and remitted on behalf of other entities are excluded from the net operating impact

This positive net operating impact suggests that the Municipality will cover incremental costs associated with the development, benefiting from ongoing positive cash flows. This surplus provides the Municipality with flexibility to address future needs, invest in service enhancements, or contribute to reserve funds for long-term financial stability. A summary of the projected ongoing revenues and expenditures associated with the development, along with the estimated net fiscal impact, is presented in **Table 12**.

Table 12 - Net Operating Impact Summary

	Total Revenues / Expenditures
Incremental Revenues	<i>Dollars</i>
Taxation Revenues	1,680,679
Residential Growth	1,680,679
Non-Residential Growth	0
Non-Tax Revenues	849,826
Utility Fees	632,574
Total Revenues	3,163,079
Incremental Expenditures	
Operating Costs	1,741,362
Lifecycle Contribution	690,168
Total Costs	2,431,530
Surplus / (Deficit)	731,548

6. Capital Works and Funding Sources

Servicing new growth requires substantial up-front capital investment in municipal infrastructure. To preserve the long-term sustainability of municipal finances and avoid shifting costs onto existing taxpayers, these capital requirements and the one-time revenue sources must be assessed in tandem. The Municipality's net one-time funding position is positive, reflecting that most capital works are delivered and funded by the developer. Revenue sources and the resulting net one-time surplus are presented in **Table 13**.

Table 13 - Capital Works and Funding Sources Summary²

Revenues	Net One-Time Revenues / Expenditures
	<i>Dollars</i>
Development Cost Charges	17,182,213
Building Permits	2,465,400
Affordable Housing and Water Quality	1,914,250
Net Revenues	21,561,863
Surplus / (Deficit)	21,561,863

² Net DCC in Table 13 reflects gross DCC revenues (Table 4) subtracted by DCC credits/expenditures for eligible developer-delivered works.

7. Concluding Remarks

This FIA was prepared to assess whether the upper phases of the Kingsview development (Phases 4–8) are fiscally sustainable for the Municipality of North Cowichan by comparing new municipal revenues to the incremental operating and lifecycle costs associated with servicing the development.

Taken together, the one-time and ongoing results indicate that the upper phases of Kingsview are fiscally supportable in their current form: annual municipal revenues exceed annual incremental costs, and one-time municipal inflows exceed DCC credits recognized for developer-built works. These findings support prudent, transparent financial planning while helping to mitigate the risk of undue taxpayer burden associated with the development.

Results are sensitive to several parameters that may change over time, including: assessment values and tax rates, utility rate and parcel-tax provisions, DCC/CAC policy updates, final servicing designs, and departmental service cost growth. As bylaws, rates, and agreements are amended or finalized, the Municipality should update the FIA to maintain accuracy and help ensure that budget planning, reserve strategies, and credit reconciliations align with actual outcomes.

Appendix A – Asset-Level Lifecycle Costs

Kingsview Development Project

		Quantity							
							Reservoir / Watermain / Pumpstation		
	unit	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8		Rate	Useful Life
General								per unit	
Environmental Protection - includes; environmental fencing, temporary & permanent topsoil & seed boulevard	LS	1	1	1	1	1		-	20
trails (park)	m2	400	7,700	3,700	3,400	6,700		25	25
Total	lm		965	613	588	900		30	15
Water System									
200mm PC235 PVC watermain	lm	119	990	710	838	1,393		300	50
valves, fittings, thrust blocks	ls	1	1	1	1	1		From 6000 to 40000	50
Fire hydrant assembly c/w lead and valve	ea	1	15	7	6	10		9,600	50
Irrigation service c/w meter setter and box, hose bib	ea	2	6	3	2	4		From 3000 to 3200	50
200mm PC235 PVC water service to MF lot c/w gate valve	ls	1		3	4	2		From 4500 to 5000	50
250mm PC235 PVC watermain	lm		901	190				350	50
Airvalve	ea		2	1				5,000	50
19mm water service c/w meter setter and box, c/w ball style corp stop	ea		54	56	47	85		2,750	50
150mm PC235 PVC water service to MF lot c/w gate valve	ls		5					5,000	50
Permanent underground flushout	ea		2	1		1		5,500	50
PRV station	ea		3	1	1	2		110,000	20
Total									
Sanitary Sewer									
200mm SDR35 PVC	lm	281	1,620	713	849	1,110		400	50
Manhole - 1050mm diameter complete	ea	5	36	9	11	13		6,750	50
Multi-Family lot service	ea	2						4,500	50
End-of-line cleanout	ea		2	1	1	3		4,500	50
100mm lot service	ea		54	56	47	85		3,000	50
200mm Multi-Family lot service	ea		7	3	4	2		4,500	50
Total									
Storm Drainage									
200mm SDR35 PVC	lm	281	1,620	713	849	1,110		400	50
250mm SDR35 PVC	lm	77	366	118	315	980		430	50
375mm SDR35 PVC	lm	266						525	50
375mm SDR35 PVC - OFFSITE	lm	11						600	50
750mm PVC - OFFSITE	lm	1						900	50
600mm RIBBED N-12 HDPE Culvert	lm	21						450	40
Headwall - Langley 11-13 c/w grills	ea	1	2			15		From 7500 to 8000	50
Headwall - sandbag	ea	6						500	40
Headwall - Langley "Mini"	ea	2						1,350	50
Headwall - Langley Type 2 c/w grills	ea	4	3		3	2		3,750	50
Manhole - 1050mm diameter complete	ea	5	36	9	11	13		6,750	50
Manhole - 1500mm diameter overbuild complete	ea	1						15,000	50
Manhole - 1500mm diameter SPLITTER complete	ea	1						18,000	50
Oil Grit Separator complete	ls	1	2		1	2		30,000	50
End-of-line cleanout	ea	1	3	1	1	3		From 3500 to 4500	50
Catch basin - single, complete	ea	2		24	20	40		5,000	50
Catch basin - double, complete	ea	2	5	2	2	1		6,500	50
150mm drain service to Multi-Family	ea	1						3,000	50
250mm drain service to Multi-Family	ea	1				2		From 3500 to 4500	50
Detention pond 1422m3 - Complete, including control structures, geotextile / geogrid	ls	1						395,000	50
300mm SDR35 PVC	lm		432	151	258	53		470	50
375mm RIBBED PVC	lm		440	66	38			530	50
600mm SDR35 PVC	lm		26	121				675	50
600mm concrete	lm		27					500	50
900mm concrete	lm		50					1,500	50
150mm perforated PVC	lm		55					150	50
Headwall - Langley 16-20 c/w grills	ea		2			2		13,500	-
Manhole - 1200mm diameter, on 900 concrete complete	ea		1					7,800	-
Lawn basin - complete	ea		7	3	1	1		3,750	-
100mm lot service	ea	</							

Road Works								
Road structure - 50mm HMAC, 100mm crushed gravel base, 200mm pit-run gravel	m2	1,325	8,947	4,509	6,637	6,640	95	45
Non-mountable curb & gutter c/w base gravels and d/w drops	lm	271	3,766	1,840	1,695	3,340	200	From 30 to 45
1.5m concrete sidewalk - 100mm thick, c/w base gravels	m2	200	2,947	1,382	1,270	1,927	150	
1.5m concrete sidewalk - 150mm thick, c/w base gravels (includes d/w infill)	m2	28	153	279	144	230	175	30
Gravel access road	m2	185					55	30
Gravel parking lot	m2	535	395	250			From 55 to 65	30
fencing	lm	27	90					150
Road structure - 75mm HMAC, 100mm crushed gravel base, 300mm pit-run gravel	ea		10,301	4,376	650	5,630	6,500	50
Driveway apron - 150mm thick, 6m wide c/w flares	ea		17	28	13	24	3,750	50
Access Road - 50mm HMAC, 100mm crushed gravel base, 200mm pit-run gravel	ea		625				3,000	50
Asphalt Path - 50mm HMAC, 100mm crushed gravel base, 200mm pit-run gravel	ea		383				4,500	50
Removable bollards	ls		10				160,000	50
PARK Road structure - 50mm HMAC, 100mm crushed gravel base, 200mm pit-run gravel	ea					2,464	3,000	40
Total								
Electrical								
Street light c/w base	ea	5	47	23	21	42	8,000	30
Street light c/w service base	ea		1	1	1	1	12,000	30
Total								
Water System (Watermain)								
200 mm HDPE PE4710 Supply Watermain	lm					1,146	320	50
300 mm HDPE PE4710 Distribution Watermain	lm					1,173	435	50
200 mm Line Valves	ea					4	6,400	50
300 mm Line Valves	ea					2	10,000	50
75 mm Combination Air Valves	ea					4	8,000	50
50 mm Conduit (power)	lm					2,276	96	50
Power Conductors (3xRW90 #10)	lm					6,828	10	25
38 mm Conduit (communications)	lm					2,276	91	50
Fibre Optic Communications Cable	lm					2,276	15	50
Junction Boxes	ea					20	1,300	50
Total								
Reservoir								
Pipe - 150mm underdrain and perim. drain	lm					150	200	50
Pipe - 300mm overflow and drain to discharge	lm					150	400	50
Dechlorination Manhole - 1500mm	ea					1	7,000	50
Access stairway	ls					1	20,000	40
Access Road	m2					612	50	30
Reservoir valves and piping	ls					1	75,000	50
Concrete reservoir (conc volume)	m3					359	2,500	50
Gauge Pressure Transmitters	ea					3	2,500	30
Level Switch	ea					2	200	30
Reservoir JB	ls					1	1,500	50
Miscellaneous conduits and conductors	ls					1	10,000	50
Main panel	ls					1	12,000	30
Total								
Pumpstation								
Site Works								
Remove and reinstate drain	ls					1	5,000	50
Site Piping -- water including hot tap	ls					1	15,000	50
200 mm Gate Valve	ea					4	6,400	50
Site Piping -- storm	ls					1	10,000	50
Antenna pole	ls					1	3,000	50
Mechanical								
Grundfos CR64-4 Pump skid (inc headers and valves)	ea					3	100,000	20
150 mm Isolation Valves (Gate and Butterfly)	ls					1	17,600	50
150mm Strainer	ea					1	720	50
65mm mm Surge Relief Valve	ea					1	4,000	50
50mm Combination Air Valves	ea					2	6,000	50
Small Valves (drains, vents, etc)	ls					1	2,000	50
Stainless Steel 304 Piping	ls					1	95,000	50
Domestic Water and Drainage System	ea					1	109,500	50
Structural								
Pump Station Foundation	ls					1	75,000	40
Pump Station Building incl. finishes	ls					1	96,000	40
Electrical								
Flow Meter 6"	ea					1	6,400	20
Pressure Gauge	ea					3	100	20
Cl2 Analyzer	ea					1	7,000	20
PLC Control Panel	ls					1	20,000	20
UPS	ea					1	1,000	20
Radio Panel and Antennae	ls					1	10,000	20
MCC c/w ATS and VFDs	ea					1	109,500	20
Generator	ea					1	77,598	20
Miscellaneous conduits, conductors, wiring and terminations	ls					1	50,000	20
Total								

Total Cost						Annual Average					
Phase 4	Phase 5	Phase 6	Phase 7	Phase 8	Reservoir / Watermain / Pumpstation	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8	Reservoir / Watermain / Pumpstation
-	-	-	-	-		-	-	-	-	-	
10,000	192,500	92,500	85,000	167,500		400	7,700	3,700	3,400	6,700	
	28,950	18,390	17,640	27,000			1,930	1,226	1,176	1,800	
10,000	221,450	110,890	102,640	194,500		400	9,630	4,926	4,576	8,500	
35,820	297,000	213,000	251,400	417,900		716	5,940	4,260	5,028	8,358	
6,000	40,000	25,000	25,000	35,000		120	800	500	500	700	
9,600	144,000	67,200	57,600	96,000		192	2,880	1,344	1,152	1,920	
6,000	19,200	9,600	6,400	12,800		120	384	192	128	256	
4,500		15,000	20,000	10,000		90		300	400	200	
	315,350	66,360					6,307	1,327			
	10,000	5,000					200	100			
	148,500	154,000	129,250	233,750			2,970	3,080	2,585	4,675	
	25,000						500				
	11,000	5,500		5,500			220	110		110	
	330,000	110,000	110,000	220,000			16,500	5,500	5,500	11,000	
61,920	1,340,050	670,660	599,650	1,030,950		1,238	36,701	16,713	15,293	27,219	
112,240	648,000	285,200	339,600	444,000		2,245	12,960	5,704	6,792	8,880	
33,750	243,000	60,750	74,250	87,750		675	4,860	1,215	1,485	1,755	
9,000						180					
	9,000	4,500	4,500	13,500			180	90	90	270	
	162,000	168,000	141,000	255,000			3,240	3,360	2,820	5,100	
	31,500	13,500	18,000	9,000			630	270	360	180	
154,990	1,093,500	531,950	577,350	809,250		3,100	21,870	10,639	11,547	16,185	
18,840	261,200	122,000	178,000	239,200		377	5,224	2,440	3,560	4,784	
32,981	157,380	50,740	135,450	421,400		660	3,148	1,015	2,709	8,428	
139,440						2,789					
6,480						130					
630						13					
9,450						236					
7,500	16,000			120,000		150	320			2,400	
3,000						75					
2,700						54					
15,000	11,250		11,250	7,500		300	225		225	150	
52,000	263,250	60,750	94,500	108,000		1,040	5,265	1,215	1,890	2,160	
15,000						300					
18,000						360					
30,000	60,000		30,000	60,000		600	1,200		600	1,200	
3,500	13,500	4,500	4,500	13,500		70	270	90	90	270	
10,000		120,000	100,000	200,000		200		2,400	2,000	4,000	
13,000	32,500	13,000	13,000	6,500		260	650	260	260	130	
3,000						60					
3,500				9,000		70				180	
395,000						7,900					
	203,040	70,735	121,260	24,910			4,061	1,415	2,425	498	
	233,200	34,980	19,875				4,664	700	398		
	17,753	81,675						1,634			
	13,250						265				
	74,550						1,491				
	8,250						165				
	27,000			27,000			540			540	
	7,800						156				
	26,250	11,250	3,750	3,750			525	225	75	75	
	162,000	168,000	141,000	255,000			3,240	3,360	2,820	5,100	
	22,500						450				
	160,000						3,200				
		49,800						996			
		13,500						270			
			22,500						450		
			265,000						5,300		
				237,750						4,755	
				50,000						1,000	
779,021	1,770,673	800,930	1,140,085	1,783,510		15,643	35,413	16,019	22,802	35,670	

125,875	849,965	428,355	630,515	630,800		2,797	18,888	9,519	14,011	14,018	
54,200	753,200	368,000	339,000	668,000		1,807	25,107	8,178	7,533	22,267	
30,000	442,050	207,300	190,500	289,050		1,000	14,735	6,910	6,350	9,635	
4,900	26,775	48,825	25,200	40,250		163	893	1,628	840	1,342	
10,175						339					
29,425	25,675	16,250				981	856	542			
4,080	13,500					204	675				
	1,339,065	568,880	84,500	731,900			29,757	12,642	1,878	16,264	
	34,000	56,000	26,000	48,000			1,133	1,867	867	1,600	
	62,500						1,389				
	42,075						935				
	20,000						400				
				234,080						5,202	
258,655	3,608,805	1,693,610	1,295,715	2,642,080		7,291	94,767	41,284	31,479	70,327	
40,000	376,000	184,000	168,000	336,000		1,333	12,533	6,133	5,600	11,200	
	12,000	12,000	12,000	12,000			400	400	400	400	
40,000	388,000	196,000	180,000	348,000		1,333	12,933	6,533	6,000	11,600	
					366,720						7,334
					510,255						10,205
					25,600						512
					20,000						400
					32,000						640
					218,496						4,370
					65,549						2,622
					207,116						4,142
					34,140						683
					26,000						520
					1,505,876						31,428
					30,000						600
					60,000						1,200
					7,000						140
					20,000						500
					30,600						1,020
					75,000						1,500
					897,500						17,950
					7,500						250
					400						13
					1,500						30
					10,000						200
					12,000						400
					1,151,500						23,803
					5,000						100
					15,000						300
					25,600						512
					10,000						200
					3,000						60
					300,000						15,000
					17,600						352
					700						14
					4,000						80
					12,000						240
					2,000						40
					95,000						1,900
					7,000						140
					75,000						1,875
					96,000						2,400
					6,400						320
					300						15
					7,000						350
					20,000						1,000
					1,000						50
					10,000						500
					109,500						5,475
					77,600						3,880
					50,000						2,500
					949,700						37,303

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