

City of Spruce Grove: Offsite Levy Rates Review

December 6th, 2022

Prepared by:

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December 6th, 2022

City of Spruce Grove 315 Jespersen Avenue Spruce Grove, Alberta T7X 3E8

RE: City of Spruce Grove Offsite Levy Rates Review

Enclosed is our report underpinning the review of the City's offsite levy rates. If you have any questions do not hesitate to contact me.

Respectfully,

Greg Weiss President

1 DOCUMENT INFORMATION

Version Number	Revision Date	Description
1.0	June 15 th , 2022	Draft
2.0	June 24 th , 2022	Draft
3.0	August 3 rd , 2022	Draft
4.0	December 6 th , 2022	Final

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3 INTRODUCTION

3.1 Introduction

Bylaw C-1117-20 established by the City of Spruce Grove ("the City") in 2020 defines offsite levy charges for roads, water, and sanitary infrastructure in the municipality. The City wishes to update this bylaw, amending certain infrastructure in alignment with the City's current capital plans, ensuring updated costs and development forecasts are reflected fairly and equitably in rates, and adding recreation and library infrastructure.

This report outlines the methodology and information used to update the offsite levy charges for the City, as well as other key findings and recommendations.

3.2 Methodology

The City maintains various capital plans, and these plans have been used to generate key inputs for this offsite levy rates review. City staff and their engineering advisors reviewed existing plans and identified offsite projects for roads, water, sanitary, recreation, and library¹. The City's review also included determination of cost allocation to existing development, future development, benefiting areas, etc.

Support provided by CORVUS Business Advisors included:

- Incorporation of offsite levy area measurements and land development forecasts (provided by City staff).
- Incorporation of infrastructure costs and allocation percentages for existing development, new development, and other parties (provided by City staff).
- Reconciliation of offsite levy reserve opening balances (historical details provided by City staff).
- Development of offsite levy rates and associated report.
- Review of offsite levy rates with staff and Council.

Offsite levy rates within the City's offsite levy model are forecast using a rolling 25-year review period. During this review, a cut-off date of **December 31**st, **2021** was established (the most recent year-end when the project commenced), and so the 25-year review period stems from **2022 to 2046**. Project expenditures, offsite levy receipts etc. were gathered as "actuals" from City financial records up to the cut-off date. Beyond the cut-off date, all financial details are estimates. When the City completes its next rate update, information from January 1st, 2022 up to the new cut-off date will be converted from estimates to actuals.

Costs that benefit development prior to and within the review period are included in rates. Costs that benefit development beyond the review period (called "financial oversizing") are excluded from rates. In future years, when rates are updated, and the rolling 25-year period

¹ It is not within CORVUS' scope of work to review or assess capital plans. Infrastructure requirements, costs, allocations etc. are determined by the municipality and their engineering/consulting advisors.

moves further out, offsite infrastructure costs beyond 2046 will gradually find their way into rates.

4 KEY FINDINGS

Key findings pertaining to the update of City offsite levy rates are as follows:

 Offsite infrastructure costs to be included in the offsite levy bylaw total approximately \$215.06 million (current dollars). An overview of offsite infrastructure costs and maps is provided in Appendices B1, C1, D1, E1, and F1.

Before determining how the infrastructure costs will be allocated to parties that benefit (e.g., existing development, new development, other municipalities etc.), financing provided by way of special ear-marked/conditional grants and other contributions are deducted from offsite infrastructure costs. For this update, the City has identified approximately **\$1.37 million** in special grants and contributions. An overview of special grants and contributions and resulting net costs is provided in Appendices B2, C2, D2, E2, and F2.

The residual benefit allocated to existing development (the City's share) is approximately \$7.55 million. The share allocated to other stakeholders (e.g., neighbouring municipalities) is \$0.00.

That portion of cost which is allocated to future development totals approximately **\$206.13 million** (\$45.97 million + \$160.16 million) and is based on the allocations shown in Appendices B4, C4, D4, E4, and F4. However, a portion of the cost allocated to future development is beyond the 25-year review period (called "financial oversizing"). Financial oversizing is determined based on the anticipated year of construction (construction staging) which is provided in Appendices B3, C3, D3, E3, and F3.

Of the **\$206.13** million in total offsite infrastructure costs allocated to future development, the share allocated to future development that is included in rates today (the offsite levy share) is approximately **\$160.16** million, as shown in the table below. A complete summary of offsite infrastructure net cost "flow-thru" is provided in Appendices B6, C6, D6, E6, and F6.

Infrastructure	 ecial Grants & ontributions	N	luni Share of Costs	_	Other Stakeholders' hare of Costs	Developer Cost Beyond 25 Yrs (Financial Oversizing)			veloper Costs (In Rates)	Total Costs
Transportation	\$ 151,961	\$	-	\$	-	\$	38,650,001	\$	86,435,736	\$ 125,237,698
Water	\$ -	\$	2,415,600	\$	-	\$	507,496	\$	19,993,653	\$ 22,916,749
Sanitary	\$ 1,222,378	\$	-	\$	-	\$	6,815,357	\$	21,955,178	\$ 29,992,913
Recreation	\$ -	\$	-	\$	-	\$	-	\$	26,643,505	\$ 26,643,505
Library	\$ -	\$	5,132,452	\$	-	\$	-	\$	5,132,452	\$ 10,264,903
Total	\$ 1,374,339	\$	7,548,052	\$	-	\$	45,972,854	\$	160,160,523	\$ 215,055,768

Before allocating infrastructure costs to benefitting lands, offsite levy costs must be reduced by the amount of levies collected to date. Up to December 31st, 2021, the City has collected **\$43.30 million** as shown in Appendices B5, C5, D5, E5, and F5.

Levies Collected To Dat	е	
Transportation	\$	24,484,993
Water	\$	12,376,282
Sanitary	\$	6,442,848
Recreation	\$	-
Library	\$	-
Total	\$	43 304 123

Summary of Offsite Levy Collections

- To facilitate the allocation of infrastructure costs to those lands that benefit from the infrastructure, the City is parsed into 11 offsite levy areas. The area boundaries, numbering schema, and area measurements are described in *Appendix A* along with an offsite levy map; and, an overview of offsite infrastructure allocations to each benefitting area is provided in Appendices B7, C7, D7, E7, and F7.
- To calculate offsite levy rates, it is necessary to forecast the amount of land that will develop during the 25-year review period. Land development forms the denominator of the rate calculation. A larger denominator reduces rates but could potentially result in under-collection thereby placing an increased burden on taxpayers. A smaller denominator increases rates but could potentially result in over-collection thereby placing an increased burden on future development. Accordingly, land development forecasts need to be (a) reasonable and reflect current planning assumptions including the current pace of development in the community, and (b) updated regularly.

For this update, the City is forecasting development of approximately **892 ha.** over the 25-year review period. The land development forecast and underpinning assumptions are shown in *Appendix A*.

- Offsite Levy Accounts. The City is managing offsite levy receipts and withdrawals via 3 accounts, in alignment with MGA requirements (i.e., one account for each infrastructure type). The reason that an account is required for each infrastructure type is because offsite levies can only be used for the type of infrastructure for which they were collected (e.g., water levies can only be used to construct water offsite infrastructure, not sanitary infrastructure etc.). The City will need to establish 2 more accounts (one for each of the new infrastructure types being added to the bylaw). An overview of updated account balances is shown in Appendices B8, C8, D8, E8, and F8.
- Interest. Offsite levy accounts (both actual and forecast) are impacted by interest. Actual reserve inflows and forecast account balances that are in a positive position earn interest (as required by the MGA). Actual reserve outflows and forecast account balances that are in a negative position are charged interest (forecast balances that are negative indicate that front-ending will be required).

An overview of account interest rates and forecast balances over the 25-year review period is shown in Appendices B9, C9, D9, E9, and F9.

• Front-ending. Front-ending is an extremely important concept that underpins rigorous management of offsite levies. Front-ending represents debts owed by future development to the municipality for past construction undertaken by the municipality

Total

on behalf of future development—i.e., a municipality will often pay for its share of an offsite infrastructure project in addition to that portion of the project which benefits future development when offsite levy reserve balances are insufficient to pay for future development's share of the project.

Because front-ending balances represent debts owed to the municipality, they need to be clearly reflected in official City documents such as levy account balances, financial statements (e.g., front-ending notes), or accounts receivables, etc. This documentation enables the City to collect on these debts as future development occurs, and offsite levies are collected.

At end 2021, the overall net front-ending due to the City was **\$22.60 million**. A complete reconciliation of balances for each of the accounts is provided in Appendices B8, C8, D8, E8, and F8.

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Reserve Balance	
Transportation	\$ (13,058,659)
Water	\$ (1,983,075)
Sanitary	\$ (7,559,966)
Recreation	\$ -
Library	\$ -

Summary of Account Balances & Front-ending

5 RATES

For future development to pay for its share of the **\$215.06** million infrastructure costs either built already or contained in the City's future capital plans, rates are **\$128,994** per net hectare on a weighted average basis. These rates reflect the actual cost of infrastructure required to facilitate development in the City. A comparison of offsite levy rates with other municipalities is summarized in *Appendix G*.

Since the last update, rates are increasing an average of ~52%. The primary reason for this increase is the addition of new infrastructure types and associated costs within the 25-year review period.

Summary of Offsite Levy Charges (Per Net Ha)²

	Transportation		Water			Sanitary	ı	Recreation	Library	Total
High	\$	70,703	\$	18,396	\$	29,116	\$	27,517	\$ 5,301	\$ 149,410
Low	\$	70,703	\$	1,311	\$	-	\$	27,517	\$ 5,301	\$ 105,318
Weighted Average	\$	70,703	\$	8,132	\$	17,342	\$	27,517	\$ 5,301	\$ 128,994

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² Highs, lows, and weighted averages are shown for information purposes only. Developers pay the actual offsite levy charges pertaining to their specific offsite levy area.

Area #	Tra	ansportation Levies	Water Levies	Sanitary Levies	F	Recreation Levies	Library Levies	Total
1.0	\$	70,703	\$ 1,797	\$ -	\$	27,517	\$ 5,301	\$ 105,318
2.0	\$	70,703	\$ 1,311	\$ 29,116	\$	27,517	\$ 5,301	\$ 133,947
3.0	\$	70,703	\$ 1,311	\$ 29,116	\$	27,517	\$ 5,301	\$ 133,947
4.0	\$	70,703	\$ 5,288	\$ 3,676	\$	27,517	\$ 5,301	\$ 112,484
5.0	\$	70,703	\$ 1,463	\$ 719	\$	27,517	\$ 5,301	\$ 105,702
6.0	\$	70,703	\$ 4,636	\$ -	\$	27,517	\$ 5,301	\$ 108,156
7.0	\$	70,703	\$ 5,655	\$ -	\$	27,517	\$ 5,301	\$ 109,175
8.0	\$	70,703	\$ 12,593	\$ -	\$	27,517	\$ 5,301	\$ 116,113
9.0	\$	70,703	\$ 4,150	\$ -	\$	27,517	\$ 5,301	\$ 107,670
10.0	\$	70,703	\$ 18,396	\$ 27,494	\$	27,517	\$ 5,301	\$ 149,410
11.0	\$	70,703	\$ 17,605	\$ 27,494	\$	27,517	\$ 5,301	\$ 148,619

6 RECOMMENDATIONS

CORVUS recommends the following:

- 1. Implement the updated offsite levy rates outlined in Section 5.
- 2. Amend the offsite levy account balances in City documentation to align with Appendices B8, C8, D8, E8, and F8. In so doing, remove excess cash from reserves (if any) to pay down front-ending debts.

7 ACKNOWLEDGEMENTS

CORVUS Business Advisors would like to thank all City of Spruce Grove staff who supported the work of this rate update.

8 DISCLAIMER

CORVUS Business Advisor has relied upon the City of Spruce Grove and its engineering/consulting advisors to provide all the data and information used to construct the offsite levy model and create the rates, such as planning data and assumptions, development forecasts and assumptions, infrastructure costs and costs estimates, allocations to benefitting parties, allocation to benefitting areas, historical financial details, and other assumptions etc. As such, CORVUS Business Advisors makes no guarantee as to the accuracy of the input data and information provided by these groups or the results that stem from this data and information.

Offsite levy rates are not intended to stay static; they are based upon educated assumptions and the best available information of the day. Planning assumptions, cost estimates etc. can change each year. Accordingly, the Municipal Government Act requires that offsite levy rates be updated with the most available information on a regular basis and a status report provided to Council <u>annually</u>. When information changes, it will be reflected in a future update, and rates adjusted accordingly.

APPENDIX A: OFFSITE LEVY AREAS AND STAGING

A1. Offsite Levy Areas

The City is parsed into **11** offsite levy areas, as shown in the map below. Areas take into consideration existing/planned infrastructure basins as well as natural and man-made barriers (e.g., rivers, highways, etc.). All offsite levy infrastructure costs are allocated to one or more areas. Of particular note, annexation areas have now been included in Areas 3, 4, and 11.

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Offsite Levy Areas

Total net development area, the amount of land available for development across all offsite levy areas, is approximately **1476 net ha**. In calculating net development area only those lands remaining to be developed (at Dec 31, 2016) that have not previously paid offsite levies have been considered (as required by legislation/regulation). Further, allowances have been made to net development area calculations for environmental reserves, municipal reserves, and arterial road right of way.

Offsite Levy Net Development Area

Area Ref. #	Development Area Location	Land Use	Gross Area (ha.)	Environmental Reserves (ha.)	Sub-total	Municipal Reserves	Arterial Right of Way	Net Development Area (ha.)
1.1	See Map	Commercial	0.53	-	0.53	0.05	-	0.48
1.3	See Map	Residential - Low/Medium Density	117.67	23.65	94.02	9.40	-	84.62
1.4	See Map	Residential - High Density	1.22	-	1.22	0.12	-	1.10
2.3	See Map	Residential - Low/Medium Density	47.99	0.93	47.06	4.71	2.40	39.95
2.4	See Map	Residential - High Density	3.85	-	3.85	0.39	-	3.47
3.1	See Map	Commercial	98.53	4.37	94.16	9.42	-	84.74
3.3	See Map	Residential - Low/Medium Density	114.07	4.37	109.70	10.97	-	98.73
3.4	See Map	Residential - High Density	6.91	-	6.91	0.69	-	6.22
3.5	See Map	Other	200.04	-	200.04	20.00	-	180.04
4.2	See Map	Industrial	248.00	-	248.00	24.80	3.20	220.00
4.3	See Map	Residential - Low/Medium Density	11.31	-	11.31	1.13	-	10.18
4.5	See Map	Other	75.20	-	75.20	7.52	-	67.68
5.3	See Map	Residential - Low/Medium Density	54.06	1.19	52.87	5.29	-	47.58
5.4	See Map	Residential - High Density	2.71	-	2.71	0.27	-	2.44
6.3	See Map	Residential - Low/Medium Density	26.70	-	26.70	2.67	-	24.03
6.4	See Map	Residential - High Density	2.13	-	2.13	0.21	-	1.92
7.5	See Map	Other	-	-	-	-	-	-
8.1	See Map	Commercial	4.52	-	4.52	0.45	-	4.07
8.3	See Map	Residential - Low/Medium Density	1.36	-	1.36	-	-	1.36
9.1	See Map	Commercial	22.40	-	22.40	2.24	-	20.16
9.3	See Map	Residential - Low/Medium Density	11.67	-	11.67	1.17	-	10.50
9.4	See Map	Residential - High Density	1.57	-	1.57	0.16	-	1.41
10.1	See Map	Commercial	1.73	-	1.73	0.17	-	1.56
10.3	See Map	Residential - Low/Medium Density	253.50	9.19	244.31	24.43	1.35	218.53
10.4	See Map	Residential - High Density	10.65	-	10.65	1.07	-	9.59
11.1	See Map	Commercial	26.60		26.60	2.66	-	23.94
11.3	See Map	Residential - Low/Medium Density	106.32	12.00	94.32	9.43	9.37	75.52
11.5	See Map	Other	262.94	-	262.94	26.29	-	236.65
		Total	1,714.17	55.70	1,658.48	165.71	16.32	1,476.45

Summary of Offsite Levy Net Development Area

Description	ha.
Gross Development Area	1,714.17
Less Environment Reserve	55.70
Less Municipal Reserve	165.71
Less ROW Allowance	16.32
Net Development Area	1,476.45

*Note: 1 Hectare (ha.) = \sim 2.47 Acres

Net development area definitions will be applied in determining offsite levy obligations of developers on application for subdivision or development within the City of Spruce Grove. Net development area is defined as follows:

- Gross Area The area of lands to be developed in hectares that have not previously paid an offsite levy.
 - o Less: Any environmental reserves contained within the development area.
 - o Less: A 10% allowance for Municipal Reserves.
 - Less: Arterial road right of way that bisects the development lands.
- Equals: Net Developable Area, which is the area subject to offsite levies.

A2. Development Staging

A rate planning period of 25-years underpins the offsite levy model and rate calculations. Many municipalities use this planning period as it provides a reasonable timeframe to recoup the costs associated with offsite levy infrastructure construction, and it aligns with the timeframes of many municipal capital planning and construction cycles.

Of the **1476 net ha**. of development area available across all offsite levy development areas, planners estimate that approximately **892 net ha**. **(60%)** will develop during the next 25-years (the rate planning period) as shown in the tables below.

Summary of Anticipated Development during the 25-year Rate Planning Period

Developed Since Model Created	93.28	6.3%
Developed In Next 25 Years	892.16	60.4%
Developed Beyond 25 Years	491.03	33.3%
Net Development Area	1,476.47	

Anticipated Development During the 25-year Rate Planning Period

Area	Area Developed in Next 25																									
Ref. #	vears	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046
1.61. #	(Net ha.)																									
1.1	0.48	-	-	-	-	-	-	-	-	-	-	-	-	0.48	-	-	-	-	-	-	-	-	-	-	-	-
1.3	75.87	4.00	4.00	4.00	_	_	4.00	4.00	4.00	4.00	4.00	4.00	4.00	8.00	8.00	8.00	8.00	3.87	_	-	_	-	_		_	
1.4	1.10	-	-	-	-	-	-	-	1.10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.3	26.37	2.53	2.53	2.80	2.80	2.80	2.80	0.60	1.90	1.90	1.90	1.90	1.91	-	-	-	-	-	-	-	-	-	-	-	-	-
2.4	3.47	-	-	1.00	1.00	1.00	0.47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.1	75.07	4.00	4.00	4.00	4.00	4.00	4.00	4.00	5.60	5.60	5.60	5.60	6.34	4.00	4.00	4.00	4.00	2.33	-	-	-	-	-	-	-	-
3.3	98.73	ı	3.30	3.30	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.33	-	-	-	-	-	-	-	-
3.4	6.22	-	1.70	-	-	-	-	-	0.60	0.60	0.60	0.60	0.60	-	-	-	-	-	0.75	0.77	-	-	-	-	-	-
3.5	10.66	-	-	-	-	-	-	-	-	-	-	-	-	2.10	2.10	2.10	2.10	0.66	1.60	-	-	-	-	-	-	-
4.2	218.16	11.08	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	8.80	9.60	8.00	7.32	6.16
4.3	2.64	1.00	1.64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.3	35.17	4.30	4.30	4.30	4.30	4.30	4.30	4.58	3.00	1.79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.4	2.44	-	-	2.20	0.24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.3	13.28	2.00	2.00	2.00	2.00	2.00	2.00	1.28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.4	0.92	-	0.92	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8.1	4.07	-	4.07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9.1	8.18	2.20	5.30	0.68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9.3	9.23	0.91	0.93	0.93	0.93	0.93	0.93	1.28	1.20	1.19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9.4	1.41	-	-	-	-	-	-	1.41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10.1	0.08	0.08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10.3	181.31	10.00	10.00	10.00	10.00	10.00	10.00	9.69	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	5.00	5.00	5.00	4.67	3.95	-	-
10.4	9.09	0.25	0.25	-	-	-	-	-	1.60	1.60	1.60	1.60	1.28	0.91	-	-	-	-	-	-	-	-	-	-	-	-
11.1	18.94	2.50	8.00	3.00	0.75	0.75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.94	-	-	-	-
11.3	69.70	4.00	4.00	4.00	4.00	-	-	-	4.00	4.00	4.00	4.00	4.00	-	-	-	-	-	4.00	4.00	4.00	4.00	4.00	3.52	4.00	6.18
11.5	19.57	-	-	-	-	-	1.75	1.75	1.75	1.77	-	-	-	-	-	-	-	-	-	-	-	-	6.00	6.55	-	-
	892.14	48.85	65.73	51.01	45.42	41.18	45.65	43.99	48.15	45.86	41.10	41.10	41.54	38.88	37.50	37.50	37.50	29.99	23.15	18.57	17.80	21.74	24.27	22.02	11.32	12.34

APPENDIX B: WATER OFFSITE INFRASTRUCTURE

B1. Water Offsite Infrastructure Costs

To support future growth, water offsite infrastructure is required. The estimated cost of this infrastructure is based upon: (a) actual construction costs to the cut-off date, (b) debenture interest associated with financing, and (c) future cost estimates. Total cost is approximately **\$22.92 million** as outlined in the table an map below. Actual costs, debenture interest (if any), and cost estimates were provided by City staff. It is important to note that these costs represent "gross" costs, of which only a portion will go to support future development during the 25-year review period. The remainder of this section outlines how the "net" costs for future development are determined.

Summary of Water Offsite Infrastructure

Item	Project Description	Cost of Completed Work		Fut	ture Debenture Interest	-	timated Cost of Vork Yet to be Completed	1	otal Project stimated Cost
1	Campsite Watermain Loop (41-99-17)	\$	328,202	\$	-	\$	-	\$	328,202
2	Campgrounds Watermain	\$	776,587	\$	-	\$	-	\$	776,587
3	New Growth Water Reservoir (CP_DP186)	\$	11,683,232	\$	156,903	\$	-	\$	11,840,135
4	Water Main 400mm - 1200m from Century Rd to Pioneer Rd (along Hwy 16A)	\$	1,071,905	\$	-	\$	-	\$	1,071,905
6	Water Main 400mm - Easton	\$	523,919	\$	-	\$	-	\$	523,919
7	Water Main 400mm - Pioneer Road to south of Hwy 16A	\$	-	\$	-	\$	2,776,000	\$	2,776,000
8	Water Main 400mm - Diamond Ave between Golden Spike and Century Road	\$	-	\$	-	\$	4,400,000	\$	4,400,000
9	Pressure Reducing Valves - 13	\$	-	\$	-	\$	250,000	\$	250,000
10	Pressure Reducing Valves - 14	\$	-	\$	-	\$	250,000	\$	250,000
11	Pressure Reducing Valves - 15	\$	-	\$	-	\$	150,000	\$	150,000
12	Pressure Reducing Valves - 10	\$	-	\$	-	\$	250,000	\$	250,000
13	Pressure Reducing Valves - 11, 12	\$	-	\$	-	\$	300,000	\$	300,000
100	Unallocated Offsite Levies Collected to Dec 31, 2016 & Contributions From Old A	\$	-	\$	-	\$	-	\$	-
		\$	14,383,846	\$	156,903	\$	8,376,000	\$	22,916,749

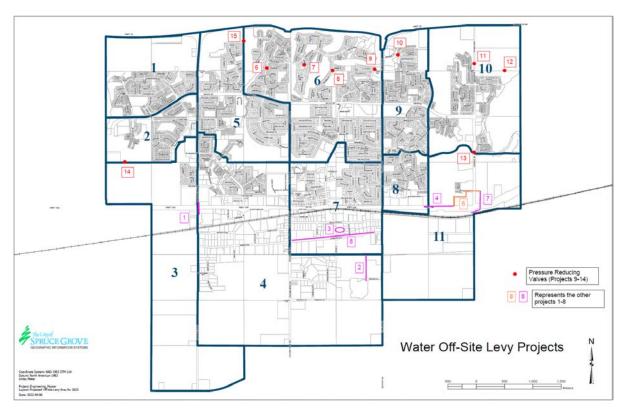
^{*}Costs estimates are reflected in current dollars.

^{**}Estimates include engineering costs and contingencies.

^{***}Offsite levy project details, allocations, etc. were determined by City staff and their engineering/consulting advisors.

^{****} Project #3 historical financing costs are included in the cost of work completed; and costs reflect only the portion allocated to future development.

^{*****} Project numbering may be out of sequence as rows containing deleted projects are hidden.



Location of Water Projects

B2. Water Offsite Infrastructure Grants & Contributions to Date

The MGA enables the City to allocate the costs of offsite infrastructure to future development, other than those costs that have been provided by way of special grant or contribution (i.e., contributed infrastructure). The City has/will receive **\$0.00** in special grants and contributions for water offsite levy infrastructure as shown in the table below (note, if the City receives other grants or contributions in the future, it will be reflected in one of the annual updates and rates adjusted accordingly). The result is that the total reduced project estimated cost is **\$22.92 million**.

Special Grants and Contributions for Water Offsite Infrastructure

Item	Project Description	etal Project mated Cost	Special Provincial Grants	Developer Agreement Contributions	uced Project imated Cost
1	Campsite Watermain Loop (41-99-17)	\$ 328,202	\$ -	\$ -	\$ 328,202
2	Campgrounds Watermain	\$ 776,587	\$ -	\$ -	\$ 776,587
3	New Growth Water Reservoir (CP_DP186)	\$ 11,840,135	\$ -	\$ -	\$ 11,840,135
4	Water Main 400mm - 1200m from Century Rd to Pioneer Rd (along Hwy 16A)	\$ 1,071,905	\$ -	\$ -	\$ 1,071,905
6	Water Main 400mm - Easton	\$ 523,919	\$ -	\$ -	\$ 523,919
7	Water Main 400mm - Pioneer Road to south of Hwy 16A	\$ 2,776,000	\$ -	\$ -	\$ 2,776,000
8	Water Main 400mm - Diamond Ave between Golden Spike and Century Road	\$ 4,400,000	\$ -	\$ -	\$ 4,400,000
9	Pressure Reducing Valves - 13	\$ 250,000	\$ -	\$ -	\$ 250,000
10	Pressure Reducing Valves - 14	\$ 250,000	\$ -	\$ -	\$ 250,000
11	Pressure Reducing Valves - 15	\$ 150,000	\$ -	\$ -	\$ 150,000
12	Pressure Reducing Valves - 10	\$ 250,000	\$ -	\$ -	\$ 250,000
13	Pressure Reducing Valves - 11, 12	\$ 300,000	\$ -	\$ -	\$ 300,000
100	Unallocated Offsite Levies Collected to Dec 31, 2016 & Contributions From Old A	\$ -	\$ -	\$ -	\$ -
		\$ 22,916,749	-	\$ -	\$ 22,916,749

B3. Water Infrastructure Staging

The timing of construction is used to determine the impact of inflation on cost, the impact of forecast reserve balances, and the estimate of financial oversizing (described in the Section that follows). The City anticipates construction of offsite infrastructure as outlined in the table below. Note, if this schedule is adjusted in the future, it will be reflected in one of the annual rate/bylaw updates.

Water Infrastructure Staging

Item	Project Description	Construction Start Year
1	Campsite Watermain Loop (41-99-17)	2003
2	Campgrounds Watermain	2012
3	New Growth Water Reservoir (CP_DP186)	2014
4	Water Main 400mm - 1200m from Century Rd to Pioneer Rd (along Hwy 16A)	2019
6	Water Main 400mm - Easton	2021
7	Water Main 400mm - Pioneer Road to south of Hwy 16A	2025
8	Water Main 400mm - Diamond Ave between Golden Spike and Century Road	2023
9	Pressure Reducing Valves - 13	2025
10	Pressure Reducing Valves - 14	2025
11	Pressure Reducing Valves - 15	2025
12	Pressure Reducing Valves - 10	2025
13	Pressure Reducing Valves - 11, 12	2022

^{*}The share of projects beyond the 25-year review period are not included in rates today (see financial oversizing in next section).

B4. Water Offsite Infrastructure Benefiting Parties

The water offsite infrastructure previously outlined will benefit various parties to varying degrees as determined by City staff and engineering advisors. The potential benefiting parties were include:

- City of Spruce Grove that portion of cost which is required to service existing residents.
- Other Stakeholders other parties (such as neighboring municipalities) that benefit from the infrastructure.
- City of Spruce Grove Future Development (Financial Oversizing) that portion of cost which benefits future development beyond the 25-year review period.
- City of Spruce Grove Future Development (in Rates) all growth-related infrastructure (i.e., leviable water infrastructure costs) during the 25-year rate planning period.

The table below outlines the allocation of water offsite levy infrastructure costs to benefiting parties.

^{**}Costs are inflated to the year of construction using an inflation rate of 5% for the first 2 years, and 3% thereafter.

Item	Project Description	Reduced Project Estimated Cost	Muni Share %	Other Stakeholder Share	Developer Share Beyond 25 Yrs (Financial Oversizing %)	OSL / Developer Share %
1	Campsite Watermain Loop (41-99-17)	\$ 328,202			0.0%	100.0%
2	Campgrounds Watermain	\$ 776,587			0.0%	100.0%
3	New Growth Water Reservoir (CP_DP186)	\$ 11,840,135			0.0%	100.0%
4	Water Main 400mm - 1200m from Century Rd to Pioneer Rd (along Hwy 16A)	\$ 1,071,905			0.0%	100.0%
6	Water Main 400mm - Easton	\$ 523,919			0.0%	100.0%
7	Water Main 400mm - Pioneer Road to south of Hwy 16A	\$ 2,776,000			12.0%	88.0%
8	Water Main 400mm - Diamond Ave between Golden Spike and Century Road	\$ 4,400,000	48.7%		2.1%	49.3%
9	Pressure Reducing Valves - 13	\$ 250,000			12.0%	88.0%
10	Pressure Reducing Valves - 14	\$ 250,000			12.0%	88.0%
11	Pressure Reducing Valves - 15	\$ 150,000	50.0%		6.0%	44.0%
12	Pressure Reducing Valves - 10	\$ 250,000	50.0%		6.0%	44.0%
13	Pressure Reducing Valves - 11, 12	\$ 300,000	25.0%		0.0%	75.0%
100	Unallocated Offsite Levies Collected to Dec 31, 2016 & Contributions From Old A	\$ -				100.0%
		\$ 22,916,749				

Allocation of Water Infrastructure to Benefiting Parties

B5. Existing Receipts & Adjusted Levy Cost

Using the offsite levy share percentages shown in the previous section and applying those percentages to project costs results in an offsite levy cost of approximately **\$19.99 million**. However, prior to allocating these costs to benefiting areas, existing offsite levy receipts collected from developers need to be considered in determining the residual/net costs to developers. The City has collected **\$12.38 million** (\$11.40 million + \$0.98 million) in offsite levies to date and results in an adjusted offsite levy cost of approximately **\$7.62 million**.

Offsite Lev	y Funds	Collected	to Date	& Ad	justed	Levy	Cost

Item	Project Description	OSL / Developer Cost		Offsite Levy Funds Collected to Dec 31, 2016		Fı	Offsite Levy ands Collected starting Jan 1, 2017	De	Adjusted veloper (Levy) Cost
1	Campsite Watermain Loop (41-99-17)	\$	328,202	\$	328,202	\$	-	\$	-
2	Campgrounds Watermain	\$	776,587	\$	776,587	\$	-	\$	-
3	New Growth Water Reservoir (CP_DP186)	\$	11,840,135	\$	7,239,634	\$	633,813	\$	3,966,689
4	Water Main 400mm - 1200m from Century Rd to Pioneer Rd (along Hwy 16A)	\$	1,071,905	\$	-	\$	346,201	\$	725,704
6	Water Main 400mm - Easton	\$	523,919	\$	-	\$	-	\$	523,919
7	Water Main 400mm - Pioneer Road to south of Hwy 16A	\$	2,442,880	\$	-	\$	-	\$	2,442,880
8	Water Main 400mm - Diamond Ave between Golden Spike and Century Road	\$	2,169,024	\$	-	\$	-	\$	2,169,024
9	Pressure Reducing Valves - 13	\$	220,000	\$	-	\$	-	\$	220,000
10	Pressure Reducing Valves - 14	\$	220,000	\$	-	\$	-	\$	220,000
11	Pressure Reducing Valves - 15	\$	66,000	\$	-	\$	-	\$	66,000
12	Pressure Reducing Valves - 10	\$	110,000	\$	-	\$	-	\$	110,000
13	Pressure Reducing Valves - 11, 12	\$	225,000	\$	-	\$	-	\$	225,000
100	Unallocated Offsite Levies Collected to Dec 31, 2016 & Contributions From Old A	\$	-	\$	3,051,844	\$	-	\$	(3,051,844)
		\$	19,993,653	\$	11,396,268	\$	980,014	\$	7,617,371

B6. Summary of Water Offsite Levy Cost Flow-through

As shown in the figure below, the total cost for water infrastructure that forms the basis of the rate is approximately **\$7.62 million**. The cost allocations to each benefitting party are based on the benefitting percentages shown in Section B4. The offsite levy balance (due

^{*}Allocations to future development (vs municipal share etc.) were determined by City staff and their engineering/consulting advisors.

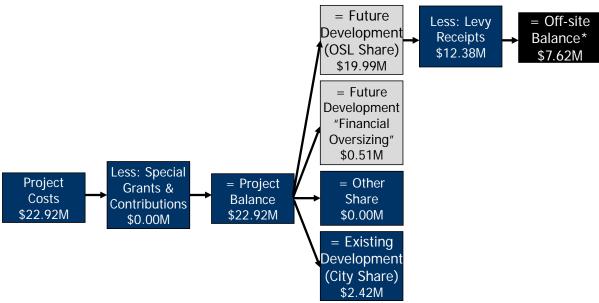
^{**}Financial oversizing is determined by separating out the pro rata portion of developer cost beyond the 25-year review period, in comparison with the anticipated year of construction. As the years move forward and rates are updated, these additional developer costs will be included in rate calculations. For example, a project which is slated to be constructed in year 20 of the 25-year review period will have 20% (5/25) of its costs in rates today, and 80% (20/25) of its costs will sit beyond the 25-year review period.

^{***} Project #3 is allocated 50% to the City and 50% to the offsite levy. However, costs shown include only the portion allocated to future development, and so the allocation is shown as 100% offsite levy.

from developers) is allocated to various benefitting areas (as described in the next section).

Total Water Offsite Levy Costs

- Future



B7. Water Infrastructure Benefiting Areas

Net developer costs for each project have been allocated to multiple benefiting offsite levy area (see tables below). Allocations are denoted with a "1" below applicable area numbers. Benefiting areas were determined by City staff and their engineering advisors. The lands anticipated to develop over the 25-years in each offsite levy benefitting area are used to determine rates.

Benefiting	Areas for	Water	<u>Offsite</u>	<u>Infrastructure</u>

Item	Project Description	ı	Developer Cost	1	2	3	4	5	6	7	8	9	10	11
1	Campsite Watermain Loop (41-99-17)	\$	-	1	1	1	1	1						
2	Campgrounds Watermain	\$	-				1			1				1
3	New Growth Water Reservoir (CP_DP186)	\$	3,966,689	1	1	1	1	1	1	1	1	1	1	1
4	Water Main 400mm - 1200m from Century Rd to Pioneer	\$	725,704								1		1	1
6	Water Main 400mm - Easton	\$	523,919								1		1	1
7	Water Main 400mm - Pioneer Road to south of Hwy 16A	\$	2,442,880								1		1	1
8	Water Main 400mm - Diamond Ave between Golden	\$	2,169,024				1			1			1	1
9	Pressure Reducing Valves - 13	\$	220,000							1			1	1
10	Pressure Reducing Valves - 14	\$	220,000	1	1	1	1							1
11	Pressure Reducing Valves - 15	\$	66,000	1				1	1					
12	Pressure Reducing Valves - 10	\$	110,000						1			1		
13	Pressure Reducing Valves - 11, 12	\$	225,000										1	
100	Unallocated Offsite Levies Collected to Dec 31, 2016 & C	\$	(3,051,844)	1	1	1	1	1	1	1	1	1	1	1
		\$	7,617,371											

B8. Reserve Balance

The balance of the City's water reserve at December 31st, 2021 is **\$(1,983,075)**. This updated balance takes into consideration expenditures up to end-2021 and assumes that front-ending debts will be drawn down via a withdrawal of all available cash in the account.

Water Offsite Levy Reserve Balance

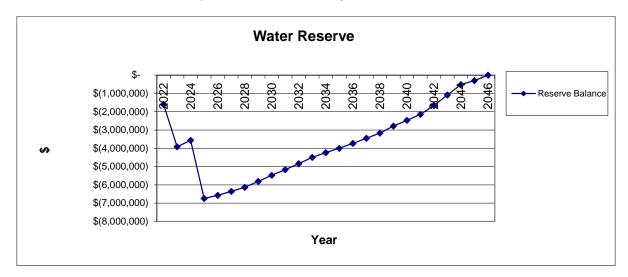
Description		Dr		Cr	Balance
Offsite Levy Expenditures to December 31, 2016		0044	\$	8,344,423.23	\$ (8,344,423.23)
Offsite Levy Receipt Allocations to December 31, 2016	\$	8,344,423.23			\$
Unallocated Receipts & Interest to December 31, 2016 Adjustments made during 2019 update - see updated continuity	\$	2,527,298.67	\$	465,926.72	\$ 2,527,298.67
Opening Balance			φ	405,920.72	\$ 2,061,371.95 2,061,371.95
					,,.
2017					\$ 2,061,371.95
Interest on Opening Balance	\$	175,216.62			\$ 2,236,588.57
Project Expenditures (OSL Share)			\$	3,877,541.84	\$ (1,640,953.27)
Offsite Levy Receipts	\$	650,685.58			\$ (990,267.69)
Offsite Levy Receipts Collected Under Old Agreement or Old Bylaw (if any)	\$	-			\$ (990,267.69)
Debenture Interest Accrued This Year			\$	-	\$ (990,267.69
Interest on Project Expenditure		_	\$	26,270.35	\$ (1,016,538.04
Interest on Offsite Levy Receipts	\$	2,765.41			\$ (1,013,772.63)
Interest on Offsite Levy Receipts Collected Under Old Agreement or Old Bylaw (if any)	\$	-			\$ (1,013,772.63
Interest on Debenture Expenditure			\$	-	\$ (1,013,772.63)
2018					\$ (1,013,772.63)
Interest on Opening Balance			\$	27,473.24	\$ (1,041,245.86
Project Expenditures (OSL Share)			\$	123,955.19	\$ (1,165,201.05
Offsite Levy Receipts	\$	169,280.00	Ť	-,	\$ (995,921.05
Offsite Levy Receipts Collected Under Old Agreement or Old Bylaw (if any)	\$	-			\$ (995,921.05)
Debenture Interest Accrued This Year			\$	_	\$ (995,921.05)
Interest on Project Expenditure			\$	839.80	\$ (996,760.85)
Interest on Offsite Levy Receipts	\$	719.44	Ψ.	000.00	\$ (996,041.41)
Interest on Offsite Levy Receipts Collected Under Old Agreement or Old Bylaw (if any)	\$				\$ (996,041.41)
Interest on Debenture Expenditure			\$	-	\$ (996,041.41)
2019					\$ (996,041.41)
Interest on Opening Balance			\$	24,888.58	\$ (1,020,930.00)
Project Expenditures (OSL Share)				1,465,139.78	\$ (2,486,069.78)
Offsite Levy Receipts	\$	23,615.59	Ψ	1,400,109.70	\$ (2,462,454.19)
Offsite Levy Receipts Offsite Levy Receipts Collected Under Old Agreement or Old Bylaw (if any)	\$	990,472.52			\$ (1,471,981.67)
Debenture Interest Accrued This Year	Ψ	990,472.32	\$		\$ (1,471,981.67
Interest on Project Expenditure			\$	9,157.12	\$ (1,481,138.79
Interest on Offsite Levy Receipts	\$	283.39	Ψ	9,137.12	\$ (1,480,855.40
Interest on Offsite Levy Receipts Collected Under Old Agreement or Old Bylaw (if any)	\$	11,885.67			\$ (1,468,969.73)
Interest on Debenture Expenditure	Ψ	11,003.07	\$	-	\$ (1,468,969.73)
·			_		·
2020			_		\$ (1,468,969.73)
Interest on Opening Balance			\$	36,724.24	\$ (1,505,693.98
Project Expenditures (OSL Share)			\$	24,737.09	\$ (1,530,431.07)
Offsite Levy Receipts	\$	10,771.51	_		\$ (1,519,659.56)
Offsite Levy Receipts Collected Under Old Agreement or Old Bylaw (if any)	\$	-	\$	-	\$ (1,519,659.56)
Interest on Project Expenditure			\$	154.61	\$ (1,519,814.16)
Interest on Offsite Levy Receipts	\$	43.09			\$ (1,519,771.08)
Interest on Offsite Levy Receipts Collected Under Old Agreement or Old Bylaw (if any)	\$	-	\$	-	\$ (1,519,771.08)
Interest on Debenture Expenditure	\$	-	\$	-	\$ (1,519,771.08)
2021					\$ (1,519,771.08)
Interest on Opening Balance			\$	37,994.28	\$ (1,557,765.35
Project Expenditures (OSL Share)			\$	548,049.00	\$ (2,105,814.35
Offsite Levy Receipts	\$	125,661.54			\$ (1,980,152.81)
Offsite Levy Receipts Collected Under Old Agreement or Old Bylaw (if any)					\$ (1,980,152.81)
Interest on Project Expenditure			\$	3,425.31	\$ (1,983,578.12
Interest on Offsite Levy Receipts	\$	502.65			\$ (1,983,075.47
Interest on Offsite Levy Receipts Collected Under Old Agreement or Old Bylaw (if any)					\$ (1,983,075.47
Interest on Debenture Expenditure					\$ (1,983,075.47)

B9. Development and Water Infrastructure Staging Impacts

Water offsite infrastructure will be constructed in staged fashion over the 25-year review period. We have reviewed the availability of offsite levy funds to meet these construction requirements and found that offsite levy reserve funds will not be sufficient to pay for construction of water infrastructure from time to time—front ending of infrastructure will be required. A front-ender is the party that constructs and pays up front for infrastructure that benefits other parties. The front-ender (be it a municipality or a developer) is reimbursed over time as levies are collected, and in accordance with the municipality's front-ending repayment policies.

To compensate parties for capital they provide in front-ending offsite infrastructure construction, a **2.50%** interest allowance has been charged to the reserve when it is forecast to be in a negative balance. Further, a **0.80%** interest credit has been provided to the reserve when it is forecast to be in a positive balance. The graph and table below outline the forecast water levy reserve balances over the 25-year development period.

If necessary, an interest staging adjustment has been applied to rates (slightly positive or slightly negative) to ensure that the forecast reserve balance at the end of the 25-year review period always returns to break-even (i.e., developers are not charged too much thereby providing a windfall to the City, nor are they charged too little thereby placing an unequitable burden on taxpayers).



Anticipated Water Offsite Levy Reserve Balances³

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³ In determining staging adjustments, the offsite levy model also applies inflation to future rates. In so doing it acknowledges that rates must keep pace with inflation just as costs do. Also, it acknowledges that an offsite levy rate of \$X paid today is not worth the same as the equivalent \$X rate paid in the future (i.e., it is discounted).

Anticipated Water Offsite Levy Reserve Balances

					Ор	ening Balance	\$ (1,983,075)
Year	F	Receipts	E	xpenditure		Interest	Balance
2022	\$	412,556	\$	-	\$	(39,263)	\$ (1,609,782)
2023	\$	602,916	\$	2,813,667	\$	(95,513)	\$ (3,916,046)
2024	\$	442,025	\$	-	\$	(86,851)	\$ (3,560,872)
2025	\$	400,591	\$	3,418,108	\$	(164,460)	\$ (6,742,849)
2026	\$	329,832	\$	-	\$	(160,325)	\$ (6,573,342)
2027	\$	368,752	\$	-	\$	(155,115)	\$ (6,359,705)
2028	\$	373,848	\$	-	\$	(149,646)	\$ (6,135,503)
2029	\$	462,881	\$	-	\$	(141,816)	\$ (5,814,438)
2030	\$	472,271	\$	-	\$	(133,554)	\$ (5,475,721)
2031	\$	433,917	\$	-	\$	(126,045)	\$ (5,167,849)
2032	\$	446,935	\$	-	\$	(118,023)	\$ (4,838,937)
2033	\$	453,304	\$	-	\$	(109,641)	\$ (4,495,274)
2034	\$	358,906	\$	-	\$	(103,409)	\$ (4,239,778)
2035	\$	342,957	\$	-	\$	(97,421)	\$ (3,994,242)
2036	\$	353,246	\$	-	\$	(91,025)	\$ (3,732,021)
2037	\$	363,843	\$	-	\$	(84,204)	\$ (3,452,382)
2038	\$	354,986	\$	-	\$	(77,435)	\$ (3,174,831)
2039	\$	458,952	\$	-	\$	(67,897)	\$ (2,783,776)
2040	\$	371,424	\$	-	\$	(60,309)	\$ (2,472,661)
2041	\$	380,730	\$	-	\$	(52,298)	\$ (2,144,229)
2042	\$	522,345	\$	-	\$	(40,547)	\$ (1,662,431)
2043	\$	604,427	\$	-	\$	(26,450)	\$ (1,084,454)
2044	\$	581,839	\$	-	\$	(12,565)	\$ (515,180)
2045	\$	223,815	\$	-	\$	(7,284)	\$ (298,649)
2046	\$	298,649	\$	-	\$	(0)	\$ (0)

APPENDIX C: SANITARY OFFSITE INFRASTRUCTURE

C1. Sanitary Offsite Infrastructure Costs

To support future growth, sanitary offsite infrastructure is required. The estimated cost of this infrastructure is based upon: (a) actual construction costs to the cut-off date, (b) debenture interest associated with financing, and (c) future cost estimates. Total cost is approximately **\$29.99 million** as outlined in the table and map below. Actual costs, debenture interest (if any), and cost estimates were provided by City staff. It is important to note that these costs represent "gross" costs, of which only a portion will go to support future development during the 25-year review period. The remainder of this section outlines how the "net" costs for future development are determined.

Summary of Sanitary Offsite Infrastructure

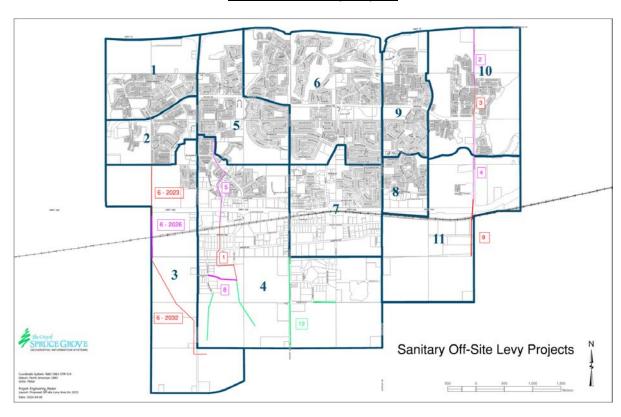
ltem	Project Description	Cost of Completed Work	Future Debenture Interest	Estimated Cost of Work Yet to be Completed	Total Project Estimated Cost
1	West Trunk Sanitary Sewer (42-99-12-06) - W of Campsite Rd to S Industrial Lands*	\$ 3,772,950	\$ -	\$ -	\$ 3,772,950
2	Pioneer Road Trunk Sewer (42-99-16-09)	\$ 2,964,966	\$ -	\$ -	\$ 2,964,966
3	Pioneer Road Sanitary Sewer Extension (41-01-01-14)	\$ 1,553,981	\$ -	\$ -	\$ 1,553,981
4	Pioneer Trunk Sewer Extension DP138	\$ 3,983,988	\$ -	\$ -	\$ 3,983,988
5	Campsite West Trunk Sanitary Sewer (42-99-09)	\$ 1,358,031	\$ -	\$ -	\$ 1,358,031
6	Boundary Trunk Extension - north Hwy 16A to south municipal boundary	\$ 157,818	\$ -	\$ 7,234,000	\$ 7,391,818
8	Spruce Grove Industrial Sanitary Trunk	\$ 456,180	\$ -	\$ -	\$ 456,180
9	Pioneer Trunk Extension -875m of 750mm north Hwy 16A to south of Hwy 16A	\$ -	\$ -	\$ 3,174,000	\$ 3,174,000
12	West Trunk Southern Branches - 4 Extensions to municipal boundary	\$ -	\$ -	\$ 5,337,000	\$ 5,337,000
100	Unallocated Offsite Levies Collected to Dec 31, 2016 & Contributions From Old Agreeme	\$ -	\$ -	\$ -	\$ -
		\$ 14,247,913	\$ -	\$ 15,745,000	\$ 29,992,913

^{*}Costs estimates are reflected in current dollars.

^{**}Estimates include engineering costs and contingencies.

^{***}Offsite levy project details, allocations, etc. were determined by City staff and their engineering/consulting advisors.

^{****} Project numbering may be out of sequence as rows containing deleted projects are hidden.



Location of Sanitary Projects

C2. Sanitary Offsite Infrastructure Grants & Contributions to Date

The MGA enables the City to allocate the costs of offsite infrastructure to future development, other than those costs that have been provided by way of special grant or contribution (i.e., contributed infrastructure). The City has/will receive \$1.22 million in special grants and contributions (\$1.16 million + \$0.06 million) for sanitary offsite levy infrastructure as shown in the table below (note, if the City receives additional grants or contributions in the future, it will be reflected in one of the annual updates and rates adjusted accordingly). The result is that the total reduced project estimated cost is \$28.77 million.

Special Grants and Contributions for Sanitary Offsite Infrastructure

Item	Project Description	al Project nated Cost	Sį	pecial Grants	1	Developer Agreement ontributions	luced Project timated Cost
1	West Trunk Sanitary Sewer (42-99-12-06) - W of Campsite Rd to S Industrial Lands*	\$ 3,772,950	\$	-	\$	9,890	\$ 3,763,060
2	Pioneer Road Trunk Sewer (42-99-16-09)	\$ 2,964,966	\$	1,163,038	\$	9,890	\$ 1,792,038
3	Pioneer Road Sanitary Sewer Extension (41-01-01-14)	\$ 1,553,981	\$	-	\$	9,890	\$ 1,544,091
4	Pioneer Trunk Sewer Extension DP138	\$ 3,983,988	\$	-	\$	9,890	\$ 3,974,098
5	Campsite West Trunk Sanitary Sewer (42-99-09)	\$ 1,358,031	\$	-	\$	9,890	\$ 1,348,141
6	Boundary Trunk Extension - north Hwy 16A to south municipal boundary	\$ 7,391,818	\$	-	\$	9,890	\$ 7,381,928
8	Spruce Grove Industrial Sanitary Trunk	\$ 456,180	\$	-	\$	-	\$ 456,180
9	Pioneer Trunk Extension -875m of 750mm north Hwy 16A to south of Hwy 16A	\$ 3,174,000	\$	-	\$	-	\$ 3,174,000
12	West Trunk Southern Branches - 4 Extensions to municipal boundary	\$ 5,337,000	\$	-	\$	-	\$ 5,337,000
100	Unallocated Offsite Levies Collected to Dec 31, 2016 & Contributions From Old Agreeme	\$ -	\$	-	\$	-	\$ -
		\$ 29,992,913	\$	1,163,038	\$	59,340	\$ 28,770,535

C3. Sanitary Infrastructure Staging

The timing of construction is used to determine the impact of inflation on cost, the impact of forecast reserve balances, and the estimate of financial oversizing (described in the Section that follows). The City anticipates construction of offsite infrastructure as outlined in the table below. Note, if this schedule is adjusted in the future, it will be reflected in one of the annual rate/bylaw updates.

Sanitary Infrastructure Staging

ltem	Project Description	Construction Start Year
1	West Trunk Sanitary Sewer (42-99-12-06) - W of Campsite Rd to S Industrial Lands*	2006
2	Pioneer Road Trunk Sewer (42-99-16-09)	2009
3	Pioneer Road Sanitary Sewer Extension (41-01-01-14)	2012
4	Pioneer Trunk Sewer Extension DP138	2015
5	Campsite West Trunk Sanitary Sewer (42-99-09)	2000
6	Boundary Trunk Extension - north Hwy 16A to south municipal boundary	2023
8	Spruce Grove Industrial Sanitary Trunk	2007
9	Pioneer Trunk Extension -875m of 750mm north Hwy 16A to south of Hwy 16A	2033
12	West Trunk Southern Branches - 4 Extensions to municipal boundary	+2046

^{*}The share of projects beyond the 25-year review period are not included in rates today (see financial oversizing in next section).

C4. Sanitary Offsite Infrastructure Benefiting Parties

The sanitary offsite infrastructure previously outlined will benefit various parties to varying degrees as determined by City staff and engineering advisors. The potential benefiting parties were include:

- City of Spruce Grove that portion of cost which is required to service existing residents.
- Other Stakeholders other parties (such as neighboring municipalities) that benefit from the infrastructure.
- City of Spruce Grove Future Development (Financial Oversizing) that portion of cost which benefits future development beyond the 25-year review period.
- City of Spruce Grove Future Development (in Rates) all growth-related infrastructure (i.e., leviable sanitary infrastructure costs) during the 25-year rate planning period.

The table below outlines the allocation of sanitary offsite levy infrastructure costs to benefiting parties.

^{**}Costs are inflated to the year of construction using an inflation rate of 5% for the first 2 years, and 3% thereafter.

Allocation of Sanitary Infrastructure to Benefiting Parties

Item	Project Description	Reduced Project Estimated Cost	Muni Share %	Other Stakeholder Share	Developer Share Beyond 25 Yrs (Financial Oversizing %)	OSL / Developer Share %
1	West Trunk Sanitary Sewer (42-99-12-06) - W of Campsite Rd to S Industrial Lands*	\$ 3,763,060			0.0%	100.0%
2	Pioneer Road Trunk Sewer (42-99-16-09)	\$ 1,792,038			0.0%	100.0%
3	Pioneer Road Sanitary Sewer Extension (41-01-01-14)	\$ 1,544,091			0.0%	100.0%
4	Pioneer Trunk Sewer Extension DP138	\$ 3,974,098			0.0%	100.0%
5	Campsite West Trunk Sanitary Sewer (42-99-09)	\$ 1,348,141			0.0%	100.0%
6	Boundary Trunk Extension - north Hwy 16A to south municipal boundary	\$ 7,381,928			4.0%	96.0%
8	Spruce Grove Industrial Sanitary Trunk	\$ 456,180			0.0%	100.0%
9	Pioneer Trunk Extension -875m of 750mm north Hwy 16A to south of Hwy 16A	\$ 3,174,000			44.0%	56.0%
12	West Trunk Southern Branches - 4 Extensions to municipal boundary	\$ 5,337,000			96.0%	4.0%
100	Unallocated Offsite Levies Collected to Dec 31, 2016 & Contributions From Old Agreeme	\$ -				100.0%
		\$ 28,770,535				

^{*}Allocations to future development (vs municipal share etc.) were determined by City staff and their engineering/consulting advisors.

C5. Existing Receipts & Adjusted Levy Cost

Using the offsite levy share percentages shown in the previous section and applying those percentages to project costs results in an offsite levy cost of approximately \$21.96 million. However, prior to allocating these costs to benefiting areas, existing offsite levy receipts collected from developers need to be considered in determining the residual/net costs to developers. The City has collected \$6.44 million (\$5.71 million + \$0.73 million) in offsite levies to date, and this results in an adjusted offsite levy cost of approximately \$15.51 million

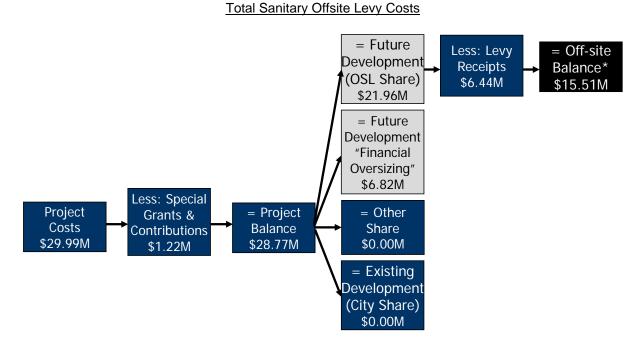
Offsite Levy Funds Collected to Date & Adjusted Levy Cost

Item	Project Description	OSL / De	eveloper ost	Fund	fsite Levy ds Collected Dec 31, 2016	Fun	ffsite Levy ds Collected arting Jan 1, 2017	djusted loper (Levy) Cost
1	West Trunk Sanitary Sewer (42-99-12-06) - W of Campsite Rd to S Industrial Lands*	\$ 3	3,763,060	\$	3,246,918	\$	53,977	\$ 462,165
2	Pioneer Road Trunk Sewer (42-99-16-09)	\$ 1	,792,038			\$	96,897	\$ 1,695,141
3	Pioneer Road Sanitary Sewer Extension (41-01-01-14)	\$ 1	,544,091			\$	83,523	\$ 1,460,567
4	Pioneer Trunk Sewer Extension DP138	\$ 3	3,974,098			\$	211,691	\$ 3,762,407
5	Campsite West Trunk Sanitary Sewer (42-99-09)	\$ 1	,348,141	\$	1,358,031	\$	(85)	\$ (9,805)
6	Boundary Trunk Extension - north Hwy 16A to south municipal boundary	\$ 7	,086,651	\$	157,818	\$	206,473	\$ 6,722,360
8	Spruce Grove Industrial Sanitary Trunk	\$	456,180	\$	-	\$	-	\$ 456,180
9	Pioneer Trunk Extension -875m of 750mm north Hwy 16A to south of Hwy 16A	\$ 1	,777,440	\$	-	\$		\$ 1,777,440
12	West Trunk Southern Branches - 4 Extensions to municipal boundary	\$	213,480	\$	-	\$	-	\$ 213,480
100	Unallocated Offsite Levies Collected to Dec 31, 2016 & Contributions From Old Agreeme	\$	-	\$	947,657	\$	-	\$ (947,657)
		\$ 21	,955,178	\$	5,710,423	\$	732,425	\$ 15,512,330

C6. Summary of Sanitary Offsite Levy Cost Flow-through

As shown in the figure below, the total costs for sanitary infrastructure that forms the basis of the rate is approximately **\$15.51 million**. The cost allocations to each benefitting party are based on the benefitting percentages shown in Section C4. The offsite levy balance (due from developers) is allocated to various benefitting areas (as described in the next section).

^{**}Financial oversizing is determined by separating out the pro rata portion of developer cost beyond the 25-year review period, in comparison with the anticipated year of construction. As the years move forward and rates are updated, these additional developer costs will be included in rate calculations. For example, a project which is slated to be constructed in year 20 of the 25-year review period will have 20% (5/25) of its costs in rates today, and 80% (20/25) of its costs will sit beyond the 25-year review period.



C7. Sanitary Infrastructure Benefiting Areas

Net developer costs for each project have been allocated to multiple benefiting offsite levy area (see tables below). Allocations are denoted with a "1" below applicable area numbers. Benefiting areas were determined by City staff. The lands anticipated to develop over the 25-years in each offsite levy benefiting area are used to determine rates.

Item	Project Description	[Developer Cost	1	2	3	4	5	6	7	8	9	10	11
1	West Trunk Sanitary Sewer (42-99-12-06) - W of Campsite Rd to S Industrial	\$	462,165				1	1						
2	Pioneer Road Trunk Sewer (42-99-16-09)	\$	1,695,141										1	1
3	Pioneer Road Sanitary Sewer Extension (41-01-01-14)	\$	1,460,567										1	1
4	Pioneer Trunk Sewer Extension DP138	\$	3,762,407										1	1
5	Campsite West Trunk Sanitary Sewer (42-99-09)	\$	(9,805)				1							
6	Boundary Trunk Extension - north Hwy 16A to south municipal boundary	\$	6,722,360		1	1								
7	Pioneer Trunk Extension -851m of 600mm north south of Hwy 16A to boundary	\$	(79,949)										1	1
8	Spruce Grove Industrial Sanitary Trunk	\$	456,180				1							
9	Pioneer Trunk Extension -875m of 750mm north Hwy 16A to south of Hwy 16A	\$	1,777,440										1	1
12	West Trunk Southern Branches - 4 Extensions to municipal boundary	\$	213,480				1							
100	Unallocated Offsite Levies Collected to Dec 31, 2016 & Contributions From Old Agre	\$	(947,657)	1	1	1	1	1	1	1	1	1	1	1
		\$	15,512,330											

Benefiting Areas for Sanitary Offsite Infrastructure

C8. Reserve Balance

The balance of the City's sanitary reserve at December 31st, 2021 is **\$(7,559,966)**. This updated balance takes into consideration expenditures up to end-2021 and assumes that front-ending debts will be drawn down via a withdrawal of all available cash in the account.

Sanitary Offsite Levy Reserve Balance

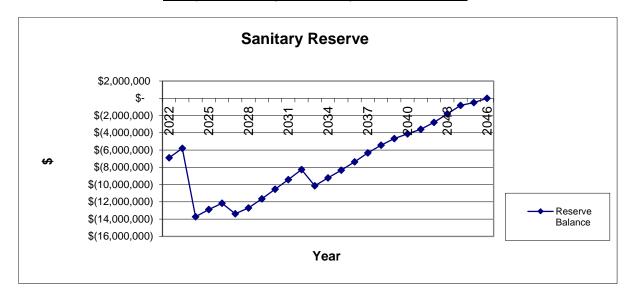
Description	Dr	Cr	Balance
Offsite Levy Expenditures to December 31, 2016		\$ 11,522,334.96	\$ (11,522,334.96
Offsite Levy Receipt Allocations to December 31, 2016	\$ 4,762,766.14		\$ (6,759,568.82
Unallocationed Receipts (Adjustments made during 2019 update - see updated continuity)	\$ 465,926.72	\$ -	\$ (6,293,642.10
			\$ (6,293,642.10
Opening Balance			\$ (6,293,642.10
2017			\$ (6,293,642.10
Interest on Opening Balance		\$ 170,557.70	\$ (6,464,199.80
Project Expenditures (OSL Share)		\$ 756,872.34	\$ (7,221,072.14
Offsite Levy Receipts	\$ 278,601.18		\$ (6,942,470.96
Offsite Levy Receipts Collected Under Old Agreement or Old Bylaw (if any)	\$ -		\$ (6,942,470.96
Debenture Interest Accrued This Year	· ·	\$ -	\$ (6,942,470.96
Interest on Project Expenditure		1	
	A 44 040 55	\$ 5,127.81	\$ (6,947,598.77
Interest on Offsite Levy Receipts	\$ 11,840.55		\$ (6,935,758.22
Interest on Offsite Levy Receipts Collected Under Old Agreement or Old Bylaw (if any)	\$ -		\$ (6,935,758.22
Interest on Debenture Expenditure		\$ -	\$ (6,935,758.22
2018			\$ (6,935,758.22
Interest on Opening Balance		\$ 187,959.05	\$ (7,123,717.27
Project Expenditures (OSL Share)		\$ 349,487.46	\$ (7,473,204.73
Offsite Levy Receipts	\$ 35,785.00		\$ (7,437,419.73
Offsite Levy Receipts Collected Under Old Agreement or Old Bylaw (if any)	\$ -		\$ (7,437,419.73
Debenture Interest Accrued This Year		\$ -	\$ (7,437,419.73
Interest on Project Expenditure		\$ 2,367.78	\$ (7,439,787.51
Interest on Offsite Levy Receipts	\$ 1,520.86	,	\$ (7,438,266.64
Interest on Offsite Levy Receipts Collected Under Old Agreement or Old Bylaw (if any)	\$ -		\$ (7,438,266.64
Interest on Debenture Expenditure	,	\$ -	\$ (7,438,266.64
0040			<i>-</i>
2019 Interest on Opening Balance		Ф 405 000 CO	\$ (7,438,266.64
Project Expenditures (OSL Share)		\$ 185,863.69 \$ 456,180.08	\$ (7,624,130.33
,	•	\$ 456,180.08	(8,080,310.41
Offsite Levy Receipts	\$ -		\$ (8,080,310.41
Offsite Levy Receipts Collected Under Old Agreement or Old Bylaw (if any)	\$ 481,730.30		\$ (7,598,580.11
Debenture Interest Accrued This Year		\$ -	\$ (7,598,580.11
Interest on Project Expenditure	-	\$ 2,851.13	\$ (7,601,431.24
Interest on Offsite Levy Receipts	\$ -		\$ (7,601,431.24
Interest on Offsite Levy Receipts Collected Under Old Agreement or Old Bylaw (if any)	\$ 5,780.76		\$ (7,595,650.47
Interest on Debenture Expenditure		\$ -	\$ (7,595,650.47
2020			\$ (7,595,650.47
Interest on Opening Balance		\$ 189,891.26	\$ (7,785,541.74
Project Expenditures (OSL Share)		\$ -	\$ (7,785,541.74
Offsite Levy Receipts	\$ 20,086.86		\$ (7,765,454.88
Offsite Levy Receipts Collected Under Old Agreement or Old Bylaw (if any)			\$ (7,765,454.88
Debenture Interest Accrued This Year			\$ (7,765,454.88
Interest on Project Expenditure	`		\$ (7,765,454.88
Interest on Offsite Levy Receipts	\$ 80.35		\$ (7,765,374.53
Interest on Offsite Levy Receipts Collected Under Old Agreement or Old Bylaw (if any)			\$ (7,765,374.53
Interest on Debenture Expenditure			\$ (7,765,374.53
2024			
2021 Interest on Opening Balance		\$ 194,134.36	\$ (7,765,374.53
Project Expenditures (OSL Share)		\$ 194,134.36 \$ -	(7,959,508.89 (7,959,508.89
Offsite Levy Receipts	¢ 207.054.50	Ψ -	\$
·	\$ 397,951.53		\$ (7,561,557.36
Offsite Levy Receipts Collected Under Old Agreement or Old Bylaw (if any) Debenture Interest Accrued This Year			\$ (7,561,557.36
			\$ (7,561,557.36
Interest on Project Expenditure	m 150151		\$ (7,561,557.36
Interest on Offsite Levy Receipts	\$ 1,591.81		\$ (7,559,965.55
Interest on Offsite Levy Receipts Collected Under Old Agreement or Old Bylaw (if any)			\$ (7,559,965.55
Interest on Debenture Expenditure			\$ (7,559,965.55

C9. Development and Sanitary Infrastructure Staging Impacts

Sanitary offsite infrastructure will be constructed in staged fashion over the 25-year development period. We have reviewed the availability of offsite levy funds to meet these construction requirements and found that offsite levy reserve funds will not be sufficient to pay for construction of sanitary infrastructure from time to time—front ending of infrastructure will be required. A front-ender is the party that constructs and pays up front for infrastructure that benefits other parties. The front-ender (be it a municipality or a developer) is reimbursed over time as levies are collected, and in accordance with the municipality's front-ending repayment policies.

To compensate parties for capital they provide in front-ending offsite infrastructure construction, a **2.50%** interest allowance has been charged to the reserve when it is forecast to be in a negative balance. Further, a **0.80%** interest credit has been provided to the reserve when it is forecast to be in a positive balance. The graph and table below outline the forecast water levy reserve balances over the 25-year development period.

If necessary, an interest staging adjustment has been applied to rates (slightly positive or slightly negative) to ensure that the forecast reserve balance at the end of the 25-year review period always returns to break-even (i.e., developers are not charged too much thereby providing a windfall to the City, nor are they charged too little thereby placing an unequitable burden on taxpayers).



Anticipated Sanitary Offsite Levy Reserve Balances⁴

⁴ In determining staging adjustments, the offsite levy model also applies inflation to future rates. In so doing it acknowledges that rates must keep pace with inflation just as costs do. Also, it acknowledges that an offsite levy rate of \$X paid today is not worth the same as the equivalent \$X rate paid in the future (i.e., it is discounted).

Anticipated Sanitary Offsite Levy Reserve Balances

	Opening Balance											
Year	Receipts	Expenditure	Interest	Balance								
2022	\$ 834,757	\$ -	\$ (168,130)	\$ (6,893,339)								
2023	\$ 1,238,412	\$ -	\$ (141,373)	\$ (5,796,300)								
2024	\$ 1,083,932	\$ 8,687,717	\$ (335,002)	\$ (13,735,086)								
2025	\$ 1,153,835	\$ -	\$ (314,531)	\$ (12,895,783)								
2026	\$ 1,030,332	\$ -	\$ (296,636)	\$ (12,162,088)								
2027	\$ 1,080,368	\$ 1,971,827	\$ (326,339)	\$ (13,379,886)								
2028	\$ 989,541	\$ -	\$ (309,759)	\$ (12,700,104)								
2029	\$ 1,335,938	\$ -	\$ (284,104)	\$ (11,648,269)								
2030	\$ 1,375,767	\$ -	\$ (256,813)	\$ (10,529,315)								
2031	\$ 1,334,289	\$ -	\$ (229,876)	\$ (9,424,902)								
2032	\$ 1,374,318	\$ -	\$ (201,265)	\$ (8,251,849)								
2033	\$ 1,436,446	\$ 3,068,243	\$ (247,091)	\$ (10,130,737)								
2034	\$ 1,124,188	\$ -	\$ (225,164)	\$ (9,231,713)								
2035	\$ 1,111,296	\$ -	\$ (203,010)	\$ (8,323,427)								
2036	\$ 1,144,635	\$ -	\$ (179,470)	\$ (7,358,262)								
2037	\$ 1,178,974	\$ -	\$ (154,482)	\$ (6,333,770)								
2038	\$ 1,025,993	\$ -	\$ (132,694)	\$ (5,440,472)								
2039	\$ 888,396	\$ -	\$ (113,802)	\$ (4,665,877)								
2040	\$ 642,669	\$ -	\$ (100,580)	\$ (4,123,788)								
2041	\$ 615,124	\$ -	\$ (87,717)	\$ (3,596,381)								
2042	\$ 883,188	\$ -	\$ (67,830)	\$ (2,781,023)								
2043	\$ 1,028,248	\$ -	\$ (43,819)	\$ (1,796,595)								
2044	\$ 1,003,246	\$ -	\$ (19,834)	\$ (813,183)								
2045	\$ 334,538	\$ -	\$ (11,966)	\$ (490,611)								
2046	\$ 490,611	\$ -	\$ 0	\$ 0								

APPENDIX D: TRANSPORTATION OFFSITE INFRASTRUCTURE

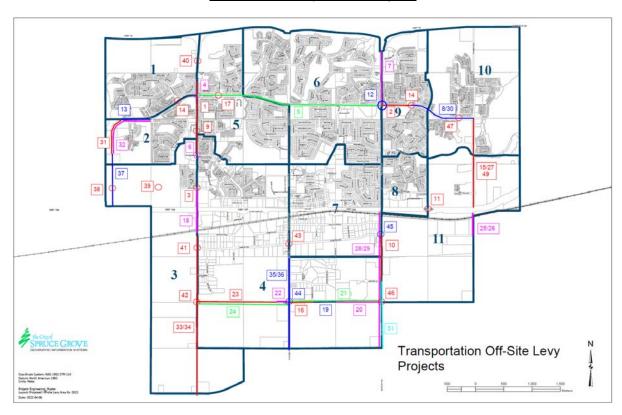
D1. Transportation Offsite Infrastructure Costs

To support future growth, transportation offsite infrastructure is required. The estimated cost of this infrastructure is based upon: (a) actual construction costs to the cut-off date, (b) debenture interest associated with financing, and (c) future cost estimates. Total cost is approximately \$125.24 million as outlined in the table and map below. Actual costs, debenture interest (if any), and cost estimates were provided by City staff. It is important to note that these costs represent "gross" costs, of which only a portion will go to support future development during the 25-year review period. The remainder of this section outlines how the "net" costs for future development are determined.

Summary of Transportation Offsite Infrastructure

Item	Project Description	Cor	Cost of mpleted Work	Fut	ure Debenture Interest	-	timated Cost of /ork Yet to be Completed		otal Project
1	Campsite Road Twinning	\$	137,529	\$		\$	-	\$	137,529
2	Grove Drive - Century Road to Greystone	\$	56,771	\$	-	\$	-	\$	56,771
3	Traffic Signals - Campsite Road and McLeod Ave	\$	203,441	\$	-	\$	-	\$	203,441
4	Traffic Signals - Campsite Road and Grove Drive	\$	104,864	\$	-	\$	-	\$	104,864
5	Grove Drive Twinning/Widening - Campsite to Century	\$	5.828.599		-	\$	-	\$	5,828,599
6	TLC Signalization	\$	262,197	\$	-	\$	_	\$	262,197
7	Century Road Widening/Landscaping	\$	1.872.896		_	\$	_	\$	1,872,896
8	Grove Drive East/West	\$	3,130,734		-	\$	_	\$	3,130,734
9	Traffic Signals - Jennifer Heil Way and Hawthorne Gate	\$	200,970		-	\$	_	\$	200,970
10	Century Road South of Diamond Ave.	\$	1,474,213		-	\$	_	\$	1,474,213
11	Traffic Signals - Highway 16A/Century Crossing	\$	376.862		_	\$		\$	376,862
12	Century Road/ Grove Drive Intersection	\$	1,546,798			\$	_	\$	1,546,798
13	Grove Drive East Extension	\$	1,650,186	-	-	\$	_	\$	1,650,186
14	Traffic Signals - (1) Grove Dr and Greystone, and (2) Grove Dr and Harvest Ridge	\$	370,210	\$	-	\$	-	\$	370,210
15	Pioneer Rd - Grove Dr to Highway 16A with roundabout at McLeod Ave and Grove Dr	\$	11,135,324	\$	1,184,155	\$	-	\$	12,319,479
16	South Industrial Arterial - Tamarack Drive	\$	760,710	\$	-	\$	-	\$	760,710
17	Traffic Signals - Grove Drive and Deer Park	\$	261,976			\$	-	\$	261,976
18	Widening Jennifer Heil Road/Campsite Rd from McLeod Ave to south of the CN rail	\$	2,483,505		263,937	\$	-	\$	2,747,442
19	Tamarack Drive 2LAUD - 200m from Golden Spike Rd east	\$	-	\$	-	\$	732,000	\$	732,000
20	Tamarack Drive 2LAUD - 1400m from existing to Century Rd	\$	-	\$	-	\$	5,124,000		5,124,000
21	Tamarack Drive 4LAUD - 1600m from Golden Spike Rd to	\$	1,117,706	\$	121,919	\$	4,560,294	\$	5,799,919
22	Tamarack Drive 2LAUD - 90m from Golden Spike Rd west	\$	-	\$	-	\$	329,400	\$	329,400
23	Tamarack Drive 2LAUD - 1500m from existing to Campsite Rd	\$	-	\$	-	\$	5,490,000	•	5,490,000
24	Tamarack Drive 4LAUD - 1600m from Golden Spike Rd to	\$	-	\$	-	\$	5,856,000	\$	5,856,000
25	Pioneer Road 2LAUD - 400m south of Hwy 16A	\$	-	\$	-	\$	1,464,000	\$	1,464,000
26	Pioneer Road 4LAUD - 400m south of Hwy 16A	\$	-	\$	-	\$	1,464,000		1,464,000
27	Pioneer Road 4LAUD - 1400m Hwy 16A to Grove Dr	\$	-	\$	-	\$	5,124,000		5,124,000
28	Century Road 2LAUD - 2400m Hwy 16A to south boundary	\$	-	\$	-	\$	4,485,000	\$	4,485,000
29	Century Road 4LAUD - 2400m Hwy 16A to south boundary	\$	-	\$	-	\$	8,784,000	\$	8,784,000
30	Grove Drive East 4LAUD - 1000m to Pioneer Rd	\$	-	\$	-	\$	3,120,000	\$	3,120,000
31	Grove Drive West 2LAUD - 600m to Boundary Rd	\$	2,149,514	\$	228,620		-	\$	2,378,134
32	Grove Drive West 4LAUD - 1400m to Boundary Rd	\$	279,117		-	\$	2,210,000	\$	2,489,117
33	Campsite Road 2LAUD - 1300m from CN to south boundary	\$	-	\$	-	\$	4,758,000	\$	4,758,000
34	Campsite Road 4LAUD - 1300m from CN to south boundary	\$	-	\$	-	\$	3,900,000	\$	3,900,000
35	Golden Spike Road 2LAUD - 1400m to south boundary	\$	-	\$	-	\$	4,400,000		4,400,000
36	Golden Spike Road 4LAUD - 1400m to south boundary	\$	-	\$	-	\$	5,124,000		5,124,000
37	Boundary Road 2LAUD - 1200m to Hwy16A	\$	19,229	\$	2,097	\$	10,895,570	\$	10,916,896
38	Traffic Signals - Boundary @ McLeod	\$	-	\$	-	\$	360,000	\$	360,000
39	Traffic Signals - Hwy 16A - between Boundary & Campsite	\$	-	\$	-	\$	360,000	\$	360,000
40	Traffic Signals - Campsite - between Grove Dr & Hwy 16	\$	240,534		26,237	\$	-	\$	266,771
41	Traffic Signals - Campsite @ Diamond	\$	-	\$	-	\$	360,000	\$	360,000
42	Traffic Signals - Campsite @ Tamarack	\$	-	\$	-	\$	360,000	\$	360,000
43	Traffic Signals - Golden Spike @ Diamond	\$	-	\$	-	\$	360,000	\$	360,000
44	Traffic Signals - Golden Spike @ Tamarack	\$	-	\$	-	\$	360,000	\$	360,000
45	Traffic Signals - Century @ Diamond	\$	-	\$	-	\$	360,000	\$	360,000
46	Traffic Signals - Century @ Tamarack	\$	-	\$	-	\$	360,000	\$	360,000
47	Traffic Signals - Grove Dr @ Greenbury Blvd	\$	-	\$	-	\$	360,000	\$	360,000
48	Upgrade of Grove Drive from Century Road to Pioneer Road	\$	708,321	\$	77,263	\$	-	\$	785,584
49	Pioneer Road Top Lift Asphalt	\$	-	\$	-	\$	1,602,000	\$	1,602,000
51	Century Road 2LAUD - Century Close to south boundary	\$	-	\$	-	\$	4,299,000	\$	4,299,000
100	Unallocated Offsite Levies Collected to Dec 31, 2016	\$	-	\$	-	\$	-	\$	-
		\$	36,372,205	\$	1,904,229	\$	86,961,264	\$	125,237,698

Location of Transportation Projects



D2. Transportation Offsite Infrastructure Grants & Contributions to Date

The MGA enables the City to allocate the costs of offsite infrastructure to future development, other than those costs that have been provided by way of special grant or contribution (i.e., contributed infrastructure). The City has/will receive \$0.15 million in special grants and contributions for transportation offsite levy infrastructure as shown in the table below (note, if the City receives other grants or contributions in the future, it will be reflected in one of the annual updates and rates adjusted accordingly). The result is that the total reduced project estimated cost is \$125.09 million.

^{*}Costs estimates are reflected in current dollars.

^{**}Estimates include engineering costs and contingencies.

^{***}Offsite levy project details, allocations, etc. were determined by City staff and their engineering/consulting advisors.

^{****} Project numbering may be out of sequence as rows containing deleted projects are hidden.

^{******}Debenture Interest (if any) reflects only future interest. Interest incurred to date is included in the Cost of Completed Work.

Special Grants and Contributions for Transportation Offsite Infrastructure

2 3 4 5	Campsite Road Twinning Grove Drive - Century Road to Greystone			Grants	Agreement Contributions		luced Project timated Cost
3 4 5	Grove Drive - Century Road to Greystone	\$ 137,529		-	\$ -	\$	137,529
4 5		\$ 56,771		-	\$ -	\$	56,771
5	Traffic Signals - Campsite Road and McLeod Ave	\$ 203,441		-	\$ -	\$	203,441
	Traffic Signals - Campsite Road and Grove Drive	\$ 104,864		-	\$ -	\$	104,864
	Grove Drive Twinning/Widening - Campsite to Century	\$ 5,828,599	\$	-	\$ -	\$	5,828,599
	TLC Signalization	\$ 262,197		-	\$ -	\$	262,197
	Century Road Widening/Landscaping	\$ 1,872,896		-	\$ -	\$	1,872,896
	Grove Drive East/West	\$ 3,130,734		-	\$ -	\$	3,130,734
	Traffic Signals - Jennifer Heil Way and Hawthorne Gate	\$ 200,970		-	\$ -	\$	200,970
	Century Road South of Diamond Ave.	\$ 1,474,213		151,961	\$ -	\$	1,322,252
	Traffic Signals - Highway 16A/Century Crossing	\$ 376,862		-	\$ -	\$	376,862
	Century Road/ Grove Drive Intersection	\$ 1,546,798		-	\$ -	\$	1,546,798
	Grove Drive East Extension	\$ 1,650,186		-	\$ -	\$	1,650,186
	Traffic Signals - (1) Grove Dr and Greystone, and (2) Grove Dr and Harvest Ridge	\$ 370,210		-	\$ -	\$	370,210
	Pioneer Rd - Grove Dr to Highway 16A with roundabout at McLeod Ave and Grove Dr	\$ 12,319,479		-	\$ -	\$	12,319,479
	South Industrial Arterial - Tamarack Drive	\$ 760,710		-	\$ -	\$	760,710
	Traffic Signals - Grove Drive and Deer Park	\$ 261,976		-	\$ -	\$	261,976
	Widening Jennifer Heil Road/Campsite Rd from McLeod Ave to south of the CN rail	\$ 2,747,442		-	\$ -	\$	2,747,442
	Tamarack Drive 2LAUD - 200m from Golden Spike Rd east	\$ 732,000		-	\$ -	\$	732,000
	Tamarack Drive 2LAUD - 1400m from existing to Century Rd	\$ 5,124,000		-	\$ -	\$	5,124,000
	Tamarack Drive 4LAUD - 1600m from Golden Spike Rd to	\$ 5,799,919		-	\$ -	\$	5,799,919
	Tamarack Drive 2LAUD - 90m from Golden Spike Rd west	\$ 329,400		-	\$ -	\$	329,400
	Tamarack Drive 2LAUD - 1500m from existing to Campsite Rd	\$ 5,490,000		-	\$ -	\$	5,490,000
	Tamarack Drive 4LAUD - 1600m from Golden Spike Rd to	\$ 5,856,000		-	\$ -	\$	5,856,000
	Pioneer Road 2LAUD - 400m south of Hwy 16A	\$ 1,464,000		-	\$ -	\$	1,464,000
	Pioneer Road 4LAUD - 400m south of Hwy 16A	\$ 1,464,000		-	\$ -	\$	1,464,000
	Pioneer Road 4LAUD - 1400m Hwy 16A to Grove Dr	\$ 5,124,000		-	\$ -	\$	5,124,000
	Century Road 2LAUD - 2400m Hwy 16A to south boundary	\$ 4,485,000		-	\$ -	\$	4,485,000
	Century Road 4LAUD - 2400m Hwy 16A to south boundary	\$ 8,784,000		-	\$ - \$ -	\$	8,784,000
	Grove Drive East 4LAUD - 1000m to Pioneer Rd	\$ 3,120,000			Ψ	\$	3,120,000
31	Grove Drive West 2LAUD - 600m to Boundary Rd	\$ 2,378,134		-	\$ -	\$	2,378,134
	Grove Drive West 4LAUD - 1400m to Boundary Rd	\$ 2,489,117		-	\$ -	\$	2,489,117
	Campsite Road 2LAUD - 1300m from CN to south boundary	\$ 4,758,000		-	\$ -	\$	4,758,000
	Campsite Road 4LAUD - 1300m from CN to south boundary Golden Spike Road 2LAUD - 1400m to south boundary	\$ 3,900,000		-	\$ - \$ -	\$	3,900,000
	Golden Spike Road 2LAUD - 1400m to south boundary Golden Spike Road 4LAUD - 1400m to south boundary	\$ 4,400,000 5,124,000		-	\$ - \$ -	\$	4,400,000 5,124,000
						-	
	Boundary Road 2LAUD - 1200m to Hwy16A Traffic Signals - Boundary @ McLeod	\$ 10,916,896	_	-	\$ - \$ -	\$	10,916,896
	Traffic Signals - Boundary @ McLeod Traffic Signals - Hwy 16A - between Boundary & Campsite	\$ 360,000 360,000		-	\$ -	\$	360,000 360,000
	Traffic Signals - Campsite - between Grove Dr & Hwy 16	\$ 266,771	\$		\$ -	\$	266,771
	Traffic Signals - Campsite @ Diamond	\$ 360,000		-	\$ -	\$	360,000
	Traffic Signals - Campsite @ Diamond Traffic Signals - Campsite @ Tamarack	\$ 360,000		-	\$ -	\$	360,000
	Traffic Signals - Campsite @ Tamarack Traffic Signals - Golden Spike @ Diamond	\$ 360,000		-	\$ -	\$	360,000
	Traffic Signals - Golden Spike @ Damond Traffic Signals - Golden Spike @ Tamarack	\$ 360,000		-	\$ -	\$	360,000
	Traffic Signals - Century @ Diamond	\$ 360,000		-	\$ -	\$	360,000
	Traffic Signals - Century @ Diamond Traffic Signals - Century @ Tamarack	\$ 360,000		-	\$ -	\$	360,000
	Traffic Signals - Grove Dr @ Greenbury Blvd	\$ 360,000		-	\$ -	\$	360,000
	Upgrade of Grove Drive from Century Road to Pioneer Road	\$ 785,584		-	\$ -	\$	785,584
	Pioneer Road Top Lift Asphalt	\$ 1,602,000		-	\$ -	\$	1,602,000
	Century Road 2LAUD - Century Close to south boundary	\$ 4.299.000		-	\$ -	\$	4,299,000
	Unallocated Offsite Levies Collected to Dec 31, 2016	\$ - ,∠33,000	\$	-	\$ -	\$	- ,233,000
100	Chamboatoa Choite Levies Concetted to Dec 31, 2010	\$ 125.237.698		151.961	\$ -	\$	125.085.737

D3. Transportation Infrastructure Staging

The timing of construction is used to determine the impact of inflation on cost, the impact of forecast reserve balances, and the estimate of financial oversizing (described in the Section that follows). The City anticipates construction of offsite infrastructure as outlined in the table below. Note, if this schedule is adjusted in the future, it will be reflected in one of the annual rate/bylaw updates.

Transportation Infrastructure Staging

Item	Project Description	Construction Start Year
1	Campsite Road Twinning	2006
2	Grove Drive - Century Road to Greystone	2006
3	Traffic Signals - Campsite Road and McLeod Ave	2006
4	Traffic Signals - Campsite Road and Grove Drive	2006
5	Grove Drive Twinning/Widening - Campsite to Century	2006
6	TLC Signalization	2008
7	Century Road Widening/Landscaping	2009
8	Grove Drive East/West	2009
9	Traffic Signals - Jennifer Heil Way and Hawthorne Gate	2010
10	Century Road South of Diamond Ave.	2011
11	Traffic Signals - Highway 16A/Century Crossing	2011
12	Century Road/ Grove Drive Intersection	2013
13	Grove Drive East Extension	2013
14	Traffic Signals - (1) Grove Dr and Greystone, and (2) Grove Dr and Harvest Ridge	2013
15	Pioneer Rd - Grove Dr to Highway 16A with roundabout at McLeod Ave and Grove Dr	2016
16	South Industrial Arterial - Tamarack Drive	2015
17	Traffic Signals - Grove Drive and Deer Park	2015
18	Widening Jennifer Heil Road/Campsite Rd from McLeod Ave to south of the CN rail	2015
19	Tamarack Drive 2LAUD - 200m from Golden Spike Rd east	2030
20	Tamarack Drive 2LAUD - 1400m from existing to Century Rd	2030
21	Tamarack Drive 4LAUD - 1600m from Golden Spike Rd to	2042
22	Tamarack Drive 2LAUD - 90m from Golden Spike Rd west	2026
23	Tamarack Drive 2LAUD - 1500m from existing to Campsite Rd	2026
24	Tamarack Drive 4LAUD - 1600m from Golden Spike Rd to	2036
25	Pioneer Road 2LAUD - 400m south of Hwy 16A	2040
26	Pioneer Road 4LAUD - 400m south of Hwy 16A	2044
27	Pioneer Road 4LAUD - 1400m Hwy 16A to Grove Dr	2032
28	Century Road 2LAUD - 2400m Hwy 16A to south boundary	2030
29	Century Road 4LAUD - 2400m Hwy 16A to south boundary	2042
30	Grove Drive East 4LAUD - 1000m to Pioneer Rd	2026
31	Grove Drive West 2LAUD - 600m to Boundary Rd	2019
32	Grove Drive West 4LAUD - 1400m to Boundary Rd	2025
33	Campsite Road 2LAUD - 1300m from CN to south boundary	2033
34	Campsite Road 4LAUD - 1300m from CN to south boundary	2044
35	Golden Spike Road 2LAUD - 1400m to south boundary	2028
36	Golden Spike Road 4LAUD - 1400m to south boundary	2040
37	Boundary Road 2LAUD - 1200m to Hwy16A	2025
38	Traffic Signals - Boundary @ McLeod	2042
39	Traffic Signals - Hwy 16A - between Boundary & Campsite	2022
40	Traffic Signals - Campsite - between Grove Dr & Hwy 16	2019
41	Traffic Signals - Campsite @ Diamond	2031
42	Traffic Signals - Campsite @ Tamarack	2032
43	Traffic Signals - Golden Spike @ Diamond	2025
44	Traffic Signals - Golden Spike @ Tamarack	2031
45	Traffic Signals - Century @ Diamond	2026
46	Traffic Signals - Century @ Tamarack	2043
47	Traffic Signals - Grove Dr @ Greenbury Blvd	2033
48	Upgrade of Grove Drive from Century Road to Pioneer Road	2019
49	Pioneer Road Top Lift Asphalt	2023
51	Century Road 2LAUD - Century Close to south boundary	2030

^{*}The share of projects beyond the 25-year review period are not included in rates today (see financial oversizing in next section).

D4. Transportation Offsite Infrastructure Benefiting Parties

The transportation offsite infrastructure previously outlined will benefit various parties to

^{**}Costs are inflated to the year of construction using an inflation rate of 5% for the first 2 years, and 3% thereafter.

varying degrees as determined by the City's staff and engineering advisors. The potential benefiting parties were include:

- City of Spruce Grove that portion of cost which is required to service existing residents.
- Other Stakeholders other parties (such as neighboring municipalities) that benefit from the infrastructure.
- City of Spruce Grove Future Development (Financial Oversizing) that portion of cost which benefits future development beyond the 25-year review period.
- City of Spruce Grove Future Development (in Rates) all growth-related infrastructure (i.e., leviable transportation infrastructure costs) during the 25-year rate planning period.

The table below outlines the allocation of transportation offsite levy infrastructure costs to benefiting parties. Project allocations were determined by City staff.

Allocation of Transportation Infrastructure to Benefiting Parties

ltem	Project Description	Reduced Proje Estimated Co		Other Stakeholder Share	Developer Share Beyond 25 Yrs (Financial Oversizing %)	OSL / Developer Share %
1	Campsite Road Twinning	\$ 137,5	29		0.0%	100.0%
2	Grove Drive - Century Road to Greystone	\$ 56,7			0.0%	100.0%
3	Traffic Signals - Campsite Road and McLeod Ave	\$ 203,4	41		0.0%	100.0%
4	Traffic Signals - Campsite Road and Grove Drive	\$ 104,8	64		0.0%	100.0%
5	Grove Drive Twinning/Widening - Campsite to Century	\$ 5,828,5	99		0.0%	100.0%
6	TLC Signalization	\$ 262,	97		0.0%	100.0%
7	Century Road Widening/Landscaping	\$ 1,872,8	96		0.0%	100.0%
8	Grove Drive East/West	\$ 3,130,7	34		0.0%	100.0%
9	Traffic Signals - Jennifer Heil Way and Hawthorne Gate	\$ 200,9			0.0%	100.0%
10	Century Road South of Diamond Ave.	\$ 1,322,2	52		0.0%	100.0%
11	Traffic Signals - Highway 16A/Century Crossing	\$ 376,8			0.0%	100.0%
12	Century Road/ Grove Drive Intersection	\$ 1,546,7	98		0.0%	100.0%
13	Grove Drive East Extension	\$ 1,650,	86		0.0%	100.0%
14	Traffic Signals - (1) Grove Dr and Greystone, and (2) Grove Dr and Harvest Ridge	\$ 370,2			0.0%	100.0%
15	Pioneer Rd - Grove Dr to Highway 16A with roundabout at McLeod Ave and Grove Dr	\$ 12,319,4	79		0.0%	100.0%
16	South Industrial Arterial - Tamarack Drive	\$ 760,7			0.0%	100.0%
17	Traffic Signals - Grove Drive and Deer Park	\$ 261,9			0.0%	100.0%
18	Widening Jennifer Heil Road/Campsite Rd from McLeod Ave to south of the CN rail	\$ 2,747,4			0.0%	100.0%
19	Tamarack Drive 2LAUD - 200m from Golden Spike Rd east	\$ 732,0			32.0%	68.0%
20	Tamarack Drive 2LAUD - 1400m from existing to Century Rd	\$ 5,124,0			32.0%	68.0%
21	Tamarack Drive 4LAUD - 1600m from Golden Spike Rd to	\$ 5,799,9			80.0%	20.0%
22	Tamarack Drive 2LAUD - 90m from Golden Spike Rd west	\$ 329,4			16.0%	84.0%
23	Tamarack Drive 2LAUD - 1500m from existing to Campsite Rd	\$ 5,490,0			16.0%	84.0%
24	Tamarack Drive 4LAUD - 1600m from Golden Spike Rd to	\$ 5,856,0			56.0%	44.0%
25	Pioneer Road 2LAUD - 400m south of Hwy 16A	\$ 1,464,0			72.0%	28.0%
26	Pioneer Road 4LAUD - 400m south of Hwy 16A	\$ 1,464,0			88.0%	12.0%
27	Pioneer Road 4LAUD - 1400m Hwy 16A to Grove Dr	\$ 5,124,0			40.0%	60.0%
28	Century Road 2LAUD - 2400m Hwy 16A to south boundary	\$ 4,485,0			32.0%	68.0%
29	Century Road 4LAUD - 2400m Hwy 16A to south boundary	\$ 8,784,0			80.0%	20.0%
30	Grove Drive East 4LAUD - 1000m to Pioneer Rd	\$ 3,120,0			16.0%	84.0%
31	Grove Drive West 2LAUD - 600m to Boundary Rd	\$ 2,378,			0.0%	100.0%
32	Grove Drive West 4LAUD - 1400m to Boundary Rd	\$ 2,489,			12.0%	88.0%
33	Campsite Road 2LAUD - 1300m from CN to south boundary	\$ 4,758,0			44.0%	56.0%
34 35	Campsite Road 4LAUD - 1300m from CN to south boundary	\$ 3,900,0			88.0% 24.0%	12.0% 76.0%
36	Golden Spike Road 2LAUD - 1400m to south boundary Golden Spike Road 4LAUD - 1400m to south boundary	\$ 4,400,0 \$ 5,124,0			72.0%	28.0%
37	Boundary Road 2LAUD - 1200m to Hwy16A	\$ 10,916,8			12.0%	88.0%
38	Traffic Signals - Boundary @ McLeod	\$ 360,0			80.0%	20.0%
39	Traffic Signals - Hwy 16A - between Boundary & Campsite	\$ 360,0			0.0%	100.0%
40	Traffic Signals - Campsite - between Grove Dr & Hwy 16	\$ 266,7			0.0%	100.0%
41	Traffic Signals - Campsite - Detween Grove Dr & riwy 10	\$ 360,0			36.0%	64.0%
42	Traffic Signals - Campsite @ Diamond Traffic Signals - Campsite @ Tamarack	\$ 360,0			40.0%	60.0%
43	Traffic Signals - Campsite @ Famarack Traffic Signals - Golden Spike @ Diamond	\$ 360,0			12.0%	88.0%
44	Traffic Signals - Golden Spike @ Tamarack	\$ 360,0			36.0%	64.0%
45	Traffic Signals - Century @ Diamond	\$ 360,0			16.0%	84.0%
46	Traffic Signals - Century @ Diamond Traffic Signals - Century @ Tamarack	\$ 360,0			84.0%	16.0%
47	Traffic Signals - General Grand Blvd	\$ 360,0			44.0%	56.0%
48	Upgrade of Grove Drive from Century Road to Pioneer Road	\$ 785,5			0.0%	100.0%
49	Pioneer Road Top Lift Asphalt	\$ 1,602,0			4.0%	96.0%
51	Century Road 2LAUD - Century Close to south boundary	\$ 4,299,0			32.0%	68.0%
100	Unallocated Offsite Levies Collected to Dec 31, 2016	\$			02.070	100.0%
		\$ 125,085,7	37			

^{*}Allocations to future development (vs municipal share etc.) were determined by City staff and their engineering/consulting advisors.

D5. Existing Receipts & Adjusted Levy Cost

Using the offsite levy share percentages shown in the previous section and applying those percentages to project costs results in an offsite levy cost of approximately **\$86.44 million**. However, prior to allocating these costs to benefiting areas, existing offsite levy receipts collected from developers need to be considered in determining the residual/net costs to developers. The City has collected **\$24.48 million** (\$19.45 million + \$5.03 million) in offsite

^{**}Financial oversizing is determined by separating out the pro rata portion of developer cost beyond the 25-year review period, in comparison with the anticipated year of construction. As the years move forward and rates are updated, these additional developer costs will be included in rate calculations. For example, a project which is slated to be constructed in year 20 of the 25-year review period will have 20% (5/25) of its costs in rates today, and 80% (20/25) of its costs will sit beyond the 25-year review period.

levies to date, and results in an adjusted offsite levy cost of approximately **\$61.95 million**.

Offsite Levy Funds Collected to Date & Adjusted Levy Cost

Item	Project Description	. / Developer Cost	Fu	Offsite Levy nds Collected Dec 31, 2016	5	Offsite Levy unds Collected Starting Jan 1, 2017	Adjusted reloper (Levy) Cost
	Campsite Road Twinning	\$ 137,529	\$	137,529	\$	-	\$ -
	Grove Drive - Century Road to Greystone	\$ 56,771	\$	56,771	\$	-	\$ -
	Traffic Signals - Campsite Road and McLeod Ave	\$ 203,441	\$	203,441	\$	-	\$ -
4	Traffic Signals - Campsite Road and Grove Drive	\$ 104,864	\$	104,864	\$	-	\$ -
5	Grove Drive Twinning/Widening - Campsite to Century	\$ 5,828,599	\$	5,828,599	\$	-	\$ -
6	TLC Signalization	\$ 262,197	\$	262,197	\$	-	\$ -
	Century Road Widening/Landscaping	\$ 1,872,896		1,872,896		-	\$ -
8	Grove Drive East/West	\$ 3,130,734		3,130,734		-	\$ -
	Traffic Signals - Jennifer Heil Way and Hawthorne Gate	\$ 200,970		200,970		-	\$ -
	Century Road South of Diamond Ave.	\$ 1,322,252		1,322,252		-	\$ -
11	Traffic Signals - Highway 16A/Century Crossing	\$ 376,862	\$	376,862		-	\$ -
12	Century Road/ Grove Drive Intersection	\$ 1,546,798	\$	1,546,798	\$	-	\$ -
13	Grove Drive East Extension	\$ 1,650,186	\$	1,650,186	\$	-	\$ -
14	Traffic Signals - (1) Grove Dr and Greystone, and (2) Grove Dr and Harvest Ridge	\$ 370,210	\$	370,210	\$	-	\$ -
15	Pioneer Rd - Grove Dr to Highway 16A with roundabout at McLeod Ave and Grove Dr	\$ 12,319,479	\$	-	\$	1,030,886	\$ 11,288,593
16	South Industrial Arterial - Tamarack Drive	\$ 760,710	\$	-	\$	66,832	\$ 693,878
17	Traffic Signals - Grove Drive and Deer Park	\$ 261,976	\$	137,529	\$	10,933	\$ 113,514
18	Widening Jennifer Heil Road/Campsite Rd from McLeod Ave to south of the CN rail	\$ 2,747,442	\$	1,696,507	\$	83,046	\$ 967,889
19	Tamarack Drive 2LAUD - 200m from Golden Spike Rd east	\$ 497,760	\$	-	\$	37,196	\$ 460,564
20	Tamarack Drive 2LAUD - 1400m from existing to Century Rd	\$ 3,484,320		-	\$	260,372	3,223,948
	Tamarack Drive 4LAUD - 1600m from Golden Spike Rd to	\$ 1,159,984	\$	-	\$	256,450	903,534
22	Tamarack Drive 2LAUD - 90m from Golden Spike Rd west	\$ 276,696	\$	-	\$	21,368	255,328
23	Tamarack Drive 2LAUD - 1500m from existing to Campsite Rd	\$ 4,611,600		-	\$	356,141	4,255,459
24	Tamarack Drive 4LAUD - 1600m from Golden Spike Rd to	\$ 2,576,640	\$	-	\$	174,093	\$ 2,402,547
	Pioneer Road 2LAUD - 400m south of Hwy 16A	\$ 409,920	\$	-	\$	22,944	386,976
26	Pioneer Road 4LAUD - 400m south of Hwy 16A	\$ 175,680	\$	-	\$	2,365	173,315
	Pioneer Road 4LAUD - 1400m Hwy 16A to Grove Dr	\$ 3,074,400	\$	-	\$	224,358	2,850,042
28	Century Road 2LAUD - 2400m Hwy 16A to south boundary	\$ 3,049,800		-	\$	342,164	2,707,636
29	Century Road 4LAUD - 2400m Hwy 16A to south boundary	\$ 1,756,800		-	\$	75,929	1,680,871
30	Grove Drive East 4LAUD - 1000m to Pioneer Rd	\$ 2,620,800		-	\$	256,819	2,363,981
31	Grove Drive West 2LAUD - 600m to Boundary Rd	\$ 2,378,134		-	\$	190,764	2,187,370
32	Grove Drive West 4LAUD - 1400m to Boundary Rd	\$ 2,190,423	\$	-	\$	83,362	\$ 2,107,061
33	Campsite Road 2LAUD - 1300m from CN to south boundary	\$ 2,664,480		-	\$	191,612	2,472,868
34	Campsite Road 4LAUD - 1300m from CN to south boundary	\$ 468,000	\$		\$	6,301	461,699
35	Golden Spike Road 2LAUD - 1400m to south boundary	\$ 3,344,000	\$	-	\$	276,499	3,067,501
36	Golden Spike Road 4LAUD - 1400m to south boundary	\$ 1,434,720	\$	-	\$	80,305	1,354,415
37	Boundary Road 2LAUD - 1200m to Hwy16A Traffic Signals - Boundary @ McLeod	\$ 9,606,869	\$	-	\$	595,391	\$ 9,011,478
	Traffic Signals - Boundary @ McLeod Traffic Signals - Hwy 16A - between Boundary & Campsite	\$ 72,000		-	\$	3,112	68,888
	Traffic Signals - Hwy 16A - between Boundary & Campsite Traffic Signals - Campsite - between Grove Dr & Hwy 16	360,000	\$	-	\$	28,414	331,586
	Traffic Signals - Campsite @ Diamond	\$ 266,771 230,400	\$	-	\$	25,335 17,028	\$ 241,436 213,372
	Traffic Signals - Campsite @ Diamond Traffic Signals - Campsite @ Tamarack	\$ 216,000	\$	-	\$	15,763	200,237
	Traffic Signals - Campsite @ Tamarack Traffic Signals - Golden Spike @ Diamond	\$ 316,800	\$	-	\$	24,619	292,181
	Traffic Signals - Golden Spike @ Diamond Traffic Signals - Golden Spike @ Tamarack	\$ 230.400	\$	-	\$	17.028	213,372
	Traffic Signals - Golden Spike @ Tamarack Traffic Signals - Century @ Diamond	\$ 302,400	\$	-	\$	23,353	\$ 279,047
	Traffic Signals - Century @ Diamond Traffic Signals - Century @ Tamarack	\$ 57,600	\$	-	\$	1,847	55,753
	Traffic Signals - Century @ Tamarack Traffic Signals - Grove Dr @ Greenbury Blvd	\$ 201,600	\$	-	\$	27,149	174,451
	Upgrade of Grove Drive from Century Road to Pioneer Road	\$ 785,584		-	\$	33,193	752,391
49	Pioneer Road Top Lift Asphalt	\$ 1,537,920	\$	-	\$	56,943	1,480,977
51	Century Road 2LAUD - Century Close to south boundary	\$ 2,923,320		-	\$	104,187	2,819,133
U J I		۷,۶۷۵,۵۷۵		_			
100	Unallocated Offsite Levies Collected to Dec 31, 2016	\$ _	\$	553,628	\$	_	\$ (553,628)

D6. Summary of Transportation Offsite Levy Cost Flow-through

As shown in the figure below, the total cost for transportation infrastructure that forms the basis of the rate is approximately **\$61.95 million**. The cost allocations to each benefitting party are based on the benefitting percentages shown in Section D4. The offsite levy balance (due from developers) is allocated to various benefitting areas (as described in the next section).

Less: Levy = Future = Off-site Receipts Development Balance* **Applied** (OSL Share) \$61.95M \$24.48M \$86.44M = Future Development "Financial Oversizing" \$38.65M Less: Special = Other Project = Project Grants & Costs Balance Share Contributions \$125.24M \$125.09M \$0.00M \$0.15M = Existing Development (City Share) \$0.00M

Total Transportation Offsite Levy Costs

D7. Transportation Infrastructure Benefiting Areas

Net developer costs for each project have been allocated to multiple benefiting offsite levy area (see tables below). Allocations are denoted with a "1" below applicable area numbers. Benefiting areas were determined by City staff. The lands anticipated to develop over the 25-years in each offsite levy benefiting area are used to determine rates.

Benefiting Areas for Transportation Offsite Infrastructure

Item	Project Description	De	veloper Cost	1	2	3	4	5	6	7	8	9	10	11
1	Campsite Road Twinning	\$	-	1	1	1	1	1	1	1	1	1	1	1
2	Grove Drive - Century Road to Greystone	\$	_	1	1	1	1	1	1	1	1	1	1	1
3	Traffic Signals - Campsite Road and McLeod Ave	\$	_	1	1	1	1	1	1	1	1	1	1	1
4	Traffic Signals - Campsite Road and Grove Drive	\$	-	1	1	1	1	1	1	1	1	1	1	1
5	Grove Drive Twinning/Widening - Campsite to Century	\$	_	1	1	1	1	1	1	1	1	1	1	1
6	TLC Signalization	\$	_	1	1	1	1	1	1	1	1	1	1	1
7	Century Road Widening/Landscaping	\$	-	1	1	1	1	1	1	1	1	1	1	1
8	Grove Drive East/West	\$	-	1	1	1	1	1	1	1	1	1	1	1
9	Traffic Signals - Jennifer Heil Way and Hawthorne Gate Intersection	\$	-	1	1	1	1	1	1	1	1	1	1	1
10	Century Road South of Diamond Ave.	\$	-	1	1	1	1	1	1	1	1	1	1	1
11	Traffic Signals - Highway 16A/Century Crossing	\$	-	1	1	1	1	1	1	1	1	1	1	1
	Century Road/ Grove Drive Intersection	\$	-	1	1	1	1	1	1	1	1	1	1	1
	Grove Drive East Extension	\$	-	1	1	1	1	1	1	1	1	1	1	1
14	Traffic Signals - (1) Grove Dr and Greystone, and (2) Grove Dr and Harvest Ridge	\$	-	1	1	1	1	1	1	1	1	1	1	1
15	Pioneer Rd - Grove Dr to Highway 16A with roundabout at McLeod Ave and Grove Dr	\$	11,288,593	1	1	1	1	1	1	1	1	1	1	1
16	South Industrial Arterial - Tamarack Drive	\$	693,878	1	1	1	1	1	1	1	1	1	1	1
17	Traffic Signals - Grove Drive and Deer Park	\$	113,514	1	1	1	1	1	1	1	1	1	1	1
18	Widening Jennifer Heil Road/Campsite Rd from McLeod Ave to south of the CN rail	\$	967,889	1	1	1	1	1	1	1	1	1	1	1
19	Tamarack Drive 2LAUD - 200m from Golden Spike Rd east	\$	460,564	1	1	1	1	1	1	1	1	1	1	1
20	Tamarack Drive 2LAUD - 1400m from existing to Century Rd	\$	3,223,948	1	1	1	1	1	1	1	1	1	1	1
21	Tamarack Drive 4LAUD - 1600m from Golden Spike Rd to Century Rd	\$	903,534	1	1	1	1	1	1	1	1	1	1	1
22	Tamarack Drive 2LAUD - 90m from Golden Spike Rd west	\$	255,328	1	1	1	1	1	1	1	1	1	1	1
23	Tamarack Drive 2LAUD - 1500m from existing to Campsite Rd	\$	4,255,459	1	1	1	1	1	1	1	1	1	1	1
24	Tamarack Drive 4LAUD - 1600m from Golden Spike Rd to Campsite Rd	\$	2,402,547	1	1	1	1	1	1	1	1	1	1	1
25	Pioneer Road 2LAUD - 400m south of Hwy 16A	\$	386,976	1	1	1	1	1	1	1	1	1	1	1
26	Pioneer Road 4LAUD - 400m south of Hwy 16A	\$	173,315	1	1	1	1	1	1	1	1	1	1	1
27	Pioneer Road 4LAUD - 1400m Hwy 16A to Grove Dr	\$	2,850,042	1	1	1	1	1	1	1	1	1	1	1
28	Century Road 2LAUD - 2400m Hwy 16A to south boundary	\$	2,707,636	1	1	1	1	1	1	1	1	1	1	1
	Century Road 4LAUD - 2400m Hwy 16A to south boundary	\$	1,680,871	1	1	1	1	1	1	1	1	1	1	1
30	Grove Drive East 4LAUD - 1000m to Pioneer Rd	\$	2,363,981	1	1	1	1	1	1	1	1	1	1	1
	Grove Drive West 2LAUD - 600m to Boundary Rd	\$	2,187,370	1	1	1	1	1	1	1	1	1	1	1
	Grove Drive West 4LAUD - 1400m to Boundary Rd	\$	2,107,061	1	1	1	1	1	1	1	1	1	1	1
	Campsite Road 2LAUD - 1300m from CN to south boundary	\$	2,472,868	1	1	1	1	1	1	1	1	1	1	1
	Campsite Road 4LAUD - 1300m from CN to south boundary	\$	461,699	1	1	1	1	1	1	1	1	1	1	1
	Golden Spike Road 2LAUD - 1400m to south boundary	\$	3,067,501	1	1	1	1	1	1	1	1	1	1	1
	Golden Spike Road 4LAUD - 1400m to south boundary	\$	1,354,415	1	1	1	1	1	1	1	1	1	1	1
	Boundary Road 2LAUD - 1200m to Hwy16A	\$	9,011,478	1	1	1	1	1	1	1	1	1	1	1
38		\$	68,888	1	1	1	1	1	1	1	1	1	1	1
39	Traffic Signals - Hwy 16A - between Boundary & Campsite	\$	331,586	1	1	1	1	1	1	1	1	1	1	1
40	Traffic Signals - Campsite - between Grove Dr & Hwy 16	\$	241,436	1	1	1	1	1	1	1	1	1	1	1
41		\$	213,372	1	1	1	1	1	1	1	1	1	1	1
42	Traffic Signals - Campsite @ Tamarack	\$	200,237	1	1	1	1	1	1	1	1	1	1	1
43	Traffic Signals - Golden Spike @ Diamond	\$	292,181	1	1	1	1	1	1	1	1	1	1	1
44		\$	213,372	1	1	1	1	1	1	1	1	1	1	1
45	Traffic Signals - Century @ Diamond	\$	279,047	1	1	1	1	1	1	1	1	1	1	1
46	Traffic Signals - Century @ Tamarack	\$	55,753	1	1	1	1	1	1	1	1	1	1	1
47	Traffic Signals - Grove Dr @ Greenbury Blvd	\$	174,451	1	1	1	1	1	1	1	1	1	1	1
48	Upgrade of Grove Drive from Century Road to Pioneer Road	\$	752,391	1	1	1	1	1	1	1	1	1	1	1
49	Pioneer Road Top Lift Asphalt	\$	1,480,977	1	1	1	1	1	1	1	1	1	1	1
	Century Road 2LAUD - Century Close to south boundary	\$	2,819,133	1	1	1	1	1	1	1	1	1	1	1
100	Unallocated Offsite Levies Collected to Dec 31, 2016	\$	(553,628)	1	1	1	1	1	1	1	1	1	1	1
		\$	61,950,743											

D8. Reserve Balance

The balance of the City's transportation reserve at December 31st, 2021 is **\$(13,058,659)**. This updated balance takes into consideration expenditures up to end-2021 and assumes that front-ending debts will be drawn down via a withdrawal of all available cash in the account.

Transportation Offsite Levy Reserve Balance

Offsite Levy Expenditures to December 31, 2016		\$ 2	3,395,137.23	\$ (23,395,137.23)
Offsite Levy Receipt Allocations to December 31, 2016	\$ 18,898,345.18			\$ (4,496,792.05)
Unallocated Receipts (Adjustments made during 2019 update - see updated contin	\$ 556,372.94	\$	2,745.00	\$ (3,943,164.11)
				\$ (3,943,164.11)
Opening Balance				\$ (3,943,164.11)

2017					\$	(3,943,164.11)
Interest on Opening Balance			\$	106,859.75	\$	(4,050,023.86)
Project Expenditures (OSL Share)			\$	3,960,947.32	\$	(8,010,971.18)
Offsite Levy Receipts	\$	1,896,536	Ф	3,900,947.32	\$, , , , , , , , , , , , , , , , , , , ,
· · ·	-	1,090,000				(6,114,434.73)
Offsite Levy Receipts Collected Under Old Agreement or Old Bylaw (if any)	\$	-	_		\$	(6,114,434.73)
Debenture Interest Accrued This Year			\$	-	\$	(6,114,434.73)
Interest on Project Expenditure			\$	26,835.42	\$	(6,141,270.15)
Interest on Offsite Levy Receipts	\$	8,060.28			\$	(6,133,209.87)
Offsite Levy Receipts Collected Under Old Agreement or Old Bylaw (if any) Interest on Debenture Expenditure	\$	= '	\$	_	\$ \$	(6,133,209.87) (6,133,209.87)
TREFEST OF DEDORAGE EXPERIMENT			Ψ	-	Ψ	(0,133,209.07)
2018					\$	(6,133,209.87)
Interest on Opening Balance						
			\$	166,209.99	\$	(6,299,419.85)
Project Expenditures (OSL Share)			\$	4,806,439.90	\$	(11,105,859.75)
Offsite Levy Receipts	\$	492,524.00			\$	(10,613,335.75)
Offsite Levy Receipts Collected Under Old Agreement or Old Bylaw (if any)	\$	-			\$	(10,613,335.75)
Debenture Interest Accrued This Year			\$	-]	\$	(10,613,335.75)
Interest on Project Expenditure		_	\$	32,563.63	\$	(10,645,899.38)
Interest on Offsite Levy Receipts	\$	2,093.23			\$	(10,643,806.16)
Offsite Levy Receipts Collected Under Old Agreement or Old Bylaw (if any)	\$	-			\$	(10,643,806.16)
Interest on Debenture Expenditure			\$	-	\$	(10,643,806.16)
2019					\$	(10,643,806.16)
Interest on Opening Balance			\$	265,962.11	\$	(10,909,768.26)
Project Expenditures (OSL Share)			\$	3,185,850.42	\$	(14,095,618.68)
Offsite Levy Receipts	\$	68,620.55	Ť	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	\$	(14,026,998.13)
Offsite Levy Receipts Collected Under Old Agreement or Old Bylaw (if any)	\$	_			\$	(14,026,998.13)
Debenture Interest Accrued This Year			\$	_	\$	(14,026,998.13)
Interest on Project Expenditure			\$	19,901.61	\$	(14,046,899.74)
Interest on Offsite Levy Receipts	\$	823.45	Ť	,	\$	(14,046,076.30)
Offsite Levy Receipts Collected Under Old Agreement or Old Bylaw (if any)	\$	-			\$	(14,046,076.30)
Interest on Debenture Expenditure			\$	-	\$	(14,046,076.30)
2020					Φ.	(4.4.0.40.070.00)
Interest on Opening Balance			¢.	251 151 01	\$	(14,046,076.30)
Project Expenditures (OSL Share)			\$	351,151.91	\$	(14,397,228.20)
Offsite Levy Receipts	Φ.	400 000 74	\$	579,021.18	\$	(14,976,249.38)
·	\$	188,983.74			\$	(14,787,265.64)
Offsite Levy Receipts Collected Under Old Agreement or Old Bylaw (if any) Debenture Interest Accrued This Year	\$	-	•	•	\$	(14,787,265.64)
			\$	-	\$	(14,787,265.64)
Interest on Project Expenditure			\$	3,618.88	\$	(14,790,884.53)
Interest on Offsite Levy Receipts	\$	755.93			\$	(14,790,128.59)
Offsite Levy Receipts Collected Under Old Agreement or Old Bylaw (if any) Interest on Debenture Expenditure	\$	-	\$	_	\$ \$	(14,790,128.59) (14,790,128.59)
•			φ	-	Ψ	(14,790,120.39)
2021					\$	(14,790,128.59)
Interest on Opening Balance			\$	369,753.21	\$	(15,159,881.80)
Project Expenditures (OSL Share)			\$	292,847.70	\$	(15,452,729.50)
Offsite Levy Receipts	\$	2,386,355.19			\$	(13,066,374.31)
Offsite Levy Receipts Collected Under Old Agreement or Old Bylaw (if any)	\$	-			\$	(13,066,374.31)
Debenture Interest Accrued This Year			\$	-	\$	(13,066,374.31)
Interest on Project Expenditure			\$	1,830.30	\$	(13,068,204.61)
Interest on Offsite Levy Receipts	\$	9,545.42			\$	(13,058,659.19)
Offsite Levy Receipts Collected Under Old Agreement or Old Bylaw (if any)	\$	-			\$	(13,058,659.19)
Interest on Debenture Expenditure			\$	-]	\$	(13,058,659.19)

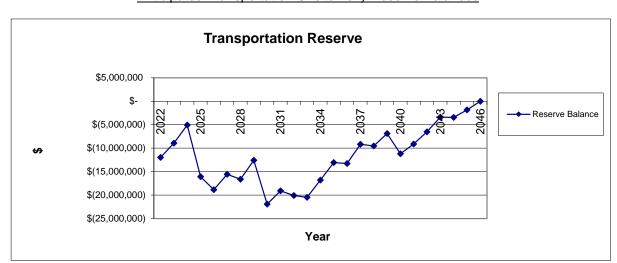
D9. Development and Transportation Infrastructure Staging Impacts

Transportation offsite infrastructure will be constructed in staged fashion over the 25-year review period. We have reviewed the availability of offsite levy funds to meet these construction requirements and found that offsite levy reserve funds will not be sufficient to pay for construction of transportation infrastructure from time to time—front ending of infrastructure will be required. A front-ender is the party that constructs and pays up front for

infrastructure that benefits other parties. The front-ender (be it a municipality or a developer) is reimbursed over time as levies are collected, and in accordance with the municipality's front-ending repayment policies.

To compensate parties for capital they provide in front-ending offsite infrastructure construction, a **2.50%** interest allowance has been charged to the reserve when it is forecast to be in a negative balance. Further, a **0.80%** interest credit has been provided to the reserve when it is forecast to be in a positive balance. The graph and table below outline the forecast water levy reserve balances over the 25-year development period.

If necessary, an interest staging adjustment has been applied to rates (slightly positive or slightly negative) to ensure that the forecast reserve balance at the end of the 25-year review period always returns to break-even (i.e., developers are not charged too much thereby providing a windfall to the City, nor are they charged too little thereby placing an unequitable burden on taxpayers).



Anticipated Transportation Offsite Levy Reserve Balances⁵

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⁵ In determining staging adjustments, the offsite levy model also applies inflation to future rates. In so doing it acknowledges that rates must keep pace with inflation just as costs do. Also, it acknowledges that an offsite levy rate of \$X paid today is not worth the same as the equivalent \$X rate paid in the future (i.e., it is discounted).

Anticipated Transportation Offsite Levy Reserve Balances

			Re	eserve Balance	\$ (13,058,659)
Year	Receipts	Expenditure		Interest	Balance
2022	\$ 3,453,855	\$ 2,098,457	\$	(292,582)	\$ (11,995,842)
2023	\$ 4,879,841	\$ 1,625,568	\$	(218,539)	\$ (8,960,108)
2024	\$ 3,976,248	\$ 10,315	\$	(124,854)	\$ (5,119,030)
2025	\$ 3,646,640	\$ 14,254,805	\$	(393,180)	\$ (16,120,374)
2026	\$ 3,405,485	\$ 5,726,432	\$	(461,033)	\$ (18,902,355)
2027	\$ 3,887,971	\$ 8,076	\$	(375,562)	\$ (15,398,022)
2028	\$ 3,859,674	\$ 4,531,942	\$	(401,757)	\$ (16,472,048)
2029	\$ 4,350,934	\$ 6,308	\$	(303,186)	\$ (12,430,608)
2030	\$ 4,268,130	\$ 13,110,784	\$	(531,832)	\$ (21,805,093)
2031	\$ 3,940,220	\$ 629,110	\$	(462,350)	\$ (18,956,333)
2032	\$ 4,058,427	\$ 4,598,608	\$	(487,413)	\$ (19,983,927)
2033	\$ 4,224,728	\$ 4,124,905	\$	(497,103)	\$ (20,381,207)
2034	\$ 4,073,230	\$ 764	\$	(407,719)	\$ (16,716,459)
2035	\$ 4,046,307	\$ -	\$	(316,754)	\$ (12,986,906)
2036	\$ 4,167,696	\$ 4,050,224	\$	(321,736)	\$ (13,191,169)
2037	\$ 4,292,727	\$ -	\$	(222,461)	\$ (9,120,903)
2038	\$ 3,535,792	\$ 3,652,815	\$	(230,948)	\$ (9,468,874)
2039	\$ 2,810,946	\$ -	\$	(166,448)	\$ (6,824,376)
2040	\$ 2,322,749	\$ 6,371,627	\$	(271,831)	\$ (11,145,087)
2041	\$ 2,293,353	\$ -	\$	(221,293)	\$ (9,073,027)
2042	\$ 2,885,013	\$ 135,139	\$	(158,079)	\$ (6,481,232)
2043	\$ 3,316,833	\$ 111,355	\$	(81,894)	\$ (3,357,648)
2044	\$ 3,099,708	\$ 3,097,846	\$	(83,895)	\$ (3,439,680)
2045	\$ 1,641,520	\$ -	\$	(44,954)	\$ (1,843,114)
2046	\$ 1,843,114	\$ -	\$	(0)	\$ (0)

APPENDIX E: RECREATION OFFSITE INFRASTRUCTURE

E1. Recreation Offsite Infrastructure Costs

To support future growth, recreation offsite infrastructure is required. The estimated cost of this infrastructure is based upon: (a) actual construction costs to the cut-off date, (b) debenture interest associated with financing, and (c) future cost estimates. Total cost is approximately **\$26.64 million** as outlined in the table below. Actual costs, debenture interest (if any), and cost estimates were provided by City staff. It is important to note that these costs represent "gross" costs, of which only a portion will go to support future development during the 25-year review period. The remainder of this section outlines how the "net" costs for future development are determined.

Summary of Recreation Offsite Infrastructure

ı	ltem	Project Description	Cost of Completed Work	Debenture Interest	Estimated Cost of Work Yet to be Completed	1	otal Project stimated Cost
ſ	1	Civic Centre (Recreation Facilities)	\$ -	\$ 11,161,739	\$ 15,481,766	\$	26,643,505
		_	\$ -	\$ 11,161,739	\$ 15,481,766	\$	26,643,505

*On June 13, 2022, City of Spruce Grove Council approved to proceed with the construction of the Civic Centre. This \$72.79 million project will be situated on Westwind Drive and includes: (1) a spectator ice rink, (2) a community ice rink (\$15.48 million), (3) an art gallery, (4) a black box performing arts theatre/flex space, and (5) a library branch (\$5.97 million). The cost of the community ice rink (\$15.48 million) and the cost of library branch (\$5.97 million), which together total \$21.45 million out of the \$72.79 million total project cost, are attributed to future growth and are included in the offsite levy rates. The construction of the project is beginning in 2022, with the City front-ending the cost of construction. Financing of the community ice rink and the library branch (i.e., those project elements attributed to future growth) is enabled by a \$21.45 million debenture over 25 years. The interest costs associated with the debenture, which totals \$11.16 million for the community ice rink and \$4.30 million for the library branch, also form part of the offsite levy rates. All areas of the City will benefit from the Civic Centre project.

E2. Recreation Offsite Infrastructure Grants & Contributions to Date

The MGA enables the City to allocate the costs of offsite infrastructure to future development, other than those costs that have been provided by way of special grant or contribution (i.e., contributed infrastructure). The City has/will receive **\$0.00** in special grants and contributions for recreation offsite levy infrastructure as shown in the table below (note, if the City receives other grants or contributions in the future, it will be reflected in one of the annual updates and rates adjusted accordingly). The result is that the total reduced project estimated cost is **\$26.64 million**.

^{**}Costs estimates are reflected in current dollars.

^{***}Estimates include engineering costs and contingencies.

^{****}Offsite levy project details, allocations, etc. were determined by City staff and their engineering/consulting advisors.

Special Grants and Contributions for Recreation Offsite Infrastructure

•	tem	Project Description	otal Project stimated Cost	Spe	ecial Provincial Grants	Developer Agreement Contributions	uced Project imated Cost
	1	Civic Centre (Recreation Facilities)	\$ 26,643,505	\$	-	\$ -	\$ 26,643,505
			\$ 26,643,505	\$	-	\$ -	\$ 26,643,505

E3. Recreation Infrastructure Staging

The timing of construction is used to determine the impact of inflation on cost, the impact of forecast reserve balances, and the estimate of financial oversizing (described in the Section that follows). The City anticipates construction of offsite infrastructure as outlined in the table below. Note, if this schedule is adjusted in the future, it will be reflected in one of the annual rate/bylaw updates.

Recreation Infrastructure Staging

Item	Project Description	Construction Start Year
1	Civic Centre (Recreation Facilities)	2022

^{*}The share of projects beyond the 25-year review period are not included in rates today (see financial oversizing in next section).

E4. Recreation Offsite Infrastructure Benefiting Parties

The recreation offsite infrastructure previously outlined will benefit various parties to varying degrees as determined by City staff and engineering advisors. The potential benefiting parties were include:

- City of Spruce Grove that portion of cost which is required to service existing residents.
- Other Stakeholders other parties (such as neighboring municipalities) that benefit from the infrastructure.
- City of Spruce Grove Future Development (Financial Oversizing) that portion of cost which benefits future development beyond the 25-year review period.
- City of Spruce Grove Future Development (in Rates) all growth-related infrastructure (i.e., leviable recreation infrastructure costs) during the 25-year rate planning period.

The table below outlines the allocation of recreation offsite levy infrastructure costs to benefiting parties. Project allocations were determined by City staff.

^{**}Costs are inflated to the year of construction using an inflation rate of 5% for the first 2 years, and 3% thereafter.

Allocation of Recreation Infrastructure to Benefiting Parties

It	em	Project Description	Reduced Project Estimated Cost	Muni Share %	Other Stakeholder Share	Developer Share Beyond 25 Yrs (Financial Oversizing %)	OSL / Developer Share %
	1	Civic Centre (Recreation Facilities)	\$ 26,643,505			0.0%	100.0%
			\$ 26,643,505				

^{*}Allocations to future development (vs municipal share etc.) were determined by City staff and their engineering/consulting advisors.

E5. Existing Receipts & Adjusted Levy Cost

Using the offsite levy share percentages shown in the previous section and applying those percentages to project costs results in an offsite levy cost of approximately \$26.64 million. However, prior to allocating these costs to benefiting areas, existing offsite levy receipts collected from developers need to be considered in determining the residual/net costs to developers. The City has collected \$0.00 in offsite levies to date, and results in an adjusted offsite levy cost of approximately \$26.64 million.

Offsite Levy Funds Collected to Date & Adjusted Levy Cost

	ltem	Project Description	OSL /	/ Developer Cost	Funds (te Levy Collected 31, 2016	Funds Starti	site Levy Collected ing Jan 1, 2017	Adjusted loper (Levy) Cost
	1	Civic Centre (Recreation Facilities)	\$	26,643,505	\$	-	\$	-	\$ 26,643,505
Ī			\$	26,643,505	\$	-	\$	-	\$ 26,643,505

E6. Summary of Recreation Offsite Levy Cost Flow-through

As shown in the figure below, the total cost for recreation infrastructure that forms the basis of the rate is approximately **\$26.64 million**. The cost allocations to each benefitting party are based on the benefitting percentages shown in Section F4. The offsite levy balance (due from developers) is allocated to various benefitting areas (as described in the next section).

^{**}Financial oversizing is determined by separating out the pro rata portion of developer cost beyond the 25-year review period, in comparison with the anticipated year of construction. As the years move forward and rates are updated, these additional developer costs will be included in rate calculations. For example, a project which is slated to be constructed in year 20 of the 25-year review period will have 20% (5/25) of its costs in rates today, and 80% (20/25) of its costs will sit beyond the 25-year review period.

Less: Levy = Future = Off-site Receipts Development Balance* **Applied** (OSL Share) \$26.64M \$0.00M \$26.64M = Future Development "Financial Oversizing" \$0.00M Less: Special **Project** = Project = Other Grants & Costs Balance Share Contributions \$26.64M \$26.64M \$0.00M \$0.00M = Existing Development (City Share)

Total Recreation Offsite Levy Costs

E7. Recreation Infrastructure Benefiting Areas

Net developer costs for each project have been allocated to multiple benefiting offsite levy area (see tables below). Allocations are denoted with a "1" below applicable area numbers. Benefiting areas were determined by City staff. The lands anticipated to develop over the 25-years in each offsite levy benefitting area are used to determine rates.

\$0.00M

Benefiting Areas for Recreation Offsite Infrastructure

Item	Project Description	De	veloper Cost	1	2	3	4	5	6	7	8	9	10	11
1	Civic Centre (Recreation Facilities)	\$	26,643,505	1	1	1	1	1	1	1	1	1	1	1
		\$	26,643,505											

E8. Reserve Balance

As a new account, the balance of the City's recreation reserve at December 31st, 2021 is **\$0.00**.

Recreation Offsite Levy Reserve Balance

Description	Dr	Cr	Balance
Offsite Levy Expenditures to December 31, 2021		\$ -	\$ -
Offsite Levy Receipt Allocations to December 31, 2021	\$ -		\$ -
Debenture Interest Accrued to December 31, 2021		\$ -	\$ -
Unallocated Receipts to December 31, 2021	\$ -		\$ -
Opening Balance			\$ -

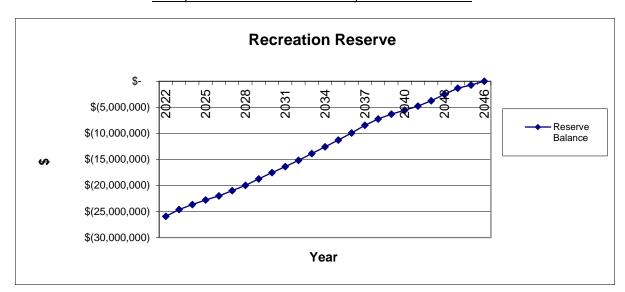
E9. Development and Recreation Infrastructure Staging Impacts

Recreation offsite infrastructure will be constructed in staged fashion over the 25-year

review period. We have reviewed the availability of offsite levy funds to meet these construction requirements and found that offsite levy reserve funds will not be sufficient to pay for construction of recreation infrastructure from time to time—front ending of infrastructure will be required. A front-ender is the party that constructs and pays up front for infrastructure that benefits other parties. The front-ender (be it a municipality or a developer) is reimbursed over time as levies are collected, and in accordance with the municipality's front-ending repayment policies.

To compensate parties for capital they provide in front-ending offsite infrastructure construction, a **2.50%** interest allowance has been charged to the reserve when it is forecast to be in a negative balance. Further, a **0.80%** interest credit has been provided to the reserve when it is forecast to be in a positive balance. The graph and table below outline the forecast water levy reserve balances over the 25-year development period.

If necessary, an interest staging adjustment has been applied to rates (slightly positive or slightly negative) to ensure that the forecast reserve balance at the end of the 25-year review period always returns to break-even (i.e., developers are not charged too much thereby providing a windfall to the City, nor are they charged too little thereby placing an unequitable burden on taxpayers).



Anticipated Recreation Offsite Levy Reserve Balances⁶

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⁶ In determining staging adjustments, the offsite levy model also applies inflation to future rates. In so doing it acknowledges that rates must keep pace with inflation just as costs do. Also, it acknowledges that an offsite levy rate of \$X paid today is not worth the same as the equivalent \$X rate paid in the future (i.e., it is discounted).

Anticipated Recreation Offsite Levy Reserve Balances

		(Opening Balance	\$ -
Year	Receipts	Expenditure	Interest	Balance
2022	\$ 1,344,189	\$ 26,643,505	\$ (632,483)	\$ (25,931,800)
2023	\$ 1,899,161	\$ -	\$ (600,816)	\$ (24,633,455)
2024	\$ 1,547,496	\$ -	\$ (577,149)	\$ (23,663,108)
2025	\$ 1,419,218	\$ -	\$ (556,097)	\$ (22,799,987)
2026	\$ 1,325,363	\$ -	\$ (536,866)	\$ (22,011,490)
2027	\$ 1,513,140	\$ -	\$ (512,459)	\$ (21,010,808)
2028	\$ 1,502,127	\$ -	\$ (487,717)	\$ (19,996,398)
2029	\$ 1,693,318	\$ -	\$ (457,577)	\$ (18,760,657)
2030	\$ 1,661,092	\$ -	\$ (427,489)	\$ (17,527,054)
2031	\$ 1,533,475	\$ -	\$ (399,839)	\$ (16,393,419)
2032	\$ 1,579,479	\$ -	\$ (370,348)	\$ (15,184,288)
2033	\$ 1,644,201	\$ -	\$ (338,502)	\$ (13,878,590)
2034	\$ 1,585,240	\$ -	\$ (307,334)	\$ (12,600,683)
2035	\$ 1,574,762	\$ -	\$ (275,648)	\$ (11,301,569)
2036	\$ 1,622,005	\$ -	\$ (241,989)	\$ (9,921,554)
2037	\$ 1,670,665	\$ -	\$ (206,272)	\$ (8,457,161)
2038	\$ 1,376,077	\$ -	\$ (177,027)	\$ (7,258,110)
2039	\$ 1,093,978	\$ -	\$ (154,103)	\$ (6,318,236)
2040	\$ 903,979	\$ -	\$ (135,356)	\$ (5,549,613)
2041	\$ 892,539	\$ -	\$ (116,427)	\$ (4,773,501)
2042	\$ 1,122,804	\$ -	\$ (91,267)	\$ (3,741,965)
2043	\$ 1,290,862	\$ -	\$ (61,278)	\$ (2,512,381)
2044	\$ 1,206,360	\$ -	\$ (32,651)	\$ (1,338,672)
2045	\$ 638,855	\$ -	\$ (17,495)	\$ (717,312)
2046	\$ 717,312	\$ -	\$ (0)	\$ (0)

APPENDIX F: LIBRARY OFFSITE INFRASTRUCTURE

F1. Library Offsite Infrastructure Costs

To support future growth, library offsite infrastructure is required. The estimated cost of this infrastructure is based upon: (a) actual construction costs to the cut-off date, (b) debenture interest associated with financing, and (c) future cost estimates. Total cost is approximately **\$10.26 million** as outlined in the table below. Actual costs, debenture interest (if any), and cost estimates were provided by City staff. It is important to note that these costs represent "gross" costs, of which only a portion will go to support future development during the 25-year review period. The remainder of this section outlines how the "net" costs for future development are determined.

Summary of Library Offsite Infrastructure

Iter	n Project Description	Cost of Completed Work	Debenture Interest	 timated Cost of lork Yet to be Completed	otal Project stimated Cost
1	Civic Centre (Library)	\$ -	\$ 4,297,733	\$ 5,967,170	\$ 10,264,903
		\$ -	\$ 4,297,733	\$ 5,967,170	\$ 10,264,903

*On June 13, 2022, City of Spruce Grove Council approved to proceed with the construction of the Civic Centre. This \$72.79 million project will be situated on Westwind Drive and includes: (1) a spectator ice rink, (2) a community ice rink (\$15.48 million), (3) an art gallery, (4) a black box performing arts theatre/flex space, and (5) a library branch (\$5.97 million). The cost of the community ice rink (\$15.48 million) and the cost of library branch (\$5.97 million), which together total \$21.45 million out of the \$72.79 million total project cost, are attributed to future growth and are included in the offsite levy rates. The construction of the project is beginning in 2022, with the City front-ending the cost of construction. Financing of the community ice rink and the library branch (i.e., those project elements attributed to future growth) is enabled by a \$21.45 million debenture over 25 years. The interest costs associated with the debenture, which totals \$11.16 million for the community ice rink and \$4.30 million for the library branch, also form part of the offsite levy rates. All areas of the City will benefit from the Civic Centre project.

F2. Library Offsite Infrastructure Grants & Contributions to Date

The MGA enables the City to allocate the costs of offsite infrastructure to future development, other than those costs that have been provided by way of special grant or contribution (i.e., contributed infrastructure). The City has/will receive \$0.00 in special grants and contributions for library offsite levy infrastructure as shown in the table below (note, if the City receives other grants or contributions in the future, it will be reflected in one of the annual updates and rates adjusted accordingly). The result is that the total reduced project estimated cost is \$10.26 million.

^{**}Costs estimates are reflected in current dollars.

^{***}Estimates include engineering costs and contingencies.

^{****}Offsite levy project details, allocations, etc. were determined by City staff and their engineering/consulting advisors.

Special Grants and Contributions for Library Offsite Infrastructure

Item	Project Description	otal Project imated Cost	Spe	ecial Provincial Grants	,	Developer Agreement ontributions	uced Project imated Cost
1	Civic Centre (Library)	\$ 10,264,903	\$	-	\$	•	\$ 10,264,903
		\$ 10.264.903	\$	-	\$		\$ 10.264.903

F3. Library Infrastructure Staging

The timing of construction is used to determine the impact of inflation on cost, the impact of forecast reserve balances, and the estimate of financial oversizing (described in the Section that follows). The City anticipates construction of offsite infrastructure as outlined in the table below. Note, if this schedule is adjusted in the future, it will be reflected in one of the annual rate/bylaw updates.

Library Infrastructure Staging

ltem	Project Description	Construction Start Year
1	Civic Centre (Library)	2022

^{*}The share of projects beyond the 25-year review period are not included in rates today (see financial oversizing in next section).

F4. Library Offsite Infrastructure Benefiting Parties

The library offsite infrastructure previously outlined will benefit various parties to varying degrees as determined by City staff and engineering advisors. The potential benefiting parties were include:

- City of Spruce Grove that portion of cost which is required to service existing residents.
- Other Stakeholders other parties (such as neighboring municipalities) that benefit from the infrastructure.
- City of Spruce Grove Future Development (Financial Oversizing) that portion of cost which benefits future development beyond the 25-year review period.
- City of Spruce Grove Future Development (in Rates) all growth-related infrastructure (i.e., leviable library infrastructure costs) during the 25-year rate planning period.

The table below outlines the allocation of library offsite levy infrastructure costs to benefiting parties. Project allocations were determined by City staff.

^{**}Costs are inflated to the year of construction using an inflation rate of 5% for the first 2 years, and 3% thereafter.

Allocation of Library Infrastructure to Benefiting Parties

Ite	n Project Description	Reduced Project Estimated Cost	Muni Share %	Other Stakeholder Share	Developer Share Beyond 25 Yrs (Financial Oversizing %)	OSL / Developer Share %
1	Civic Centre (Library)	\$ 10,264,903	50.0%		0.0%	50.0%
		\$ 10.264.903				

^{*}Allocations to future development (vs municipal share etc.) were determined by City staff and their engineering/consulting advisors.

F5. Existing Receipts & Adjusted Levy Cost

Using the offsite levy share percentages shown in the previous section and applying those percentages to project costs results in an offsite levy cost of approximately **\$5.13 million**. However, prior to allocating these costs to benefiting areas, existing offsite levy receipts collected from developers need to be considered in determining the residual/net costs to developers. The City has collected **\$0.00** in offsite levies to date, and results in an adjusted offsite levy cost of approximately **\$5.13 million**.

Offsite Levy Funds Collected to Date & Adjusted Levy Cost

ltem	Project Description	os	SL / Developer Cost	Fu	Offsite Levy Inds Collected Dec 31, 2016	Fund	fsite Levy ls Collected ting Jan 1, 2017	Adjusted eloper (Levy) Cost
1	Civic Centre (Library)	\$	5,132,452	\$	-	\$	-	\$ 5,132,452
		\$	5,132,452	\$	-	\$	-	\$ 5,132,452

F6. Summary of Library Offsite Levy Cost Flow-through

As shown in the figure below, the total cost for library infrastructure that forms the basis of the rate is approximately **\$5.13 million**. The cost allocations to each benefitting party are based on the benefitting percentages shown in Section F4. The offsite levy balance (due from developers) is allocated to various benefitting areas (as described in the next section).

^{**}Financial oversizing is determined by separating out the pro rata portion of developer cost beyond the 25-year review period, in comparison with the anticipated year of construction. As the years move forward and rates are updated, these additional developer costs will be included in rate calculations. For example, a project which is slated to be constructed in year 20 of the 25-year review period will have 20% (5/25) of its costs in rates today, and 80% (20/25) of its costs will sit beyond the 25-year review period.

Less: Levy = Future = Off-site Receipts Development Balance* **Applied** (OSL Share) \$5.13M \$0.00M \$5.13M = Future Development "Financial Oversizing" \$0.00M Less: Special = Project = Other **Project** Grants & Costs Balance Share Contributions \$10.26M \$10.26M \$0.00M \$0.00M = Existing Development (City Share)

Total Library Offsite Levy Costs

F7. Library Infrastructure Benefiting Areas

Net developer costs for each project have been allocated to multiple benefiting offsite levy area (see tables below). Allocations are denoted with a "1" below applicable area numbers. Benefiting areas were determined by City staff. The lands anticipated to develop over the 25-years in each offsite levy benefitting area are used to determine rates.

\$5.13M

Benefiting Areas for Library Offsite Infrastructure

Item	Project Description	De	veloper Cost	1	2	3	4	5	6	7	8	9	10	11
1	Civic Centre (Library)	\$	5,132,452	1	1	1	1	1	1	1	1	1	1	1
		\$	5,132,452											

F8. Reserve Balance

As a new account, the balance of the City's library reserve at December 31st, 2021 is \$0.00. Library Offsite Levy Reserve Balance

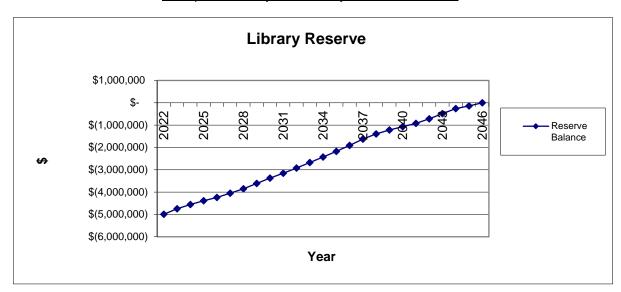
Description	Dr	Cr	Balance	
Offsite Levy Expenditures to December 31, 2021		\$ -	\$	-
Offsite Levy Receipt Allocations to December 31, 2021	\$ -		\$	-
Debenture Interest Accrued to December 31, 2021		\$ -	\$	-
Unallocated Receipts to December 31, 2021	\$ -		\$	-
Opening Balance			\$	-

F9. Development and Library Infrastructure Staging Impacts

Library offsite infrastructure will be constructed in staged fashion over the 25-year review period. We have reviewed the availability of offsite levy funds to meet these construction requirements and found that offsite levy reserve funds will not be sufficient to pay for construction of library infrastructure from time to time—front ending of infrastructure will be required. A front-ender is the party that constructs and pays up front for infrastructure that benefits other parties. The front-ender (be it a municipality or a developer) is reimbursed over time as levies are collected, and in accordance with the municipality's front-ending repayment policies.

To compensate parties for capital they provide in front-ending offsite infrastructure construction, a **2.50%** interest allowance has been charged to the reserve when it is forecast to be in a negative balance. Further, a **0.80%** interest credit has been provided to the reserve when it is forecast to be in a positive balance. The graph and table below outline the forecast water levy reserve balances over the 25-year development period.

If necessary, an interest staging adjustment has been applied to rates (slightly positive or slightly negative) to ensure that the forecast reserve balance at the end of the 25-year review period always returns to break-even (i.e., developers are not charged too much thereby providing a windfall to the City, nor are they charged too little thereby placing an unequitable burden on taxpayers).



Anticipated Library Offsite Levy Reserve Balances⁷

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⁷ In determining staging adjustments, the offsite levy model also applies inflation to future rates. In so doing it acknowledges that rates must keep pace with inflation just as costs do. Also, it acknowledges that an offsite levy rate of \$X paid today is not worth the same as the equivalent \$X rate paid in the future (i.e., it is discounted).

Anticipated Library Offsite Levy Reserve Balances

				C	Opening Balance		\$ -
Year	F	Receipts	E	xpenditure	_	Interest	Balance
2022	\$	258,937	\$	5,132,452	\$	(121,838)	\$ (4,995,353)
2023	\$	365,843	\$	-	\$	(115,738)	\$ (4,745,247)
2024	\$	298,101	\$	=	\$	(111,179)	\$ (4,558,325)
2025	\$	273,390	\$	-	\$	(107,123)	\$ (4,392,059)
2026	\$	255,310	\$	-	\$	(103,419)	\$ (4,240,167)
2027	\$	291,483	\$	-	\$	(98,717)	\$ (4,047,401)
2028	\$	289,361	\$	-	\$	(93,951)	\$ (3,851,991)
2029	\$	326,191	\$	-	\$	(88,145)	\$ (3,613,945)
2030	\$	319,983	\$	-	\$	(82,349)	\$ (3,376,311)
2031	\$	295,400	\$	-	\$	(77,023)	\$ (3,157,934)
2032	\$	304,262	\$	-	\$	(71,342)	\$ (2,925,014)
2033	\$	316,729	\$	-	\$	(65,207)	\$ (2,673,492)
2034	\$	305,372	\$	-	\$	(59,203)	\$ (2,427,323)
2035	\$	303,353	\$	-	\$	(53,099)	\$ (2,177,069)
2036	\$	312,454	\$	-	\$	(46,615)	\$ (1,911,231)
2037	\$	321,827	\$	-	\$	(39,735)	\$ (1,629,139)
2038	\$	265,080	\$	-	\$	(34,101)	\$ (1,398,161)
2039	\$	210,738	\$	-	\$	(29,686)	\$ (1,217,109)
2040	\$	174,137	\$	-	\$	(26,074)	\$ (1,069,046)
2041	\$	171,934	\$	-	\$	(22,428)	\$ (919,540)
2042	\$	216,290	\$	-	\$	(17,581)	\$ (720,831)
2043	\$	248,664	\$	-	\$	(11,804)	\$ (483,971)
2044	\$	232,386	\$	-	\$	(6,290)	\$ (257,874)
2045	\$	123,065	\$	-	\$	(3,370)	\$ (138,179)
2046	\$	138,179	\$	-	\$	0	\$ 0

APPENDIX G: RATE COMPARISON

The table below compares the City of Spruce Grove offsite levy rates to rates in other municipalities.

Municipality / Area	Average Per Ha.
City of Beaumont* Residential (roads, water, sewer)	\$53,900 - \$77,600 (2019)
City of Lacombe* (roads, water, sewer, storm)	\$19,800 - \$120,100 (2013)
City of Brooks* (roads, water, sewer, storm)	\$79,823 (2021)
City of Beaumont* Industrial (roads, water, sewer)	\$80,900 - \$116,390 (2019)
City of Cold Lake* (roads, water, sewer, storm)	\$103,000 (2007)
City of Fort Saskatchewan* (South Fort) (roads, water, sewer, storm)	\$104,100 (2017)
City of Lloydminster (roads, water, sewer)	\$112,900 (2011)
City of Leduc* (roads, water, sewer)	\$138,500 (2021)
City of Spruce Grove* (roads, water, sewer, rec, fire, library)	\$128,994 (New)
City of Red Deer* (roads, water, sewer, storm)	\$203,300 (2019)
Red Deer County (Gasoline Alley) (roads, water, sewer, storm)	\$220,000 (2017)
City of Medicine Hat* (subsidy) (roads, water, sewer, storm)	TBC In Progress
Strathcona County (New Growth Areas)* (roads, water, sewer, storm)	\$ 251,000 (2021)
City of Lethbridge (roads, water, sewer, storm)	\$281,000 (2020)
City of Chestermere* (roads, water, sewer, storm, recreation)	\$295,960 (2022) In Progress
City of St. Albert* (roads, water, sewer, storm)	+\$325,000 (2022)
City of Edmonton (roads, water, sewer, storm, fire)	+\$400,000
City of Calgary Green Field Area (roads, water, sewer, storm, comm svc, stabilization)	\$495,000 - \$544,000

^{*}CORVUS clients

^{**}Note: this information was adapted from online sources end-2021. Since then, some municipalities may have updated (or are in the process of updating) levy rates.