2025 Township of Amaranth Asset Management Plan

Township of Amaranth
374028 6th Line,
Amaranth, ON
L9W 0M6

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Asset Management Plan

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R.J. Burnside & Associates Limited
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Record of Revisions

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-	November 2025	Initial Submission to Township of Amaranth

R.J. Burnside & Associates Limited

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Executive Summary

This report contains the Asset Management Plan for the Township of Amaranth (Township) for all capital assets (core and non-core). The report has been organized as follows:

- Section 1: Introduction
- Section 2: State of Local Infrastructure
- Section 3: Expected Levels of Service
- Section 4: Asset Management Strategy
- Section 5: Recommendations

The “state of local infrastructure” section provides an overview of the capital assets owned by the Township. This includes detailed information on asset inventory, including asset attributes, accounting valuations, replacement costs, useful life, age, and asset conditions. This information provides the foundation for other sections of the asset management plan.

Based on data provided by the Township and discussions with Township Staff, it is believed that the Township’s capital assets based on weighted average condition (with the weighting based on asset replacement cost) are as follows:

Tax Based Assets

- Road and Roadside assets – Good condition
- Bridge & Culvert assets – Good condition
- Storm Water assets - Average condition
- Facility assets – Good condition
- Land Improvement assets – Good condition
- Vehicle assets – Good condition
- Equipment assets – Good condition
- Information Technology assets – Good condition

Ratepayer Based Assets

- Water assets – Good condition

As outlined in the following summary assets table. Please note that weighted average conditions do not fully reflect the many assets that need to have capital improvement investments but provide an overall high-level perspective of all the assets found in that asset grouping/network.

Please note that Water assets which are funded by system rate payers have been separated from the other tax-based capital assets. Each asset class has been subset for better understanding of the capital asset classes.

Looking at the weighted average of remaining life as a percentage of useful life can provide a quick estimate of how quickly the Township may be looking to invest in either capital improvements or asset replacement. It is important to view the Remaining Service Life percentages not as absolute but as triggers to seek more information about an asset type. For example, Crossroad Culverts and Vehicles show approximately 32% and 33% of their service life remains or these assets are moving into their last 1/3 of their lifecycle. So weighted averages are good high-level values that may require some additional detailed information for clarity.

Tax Supported

Asset Type	Condition (weighted average)	Risk (weighted average)	Useful Life (UL) - Weighted Average	Remaining Service Life (RSL) - Weighted Average	RSL as a % of UL
Road Base	N/A	Low	60	N/A	N/A
Road Surface Asphalt	Good	Low	25	12	47%
Road Surface Gravel	Average	Low	5	3	60%
Roadway Assets	Good	Low	43	28	65%
Bridge & Culverts	Good	Moderate	70	27	39%
Storm Mains	Average	Moderate	73	36	49%
Catch Basins	Good	Low	100	65	65%
Storm Manholes	Good	Moderate	100	65	65%
Crossroad Culverts	Average	Moderate	38	12	32%
Storm Ponds	Average	Moderate	100	64	64%
Discharge Points	Average	Moderate	50	13	26%
Facilities & Components	Good	Moderate	48	17	35%
Land Improvements	Good	Low	25	9	36%
Vehicles	Good	Moderate	15	5	33%
Equipment	Good	Low	16	7	44%
Software & Hardware	Good	Moderate	9	4	44%

Water Rate Payer Supported

Asset Type	Condition (weighted average)	Risk (weighted average)	Useful Life (UL) - Weighted Average	Remaining Service Life (RSL) - Weighted Average	RSL as a % of UL
Water Facilities & Components	Very Good	Moderate	46	38	82%
Water Mains	Good	Low	100	68	68%
Water Fittings	Average	Moderate	100	64	64%
Hydrants	Average	Moderate	50	15	30%
Hydrant Laterals	Good	Low	100	65	65%
Water System Valves	Average	Moderate	75	41	55%
Wells	Average	Moderate	49	18	37%

The Roadway assets (Barriers, Street Lights, Sidewalks and Signs) are reviewed regularly by staff who provide maintenance and capital improvement recommendations for the most appropriate levels of service to the public. The street signs are replaced as required and maintain Provincial Maintenance Standards (Ontario Regulation 239/02) with the Township having a contractor review all street signs once every two years. So, it is expected that the identified Useful Life of the street signs is set too low and generally will exceed the noted lifecycle. Also, streetlights have been converted to LED lights and are expected to have a longer lifecycle than in the past.

The Crossroad Culverts as noted are potentially into their last 1/3 of their lifecycle, and it is recommended that they be inspected for condition and assessment of their remaining life. This will better prepare the Township for appropriate reserves for these asset replacements.

The rate payer Water Facility assets are going through some major upgrades which will provide the Township with good water resources for identified growth plans.

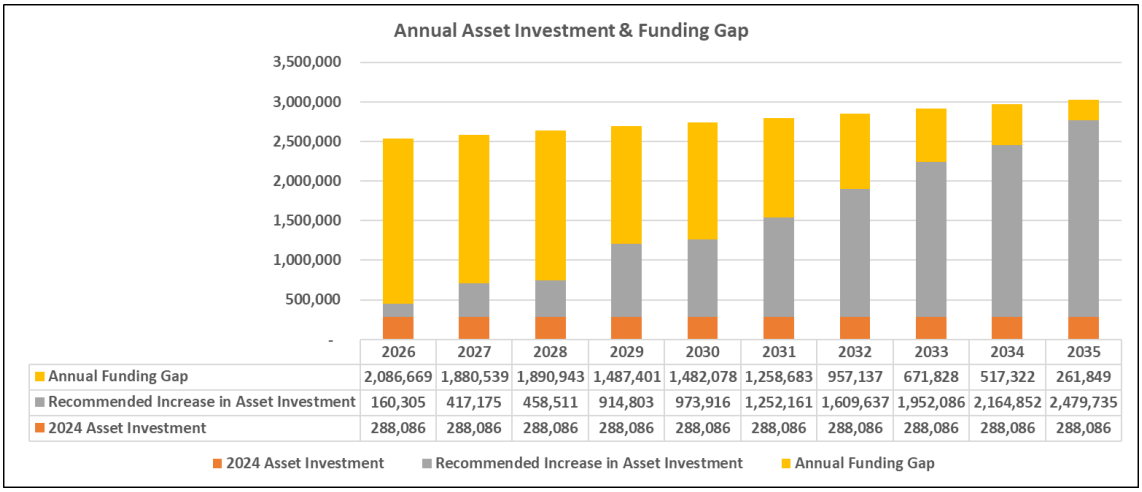
“Expected levels of service" compares the current level of service provided by the Township, and the recommended levels of service that will help extend the life of the above-mentioned asset types. The Township takes great care in the service levels they offer their constituents and public. This report has made a few additional Levels of Service (LOS) recommendations that can potentially extend the life of the Township’s capital assets and therefore reduce the total lifecycle costs of these assets. Township Staff are looking into ways to lowering the current level of service to meeting the Ontario Regulation 239/02 Maintenance Standards. For example, the Township’s highest road maintenance class is level 3. This means that the Township has 12 hours to clear a road surface of snow accumulation greater then 8 cm. Also, the Township has 16 hours to provide service for ice prevention and 8 hours to treat icy roadways. There may be potential for reducing some winter maintenance workload, however it is also very important to assess the potential risk in reducing a LOS to the public. Further internal Senior Management and Council discussions will need to occur before making this kind of change to Level of Service.

The "asset management strategy" provides a long-term operating and capital forecast for asset related capital costs, indicating the requirements for maintaining, rehabilitating, replacing / disposing, and expanding the Township's assets, while moving towards the specified expected levels of service identified above. The goal of the asset management strategy is to have the Township moving towards a sustainable asset management position over the 10-year forecast period. We have also taken into consideration the potential risk of each asset by identifying the asset consequence of failure and probability of failure. Asset risk was assessed based on the asset’s age, condition, consequence of failure, and probability of failure.

Township staff and R.J. Burnside & Associates Limited (Burnside) worked to create a complete asset dataset. Gaps in this data have been found, and estimates were made where possible. The Township has completed a Facilities inspection assessment in 2024 by a contractor providing updated information of asset inventory and condition, as well as replacement costs which was incorporated in this asset management plan. It is recommended that Township staff review the working data spreadsheets provided and update information as it becomes available. As assets are reviewed, the asset inventory can be updated, creating an improved dataset annually.

The Asset Management Financing Strategy described in Section 5.0 of this report identifies a funding plan for the recommended asset management strategy, including a review of historical results and recommendations with respect to the required amounts and types of funding (revenue) annually over the forecast period. Also, any infrastructure funding gaps are identified, and recommendations are made regarding potential approaches to reduce and mitigate these gaps over the 10-year forecast period.

Great effort was placed in this study to incorporate the potential Township growth in both housing and commercial/industrial development. The known developments have been taken into account and are documented. The Township Development Charges report was used to identify the shared costs the Township and Developers will incur. These costs were incorporated into both the Asset Strategy and Financial Strategy.



	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Annual Funding Gap	2,086,669	1,880,539	1,890,943	1,487,401	1,482,078	1,258,683	957,137	671,828	517,322	261,849
Recommended Increase in Asset Investment	160,305	417,175	458,511	914,803	973,916	1,252,161	1,609,637	1,952,086	2,164,852	2,479,735
2024 Asset Investment	288,086	288,086	288,086	288,086	288,086	288,086	288,086	288,086	288,086	288,086

Overall, this asset management plan is a tool to be used by the Township for capital and financial decision making. It can be tied to various existing reports (such as budget, official plan, and strategic planning reports) to ensure the asset management plan can be updated to reflect any changes in the Township's priorities.

Please note that this study incorporated all of the Township's tangible capital assets with some updates to the Township Facilities and Water Facility assets.

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In the preparation of the various instruments of service contained herein, R.J. Burnside & Associates Limited was required to use and rely upon various sources of information (including but not limited to reports, data, drawings, observations) produced by parties other than R.J. Burnside & Associates Limited. For its part R.J. Burnside & Associates Limited has proceeded based on the belief that the third-party/parties in question produced this documentation using accepted industry standards and best practices and that all information was therefore accurate, correct and free of errors at the time of consultation. As such, the comments, recommendations and materials presented in this instrument of service reflect our best judgment in light of the information available at the time of preparation. R.J. Burnside & Associates Limited, its employees, affiliates and subcontractors accept no liability for inaccuracies or errors in the instruments of service provided to the client, arising from deficiencies in the aforementioned third-party materials and documents.

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1.0 Introduction

1.1 Overview

R.J. Burnside & Associates Limited (Burnside) was retained by the Township of Amaranth (Township) to prepare an asset management plan for all Township tangible capital assets. The asset management plan is intended to be a tool for the Township to use during various decision-making processes, including the annual budget process and Provincial / Federal capital grant application processes. This plan will serve as a road map for sustainable infrastructure planning going forward.

Assets included in this asset management plan are the following:

Tax Supported

- Roads (Asphalt and Gravel)
- Bridges/Culverts (greater than 3 m diameter)
- Roadway Assets (Sidewalks, Guiderails, Street Lights and, Signs)
- Storm Water (Mains, Catch Basins, Manholes, Crossroad Culverts, Storm Ponds and, Discharge Points)
- Facilities and Components
  - Administration Building
  - Public Works Garage
  - Sand Domes
- Land Improvements (Parks, Ball Fields and Pavilions)
- Vehicles
- Equipment
- Software & Hardware

Ratepayer Supported

- Water (Facilities and Components, Wells, Mains, Fittings, Valves, Hydrants and Hydrant Laterals).

It is recommended that this plan be updated on an annual basis to ensure that it is kept up to date. All assets listed above, other than ratepayer water assets, are tax supported and are discussed more thoroughly in this report.

1.2 Plan Objectives

The Township's goals and objectives, with respect to their capital assets, relate to the level of service being provided to the Township's residents and visitors. Services are provided at current levels of service. This asset management plan provides a few recommended service additions that will improve the asset lifecycles for these Township

assets. In addition, much effort was invested in identifying assets and potential additional services that relate to growth of future housing and commercial/industrial developments. The Township's infrastructure and other capital assets are anticipated to be maintained at condition levels that provide for a safe and functional environment for its residents and visitors. Therefore, the asset management plan and its implementation will be evaluated based on the Township's ability to meet these goals and objectives.

1.3 Plan Development

The development of the Township's asset management plan was based on the steps summarized below:

- Develop a complete listing of all Township capital assets, to be included in the plan, including attributes such as useful life, age, accounting valuation, and current replacement valuation. Update the replacement cost of assets to 2025 dollars, and where required, use applicable inflationary indices.
- Assess current condition of the assets, based on a combination of the following:
  - Existing reports
  - Road Needs Study
  - Bridge and Culvert Inspection reports
  - Facility Condition Assessment Report
  - Burnside desktop assessments based on reports
  - Staff assessments
  - Asset age analysis
- Assess the risk of asset failure for each asset, based on determining the probability of each asset failing, as well as the consequence of the asset failing. This risk analysis is one of the components used to identify priority projects for inclusion in the asset management plan, as well as asset risk levels that require mitigation.
- Determine expected levels of service, based on standard practices and discussions with Township staff. Further analysis of the maintenance practices that can be applied to the assets to extend their lifecycle and potentially provide a lower asset total lifecycle cost.
- Prepare an asset management strategy (i.e., operating, and capital forecast) based on the asset inventory, identified priorities, and level of service analysis discussed above. This includes potential growth-related assets over the 10 year study period.
- Prepare a financing strategy to support the asset management strategy including growth related projects and assets, thus determining how the operating and capital-related expenditure forecast will be funded over the plan period.
- Prepare a final report, summarizing the process, strategy, and results of the asset management plan.

1.4 Maintaining the Asset Management Plan

The asset management plan should be updated as the capital needs and priorities of the Township changes. This can be accomplished in conjunction with the Township's budget process. With the delivery of this project's working spreadsheet file, the Township will have the tools available to perform updates to the plan when needed.

When updating the asset management plan, note that the state of local infrastructure, expected levels of service, and asset management strategy are integrated and impact each other. The asset management strategy illustrates the costs required to maintain expected levels of service at a sustainable level. The expected levels of service component summarize and link each service area to specific assets contained in the State of Local Infrastructure Section and thus determines how these assets will be used to provide expected service levels.

This report covers a forecast period of 10 years; however, it is suggested that more focus and attention be put on the first five years of the asset management plan, to ensure accurate capital planning in the short term. It is also recommended that the Township start moving towards 50-year forecasts. This longer-term vision will ensure that future infrastructure investments are not lost in the shorter 10-year forecast window.

1.5 Plan Integration

The municipal environment is continually changing and demanding when it comes to legislation and other responsibilities. Integrating the asset management plan with the Township's budget process, as well as Public Standards Accounting Board Handbook Section 3150 (tangible capital asset) requirements can make updates in all three areas more efficient.

With respect to integrating the Township's budget process with asset management planning, the Township requires a projection of capital and operating costs over a future period. The budget outlines total operating and capital requirements for the Township, while the asset management plan focuses in on specific asset-related requirements. With this link to the annual budget, the budget update process can also become an asset management plan update process.

Both asset management and PSAB 3150 require a complete and accurate asset inventory. The significant difference between the two lies in valuation approaches (PSAB 3150 requires historical cost valuation, while asset management requires future replacement cost valuation). Using a single asset inventory, as developed in the asset management spreadsheets for the Township assets (delivered to the Township as working documents for Township staff), containing both historic and current replacement valuation methods is an effective approach to maintaining the Township's asset data.

Please note that the Township is undertaking major upgrades to the rate payer Water Facilities asset data. This project has incorporated these updated assets that are not yet part of the Township's tangible capital asset inventory. This is also true of the Township tax-based facilities, as the 2024 Facilities Condition Assessment data was incorporated into this asset management plan. The additional and new assets will need to be incorporated into the Township tangible capital asset inventory for the Township 2025 financial statements.

2.0 State of Local Infrastructure

2.1 Scope and Process

This section of the plan provides an opportunity to develop a greater understanding of the capital assets owned by the Township. The state of local infrastructure analysis includes:

- An asset inventory documenting asset types, subtypes including quantities, materials, and other similar asset attributes (where available).
- Financial accounting valuation (where available).
- Replacement cost valuation.
- Asset age distribution analysis and asset age as a proportion of expected useful life.
- Asset condition information (mostly based on report and / or staff assessment as well as the age of the asset).
- Documentation of assumptions made in creating the asset inventory.

Burnside developed a detailed asset inventory listing for the Township which was used as a starting point in fulfilling the requirements for this report. This inventory provides current financial accounting valuations (i.e., historical cost, accumulated amortization, and net book value) as well as attributes such as replacement cost, useful life, and age. With respect to replacement cost, the Township provided various recent valuations, which were inflated in order to estimate 2025 replacement costs. Other valuations of a potential Historic cost were made using current 2025 replacement cost and deflating the value to the year or estimated year that the asset was constructed and / or acquired.

The following data and reports were used extensively to develop the Township's asset inventory during this project:

- Township PSAB 3150 asset inventory.
- Township reports (such as spreadsheets, documents, and notes and discussions with staff).
- Township 2022 Road Needs Study.
- Township 2023 Bridge Inspection Report.
- Township Facility Condition Assessment Report 2024.
- Township Water Rate study 2015 and Water Financial Report 2020.
- Township Water system expansion assets, from Township Engineer.
- Recent purchase information from the Township.
- Township 2024 Development Charges Report for Growth assets and shared cost between Township and Developers.
- Many discussions with Township staff.

Some adjustments to asset useful lives have been made but further analysis may reveal that the Township will want to update some useful life values in their tangible capital asset financial reporting so that they better reflect the lifecycle and remaining life of the Township's assets. Burnside engineers have reviewed the useful lives of the Township assets identified in this project and believe they now better reflect the conditions, maintenance practices, and management of the Township's assets.

2.2 Asset Condition

Each asset was tracked based on estimated total useful life and remaining service life. Using this data, along with staff information, and age analysis of the Township's assets assisted in identifying potential areas of focus where inspected asset conditions were not available. We want to state that asset conditions are always best defined via engineering best practices. Engineering based condition assessments can provide more realistic estimates of an asset's remaining service life, which can then be used to establish asset rehabilitation and / or replacement schedules. Age related condition values can be problematic if the asset's useful life is not appropriately defined for the environment and use of the asset. For example, if a useful life of an asset is defined as shorter than the assets' true performance, this will result in a lower / poorer age assessed condition rating. This method of condition approximation was only used when inspected conditions were not available.

A rating out of 10 was established for all assets and was based on a combination of past reported physical inspections, current inspections, staff assessment, and asset age analysis. This rating was then converted to a condition description of "Very Good" to "Very Poor" as shown in Table 2.1.

Table 2.1: Asset Condition Format for all Assets

Condition (value 1-10)	Condition
9 - 10	Very Good
7 - 8	Good
5 - 6	Average
3 - 4	Poor
1 - 2	Very Poor

The condition of the assets is an important element of any lifecycle assessment process. This process also identifies maintenance and operating practices that can be applied to ensure appropriate service levels, as well as extending the life of the asset to its maximum service life.

A high-level summary of the average conditions for the Township's assets are shown in Table 2.2. The conditions listed in Table 2.2 were calculated using weighted average conditions. The weighting factor used was the asset replacement costs so that the greater the cost the greater the weighting of that asset's condition was used to determine the average. Using this method provides more emphasis on the more expensive to replace assets. However, please note that averages are a composition of many assets in a group. Averages can be misleading with respect to immediate needs as the new assets offset the old assets requiring urgent replacement.

2.3 Capital Asset Overview

The Township presently owns capital assets with a 2023 replacement value of approximately $207.6 million, broken out in Table 2.2 and summarized as follows:

- $174.8 million Core tax supported assets (Roads, Roadway Assets, Bridges, Storm Water).
- $18.9 million Non-core tax supported assets (Facilities, Land Improvements, Vehicles, Equipment, Software & Hardware).
- $13.9 million Water ratepayers supported assets.

Figure 2.1, Figure 2.2, and Figure 2.3 outline the breakdown of these totals into the Township's asset categories.

Figure 2.1: Township Tax Supported Assets Replacement Costs (2025) Including Road Bases

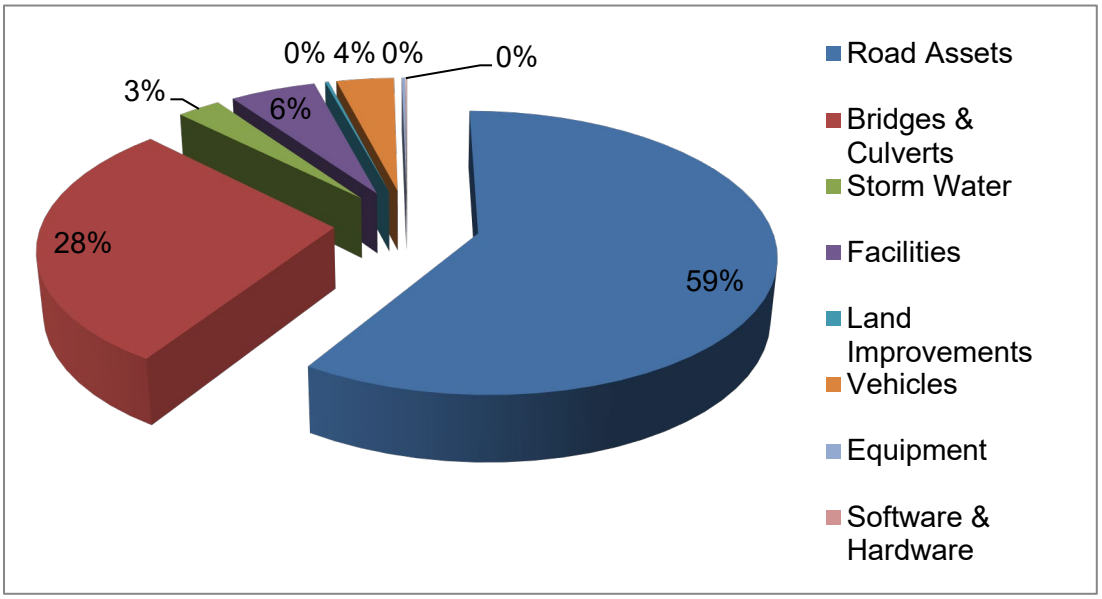


Figure 2.2: Township Tax Supported Assets Replacement Costs (2025) Excluding Road Bases

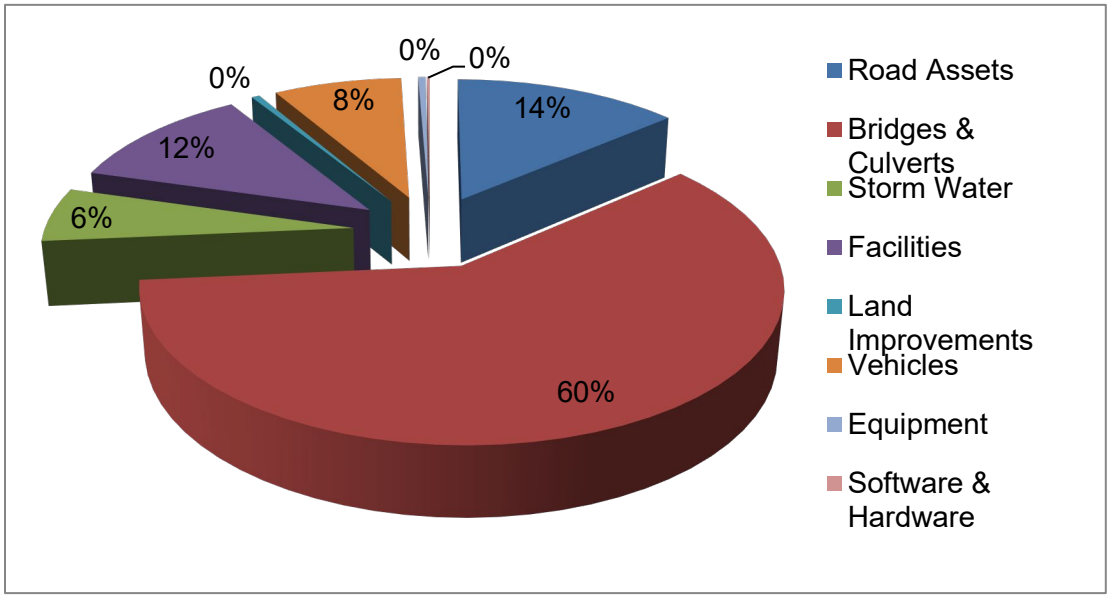


Figure 2.3: Township Ratepayers Supported Water Assets Replacement Costs (2025)

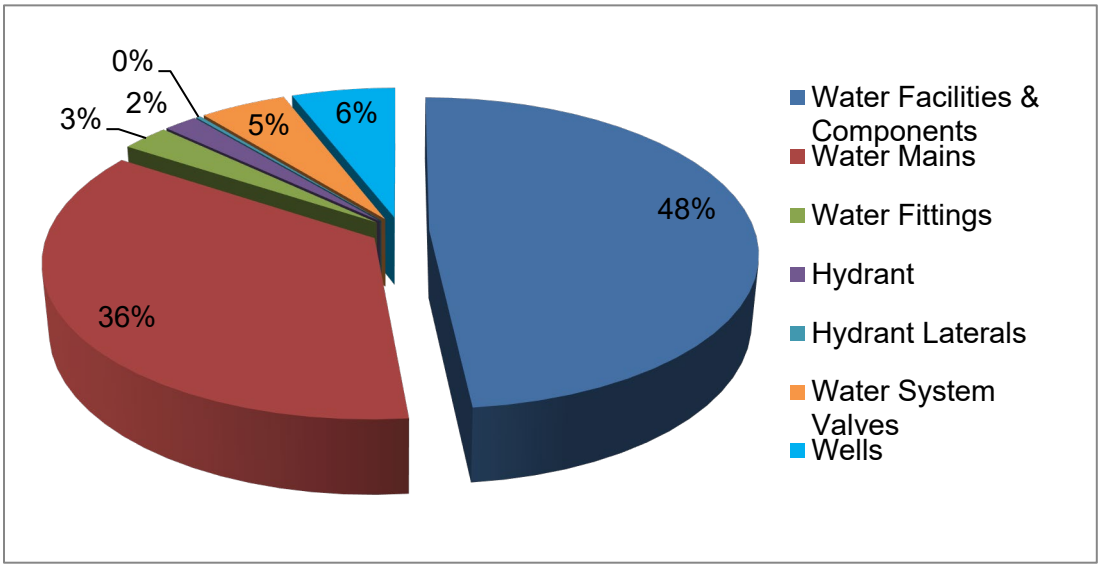


Table 2.2: Asset Assessment Summary

Asset Type	Historic Cost	2024 Accumulated Amortization	2024 Net Book Value	2025 Replacement Cost	Condition Value (weighted average)	Condition Text (weighted average)	Useful Life (UL) - Weighted Average	Age (weighted average)	Remaining Life (weighted average)	Risk Value (weighted average)	Risk Text (weighted average)
Road Base	$8,147,788	$5,443,544	$2,704,244	$101,710,079	N/A	N/A	60	54	6	N/A	Low
Road Surface Asphalt	$5,252,526	$1,947,449	$3,305,077	$9,580,978	9.0	Good	25	12	12	1.4	Low
Road Surface Gravel	$735,765	$545,933	$185,724	$1,572,749	7.0	Average	5	3	3	1.1	Low
Bridge & Culverts	$9,934,707	$2,421,502	$7,513,205	$55,063,000	6.9	Good	70	126	27	2.2	Moderate
Roadway Assets	$568,850	$369,500	$199,349	$1,460,727	7.4	Good	43	17	28	1.2	Low
Storm Mains	$1,286,684	$653,849	$632,834	$2,994,543	5.1	Average	73	36	36	2.0	Moderate
Catch Basins	$284,864	$97,960	$186,904	$867,900	6.7	Good	100	35	65	1.0	Low
Storm Manholes	$184,081	$64,428	$119,653	$385,000	7.0	Good	100	35	65	2.0	Moderate
Crossroad Culvert	$360,980	$161,629	$199,489	$1,077,769	5.8	Average	38	46	12	1.8	Moderate
Storm Ponds	$36,615	$13,275	$23,340	$70,000	6.0	Average	100	36	64	2.0	Moderate
Discharge Points	$13,353	$9,825	$3,528	$45,000	5.0	Average	50	37	13	2.0	Moderate
Facilities & Components	$3,939,527	$2,566,648	$1,366,291	$10,679,747	7.3	Good	48	35	17	1.9	Moderate
Land Improvements	$283,582	$190,893	$92,689	$447,500	6.4	Good	25	16	9	1.0	Low
Vehicles	$3,918,242	$1,871,760	$2,046,482	$7,170,000	6.8	Good	15	10	5	1.8	Moderate
Equipment	$384,460	$225,384	$152,781	$421,913	7.7	Good	16	11	7	1.1	Low
Software & Hardware	$136,260	$62,077	$74,183	$154,516	7.0	Good	9	6	4	2.0	Moderate

Water Facilities & Components	$5,784,579	$1,059,519	$4,725,059	$6,745,000	9.1	Very Good	46	8	38	1.8	Moderate
Water Mains	$3,353,600	$1,038,107	$2,315,493	$4,989,309	7.0	Good	100	32	68	1.2	Low
Water Fittings	$205,733	$74,664	$131,069	$383,000	6.6	Average	100	36	64	1.4	Moderate
Hydrant	$151,762	$106,236	$45,526	$270,000	6.0	Average	50	35	15	2.0	Moderate
Hydrant Laterals	$21,211	$7,424	$13,787	$36,000	7.0	Good	100	35	65	1.0	Low
Water System Valves	$304,310	$137,075	$167,235	$690,000	6.1	Average	75	34	41	1.9	Moderate
Wells	$314,609	$193,875	$120,734	$825,000	7.1	Average	49	31	18	2.0	Moderate
Total All assets	**$45,604,087**	**$19,262,557**	**$26,324,676**	**$207,639,729**	**4.0**	**Average**	**59**	**65**	**16**	**1.0**	**Low**
Total without Road Base Replacement Costs				**$105,929,650**	**7.2**	**Good**	**58**	**76**	**25**	**1.9**	**Moderate**

The capital asset inventory was organized in a Microsoft Excel spreadsheet and delivered to the Township in digital form as working documents for Township staff to continue to use and update as required. Each of the asset types were assessed for their age, condition (where available) and for data accuracy and completeness.

Table 2.1 shows the Township's financial accounting valuation summary by asset type for all Township assets. Since 2009, municipalities across Canada have been required under the Public Sector Accounting Board Handbook Section 3150 (PSAB 3150) to maintain asset listings complete with historical cost (i.e., the original cost to purchase or construct an asset), accumulated amortization and net book value. These values were to be reported on the Township's audited financial statements each year. Burnside has done the additional work of developing the 2025 cost for assets that were not part of the Township's Financial asset inventory and added them to the spreadsheets provided. If the Township chooses to use the asset inventory developed in this project to report the PSAB 3150 values, the data / information is found in the delivered spreadsheets to Township Staff.

Including all the Township's capital assets studied in this project, the total tangible capital asset historical cost is approximately $45.6 million or approximately 22.0% of the total replacement cost. It is expected that historical cost totals are less than replacement cost totals, given inflationary adjustments that would occur between the original asset purchase / construction date and 2025. Total accumulated amortization for the Township's assets is approximately $19.3 million or 42.2% of the total asset historical cost. This represents the proportion of tangible capital assets that have been amortized (i.e., used up) to date from a financial valuation perspective. This also leads one to assume that the Township's assets are approaching half of their lifecycle.

Clearly the Township's owned road assets have the greatest percentage tax supported replacement cost if the road base values were included in the calculation (see Table 2.2). Road bases are considered assets that will never be totally replaced but will from time to time be improved and in spot locations on an as needed basis. Therefore, by excluding road base asset values (see Figure 2.2), the Township's bridge percentage replacement costs provide 59.9% of the tax supported assets. More in-depth discussion of the asset types follows below.

The Township's tax supported assets within the road allowance make up a key service that reflects the economic and social development of the community. The road environment or assets found within the road right-of-way make up 90.2% in replacement costs including road bases and 79.4% when road bases are excluded for tax supported assets studied in this project. The following tax supported asset types are the assets studied in this project:

- Roads – 12.1% of the total Township's asset replacement costs (excluding road bases).
- Bridges and Culverts – 59.9% of the total Township's asset replacement costs (excluding road bases).
- Other Roadway Assets – 1.6% of the total Township's asset replacement costs (excluding road bases).
- Storm Water – 5.9% of the total Township's asset replacement costs (excluding road bases).
- Facilities – 11.6% of the total Township's asset replacement costs (excluding road bases).
- Land Improvements – 0.5% of the total Township's asset replacement costs (excluding road bases).
- Vehicles – 7.8% of the total Township's asset replacement costs (excluding road bases).
- Equipment – 0.5% of the total Township's asset replacement costs (excluding road bases).
- Software and Hardware – 0.2% of the total Township's asset replacement costs (excluding road bases).

More detailed discussion of these tax supported asset types is provided below.

2.3.1 Roads

Figure 2.4 outlines the replacement cost distribution of the Township road environment assets excluding road bases and crossroad culverts as they are part of the Storm Water assets grouping.

At the current replacement cost the road assets account for approximately $8.7 million dollars excluding road bases or approximately 12.1% of the tax supported assets studied in this project. The composition of the road surfaces is outlined in Table 2.3.

The Township completed a Road Needs Study three years ago which assists the Township in prioritizing both capital and operational maintenance programs. It is recommended that this type of road study be completed every five to ten years to provide engineering type inspections of the Township roads. The Road Study information was incorporated in this project.

Table 2.3: Road Surface Asset Summary

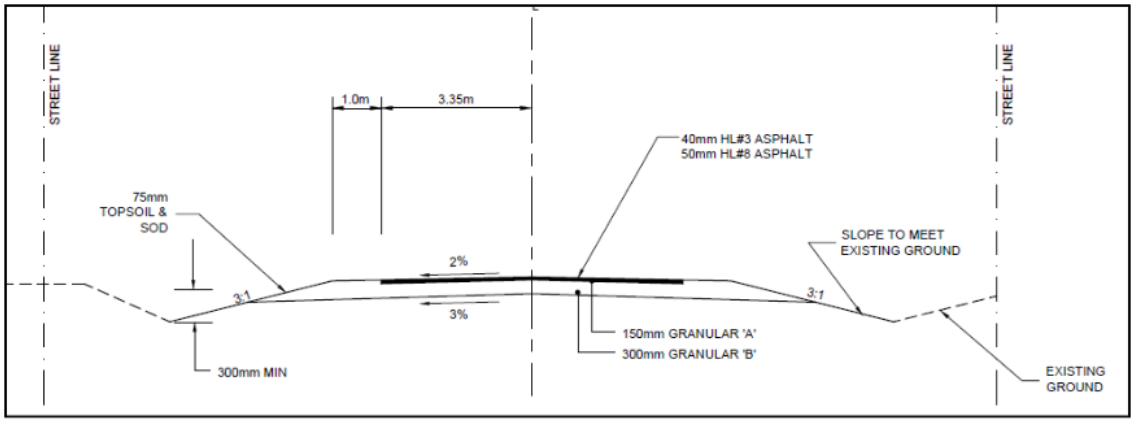
Road Surface	Surface Length (m)	Condition (weighted average)	Condition (Text)	Risk (weighted average)	Risk (Text)	Replacement Cost
Asphalt	44,680	9.0	Very Good	1.4	Low	$9,580,978
Gravel	186,479	7.0	Good	1.1	Low	$1,572,749
Total	**231,160**	**8.7**	**Good**	**1.3**	**Moderate**	**$11,153,726**

Table 2.4: Other Roadway Assets Summary

Roadway Assets	Numbers or Length (m)	Useful Life (UL) - Weighted Average	Age (weighted average)	Remaining Life (weighted average)	Condition (weighted average)	Condition (Text)	Risk (weighted average)	Risk (Text)	Replacement Cost
Barriers	1,953	50	12	38	8.0	Good	1.0	Low	$1,036,050
Street Lights	89	25	35	2	7.0	Good	1.0	Low	$137,000
Sidewalks	485	50	40	10	6.0	Average	1.0	Low	$72,750
Signs	869	15	21	0	4.9	Average	2.2	Moderate	$214,927
Total		**43**	**17**	**28**	**7.4**	**Good**	**1.2**	**Low**	**$1,460,727**

Key to all roads is the road base on which they are built. These road bases in most cases were established many years ago. Hard top (asphalt) road surface roads provide the longest life cycle with the best level of service when constructed on excellent road bases. Once the road base becomes soft, it cannot economically support a hardtop road surface, and it is best to convert it to a gravel road until funding is made available and the base has been reinforced. Figure 2.4 provides a typical road cross-section diagram. This can be applied for all surface types as asphalt (shown in Figure 2.4), and without asphalt for gravel road surfaces.

Figure 2.4: Typical Asphalt Road Surface Cross Section



The Township's gravel surface roads are upgraded approximately every five years or as required with surface gravel replacement / top-up. In some locations additional gravel is at times required to help reinforce the gravel road base.

The Township Road Needs Study report provides updates and explanations of the Township's Road conditions and related deficiencies that impact longevity or operations of the roads, including road widths, drainage, surface type, alignment, and brushing maintenance where required. The road conditions from the road study were incorporated into this asset management plan. It is important to note that only current assumed roads were studied and listed in the asset inventory.

Table 2.4 provides the breakdown of other roadway assets which total $1.5 million in replacement cost. These include:

- Barriers (guardrails)
- Streetlights
- Sidewalks
- Signs

Sidewalks, guardrails and streetlights are inspected regularly as part of the standard Township road patrol process.

The Township uses a contractor to inspect bi-annually all road signs for retro-reflectivity and maintained as a maintenance standard.

These roadway assets continue to grow in number and replacement costs as the Township continues to assume new developments.

2.3.2 Bridges and Culverts

The Township is responsible for 42 bridges and culverts structures over the span of 3.0 m. Please note one bridge is closed. The 2023 structure inspections focused on 20 structures as an additional 21 structures were never inspected before. There is one additional structure that has been added to the Township asset inventory and is also included in this study. The inspection reports were reviewed, and information used in this asset management analysis. The additional 21 structures had bridge condition indexes approximated. Discussion with the structure inspectors enabled a higher level of confidence with the data used in the analysis.

Visual inspections are required to be carried out every two years in accordance with the Ministry of Transportation – Ontario Structure Inspection Manual (OSIM). The inspections are to be completed under the direction of a professional engineer to assess their condition and identify any material defects, performance deficiencies, maintenance needs, additional studies and / or repairs / rehabilitation work required on a structure-by-structure basis.

The Township has a total of $55.1 million in replacement cost of bridge and culvert assets. Table 2.5 provides the distribution of the types of bridges that the Township owns.

Table 2.5: Bridge and Culvert Structure Types

Bridge Type	Number	Replacement Cost
I-beam or Girders	3	$10,591,000
Through Girder	2	$4,248,000
T-Beam	1	$1,508,000
Box Beams of Girders	2	$6,085,000
Cast-In-Place Conc. Rigid Frame	21	$18,139,000
Cast in Place Box Culvert	1	$895,000
Guardian Bridge	1	$1,885,000
Bowstring Arch	2	$4,151,000
Multi-Plate Arch Culvert	4	$3,123,000
Precast Concrete Box Culvert	4	$2,420,000
Closed Bridge	1	
Total	**42**	**$53,045,000**

Load postings may be recommended for structures based on age, condition, noted performance deficiencies, or based on the findings of a structural evaluation. There are currently four structures in the Township's inventory that have load postings and three additional structures with recommendations for load postings. See Table 2.6 for structure Load Posting details.

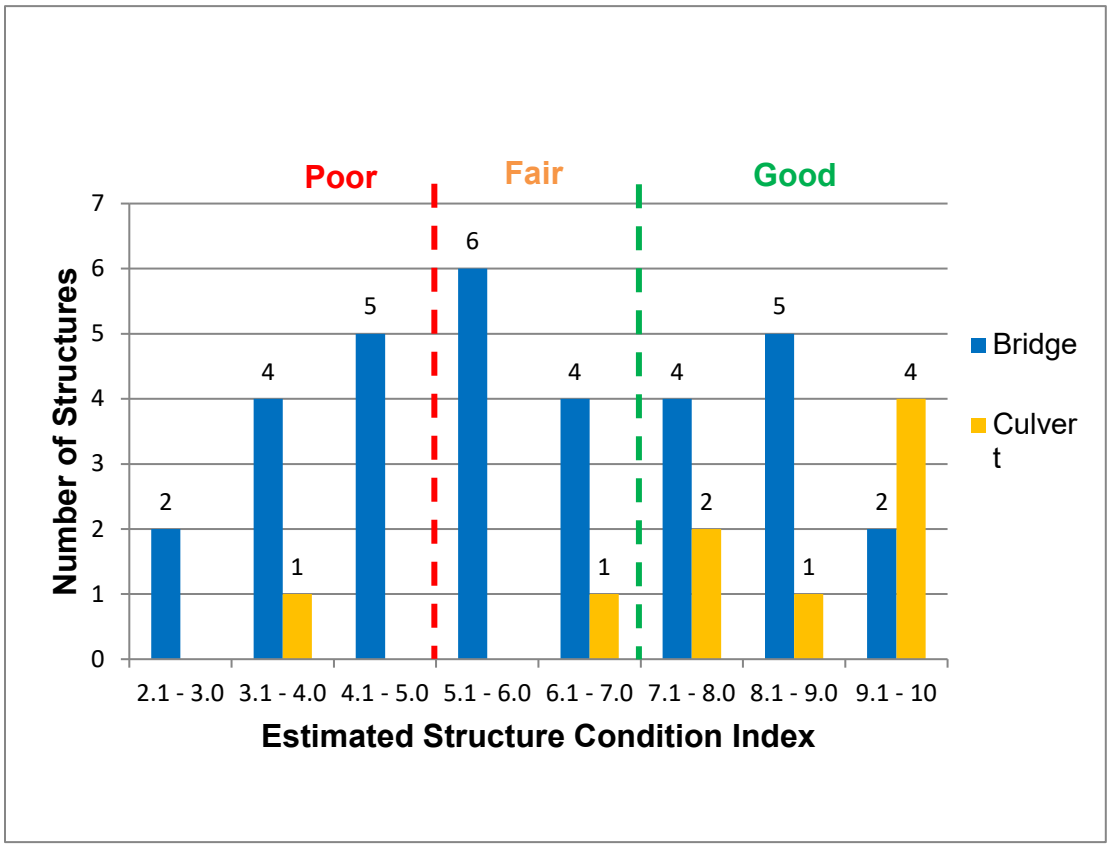
Table 2.6: Structure Load Limit Posting Needs

Asset ID	Bridge Number & Asset Name	Structure Type	Load Posting	Monitoring
2296	Bridge 10 MTO (4-72) - 7th Line - north of 10th SR	Through Girder (Concrete)	16	Yes
2289	Bridge 11 MTO (4-73) - 15th SR - west of 6th Line	Through Girder	12	Yes
2479	Bridge 12 MTO (4-76) - 6th Line - just south of 15th SR	Bowstring Arch	12	
2480	Bridge 13 MTO (4-75) - 6th Line - just north of 15th SR	Bowstring Arch	14	Yes
N/A	Bridge 39 - 8th Line 200m north of 25 SR	Cast-In-Place Conc. Rigid Frame		Yes
N/a	Bridge 40 - 9th Line 125m north of County Rd 109	Cast-In-Place Conc. Rigid Frame		Yes
N/A	Bridge 42 - 30 SR 400 m west of County Rd 12	Cast-In-Place Conc. Rigid Frame		Yes

The capital works needs include any repair, rehabilitation, or replacement work which would typically be completed by the Township's hired contractor, to assist in extending the service life of a structure and increasing the Bridge Condition Index (BCI). In accordance with the OSIM reports, the capital and maintenance works required are based on a priority of six to ten years, one to five years, and urgent now needs have been estimated and incorporated into the asset management strategy.

Based on the OSIM inspection of each structure, the estimated Structure Condition Index Distribution graph, shown in Figure 2.5, provides a summary of the current state of the Township's structures.

Figure 2.5: Structure Condition Distribution



Currently, the Township's structures weighted average based on replacement cost and calculated Bridge Condition Index is Good (6.9) as illustrated in Figure 2.5. Of interest, the Ministry of Transportation Ontario (MTO) has established a goal to have 85% of their structures in "Good" condition by the year 2021, and to maintain that condition moving forward by addressing rehabilitations and replacements as necessary. Burnside recognizes that the above goal was not established by the Township. It should be noted that based on the current state of the inspected structures Township has some serious investment needs in their structures, as only 50% fall into the Good or Very Good categories.

Continued maintenance and completion of rehabilitative or replacement works as recommended in the 2023 OSIM Bridge Inspection Report along with the identified 2024 and 2025 projects has helped to move the structure BCI conditions in an upward direction. It is important to note that 20 additional structures have been added to the bridge / culvert asset inventory, and four of these have been replaced with a total cost of $2.4 million. The Township is working hard to improve their structures.

Table 2.6 shows the Capital investment recommendations grouped by Now Needs, 1-5 Years and 6-10 Years.

Table 2.7: Bridge and Culvert Capital Needs

Time Frame	Capital Cost
Now	$805,000.00
1 – 5 years	$5,200,000.00
6 – 10 years	$4,319,500.00
TOTAL	**$10,324,500.00**

2.3.3 Storm Water Assets

The Township has $5.4 million of storm water assets replacement cost. The majority of the storm water asset value is made up with storm water mains total replacement cost approximately $3.0 million or 55% of the Township's tax supported storm water assets. Table 2.8 shows the distribution of the Township's storm water assets. More detailed listing of the storm water assets was provided to Township staff with the working spreadsheet of asset inventory. In general, the storm water assets are in Average condition and have a weighted average of Moderate risk of failure.

Figure 2.6: Storm Water Assets Replacement Cost Distribution (2025)

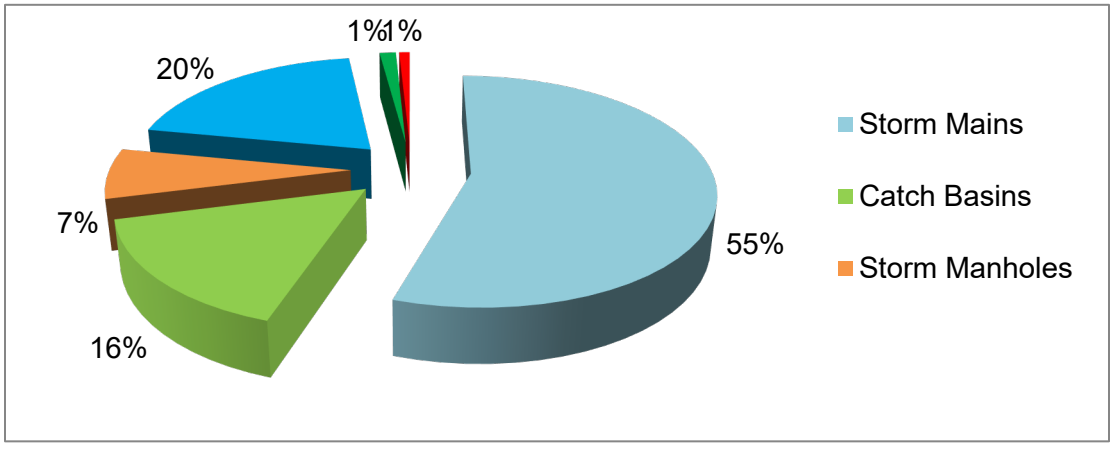


Table 2.8: Storm Water Assets

Storm Water Assets	Length (m) / Number	Condition (weighted average)	Condition (Text)	Useful Life (weighted average)	Age (weighted average)	Remaining Life (weighted average)	Risk (weighted average)	Replacement Cost
Storm Mains	3132 m	5.1	Average	73.0	36.0	36.0	2.0	$2,994,543
Catch Basins	74	6.7	Good	100.0	35.4	64.6	1.0	$867,900
Storm Manholes	19	7.0	Good	100.0	35.0	65.0	2.0	$385,000
Crossroad Culvert	410	5.8	Average	38.0	46.0	12.0	1.8	$1,077,769
Storm Ponds	2	6.0	Average	100.0	36.0	64.0	2.0	$70,000
Discharge Points	2	5.0	Average	50.0	37.0	13.0	2.0	$45,000
Total		**5.6**	**Average**	**72.4**	**37.8**	**38.0**	**1.8**	**$5,440,212**

Table 2.9: Township Facilities (tax supported)

Facilities (Tax Based)	Historic Cost	2024 Accumulated Amortization	2024 Net Book Value	2025 Replacement Cost	Condition (weighted average)		Useful Life (weighted average)	Age (weighted average)	Remaining Life (weighted average)	Risk (weighted average)
					Value	Text				Text
Administration Building	$2,660,261	$1,615,568	$1,038,105	$6,720,408	8	Good	51	31	22	Moderate
Public Works Garage	$785,270	$575,535	$209,736	$3,409,339	6.1	Average	47	46	8	Moderate
Sand Domes	$493,996	$375,546	$118,450	$550,000	6.5	Good	25	20	5	Moderate
Total	**$3,939,527**	**$2,566,648**	**$1,366,291**	**$10,679,747**	**7.3**	**Good**	**48**	**35**	**17**	**Moderate**

Table 2.10: Summary of Water Assets

Asset Type	Historic Cost	2023 Accumulated Amortization	2023 Net Book Value	2024 Replacement Cost	Condition Value (weighted average)	Condition Text (weighted average)	Useful Life (years)	Age (weighted average)	Remaining Life (weighted average)	Risk Value (weighted average)	Risk Text (weighted average)
Water Facilities & Components	$5,784,579	$1,059,519	$4,725,059	$6,745,000	9.1	Very Good	46	8	38	1.8	Moderate
Water Mains	$3,353,600	$1,038,107	$2,315,493	$4,989,309	7.0	Good	100	32	68	1.2	Low
Water Fittings	$205,733	$74,664	$131,069	$383,000	6.6	Average	100	36	64	1.4	Moderate
Hydrant	$151,762	$106,236	$45,526	$270,000	6.0	Average	50	35	15	2.0	Moderate
Hydrant Laterals	$21,211	$7,424	$13,787	$36,000	7.0	Good	100	35	65	1.0	Low
Water System Valves	$304,310	$137,075	$167,235	$690,000	6.1	Average	75	34	41	1.9	Moderate
Wells	$314,609	$193,875	$120,734	$825,000	7.1	Average	49	31	18	2.0	Moderate
Total	**$10,135,803**	**$2,616,901**	**$7,518,902**	**$13,938,309**	**7.9**	**Good**	**68.8**	**20.7**	**48.1**	**1.6**	**Moderate**

As the storm water assets age beyond their mid lifecycle, it will become more important to prioritize CCTV inspections of the older pipes and develop a Capital replacement plan.

It is also recommended the Township develop an inspection program to locate and inspect all Township crossroad culverts. Crossroad culverts become critical during extreme weather events. This type of project will provide key information to Township staff to ensure water is appropriately moving and not building up in areas which can harm other municipal or private assets. It is also expected that completing a project like this will discover some rural catch basins to further expand the Township asset inventory.

2.3.3.1 Township Municipal Drains

A Municipal Drain is a system to move water. It is created pursuant to a bylaw passed by the local municipality. The municipality is responsible for the construction of the drainage system and for its future maintenance and repair. Costs are recovered from the land and roads in the watershed of the drain. What makes Municipal Drains different from other forms of drainage systems is that they are municipal infrastructure and the municipality is responsible for their management.

Municipal Drains are identified by a municipal by-law that adopts an Engineer's report. These reports contain plans, profiles and specifications defining the location, size and depth of the drain, and how costs are shared among property owners within the watershed area. Most Municipal Drains are either open drains or closed drains with pipes or tiles buried in the ground. Municipal Drains are generally located in rural agricultural areas. There is approximately 267 km of Municipal Drains constructed under the Drainage Act located within the Township (Ontario Ministry of Agriculture, Food, and Agribusiness OMAFRA data).

Council considers two factors when determining if Municipal Drain maintenance and repair work is required:

1. Results of inspections by the Drainage Superintendent; and
2. Complaints and concerns of property owners.

The costs for maintenance and repair work are distributed over the affected watershed area in accordance with the assessment schedule provided in the governing by-law. The costs are pro-rated, meaning they are assessed in the same proportions as detailed in the report. The Township is responsible for paying the pro-rated share assessed to municipal roads where the municipal drain crosses. Typically, this would be in the 5-10 % range of the total expenditure.

Currently, two new Engineer's Reports are being prepared under Section 4 and 78 of the Drainage Act:

Menary Drainage Works 'C' & 'D' Drain – Replacement of Existing Tile / New Branch

- Total Estimated project cost = $475,000
- Estimated Construction timing = Summer 2026
- Estimated total assessment of the Municipal Office property and the 6th Line = $140,000

Bryan Drainage Works, 'C' Drain – New Tile Installation

- Total Estimated project cost = $105,000
- Estimated construction timing = Summer 2026

Estimated total assessment to the 7th Line = $1,000

2.3.4 Facility Assets

Township facility assets total $10.7 million in replacement costs or 11.6% of the Township's tax supported asset inventory not including road bases. Table 2.9 expands on the Township Facility asset values. Based on weighted average, the condition of these facility assets is Good with Moderate risk of failure.

The Township has completed facility condition assessments for both the Administration Office and Public Works Garage identifying with the building structures and asset components. This information was incorporated in this asset management plan.

It needs to be noted that the Township Administration Office does not have a generator. This is something highly recommended for Township staff to be able to continue to work in the case of an emergency to help serve the public.

2.3.5 Land Improvements

The Township Land Improvements, which are mostly parks and playgrounds, amount to approximately $447,500 or 0.5% of the total replacement cost of tax supported Township assets, not including road bases or land costs. The weighted average condition of all the Land Improvements identified assets is Good. These assets based on the data appear to be past their half-life of their lifecycle. It is very important to continue with inspections and schedule potential future improvements.

It is also important to note that three additional land improvement assets were added to the Township asset inventory (Devonleigh Playground, Country Meadows Playground, and Country Meadows Walkway).

2.3.6 Vehicles

The total replacement cost of vehicles is $7.2 million or 7.8% of the total tax-based Township assets replacements costs excluding road bases. Township vehicles have a weighted average of Average condition.

The Public Works fleet of vehicles has been identified with a weighted average remaining life of five years which means over half of the vehicle lifecycle is used up. The Township has been doing everything they can to extend the life of these very expensive assets, as painting them to prevent the vehicles from rusting. It is recommended that the Township review their fleet vehicles and develop a 10-year replacement plan to ensure that roads are well maintained.

2.3.7 Equipment

The Equipment category is made up of both Public Works machinery and general Administration equipment. The total replacement cost for this asset grouping is $421,913 or 0.5% with respect to the total of tax-based Township assets excluding road bases. The weighted average condition of this asset grouping is Good and remaining life expectancy of approximately seven years.

2.3.8 Software and Hardware

Information Technology (IT) has become a major requirement for municipal operations. This equipment is a requirement for Township staff to do their job to serve the public most effectively. Proper maintenance of these assets is becoming more and more expensive.

The Township IT equipment based on the information provided has a replacement value of $154,516 with a weighted average “Good” condition. As many IT assets have a short lifecycle three to five years, the “Good” condition assessment may be due to this equipment being recently updated. It is recommended that the IT asset data be regularly updated and ensure any unused/disposed old equipment is removed from the asset inventory.

2.3.9 Water Ratepayers Supported Assets

The Township water ratepayer supported assets provide potable water to the Waldemar community. These assets total $13.9 million in 2025 replacement cost value which is 13.2% of all the Township assets excluding road bases. Table 2.10 provides a summary of all the water ratepayers supported assets. A more detailed review of these assets was delivered to Township staff in the asset inventory spreadsheets.

Each Water ratepayers supported asset component identified in Table 2.10 is critical to the acquiring, treatment, and distribution of potable water to the Waldemar community with sufficient quantity and pressure. As this is a Water ratepayers supported asset grouping, we shall only comment on the condition of the system based on the documented age of these assets. Please note that the water pump house internal assets are being totally replaced to provide for the increased water supply via the new standpipe system.

In general, the condition of the water assets is Good with Moderate risk of failure. The Township is maintaining the appropriate water distribution levels of service. The water quality and pressure are at acceptable levels for the current number of homes being serviced.

2.4 Future Developments

One of the key elements of this asset management plan is the addition of looking forward to future growth in the Township. Burnside had many discussions with staff and our engineering staff that are assisting the Township with new development plans and infrastructure. Growth provides many new Township assets from roads and roadside assets to water distribution and new parks. Tables 2.11 to 2.18 provide the current detail that is understood for growth in the Township over the 10-year project analysis period.

As shown in Table 2.11 it is expected that over 7.5 km of new asphalt surface roads will be constructed with a replacement cost of $2.3 million. This is approximately 17% more asphalt roads that need to be maintained. There will also be 2.6 km of sidewalk constructed which is five times more sidewalk to maintain. These assets will require additional Public Works vehicles as well as staff (see Table 2.12) to assist in maintaining the new assets pertaining to the growth.

Table 2.13 provides the known information related to new storm water assets that are to be assumed by the Township. For example, 3.3 km of storm water main will be required, which over doubles this asset type for the Township. The storm water catch basins and manholes number almost doubles the number of these assets that will require cleanout and maintenance on a regular basis.

Table 2.15 provides information of future land improvement assets like parks and walkways etc. New parks will require additional Township resources for regular playground inspections.

Finally, Table 2.17 lists the future new water related assets. There will be an increase of 65% of water main pipes or $3.2 million in replacement costs. As these assets are maintained by the water rate payers it will be important to ensure that new water rate studies incorporate these additional assets and the cost to maintain them.

Table 2.11: Future New Growth Road Assets

Development Name	Potential Year of Asset Acquisition	Asphalt Road Surface		Asphalt Road Base		Concrete Curb		Concrete Sidewalk		Streetlights		Signs		Retaining Wall	
		(m)	Replacement Cost	(m)	Replacement Cost	(m)	Replacement Cost	(m)	Replacement Cost	Number	Replacement Cost	Number	Replacement Cost	Number	Replacement Cost
Verdon (Hamount Valley) Phase 1	2034	1,223	$305,750	1,223	$538,120	2,110	$126,600			40	$320,000	15	$4,500		
Amaranth Country Estates	2025	840	$210,000	840	$369,600					8	$64,000	8	$3,600		
Primrose Estates (previously referred to as Blue Spruce)	2030	921	$294,720	921	$405,240					25	$200,000	11	$4,950		
Cachet Subdivision (previously referred Centurian Homes)	2031	1,970	$630,400	1,970	$866,800	3,940	$236,400	1,970	$295,500	32	$256,000	24	$10,800	1	$274,366
Station Street	2031	643	$205,760	643	$282,920	1,286	$77,160	643	$96,450	17	$136,000	0	$0		
9th Line	2027	234	$74,880	234	$102,960					2	$16,000				
Russel Hill Road	2031									1	$8,000				
2nd Line Amaranth	2027	1,700	$544,000	1,700	$748,000					35	$140,000				
Total		**7,531**	**$2,265,510**	**7,531**	**$3,313,640**	**7,336**	**$440,160**	**2,613**	**$391,950**	**160**	**$1,140,000**	**58**	**$23,850**	1	**$274,366**

Table 2.12: Future New Growth Road Related Assets

Future Needs	Year Purchased/Required	Additional Cost	
		Capital	LOS Increase
Plow Truck	2025	$430,000	
Sidewalk Plow	2032	$250,000	
One Part Time Operator	2032		$40,000

Table 2.13: Future New Growth Storm Water Assets

Development Name	Potential Year of Asset Acquisition	Storm Main		Double Catchbasins		Catch Basins		Storm Manholes		Other Storm Structures		Crossroad Culverts		Storm services		Storm Ponds		Fence		Gates
		(m)	Replacement Cost	Number	Replacement Cost	Number	Replacement Cost	Number	Replacement Cost	Number	Replacement Cost	Number	Replacement Cost	Number	Replacement Cost	Number	Replacement Cost	(m)	Replacement Cost	Replacement Cost
Verdon (Hamount Valley) Phase 1	2034	1,185	$592,000	5	$35,000	20	$70,000	21	$221,000	5	$210,000	18	$45,000			1	$295,000			
Amaranth Country Estates	2026									1	$10,000	3	$7,500			0				
Primrose Estates (previously referred to as Blue Spruce)	2030	47	$30,000	2	$14,000					2	$60,000	3	$40,000			1	$300,000			
Cachet Subdivision (previously referred to Centurian Homes)	2031	1,828	$1,164,843	6	$42,000	16		35	$491,250	1	$19,657			65	$260,000	1	$350,000	838	$134,080	$18,125
Station Street	2031	312	$90,377	2	$14,000	10	$35,000	6	$57,500	1	$26,710			8	$32,000					
9th Line	2027									1	$19,657									
2nd Line Amaranth	2027											4	$65,000							
Total		**3,372**	**$1,877,221**	**15**	**$105,000**	**46**	**$105,000**	**62**	**$769,750**	**11**	**$346,024**	**28**	**$157,500**	**$73**	**$292,000**	**3**	**$945,000**	**$838**	**$134,080**	**$18,125**

Table 2.14: Future New Growth Storm Water Related Assets

Future Needs	Year Required	Additional Cost	
		Capital	LOS Increase
Catch Basin Clean out	2032		$600

Table 2.15: Future New Growth Land Improvement Assets

Development Name	Potential Year of Asset Acquisition	Park Assets Replacement Costs						
		Courts	Furniture	Fences	Plantings	Gates	Walkways	Lighting
Verdon (Hamount Valley) Phase 1	2034							
Amaranth Country Estates	2025		$150,000	$23,680	$15,000	$5,000	$24,000	$8,000
Primrose Estates (previously referred to as Blue Spruce)	2030	$50,000	$5,000	$20,800	$60,000	$2,500	$4,400	
Cachet Subdivision (previously referred Centurian Homes)	2031		$342,657	$36,160	$12,600		$67,200	$70,000
Total		**$50,000**	**$497,657**	**$80,640**	**$87,600**	**$7,500**	**$95,600**	**$78,000**

Table 2.16: Future New Growth Land Improvement Related Assets

Future Needs	Year Required	Additional Cost	
		Capital	LOS Increase
Playground Inspection	2031		$5,000

Table 2.17: Future New Growth Water Assets

Development Name	Potential Year of Asset Acquisition	Water Main Length		Water System Valves		Hydrants		Water Network Chambers		Sampling Stations/Yard Hydrants		Services	
		(m)	Replacement Cost	Number	Replacement Cost	Number	Replacement Cost	Number	Replacement Cost	Number	Replacement Cost	Number	Replacement Cost
Verdon (Hamount Valley) Phase 1	2034	1,226	$1,226,000	12	$180,000	8	$120,000	2	$345,198	1	$5,000	34	$102,000
Cachet Subdivision (previously referred to Centurian Homes)	2031	1,996	$1,996,000	16	$240,000	16	$240,000	0	0	2	$10,000	64	$192,000
Station Street	2031	1,226	$1,226,000	6	$30,000	10	$150,000	0	0	1	$5,000	9	$27,000
9th Line	2027	200	$200,000	2	$10,000	0	$0	0	0	0	0	0	0
Total		**3,222**	**$3,222,000**	**28**	**$420,000**	**24**	**$360,000**	**2**	**$345,198**	**3**	**$15,000**	**98**	**$294,000**

Table 2.18: Future New Growth Water Related Assets

Future Needs	Year Required	Additional Cost	
		Capital	LOS Increase
Hydrant and System Valve Turning	2032		$1,500
	2035		$1,900
Hydrant Flushing	2032		$2,500
	2035		$3,125
Contractor Services	2032		$3,505
	2035		$7,010

2.5 Data Accuracy and Completeness

An important element of this asset management plan is ensuring that tools and procedures are in place to maintain accuracy and completeness of the asset data and calculations moving forward. As time passes, assets are used, maintained, improved, disposed of, and replaced.

All of these lifecycle events can trigger changes to the asset database used within the asset management plan. Therefore, tools and procedures are essential to ensure the asset data remains accurate and complete. This includes the timing of condition assessments for each asset type and what should be included within the condition assessment procedures.

It is important to note that where gaps were found in the Township's asset inventory approximations were made to be able to complete this project. It is recommended that the Township use the asset inventory spreadsheets provided to staff as a starting point and that the highlighted cells be verified and corrected where required.

Also as noted above we recommend that the Township undertake a project to inspect the crossroad culverts using qualified engineers to ensure asset condition, maintenance and rehabilitation plans and remaining life information is recorded and a plan implemented.

3.0 Expected Levels of Service

The Township has been offering and maintaining for its residents and visitors, good service levels, during challenging economic times. The Province has demanded via Ontario Regulation 588/17 that municipalities complete asset management plans on a regular basis to ensure that appropriate investments are being made in municipal infrastructure. Reviewing past records has shown that some investments were being made into maintaining and replacing the Township's assets. It is important to note that the long-term objective of the Township needs to be asset sustainability. The challenging issue the Township has had to face is the addition of 21 bridge/culvert structures that are greater than 3 m in diameter. This not only increases the cost of bi-annually inspecting the structures but also in the replacement of these structures. In general, the Township is performing maintenance activities when required.

3.1 Scope and Process

A level of service (LOS) analysis gives the Township an opportunity to document the levels of service that are currently being provided and compare it to the levels of service that will ensure the assets achieve their full lifecycle potential. This can be done through a review of current practices and procedures, an examination of trends or issues facing the Township and / or through an analysis of performance measures and targets that staff can use to measure performance.

Expected LOS can be impacted by a number of factors, including:

- Legislative requirements (e.g., minimum maintenance standards for roads, etc.)
- Strategic planning goals and objectives
- Resident expectations
- Visitor expectations
- Council expectations
- Financial or resource constraints

The previous section task of determining the state of the Township's local infrastructure establishes the asset inventory and condition, as well as asset management policies and principles to guide the refinement and upkeep of asset infrastructure. The LOS analysis utilizes this information and factors in the impact of asset service level targets. It is important to document an expected LOS that is realistic to the community. It is common to strive for the highest LOS; however, these service levels usually come at a cost. It is also helpful to consider the risk associated with a certain LOS. Therefore, expected LOS should be determined in a way that balances both level of investment and associated risk to the Township.

Burnside received both verbal and documented confirmation of maintenance practices that the Township staff undertake. We recommend that the Township continue to make use of their Road Needs Study and the biannual bridge inspections and analysis utilizing the most up to date MTO bridge / culvert degradation models. The engineering-based inspection practices provide historic condition information as well as information related to any changes to asset maintenance. This will also help better determine the remaining life of the municipality's assets.

This information will help not only identify the current Township needs but also future requirements due to Levels of Service changes. Ensuring that appropriate levels of service are determined and recorded helps during the Township's future growth.

The strategy of investing more often in smaller amounts which provides higher levels of service and better asset conditions with an overall lower total cost over the lifecycle of the asset is recommended.

3.2 Current Levels of Service versus Expected Levels of Service

The Township's current LOS has resulted in the current state of infrastructure as discussed in the previous section of the report. The current LOS also relates to the risk assessment discussed in later report sections. Regarding the cost of this LOS, the Township has established an operating and capital budget for the current year that includes the cost of providing this LOS. After many discussions with Township staff, it was determined that over the 10-year project timeline will require approximately $37,430 annual increase in LOS funding for tax-based assets. The greatest contributor to this increase comes from road assets.

Table 3.1 to Table 3.7 outline broad LOS descriptions with identified additional costs to achieve enhanced expected LOS. This analysis was noted through discussions with the Township's staff and engineering best practices. Based on the information provided the Township is both budgeting and mostly completing appropriate levels of service. The Levels of Service cost impact analysis was factored into the asset management strategy discussed in Section 4.0 of this report.

As noted above in discussions with Township staff concern has been raised with respect to Winter maintenance LOS. Township Staff believe lowering the current level of service which exceeds the Ontario Regulation 239/02 Maintenance Standards. For example, the Township's highest road maintenance class is level 3. This means that the Township has 12 hours to clear a road surface of snow accumulation greater then 8 cm. Also, the Township has 16 hours to provide service for ice prevention and 8 hours to treat icy roadways. There may be potential for reducing some winter maintenance workload, however it is also very important to assess the potential risk in reducing a LOS to the public. Further internal Senior Management and Council discussions will need to occur before making this kind of change to Level of Service.

If the Township moves forward with a potential reduction in LOS for winter road maintenance the Township may identify some related savings:

- Public Works vehicles may show reduced wear which then may extend the life of these very costly plow trucks.
- This may also reduce the amount salt/sand distribution on Township roads.
- Fewer staffing shifts for winter road maintenance.

As noted, more analysis work will need to be invested before Council making a LOS reduction causing a potential risk increase.

Also as noted in Section 2 Township Growth will have an impact on LOS. The potential for increased staffing to ensure appropriate maintenance of these new assets (see Tables 2.11 to 2.18. These additional assets and LOS have been incorporated into this asset management plan.

Table 3.1: Road Expected Levels of Service

Roads Expected Strategic LOS	Current LOS	Expected LOS	Benchmark (if Applicable)	Current Cost of LOS	Estimated Cost of Expected LOS	Cost Description
Safe Roads	Meet "Minimum Maintenance Standards" as defined by Ontario Regulation 239/02 and Amendments.	Meet "Minimum Maintenance Standards" as defined by Ontario Regulation 239/02 and Amendments.	Regulation Standard	staff	staff	Municipality has an AVL system in all vehicles recording Roads Patrolled.
Fix Public Identified Issues Quickly	Complaints are tracked on spreadsheet and replied within 24 hours.	Track complaints by road segment so that history can be recorded.	Respond to Public Inquiry within 7 days	$3,500	$4,000	Municipality delivers this Level of Service well. Cost is for Pothole patching.
Maintain Road System Network Condition for safe use	Road Maintenance is completed regularly and when required.	Maintain adequate road network condition index to ensure safe roads.	Assess Road Conditions every 10 years with Internal assessment annually	Staff	Staff	Roads Needs Study every 10 years to include $60,000 Network Condition analysis (next proposed for 2033).
Asphalt Roads are Clean and Clear	Street sweeping and flushing are completed annually.	Roads are swept and flushed to ensure they are clear of debris and safe.		$10,200	$10,200	Municipality has minimal Asphalt roads. Debris is collected as per Minimum Maintenance Standards.
Follow Best Practice for Asphalt Roads	Completing a regular Crack Seal program.	Completing a regular crack seal program.		$18,360	$18,360	Municipality looking to implement an annual crack seal program.
Gravel Roads are well maintained and Dust Inhibited	Gravel roads are smoothed when required, and Calcium Chloride applied to control dust.	Gravel roads are smoothed when required, and Calcium Chloride applied to control dust.		$207,570	$225,000	Municipality delivers this Level of Service well.
Safe and well-maintained Roadsides	Municipality uses weed control spray.	Roadsides are clear of obstructions and well maintained for safe road travel.		$16,500	$20,000	Municipality delivers this Level of Service well.
Winter Road Maintenance	Winter roads are cleared and safe.	Roads are maintained and meet "Minimum Maintenance Standards" as defined by Ontario Regulation 239/02 and Amendments.		$80,000	$85,000	Municipality uses sand to deliver this Level of Service.
Weather forecast information	Municipal staff check weather forecasts minimum 3 times per day in the Winter months (October 1 – April 30).	Weather forecasts are reviewed three times per day during the Winter Maintenance months.		Staff	Staff	Municipality delivers this Level of Service well via County Agreement.
Signs can be seen clearly	Retro-reflectivity completed every other year.	Signs: Visual inspections. Replace when needed.	Reflectivity Standard	$4,000	$4,000	Municipality delivers this Level of Service well. Cost for Contractor inspections based on annual cost.
Traffic Counts	Updated traffic counts are recorded when required.	Clear understanding of traffic counts are updated.		$0	$1,200	Recommended that some counts be completed annually.

Road Line Painting	Paved Roads have clearly marked/lined lanes.	Proper road lane paint distinction.		$17,340	$17,340	Annual budget for line painting
Guiderails are safe and well maintained	Staff look to see if there are any deficiencies while doing road patrols for MMS.	Meet all safety standards.		Staff	Staff	Municipality delivers this Level of Service well.
Safe Well lit Urban/Semi-Urban Street areas	Maintenance activated by Public Notice for Street Lights.	Maintenance activated by Public Notice for Street Lights.	Correction of Issues within MMS	$2,500	$2,500	Municipality delivers this Level of Service well.

Table 3.2: Bridge Expected Levels of Service

Bridge Expected Strategic LOS	Current LOS	Expected LOS	Benchmark (if Applicable)	Current Cost of LOS	Estimated Cost of Expected LOS	Cost Description
Safe Bridges	Township identified 21 additional structures that need to be added to their OSIM inspections. There are 4 bridges with load limits, 6 structures being monitored, and one structure closed.	Maintain good condition and no-load limits.	MTO bridge guides	$7,500	$8,000	Municipality is working towards completing this LOS. Costs are for Monitoring 6 structures.
Bridges Maintained	Follow Bridge Inspection Report recommendations for Bridge and Culvert maintenance.	Proactive Bridge and Culvert maintenance (based on bridge inspection report).		$41,000	$47,500	Municipality is completing this LOS, with improving the safety features identified in the Municipality's Bridge Inspection Report.
Proper Bridge Spring Maintenance	Bridge washing is completed in Spring	Blowing out Expansion Joints & Washing of Bridges in Spring.		staff	staff	Municipality delivers this Level of Service well.
Bridge Inspections	Bridge inspections (i.e. using OSIM forms) required every 2 years.	Bridge inspections (i.e., using current OSIM forms) required every 2 years.	Completed every 2 years	Contractor	Contractor	Municipality delivers this Level of Service well.

Table 3.3: Storm Water Expected Levels of Service

Storm Water Expected Strategic LOS	Current LOS	Expected LOS	Benchmark (if Applicable)	Current Cost of LOS	Estimated Cost to Move to Expected LOS	Cost Description
Effective Storm Water Management	Investigate and respond based on public complaints/concerns	Proper flows and clear system with little to no inhibitors	No storm water back-up incidents	Staff	Staff	Municipality delivers this Level of Service. Municipality is looking for funding to complete a Storm Water assets condition assessment ($75,000).
Cross Road Culverts are Appropriately Sized and Maintained	Cross Road Culverts are replaced when required. Assessment of appropriate size is completed before replacement using HDPE material for longer lifecycle potential	Climate Change and/or Extreme Weather events do not cause adverse issues with the Municipal road network		$13,120	$13,120	Municipality delivers this Level of Service.
Catch Basins are clear and well Maintained	Catch Basin cleaning every three years	Annual Catch Basin cleaning		$500	$600	Cost is broken down into annual value
Storm Water Mains are clear and well Maintained	No identified issues	Regular inspection for condition and no physical obstructions		Staff	Staff	Municipality delivers this Level of Service.
Discharge Points are clear and well Maintained	No identified issues. Staff inspect annually.	Regular inspection for condition and no physical obstructions		Staff	Staff	Municipality delivers this Level of Service.
Municipal Drains are well Managed and Maintained	Drainage Superintendent responds to Landowner concerns and follows Ontario Drainage Act	Drainage Superintendent responds to Landowner concerns and follows Ontario Drainage Act	Follow Ontario Drainage Act	$48,000	$48,000	Municipality delivers this Level of Service. Cost shows the cost for Township Drainage Superintendent minus the Township Superintendent Services Grant (approximately 50%) which is reflected in total.

Table 3.4: Facilities Expected Levels of Service

Facilities Expected Strategic LOS	Current LOS	Expected LOS	Benchmark (if Applicable)	Current Cost of LOS	Estimated Increase in Cost from Current to Expected LOS	Cost Description
Facilities are well maintained and safe for Public Use	Meet all legislative requirements.	Meet all Provincial legislative requirements.	Provincial Guidelines	$25,000	$25,000	Municipality provides this level of service
Facilities are clean safe for Public Use	Municipality has regular cleaning of facilities	Safe for Public use		$5,610	$5,610	Municipality provides this level of service
Source Water is well Protected	Source water protection zones are maintained and mapped in County GIS	Maintaining appropriate Zoning and Planning to ensure Source Water Protection		Staff	Staff	Municipality provides this level of service
Wells are well Maintained	Appropriate maintenance for Administration Building and Public Works Yard wells are undertaken when required.	Appropriate maintenance is undertaken when required		Contractor	Contractor	Municipality provides this level of service
Water Treatment Processes Meet Legislative Requirements	Water sampling and testing is completed for the Municipal Office and Public Works Yard water.	Meet all Provincial legislative requirements.	Provincial Guidelines	Staff	Staff	Municipality provides this level of service
Well Maintained Generators where applicable	Tested and well maintained.	Tested and well-maintained generator		$450	$500	Municipality provides this level of service
Safe Wastewater Treatment Structures (Tanks and Septic Beds)	Regular Septic maintenance is completed every 5 years or as required.	Meet legislative requirement (Building Code, Fire Code, Health & Safety, etc.)	Provincial Guidelines	$350	$500	Municipality provides this level of service. Cost is subset annual value.
Facilities meet all Fire Code Requirements	Meet all Fire Code requirements based on year of construction.	Meet all Provincial legislative requirements.	Provincial Guidelines	$1,250	$1,250	Municipality provides this level of service
Well Maintained Emergency Services Equipment	Municipality completes annual fire safety equipment inspections	Meet all manufacturers maintenance schedules		$332	$332	Municipality provides this level of service
Heating Systems are inspected and maintained	Meet all manufacturers maintenance schedules	Meet all manufacturers maintenance schedules	Manufacturers Maintenance Schedule	$600	$600	Regular maintenance and inspections done annually.
Well Maintained on-site properties	Staff complete Township property site outdoor maintenance	Safe on-site properties		Staff	Staff	Municipality provides this level of service
Fix Public Identified Issues Quickly	Complaints are tracked on spreadsheet and replied within 24 hours	Track complaints by facility/property so that history can be recorded.	Respond to Public Inquiry within days	Staff	Staff	Municipality provides this level of service
Facilities have Handicap Accessibility	Municipality has and maintains all necessary accessibility systems.	Meet all Provincial legislative requirements.		Grant Funding	Grant Funding	Municipality will provide this level of service once Grant money is received

Table 3.5: Land Improvements Expected Levels of Service

Land Improvements Expected Strategic LOS	Current LOS	Expected LOS	Benchmark (if Applicable)	Current Cost of LOS	Estimated Increase in Cost from Current to Expected LOS	Cost Description
Parks are Safe and well maintained	Regular maintenance and standard levels of service are established. Visual inspections documented for parks and playgrounds.	Meet all Provincial legislative requirements.	Provincial Guidelines	$27,500	$27,500	Municipality provides this level of service. Cost is for all grass cutting.
Trails are safe well maintained	Visual inspections.	Safe and well-maintained trails.		Staff	Staff	Municipality provides this level of service.
Playground Structures are Safe	Visual inspections and improvements are completed.	Meet all Provincial legislative requirements.	Provincial Guidelines	$5,100	$5,100	Municipality provides this level of service.
Parks have Handicap Accessibility	Municipality has submitted to the Province for funding to make this improvement. Potential project in 2025.	Meet all Provincial legislative requirements.	Provincial Guidelines			Municipality is working towards this Level of Service.
Closed Solid Waste Site is Monitored	Contracted monitoring program.	Meet all Provincial legislative requirements.	Provincial Guidelines	$13,531	$13,531	Municipality provides this level of service.
Fix Public Identified Issues Quickly	Complaints are tracked on spreadsheets and replied within 24 hours.	Track complaints by park/asset so that history can be recorded.		Staff	Staff	Municipality provides this level of service.

Table 3.6: Vehicles and Equipment Expected Levels of Service

Vehicles & Equipment Expected Strategic LOS	Current LOS	Expected LOS	Benchmark (if Applicable)	Current Cost of LOS	Estimated Increase in Cost from Current to Expected LOS	Cost Description
Vehicles are Safe and well maintained	Meet all manufacturers maintenance schedules.	Meet all manufacturers maintenance schedules.	Manufacturers Maintenance Schedule	$470,000	$470,000	Vehicle maintenance/repair costs, oil and fuel.
Vehicles Lifecyle is maximized	Municipality repaints large vehicles to try and extend the life of these assets. Meet all manufacturing maintenance schedules.	Extending the lifecycle of assets for most cost-effective net cost.		$25,000	$25,000	Municipality doing their best to extend the life of their vehicles.
Winter Road Equipment is well maintained	Grader and Ice blades are replaced annually and as required.	Equipment is well maintained and provides good service.		$17,500	$20,000	Municipality uses sand to deliver Level of Service.
GPS Tracking Systems are working well	GPS vehicle tracking systems are well maintained.	Assist in recording information to meet Maintenance Standards for roads.	ON Regulation 239/02	$25,602	$25,602	Municipality provides this level of service. Cost is for GPS maintenance.
Other Equipment is well maintained	Municipality repairs what they can and replaces when necessary.	Equipment is well maintained and provides good service.		$25,000	$25,000	Municipality provides this level of service.
IT Data is Secure	Meet all current IT Safety Protocols, with Backup and Redundancy Processes are implemented.	Meet all current IT Safety Protocols, with Backup and Redundancy Processes are implemented.	IT Standards	IT Consultant	IT Consultant	Municipality provides this level of service.
IT Hardware and Software are well Maintained	Meet all manufacturers maintenance schedules.	Meet all manufacturers maintenance schedules.	Manufacturers Maintenance Schedule	$91,603	$91,603	Dufferin County IT Support Consultant cost.

Table 3.7: Water Expected Levels of Service

Water Expected Strategic LOS	Current LOS	Expected LOS	Benchmark (if Applicable)	Estimated Cost of Current LOS	Estimated Cost of Expected LOS	Cost Description
Source Water is well Protected	Maintaining appropriate Zoning and Planning to ensure Source Water Protection.	Maintaining appropriate Zoning and Planning to ensure Source Water Protection		$16,320	$16,320	Township is completing this LOS. Annual Monitoring Program ensures compliance with Water Permits. Costs include contractor fees .
Production Wells are well Maintained	Appropriate maintenance is undertaken when required. New water process system is being constructed with a new Stand Pipe.	Appropriate maintenance is undertaken when required.		$1,700	$1,700	Township is completing this LOS. Cost are annual for well inspections that happen once every 10 years.
Treatment Processes Meet Legislative Requirements	Meet all Provincial legislative requirements using Contractor.	Meet all Provincial legislative requirements.	Provincial Guidelines	$71,600	$71,600	Township is completing this LOS, via Contractor. Cost identified for Contractor Services.
Well Maintained Generator	Inspection completed annually, tested monthly.	Tested and well-maintained generator.			$1,500	Township is completing this LOS on the Generator that is in service.
Appropriate Water Storage for Distribution Network	Water Storage is sufficient for current needs. New Stand Pipe is being put in service in 2025.	Water Storage meets the needs of the Water Distribution Network.			$500	Township is completing this LOS, via Contractor.
Pumps are well maintained	Pumps are inspected and have redundancy.	Appropriately maintained systems with risk redundancy.		$750	$750	Township is completing this LOS, via Contractor.
Efficient Water Distribution System	Water main leak repairs are completed as identified using Township Contractor.	Water Losses are tracked and minimized.		$2,750	$2,750	Township is completing this LOS. Costs are broken down for annual value.
System Valves are exercised and well maintained	System valves are exercised on a two year rotation. Replaced when required.	System valves are exercised and well maintained.		$450	$450	Township is completing this LOS.
Scada System Software Adjustments	New Computer system updated in 2025.	Scada System is reviewed and well maintained to ensure appropriate water quality and quantity distribution.		$500	$500	Township has system adjustments made as required to fulfill appropriate LOS.
Sufficient Water pressure and supply for Fire Protection	Water pressure meets and exceeds Fire Protection Standards. Current pressure varries from 48 psi to 80 psi. Once upgrades are completed the pressure will be 55 psi to 87 psi.	Water Pressure meets Fire Protection Standards of 50 psi and water supply is readily available.		Contractor	Contractor	Township is completing this LOS, via Contractor.
Safe Pumphouse Buildings	Meet legislative requirement (Building Code, Fire Code, Health & Safety, etc.)	Meet legislative requirement (Building Code, Fire Code, Health & Safety, etc.)	Provincial Guidelines	staff / Contractor	staff / Contractor	Township is completing this LOS.

Facilities including Heating Systems are inspected and maintained	Facilities including Heating Systems are well maintained to ensure proper operations.	Facilities including Heating Systems are well maintained to ensure proper operations.		$2,332	$2,332	Township is completing this LOS. Costs are broken down for annual value.
Hydrants are Inspected and valves turned	All are inspected and valves turned in the Spring. Select Hydrants are inspected and valves turned in the late Fall.	Hydrants are inspected and valves exercised completing any required maintenance.		$750	$750	Township is completing this LOS. Costs are broken down for annual value.
Hydrants are Flushed and Swabbed	Flushing Program meets Guideline Standards.	Flushing Program meets Guideline Standards.		$1,250	$1,250	Township is completing this LOS.

4.0 Asset Management Strategy

4.1 Scope and Process

The asset management strategy provides the recommended course of actions required to maintain (or move towards) a sustainable asset position while delivering the levels of service discussed in the previous section. The course of actions, when combined, forms a long-term operating and capital forecast that includes:

- **Non-infrastructure solutions:** Reduce costs and / or extend expected useful life estimates.
- **Maintenance activities:** Regularly scheduled activities to maintain existing levels of service, or repairs needed due to unplanned events.
- **Renewal / Rehabilitation:** Significant repairs or maintenance planned to maintain the levels of service and increase the remaining life of assets.
- **Replacement / Disposal:** Complete disposal and replacement of assets when renewal or rehabilitation is no longer an option.

Priority identification becomes a critical process during the development of an asset management strategy. Priorities have been determined based on assessment of the overall risk of asset failure, which is determined by looking at both the probability of an asset failing, as well as the consequences of asset failure. The consequences of the municipality not meeting desired levels of service must also be considered in determining risk. As discussed in Section 3.0, adding enhanced levels of service results in both operating and capital budget impacts over the 10-year forecast period. This must be taken into consideration, with the overall objective of reaching sustainable levels while mitigating risk.

4.2 Risk Assessment

The risk of an asset failing is defined by the following calculation:

Risk of Asset Failure = Probability of Failure X Consequence of Failure

Probability of failure has been linked to the condition assessment for each asset, assuming that an asset in “very good” condition has a “rare” probability of failure. The following Table 4.1 outlines the probability factor tied to each condition rating.

Table 4.1: Probability of Failure Matrix

Condition (value 1-10)	Condition	Probability of Failure
9 - 10	Very Good	Rare
7 - 8	Good	Unlikely
5 - 6	Average	Possible
3 - 4	Poor	Likely
1 - 2	Very Poor	Almost Certain

Consequence of failure have been determined by examining each asset type separately. Consequence refers to the impact on the municipality if a particular asset were to fail.

Types of impact include the following:

- Cost Impacts: the cost of failure to the Township (i.e., capital replacement, rehabilitation, fines and penalties, damages, etc.).
- Social impacts: potential injury or death to residents / public.
- Environmental impacts: the impact of the asset failure on the environment.
- Service delivery impacts: the impact of the asset failure on the Township's ability to provide services at desired levels.

Each type of impact was reviewed and consequence of failure for each asset type was determined by using the information contained in Table 4.2 as a guide to assess the level of impact. Levels of impact were documented as ranging from "significant" to "insignificant".

Table 4.2: Consequence of Failure Matrix

	Cost	Social	Environmental	Service Delivery
Significant	Significant Cost – Difficult to Recover	Death, Serious Injury	Long-term Impact – Permanent	Major Interruptions
Major	Substantial Cost – Multi-year Budget Impacts	Major Injury	Long-term Impact – Fixable	Significant Interruptions
Moderate	Considerable Cost – Requires Revisions to Budget	Moderate Injury	Medium-term Impact – Fixable	Moderate Interruptions
Minor	Small/Minor Cost – within Budget Allocations	Minor Injury	Short-term/Minor Impact – Fixable	Minor Interruptions
Insignificant	Negligible or Insignificant Cost	No Injury	No Impact	No Interruptions

With both probability of failure and consequence of failure documented, total risk of asset failure was determined using the matrix contained in Table 4.3.

Total risk has been classified under the following categories:

- Extreme Risk (E): Risk beyond acceptable levels
- High Risk (H): Risk slightly beyond acceptable levels
- Medium/Moderate Risk (M): Risk at acceptable levels, monitoring required to ensure risk does not become high
- Low Risk (L): Very little risk

Table 4.3: Total Risk of Asset Failure Matrix

Probability of Failure	Consequence of Failure				
	Significant	Major	Moderate	Minor	Insignificant
Almost Certain	E	E	H	H	M
Likely	E	H	H	M	M
Possible	H	H	M	M	L
Unlikely	H	M	M	L	L
Rare	M	M	L	L	L

Risk levels can be reduced or mitigated through planned maintenance, rehabilitation and / or replacement of an asset. An objective of this asset management plan is to identify ways to reduce risk levels where they are deemed to be too high, as well as ensure assets are maintained in a way that keeps risk at acceptable levels.

4.3 Climate Change

Over the past decade there has been increased numbers of extreme weather events which are putting greater stress on municipal infrastructure, and pressure to ensure levels of service are maintained. Climate change poses a real risk management question which needs to be addressed within the context of municipal decision making.

Some climate change projections (Federation of Canadian Municipalities):

- Warmer summer temperatures
- Warmer winter temperatures
- More intense storms
- Longer droughts
- Increased frequency and amount of ice
- Summers stretching longer
- Sea level rising

The Township of Amaranth has witnessed some of these climate change projections already causing potential challenges with road washouts from extreme weather events, or quick winter thaw runoff. Many roads as well as crossroad culverts have not been designed/constructed for such intense high-volume rainstorms.

Identifying areas of concern will help the Township to design road and storm water assets to improve resiliency to extreme weather events. This type of investment will reduce risk of failure of infrastructure and ensure appropriate levels of service are maintained for the public.

Another factor towards climate change issues is the materials used in asset construction. The focus is to reduce the total carbon footprint on the construction of infrastructure assets. Investing in infrastructure with a long-term view provides both better levels of service as well as reducing the total carbon footprint.

As noted above it is recommended the Township undertakes a project to inspect the crossroad culverts to determine condition and a true remaining life. This type of project will provide guidance to the Township on the crossroad culverts that need to be replaced and potentially increased in size for better water flow during extreme weather events. The Township is slowly replacing old crossroad culverts as roads are being renewed with new more durable materials. The Township is also working diligently with respect to the maintenance of the municipal drains across the Township. This will also help the Township make good progress to becoming a more climate change resilient municipality.

4.4 Long-term Forecast

For many years, lifecycle costing has been used in the field of engineering to evaluate the advantages of using alternative materials in construction or production design. The method has gained wider acceptance and use recently in the management of capital assets. By definition, lifecycle costs are **all** the costs which are incurred during the lifecycle of a capital asset, from the time it is purchased or constructed, to the time it is taken out of service for disposal/replacement.

In defining the long-term forecast for the Township's asset management strategy, costs incurred through an asset's lifecycle, the asset's condition, expected LOS, and risk were considered and documented. The additional or increased cost for the expected LOS is included in the total costs presented. Asset replacement analysis in forecasting the Township's asset replacement needs which are summarized in Figure 4.1 (uninflated) and Figure 4.2 (inflated), which we are calling Asset Strategy based on expected levels of service for tax supported assets. The inflation factor being used is 2%.

Figure 4.3 and Figure 4.4 are rate supported replacement forecasts of Water assets (uninflated and inflated respectively).

The asset strategy incorporated all the information discussed above in this report and based on the information provided by the Township, past reports, staff input, and understanding of the asset's reaction in their current environment as well as the expected asset maintenance levels, and the current asset condition, which is expected to produce a reduced asset potential risk of failure. The outcome of this approach was to provide appropriate asset service levels, as well the assets were expected to meet or exceed their useful life which reduces expected infrastructure deficits. In total, $37.8 million (uninflated) and $42.1 million (inflated) are shown as tax-based asset maintenance, improvement, rehabilitation and replacement needs over the 10-year forecast. This is the recommended asset strategy for the Township of Amaranth.

Assets like Bridges, major culverts, Facilities are not expected to be replaced for usually 50 to 80 years or more. It needs to be stated; these assets need to have reserve funding for their rehabilitation / replacement schedule in the future. The Financial Strategy provides the Township with an investment plan into their reserve accounts.

For the recommended asset strategy to be feasible, the expected level of service adjustments discussed in Section 3.0 are needed in conjunction with the current level of service amounts to effectively maintain and rehabilitate the assets as required.

The financing strategy discussed in the next section will incorporate the level of service adjustments into the recommended financing analysis.

Figure 4.1: Proposed Asset Strategy Based on Expected Levels of Service for Tax Supported Assets (uninflated)

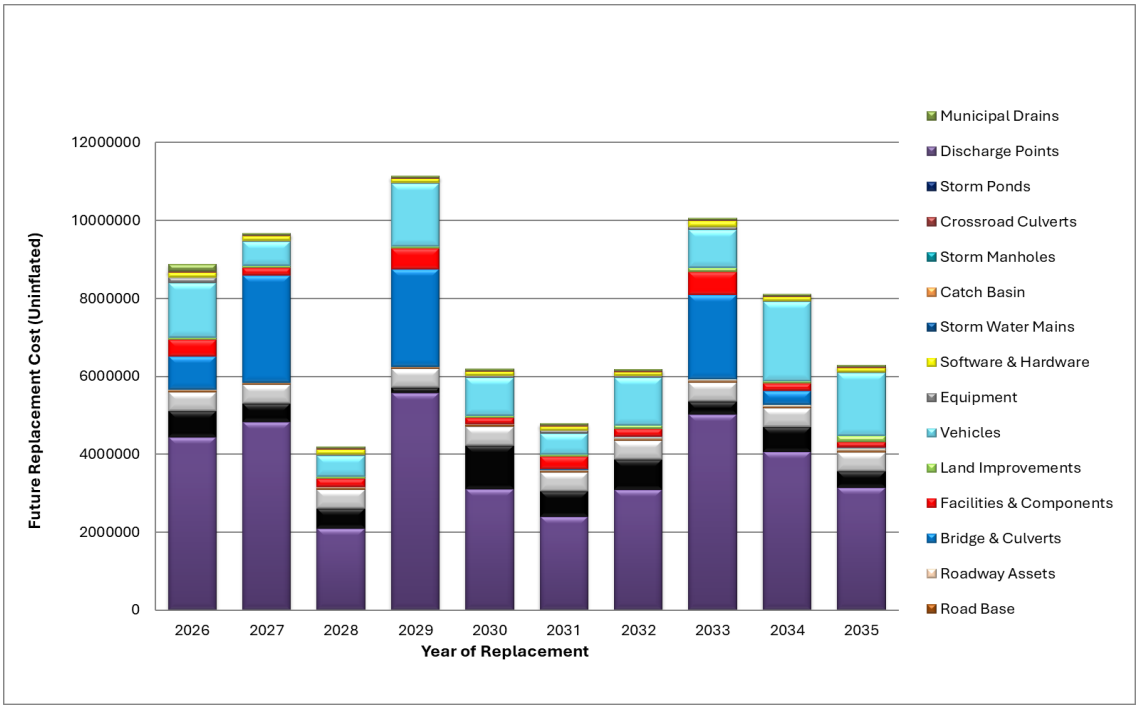


Figure 4.2: Proposed Asset Strategy Based on Expected Levels of Service for Tax Supported Assets (inflated)

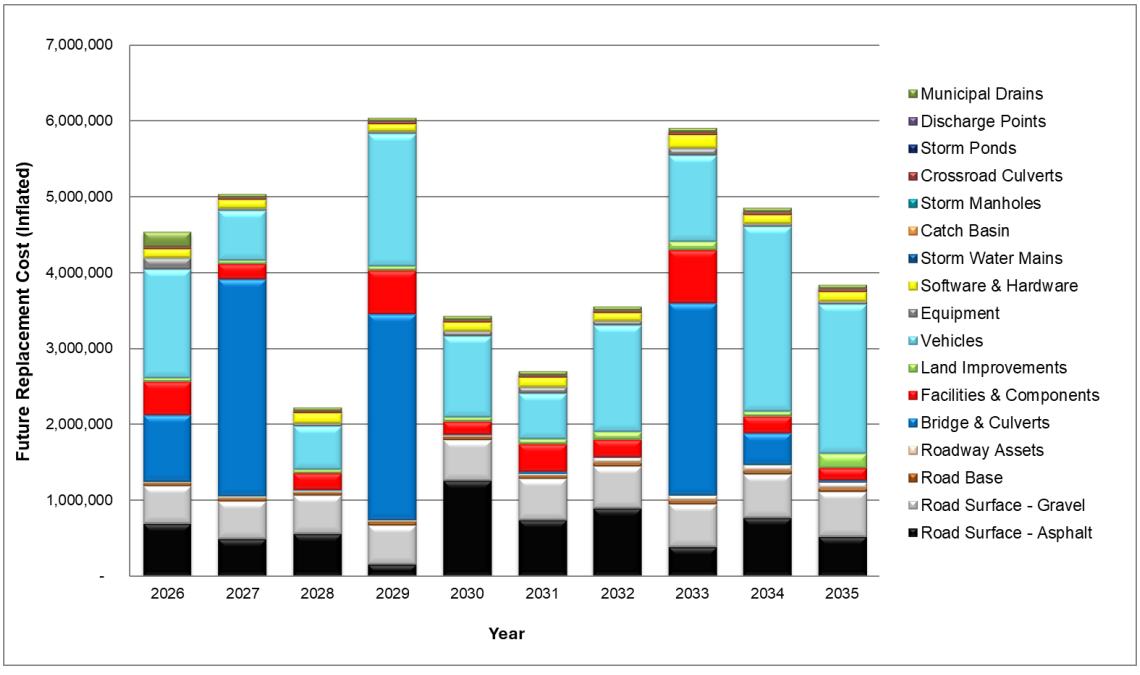


Figure 4.3: Proposed Asset Strategy Based on Expected Levels of Service for Water Ratepayers Supported Assets (uninflated)

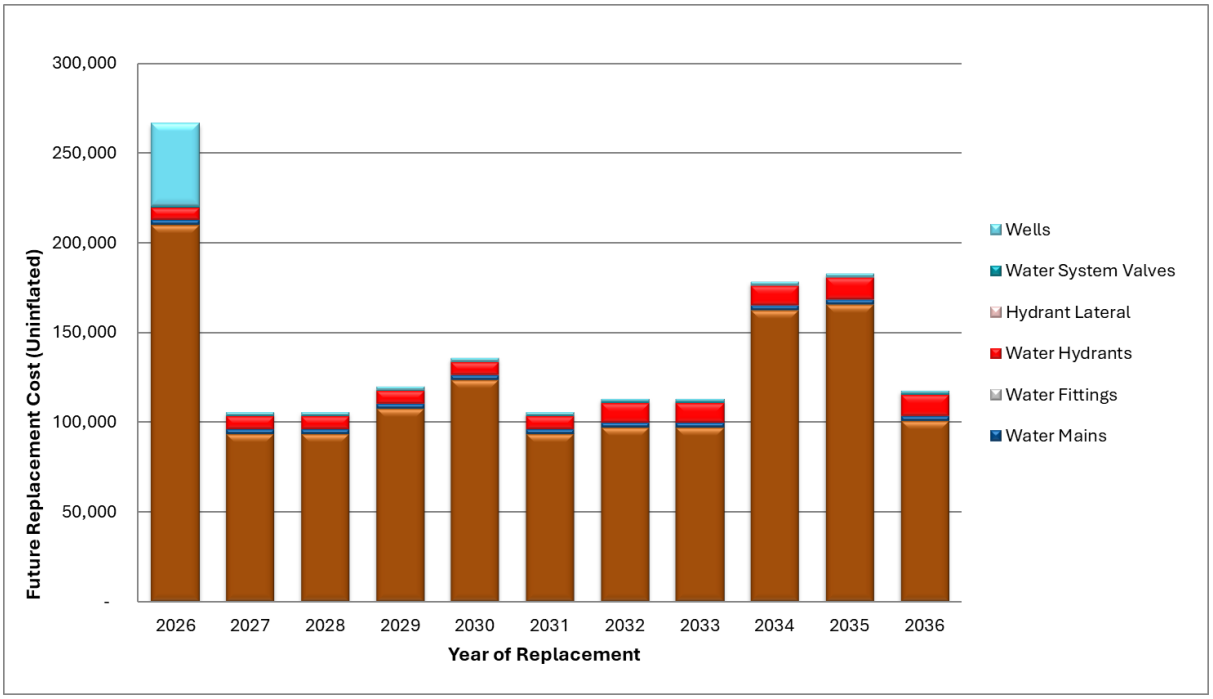
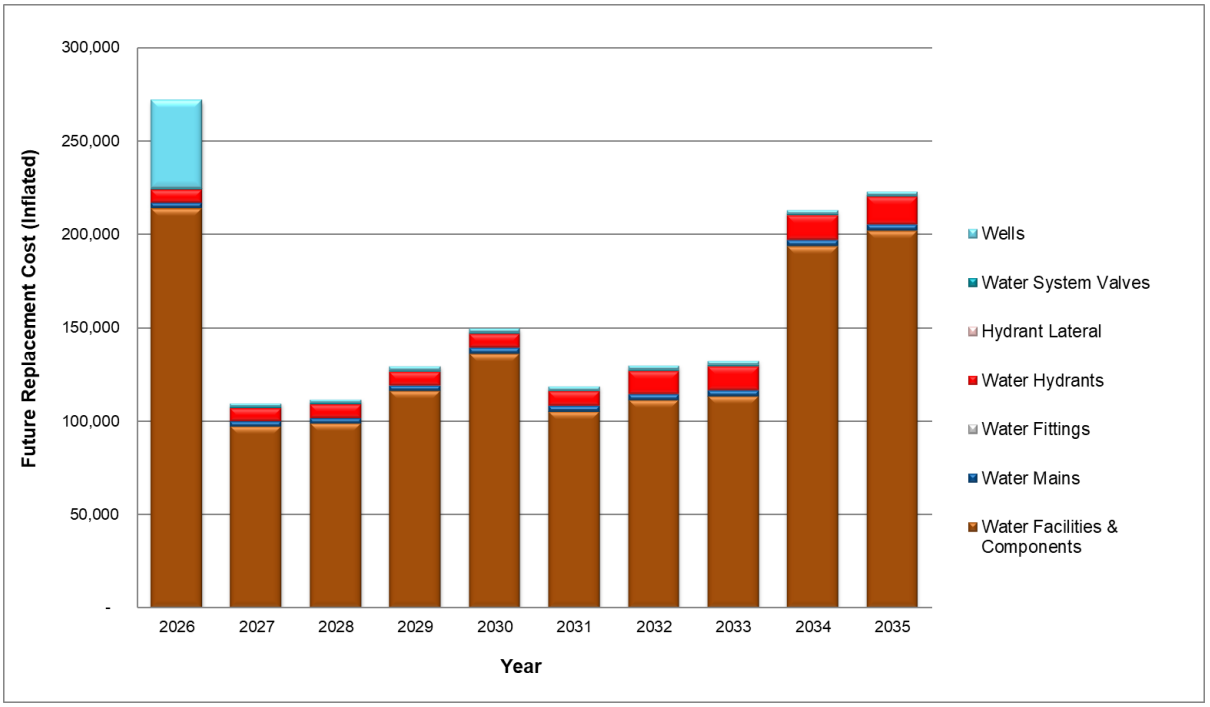


Figure 4.4: Proposed Asset Strategy Based on Expected Levels of Service for Water Ratepayers Supported Assets (inflated)



5.0 Financing Strategy

5.1 Scope and Process

The financing strategy provides the recommended use of various funding sources to finance the asset management strategy and levels of service recommendations discussed in Chapters 3 and 4. The financing strategy also provides recommendations to increase annual investments in assets that will be used beyond this report's 10-year forecast period.

5.2 Funding Sources

The following funding sources have been used within the financing strategy:

Grant Funding: It has been assumed that the Canada Community Building Fund (formerly Federal Gas Tax) will continue throughout the forecast period. The Township's allocation is expected to be $141,710 in 2026 and $147,378 in 2027. It has been assumed that funding will remain constant at this amount moving forward beyond 2027.

It has also been assumed that Ontario Community Infrastructure Fund (OCIF) annual amounts will remain constant at 2025 levels, $161,014 per year, over the forecast period. The province has implemented a formula for future OCIF funding, based on each municipality's asset replacement values.

Operating Budget: It has been assumed that $0 in funding is currently available from the operating budget to fund capital. This means currently, capital is funded exclusively from grants, existing reserves, and/or debt. Also, it has been assumed that the funding currently in the 2025 Budget for gravel resurfacing will continue throughout the capital forecast.

Proposed funding increases for levels of service have been included in the financing strategy. Given that there are levels of service recommendations that are operating in nature, it has been assumed that these costs will be funded from the annual operating budget. This could be through existing funding or proposed increases each year.

Reserves: The Township's existing capital reserves have been utilized as a funding source for asset management needs over the forecast period. Specifically for tax supported assets, existing balances for the Canada Community Building Fund, Equipment Replacement Reserve, Recreation Reserve, Building Reserve, Asset

Management Reserve, Bridge Reserve, and $500,000 from the General Reserve Fund. These reserves have become a primary source of capital funding over the forecast period. It is recommended that increases in annual asset investment be allocated to reserves for capital use each year.

Development: The Township has a Development Charges (DC) Background Study and Bylaw that establishes growth related capital costs that can be funded from development charges over the forecast period.

Water: The Township has a Water Rate Study that sets current and future water rates to support ongoing operating costs and capital needs. Rates are established in a manner that allows for transfers from the water operating budget to water capital reserves annually to fund asset investments.

Debt: If all other funding sources fall short in funding recommended lifecycle needs each year, debt financing is recommended. Debt financing is anticipated within the forecast period (see the analysis provided below). The impact of additional principal and interest payments on the annual budget has been included in this financing strategy.

5.3 Tax Supported Historic Asset Investment

Table 5.1 outlines the Township's historic capital investment in assets. As shown, the annual investment has been gradually declining over the last three years.

Table 5.1: Historic Asset Investment – Capital

Funding Type - Tax Supported Assets	2022	2023	2024	2025
Canada Community Building Fund (Federal Gas Tax)	129,366	134,991	136,041	141,710
OCIF Funding	195,055	166,135	155,217	146,376
Operating to fund Capital (excluding gravel resurface)	-	-	-	-
Total Asset Investment - Capital (Sustainable)	**324,421**	**301,126**	**291,258**	**288,086**

Therefore, a capital asset investment in 2025 of $288,086 becomes the starting point for recommending increases in annual asset investments over the forecast period.

5.4 Tax Supported Optimal Asset Investment

Based on an analysis of the Township's capital assets in terms of replacement cost and useful life, the following summary of optimal annual asset investment has been created for tax supported assets (water related assets will be discussed later in this chapter).

Table 5.2: Optimal Asset Investment Summary (Tax Supported)

Tax Supported Assets	Replacement Cost	Weighted Average Useful Life	Annual Replacement Investment (2025)
Road Surface - Asphalt	9,580,978	24	399,200
Road Surface - Gravel	1,572,749	5	314,500
Road Base	101,710,079	60	20,000
Roadway Assets	1,460,727	43	34,000
Bridge & Culverts	55,063,000	70	786,600
Facilities & Components	10,679,747	48	222,500
Land Improvements	447,500	25	17,900
Vehicles	7,170,000	15	478,000
Equipment	421,913	16	26,400
Software & Hardware	154,516	9	17,200
Storm Water Mains	2,994,543	73	41,000
Catch Basin	867,900	100	8,700
Storm Manholes	385,000	100	3,900
Crossroad Culverts	1,077,769	38	28,400
Storm Ponds	70,000	100	700
Discharge Points	45,000	50	900
Municipal Drains	n/a	n/a	48,000
Total	**193,701,421**		**2,447,900**

** Road Base annual investment for maintenance only.

** Municipal Drains annual investment $48,000

In summary, an annual asset investment of $2,447,900 is needed to fund long-term asset management planning needs. Annual asset investments for road base assets are based on level of service costs identified in this asset management plan and not full replacement.

This $2,447,900 annual asset investment becomes the funding target over the forecast period. However, this target changes over time as inflation increases this amount annually. Assuming 2% annual inflation, the target annual capital asset investment amount becomes $2,983,970 by the year 2035.

5.5 Tax Supported Financing Strategy

The detailed 10-year financing strategy is provided in Appendix A to this report.

As the 2025 Budget has already been developed and passed by the Township, all recommendations provided are shown to begin in 2026. Also, like chapter 4, a 2% inflation factor has been applied annually to all costs.

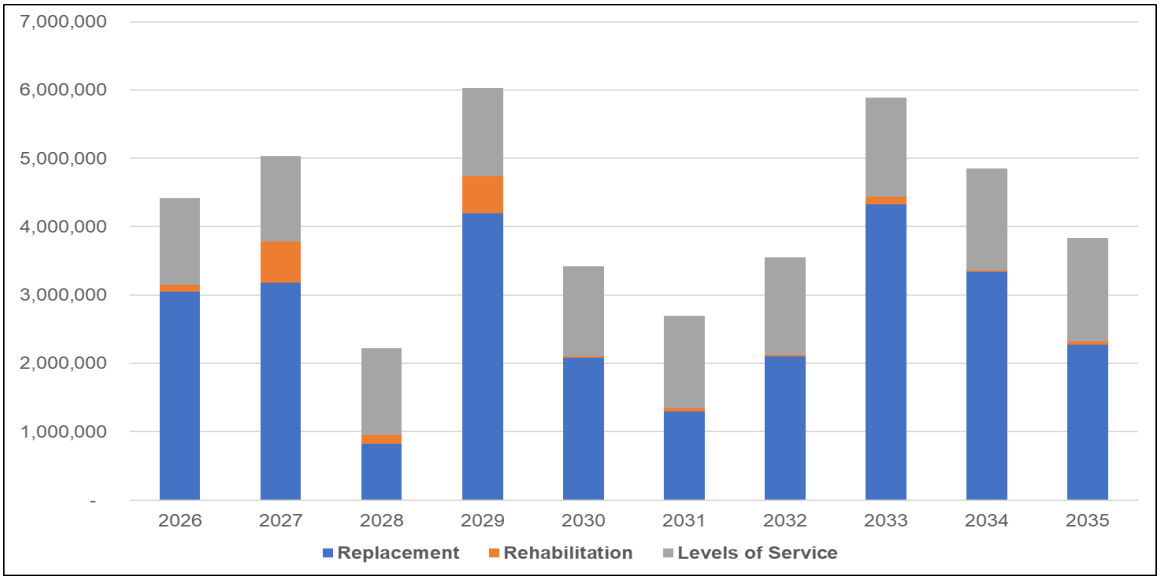
Table 5.3 provides a high-level summary of the 10-year forecast by cost type for tax supported assets (i.e., asset replacement needs, asset rehabilitation needs, and levels of service recommendations).

Table 5.3: Forecast Summary (Tax Supported)

Forecast	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Replacement	3,045,125	3,183,488	817,896	4,196,692	2,076,415	1,299,846	2,098,254	4,322,940	3,337,534	2,272,092
Rehabilitation	105,068	603,940	139,128	540,134	24,290	44,483	25,271	116,580	26,292	48,150
Levels of Service	1,267,806	1,243,743	1,268,619	1,293,991	1,319,871	1,351,900	1,425,573	1,454,084	1,483,166	1,512,831
Total	**4,417,999**	**5,031,171**	**2,225,643**	**6,030,817**	**3,420,576**	**2,696,229**	**3,549,098**	**5,893,604**	**4,846,992**	**3,833,073**

Figure 5.1 shows the same forecast in graph form. As illustrated, there are fluctuations in annual lifecycle needs throughout the forecast.

Figure 5.1: Forecast Summary (Tax Supported)



As shown in Appendix A, the 10-year forecast has a recommended funding plan as follows.

Table 5.4: Capital Forecast with Funding Sources (Tax Supported)

Asset Class	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	Total
Totals by Asset Class (Replacement, Rehabilitation and Levels of Service)											
Road Surface - Asphalt	720,198	482,836	547,311	147,319	1,251,718	734,258	887,143	377,392	764,502	516,682	6,429,359
Road Surface - Gravel	489,600	499,392	509,380	519,567	529,959	540,558	551,369	562,396	573,645	585,118	5,360,984
Road Base	40,800	41,616	42,448	43,298	44,164	45,046	45,948	46,866	47,804	48,760	446,750
Roadway Assets	21,930	22,369	22,816	23,272	23,738	24,212	70,644	72,057	73,498	74,968	429,504
Bridge & Culverts	877,710	2,859,019	8,490	2,709,327	8,833	28,717	9,189	2,529,026	421,868	31,084	9,483,263
Facilities & Components	438,162	199,194	221,713	576,814	176,344	366,111	228,861	692,310	218,242	161,170	3,278,921
Land Improvements	49,094	50,076	51,077	52,099	53,140	59,834	106,977	120,834	63,496	193,370	799,997
Vehicles	1,428,614	650,876	573,691	1,748,780	1,071,623	608,806	1,402,088	1,131,356	2,438,708	1,969,410	13,023,952
Equipment	151,372	30,691	36,346	28,143	63,871	85,363	52,840	97,833	31,072	31,694	609,225
Software & Hardware	122,265	115,283	130,955	99,154	112,481	116,925	105,223	172,941	121,753	126,564	1,223,544
Storm Water Mains	-	-	-	-	-	-	-	-	-	-	-
Catch Basin	612	624	637	649	662	676	1,378	1,406	1,434	1,463	9,541
Storm Manholes	-	-	-	-	-	-	-	-	-	-	-
Crossroad Culverts	28,682	29,256	29,841	30,438	31,047	31,667	32,301	32,947	33,606	34,278	314,063
Storm Ponds	-	-	-	-	-	-	-	-	-	-	-
Discharge Points	-	-	-	-	-	-	-	-	-	-	-
Municipal Drains	48,960	49,939	50,938	51,957	52,996	54,056	55,137	56,240	57,364	58,512	536,099
Total	**4,417,999**	**5,031,171**	**2,225,643**	**6,030,817**	**3,420,576**	**2,696,229**	**3,549,098**	**5,893,604**	**4,846,992**	**3,833,073**	**41,945,202**
Funding Analysis											
Canada Community Building Fund (Gas Tax)	141,710	147,378	147,378	147,378	147,378	147,378	147,378	147,378	147,378	147,378	1,468,112
OCIF Funding	161,014	161,014	161,014	161,014	161,014	161,014	161,014	161,014	161,014	161,014	1,610,140
Transfer from Operations	-	-	-	-	-	-	-	-	-	-	-
Development Charges	488,785	9,104	-	9,471	81,534	69,167	-	236,148	-	134,085	1,028,294
Transfer from/(to) Capital Reserves - 2025 Exis	-	-	-	-	-	-	-	-	-	-	-
Transfer from/(to) Capital Reserves - New	2,061,972	359,157	402,733	848,436	906,132	1,114,152	1,626,188	1,884,546	2,101,082	2,186,078	13,490,476
Operating Funding (LOS Impacts already in 202	1,204,518	1,204,518	1,204,518	1,204,518	1,204,518	1,204,518	1,204,518	1,204,518	1,204,518	1,204,518	12,045,176
Debt Funding	360,000	3,150,000	310,000	3,660,000	920,000	0	410,000	2,260,000	1,233,000	0	12,303,004
Total	**4,417,999**	**5,031,171**	**2,225,643**	**6,030,817**	**3,420,576**	**2,696,229**	**3,549,098**	**5,893,604**	**4,846,992**	**3,833,073**	**41,945,202**

As noted in section 5.2 above, Canada Community Building Fund and OCIF funding is shown as a funding source in each year of the forecast period, reserves are used as the primary funding source, operating budget funding is used for levels of service recommendations that are considered operating in nature. Debt funding is used to finance the remaining funding needs each year.

Debt Funding (Tax Supported)

Debt funding is anticipated within the forecast period. As shown above in Table 5.4, debt principal amounts of $12.3 million is required to fund recommended asset lifecycle needs. Given that the Township's ability to use debt funding is restricted based on the province's debt capacity (annual repayment limit) calculations, an analysis of all current and proposed debt was completed (see Figures 5.2 and 5.3). This includes all new debts already proposed for 2025.

Figure 5.2: Summary of Current and Proposed Debt Payments (Tax Supported)

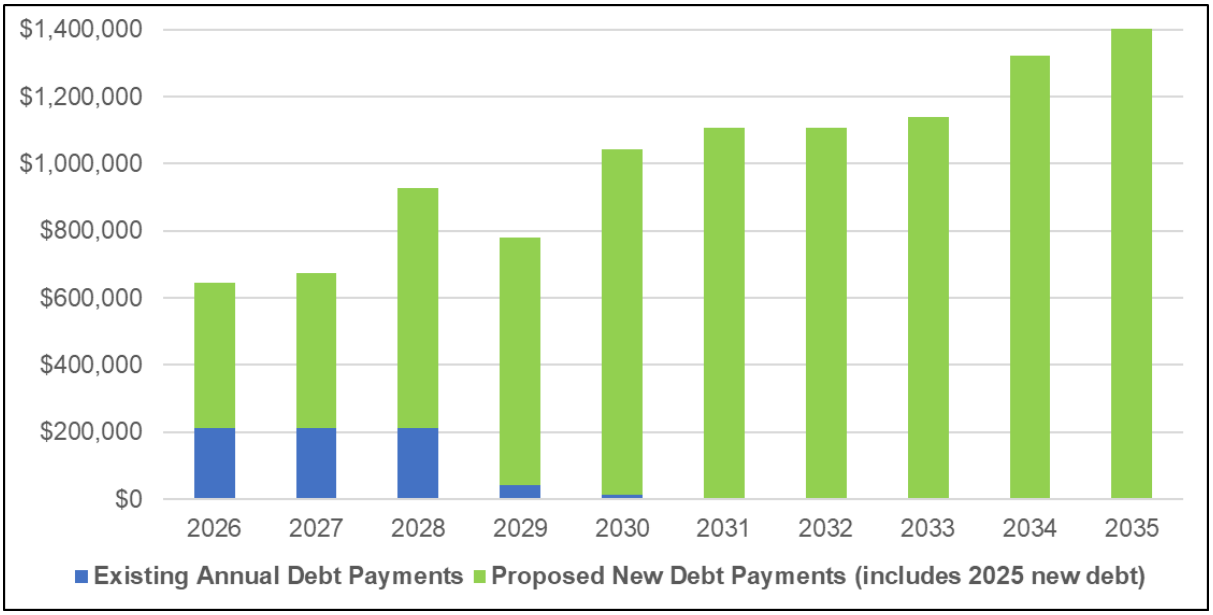
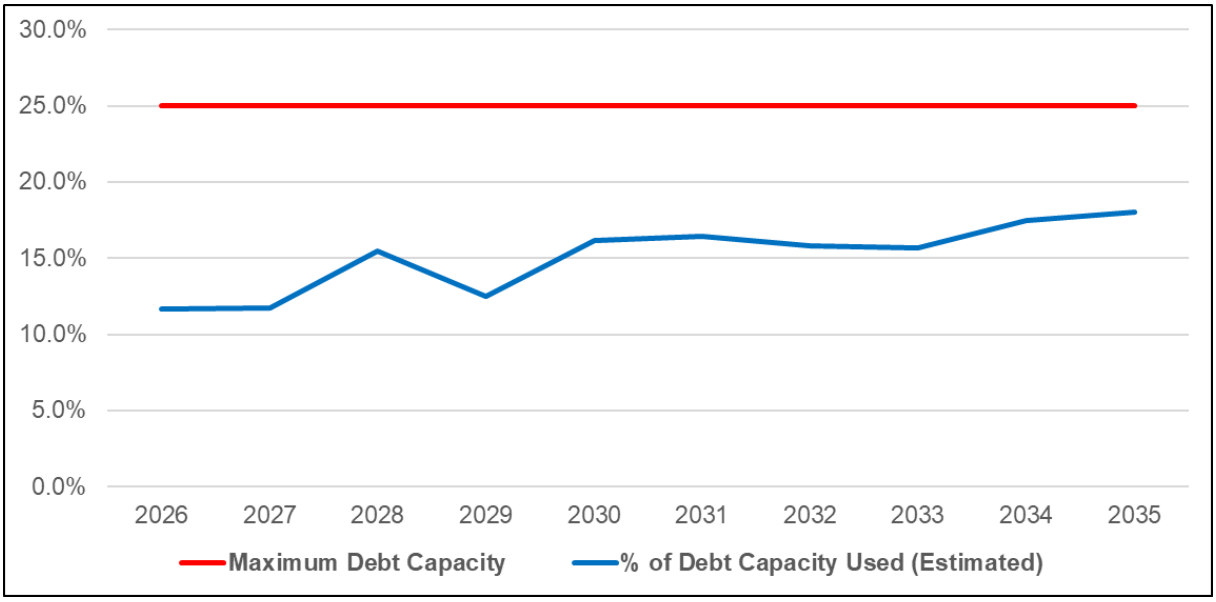


Figure 5.3: Percent of Annual Repayment Limit Used (Tax Supported)



Figures 5.2 and 5.3 above show that current and projected debt requirements are within the annual debt capacity limits of 25% of Township revenues, reaching a maximum level of 18% of revenues in 2035. Future debt payments have been estimated, assuming an interest rate of 5.0% over a 20-year term. Please note that 2025 debt already approved by the Township results in reaching approximately 12% debt capacity by 2026.

Levels of Service Implementation

This asset management plan recommends various changes to levels of service to move from current levels to expected levels throughout the forecast period. The financial impact of moving from current to expected levels for all assets totals $37,430 (refer to Table 5.5 below). As illustrated, this increase has been recommended in 2026 resulting in achieving expected levels of service in 1 year. More information on level of service recommendations can be found in Chapter 3 of this report.

Table 5.5: Levels of Service Analysis and Phase-In

Asset Area - Tax Supported	Existing LOS	Expected LOS	Increase in LOS
Roads	359,970	387,600	27,630
Bridges	48,500	55,500	7,000
Storm Water	61,620	61,720	100
Facilities	33,592	33,792	200
Vehicles & Equipment	654,705	657,205	2,500
Land Improvements	46,131	46,131	-
Total (2025 $)	**1,204,518**	**1,241,948**	**37,430**

LOS Increase Phase-In	2026
Roads	27,630
Bridges	7,000
Storm Water	100
Facilities	200
Vehicles & Equipment	2,500
Land Improvements	-
Total (2025 $)	**37,430**
% Phase-In	**100%**

Reserve Funding

With reserve funding becoming a primary source of funding within this financing strategy, a recommended phased-in approach to increasing contributions to reserves is provided. Table 5.6 outlines the calculated transfer amounts for the forecast period, with a recommended plan to increase transfers to reach $2,413,729 by 2035. This combined with anticipated grant funding allows the Township to reach an annual asset capital investment amount of $2,722,121 by 2035. This represents 91% of the optimal annual capital asset investment amount in 2035.

Table 5.6: Contributions to Reserves (Tax Supported)

	Forecast									
Funding Type - Tax Supported Assets	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**
Transfer to Reserves for Asset Management	107,467	357,869	398,405	853,897	912,210	1,189,655	1,546,331	1,887,880	2,099,746	2,413,729
Total	107,467	357,869	398,405	853,897	912,210	1,189,655	1,546,331	1,887,880	2,099,746	2,413,729
Transfer from Operations to Capital	-	-	-	-	-	-	-	-	-	-
Transfer from/(to) Capital Reserves - 2025 Exis	-	-	-	-	-	-	-	-	-	-
Canada Community Building Fund (Gas Tax)	141,710	147,378	147,378	147,378	147,378	147,378	147,378	147,378	147,378	147,378
OCIF Funding	161,014	161,014	161,014	161,014	161,014	161,014	161,014	161,014	161,014	161,014
Total Asset Investment	**410,191**	**666,261**	**706,797**	**1,162,289**	**1,220,602**	**1,498,047**	**1,854,723**	**2,196,272**	**2,408,138**	**2,722,121**

It is recommended that existing capital reserves (identified above in Section 5.2) be used to fund asset management capital needs. Regarding new transfers to reserves recommended in Table 5.6, this can be accomplished with one consolidated asset management capital reserve, or by using multiple reserves by department (i.e., Recreation) or function (i.e., Vehicles).

Development Charges

The Township's Development Charges Background Study provides for specific capital projects that can be fully or partially funded from Development Charges (DCs). The following table outlines the projects that include DC funding within the forecast period, as well as the portion of the project that is considered growth related. Please note that the amounts shown are in 2025 dollars and are inflated within the forecast schedules.

Table 5.7: Use of Development Charges

DC Study Projects	Asset ID	Year	Replacement Cost (2025 $)	Growth Percentage	Growth Cost - DC Funding (2025 $)
Bridge 40	40	2026	402,500	50%	201,250
30 SR - .7km East of 2nd Line to TL	2406	2026	150,000	80%	120,000
20 SR - TL to 2nd Line	2377	2026	293,721	20%	58,744
20 SR - 2nd Line to County 11	2376	2031	263,342	20%	52,668
2nd Line - N of Maples to 5 SR	5103	2033	739,000	20%	147,800
Mill St - Church to David	2425	2035	61,855	80%	49,484
Jon St - Church to Mill	2424	2035	64,703	80%	51,762
Station - St John to Peter	2398	2026	70,248	80%	56,198
Station - Peter to 390m East	4119	2026	53,760	80%	43,008
Station - 10th Line to St John	2397	2030	92,310	80%	73,848
Bridge Inspections	n/a	2027	17,500	50%	8,750
Bridge Inspections	n/a	2029	17,500	50%	8,750
Bridge Inspections	n/a	2031	17,500	50%	8,750
Bridge Inspections	n/a	2033	17,500	50%	8,750
Bridge Inspections	n/a	2035	17,500	50%	8,750
Road Needs Study	n/a	2033	60,000	75%	45,000
			2,338,939		**943,513**

Operating Budget Funding

As discussed earlier in this chapter, the recommended financing strategy assumes that operating-related levels of service increases will be funded from the operating budget.

Many levels of service recommendations outlined in Chapter 3 have already been implemented by the Township. Section 4 of Appendix A of this report outlines that adjustments are needed to the Township's operating budget to account for any further levels of service impact that are not currently funded. Please refer to the Levels of Service Implementation discussion above.

As debt financing is needed to fund the recommended financing strategy, this has an impact on the Township's operating budget going forward. It has also been assumed that when existing debt payments are complete, the budget space created will be used to either fund new debt or to increase transfers to reserves for asset management purposes. This is outlined in Appendix A and summarized below in Table 5.8.

Table 5.8: Increase in Funding Summary (Tax Supported)

Increase in Funding	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Increase (Decrease) in Transfers to Reserves	107,467	250,401	40,536	455,493	58,312	277,446	356,675	341,549	211,867	313,983
Increase (Decrease) in Operating - LOS	38,200	800	800	800	800	800	800	900	900	900
Increase (Decrease) in Operating - Debt	432,693	28,890	252,760	(147,492)	265,128	62,207	-	32,900	181,350	98,940
Total Impact on Annual Tax Supported Budget	**578,360**	**280,091**	**294,096**	**308,801**	**324,241**	**340,453**	**357,475**	**375,349**	**394,117**	**413,823**
Estimated Taxation Impact: 1% in 2025 = $56,206	**9.80%**	**4.52%**	**4.52%**	**4.52%**	**4.52%**	**4.52%**	**4.52%**	**4.52%**	**4.52%**	**4.52%**

Table 5.8 outlines the total annual increase in funding recommended from 2026 to 2035. These increases can be incorporated through:

- Finding efficiencies in the annual budget.
- Increase in external funding (i.e., grants or third-party contributions).
- Allocations of annual Township surpluses to capital reserves (if available).
- Recommending budget (taxation) increases.

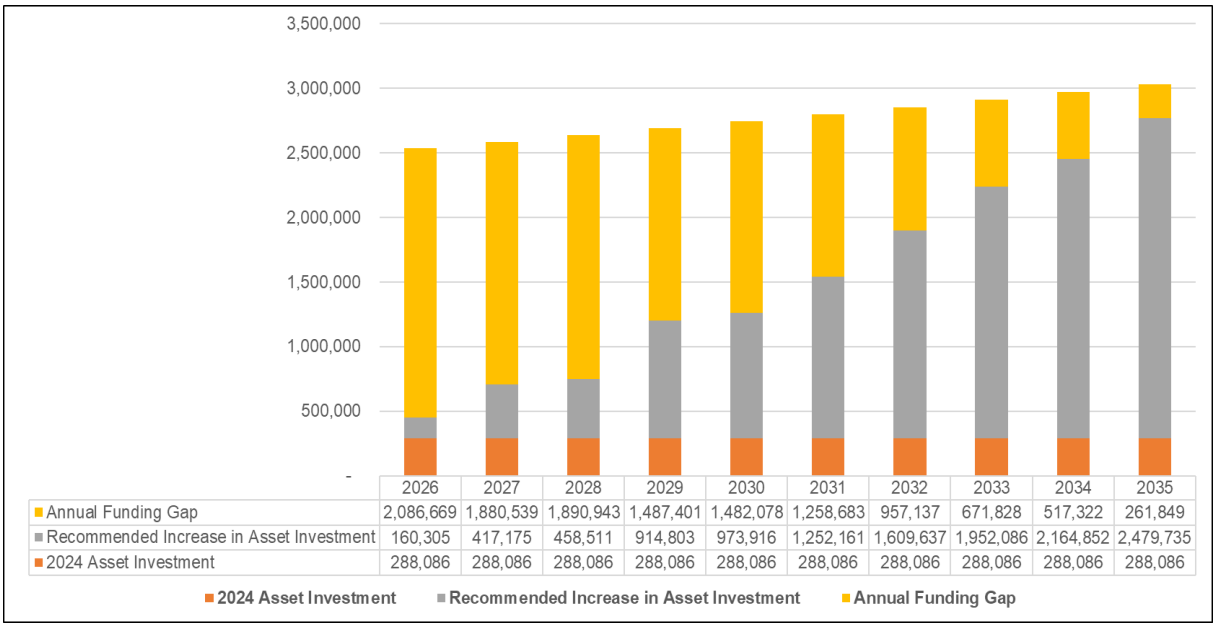
For 2026, a 9.8% increase is shown. This is predominantly due to the new debt the Township has established in 2025, resulting in new debt payments of approximately $433,000 to be funded from property taxation.

As shown in Table 5.8, if taxation increases are required each year to allow for the total recommended increases in funding (i.e., top three items above are not available), an increase in taxation would be required annually. While a 9.8% increase is needed in 2026, the increase stabilizes at 4.52% annually for the remainder of the forecast period.

Funding Gap

Figure 5.4 provides an overall summary of the recommended annual investment levels (shown in orange and gray) as well as the funding gap (shown in yellow). The funding recommendations outlined in this chapter ensure the funding gap is significantly reduced by 2035, where 91% of the optimal annual asset investment (operating levels of service and capital) is achieved.

Figure 5.4: Annual Asset Investment & Funding Gap



	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Annual Funding Gap	2,086,669	1,880,539	1,890,943	1,487,401	1,482,078	1,258,683	957,137	671,828	517,322	261,849
Recommended Increase in Asset Investment	160,305	417,175	458,511	914,803	973,916	1,252,161	1,609,637	1,952,086	2,164,852	2,479,735
2024 Asset Investment	288,086	288,086	288,086	288,086	288,086	288,086	288,086	288,086	288,086	288,086

Figure 5.4 is also provided in Appendix A, along with detailed figures to support the calculations.

5.6 Water Related Assets

Optimal Investment in Water Assets

Based on an analysis of the Township's capital assets in terms of replacement cost and useful life, Table 5.9 shows a summary of optimal annual asset investment.

Table 5.9: Optimal Asset Investment Summary (Water Rate Payers Supported)

Water Supported Assets	Replacement Cost	Weighted Average Useful Life	Annual Replacement Investment (2025)
Water Facilities & Components	6,745,000	46	146,600
Water Mains	4,989,309	100	49,900
Water Fittings	383,000	100	3,800
Water Hydrants	270,000	50	5,400
Hydrant Lateral	36,000	100	400
Water System Valves	690,000	75	9,200
Wells	825,000	49	16,800
Total	**13,938,309**		**232,100**

In summary, an annual asset investment of $232,100 is needed to fund long-term asset management planning needs for water assets. This annual investment amount grows with inflation.

These optimal investment amounts become the funding target over the forecast period. However, this annual target over time increases as inflation increases. Assuming 2% annual inflation, the target annual capital asset investment amount becomes approximately $282,900 by the year 2035.

2020 Water Financial Plan

The Township's 2020 Water Financial Plan provides for increasing contributions to water capital reserves:

Water: A contribution of $79,279 by 2030

The annual contributions to reserves are lower in the Water Financial Plan in comparison to the asset management recommendations discussed above. A change to water financial planning should be considered in the future to align optimal annual water asset investment timing with tax supported assets (i.e., reaching optimal annual funding in 2035).

It is recommended that the Township considers a more accelerated transition to optimal annual investment for water assets in the next update to the Water Financial Plan.

Water Debt

The 2020 Water Financial Plan also recommends incurring $139,920 in water related debt from 2021 to 2030. This is insignificant in comparison to the Township's estimated annual debt capacity (discussed above in this chapter) and does not impact the debt recommendations provided.

Water Levels of Service

This asset management plan recommends various changes to levels of service to move from current levels to expected levels throughout the forecast period for water assets (see chapter 4).

- Current Levels of Service for Water: $98,402
- Expected Levels of Service for Water: $100,402

The financial impact of moving from current to expected levels for all water assets totals $2,000. This increase has been recommended in 2026 resulting in achieving expected levels of service in 1 year.

6.0 Recommendations

The following recommendations have been provided for the Township of Amaranth's consideration:

- That this Asset Management Plan for all Township tangible capital assets be received and approved by Township Council.
- That consideration of this Asset Management Plan be given as part of the annual budgeting process to ensure sufficient capital funds are available to fund capital requirements over the 10-year period.
- The current level of funding for asset replacement and renewal at the Township is not expected to sufficiently fund the required capital needs or close the infrastructure funding gap. As such, it is recommended that the following be considered:
- That the "levels of service" strategies discussed in this report be approved.
    - Staff and Council discuss the potential of adjusting Winter road condition maintenance to a single shift, while also considering the risks in doing so.
- That the Township use capital reserves identified to fund asset management capital needs.
- The Township increase asset management funding as outlined in Table 5.6.
- The Township transfers annual surpluses to capital reserves.
- The Township dedicate any budget savings from the elimination of debt payments to funding asset management needs (i.e., new debt or transfers to reserves).
- The Township updates the Asset Management Plan as a whole, at a minimum, every five years as required in Ontario Regulation 588/17.
- The Township considers the capital priorities identified within this report when applying for future grants or deciding on how to utilize Gas Tax, OCIF funding, and / or other funding that becomes available.

Substantial investment in asset capital needs will be required over the 10-year forecast period and beyond. Through the recommendations provided above, proactive steps will be made to increase capital investment, as well as reduce the annual infrastructure funding gap for the Township's tax supported assets. Enhanced maintenance plans will assist in maintaining adequate asset conditions, mitigate asset risk as well as potentially defer capital needs within the forecast period. In addition, the Township of Amaranth is recommended to pursue all available capital grants wherever possible to further reduce the infrastructure funding gap.

Through the creation of this plan, the Township has been provided with Excel spreadsheets in which amendments and revisions can be made as needed by Township staff. It is anticipated that this plan adopted by the Township of Amaranth Council will be monitored and updated frequently as part of the budget process, with refinements and specific recommendations being provided with respect to the priority of each individual project.

BURNSIDE

[THE DIFFERENCE IS OUR PEOPLE]

Appendix A

Asset Management Plan Financing Strategy

Township of Amaranth
2025 Asset Management Plan
Financing Strategy (Tax Supported)

Table of Contents:

Section 1: Capital Forecast and Funding Analysis

Asset Class	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	Total
Capital Replacement											
Road Surface - Asphalt	524,248	290,791	366,690	-	1,101,453	580,987	730,807	147,629	601,850	350,777	**4,695,232**
Road Surface - Gravel	260,100	265,302	270,608	276,020	281,541	287,171	292,915	298,773	304,749	310,844	**2,848,023**
Road Base	-	-	-	-	-	-	-	-	-	-	**-**
Roadway Assets	15,300	15,606	15,918	16,236	16,561	16,892	17,230	17,575	17,926	18,285	**167,529**
Bridge & Culverts	821,100	2,320,092	-	2,184,348	-	-	-	2,499,149	412,307	-	**8,236,996**
Facilities & Components	378,195	164,037	106,262	540,237	139,035	328,056	190,045	652,718	177,858	119,978	**2,796,421**
Land Improvements	-	-	-	-	-	-	45,947	58,583	-	128,604	**233,134**
Vehicles	877,200	88,434	-	1,163,615	474,755	-	781,106	497,955	1,792,639	1,310,419	**6,986,123**
Equipment	124,852	3,641	8,755	-	35,165	56,083	22,974	67,370	-	-	**318,840**
Software & Hardware	28,830	19,979	33,745	-	11,344	13,765	-	65,613	12,279	14,900	**200,455**
Storm Water Mains	-	-	-	-	-	-	-	-	-	-	**-**
Catch Basin	-	-	-	-	-	-	-	-	-	-	**-**
Storm Manholes	-	-	-	-	-	-	-	-	-	-	**-**
Crossroad Culverts	15,300	15,606	15,918	16,236	16,561	16,892	17,230	17,575	17,926	18,285	**167,529**
Storm Ponds	-	-	-	-	-	-	-	-	-	-	**-**
Discharge Points	-	-	-	-	-	-	-	-	-	-	**-**
Subtotal - Capital Replacement	**3,045,125**	**3,183,488**	**817,896**	**4,196,692**	**2,076,415**	**1,299,846**	**2,098,254**	**4,322,940**	**3,337,534**	**2,272,092**	**26,650,282**
Capital Rehabilitation											
Road Surface - Asphalt	57,128	50,447	36,191	-	-	-	-	70,300	-	-	**214,066**
Road Surface - Gravel	-	-	-	-	-	-	-	-	-	-	**-**
Road Base	20,400	20,808	21,224	21,649	22,082	22,523	22,974	23,433	23,902	24,380	**223,375**
Roadway Assets	-	-	-	-	-	-	-	-	-	-	**-**
Bridge & Culverts	-	530,604	-	516,320	-	19,708	-	20,504	-	21,332	**1,108,468**
Facilities & Components	25,500	-	79,591	-	-	-	-	-	-	-	**105,091**
Land Improvements	2,040	2,081	2,122	2,165	2,208	2,252	2,297	2,343	2,390	2,438	**22,336**
Vehicles	-	-	-	-	-	-	-	-	-	-	**-**
Equipment	-	-	-	-	-	-	-	-	-	-	**-**
Software & Hardware	-	-	-	-	-	-	-	-	-	-	**-**
Storm Water Mains	-	-	-	-	-	-	-	-	-	-	**-**
Catch Basin	-	-	-	-	-	-	-	-	-	-	**-**
Storm Manholes	-	-	-	-	-	-	-	-	-	-	**-**
Crossroad Culverts	-	-	-	-	-	-	-	-	-	-	**-**
Storm Ponds	-	-	-	-	-	-	-	-	-	-	**-**
Discharge Points	-	-	-	-	-	-	-	-	-	-	**-**
Subtotal - Capital Rehabilitation	**105,068**	**603,940**	**139,128**	**540,134**	**24,290**	**44,483**	**25,271**	**116,580**	**26,292**	**48,150**	**1,673,336**

Asset Class	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	Total
Levels of Service Costs											
Road Surface - Asphalt	138,822	141,598	144,430	147,319	150,265	153,271	156,336	159,463	162,652	165,905	**1,520,061**
Road Surface - Gravel	229,500	234,090	238,772	243,547	248,418	253,387	258,454	263,623	268,896	274,274	**2,512,961**
Road Base	20,400	20,808	21,224	21,649	22,082	22,523	22,974	23,433	23,902	24,380	**223,375**
Roadway Assets	6,630	6,763	6,898	7,036	7,177	7,320	53,414	54,482	55,572	56,683	**261,975**
Bridge & Culverts	56,610	8,323	8,490	8,659	8,833	9,009	9,189	9,373	9,561	9,752	**137,799**
Facilities & Components	34,467	35,157	35,860	36,577	37,309	38,055	38,816	39,592	40,384	41,192	**377,409**
Land Improvements	47,054	47,995	48,955	49,934	50,932	57,582	58,733	59,908	61,106	62,328	**544,527**
Vehicles	551,414	562,442	573,691	585,165	596,868	608,806	620,982	633,401	646,069	658,991	**6,037,829**
Equipment	26,520	27,050	27,591	28,143	28,706	29,280	29,866	30,463	31,072	31,694	**290,385**
Software & Hardware	93,435	95,304	97,210	99,154	101,137	103,160	105,223	107,328	109,474	111,664	**1,023,089**
Storm Water Mains	-	-	-	-	-	-	-	-	-	-	**-**
Catch Basin	612	624	637	649	662	676	1,378	1,406	1,434	1,463	**9,541**
Storm Manholes	-	-	-	-	-	-	-	-	-	-	**-**
Crossroad Culverts	13,382	13,650	13,923	14,202	14,486	14,775	15,071	15,372	15,680	15,993	**146,534**
Storm Ponds	-	-	-	-	-	-	-	-	-	-	**-**
Discharge Points	-	-	-	-	-	-	-	-	-	-	**-**
Municipal Drains	48,960	49,939	50,938	51,957	52,996	54,056	55,137	56,240	57,364	58,512	**536,099**
Subtotal - Levels of Service	**1,267,806**	**1,243,743**	**1,268,619**	**1,293,991**	**1,319,871**	**1,351,900**	**1,425,573**	**1,454,084**	**1,483,166**	**1,512,831**	**13,621,584**

Asset Class	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	Total
Totals by Asset Class (Replacement, Rehabilitation and Levels of Service)											
Road Surface - Asphalt	**720,198**	**482,836**	**547,311**	**147,319**	**1,251,718**	**734,258**	**887,143**	**377,392**	**764,502**	**516,682**	**6,429,359**
Road Surface - Gravel	**489,600**	**499,392**	**509,380**	**519,567**	**529,959**	**540,558**	**551,369**	**562,396**	**573,645**	**585,118**	**5,360,984**
Road Base	**40,800**	**41,616**	**42,448**	**43,298**	**44,164**	**45,046**	**45,948**	**46,866**	**47,804**	**48,760**	**446,750**
Roadway Assets	**21,930**	**22,369**	**22,816**	**23,272**	**23,738**	**24,212**	**70,644**	**72,057**	**73,498**	**74,968**	**429,504**
Bridge & Culverts	**877,710**	**2,859,019**	**8,490**	**2,709,327**	**8,833**	**28,717**	**9,189**	**2,529,026**	**421,868**	**31,084**	**9,483,263**
Facilities & Components	**438,162**	**199,194**	**221,713**	**576,814**	**176,344**	**366,111**	**228,861**	**692,310**	**218,242**	**161,170**	**3,278,921**
Land Improvements	**49,094**	**50,076**	**51,077**	**52,099**	**53,140**	**59,834**	**106,977**	**120,834**	**63,496**	**193,370**	**799,997**
Vehicles	**1,428,614**	**650,876**	**573,691**	**1,748,780**	**1,071,623**	**608,806**	**1,402,088**	**1,131,356**	**2,438,708**	**1,969,410**	**13,023,952**
Equipment	**151,372**	**30,691**	**36,346**	**28,143**	**63,871**	**85,363**	**52,840**	**97,833**	**31,072**	**31,694**	**609,225**
Software & Hardware	**122,265**	**115,283**	**130,955**	**99,154**	**112,481**	**116,925**	**105,223**	**172,941**	**121,753**	**126,564**	**1,223,544**
Storm Water Mains	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Catch Basin	**612**	**624**	**637**	**649**	**662**	**676**	**1,378**	**1,406**	**1,434**	**1,463**	**9,541**
Storm Manholes	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Crossroad Culverts	**28,682**	**29,256**	**29,841**	**30,438**	**31,047**	**31,667**	**32,301**	**32,947**	**33,606**	**34,278**	**314,063**
Storm Ponds	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Discharge Points	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Municipal Drains	**48,960**	**49,939**	**50,938**	**51,957**	**52,996**	**54,056**	**55,137**	**56,240**	**57,364**	**58,512**	**536,099**
Total	**4,417,999**	**5,031,171**	**2,225,643**	**6,030,817**	**3,420,576**	**2,696,229**	**3,549,098**	**5,893,604**	**4,846,992**	**3,833,073**	**41,945,202**

Funding Analysis	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	Total
Total Funding by Source											
Canada Community Building Fund (Gas Tax)	141,710	147,378	147,378	147,378	147,378	147,378	147,378	147,378	147,378	147,378	**1,468,112**
OCIF Funding	161,014	161,014	161,014	161,014	161,014	161,014	161,014	161,014	161,014	161,014	**1,610,140**
Transfer from Operations	-	-	-	-	-	-	-	-	-	-	**-**
Development Charges	488,785	9,104	-	9,471	81,534	69,167	-	236,148	-	134,085	**1,028,294**
Transfer from/(to) Capital Reserves - 2025 Existing	-	-	-	-	-	-	-	-	-	-	**-**
Transfer from/(to) Capital Reserves - New	2,061,972	359,157	402,733	848,436	906,132	1,114,152	1,626,188	1,884,546	2,101,082	2,186,078	**13,490,476**
Operating Funding (LOS Impacts already in 2025 budget)	1,204,518	1,204,518	1,204,518	1,204,518	1,204,518	1,204,518	1,204,518	1,204,518	1,204,518	1,204,518	**12,045,176**
Debt Funding (see section 2)	360,000	3,150,000	310,000	3,660,000	920,000	0	410,000	2,260,000	1,233,000	0	**12,303,004**
Total	**4,417,999**	**5,031,171**	**2,225,643**	**6,030,817**	**3,420,576**	**2,696,229**	**3,549,098**	**5,893,604**	**4,846,992**	**3,833,073**	**41,945,202**
Total Cost less Funding	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Section 2: Future Debt

Year	Principal Amount	New Annual Payments									
		2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
2025	432,693	432,693	432,693	432,693	432,693	432,693	432,693	432,693	432,693	432,693	432,693
2026	360,000		28,890	28,890	28,890	28,890	28,890	28,890	28,890	28,890	28,890
2027	3,150,000			252,760	252,760	252,760	252,760	252,760	252,760	252,760	252,760
2028	310,000				24,880	24,880	24,880	24,880	24,880	24,880	24,880
2029	3,660,000					293,690	293,690	293,690	293,690	293,690	293,690
2030	920,000						73,820	73,820	73,820	73,820	73,820
2031	0							-	-	-	-
2032	410,000								32,900	32,900	32,900
2033	2,260,000									181,350	181,350
2034	1,233,000										98,940
2035	0										
Total	**12,735,696**	**432,693**	**461,583**	**714,343**	**739,223**	**1,032,913**	**1,106,733**	**1,106,733**	**1,139,633**	**1,320,983**	**1,419,923**

Assumptions:

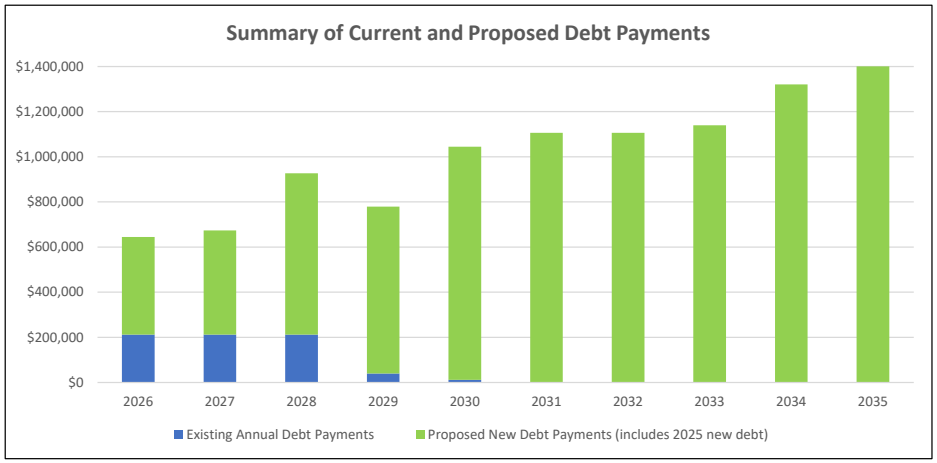
Term:	20	years
Rate:	5%	per year
Timing:	Debt is incurred at the end of the given year, with principal & interest payments starting in the following year.	

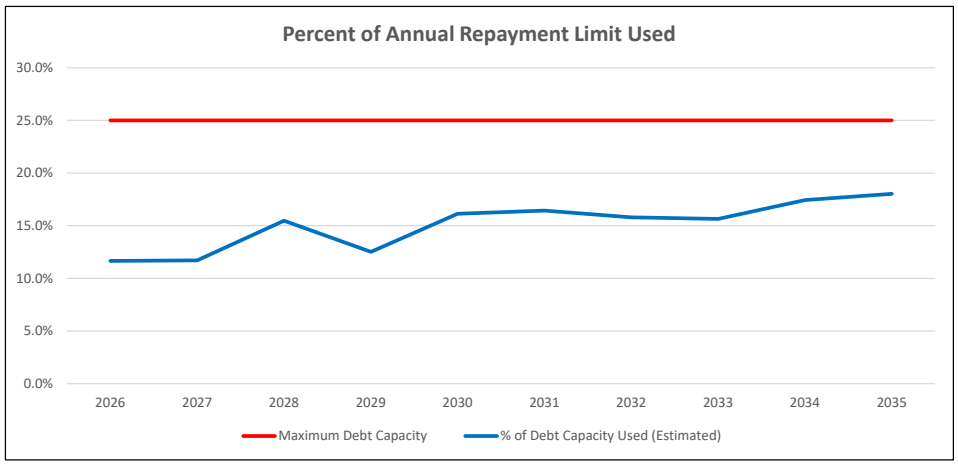
Debt Capacity Analysis

* Ontario municipalities must maintain annual debt principal and interest payments below the equivalent of 25% of revenues.

Debt Analysis	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Existing Annual Debt Payments	212,546	212,546	212,546	40,174	11,613	-	-	-	-	-
Proposed New Debt Payments (includes 2025 new debt)	432,693	461,583	714,343	739,223	1,032,913	1,106,733	1,106,733	1,139,633	1,320,983	1,419,923
Total Anticipated Debt Payments	**645,239**	**674,129**	**926,889**	**779,397**	**1,044,525**	**1,106,733**	**1,106,733**	**1,139,633**	**1,320,983**	**1,419,923**
Estimated Revenues*	5,533,654	5,755,000	5,985,200	6,224,608	6,473,592	6,732,536	7,001,837	7,281,910	7,573,186	7,876,113
Maximum Debt Capacity	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
% of Debt Capacity Used (Estimated)	**11.7%**	**11.7%**	**15.5%**	**12.5%**	**16.1%**	**16.4%**	**15.8%**	**15.7%**	**17.4%**	**18.0%**

* Annual revenue estimate assumes inflation annually.





Section 3: Reserve Schedules

Asset Management: Consolidated Reserves	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Opening Balance	2,756,441	801,936	800,648	796,319	801,780	807,858	883,361	803,504	806,837	805,502
Add: Contributions from Operating	107,467	357,869	398,405	853,897	912,210	1,189,655	1,546,331	1,887,880	2,099,746	2,413,729
Less: Contributions (to)/from Capital	(2,061,972)	(359,157)	(402,733)	(848,436)	(906,132)	(1,114,152)	(1,626,188)	(1,884,546)	(2,101,082)	(2,186,078)
Interest Earned (if applicable)	-	-	-	-	-	-	-	-	-	-
Ending Balance	**801,936**	**800,648**	**796,319**	**801,780**	**807,858**	**883,361**	**803,504**	**806,837**	**805,502**	**1,033,153**

Development Charges Reserve Funds	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Opening Balance	1,141,305	1,363,469	2,093,402	2,861,657	3,650,462	4,397,410	5,188,168	6,081,191	6,769,796	7,729,826
Add: Contributions	697,449	718,311	739,922	762,133	784,943	808,557	832,813	857,725	883,498	909,981
Less: Contributions (to)/from Capital	(488,785)	(9,104)	-	(9,471)	(81,534)	(69,167)	-	(236,148)	-	(134,085)
Interest Earned	13,500	20,727	28,333	36,143	43,539	51,368	60,210	67,028	76,533	85,057
Ending Balance	**1,363,469**	**2,093,402**	**2,861,657**	**3,650,462**	**4,397,410**	**5,188,168**	**6,081,191**	**6,769,796**	**7,729,826**	**8,590,779**

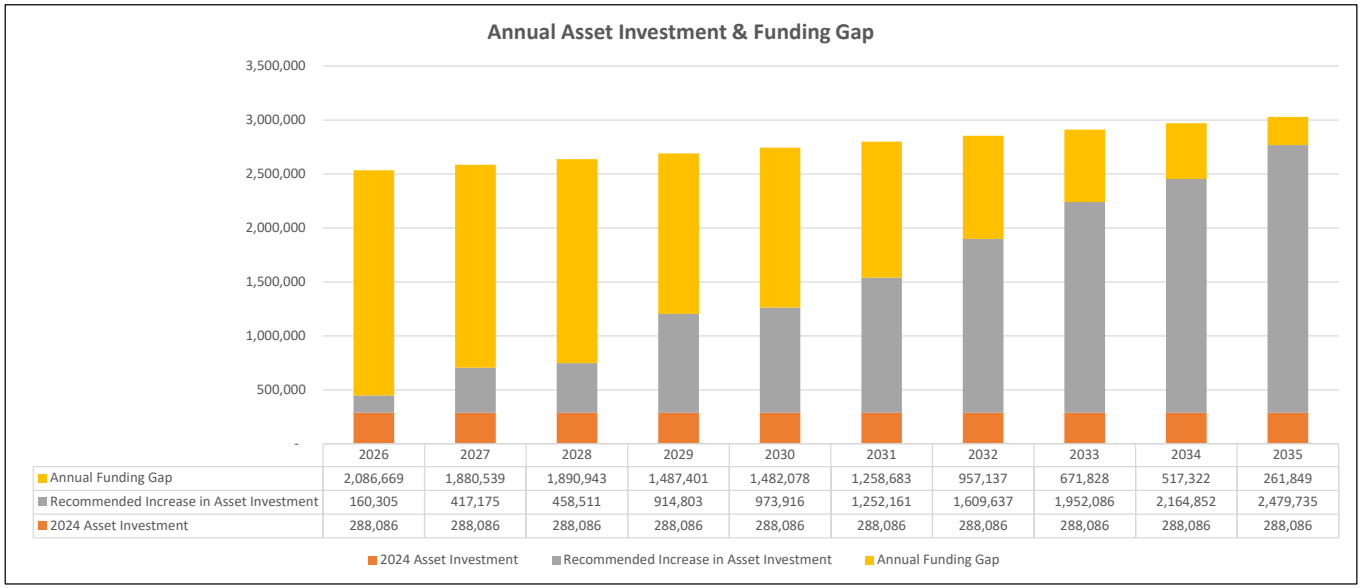
Section 4: Budget Impacts & Funding Gap

Optimal Annual Funding Analysis	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Optimal Investment - Capital	2,496,860	2,546,800	2,597,740	2,649,690	2,702,680	2,756,730	2,811,860	2,868,100	2,925,460	2,983,970
Optimal Investment - Operating LOS (increase from existing)	38,200	39,000	39,800	40,600	41,400	42,200	43,000	43,900	44,800	45,700
Total Annual Optimal Investment in Assets	**2,535,060**	**2,585,800**	**2,637,540**	**2,690,290**	**2,744,080**	**2,798,930**	**2,854,860**	**2,912,000**	**2,970,260**	**3,029,670**
Recommended Investment - Capital										
Canada Community Building Fund (Gas Tax)	141,710	147,378	147,378	147,378	147,378	147,378	147,378	147,378	147,378	147,378
OCIF Funding	161,014	161,014	161,014	161,014	161,014	161,014	161,014	161,014	161,014	161,014
Transfer from/(to) Capital Reserves - 2025 Existing	-	-	-	-	-	-	-	-	-	-
Transfer from/(to) Capital Reserves - New	107,467	357,869	398,405	853,897	912,210	1,189,655	1,546,331	1,887,880	2,099,746	2,413,729
Total Recommended Investment - Capital	**410,191**	**666,261**	**706,797**	**1,162,289**	**1,220,602**	**1,498,047**	**1,854,723**	**2,196,272**	**2,408,138**	**2,722,121**
% of Optimal Investment (Capital) Reached	*16%*	*26%*	*27%*	*44%*	*45%*	*54%*	*66%*	*77%*	*82%*	*91%*
LOS Impacts - Operating										
Recommended Investment	38,200	39,000	39,800	40,600	41,400	42,200	43,000	43,900	44,800	45,700
Total Recommended Investment - LOS Operating	**38,200**	**39,000**	**39,800**	**40,600**	**41,400**	**42,200**	**43,000**	**43,900**	**44,800**	**45,700**
% of Optimal Investment (Capital) Reached	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*
Total Recommended Investment - Capital & Operating	**448,391**	**705,261**	**746,597**	**1,202,889**	**1,262,002**	**1,540,247**	**1,897,723**	**2,240,172**	**2,452,938**	**2,767,821**
% of Optimal Investment (Operating & Capital) Reached	*18%*	*27%*	*28%*	*45%*	*46%*	*55%*	*66%*	*77%*	*83%*	*91%*
Funding (Gap) / Surplus	**(2,086,669)**	**(1,880,539)**	**(1,890,943)**	**(1,487,401)**	**(1,482,078)**	**(1,258,683)**	**(957,137)**	**(671,828)**	**(517,322)**	**(261,849)**

Investment in Capital	2025
Canada Community Building Fund (Gas Tax)	141,710
OCIF Funding	146,376
Transfer from Operating	-
Transfer to Reserves (for capital)	-
Total Investment	**288,086**

Investment in capital "starting point" for the capital forecast.

	Impact on Funding	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
	Total Recommended Investment - Capital	**410,191**	**666,261**	**706,797**	**1,162,289**	**1,220,602**	**1,498,047**	**1,854,723**	**2,196,272**	**2,408,138**	**2,722,121**
	Previous Year's Investment	**288,086**	**410,191**	**666,261**	**706,797**	**1,162,289**	**1,220,602**	**1,498,047**	**1,854,723**	**2,196,272**	**2,408,138**
	Annual Increase in Capital Investment										
	Grants	14,638	5,668	-	-	-	-	-	-	-	-
	Tax Supported	107,467	250,401	40,536	455,493	58,312	277,446	356,675	341,549	211,867	313,983
	Total Change	**122,105**	**256,069**	**40,536**	**455,493**	**58,312**	**277,446**	**356,675**	**341,549**	**211,867**	**313,983**
	Total Recommended Investment - Operating LOS (Increase Only)	38,200	39,000	39,800	40,600	41,400	42,200	43,000	43,900	44,800	45,700
	Previous Year's Investment Increase	**-**	**38,200**	**39,000**	**39,800**	**40,600**	**41,400**	**42,200**	**43,000**	**43,900**	**44,800**
	Annual Increase / (Decrease) in Operating LOS Investment										
	Tax Supported	38,200	800	800	800	800	800	800	900	900	900
	Total Change	**38,200**	**800**	**800**	**800**	**800**	**800**	**800**	**900**	**900**	**900**
A	**Total Change - Capital & LOS (excluding Grant Increase)**	**145,667**	**251,201**	**41,336**	**456,293**	**59,112**	**278,246**	**357,475**	**342,449**	**212,767**	**314,883**
B	**Net Increase / (Decrease) in Debt Payments**	**432,693**	**28,890**	**252,760**	**(147,492)**	**265,128**	**62,207**	**-**	**32,900**	**181,350**	**98,940**
A + B	**Total Impact on Annual Tax Supported Budget**	**578,360**	**280,091**	**294,096**	**308,801**	**324,241**	**340,453**	**357,475**	**375,349**	**394,117**	**413,823**
	Estimated Taxation Impact: 1% in 2025 = $56,206	**9.80%**	**4.52%**	**4.52%**	**4.52%**	**4.52%**	**4.52%**	**4.52%**	**4.52%**	**4.52%**	**4.52%**



R.J. Burnside & Associates Limited