2024 Asset Management Plan

ADOPTED: June 24, 2024

Key Statistics

$501.5 million Replacement cost of asset portfolio	**$23,713** Replacement cost of infrastructure per capita
2.7% Target average annual capital infrastructure reinvestment rate	**1.6%** Actual average annual capital infrastructure reinvestment rate
63% Percentage of assets in fair or better condition	**45%** Percentage of annual infrastructure funding needs currently being met
3.7% Portion of total infrastructure funding that comes from the CCBF	**45%** Annual cost savings for roads through proactive lifecycle management
$468 Annual infrastructure deficit per capita	**15 years** Recommended timeframe for eliminating annual infrastructure deficit

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1 Executive Summary

Municipal infrastructure provides the foundation for the economic, social, and environmental health and growth of a community through the delivery of critical services. The goal of asset management is to deliver an adequate level of service in the most cost-effective manner. This involves the development and implementation of asset management strategies and long-term financial planning.

All municipalities in Ontario are required to complete an asset management plan (AMP) in accordance with Ontario Regulation 588/17 (O. Reg. 588/17). This AMP outlines the current state of asset management planning in the Town of Huntsville. It identifies the current practices and strategies that are in place to manage public infrastructure and makes recommendations where they can be further refined. Through the implementation of sound asset management strategies, the Town can ensure that public infrastructure is managed to support the sustainable delivery of municipal services.

This AMP includes the following asset categories:

Asset Category	Source of Funding
Road Network	Taxes
Bridges	
Storm Sewer Network	
Facilities	
Equipment	
Fleet & Machinery	
Land Improvements	

The overall replacement cost of the asset categories included in this AMP totals $501.5 million. Of all assets analysed in this AMP, 63% are in fair or better condition and assessed condition data was available for 88% of assets. For the remaining 12% of assets, assessed condition data was unavailable, and asset age was used to approximate condition – a data gap that persists in most municipalities. Generally, age misstates the true condition of assets, making assessments essential to accurate asset management planning, and a recurring recommendation in this AMP.

The development of a long-term, sustainable financial plan requires an analysis of whole lifecycle costs. This AMP has used a combination of proactive lifecycle strategies and replacement only strategies to determine the lowest cost option to maintain the current level of service.

To meet capital replacement and rehabilitation needs for existing infrastructure, prevent infrastructure backlogs, and achieve long-term sustainability, the Town's average annual capital requirement totals $13.6 million and the average annual operating requirement related to capital lifecycle strategies totals $4.4 million. Overall, considering maintenance, preventative maintenance, rehabilitation and replacement costs, the average annual requirement totals $18.0 million. Based on a historical analysis of sustainable capital funding sources, the Town is committing approximately $8.1 million towards capital projects per year. As a result, there is currently an annual funding gap of $9.9 million which includes a capital funding gap of $5.5 million and $4.4 million for operating lifecycle activities. These operating lifecycle activities have been previously funded through capital.

An illustrative financial strategy was developed to address the annual funding gap. The following table compares the total and average annual tax change required to eliminate the Town's infrastructure deficit:

Funding Source	Years Until Full Funding	First Annual Tax Levy Increase	
Capital	15 Years		$310,267
Operating	15 Years		$292,000
Tax-Funded Assets	15 Years	2.7%	$602,267

With the development of this AMP, the Town has achieved compliance with O. Reg. 588/17 to the extent of the requirements that must be completed by July 1, 2024. There are additional requirements concerning proposed levels of service that must be met by July 1, 2025.

This AMP represents a snapshot in time and is based on the best available processes, data, and information at the Town. Strategic asset management planning is an ongoing and dynamic process that requires continuous improvement and dedicated resources. Several recommendations have been developed to guide the continuous refinement of the Town's asset management program. These include:

a) The continuous validation of asset inventory data and information
b) The formalization of condition assessment strategies for all asset categories
c) The continued use of risk-based decision-making as part of asset management planning and budgeting
d) The continuous review, development, and implementation of optimal lifecycle management strategies
e) The identification of proposed levels of service

The evaluation of the above items and further development of a data-driven, best-practice approach to asset management is recommended to ensure the Town is providing optimal value through its management of infrastructure and delivery of services.

2 Introduction & Context

Key Insights

- The goal of asset management is to minimize the lifecycle costs of delivering infrastructure services, manage the associated risks, while maximizing the value taxpayers receive from the asset portfolio.

- The Town's strategic asset management policy provides clear direction to staff on their role and responsibilities regarding asset management.

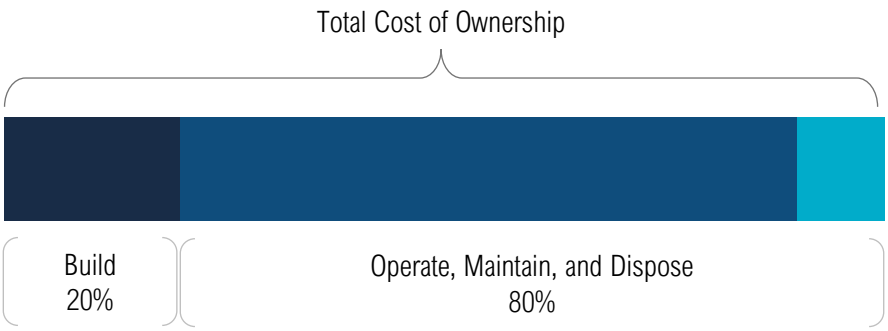
- An asset management plan is a living document that should be updated regularly to inform long-term planning.

- Ontario Regulation 588/17 outlines several key milestones and requirements for asset management plans in Ontario between July 1, 2021 and 2025.

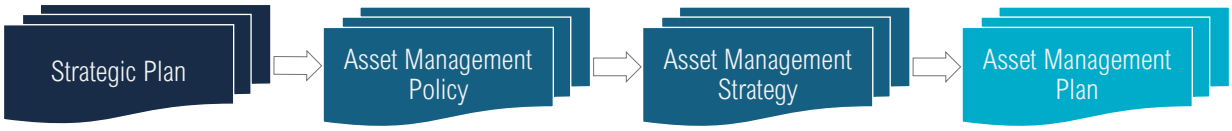
2.1 An Overview of Asset Management

Municipalities are responsible for managing and maintaining a broad portfolio of infrastructure assets to deliver services to the community. The goal of asset management is to minimize the lifecycle costs of delivering infrastructure services, manage the associated risks, while maximizing the value ratepayers receive from the asset portfolio.

The acquisition of capital assets accounts for only 10-20% of their total cost of ownership. The remaining 80-90% comes from operations and maintenance. This AMP focuses its analysis on the capital costs to maintain, rehabilitate and replace existing municipal infrastructure assets.



These costs can span decades, requiring planning and foresight to ensure financial responsibility is spread equitably across generations. An asset management plan is critical to this planning, and an essential element of a broader asset management program. The diagram below depicts an industry-standard approach and sequence to developing a practical asset management program.



The diagram, adopted from the Institute of Asset Management (IAM), illustrates the concept of 'line of sight', or alignment between the corporate strategic plan and various asset management documents. The strategic plan has a direct, and cascading impact on asset management planning and reporting.

2.1.1 Asset Management Policy

An asset management policy represents a statement of the principles guiding the municipality's approach to asset management activities. It aligns with the strategic plan and provides clear direction to municipal staff on their roles and responsibilities as part of the asset management program.

The Town adopted Budget&Financial-18 "Strategic Asset Management Policy" on May 27, 2024, in accordance with Ontario Regulation 588/17.

The objective of the policy is to provide:

- Leadership in and commitment to the development and implementation of the Town's asset management program
- Guidance for the consistent and coordinated use of asset management across the Town, and
- Guidance for logical and evidence-based decision making for the management of municipal infrastructure assets that is in line with the Town's strategic priorities and any federal and provincial regulatory requirements.

2.1.2 Asset Management Strategy

An asset management strategy outlines the translation of organizational objectives into asset management objectives. It provides greater detail than the policy on how the municipality plans to achieve asset management objectives through planned activities and decision-making criteria.

The Town's Asset Management Policy contains the key components of an asset management strategy.

2.1.3 Asset Management Plan

The asset management plan (AMP) presents the outcomes of the municipality's asset management program and identifies the resource requirements needed to achieve a defined level of service. The AMP typically includes the following content:

- State of Infrastructure
- Asset Management Strategies
- Levels of Service
- Financial Strategies

The AMP is a living document that should be updated regularly as additional asset and financial data becomes available. This will allow the municipality to re-evaluate the state of infrastructure and identify how the organization's asset management and financial strategies are progressing. The Town's previous AMP was adopted in 2020.

2.2 Key Concepts in Asset Management

Effective asset management integrates several key components, including lifecycle management, risk management, and levels of service. These concepts are applied throughout this asset management plan and are described below in greater detail.

2.2.1 Lifecycle Management Strategies

The condition or performance of most assets will deteriorate over time. This process is affected by a range of factors including an asset's characteristics, location, utilization, maintenance history and environment. Asset deterioration has a negative effect on the ability of an asset to fulfill its intended function, and may be characterized by increased cost, risk and even service disruption.

To ensure that municipal assets are performing as expected and meeting the needs of customers, residents, and taxpayers, it is important to establish a lifecycle management strategy to proactively manage asset deterioration.

There are several field intervention activities that are available to extend the life of an asset. These activities can be generally placed into one of three categories: maintenance, rehabilitation, and replacement. The following table provides a description of each type of activity and the general difference in cost.

Lifecycle Activity	Description	Example (Roads)	Cost
General Maintenance	Activities that repair current defects or inhibits deterioration	Pothole Repairs	$
Preventitive Maintenance	Activities that prevent defects or deteriorations from occurring	Crack Seal	$
Rehabilitation/ Renewal	Activities that rectify defects or deficiencies that are already present and may be affecting asset performance	Pulverize & Resurface	$$
Replacement/ Reconstruction	Asset end-of-life activities that often involve the complete replacement of assets	Full Reconstruction	$$$
Replacement Upgrade/ Reconstruction	Asset end-of-life activities that involve the complete replacement of assets with an upgraded asset	Full Reconstruction LCB to HCB Surface Composition	$$$$

Depending on initial lifecycle management strategies, asset performance can be sustained through a combination of maintenance and rehabilitation, but at some point, replacement is required for most assets. Understanding what effect these activities will have on the lifecycle of an asset, and their cost, will enable staff to make better recommendations.

The Town's approach to lifecycle management is described within each asset category outlined in this AMP. Developing and implementing a proactive lifecycle strategy will help staff to determine which activities to perform on an asset and when they should be performed to maximize useful life at the lowest total cost of ownership.

2.2.2 Risk Management Strategies

Municipalities generally take a 'worst-first' approach to infrastructure spending. Rather than prioritizing assets based on their importance to service delivery, assets in the worst condition are fixed first, regardless of their criticality. However, not all assets are created equal. Some are more important than others, and their failure or disrepair poses more risk to the community than that of others. For example, a road with a high volume of traffic that provides access to critical services poses a higher risk than a low volume rural road. These high-value assets should receive funding before others to ensure that scarce financial resources are being allocated effectively.

By identifying the various impacts of asset failure and the likelihood that the asset will fail, risk management strategies can identify critical assets, and determine where maintenance efforts, and spending, should be focused.

This AMP includes a high-level evaluation of asset risk and criticality. Each asset has been assigned probability and consequence of failure scores based on available asset data. These risk scores can be used to prioritize maintenance, rehabilitation, and replacement strategies for critical assets.

2.2.3 Levels of Service

A level of service (LOS) is a measure of what the Town is providing to the community and the nature and quality of that service. Within each asset category in this AMP, technical metrics and qualitative descriptions that measure both technical and community levels of service have been established and measured as data is available.

These measures include a combination of those that have been outlined in O. Reg. 588/17 in addition to performance measures identified by the Town as worth measuring and evaluating. The Town measures the level of service provided at two levels: Community Levels of Service, and Technical Levels of Service.

2.2.3.1 Community Levels of Service

Community levels of service are a simple, plain language description or measure of the service that the community receives. The province, through O. Reg. 588/17, has provided mandatory qualitative descriptions for core asset categories (Roads, Bridges, and Stormwater). For non-core asset categories, the Town has determined the qualitative descriptions that will be used to determine the community level of service provided. These descriptions can be found in the Levels of Service subsection within each asset category.

2.2.3.2 Technical Levels of Service

Technical levels of service are a measure of key technical attributes of the service being provided to the community. These include mostly quantitative measures and tend to reflect the impact of the municipality's asset management strategies on the physical condition of assets or the quality/capacity of the services they provide.

The province, through O. Reg. 588/17, has provided mandatory technical metrics for core asset categories (Roads, Bridges, and Stormwater). For non-core asset categories, the Town has determined the technical metrics that will be used to determine the technical level of service provided. These metrics can be found in the Levels of Service subsection within each asset category.

2.2.3.3 Current and Proposed Levels of Service

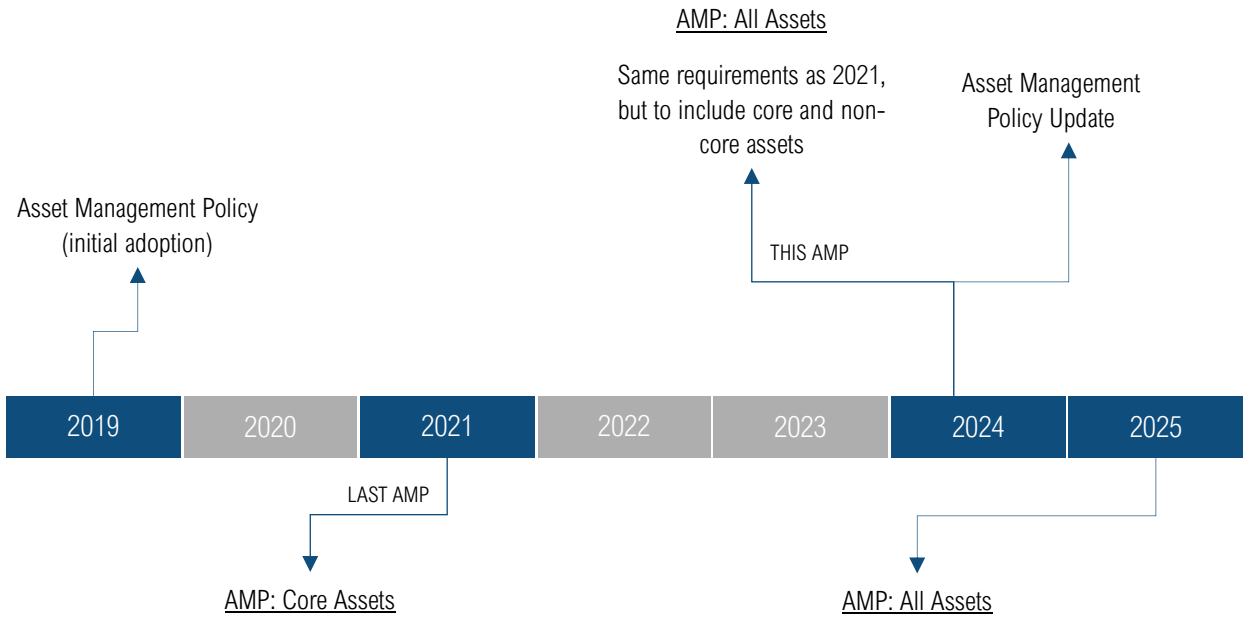
This AMP focuses on measuring the current level of service provided to the community. Once current levels of service have been measured, the Town plans to establish proposed levels of service over a 10-year period, in accordance with O. Reg. 588/17.

Proposed levels of service should be realistic and achievable within the timeframe outlined by the Town. They should also be determined with consideration of a variety of community expectations, fiscal capacity, regulatory requirements, corporate goals, and long-term sustainability. Once proposed levels of service have been established, and prior to July 2025, the Town must identify a lifecycle management and financial strategy which allows these targets to be achieved.

2.3 Ontario Regulation 588/17

As part of the *Infrastructure for Jobs and Prosperity Act, 2015*, the Ontario government introduced Regulation 588/17 - Asset Management Planning for Municipal Infrastructure (O. Reg 588/17). Along with creating better performing organizations, more liveable and sustainable communities, the regulation is a key, mandated driver of asset management planning and reporting. It places substantial emphasis on current and proposed levels of service and the lifecycle costs incurred in delivering them.

The diagram below outlines key reporting requirements under O. Reg 588/17 and the associated timelines.



1. Current levels of service
2. Inventory analysis
3. Lifecycle activities to sustain LOS
4. Cost of lifecycle activities
5. Population and employment forecasts
6. Discussion of growth impacts

1. Proposed levels of service for next 10 years
2. Updated inventory analysis
3. Lifecycle management strategy
4. Financial strategy and addressing shortfalls
5. Discussion of how growth assumptions impacted lifecycle and financial strategy

2.3.1 O. Reg. 588/17 Compliance Review

The following table identifies the requirements outlined in Ontario Regulation 588/17 for municipalities to meet by July 1, 2024. Next to each requirement, a page or section reference is included in addition to any necessary commentary.

Requirement	O. Reg. Section	AMP Section Reference	Status
Current levels of service in each category	S.5(2), 1(i-ii)	Section 5 Subsection 6 for each asset category	Complete
Current performance measures in each category	S.5(2), 2	Section 5 Subsection 6 for each asset category	Complete
Summary of assets in each category	S.5(2), 3(i)	Section 5 Subsection 1 for each asset category	Complete
Replacement cost of assets in each category	S.5(2), 3(ii)	Section 5 Subsection 1 for each asset category	Complete
Average age of assets in each category	S.5(2), 3(iii)	Section 5 Subsection 3 for each asset category	Complete
Condition of core assets in each category	S.5(2), 3(iv)	Section 5 Subsection 2 for each asset category	Complete
Description of municipality's approach to assessing the condition of assets in each category	S.5(2), 3(v)	Section 5 Subsection 2 for each asset category	Complete
Lifecycle activities needed to maintain current levels of service for 10 years	S.5(2), 4	Section 5 Subsection 4 for each asset category	Complete
Costs of providing lifecycle activities for 10 years	S.5(2), 4	Appendix B	Complete
Growth assumptions	S.5(2), 5(i-ii) S.5(2), 6(i-vi)	Section 6	Complete

3 Scope & Methodology

Key Insights

- This asset management plan includes 7 asset categories.
- The source and recency of replacement costs impacts the accuracy and reliability of asset portfolio valuation.
- Accurate and reliable condition data helps to prevent premature and costly rehabilitation or replacement and ensures that lifecycle activities occur at the right time to maximize asset value and useful life.

3.1 Asset Categories Included in this AMP

This asset management plan for the Town of Huntsville is produced in compliance with Ontario Regulation 588/17. The July 2024 deadline under the regulation—the second of three AMPs—requires analysis of all Town assets. The previous deadline required analysis of only core assets (roads, bridges, and stormwater).

The AMP summarizes the state of the infrastructure for the Town's asset portfolio, establishes current levels of service and the associated technical and customer oriented key performance indicators (KPIs), outlines lifecycle strategies for optimal asset management and performance, and provides financial strategies to reach sustainability for the asset categories listed below.

Asset Category	Source of Funding
Road Network	Taxes
Bridges	
Storm Sewer Network	
Facilities	
Equipment	
Fleet & Machinery	
Land Improvements	

3.2 Deriving Replacement Costs

There are a range of methods to determine the replacement cost of an asset, and some are more accurate and reliable than others. This AMP relies on two methodologies:

- User-Defined Cost and Cost/Unit: Based on costs provided by municipal staff which could include average costs from recent contracts; data from engineering reports and assessments; and staff estimates based on knowledge and experience.

- Cost Inflation/CPI Tables: Historical cost of the asset is inflated based on Consumer Price Index or Non-Residential Building Construction Price Index.

User-defined costs based on reliable sources are a reasonably accurate and reliable way to determine asset replacement costs. Cost inflation is typically used in the absence of reliable replacement cost data. It is a reliable method for recently purchased and/or constructed assets where the total cost is reflective of the actual costs that the Town incurred. As assets age, and new products and technologies become available, cost inflation becomes a less reliable method.

3.3 Estimated Useful Life, Average Age, and Service Life Remaining

The estimated useful life (EUL) of an asset is the period over which the Town expects the asset to be available for use and remain in service before requiring replacement or disposal. The EUL for each asset in this AMP was assigned according to the knowledge and expertise of municipal staff and supplemented by existing industry standards when necessary. Each asset's Estimated Useful Life should be reviewed periodically to determine whether adjustments need to be made to better align with the observed length of service life for each asset type.

The average age of each asset is based on the number of years each asset has been in service.

By using an asset's in-service date and its EUL, the Town can determine the service life remaining (SLR) for each asset. Using condition data and the asset's SLR, the Town can more accurately forecast when it will require replacement. The SLR is calculated as follows:

$$Service\ Life\ Remaining\ (SLR) = In\ Service\ Date + Estimated\ Useful\ Life(EUL) - Current\ Year$$

The estimated useful life, average age, and average service life remaining can be found in the Estimated Useful Life & Average Age subsection within each asset category.

3.4 Reinvestment Rate

As assets age and deteriorate, they require additional investment to maintain in a state of good repair. The reinvestment of capital funds, through asset renewal or replacement, is necessary to sustain an adequate level of service. The reinvestment rate is a measurement of available or required funding relative to the total replacement cost.

By comparing the actual vs. target reinvestment rate, the Town can determine the extent of any existing funding gap. The reinvestment rate is calculated as follows:

$$Target\ Reinvestment\ Rate = \frac{Annual\ Capital\ Requirement}{Total\ Replacement\ Cost}$$

$$Actual\ Reinvestment\ Rate = \frac{Annual\ Capital\ Funding}{Total\ Replacement\ Cost}$$

3.5 Deriving Asset Condition

An incomplete or limited understanding of asset condition can mislead long-term planning and decision-making. Accurate and reliable condition data helps to prevent premature and costly rehabilitation or replacement and ensures that lifecycle activities occur at the right time to maximize asset value and useful life.

A condition assessment rating system provides a standardized descriptive framework that allows comparative benchmarking across the Town's asset portfolio. The table below outlines the condition rating system used in this AMP to determine asset condition. This rating system is aligned with the Canadian Core Public Infrastructure Survey which is used to develop the Canadian Infrastructure Report Card. When assessed condition data is not available, service life remaining is used to approximate asset condition. See Appendix D for the condition rating criteria of each core infrastructure group (Roads, Bridges, Stormwater).

Condition	Description	Criteria	Service Life Remaining (%)
Very Good	Fit for the future	Well maintained, good condition, new or recently rehabilitated	80-100
Good	Adequate for now	Acceptable, generally approaching mid-stage of expected service life	60-80
Fair	Requires attention	Signs of deterioration, some elements exhibit significant deficiencies	40-60
Poor	Increasing potential of affecting service	Approaching end of service life, condition below standard, large portion of system exhibits significant deterioration	20-40
Very Poor	Unfit for sustained service	Near or beyond expected service life, widespread signs of advanced deterioration, some assets may be unusable	0-20

The analysis in this AMP is based on assessed condition data only as available. In the absence of assessed condition data, asset age is used as a proxy to determine asset condition.

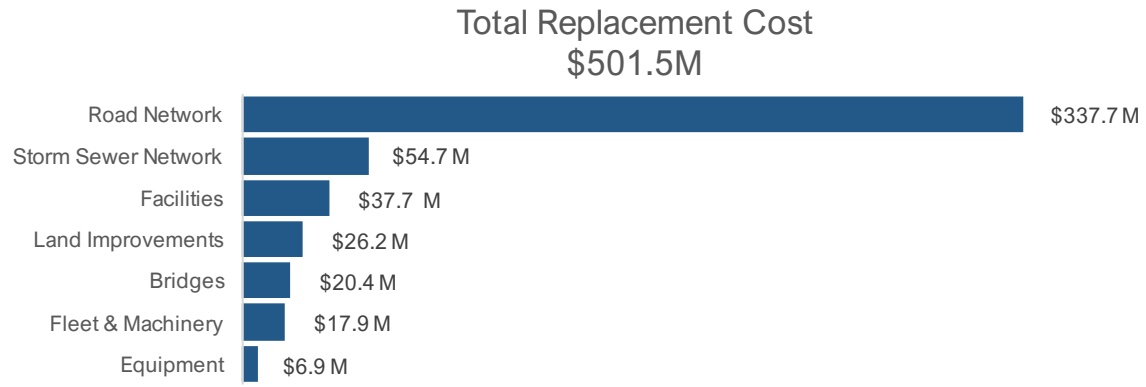
4 Portfolio Overview

Key Insights

- The total replacement cost of the Town's asset portfolio is $501.5 million.
- The Town's target capital reinvestment rate is 2.7%, and the actual capital reinvestment rate is 1.6%, contributing to an expanding capital infrastructure deficit.
- 63% of all assets are in fair or better condition.
- 53% of assets are projected to require replacement in the next 10 years.
- Average annual capital requirements total $13.6 million per year across all assets.
- Average annual operating requirements for lifecycle activities total $4.4 million per year for core infrastructure assets.
- Overall annual requirements total $18.0 million per year.

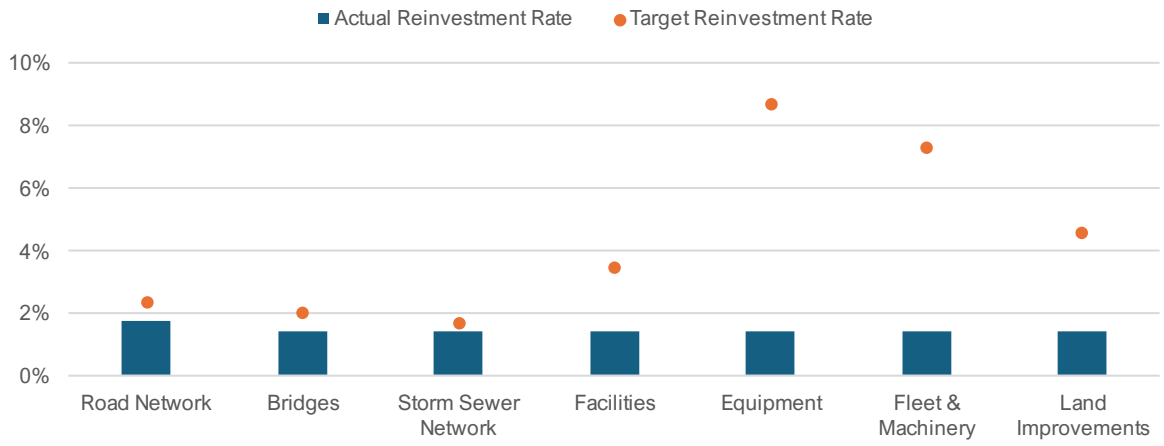
4.1 Total Replacement Cost of Asset Portfolio

The asset categories analysed in this AMP have a total replacement cost of $501.5 million based on inventory data from 2023. This total was determined based on a combination of user-defined costs and historical cost inflation. This estimate reflects replacement of existing historical assets with similar, not necessarily identical, assets available for procurement today.



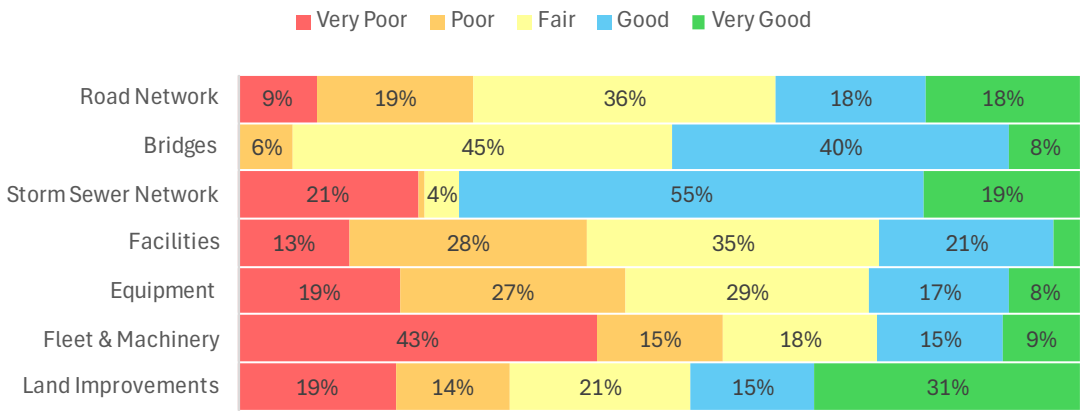
4.2 Target vs. Actual Capital Reinvestment Rate

The graph below depicts funding gaps or surpluses by comparing target vs actual capital reinvestment rate. To meet the long-term replacement needs, the Town should be allocating approximately $13.6 million annually for capital, for a target capital reinvestment rate of 2.7%. Actual annual funding for capital infrastructure totals approximately $8.1 million, for an actual capital reinvestment rate of 1.6%.



4.3 Condition of Asset Portfolio

The current condition of the assets is central to all asset management planning. Collectively, 63% of assets in Huntsville are in fair or better condition. This estimate relies on both age-based and field condition data.

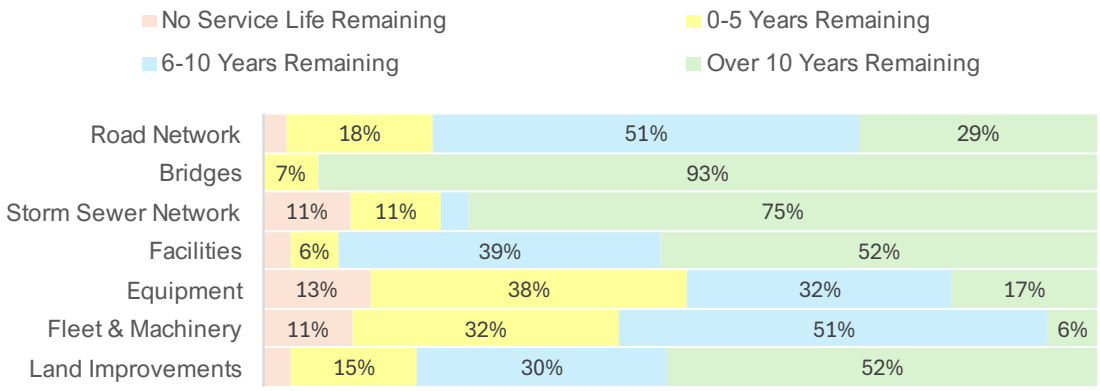


This AMP relies on assessed condition data for 88% of assets; for the remaining portfolio, age is used as an approximation of condition. Assessed condition data is invaluable in asset management planning as it reflects the true condition of the asset and its ability to perform its functions. The table below identifies the source of condition data used throughout this AMP.

Asset Category	Asset Segment	% of Assets with Assessed Condition	Source of Condition Data
Road Network	Gravel/HCB/LCB	100%	2020 Road Needs Study and 2021-2023 Staff Assessments
Road Network	Guideposts/ Sidewalks/ Streetlights/ Traffic Lights	98%	2023 Staff Assessments
Bridges	All	100%	2022 OSIM Reports
Storm Sewer Network	All	96%	2019 Storm Network Report and 2020-2023 Staff Assessment
Facilities	All	99%	2023 Staff Assessments
Equipment	All	97%	2024 Staff Assessments
Fleet & Machinery	All	99%	2024 Staff Assessments
Land Improvements	All	100%	2024 Staff Assessments

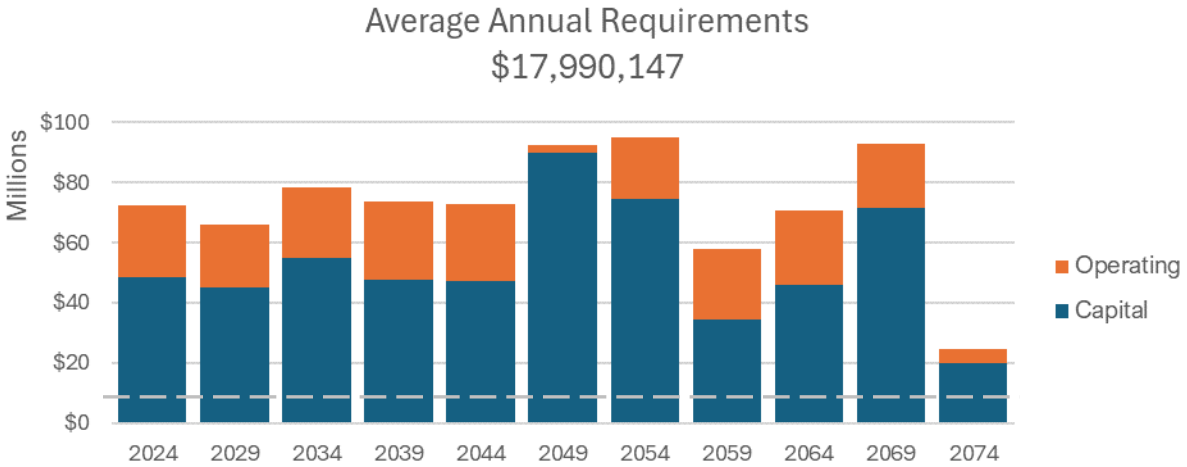
4.4 Service Life Remaining

Based on asset age, available assessed condition data and estimated useful life, 53% of the Town's assets will require replacement within the next 10 years. Capital requirements over the next 10 years are identified in Appendix B.



4.5 Forecasted Capital Requirements

The development of a long-term capital forecast should include both asset rehabilitation and replacement requirements. With the development of asset-specific lifecycle strategies that include the timing and cost of future capital events, the Town can produce an accurate long-term capital forecast. The following graph identifies annual requirements over the next 50 years.



5 Analysis of Tax-funded Assets

Key Insights

- Tax-funded assets are valued at $501.5 million.
- 63% of tax-funded assets are in fair or better condition.
- The average annual requirement to sustain the current level of service for tax-funded assets is approximately $18.0 million, including $13.6 million in annual capital requirements and $4.4 million in annual operating requirements.
- To reach sustainability, tax revenues need to be increased by at least $602,267 annually for the next 15 years to eliminate annual deficits. If the Town is successful in obtaining additional grant funding, this would further reduce annual deficits. The annual increase is expected to be increased by CPI annually in accordance with the Town's Budget & Financial Controls Policy.
- Critical assets should be evaluated to determine appropriate risk mitigation activities and treatment options.

5.1 Road Network

The Road Network is a critical component of the provision of safe and efficient transportation services and represents the highest value asset category in the Town's asset portfolio. It includes all municipally owned and maintained roadways in addition to supporting roadside infrastructure including sidewalks, guideposts, streetlights, and traffic lights.

The Town's roads and sidewalks are maintained by the Operations Department who is also responsible for winter snow clearing, ice control and snow removal operations.

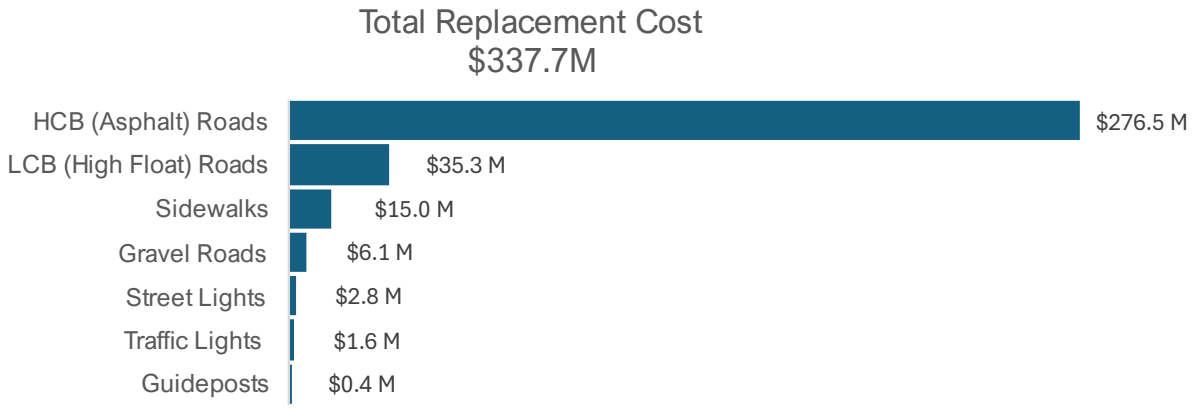
5.1.1 Asset Inventory & Replacement Cost

The table below includes the quantity, replacement cost method and total replacement cost of each asset segment in the Town's Road Network inventory.

Asset Segment	Quantity	Replacement Cost Method	Replacement Cost
Gravel Roads	133.9 km	Not Planned for Replacement[1]	$6,088,590
Guideposts	34[2]	CPI Tables	$422,128
HCB (Asphalt) Roads	127.1 km	Cost per Unit	$276,465,000
LCB (High Float) Roads	158.9 km	Cost per Unit	$35,344,080
Sidewalks	38.6 km	Cost Per Unit	$14,995,604
Street Lights	924	CPI Tables	$2,848,264
Traffic Lights	3	CPI Tables	$1,574,900
			$337,738,566

[1] Gravel roads are a perpetual maintenance asset and end of life replacement calculations do not normally apply. If gravel roads are maintained properly, they can theoretically have a limitless service life.

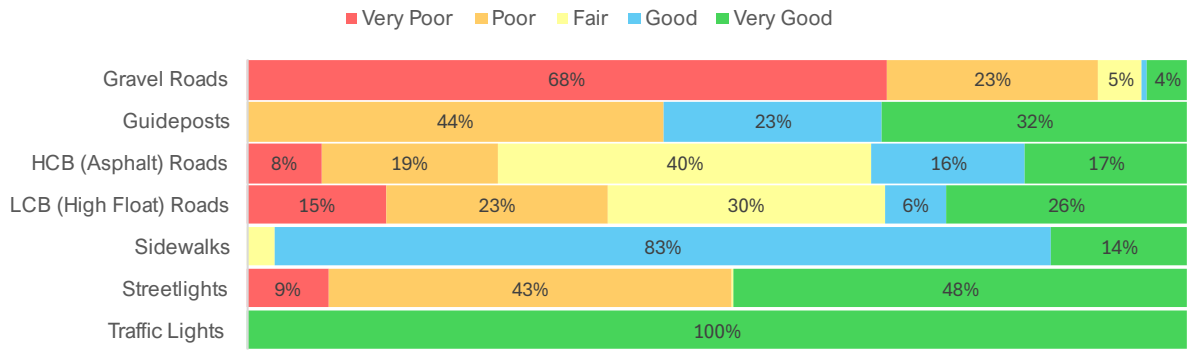
[2] Guidepost quantities are subject to some pooled assets and current inventory quantity is not an accurate representation of the total number of assets



5.1.2 Asset Condition

The table below identifies the current average condition and source of available condition data for each asset segment. The Average Condition (%) is a weighted value based on replacement cost.

Asset Segment	Average Condition (%)	Average Condition Rating	Condition Source
Gravel Roads	25%	Poor	100% Assessed
Guideposts	63%	Good	100% Assessed
HCB (Asphalt) Roads	62%	Good	100% Assessed
LCB (High Float) Roads	58%	Fair	100% Assessed
Sidewalks	65%	Good	93% Assessed 7% Age-based
Streetlights	58%	Fair	100% Assessed
Traffic Lights	92%	Very Good	67% Assessed 33% Age-based
	61%	**Good**	**99% Assessed**



5.1.2.1 Current Approach to Condition Assessment

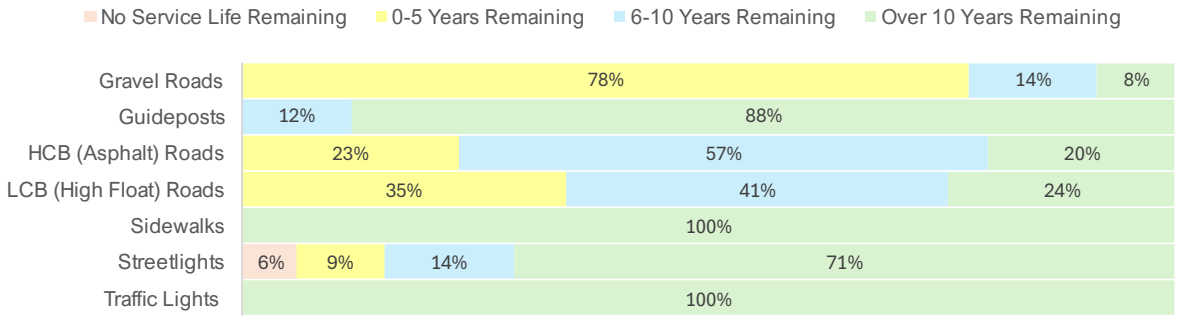
Accurate and reliable condition data allows staff to determine the remaining service life of assets and identify the most cost-effective approach to managing assets more confidently. The following describes the Town's current approach:

- A comprehensive Road Needs Study was completed in 2020 that included a detailed assessment of the condition of each road segment.
- Since then, condition assessments have been updated only on those road network assets that have undergone significant rehabilitation or replacement.
- A comprehensive Road Needs Study is currently in progress in 2024 and will include updated condition assessments of each road segment.
- The Road Needs Study is reviewed every 4 years and additional roads are assessed as needed.

5.1.3 Estimated Useful Life & Average Age

The table below identifies the estimated useful life, average age, and average service life remaining for each asset segment. Assessed condition may increase or decrease the average service life remaining.

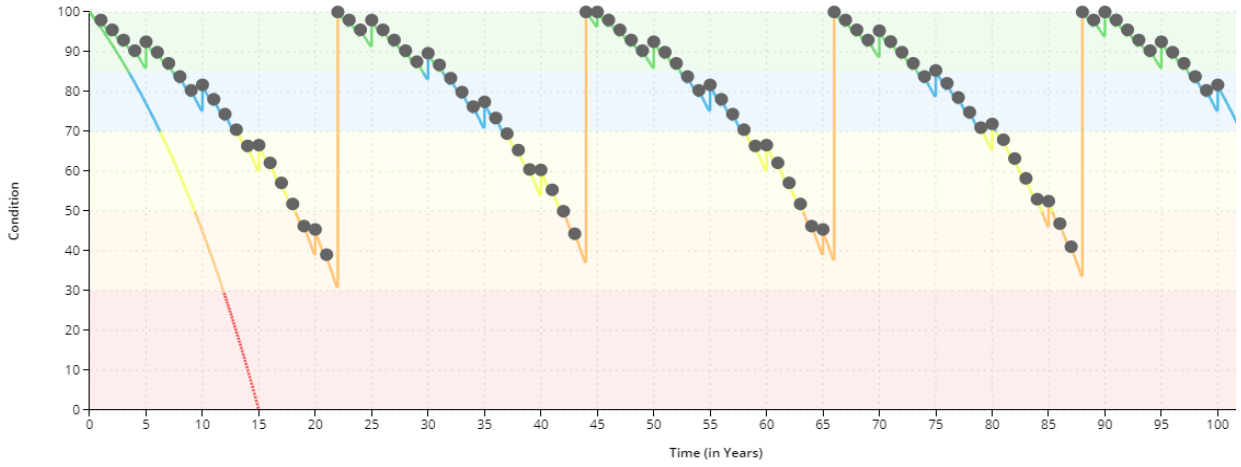
Asset Segment	Estimated Useful Life (Years)	Average Age (Years)	Average Service Life Remaining (Years)
Gravel Roads	15 Years	10.3	3.7
Guideposts	20 Years	5.7	15.3
HCB (Asphalt) Roads	20 Years	7.5	7.5
LCB (High Float) Roads	15 Years	7.9	7.1
Sidewalks	30 Years	11.0	18.9
Street Lights	20 Years	13.0	7.0
Traffic Lights	20 Years	1.7	18.3
		10.8	**8.7**



5.1.4 Lifecycle Management Strategy

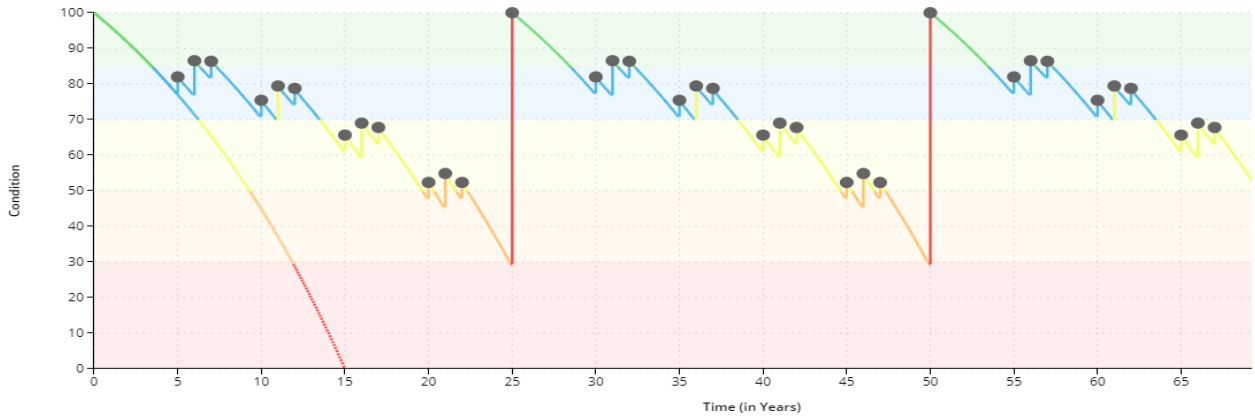
The following current lifecycle strategies have been applied to Huntsville's Asset Management System (AMS) based on the treatment strategy outlined by Town staff to manage the lifecycle of LCB, HCB, and Gravel roads. Instead of allowing the roads to deteriorate until full replacement is required, strategic rehabilitation is expected to extend the service life of roads at a lower total cost.

Gravel Roads ***Rural & Emergency Access Road Designs***		
Event Name	Event Class	Event Trigger
Grading	Maintenance	Annual Repetitive
Dust Suppressant	Maintenance	Annual Repetitive
Brushing	Maintenance	5 Years (Repeated)
Ditching & Culverts	Maintenance	Every year following brushing (Repeated)
Resurfacing	Rehabilitation	6 km Annually



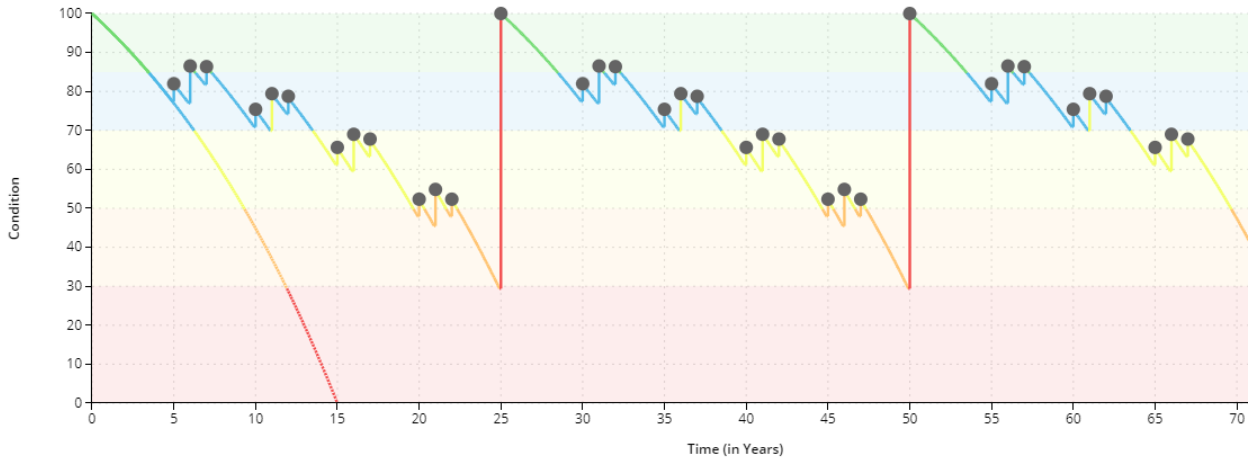
Gravel roads are a perpetual maintenance asset and end of life replacement calculations do not normally apply. If gravel roads are maintained properly, they can theoretically have a limitless service life.

HCB (Asphalt) Roads *Rural Road Design*		
Event Name	Event Class	Event Trigger
Crack Sealing	Preventative Maintenance	5 Years (Repeated)
Brushing	Maintenance	5 Years (Repeated)
Ditching & Culverts	Maintenance	Every year following Brushing (Repeated)
Pulverize & Pave	Rehabilitation	Approx. 30% Assessed Condition (Repeated)
Full Reconstruction	Replacement	As Needed (Otherwise Perpetual Treatment Strategy)



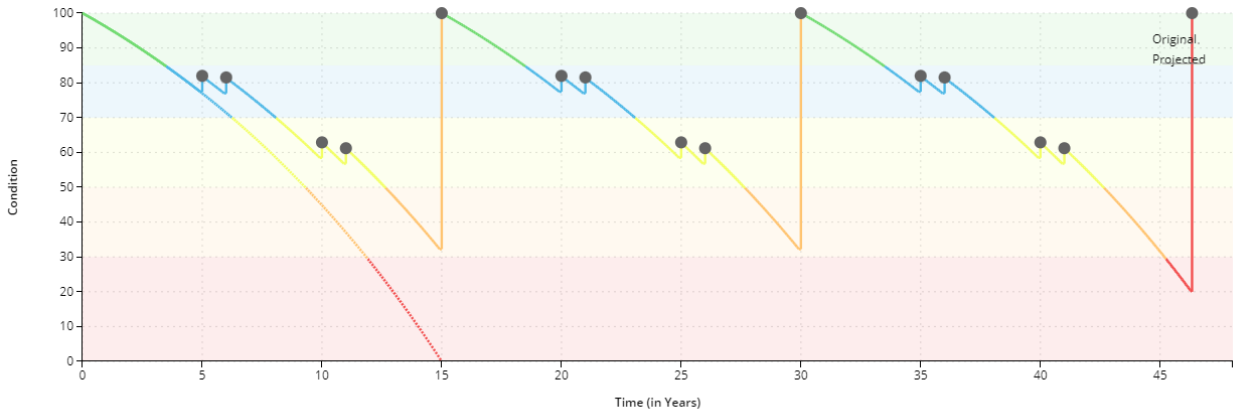
Rural road designs do not include underground infrastructure (storm sewer network assets) and therefore generally only require maintenance and rehabilitation activities rather than a full reconstruction.

HCB (Asphalt) Roads *Semi-Urban, Commercial & Industrial Road Designs*		
Event Name	Event Class	Event Trigger
Crack Sealing	Preventative Maintenance	5 Years (Repeated)
Brushing	Maintenance	5 Years (Repeated)
Ditching & Culverts	Maintenance	Every year following Brushing (Repeated)
Pulverize & Pave	Rehabilitation	Approx. 30% Assessed Condition (Repeated)
Full Reconstruction	Replacement	As Needed (Otherwise Perpetual Treatment Strategy)



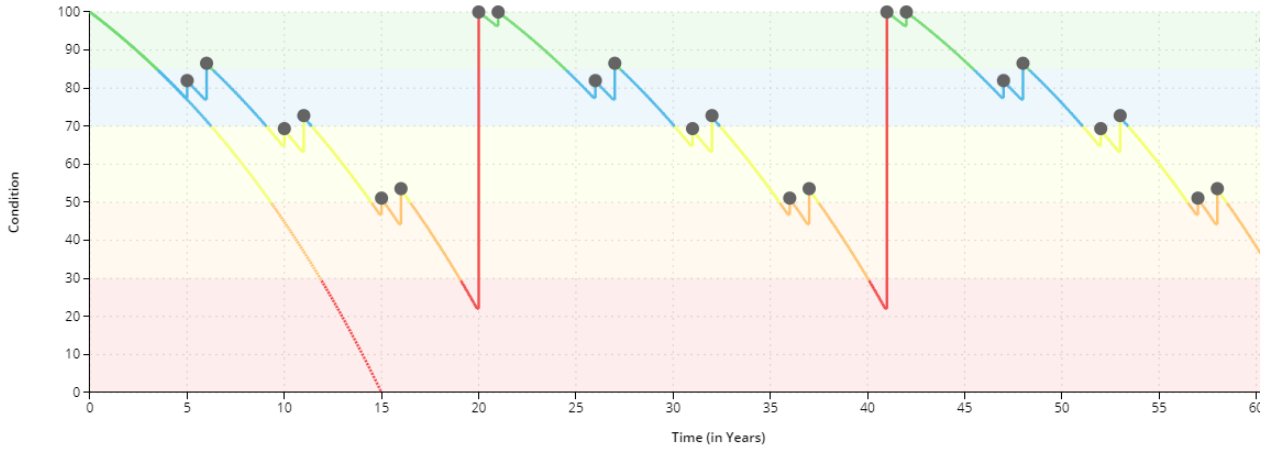
Semi-urban, commercial and industrial road designs do not include underground infrastructure (storm sewer network assets) and therefore generally only require maintenance and rehabilitation activities rather than a full reconstruction.

HCB (Asphalt) Roads *Urban Road Design*		
Event Name	Event Class	Event Trigger
Crack Sealing	Preventative Maintenance	5 Years (Repeated)
Brushing	Maintenance	5 Years (Repeated)
Pulverize & Pave	Rehabilitation	Approx. 30% Assessed Condition (Repeated)
Full Reconstruction	Replacement	Projected 46 Years



Urban road designs include underground infrastructure (storm sewer network assets) and therefore would require a full reconstruction to replace all underground infrastructure in addition to the road surface.

LCB (High Float) Roads *Rural Road Design*		
Event Name	Event Class	Event Trigger
Brushing	Maintenance	5 Years (Repeated)
Ditching & Culverts	Maintenance	Every year following Brushing (Repeated)
Double Surface Treatment	Rehabilitation	Approx. 20% Assessed Condition (Repeated)
Slurry Seal	Preventative Maintenance	Every year following Rehabilitation or Replacement activity
Full Resconstruction	Replacement	As Needed (Otherwise Perpetual Treatment Strategy)



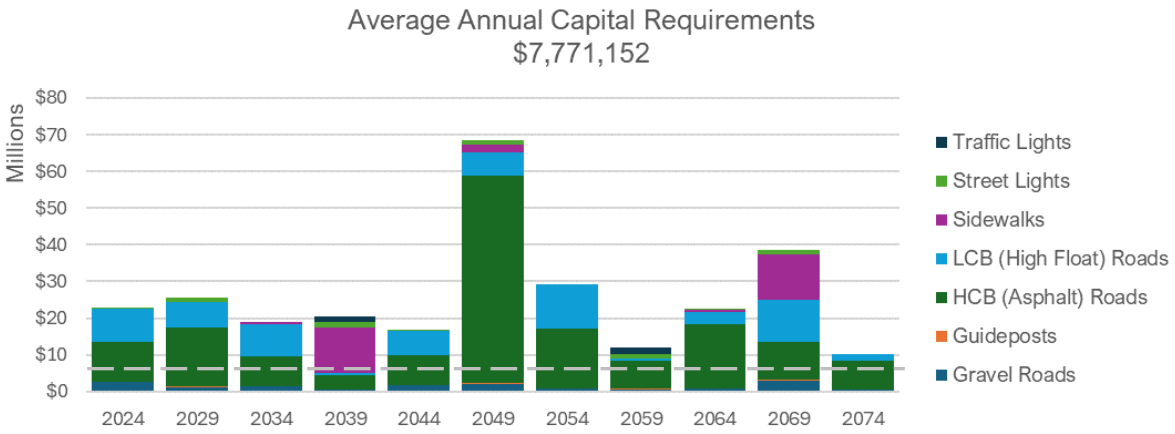
Rural road designs do not include underground infrastructure (storm sewer network assets) and therefore generally only require maintenance and rehabilitation activities rather than a full reconstruction.

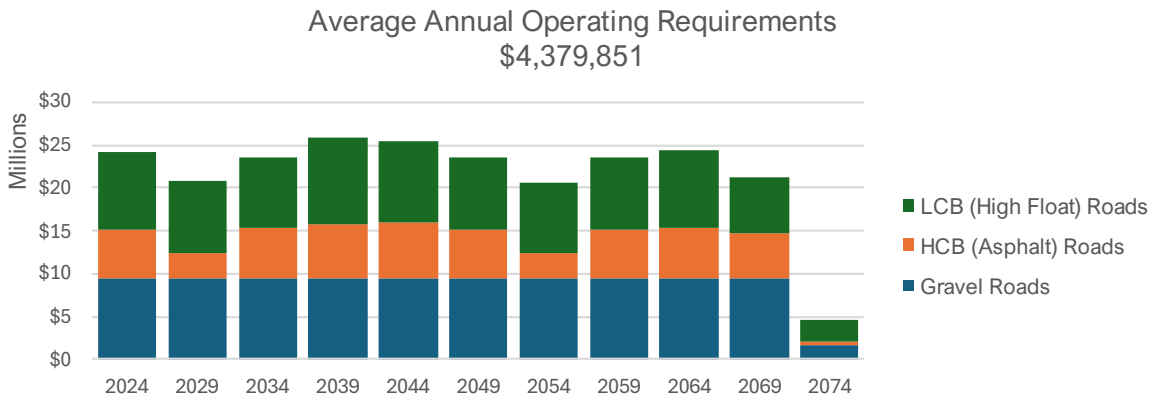
5.1.4.1 Forecasted Capital Requirements

Based on the current lifecycle strategies identified previously for HCB (Asphalt), LCB (High Float), and Gravel Roads, and assuming the end-of-life replacement of all other assets in this category, the following graph forecasts capital requirements for the Road Network.

The annual capital requirement represents the average amount per year that the Town should allocate towards funding rehabilitation and replacement needs to meet future capital needs. The annual operating requirement represents the average amount per year that the Town should allocate towards funding maintenance and preventative maintenance needs for capital lifecycle management strategies.

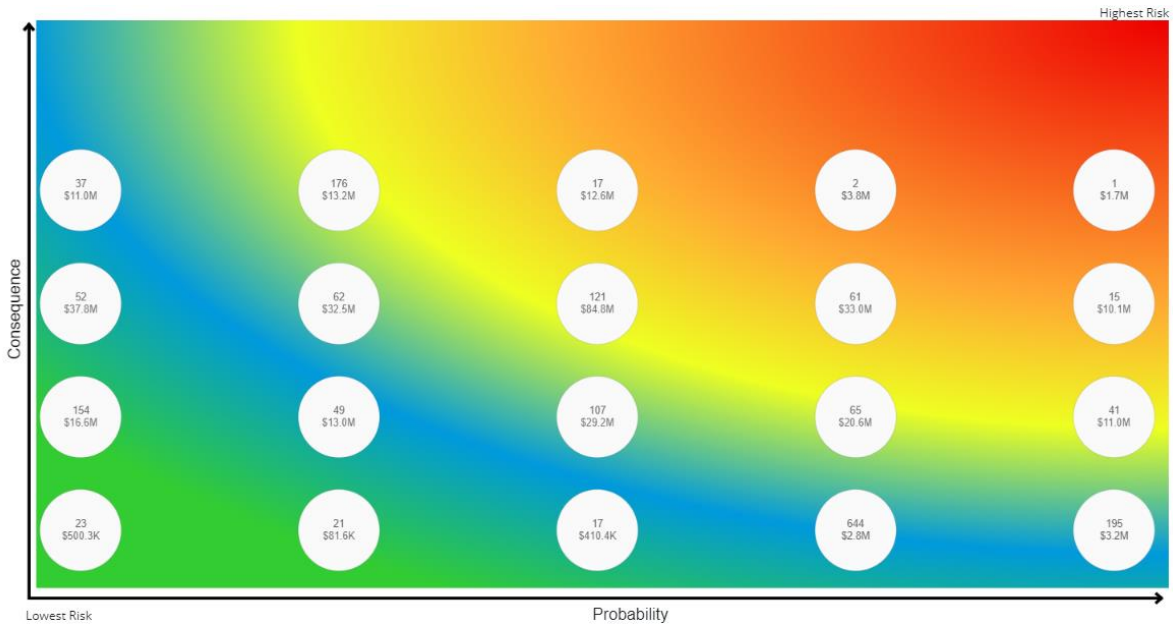
The projected cost of lifecycle activities that will need to be undertaken over the next 10 years to maintain the current level of service can be found in Appendix B.





5.1.5 Risk & Criticality

The following risk matrix provides a visual representation of the relationship between the probability of failure and the consequence of failure for the assets within this asset category based on 2023 inventory data. See Appendix E for the criteria used to determine the risk rating of each asset.



5.1.5.1 Critical Assets

The identification of critical assets allows the Town to determine appropriate risk mitigation strategies and treatment options. These may include asset-specific lifecycle strategies, condition assessment strategies, or simply the need to collect better asset data. Critical assets do not necessarily require immediate renewal or replacement.

The following table identifies the most critical assets according to the risk criteria identified in Appendix E. The risk rating is calculated by multiplying the probability of failure and the consequence of failure for each asset.

Segment	Name	Risk Rating
HCB (Asphalt) Roads	Lindgren Road West *(entire road)*	20.60 – Very High
HCB (Asphalt) Roads	Gun Club Road *(entire road)*	19.10 – Very High
HCB (Asphalt) Roads	Lorne Street South *(Duncan St. W. to Cora St. W.)*	18.48 – Very High
HCB (Asphalt) Roads	Woodland Drive *(entire road)*	18.45 – Very High
HCB (Asphalt) Roads	Lorne Street South *(Minerva St. W. to Mary St. W.)*	17.80 – Very High
HCB (Asphalt) Roads	Kitchen Road South *(Main St. W. to Cairns Rd. S.)*	17.10 – Very High
HCB (Asphalt) Roads	Yonge Street South *(Townline Rd to End)*	16.95 – Very High
HCB (Asphalt) Roads	Hoth's Lane *(Muskoka Rd. 10 to 0.3km West)*	16.95 – Very High
LCB (High Float) Roads	Old Ferguson Road *(Hwy 11 to Demain Rd.)*	16.40 – Very High
HCB (Asphalt) Roads	Lakeview Crescent *(entire road)*	16.34 – Very High

5.1.6 Levels of Service

The following tables identify the Town's current level of service for the Road Network. These metrics include the technical and community level of service metrics that are required as part of O. Reg. 588/17 as well as any additional performance measures that the Town has selected for this AMP.

5.1.6.1 Community Levels of Service

The following table outlines the qualitative descriptions that determine the community levels of service provided by the Road Network.

Service Attribute	Qualitative Description	Current LOS (2023)
Scope	Description, which may include maps, of the road network in the municipality and its level of connectivity	See Appendix C
Quality	Description or images that illustrate the different levels of road class pavement condition	The Town completed a Road Needs Study in 2020 in coordination with Tulloch Engineering. Every road section received a surface condition rating (1-10) and an overall condition rating (1-100) <u>Surface Condition Rating Criteria</u> (1-5) Road surface exhibits moderate to significant deterioration and requires renewal or full replacement within 1-5 years (6-10) Road surface is in good condition or has been recently resurfaced. Renewal or reconstruction is not required for 6-10+ years <u>Overall Condition Rating Criteria</u> (85-100) Road is in Very Good physical condition (70-84) Road is in Good physical condition (50-74) Road is in Fair physical condition (30-49) Road is in Poor physical condition (0-29) Road is in Very Poor physical condition or in a Critical State

5.1.6.2 Technical Levels of Service

The following table outlines the quantitative metrics that determine the technical level of service provided by the Road Network.

Service Attribute	Technical Metric	Current LOS (2023)	LOS (2022)
Scope	Lane-km of arterial roads (MMS classes 1 and 2) per land area (km/km^2)	0	0
	Lane-km of collector roads (MMS classes 3 and 4) per land area (km/km^2)	0.35	0.35
	Lane-km of local roads (MMS classes 5 and 6) per land area (km/km^2)	0.79	0.79
Quality	Average pavement condition index for paved roads in the municipality	HCB: 62% LCB: 58%	HCB: 71% LCB: 62%
	Average surface condition for unpaved roads in the municipality (e.g. very good, good, fair, poor, very poor)	Very Poor	Very Poor
Performance	Capital reinvestment rate	1.7%	1.7%

5.2 Bridges

Bridges represent a critical portion of the transportation services provided to the Town. Operations is responsible for the maintenance of all bridges located across municipal roads with the goal of keeping structures in an adequate state of repair and minimizing service disruptions.

5.2.1 Asset Inventory & Replacement Cost

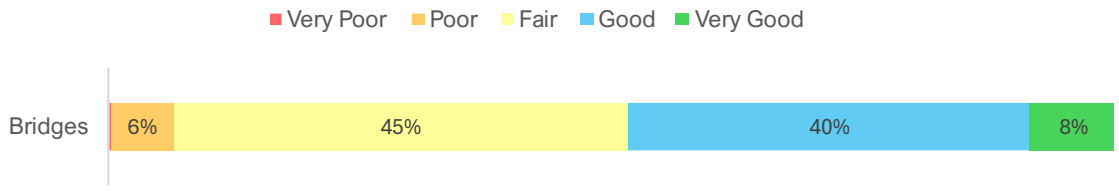
The table below includes the quantity, replacement cost method and total replacement cost of each asset segment in the Town's Bridges inventory.

Asset Segment	Quantity	Replacement Cost Method	Replacement Cost
Bridges	15	CPI Tables	$20,390,110

5.2.2 Asset Condition

The table below identifies the current average condition and source of available condition data for each asset segment. The Average Condition (%) is a weighted value based on replacement cost.

Asset Segment	Average Condition (%)	Average Condition Rating	Condition Source
Bridges	61%	Fair	100% Assessed



To ensure that the Town's Bridges continue to provide an acceptable level of service, the Town should monitor the average condition of all assets. If the average condition declines, staff should re-evaluate their lifecycle management strategy to determine what combination of maintenance, rehabilitation, and replacement activities is required to increase the overall condition of the Bridges.

5.2.2.1 Current Approach to Condition Assessment

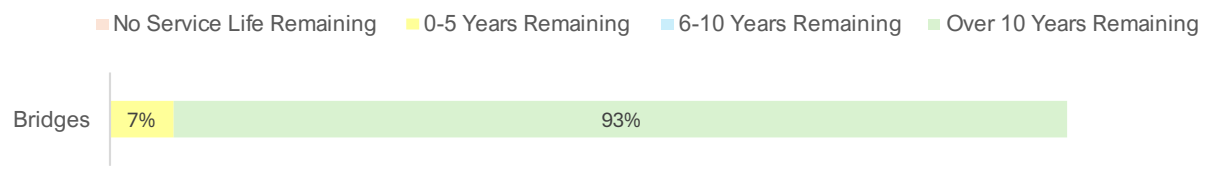
Accurate and reliable condition data allows staff to determine the remaining service life of assets and identify the most cost-effective approach to managing assets more confidently. The following describes the Town's current approach:

- Structural assessments of all bridges with a span greater than or equal to 3 meters are completed every 2 years in accordance with the Ontario Structure Inspection Manual (OSIM).
- The latest structural assessment, or Bridge Needs Study, was completed in 2022 and included a detailed assessment of the condition of each bridge.

5.2.3 Estimated Useful Life & Average Age

The table below identifies the estimated useful life, average age, and average service life remaining for each asset segment. Assessed condition may increase or decrease the average service life remaining.

Asset Segment	Estimated Useful Life (Years)	Average Age (Years)	Average Service Life Remaining (Years)
Bridges	50 Years	21.3	28.7



5.2.4 Lifecycle Management Strategy

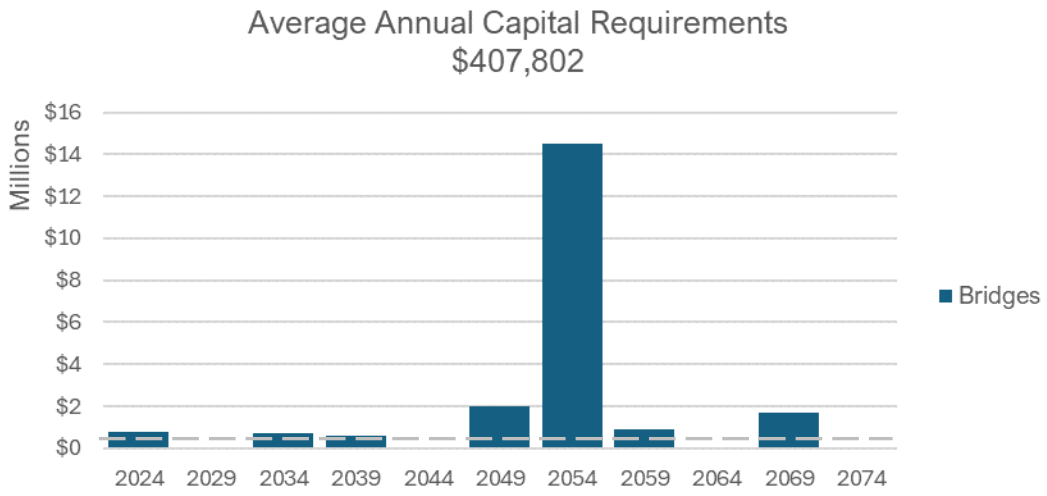
The condition or performance of most assets will deteriorate over time. To ensure that municipal assets are performing as expected and meeting the needs of customers, it is important to follow the established lifecycle management strategy for each structure as defined in the Town's current OSIM Structural Inspection Reports to proactively manage asset deterioration.

The following table outlines the Town's current lifecycle management strategy.

Activity Type	Description of Current Strategy
Maintenance, Rehabilitation and Replacement	All lifecycle activities are driven by the results of mandated structural inspections competed according to the Ontario Structural Inspection Manual (OSIM)
Bridge Replacement Strategy	Replacement of older, single lane bridges with either open or closed bottom culverts and expand road widths to double lanes, where warranted, to accommodate growth
Inspection	The most recent inspection report was completed in 2022 by Tulloch Engineering

5.2.4.1 Forecasted Capital Requirements

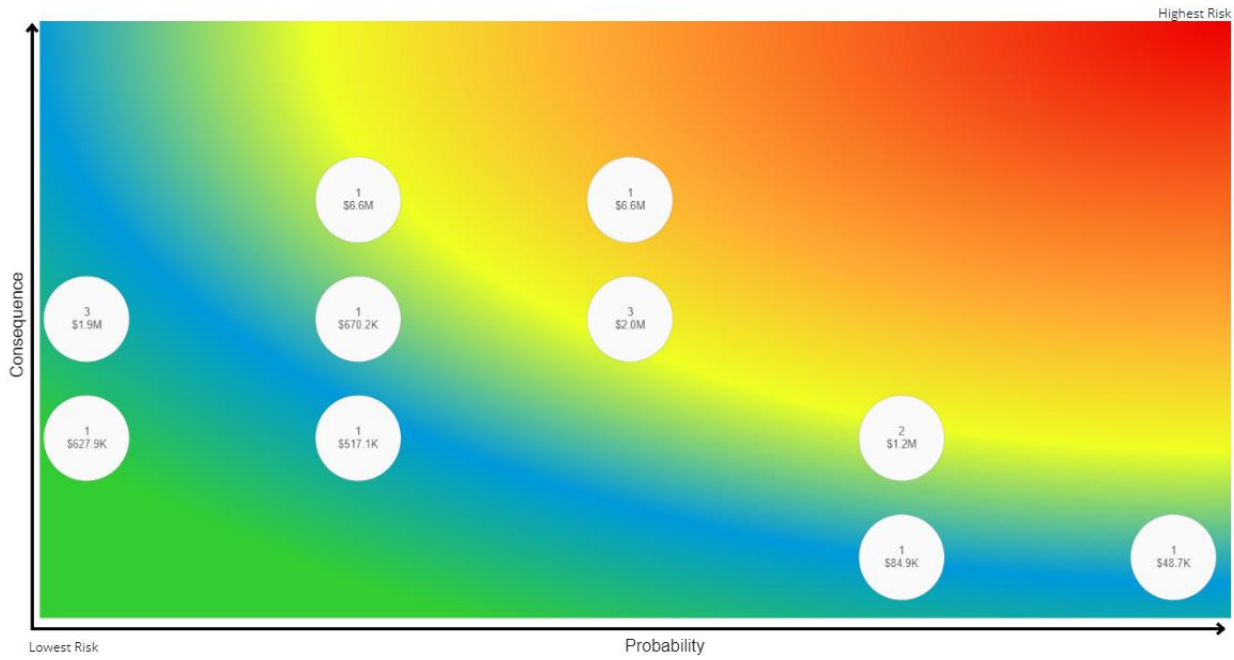
The following graph forecasts long-term capital requirements. The annual capital requirement represents the average amount per year that the Town should allocate towards funding rehabilitation and replacement needs. Since maintenance and preventative maintenance activities are driven by structural inspections, no annual operating requirements fluctuate significantly and are addressed on an as-needed basis.



The projected cost of lifecycle activities that will need to be undertaken over the next 10 years to maintain the current level of service can be found in Appendix B.

5.2.5 Risk & Criticality

The following risk matrix provides a visual representation of the relationship between the probability of failure and the consequence of failure for the assets within this asset category based on 2023 inventory data. See Appendix E for the criteria used to determine the risk rating of each asset.



5.2.5.1 Critical Assets

The identification of critical assets allows the Town to determine appropriate risk mitigation strategies and treatment options. These may include asset-specific lifecycle strategies, condition assessment strategies, or simply the need to collect better asset data. Critical assets do not necessarily require immediate renewal or replacement.

The following table identifies the most critical assets according to the risk criteria identified in Appendix E. Since there are no "Very High Risk" assets in this category, the highest risk assets have been identified. The risk rating is calculated by multiplying the probability of failure and the consequence of failure for each asset.

Segment	Name	Risk Rating
Bridges	#13 Centre Street	14.72 – High
Bridges	#5 Old North Road	12.24 - High

5.2.6 Levels of Service

The following tables identify the Town's current level of service for Bridges. These metrics include the technical and community level of service metrics that are required as part of O. Reg. 588/17 as well as any additional performance measures that the Town has selected for this AMP.

5.2.6.1 Community Levels of Service

The following table outlines the qualitative descriptions that determine the community levels of service provided by Bridges.

Service Attribute	Qualitative Description	Current LOS (2023)
Scope	Description of the traffic that is supported by municipal bridges (e.g. heavy transport vehicles, motor vehicles, emergency vehicles, pedestrians, cyclists)	Bridges provide reliable access to the road network for vehicles and/or pedestrians
Quality	Description or images of the condition of bridges and how this would affect use of the bridges	See Appendix C

5.2.6.2 Technical Levels of Service

The following table outlines the quantitative metrics that determine the technical level of service provided by the Town's Bridges.

Service Attribute	Technical Metric	Current LOS (2023)	LOS (2022)
Scope	% of bridges in the Town with loading or dimensional restrictions	47%	47%
Quality	% of bridges and major culverts in fair or better condition	73%	73%
Performance	Capital reinvestment rate	1.4%	1.4%

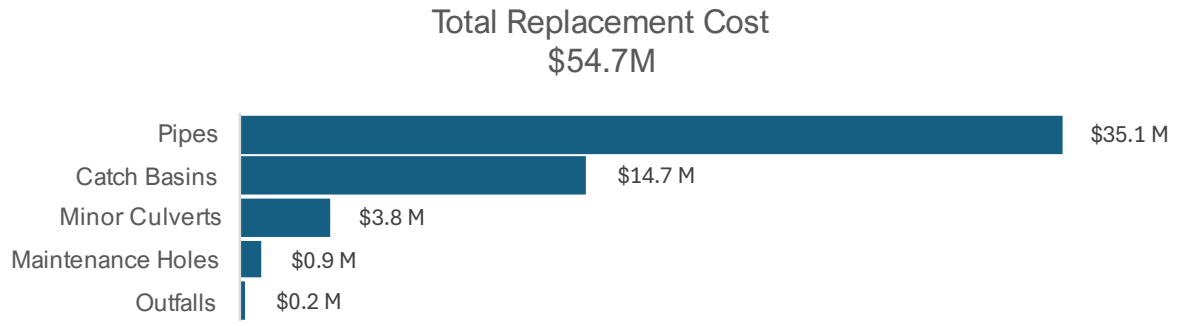
5.3 Storm Sewer Network

The Storm Sewer Network includes municipally owned catch basins, non-structural culverts, maintenance holes, outfalls, and storm sewer pipes. Operations is responsible for the maintenance of all municipally owned storm sewer infrastructure with the goal of keeping structures in an adequate state of repair and minimizing service disruptions.

5.3.1 Asset Inventory & Replacement Cost

The table below includes the quantity, replacement cost method and total replacement cost of each asset segment in the Town's Storm Sewer Network inventory.

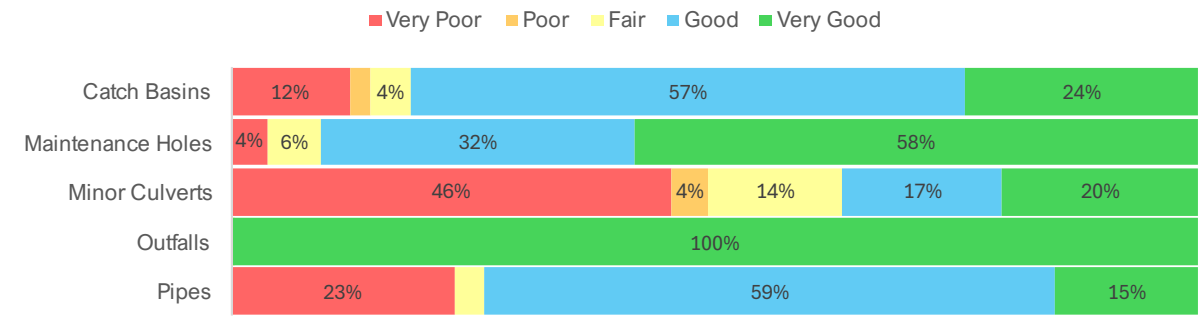
Asset Segment	Quantity	Replacement Cost Method	Total Replacement Cost
Catch Basins	903	CPI Tables	$14,760,511
Maintenance Holes	264	CPI Tables	$938,845
Minor Culverts	56	CPI Tables	$3,774,241
Outfalls	21	CPI Tables	$161,818
Pipes	18.7 km	CPI Tables	$35,063,906
			$54,699,321



5.3.2 Asset Condition

The table below identifies the current average condition and source of available condition data for each asset segment. The Average Condition (%) is a weighted value based on replacement cost.

Asset Segment	Average Condition (%)	Average Condition Rating	Condition Source
Catch Basins	64%	Good	67% Assessed 33% Age-based
Maintenance Holes	83%	Very Good	47% Assessed 53% Age-based
Minor Culverts	39%	Poor	71% Assessed 29% Age-based
Outfalls	99%	Very Good	14% Assessed 86% Age-based
Pipes	60%	Good	98% Assessed 2% Age-based
	58%	**Fair**	**96% Assessed**



To ensure that the Town's Storm Sewer Network continues to provide an acceptable level of service, the Town should monitor the average condition of all assets. If the average condition declines, staff should re-evaluate their lifecycle management strategy to determine what combination of maintenance, rehabilitation, and replacement activities is required to increase the overall condition of the Storm Sewer Network.

5.3.2.1 Current Approach to Condition Assessment

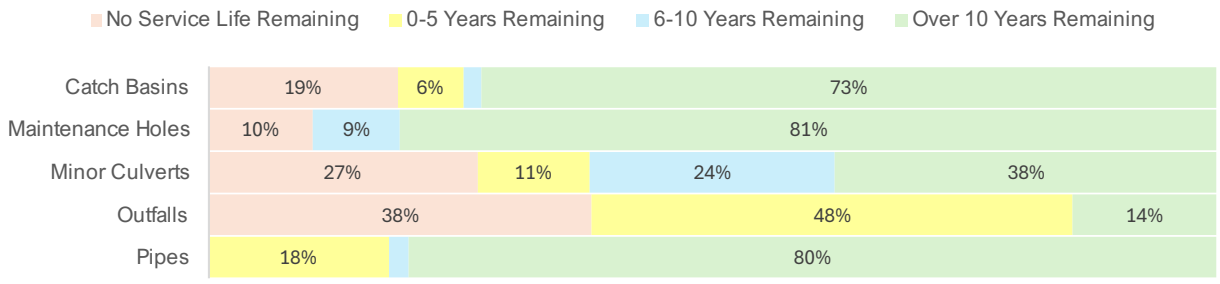
Accurate and reliable condition data allows staff to determine the remaining service life of assets and identify the most cost-effective approach to managing assets more confidently. The following describes the municipality's current approach:

- In 2018, the Town contracted Tulloch Engineering to perform a comprehensive storm network inventory analysis and condition assessments in 5 phases over a 3-year period.
- Since then, condition assessments have been updated only on those storm network assets that have undergone significant rehabilitation or replacement.
- The Town should consider establishing an industry best practice assessment cycle for the Storm Sewer Network.

5.3.3 Estimated Useful Life & Average Age

The table below identifies the estimated useful life, average age, and average service life remaining for each asset segment. Assessed condition may increase or decrease the average service life remaining.

Asset Segment	Estimated Useful Life (Years)	Average Age (Years)	Average Service Life Remaining (Years)
Catch Basins	50 Years	36.9	13.1
Maintenance Holes	50 Years	32.2	17.8
Minor Culverts	38 Years	24.5	13.5
Outfalls	35 Years	31.6	3.4
Pipes	30 – 50 Years	55.0	25.0
		43.3	**11.4**



5.3.4 Lifecycle Management Strategy

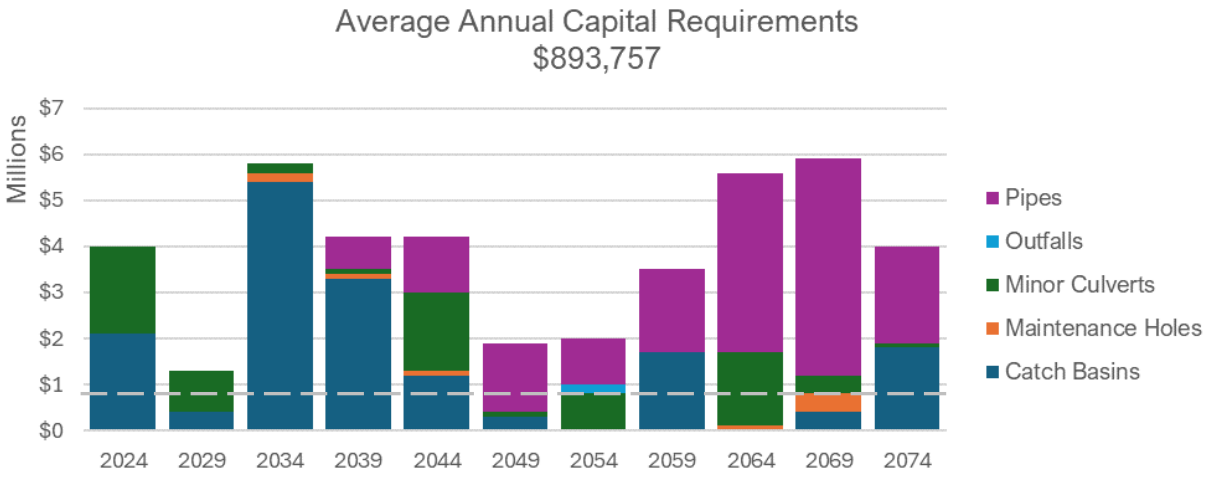
The condition or performance of most assets will deteriorate over time. To ensure that municipal assets are performing as expected and meeting the needs of customers, it is important to follow the established lifecycle management strategy to proactively manage asset deterioration.

The following table outlines the Town's current lifecycle management strategy.

Activity Type	Description of Current Strategy
Maintenance	Maintenance activities are completed to a lesser degree compared to other core linear infrastructure
	Primary activities include catch basin cleaning and storm main flushing, but only a small percentage of the entire network is flushed per year
	CCTV inspections and cleaning began in 2019 and this information is used to drive forward rehabilitation and replacement plans
Rehabilitation	Trenchless re-lining has the potential to reduce total lifecycle costs while potentially extending the current assets life by twice the original expected useful life of the asset.
Replacement	The Town's storm network assessments performed by consultants have provided Huntsville with projected replacements over the next 5-10 years

5.3.4.1 Forecasted Capital Requirements

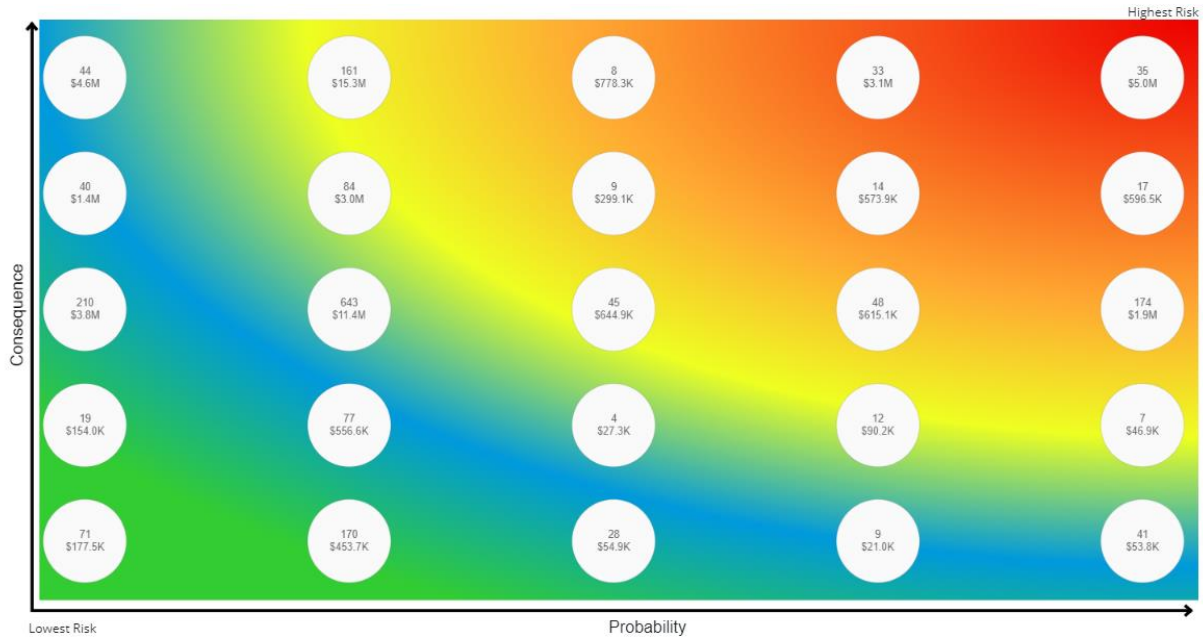
The following graph forecasts long-term capital requirements. The annual capital requirement represents the average amount per year that the Town should allocate towards funding rehabilitation and replacement needs. Annual operating requirements fluctuate significantly and are addressed on an as-needed basis.



The projected cost of lifecycle activities that will need to be undertaken over the next 10 years to maintain the current level of service can be found in Appendix B.

5.3.5 Risk & Criticality

The following risk matrix provides a visual representation of the relationship between the probability of failure and the consequence of failure for the assets within this asset category based on 2023 inventory data. See Appendix E for the criteria used to determine the risk rating of each asset.



5.3.5.1 Critical Assets

The identification of critical assets allows the Town to determine appropriate risk mitigation strategies and treatment options. These may include asset-specific lifecycle strategies, condition assessment strategies, or simply the need to collect better asset data. Critical assets do not necessarily require immediate renewal or replacement.

The following table identifies the most critical assets according to the risk criteria identified in Appendix E. The risk rating is calculated by multiplying the probability of failure and the consequence of failure for each asset.

Segment	Name	Location	Risk Rating
Pipes	Various	Caroline Street East	25 – Very High
Pipes	Various	Crestview Drive	25 – Very High
Pipes	Various	Duncan Street East	25 – Very High
Pipes	Various	Duncan Street West	25 – Very High
Pipes	Various	Echo Bay Road	25 – Very High

Segment	Name	Location	Risk Rating
Pipes	Various	Forbes Hill Drive	25 – Very High
Pipes	Various	Glenwood Drive	25 – Very High
Pipes	Various	Herman Ave	25 – Very High
Pipes	Various	Hunters Bay Drive	25 – Very High
Pipes	Various	Kirby's Way	25 – Very High
Pipes	Various	Knotty Pine Drive	25 – Very High
Pipes	Various	Lake Drive	25 – Very High
Pipes	Various	Lansdowne Street West	25 – Very High
Pipes	Various	Look Out Point Drive	25 – Very High
Pipes	Various	Manominee Street	25 – Very High
Pipes	Various	Morgan Heights Drive	25 – Very High
Pipes	Various	Silver Oaks Crescent	25 – Very High
Pipes	Various	Town Line Road West	25 – Very High
Pipes	Various	Walter Street	25 – Very High
Pipes	Various	West Street North	25 – Very High
Pipes	Various	Wilmott Street	25 – Very High
Pipes	Various	Yonge Street South	25 – Very High
Pipes	Various	Centre Street South	24 – Very High
Pipes	Various	Chalet Crescent	24 – Very High
Pipes	Various	Mawhiney Court	24 – Very High
Pipes	Various	Cliff Avenue	23 – Very High
Pipes	Various	Cora Street West	23 – Very High
Pipes	Various	Florence Street West	23 – Very High
Pipes	Various	Queen Street	23 – Very High
Pipes	Various	Sabrina Park Drive	23 – Very High
Pipes	Various	Beechwood Path	22 – Very High
Pipes	Various	Susan Street West	22 – Very High
Pipes	Various	Brunel Road	20 – Very High
Pipes	Various	Goodwin Drive	20 – Very High
Pipes	Various	Johanna Street	20 – Very High
Pipes	Various	Kendra Crescent	20 – Very High
Pipes	Various	Minerva Street West	20 – Very High
Pipes	Various	South Dufferin Street	20 – Very High
Catch Basin	STRMP00213	230 Echo Bay Road	20 – Very High

5.3.6 Levels of Service

The following tables identify the Town's current level of service for the Storm Sewer Network. These metrics include the technical and community level of service metrics that are required as part of O. Reg. 588/17 as well as any additional performance measures that the Town has selected for this AMP.

5.3.6.1 Community Levels of Service

The following table outlines the qualitative descriptions that determine the community levels of service provided by the Storm Sewer Network.

Service Attribute	Qualitative Description	Current LOS (2023)
Scope	Description, which may include map, of the user groups or areas of the municipality that are protected from flooding, including the extent of protection provided by the municipal storm sewer system	See Appendix C

5.3.6.2 Technical Levels of Service

The following table outlines the quantitative metrics that determine the technical level of service provided by the Storm Sewer Network.

Service Attribute	Technical Metric	Current LOS (2023)	LOS (2022)
Scope	% of properties in municipality resilient to 100-year storm	77%	77%
	% of the municipal stormwater management system resilient to a 5-year storm	TBD	TBD
Quality	% of storm sewer network that is in fair or better condition	78%	78%
Performance	Capital reinvestment rate	1.4%	1.4%

5.4 Facilities

The Town of Huntsville owns and maintains several facilities and recreation centres that provide key services to the community. These include:

- administrative offices
- cemeteries
- community centres
- fire stations and associated offices and facilities
- library
- parks & trails
- public works garages and storage sheds
- recreation and cultural

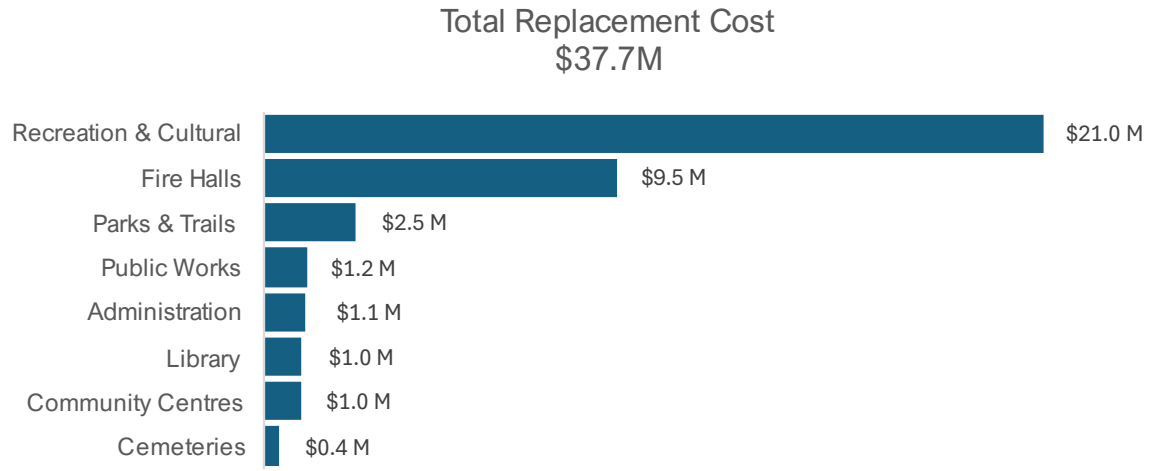
5.4.1 Asset Inventory & Replacement Cost

The table below includes the quantity, replacement cost method and total replacement cost of each asset segment in the Town's Facilities inventory.

Asset Segment	Quantity[3]	Replacement Cost Method	Replacement Cost[4]
Administration	21	97% CPI Tables 3% User-Defined Cost	$1,108,684
Cemeteries	6	94% CPI Tables 6% User-Defined Cost	$444,531
Community Centres	32	CPI Tables	$1,028,060
Fire Halls	75	CPI Tables	$9,428,222
Library	12	CPI Tables	$1,025,573
Parks & Trails	54	CPI Tables	$2,516,833
Public Works	24	CPI Tables	$1,136,305
Recreation & Cultural	646	99% CPI Tables 1% User-Defined Cost	$21,030,732
			$37,718,940

[3] The Town's facilities asset inventory contains records for many major facility components but not a complete listing. A full componentization of facilities is expected to be achieved through the comprehensive review of Town Facilities currently in progress in 2024.

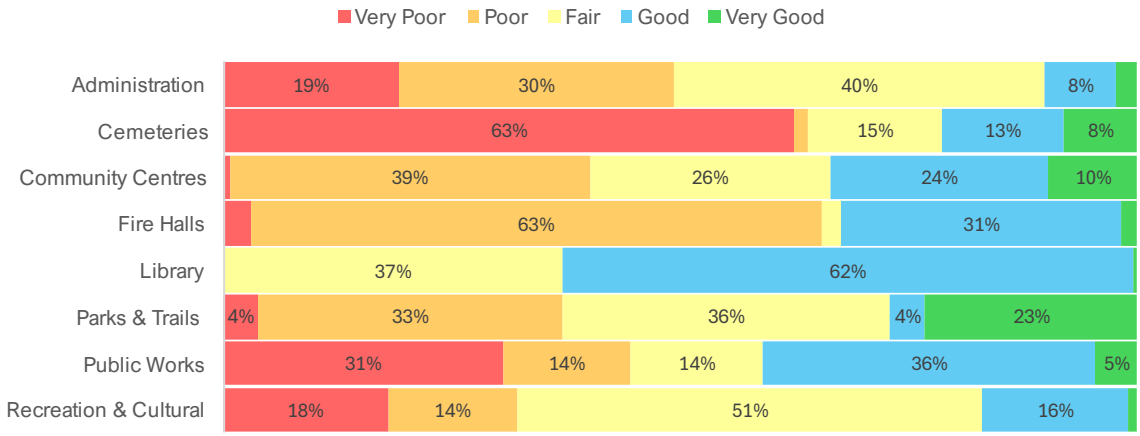
[4] A comprehensive review of Town Facilities is currently in progress in 2024 and will include updated condition assessments and replacement costs for each facility component. These updates will be reflected in the 2025 AMP.



5.4.2 Asset Condition

The table below identifies the current average condition and source of available condition data for each asset segment. The Average Condition (%) is a weighted value based on replacement cost.

Asset Segment	Average Condition (%)	Average Condition Rating	Condition Source
Administration	38%	Poor	91% Assessed 9% Age-based
Cemeteries	35%	Poor	83% Assessed 17% Age-based
Community Centres	52%	Fair	94% Assessed 6% Age-based
Fire Halls	47%	Fair	99% Assessed 1% Age-based
Library	65%	Good	86% Assessed 14% Age-based
Parks & Trails	52%	Fair	100% Assessed
Public Works	45%	Fair	100% Assessed
Recreation & Cultural	46%	Fair	99% Assessed 1% Age-based
	47%	**Fair**	**99% Assessed**



To ensure that the Town's Facilities continue to provide an acceptable level of service, the Town should monitor the average condition of all assets. If the average condition declines, staff should re-evaluate their lifecycle management strategy to determine what combination of maintenance, rehabilitation and replacement activities is required to increase the overall condition of the Facilities.

5.4.2.1 Current Approach to Condition Assessment

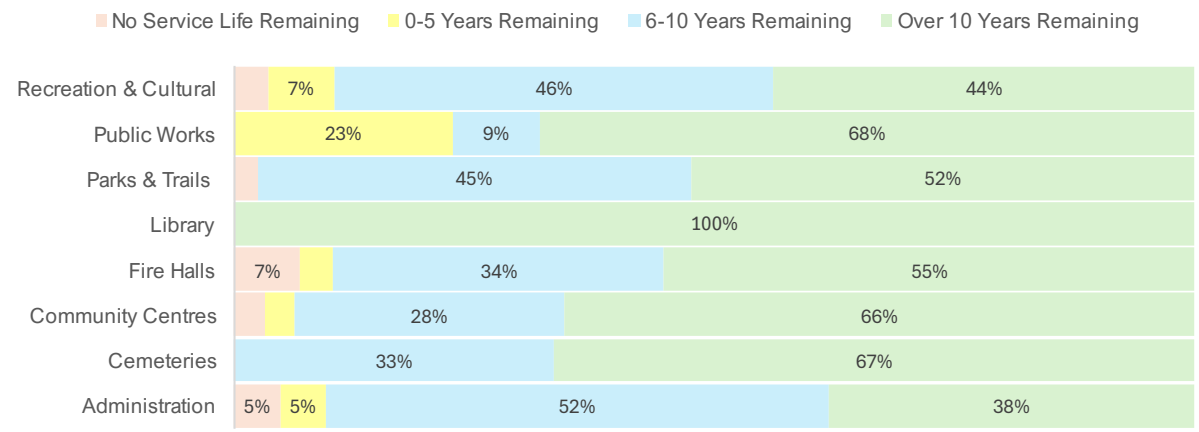
Accurate and reliable condition data allows staff to determine the remaining service life of assets and identify the most cost-effective approach to managing assets more confidently. The following describes the Town's current approach:

- High-level assessments by internal staff are performed annually to determine the condition of facilities.
- A structural assessment of Town Hall was completed by Duke Engineering in 2018.
- A structural assessment of the Huntsville Public Library was completed by Mitchel Jensen Architects in 2019.
- A condition assessment of the Town's Public Works facility was completed by Tulloch Engineering in 2022/23.
- A comprehensive review of Town Facilities is currently in progress in 2024 and will include updated condition assessments and replacement costs for each facility component.

5.4.3 Estimated Useful Life & Average Age

The table below identifies the estimated useful life, average age, and average service life remaining for each asset segment. Assessed condition may increase or decrease the average service life remaining.

Asset Segment	Estimated Useful Life (Years)	Average Age (Years)	Average Service Life Remaining (Years)
Administration	20 – 40 Years	14.0	8.2
Cemeteries	40 Years	20.8	19.2
Community Centres	15 – 50 Years	11.4	15.7
Fire Halls	15 – 50 Years	12.3	15.9
Library	20 – 40 Years	10.7	20.8
Parks & Trails	15 – 50 Years	15.7	17.3
Public Works	10 – 50 Years	13.2	16.2
Recreation & Cultural	15 – 50 Years	12.1	11.8
		12.8	**13.9**



5.4.4 Lifecycle Management Strategy

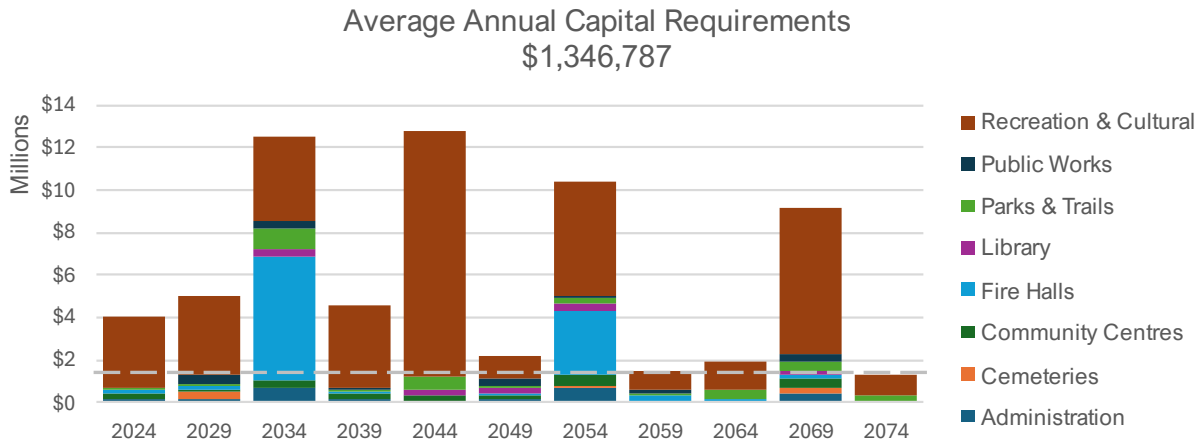
The condition or performance of most assets will deteriorate over time. To ensure that municipal assets are performing as expected and meeting the needs of customers, it is important to establish a lifecycle management strategy to proactively manage asset deterioration.

The following table outlines the Town's current lifecycle management strategy.

Activity Type	Description of Current Strategy
Maintenance/ Rehabilitation	Municipal facilities are subject to regular inspections to identify health & safety requirements as well as structural deficiencies that require additional attention
	Critical facilities (Fire Stations) have a detailed maintenance and rehabilitation schedule, while the maintenance of other facilities is dealt with on a case-by-case basis
Replacement	Assessments are completed strategically as facilities approach their end-of-life to determine whether replacement or rehabilitation is appropriate

5.4.4.1 Forecasted Capital Requirements

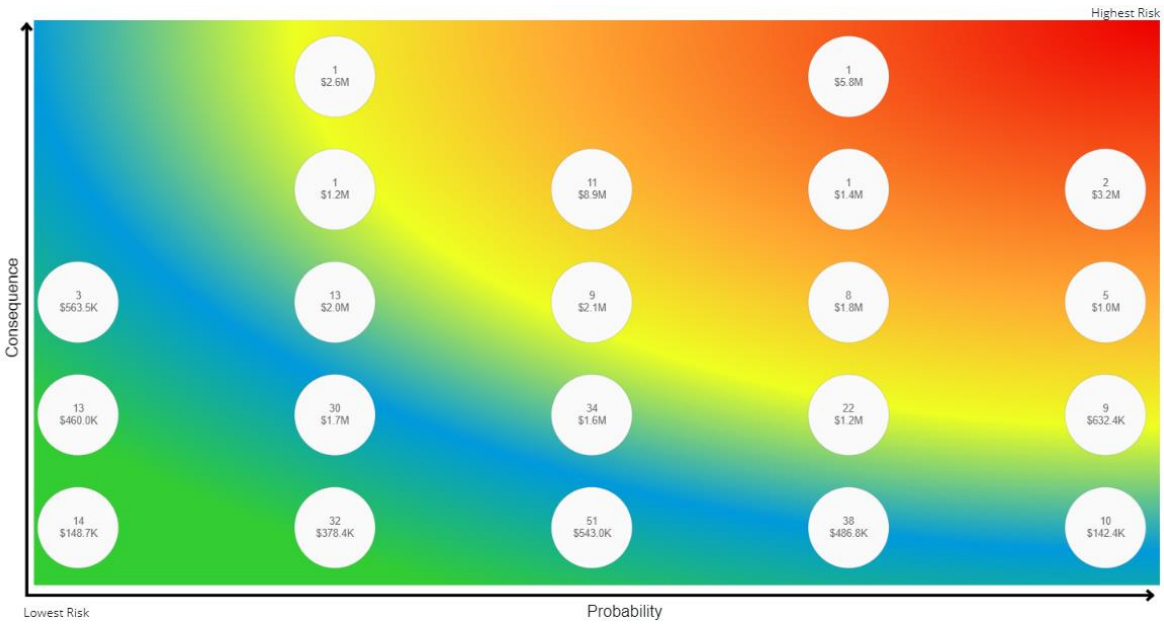
The following graph forecasts long-term capital requirements. The annual capital requirement represents the average amount per year that the Town should allocate towards funding rehabilitation and replacement needs. Annual operating requirements fluctuate significantly and are addressed on an as-needed basis.



The projected cost of lifecycle activities that will need to be undertaken over the next 10 years to maintain the current level of service can be found in Appendix B.

5.4.5 Risk & Criticality

The following risk matrix provides a visual representation of the relationship between the probability of failure and the consequence of failure for the assets within this asset category based on 2023 inventory data. See Appendix E for the criteria used to determine the risk rating of each asset.



5.4.5.1 Critical Assets

The identification of critical assets allows the Town to determine appropriate risk mitigation strategies and treatment options. These may include asset-specific lifecycle strategies, condition assessment strategies, or simply the need to collect better asset data. Critical assets do not necessarily require immediate renewal or replacement.

The following table identifies the most critical assets according to the risk criteria identified in Appendix E. The risk rating is calculated by multiplying the probability of failure and the consequence of failure for each asset.

Segment	Name	Risk Rating
Recreation & Cultural	Pool Tank and Tile at Canada Summit Centre	23.75 – Very High
Recreation & Cultural	Roof – Upper Flat at Canada Summit Centre	20 – Very High
Fire Halls	Fire Station #1 – Huntsville	20 – Very High
Recreation & Cultural	Roof – Main at Don Lough Arena	19 – Very High
Fire Halls	Fire Station #1 Roof – Huntsville	17.5 – Very High
Recreation & Cultural	Condenser at Canada Summit Centre	16.25 – Very High
Public Works	Public Works Shop at Madill Church Road	16.25 – Very High
Recreation & Cultural	Pool Change Rooms at Canada Summit Centre	16.25 – Very High

5.4.6 Levels of Service

The following tables identify the Town's current level of service for Facilities. Since Facilities are considered to be non-core assets, there are no required level of service metrics identified as part of O. Reg. 588/17. As a result, these metrics include technical and community level of service that the Town has selected for this AMP.

5.4.6.1 Community Levels of Service

The following table outlines the qualitative descriptions that determine the community levels of service provided by the Town's Facilities.

Service Attribute	Qualitative Description	Current LOS (2023)
Scope	List of facilities, locational map, an explanation of uses and the service areas supported by these assets.	See Appendix C

5.4.6.2 Technical Levels of Service

The following table outlines the quantitative metrics that determine the technical level of service provided by the Town's Facilities.

Service Attribute	Technical Metric	Current LOS (2023)	LOS (2022)
Scope	% of facilities where annual internal inspections have been completed	100%	100%
Quality	% of facility assets that are in fair or better condition	59%	60%
Performance	Capital reinvestment rate	1.4%	1.4%

5.5 Equipment

To maintain the high quality of public infrastructure and support the delivery of core services, the Town owns and employs various types of equipment. This includes:

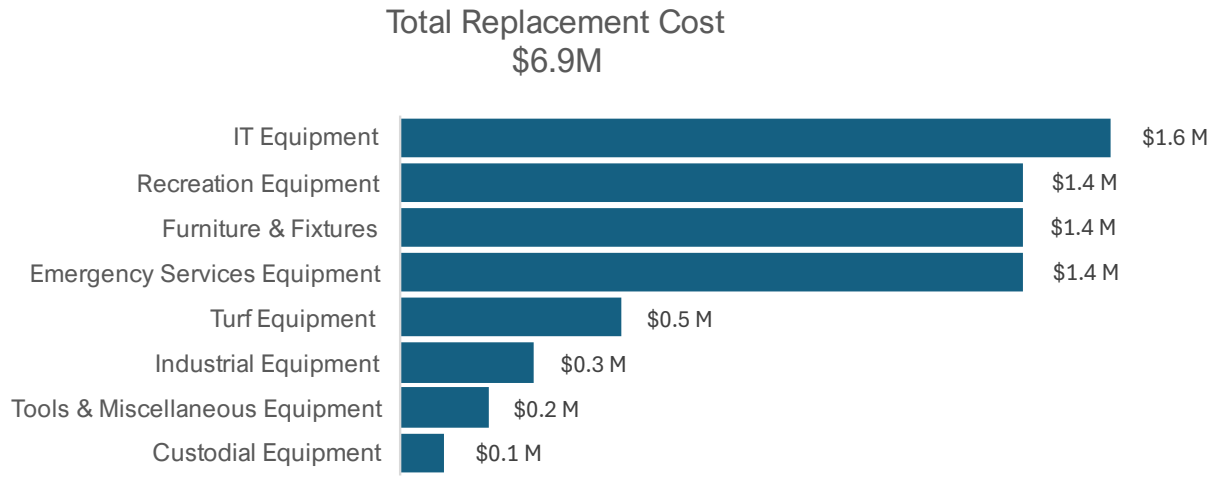
- custodial equipment to maintain facilities
- emergency services equipment to support first responders
- furniture & fixtures for facilities, offices, and buildings
- industrial equipment including appliances and hydraulic devices
- IT equipment for communication, entertainment, and data management
- recreation equipment for parks and sports facilities
- tools and miscellaneous equipment to ensure proper maintenance of facilities, fleet and machinery
- turf equipment to maintain the Town's parks, boulevards, and open spaces

Keeping equipment in an adequate state of repair is important to maintain a high level of service.

5.5.1 Asset Inventory & Replacement Cost

The table below includes the quantity, replacement cost method and total replacement cost of each asset segment in the Town's Equipment inventory.

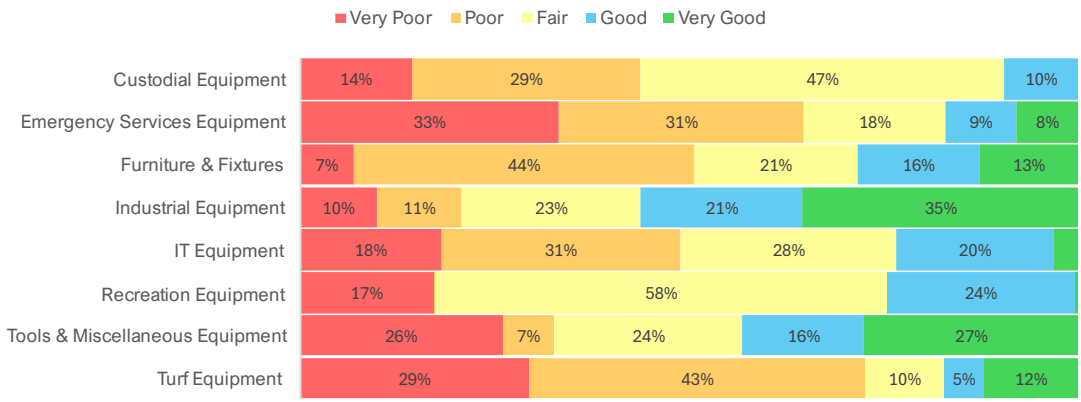
Asset Segment	Quantity	Replacement Cost Method	Replacement Cost
Custodial Equipment	6	57% CPI Tables 43% User-Defined Cost	$74,449
Emergency Services Equipment	371	87% CPI Tables 13% User-Defined Cost	$1,400,593
Furniture & Fixtures	996	99% CPI Tables 1% User-Defined Cost	$1,441,328
Industrial Equipment	30	CPI Tables	$316,626
IT Equipment	403	93% CPI Tables 7% User-Defined Cost	$1,625,656
Recreation Equipment	148	89% CPI Tables 11% User-Defined Cost	$1,357,626
Tools & Miscellaneous Equipment	84	75% CPI Tables 25% User-Defined Cost	$215,890
Turf Equipment	46	95% CPI Tables 5% User-Defined Cost	$450,177
			$6,882,345



5.5.2 Asset Condition

The table below identifies the current average condition and source of available condition data for each asset segment. The Average Condition (%) is a weighted value based on replacement cost.

Asset Segment	Average Condition (%)	Average Condition Rating	Condition Source
Custodial Equipment	47%	Fair	100% Assessed
Emergency Services Equipment	36%	Poor	96% Assessed 4% Age-based
Furniture & Fixtures	50%	Fair	70% Assessed 30% Age-based
Industrial Equipment	64%	Good	97% Assessed 3% Age-based
IT Equipment	42%	Fair	87% Assessed 13% Age-based
Recreation Equipment	50%	Fair	100% Assessed
Tools & Miscellaneous Equipment	52%	Fair	96% Assessed 4% Age-based
Turf Equipment	36%	Poor	96% Assessed 4% Age-based
	45%	**Fair**	**97% Assessed**



To ensure that the Town's Equipment continues to provide an acceptable level of service, the Town should monitor the average condition of all assets. If the average condition declines, staff should re-evaluate their lifecycle management strategy to determine what combination of maintenance, rehabilitation and replacement activities is required to increase the overall condition of the Equipment.

5.5.2.1 Current Approach to Condition Assessment

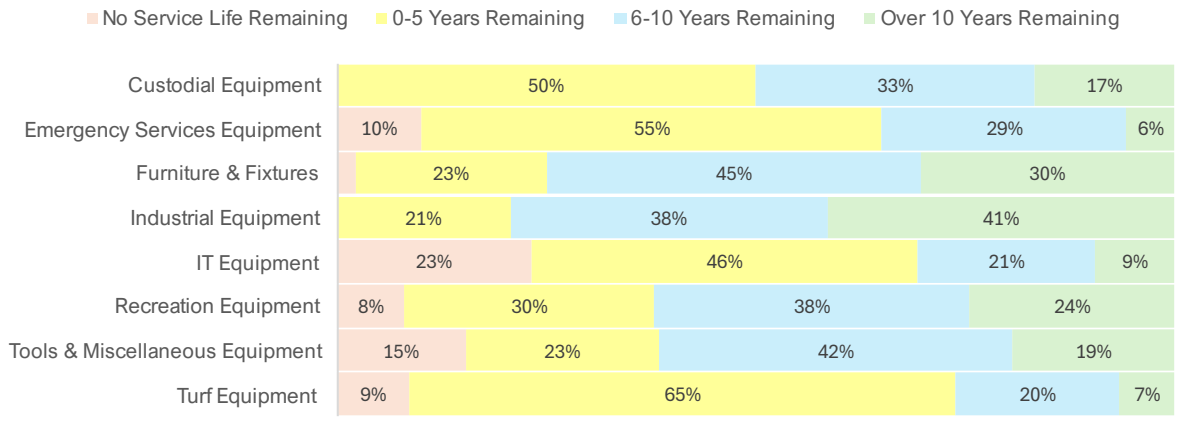
Accurate and reliable condition data allows staff to determine the remaining service life of assets and identify the most cost-effective approach to managing assets more confidently. The following describes the municipality's current approach:

- Although there is a structured reporting and tracking program in place for emergency services equipment, there are no formal condition assessment programs in place for all other equipment.
- Staff complete regular visual inspections of equipment to ensure they are in a state of adequate repair.

5.5.3 Estimated Useful Life & Average Age

The table below identifies the estimated useful life, average age, and average service life remaining for each asset segment. Assessed condition may increase or decrease the average service life remaining.

Asset Segment	Estimated Useful Life (Years)	Average Age (Years)	Average Service Life Remaining (Years)
Custodial Equipment	10 – 20 Years	5.9	5.8
Emergency Services Equipment	5 – 20 Years	7.3	4.3
Furniture & Fixtures	3 – 40 Years	9.3	13.6
Industrial Equipment	10 – 30 Years	7.0	9.8
IT Equipment	2 – 40 Years	6.8	3.5
Recreation Equipment	10 – 50 Years	8.5	8.5
Tools & Miscellaneous Equipment	10 – 50 Years	8.4	7.7
Turf Equipment	5 – 15 Years	6.9	4.6
		7.8	**7.3**



5.5.4 Lifecycle Management Strategy

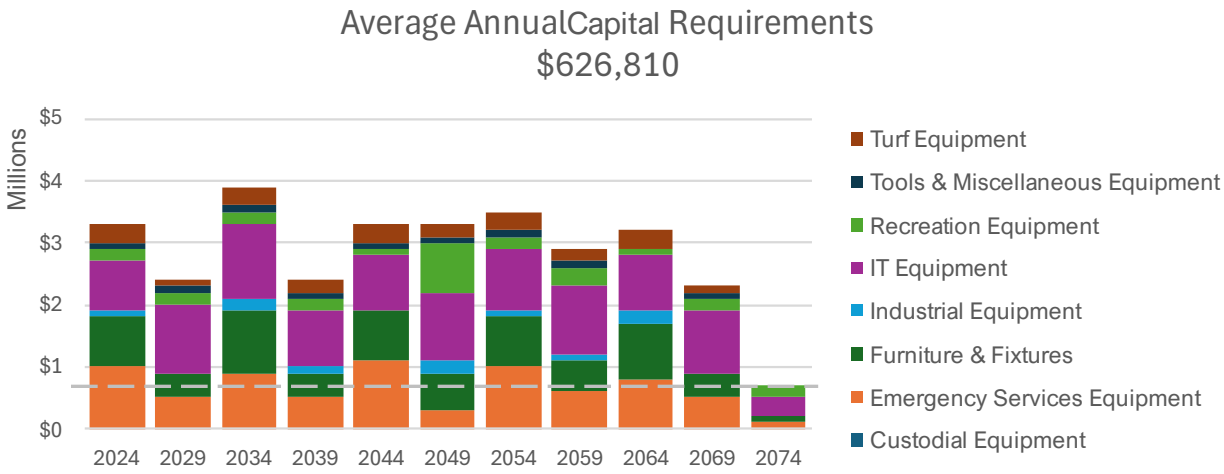
The condition or performance of most assets will deteriorate over time. To ensure that municipal assets are performing as expected and meeting the needs of customers, it is important to establish a lifecycle management strategy to proactively manage asset deterioration.

The following table outlines the Town's current lifecycle management strategy.

Activity Type	Description of Current Strategy
Maintenance/ Rehabilitation	Maintenance programs vary by department
	Emergency Services Equipment is subject to a much more rigorous inspection and maintenance program compared to most other departments
	Equipment is maintained according to manufacturer recommended actions and supplemented by the expertise of municipal staff
Replacement	The replacement of equipment depends on deficiencies identified by operators that may impact their ability to complete required tasks

5.5.4.1 Forecasted Capital Requirements

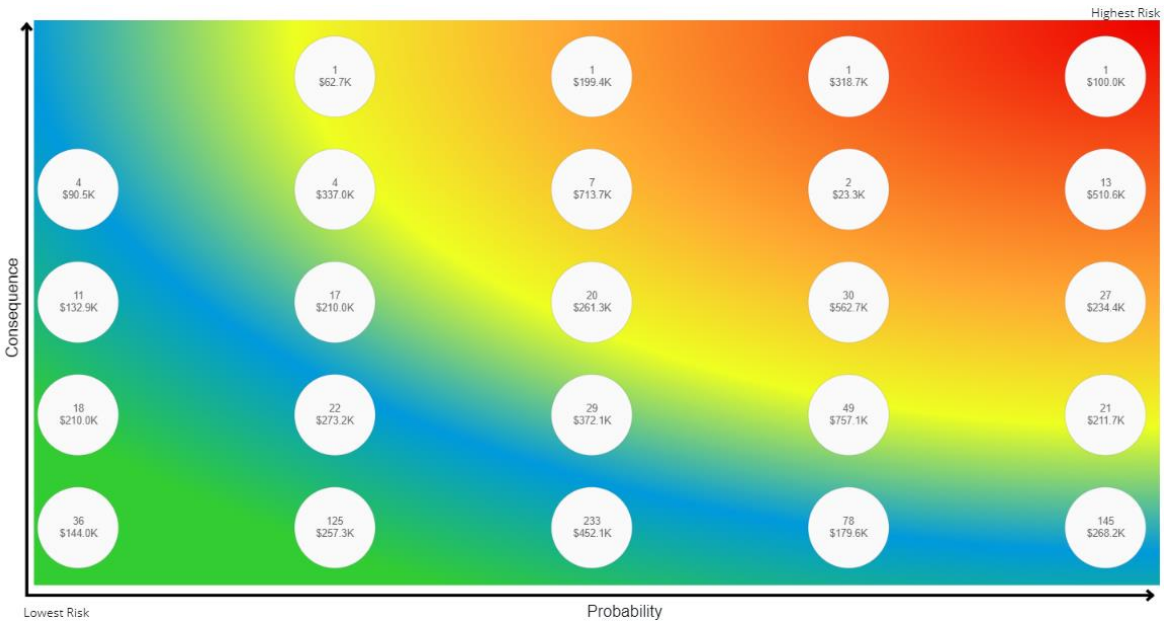
The following graph forecasts long-term capital requirements. The annual capital requirement represents the average amount per year that the Town should allocate towards funding rehabilitation and replacement needs. Annual operating requirements fluctuate significantly and are addressed on an as-needed basis.



The projected cost of lifecycle activities that will need to be undertaken over the next 10 years to maintain the current level of service can be found in Appendix B.

5.5.5 Risk & Criticality

The following risk matrix provides a visual representation of the relationship between the probability of failure and the consequence of failure for the assets within this asset category based on 2023 inventory data. See Appendix E for the criteria used to determine the risk rating of each asset.



5.5.5.1 Critical Assets

The identification of critical assets allows the Town to determine appropriate risk mitigation strategies and treatment options. These may include asset-specific lifecycle strategies, condition assessment strategies, or simply the need to collect better asset data. Critical assets do not necessarily require immediate renewal or replacement.

The following table identifies the most critical assets according to the risk criteria identified in Appendix E. The risk rating is calculated by multiplying the probability of failure and the consequence of failure for each asset.

Segment	Name	Risk Rating
Emergency Services Equipment	Air Fill Station – Fire Hall No. 1	25 – Very High
Recreation Equipment	Locomotive #1 Boiler	22.5 – Very High
Emergency Services Equipment	Fire Radio Repeaters	22.5 – Very High
Emergency Services Equipment	Bunker Gear	22.5 – Very High
Emergency Services Equipment	Hose Tested	20 – Very High
Emergency Services Equipment	Training Simulator	20 – Very High
Emergency Services Equipment	MSA G1 Cylinders	20 – Very High
Recreation Equipment	Poles for Safety Netting at McCulley	20 – Very High
Recreation Equipment	Chair Lift at Canada Summit Centre	17.5 – Very High

5.5.6 Levels of Service

The following tables identify the Town's current level of service for Equipment. Since Equipment assets are not considered to be core assets, there are no required level of service metrics identified as part of O. Reg. 588/17. As a result, these metrics include technical and community level of service that the Town has selected for this AMP.

5.5.6.1 Community Levels of Service

The following table outlines the qualitative descriptions that determine the community levels of service provided by the Town's Equipment.

Service Attribute	Qualitative Description	Current LOS (2023)
Scope	List of essential equipment, an explanation of uses and the service areas supported by these assets.	Emergency Services Equipment supports the Town's Fire Department and includes extrication and other rescue tools, air filling stations, hoses & nozzles for firefighting, personal protective gear for firefighters and other lifesaving equipment. IT Equipment supports all Town staff that provide essential services including public works, fire, etc., and includes end user computing, communication towers, networking, software and storage assets.

5.5.6.2 Technical Levels of Service

The following table outlines the quantitative metrics that determine the technical level of service provided by the Town's Equipment.

Service Attribute	Technical Metric	Current LOS (2023)	LOS (2022)
Quality	% essential equipment where regulatory inspections have been completed	100%	100%
	% of equipment in fair or better condition	54%	77%
Performance	Capital reinvestment rate	1.4%	1.4%

5.6 Fleet & Machinery

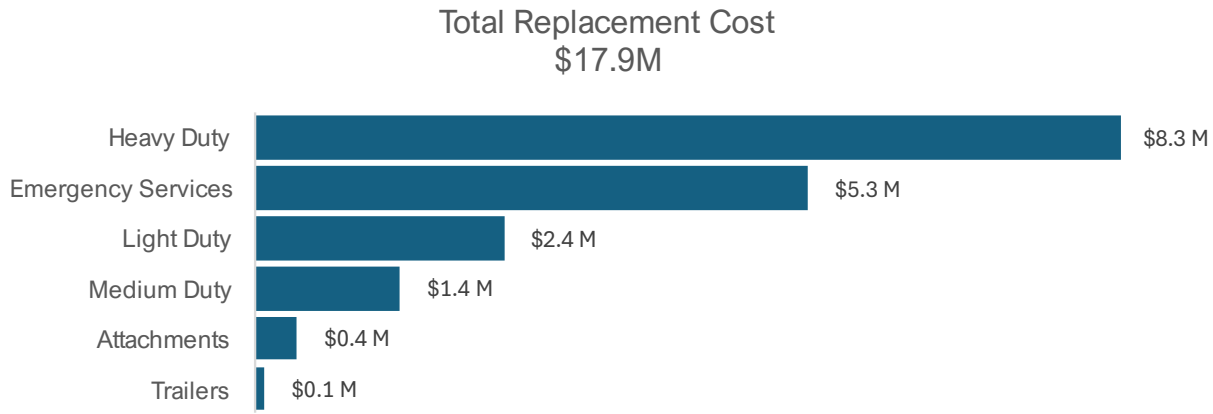
Vehicles and heavy machinery allow staff to efficiently deliver municipal services and personnel. Fleet assets are used to support several service areas, including:

- light-duty vehicles support all municipal service areas
- fire rescue vehicles to provide emergency services
- light-duty, medium-duty, & heavy-duty vehicles to support the maintenance of the transportation network, parks and facilities, and address service requests
- heavy-duty machinery supports the construction and rehabilitation of vital infrastructure, and the removal of critical infrastructure
- attachments support the operational needs of critical use vehicles and heavy-duty machinery

5.6.1 Asset Inventory & Replacement Cost

The table below includes the quantity, replacement cost method and total replacement cost of each asset segment in the Town's Fleet & Machinery inventory.

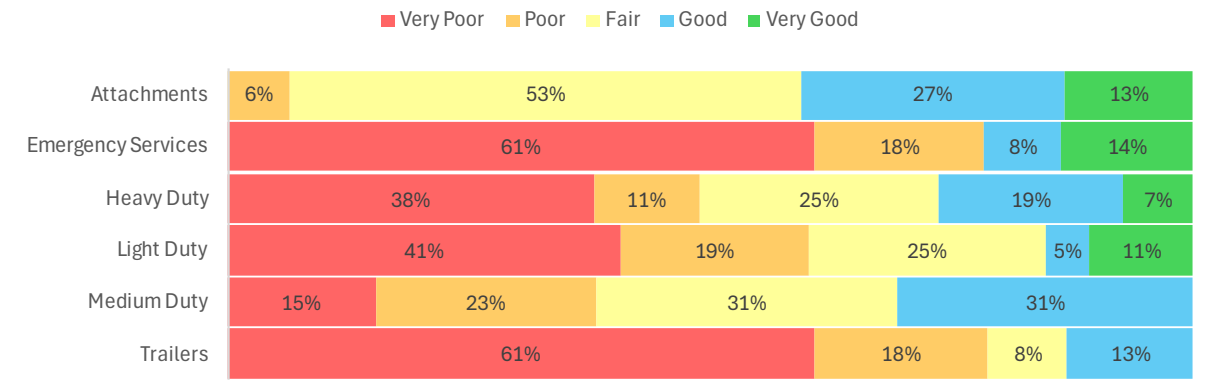
Asset Segment	Quantity	Replacement Cost Method	Replacement Cost
Attachments	19	CPI Tables	$398,320
Emergency Services	9	88% CPI Tables 12% User-Defined Cost	$5,275,817
Heavy Duty	27	65% CPI Tables 35% User-Defined Cost	$8,271,381
Light Duty	35	64% CPI Tables 36% User-Defined Cost	$2,435,527
Medium Duty	7	CPI Tables	$1,352,353
Trailers	8	76% CPI Tables 24% User-Defined Cost	$126,030
			$17,859,428



5.6.2 Asset Condition

The table below identifies the current average condition and source of available condition data for each asset segment. The Average Condition (%) is a weighted value based on replacement cost.

Asset Segment	Average Condition (%)	Average Condition Rating	Condition Source
Attachments	57%	Fair	100% Assessed
Emergency Services	30%	Poor	100% Assessed
Heavy Duty	35%	Poor	100% Assessed
Light Duty	35%	Poor	100% Assessed
Medium Duty	41%	Fair	86% Assessed 14% Age-based
Trailers	24%	Poor	100 % Assessed
	34%	**Poor**	**99% Assessed**



To ensure that the Town's Fleet & Machinery continue to provide an acceptable level of service, the Town should monitor the average condition of all assets. If the average condition declines, staff should re-evaluate their lifecycle management strategy to determine what combination of maintenance, rehabilitation and replacement activities is required to increase the overall condition of the assets.

5.6.2.1 Current Approach to Condition Assessment

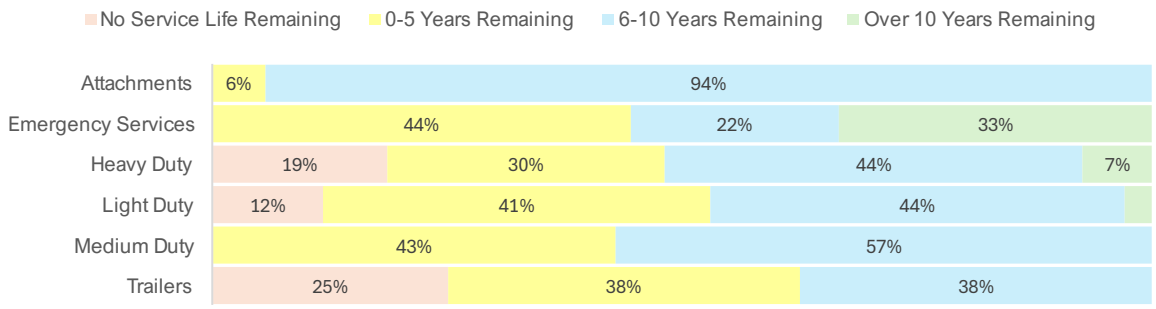
Accurate and reliable condition data allows staff to determine the remaining service life of assets and identify the most cost-effective approach to managing assets more confidently. The following describes the municipality's current approach:

- Staff complete regular visual inspections of the fleet to ensure they are in a state of adequate repair prior to operation.
- The mileage of vehicles, and hours of service for heavy-duty machinery, is used in determining the remaining useful life and relative vehicle conditions.

5.6.3 Estimated Useful Life & Average Age

The table below identifies the estimated useful life, average age, and average service life remaining for each asset segment. Assessed condition may increase or decrease the average service life remaining.

Asset Segment	Estimated Useful Life (Years)	Average Age (Years)	Average Service Life Remaining (Years)
Attachments	10 – 15 Years	4.4	7.3
Emergency Services	10 - 25 Years	9.5	7.2
Heavy Duty	10 - 15 Years	8.3	5.3
Light Duty	10 - 25 Years	6.0	3.9
Medium Duty	12 – 15 Years	6.8	5.5
Trailers	10 Years	6.4	5.3
		6.8	**5.3**



5.6.4 Lifecycle Management Strategy

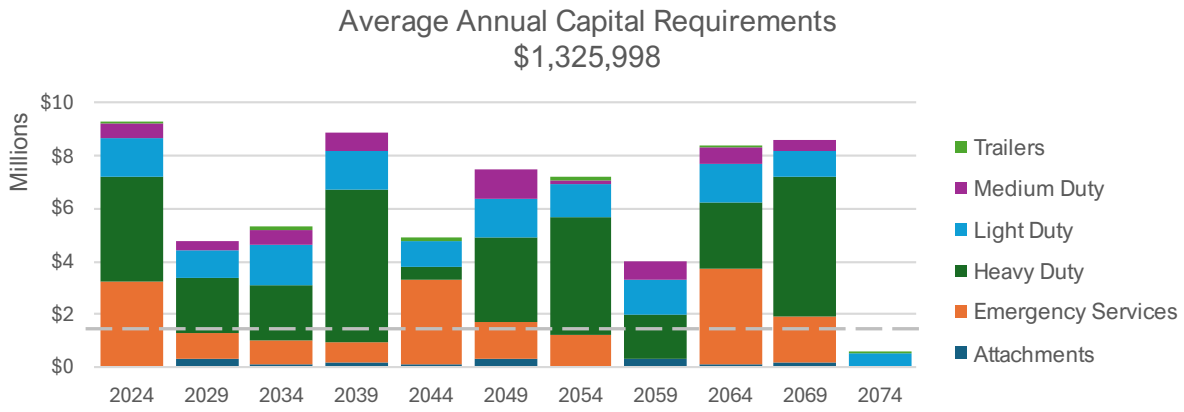
The condition or performance of most assets will deteriorate over time. To ensure that municipal assets are performing as expected and meeting the needs of customers, it is important to establish a lifecycle management strategy to proactively manage asset deterioration.

The following table outlines the Town's current lifecycle management strategy.

Activity Type	Description of Current Strategy
Maintenance/ Rehabilitation	Visual inspections, including fluid levels and tires, are completed and documented daily
	Annual preventative maintenance activities are in accordance with manufacturer recommended actions and supplemented by the expertise of municipal staff
Replacement	Vehicle age, kilometres and annual repair costs are taken into consideration when determining appropriate replacement schedules

5.6.4.1 Forecasted Capital Requirements

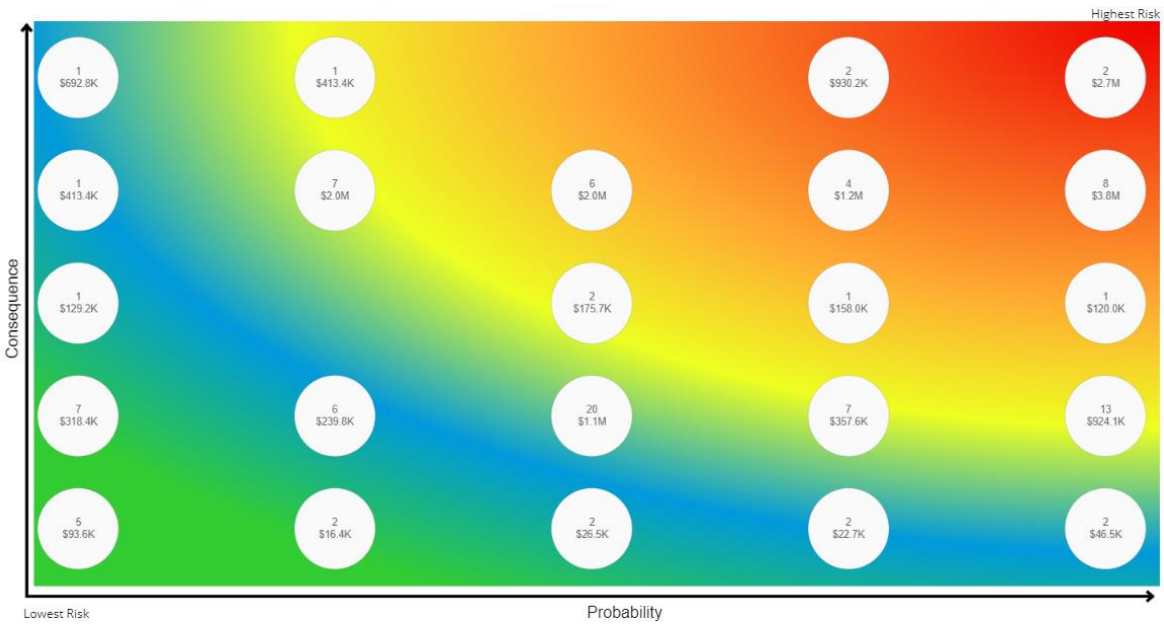
The following graph forecasts long-term capital requirements. The annual capital requirement represents the average amount per year that the Town should allocate towards funding rehabilitation and replacement needs. Annual operating requirements fluctuate significantly and are addressed on an as-needed basis.



The projected cost of lifecycle activities that will need to be undertaken over the next 10 years to maintain the current level of service can be found in Appendix B.

5.6.5 Risk & Criticality

The following risk matrix provides a visual representation of the relationship between the probability of failure and the consequence of failure for the assets within this asset category based on 2023 inventory data. See Appendix E for the criteria used to determine the risk rating of each asset.



5.6.5.1 Critical Assets

The identification of critical assets allows the Town to determine appropriate risk mitigation strategies and treatment options. These may include asset-specific lifecycle strategies, condition assessment strategies, or simply the need to collect better asset data. Critical assets do not necessarily require immediate renewal or replacement.

The following table identifies the most critical assets according to the risk criteria identified in Appendix E. The risk rating is calculated by multiplying the probability of failure and the consequence of failure for each asset.

Segment	Fleet #	Name	Risk Rating
Emergency Services	0501	Pumper/Tanker 592	25 – Very High
Emergency Services	0701	Ladder Truck 161	25 – Very High
Heavy Duty	1203	Grader	24 – Very High
Emergency Services	1302	Rescue Vehicle 181	24 – Very High
Heavy Duty	2001	Grader	24 – Very High
Heavy Duty	0906	Plow/Dump/Sander Truck	23 – Very High
Heavy Duty	0907	Plow/Dump/Sander Truck	23 – Very High
Heavy Duty	1201	Plow/Dump/Sander Truck	23 – Very High
Heavy Duty	1401	Loader/Backhoe	21 – Very High
Emergency Services	0908	Pumper/Tanker 591	20 – Very High
Medium Duty	1605	Sidewalk Plow	20 – Very High
Emergency Services	1701	Pumper/Tanker 191	20 – Very High
Heavy Duty	1301	Plow/Dump/Sander Truck	18.4 – Very High
Medium Duty	1901	Road Wizard	18.4 – Very High
Heavy Duty	1101	Loader	16.8 – Very High
Heavy Duty	1607	Loader	16.8 – Very High

5.6.6 Levels of Service

The following tables identify the Town's current level of service for Fleet & Machinery. Since Fleet & Machinery are not considered to be core assets, there are no required level of service metrics identified as part of O. Reg. 588/17. As a result, these metrics include technical and community level of service that the Town has selected for this AMP.

5.6.6.1 Community Levels of Service

The following table outlines the qualitative descriptions that determine the community levels of service provided by the Town's Fleet & Machinery assets.

Service Attribute	Qualitative Description	Current LOS (2023)
Scope	List of vehicles and machinery, an explanation of uses and the service areas supported by these assets.	Attachments support public works and parks departments and include removable attachments for various pieces of light, medium and heavy duty fleet & machinery. Emergency Services supports the Town's Fire Department and includes rescue vehicles (pumper/tankers, ladder truck, boat, etc.). Heavy Duty Fleet & Machinery supports road maintenance and plowing as well as cemetery operations and includes snowplows, backhoes, steamers, graders, loaders, etc. Light Duty Fleet & Machinery includes administrative vehicles to support many departments including facilities, operations, parks, building, bylaw, etc. Medium Duty Fleet & Machinery supports sidewalk plowing and ice resurfacing. Trailers support the movement of other fleet & machinery assets between locations.

5.6.6.2 Technical Levels of Service

The following table outlines the quantitative metrics that determine the technical level of service provided by the Town's Fleet & Machinery assets.

Service Attribute	Technical Metric	Current LOS (2023)	LOS (2022)
Quality	% of vehicles and machinery where regulatory inspections have been completed	100%	100%
	% of vehicles and machinery that are in fair or better condition	42%	39%
Performance	Capital reinvestment rate	1.4%	1.4%

5.7 Land Improvements

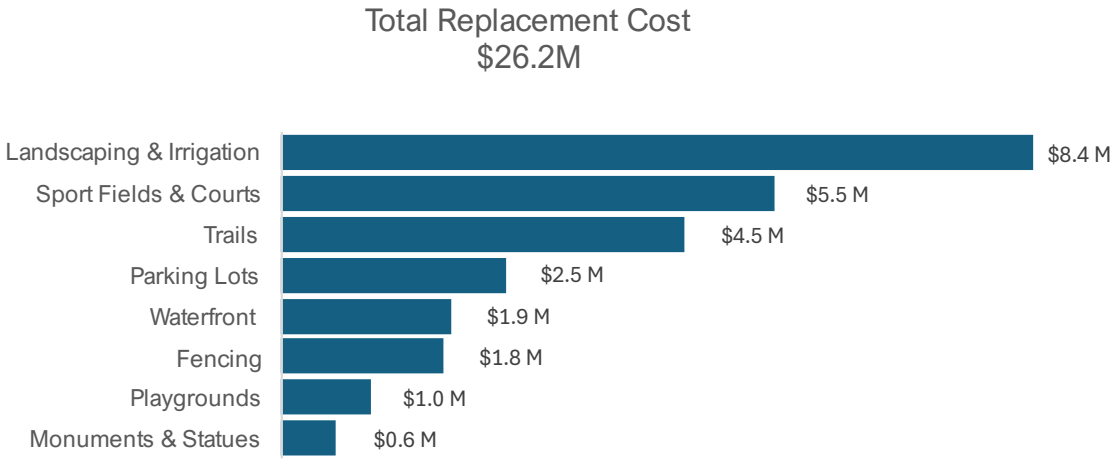
The Town of Huntsville owns a variety of assets that are considered Land Improvements. This category includes:

- Waterfront assets that include docks, launches, and other assets in, or near, water
- Parking lots for municipal facilities and parks
- Fencing and signage
- Miscellaneous landscaping, irrigation, and other assets
- Playgrounds, sports fields, and courts
- Trail systems, historical monuments, and statues

5.7.1 Asset Inventory & Replacement Cost

The table below includes the quantity, replacement cost method and total replacement cost of each asset segment in the Town's Land Improvements inventory.

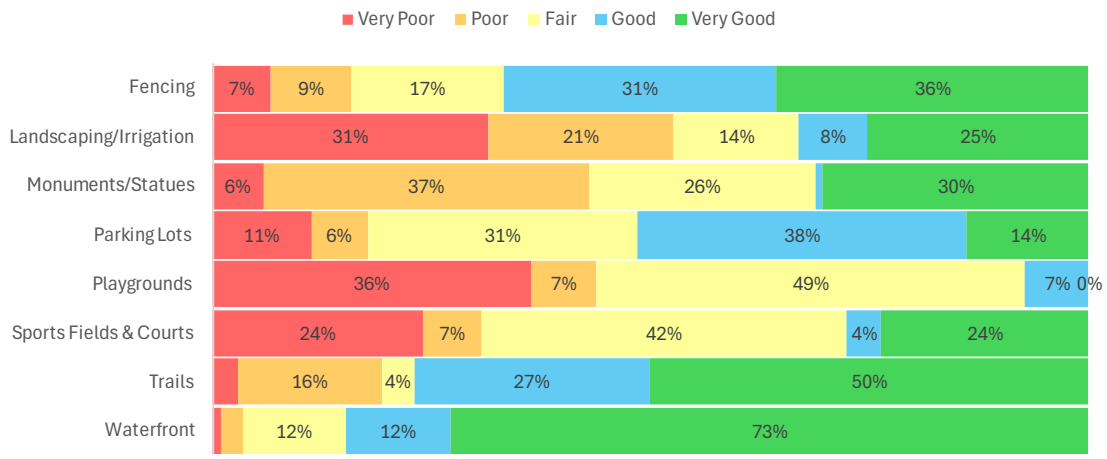
Asset Segment	Quantity	Replacement Cost Method	Replacement Cost
Fencing	87	CPI Tables	$1,755,040
Landscaping/Irrigation	254	CPI Tables	$8,335,989
Monuments/Statues	11	CPI Tables	$641,553
Parking Lots	68	CPI Tables	$2,527,101
Playgrounds	21	CPI Tables	$1,022,552
Sports Fields & Courts	57	90% CPI Tables 10% User-Defined Cost	$5,461,214
Trails	319	CPI Tables	$4,547,482
Waterfront	149	CPI Tables	$1,877,743
			$26,168,674



5.7.2 Asset Condition

The table below identifies the current average condition and source of available condition data for each asset segment. The Average Condition (%) is a weighted value based on replacement cost.

Asset Segment	Average Condition (%)	Average Condition Rating	Condition Source
Fencing	63%	Good	100% Assessed
Landscaping/Irrigation	46%	Fair	98% Assessed 2% Age-based
Monuments/Statues	55%	Fair	77% Assessed, 23% Age-based
Parking Lots	54%	Fair	100% Assessed
Playgrounds	35%	Poor	100% Assessed
Sports Fields & Courts	48%	Fair	95% Assessed 5% Age-based
Trails	69%	Good	100% Assessed
Waterfront	77%	Good	100% Assessed
	54%	**Fair**	**99.9% Assessed**



To ensure that the Town's Land Improvements continue to provide an acceptable level of service, the Town should monitor the average condition of all assets. If the average condition declines, staff should re-evaluate their lifecycle management strategy to determine what combination of maintenance, rehabilitation and replacement activities is required to increase the overall condition of the Land Improvements.

5.7.2.1 Current Approach to Condition Assessment

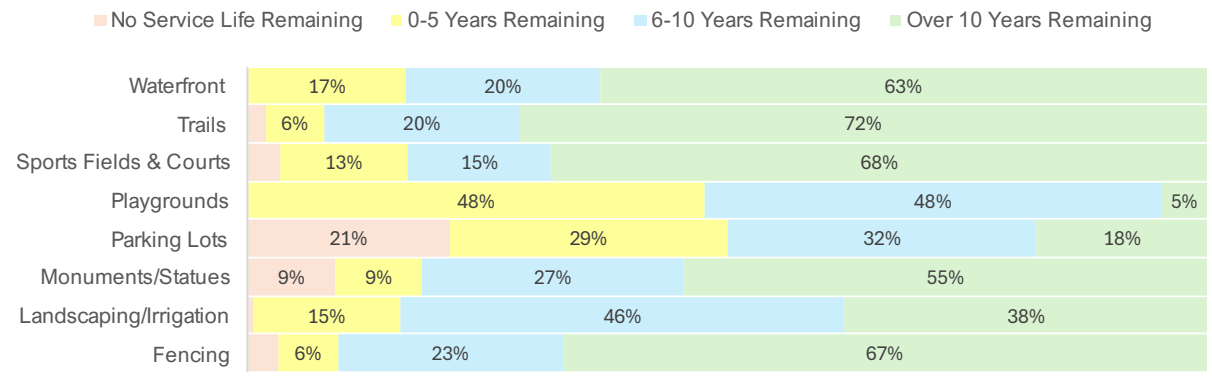
Accurate and reliable condition data allows staff to determine the remaining service life of assets and identify the most cost-effective approach to managing assets more confidently. The following describes the municipality's current approach:

- Staff complete regular visual inspections of land improvement assets to ensure they are in state of adequate repair.
- Although assessed condition data is available, there are no formal condition assessment programs in place for land improvements.

5.7.3 Estimated Useful Life & Average Age

The table below identifies the estimated useful life, average age, and average service life remaining for each asset segment. Assessed condition may increase or decrease the average service life remaining.

Asset Segment	Estimated Useful Life (Years)	Average Age (Years)	Average Service Life Remaining (Years)
Fencing	15 – 40 Years	8.8	16.8
Landscaping/Irrigation	10 – 75 Years	8.3	11.8
Monuments/Statues	25 – 40 Years	15.2	15.8
Parking Lots	10 – 30 Years	9.3	5.3
Playgrounds	10 – 20 Years	7.8	5.1
Sports Fields & Courts	10 - 50 Years	10.6	5.1
Trails	10 - 50 Years	7.0	18.3
Waterfront	10 - 60 Years	6.7	13.4
		8.3	**14.2**



5.7.4 Lifecycle Management Strategy

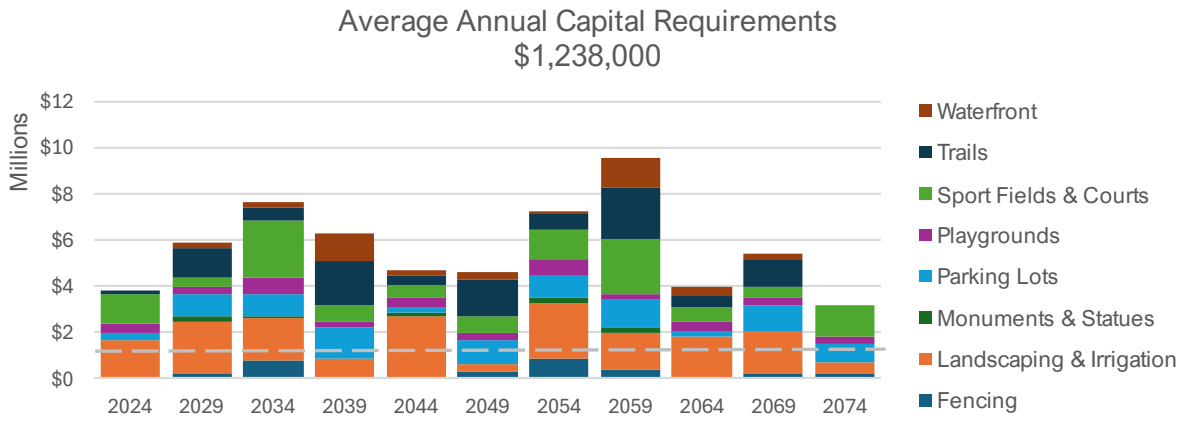
The condition or performance of most assets will deteriorate over time. To ensure that municipal assets are performing as expected and meeting the needs of customers, it is important to establish a lifecycle management strategy to proactively manage asset deterioration.

The following table outlines the Town's current lifecycle management strategy.

Activity Type	Description of Current Strategy
Maintenanace/ Rehabilitation	Various land improvement segments, including playground equipment, are subject to regular inspections to identify health & safety requirements as well as structural deficiencies that require additional attention.
	Maintenance of land improvements is dealt with on a case-by-case basis.
Replacement	The Land Improvements asset category includes several unique asset types and lifecycle requiments are dealt with on a case-by-case basis.

5.7.4.1 Forecasted Capital Requirements

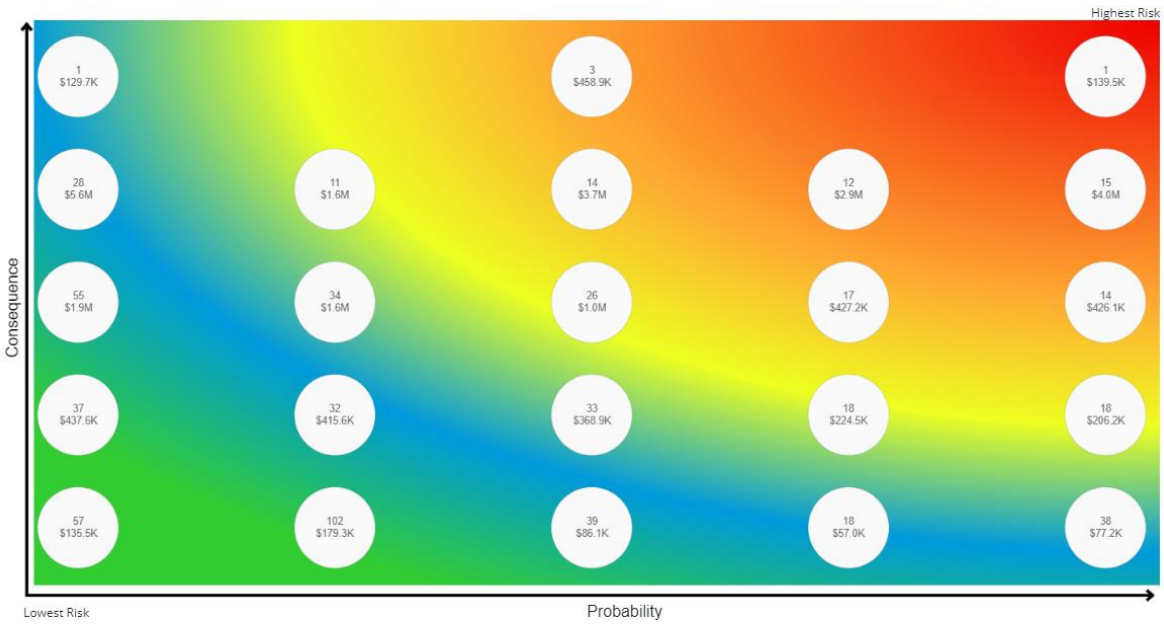
The following graph forecasts long-term capital requirements. The annual capital requirement represents the average amount per year that the Town should allocate towards funding rehabilitation and replacement needs. Annual operating requirements fluctuate significantly and are addressed on an as-needed basis.



The projected cost of lifecycle activities that will need to be undertaken over the next 10 years to maintain the current level of service can be found in Appendix B.

5.7.5 Risk & Criticality

The following risk matrix provides a visual representation of the relationship between the probability of failure and the consequence of failure for the assets within this asset category based on 2023 inventory data. See Appendix E for the criteria used to determine the risk rating of each asset.



5.7.5.1 Critical Assets

The identification of critical assets allows the Town to determine appropriate risk mitigation strategies and treatment options. These may include asset-specific lifecycle strategies, condition assessment strategies, or simply the need to collect better asset data. Critical assets do not necessarily require immediate renewal or replacement.

The following table identifies the most critical assets according to the risk criteria identified in Appendix E. The risk rating is calculated by multiplying the probability of failure and the consequence of failure for each asset.

Segment	Name	Risk Rating
Playgrounds	River Mill Park Playground	25 – Very High
Sports Fields & Courts	Utterson Tennis Courts	23.75 – Very High
Sports Fields & Courts	McCulley Robertson Skateboard Park Structure	23.75 – Very High
Parking Lots	Avery Beach Parking Lot	22.5 -Very High
Monuments/Statues	Stephenson Cemetery Archway	21.25 – Very High
Playgrounds	Hutcheson Beach Playground	21.25 – Very High
Playgrounds	Meadow Park Playground & Surface	21.25 – Very High

Segment	Name	Risk Rating
Sports Fields & Courts	Utterson Basketball ½ Court	20 – Very High
Sports Fields & Courts	Port Sydney Basketball Court	20 – Very High
Sports Fields & Courts	Conroy Park Tennis Court Surface	20 – Very High
Landscaping/Irrigation	Brunel Locks Retaining Walls	20 – Very High
Landscaping/Irrigation	Brunel Locks Mechanical	20 – Very High

5.7.6 Levels of Service

The following tables identify the Town's current level of service for Land Improvements. Since Land Improvements are not considered to be core assets, there are no required level of service metrics identified as part of O. Reg. 588/17. As a result, these metrics include technical and community level of service that the Town has selected for this AMP.

5.7.6.1 Community Levels of Service

The following table outlines the qualitative descriptions that determine the community levels of service provided by the Town's Land Improvement assets.

Service Attribute	Qualitative Description	Current LOS (2023)
Scope	Description, which may include maps of municipal parks, type of park and their proximity to the surrounding community	See Appendix C

5.7.6.2 Technical Levels of Service

The following table outlines the quantitative metrics that determine the technical level of service provided by the Town's Land Improvement assets.

Service Attribute	Technical Metric	Current LOS (2023)	LOS (2022)
Accessibility	# of recreational areas in the municipality per 1000 residents	2.3	2.3
Quality	# of customer complaints about unsafe conditions of parks, trails, or other outdoor recreational assets	TBD	TBD
Performance	Capital reinvestment rate	1.4%	1.4%

5.8 Recommendations

5.8.1 Asset Inventory & Replacement Cost

- Replacement costs used in this AMP were based on a combination of the inflation of historical costs and user-defined costs. These costs should be evaluated to determine their accuracy and reliability. Replacement costs should be updated according to the best available information on the cost to replace the asset in today's value.
- Continue to review and refine key asset specific data to further improve asset performance, risk, and level of service reporting.
- Consider the development of a formal data maintenance strategy going forward to support the consistent and accurate collection of data and promote proper maintenance and disposal of data.
- Continue to review and validate inventory data, assessed condition data and replacement costs for all bridges upon the completion of OSIM inspections every 2 years.
- The Town's asset inventory contains records for many major facility components but not a complete listing. Facilities consist of several separate capital components that have unique estimated useful lives and require asset-specific lifecycle strategies. The Town should work towards a component-based inventory of all facilities to allow for component-based lifecycle planning. This is anticipated to be achieved through the Facilities componentization and condition assessment project currently underway.

5.8.2 Condition Assessment Strategies

- Create and implement a formal internal assessment process that involves the collection and transfer of assessment data from field inspection to the Town's Asset Management System.
- Identify condition assessment strategies for high value and high-risk assets.
- Continue to review assets that have surpassed their estimated useful life to determine if immediate replacement is required or whether these assets are expected to remain in service. Adjust the condition ratings for these assets accordingly.
- Establish an industry best practice assessment cycle for the Storm Sewer Network.
- A comprehensive structural assessment of all facilities is highly recommended to gain a better understanding of the overall health and condition of each facility to identify accurate short- and long-term capital requirements.

5.8.3 Lifecycle Management Strategies

- Evaluate the efficiency of the Town's lifecycle management strategies at regular intervals to determine the impact to cost, condition, and risk.
- Review and update replacement costs on an annual basis to ensure that short-, medium-, and long-term planning are based on the best available estimate of future costs.

5.8.4 Risk Management Strategies

- Continue utilizing risk-based decision-making as part of asset management planning and budgeting processes. This should include the regular review of high-risk assets to determine appropriate risk mitigation strategies.
- Review risk models on a regular basis and adjust according to an evolving understanding of the probability and consequences of asset failure.
- Collect data to incorporate the vulnerability of infrastructure to climate change in risk analysis.

5.8.5 Levels of Service

- Continue to measure current levels of service in accordance with the metrics identified in O. Reg. 588/17 and those metrics that the Town has established in this AMP. Additional metrics can be established as they are determined to provide meaningful and reliable inputs into asset management planning.
- Work towards identifying proposed levels of service as per O. Reg. 588/17 and identify the strategies that are required to close any gaps between current and proposed levels of service.

6 Impacts of Growth

Key Insights

- Understanding the key drivers of growth and demand will allow the Town to more effectively plan for new infrastructure, and the upgrade or disposal of existing infrastructure.
- Moderate population and employment growth are expected.
- The costs of growth should be considered in long-term funding strategies that are designed to maintain the current level of service.

6.1 Description of Growth Assumptions

The demand for infrastructure and services will change over time based on a combination of internal and external factors. Understanding the key drivers of growth and demand will allow the Town to more effectively plan for new infrastructure, and the upgrade or disposal of existing infrastructure. Increases or decreases in demand can affect what assets are needed and what level of service meets the needs of the community.

6.1.1 Official Plan & Growth

In February 2019, the Town adopted the Official Plan, which was developed by the community as an important tool to be used in managing growth and development.

The Official Plan sets out the elements that contribute to the community structure of the Town and includes strategic growth policies for the Settlement Areas, the Hidden Valley Recreational Resort and Lifestyle Area, as well as the Waterfront and Rural areas.

A minimum target of 60% of new year-round dwelling units will be directed to the Huntsville Urban Settlement Area and the remaining 40% to the other land use designations.

In March 2024, the District of Muskoka endorsed a growth update report outlining future growth projections and allocations to each of the area municipalities, including the Town of Huntsville.

The following table outlines the population and employment forecasts allocated to Huntsville.

Historical & Forecast Total Population				Total Place of Work Employment Forecasts		
Municipality	2016	2021	2051	2016	2021	2051
Huntsville	19,820	21,100	29,600	10,300	9,910	13,530

6.2 Impact of Growth on Lifecycle Activities

Planning for forecasted population growth may require the expansion of existing infrastructure and services. As growth-related assets are constructed or acquired, they should be integrated into the Town's AMP. While the addition of residential units will add to the existing assessment base and offset some of the costs associated with growth, the Town will need to review the lifecycle costs of growth-related infrastructure. These costs should be considered in long-term funding strategies that are designed to, at a minimum, maintain the current level of service.

7 Illustrative Financial Strategy

Key Insights

- The Town is committing approximately $8,116,000 towards capital projects per year from sustainable revenue sources.

- Given the annual requirement of $17,990,000, there is currently a funding gap of $9,874,000 annually which is made up of a funding gap of $5,494,000 in capital and $4,380,000 in operating for lifecycle preventative maintenance activities.

- The financial strategy included in this AMP is for illustrative purposes only since replacement costs and condition assessments are anticipated to change significantly as a result of 2024 projects currently underway.

- A financial strategy recommended for implementation will be presented in the 2025 AMP in accordance with O. Reg 588/17.

- For tax-funded assets, illustrative recommendation is to increase tax revenues by at least $602,267 annually for the next 15 years to achieve a sustainable level of funding. It is also recommended that this base increase be adjusted by CPI annually.

7.1 Financial Strategy Overview

For an asset management plan to be effective and meaningful, it must be integrated with financial planning and long-term budgeting. The development of a comprehensive financial plan will allow the Town to identify the financial resources required for sustainable asset management based on existing asset inventories, current levels of service, and projected growth requirements.

This report develops such a financial plan by presenting several scenarios for consideration and culminating with final recommendations. As outlined below, the scenarios presented model different combinations of the following components:

1. The financial requirements for:
    a. Existing assets
    b. Current service levels
    c. Requirements of anticipated growth

2. Use of traditional sources of municipal funding:
    a. Tax levies
    b. Reserves
    c. Debt

3. Use of non-traditional sources of municipal funds:
    a. Reallocated budgets
    b. Partnerships
    c. Procurement methods
    d. Investment income

4. Use of Senior Government Funds:
    a. Canada Community Building Fund (CCBF)
    b. Annual grants

Note: Periodic grants are normally not included due to Provincial requirements for firm commitments. However, if moving a specific project forward is wholly dependent on receiving a one-time grant, the replacement cost included in the financial strategy is the net of such grant being received.

If the financial plan component results in a funding shortfall, the Province requires the inclusion of a specific plan as to how the impact of the shortfall will be managed. In determining the legitimacy of a funding shortfall, the Province may evaluate a Town's approach to the following:

1. To reduce financial requirements, consideration has been given to revising service levels downward.

2. All asset management and financial strategies have been considered. For example:
    a. If a zero-debt policy is in place, is it warranted? If not, the use of debt should be considered.
    b. Do user fees reflect the cost of the applicable service? If not, increased user fees should be considered.

7.1.1 Annual Requirements & Capital Funding

7.1.1.1 Annual Requirements

The annual requirements represent the amount the Town should allocate annually to each asset category to meet replacement needs as they arise, prevent infrastructure backlogs, and achieve long-term sustainability. In total, the Town must allocate approximately $17,990,000 annually to address capital requirements for the assets included in this AMP which is made up of $13,610,000 related to rehabilitation and replacement of assets, and $4,380,000 related to preventative maintenance activities related to roads.

For most asset categories the annual requirement has been calculated based on a "replacement only" scenario, in which capital costs are only incurred at the construction and replacement of each asset.

However, for the Road Network, lifecycle management strategies have been developed to identify capital costs that are realized through strategic rehabilitation and renewal of the Town's roads. The development of these strategies allows for a comparison of potential cost avoidance if the strategies were to be implemented. The following table compares two scenarios for the Road Network:

1. Replacement Only Scenario: Based on the assumption that assets deteriorate and – without regularly scheduled maintenance and rehabilitation – are replaced at the end of their service life.

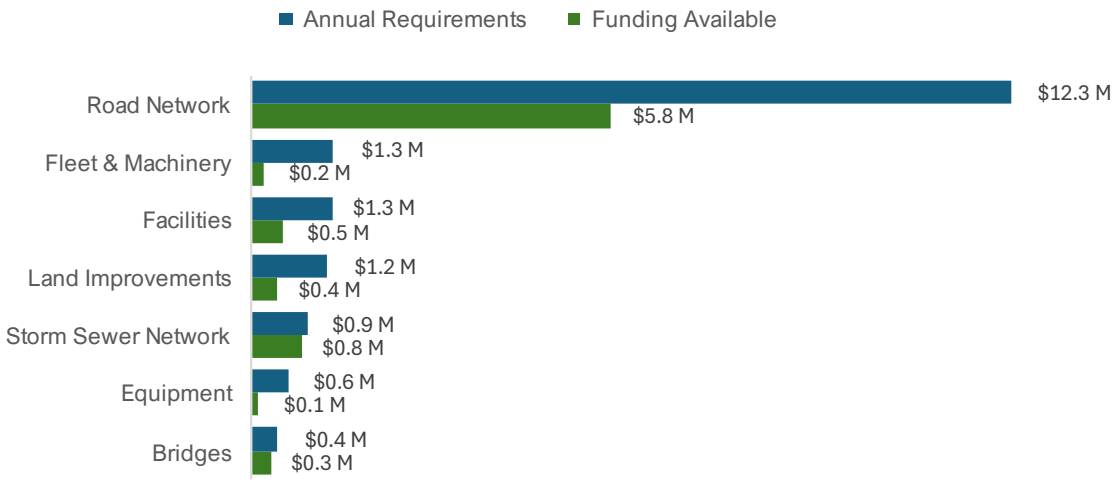
2. Current Strategy Scenario: Based on the assumption that lifecycle activities are performed at periodic intervals as required to maintain the service life of assets until replacement is required.

Asset Category	Annual Requirements (Replacement Only)	Annual Requirements (Current Strategy)	Difference
Road Network	$21,945,000	$12,151,000	$9,794,410

The current lifecycle strategies identified for roads lead to a potential annual cost avoidance of $9,794,410 for the Road Network which captures maintenance, preventative maintenance, rehabilitation and replacement activities. This represents an overall reduction of the annual requirements by 45%. As the lifecycle strategy scenario represents the lowest cost option available to the Town, these annual requirements have been in the development of the financial strategy.

7.1.1.2 Annual Funding Available

Based on a historical analysis of sustainable capital funding sources, the Town is committing approximately $8,116,000 towards future capital projects per year from sustainable revenue sources. Given the annual capital requirement of $13,610,000 and annual operating requirement of $4,380,000 there is currently a funding gap of $9,874,000 annually.



7.2 Funding Objective

A scenario has been developed that would enable the Town to achieve full funding within 15 years for the following assets:

1. **Tax Funded Assets:** Road Network, Bridges, Storm Sewer Network, Facilities, Equipment, Fleet & Machinery, and Land Improvements

Note: For the purposes of this AMP, rural and emergency access road designs have been excluded since they are a perpetual maintenance asset and end of life replacement calculations do not normally apply. These road designs are largely Gravel Roads and LCB (High Float) Roads and could also include HCB (Asphalt) Roads. If these assets are maintained properly, they can theoretically have a limitless service life. However, capital projects for preventative maintenance and rehabilitation on these roads have been recognized within the annual requirements calculation for the road network.

7.3 Financial Profile: Tax-Funded Assets

7.3.1 Current Funding Position

The following tables show, by asset category, the Town's average annual asset investment requirements, current funding positions, and funding increases required to achieve full funding on assets funded by taxes.

Asset Category	Average Annual Requirement	Annual Funding Available				Annual Deficit (Surplus)
		Taxes	CCBF	OCIF	Total Available	
Road Network	12,151,000	4,653,000	665,000	540,000	5,858,000	6,293,000
Bridges	408,000	281,000	0	0	281,000	127,000
Storm Sewer Network	893,000	754,000	0	0	754,000	139,000
Facilities	1,347,000	520,000	0	0	520,000	827,000
Equipment	627,000	95,000	0	0	95,000	532,000
Fleet & Machinery	1,326,000	247,000	0	0	247,000	1,079,000
Land Improvements	1,238,000	361,000	0	0	361,000	877,000
Total	**17,990,000**	**6,911,000**	**665,000**	**540,000**	**8,116,000**	**9,874,000**
Capital	13,610,000	6,911,000	665,000	540,000	8,116,000	5,494,000
Operating	4,380,000	0	0	0	0	4,380,000

The average annual investment requirement for the above asset categories is $17,990,000. Annual revenue currently allocated to these assets for capital purposes is $8,116,000 leaving an annual deficit of $9,874,000. Put differently, these infrastructure categories are currently funded at 45% of their long-term requirements. This annual infrastructure deficit includes a capital funding gap of $5,494,000 and an operating funding gap of $4,380,000.

It should be noted that funding through CCBF and OCIF programs are under the assumption that this funding will remain in place. The OCIF funding formula has recently been updated which may result in lower OCIF funding in the future.

7.3.2 Full Funding Requirements

In 2024, the Town of Huntsville has budgeted annual tax revenues of $21,991,439. As illustrated in the following table, without consideration of any other sources of revenue or cost containment strategies, full funding would require the following tax change over time:

Asset Category	Tax Change Required for Full Funding
Road Network	28.6%
Storm Sewer Network	0.6%
Bridges	0.6%
Facilities	3.8%
Equipment	2.4%
Fleet & Machinery	4.9%
Land Improvements	4.0%
	44.9%

Per the Town's Budget & Financial Controls Policy (Budget&Financial-21), any reductions in debt payments will be applied as an increase in the funding for capital reserves. As a result, the financing strategy should take this funding increase into account.

The Town's debt payments for these asset categories will decrease by $840,000 over the next 10 years. Existing debt will be entirely repaid within the next 10 years.

The table below outlines several options to phase-in the reduction of the infrastructure deficit:

	10 Years	15 Years	20 Years	25 Years
Existing Infrastructure Deficit	9,874,000	9,874,000	9,874,000	9,874,000
Change in Debt Costs	-840,000	-840,000	-840,000	-840,000
Updated Infrastructure Deficit:	9,034,000	9,034,000	9,034,000	9,034,000
Annual tax levy increase (%)	**4.1%**	**2.7%**	**2.1%**	**1.6%**
Annual tax levy increase ($)[5]	**903,400**	**602,267**	**451,700**	**361,360**
Capital	465,400	310,267	232,700	186,160
Operating	438,000	292,000	219,000	175,200

[5] This annual tax levy increase ($) represents the first year of the reduction to the infrastructure funding deficit (beginning in 2025). To account for increases in replacement costs over the financing strategy term, it is recommended that the first-year reduction be increased annually by CPI (as noted in the Budget & Financial Controls Policy).

7.3.3 Financial Strategy Recommendations

Considering all the above information, it is recommended that:

1. This financial strategy is for illustrative purposes only.
2. A full financial strategy with a recommendation for implementation will be brought forward in the next AMP, prior to the July 1, 2025 O. Reg 588/17 deadline.

For the purposes of the illustrative financial strategy, it would be recommended that the 15-year option be utilized as the funding strategy. This involves full funding being achieved over 15 years by:

a) Incorporating annual increases to the capital and operating budgets for the sole purpose of phasing in full funding to the asset categories covered in this AMP.
    a. Increasing capital budget tax revenues annually by a base amount of $310,267 beginning in 2025 and increasing that base amount by CPI annually thereafter.
    b. Increasing operating budget tax revenues annually by a base amount of $292,000 beginning in 2025 and increasing that base amount by CPI annually thereafter.
        i. To account for the preventative maintenance activities correctly in the operating budget, the full annual requirement should be incorporated into the operating expenditures. These should be funded, with the exception of the $292,000 noted above, from capital reserves. In 2026, the funding from capital reserves for these operating activities should be reduced by the 2025 operating increase of $292,000 inflated for CPI. The annual increase in operating will be in the form of a reduction in funding from the capital reserves.
b) Continue allocating the current CCBF and OCIF revenues towards capital projects.

Notes:

1. As in the past, periodic senior government infrastructure funding will most likely be available during the phase-in period. By Provincial AMP rules, this periodic funding cannot be incorporated into an AMP unless there are firm commitments in place. For example, OCIF formula-based funding could be included since this funding is a multi-year commitment.
2. Raising tax revenues by the amounts recommended above for infrastructure purposes will be very difficult to do however, considering a longer phase-in window may have even greater consequences in terms of infrastructure failure.

Although this option achieves full funding on an annual basis in 15 years and provides financial sustainability over the period modeled, the recommendations do require prioritizing capital projects to fit the resulting annual funding available. Current data shows a pent-up investment demand of $106,000 for the Road Network, $0 for Bridges; $3,409,000 for the Storm Sewer Network, $424,000 for Facilities, $375,000 for Equipment, $2,589,000 for Fleet & Machinery, and $988,000 for Land Improvements. The infrastructure backlog is identified in Appendix B.

Prioritizing future projects will require the current data to be replaced by condition-based data. Although the recommendations include no further use of debt, the results of the condition-based analysis may require otherwise.

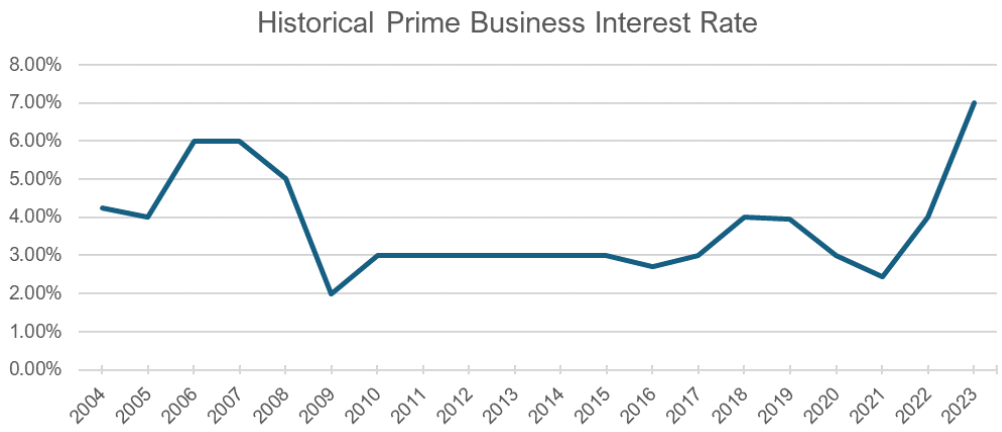
It should be noted that the financial strategy provides for full funding of the average annual requirements, it does not address the backlog of capital project spending. Since it is expected that the projects currently underway in 2024 will likely result in a change to the backlog of capital projects will, the financial strategy proposed in the upcoming 2025 AMP will include a strategy to address the backlog in addition to the funding gap.

7.4 Use of Debt

For reference purposes, the following table outlines the premium paid on a project if financed by debt. For example, a $1M project financed at 6.0% over 15 years would result in a 54% premium or $540,000 of increased costs due to interest payments. For simplicity, the table does not consider the time value of money or the effect of inflation on delayed projects.

Interest Rate	Number of Years Financed					
	5	10	15	20	25	30
7.0%	22%	42%	65%	89%	115%	142%
6.5%	20%	39%	60%	82%	105%	130%
6.0%	19%	36%	54%	74%	96%	118%
5.5%	17%	33%	49%	67%	86%	106%
5.0%	15%	30%	45%	60%	77%	95%
4.5%	14%	26%	40%	54%	69%	84%
4.0%	12%	23%	35%	47%	60%	73%
3.5%	11%	20%	30%	41%	52%	63%
3.0%	9%	17%	26%	34%	44%	53%
2.5%	8%	14%	21%	28%	36%	43%
2.0%	6%	11%	17%	22%	28%	34%
1.5%	5%	8%	12%	16%	21%	25%
1.0%	3%	6%	8%	11%	14%	16%
0.5%	2%	3%	4%	5%	7%	8%
0.0%	0%	0%	0%	0%	0%	0%

It should be noted that current interest rates have highs over the past several years, compared to the average rate over the past 20 years. Sustainable funding models that include debt need to incorporate the potential of decreasing interest rates. The following graph shows where historical lending rates have been:



A change in 15-year rates from 7% to 3% would change the premium from 65% to 26%. Such a change would have a significant positive impact on future financial plans.

The following tables outline how the Town has historically used debt for investing in the asset categories as listed. There is currently $3,649,000 of debt outstanding for the assets covered by this AMP with corresponding principal and interest payments of $840,000, well within its provincially prescribed maximum of $5,796,000.

Asset Category	Current Debt Outstanding	Use of Debt in the Last Five Years				
		2019	2020	2021	2022	2023
Road Network	$1,061,000	0	0	0	0	0
Bridges	$0	0	0	0	0	0
Storm Sewer Network	$19,000	0	0	0	0	0
Facilities	$1,569,000	0	0	0	0	0
Equipment	$0	0	0	0	0	0
Fleet & Machinery	$214,000	0	0	0	0	0
Land Improvements	$786,000	0	0	0	0	0
Total Tax Funded:	**$3,649,000**	**0**	**0**	**0**	**0**	**0**

Asset Category	Principal & Interest Payments in the Next Ten Years						
	2024	2025	2026	2027	2028	2029	2030
Road Network	235,000	208,000	173,000	166,000	159,000	152,000	146,000
Bridges	0	0	0	0	0	0	0
Storm Sewer Network	12,000	7,000	0	0	0	0	0
Facilities	307,000	295,000	270,000	259,000	248,000	237,000	227,000
Equipment	0	0	0	0	0	0	0
Fleet & Machinery	60,000	60,000	60,000	60,000	0	0	0
Land Improvements	226,000	224,000	219,000	95,000	44,000	42,000	38,000
Total Tax Funded:	**$840,000**	**$794,000**	**$772,000**	**$580,000**	**$451,000**	**$431,000**	**$411,000**

The revenue options outlined in this plan allow the Town to fully fund its long-term infrastructure requirements without further use of debt.

7.5 Use of Reserves

7.5.1 Available Reserves

Reserves play a critical role in long-term financial planning. The benefits of having reserves available for infrastructure planning include:

a) the ability to stabilize tax rates when dealing with variable and sometimes uncontrollable factors
b) financing one-time or short-term investments
c) accumulating the funding for significant future infrastructure investments
d) managing the use of debt
e) normalizing infrastructure funding requirement

By asset category, the table below outlines the details of the reserves currently available to Huntsville.

Asset Category	Balance on December 31, 2023
Road Network	3,031,000
Bridges	183,000
Storm Sewer Network	491,000
Facilities	2,578,000
Equipment	677,000
Fleet & Machinery	1,056,000
Land Improvements	1,478,000
Total Tax Funded:	**9,494,000**

There is considerable debate in the municipal sector as to the appropriate level of reserves that a municipality should have on hand. In 2021 the Town adopted the Financial Reserves Policy (Budget&Financial-27) which indicates that Council shall maintain reserve funds for capital in accordance with capital asset management plans, recognizing that this will be realized in the future. There is no clear guideline that has gained wide acceptance. Factors that municipalities should consider when determining their capital reserve requirements include:

a) breadth of services provided
b) age and condition of infrastructure
c) use and level of debt
d) economic conditions and outlook
e) internal reserve and debt policies.

These reserves are available for use by applicable asset categories during the phase-in period to full funding. This coupled with the Town's judicious use of debt in the past, allows the scenarios to assume that, if required, available reserves and debt capacity can be used for high priority and emergency infrastructure investments in the short- to medium-term.

7.5.2 Recommendation

In 2025, Ontario Regulation 588/17 will require Huntsville to integrate proposed levels of service for all asset categories in its asset management plan update. It is therefore recommended that future planning should reflect adjustments to service levels and their impacts on reserve balances.

8 Appendices

Key Insights

- Appendix A includes a one-page summary of key data from each asset category.
- Appendix B identifies projected 10-year capital requirements for each asset category.
- Appendix C includes several maps that have been used to visualize the current level of service.
- Appendix D outlines condition rating criteria for roads, storm network, and includes images that demonstrate condition rating criteria for the bridge assessments.
- Appendix E identifies the criteria used to calculate risk for each asset category.

8.1 Appendix A: Asset Category Summary

Asset Category	Replacement Cost	Asset Category Condition	Financial Capacity	
Road Network	$337.7M	Good	Annual Requirement:	$12,151,000
			Funding Available:	$5,858,000
			Annual Deficit:	**$6,293,000**
Bridges	$20.4M	Fair	Annual Requirement:	$408,000
			Funding Available:	$281,000
			Annual Deficit:	**$127,000**
Storm Sewer Network	$54.7M	Fair	Annual Requirement:	$893,000
			Funding Available:	$754,000
			Annual Deficit:	**$139,000**
Facilities	$37.7M	Fair	Annual Requirement:	$1,347,000
			Funding Available:	$520,000
			Annual Deficit:	**$827,000**
Equipment	$6.9M	Fair	Annual Requirement:	$627,000
			Funding Available:	$95,000
			Annual Deficit:	**$532,000**
Fleet & Machinery	$17.9M	Poor	Annual Requirement:	$1,326,000
			Funding Available:	$247,000
			Annual Deficit:	**$1,079,000**
Land Improvements	$26.2M	Fair	Annual Requirement:	$1,238,000
			Funding Available:	$361,000
			Annual Deficit:	**$877,000**
Overall	$501.5M	Fair	Annual Requirement:	$17,990,000
			Funding Available:	$8,116,000
			Annual Deficit:	**$9,874,000**

8.2 Appendix B: 10-Year Capital Requirements

The following tables identify the capital cost requirements for each of the next 10 years to meet project capital requirements and maintain current levels of service.

Road Network											
Asset Segment	Backlog	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Gravel Roads	$0	$72,000	$1,063,350	$479,700	$339,750	$762,390	$467,100	$546,750	$0	$70,200	$0
Guideposts	$0	$0	$0	$0	$0	$0	$0	$0	$0	$187,096	$116,801
HCB (Asphalt) Roads	$0	$1,082,650	$457,250	$2,672,700	$354,000	$6,351,350	$380,550	$5,441,400	$918,925	$5,723,885	$3,780,720
LCB (High Float) Roads	$0	$480,500	$806,000	$2,788,500	$1,371,750	$3,616,250	$442,500	$1,417,000	$565,050	$2,271,800	$2,118,050
Sidewalks	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Streetlights	$106,400	$0	$0	$0	$142,066	$0	$0	$0	$1,220,418	$0	$0
Traffic Lights	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	$106,400	**$1,635,150**	**$2,326,600**	**$5,940,900**	**$2,207,566**	**$10,729,990**	**$1,290,150**	**$7,405,150**	**$2,704,393**	**$8,252,981**	**$6,015,571**

Bridges											
Asset Segment	Backlog	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Bridges	$0	$0	$0	$48,714	$765,000	$0	$0	$0	$0	$0	$0
	$0	**$0**	**$0**	**$48,714**	**$765,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**

Storm Sewer Network											
Asset Segment	Backlog	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Catch Basins	$1,757,135	$27,216	$0	$22,904	$53,880	$204,760	$367,213	$10,862	$0	$0	$0
Maintenance Holes	$35,245	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Minor Culverts	$1,616,057	$101,328	$0	$22,908	$34,925	$90,625	$68,245	$139,194	$154,184	$432,293	$75,320
Outfalls	$0	$0	$0	$0	$0	$0	$0	$00	$0	$0	$0
Pipes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	$3,408,437	**$128,544**	**$0**	**$45,812**	**$88,805**	**$295,385**	**$435,458**	**$150,056**	**$154,184**	**$432,293**	**$75,320**

Facilities											
Asset Segment	Backlog	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Administration	$0	$30,000	$182,057	$0	$0	$0	$0	$184,687	$0	$0	$0
Cemeteries	$0	$0	$0	$0	$0	$0	$0	$252,873	$25,000	$0	$0
Community Centres	$6,966	$0	$0	$0	$0	$168,865	$0	$0	$53,298	$39,578	$0
Fire Halls	$185,682	$32,429	$0	$0	$0	$0	$45,401	$35,131	$0	$56,857	$87,234
Library	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Parks & Trails	$94,558	$0	$0	$0	$0	$0	$0	$65,434	$23,590	$0	$0
Public Works	$0	$0	$0	$0	$0	$0	$355,550	$0	$0	$0	$54,572
Recreation & Cultural	$136,936	$263,851	$606,858	$308,178	$22,768	$1,989,468	$263,851	$3,068,987	$411,080	$0	$0
	$424,142	**$326,280**	**$788,915**	**$308,178**	**$22,768**	**$2,158,333**	**$664,802**	**$3,607,112**	**$512,968**	**$96,435**	**$141,806**

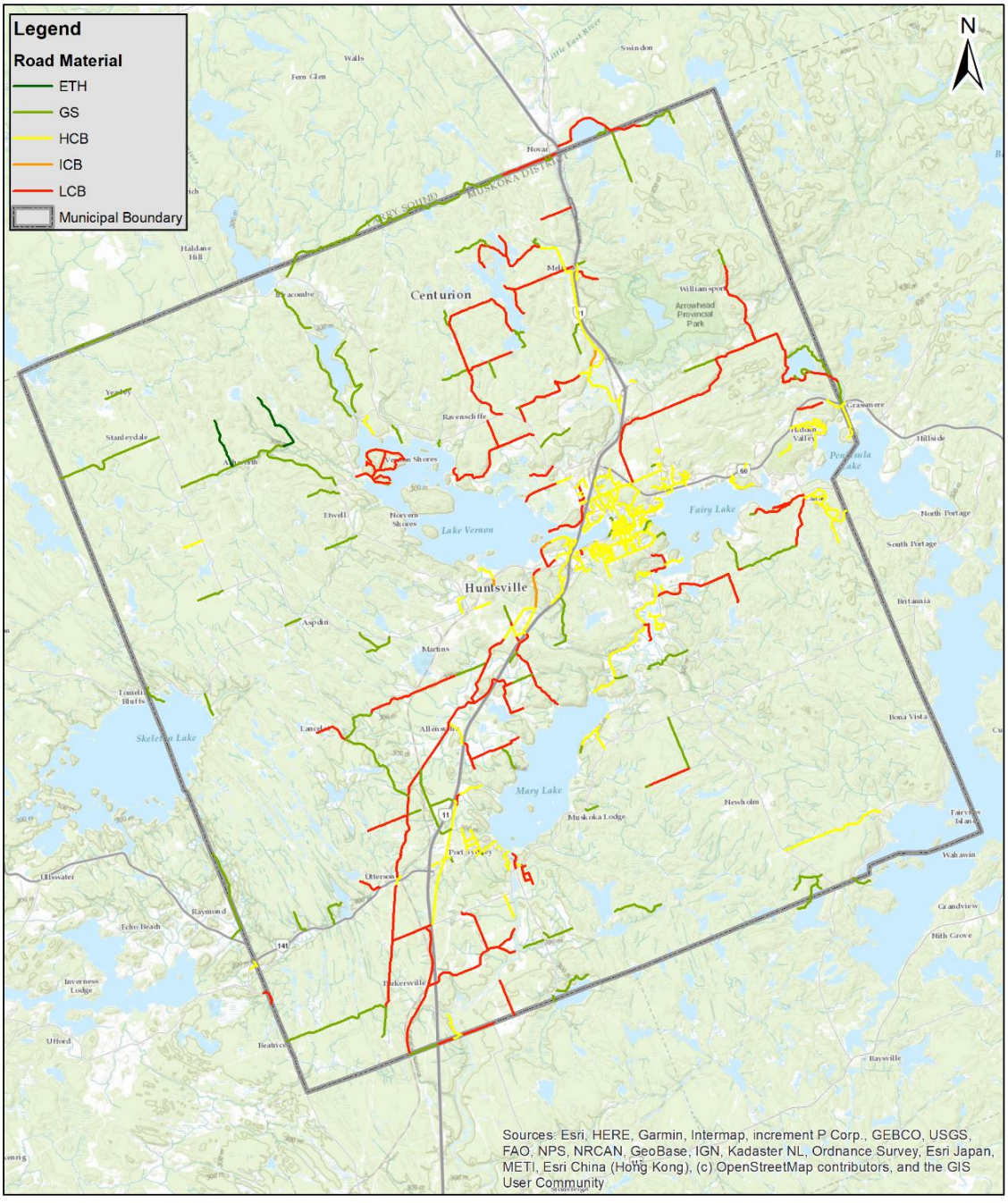
Equipment											
Asset Segment	Backlog	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Custodial Equipment	$0	$0	$0	$10,722	$0	$21,886	$0	$34,769	$0	$0	$0
Emergency Services Equipment	$31,967	$47,567	$175,192	$246,134	$62,460	$395,999	$112,380	$71,764	$228,534	$29,013	$94,858
Furniture & Fixtures	$26,657	$15,211	$15,773	$72,508	$47,911	$609,945	$55,480	$171,977	$56,125	$103,306	$40,020
Industrial Equipment	$0	$0	$10,309	$4,124	$16,907	$28,354	$0	$16,094	$0	$7,566	$0
IT Equipment	$119,135	$10,691	$132,044	$230,178	$95,008	$211,611	$297,186	$429,788	$191,006	$130,538	$59,133
Recreation Equipment	$170,619	$8,247	$6,701	$47,420	$3,093	$1,134	$59,052	$90,630	$16,520	$9,137	$4,969
Tools & Miscellaneous Equipment	$5,781	$29,748	$0	$22,650	$3,238	$0	$27,109	$9,211	$7,284	$39,257	$27,848
Turf Equipment	$20,771	$12,340	$0	$99,368	$72,351	$122,297	$11,900	$37,914	$7,393	$0	$52,947
	$374,930	**$123,804**	**$340,019**	**$733,104**	**$300,968**	**$1,391,226**	**$563,107**	**$862,147**	**$506,862**	**$318,817**	**$279,775**

Fleet											
Asset Segment	Backlog	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Attachments	$0	$0	$0	$0	$0	$25,840	$0	$91,636	$118,863	$0	$53,453
Emergency Services	$0	$0	$22,959	$3,182,299	$0	$0	$0	$953,191	$0	$0	$0
Heavy Duty	$2,423,398	$0	$0	$710,000	$0	$905,426	$62,016	$1,596,898	$392,765	$0	$62,016
Light Duty	$166,000	$173,023	$344,000	$308,114	$473,245	$0	$80,000	$582,029	$110,595	$0	$217,425
Medium Duty	$0	$0	$206,718	$0	$310,078	$0	$0	$420,499	$0	$0	$0
Trailers	$0	$61,008	$0	$0	$15,504	$22,739	$0	$10,336	$5,685	$10,758	$0
	$2,589,398	**$234,031**	**$573,677**	**$4,200,413**	**$798,827**	**$954,005**	**$142,016**	**$3,654,589**	**$627,908**	**$10,758**	**$332,894**

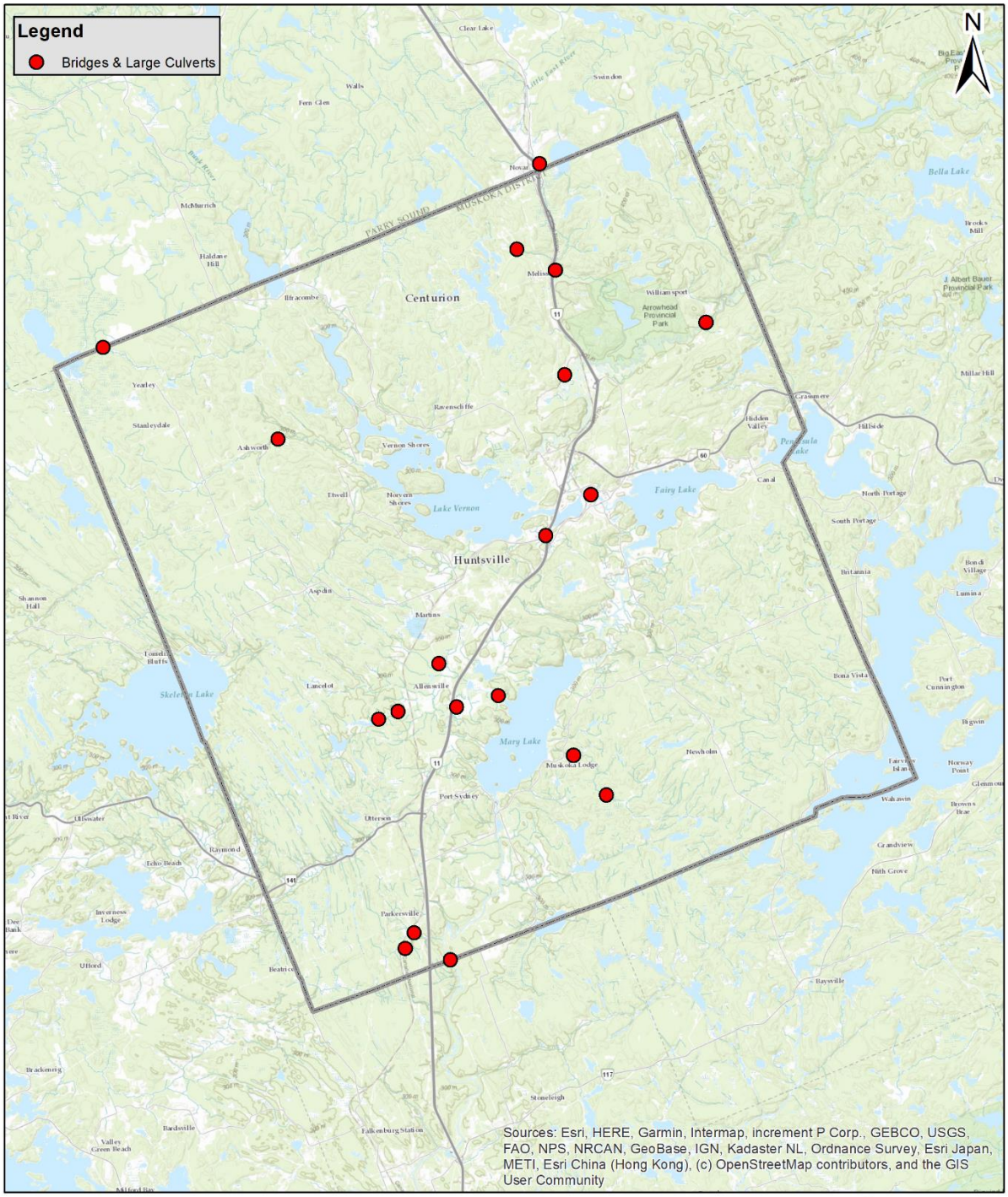
Land Improvements											
Asset Segment	Backlog	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Fencing	$30,607	$0	$0	$16,856	$65,250	$0	$0	$161,969	$0	$4,611	$14,857
Landscaping/Irrigation	$26,385	$0	$17,109	$18,564	$1,500,096	$18,557	$4,816	$18,566	$550,057	$1,758,383	$0
Monuments/Statues	$31,662	$0	$0	$0	$5,277	$0	$0	$0	$0	$159,366	$0
Parking Lots	$33,982	$0	$57,150	$112,135	$90,456	$36,939	$0	$47,902	$894,558	$27,665	$0
Playgrounds	$0	$0	$121,371	$208,093	$42,216	$76,095	$0	$234,581	$0	$69,379	$0
Sports Fields & Courts	$829,021	$0	$45,944	$15,831	$404,630	$0	$0	$0	$17,418	$348,282	$0
Trails	$36,631	$0	$2,818	$82,040	$0	$0	$10,246	$575,940	$300,094	$323,129	$76,845
Waterfront	$0	$0	$5,635	$8,146	$3,873	$20,543	$34,548	$10,809	$96,568	$14,928	$17,419
	$988,288	**$0**	**$250,027**	**$461,665**	**$2,111,798**	**$152,134**	**$49,610**	**$1,049,767**	**$1,858,695**	**$2,705,743**	**$109,121**

8.3 Appendix C: Level of Service Maps

Road Network Map



Bridge Location Map

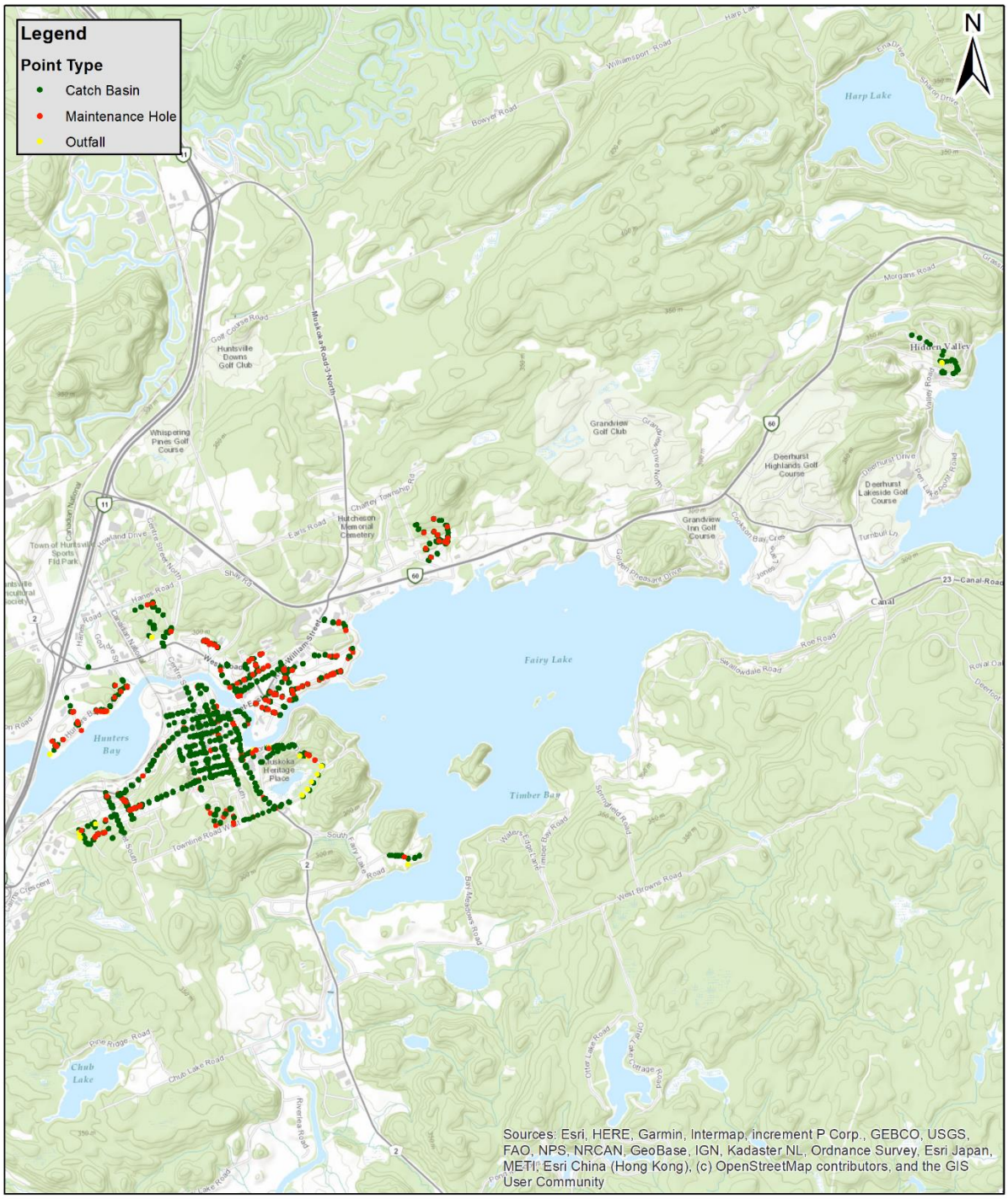


Bridges - Asset Management
Town of Huntsville

0 2 4 8 12 16 KM

UTM Zone 17 NAD 83

Storm Sewer Network Map (Catch Basins & Maintenance Holes)

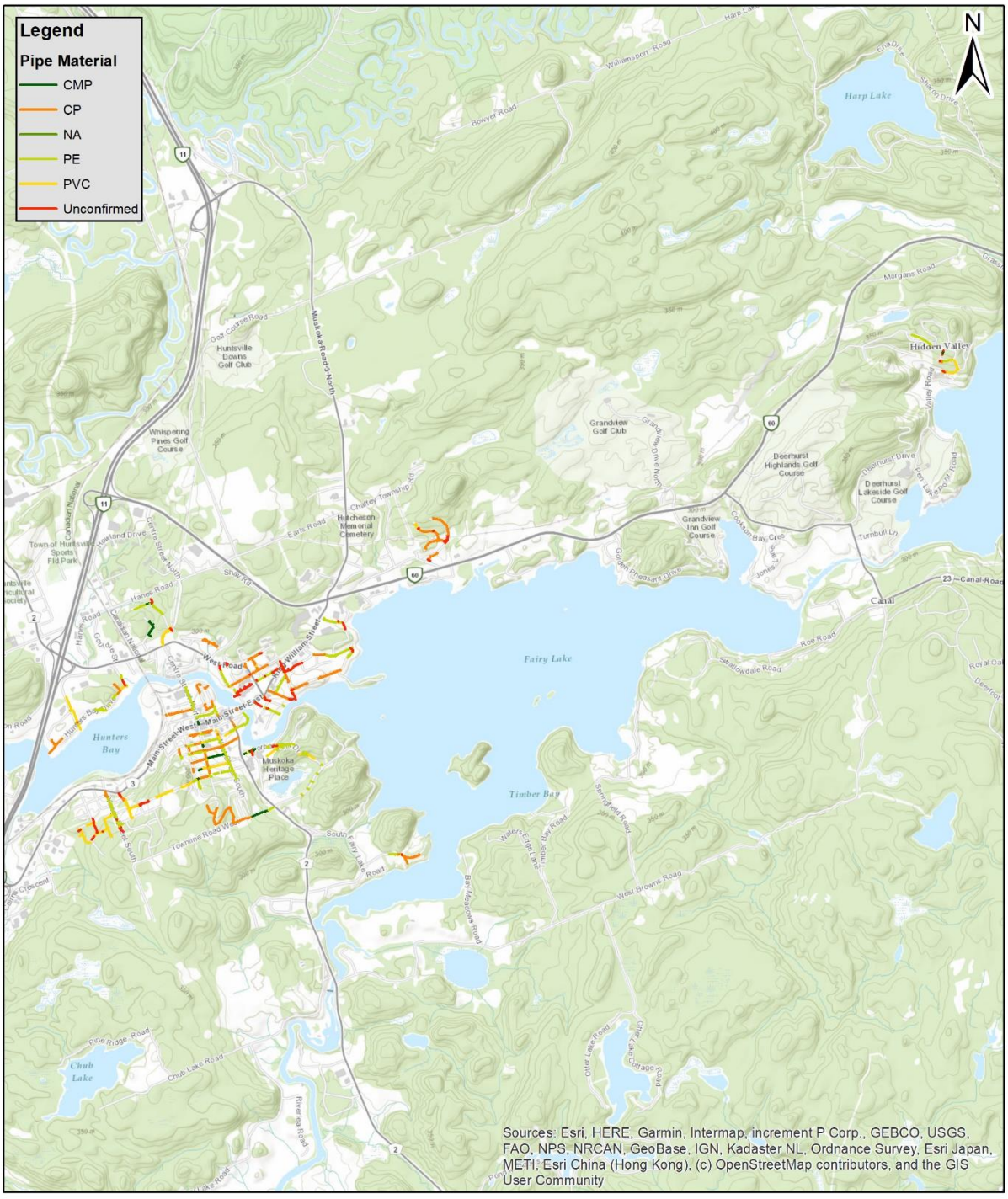


Storm Sewer Points - Asset Management
Town of Huntsville

0 0.5 1 2 3 4 KM

UTM Zone 17 NAD 83

Storm Sewer Network Map (Pipes)

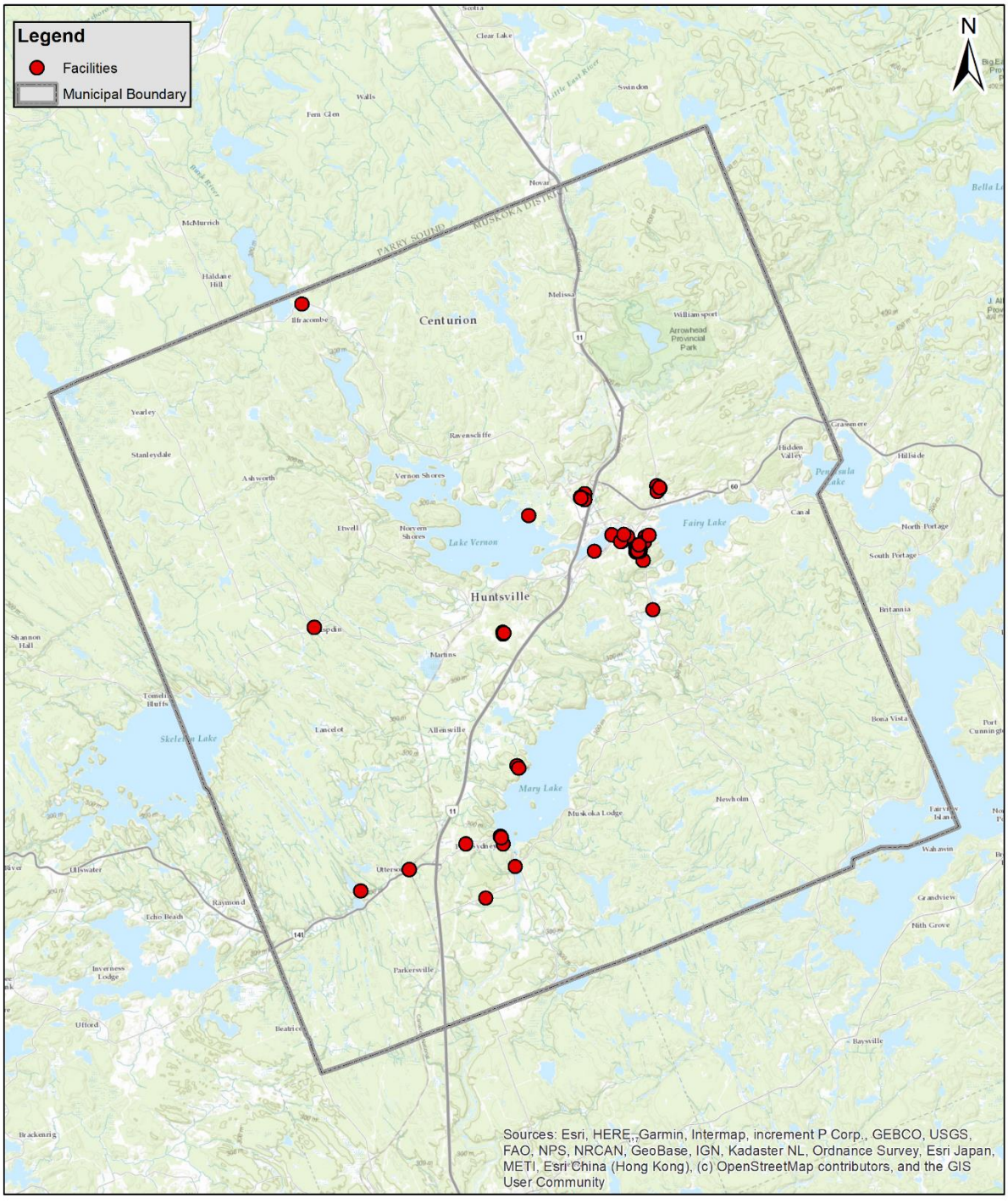


Storm Sewer Pipes- Asset Management
Town of Huntsville

0 0.5 1 2 3 4 KM

UTM Zone 17 NAD 83

Facilities Location Map

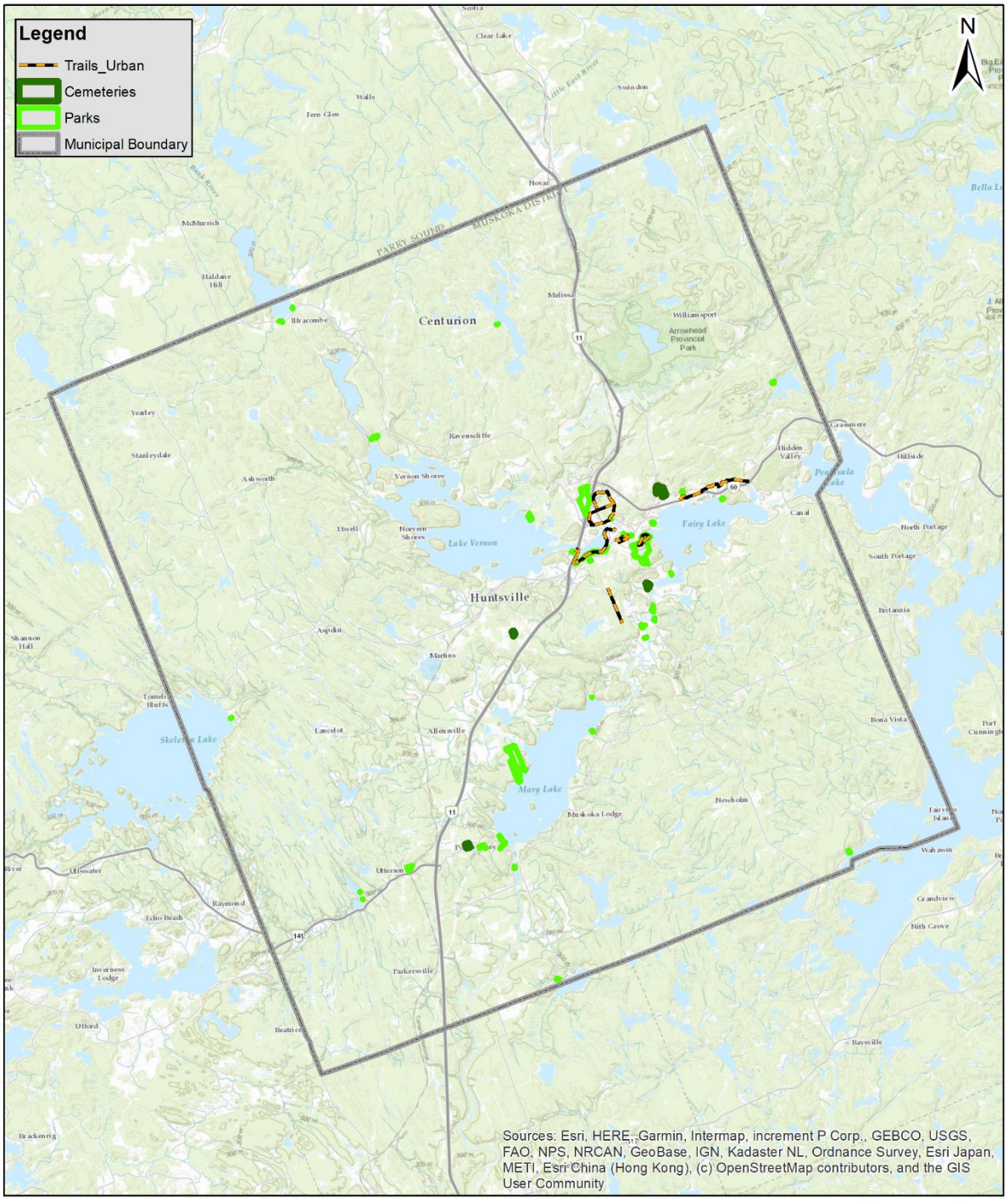


Facilities - Asset Management
Town of Huntsville

0 1.75 3.5 7 10.5 14 KM

UTM Zone 17 NAD 83

Cemeteries, Parks & Trails Map



Parks, Trails and Cemeteries - Asset Management
Town of Huntsville

0 1.5 3 6 9 12 KM

UTM Zone 17 NAD 83

8.4 Appendix D: Condition Rating Criteria

Bridge Condition Rating Criteria

Good Condition – example images

Bridge 03 – South Lancelot Road (Inspected: May 25th, 2022)

Northwest Wing Wall

West Barrel Abutment

Bridge Deck Looking East

Culvert Inlet

Fair Condition – example images

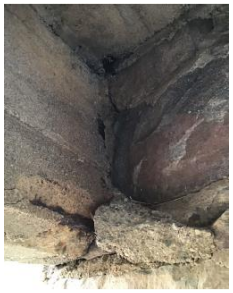
Bridge 02 – Bullen Creek (Inspected: May 25th, 2022)

North East Wingwall

Bridge Deck Looking South

West Elevation Utility Cable

Spalling/scaling Exposing Rebar



Poor Condition – example images

Bridge 14 – Candytown Lane/Brunel (Inspected: May 19th, 2022)

North East Wingwall

Beam/Main Longitudinal Elements/Girders

North Elevation

Bridge Deck Looking East

Road Condition Rating Criteria

Surface Condition Rating Criteria

(1-5) Road surface exhibits moderate to significant deterioration and requires renewal or full replacement within 1-5 years

(6-10) Road surface is in good condition or has been recently re-surfaced. Renewal or reconstruction is not required for 6-10+ years

Overall Condition Rating Criteria

(85-100) Road is in Very Good physical condition

(70-84) Road is in Good physical condition

(50-74) Road is in Fair physical condition

(30-49) Road is in Poor physical condition

(0-29) Road is in Very Poor physical condition or in a Critical State

Storm Sewer Condition Rating Criteria

Index Scores for Pipe Condition

5: Immediate attention needed

4: Poor; will become Grade 5 in near future

3: Fair; moderate

2: Good; has not begun to deteriorate

1: Excellent; minor defects

Likelihood of Failure as per Defect Grade (from NASSCO)

5: Pipe has failed or likely to fail within 5 years

4: Pipe will probably fail in 5-10 years

3: Pipe may fail in 10-20 years

2: Pipe unlikely to fail for at least 20 years

1: Failure unlikely in foreseeable future

8.5 Appendix E: Risk Rating Criteria

8.5.1 Probability of Failure

Asset Category	Risk Criteria	Criteria Weighting	Value/Range	Probability of Failure Score
Road Network (Roads)	Condition	80	85-100	1
			70-84	2
			50-69	3
			30-49	4
			0-29	5
	Service Life Remaining	20	20+	1
			16 - 19	2
			11 - 15	3
			6 - 10	4
			< 5	5
Bridges	Condition	80	80-100	1
			60-79	2
			40-59	3
			20-39	4
			0-19	5
	Service Life Remaining	20	20+	1
			16 - 19	2
			11 - 15	3
			6 - 10	4
			< 5	5
Storm Sewer Network	Condition	80	80-100	1
			60-79	2
			40-59	3
			20-39	4
			0-19	5
	Service Life Remaining	20	45+	1
			26 - 44	2
			11 - 25	3
			2 - 10	4
			< 1	5
Facilities Equipment Fleet & Machinery Land Improvements	Condition	100%	80-100	1
			60-79	2
			40-59	3
			20-39	4
			0-19	5

8.5.2 Consequence of Failure

Asset Category	Risk Classification	Risk Criteria	Value/Range	Consequence of Failure Score
Road Network (Roads)	Economic (70%)	Replacement Cost (60%)	$1,000,000+	5
			$500,001 - $1,000,000	4
			$150,001 - $500,000	3
			$50,001 - $150,000	2
			< $50,000	1
		Roadside Environment (40%)	Urban	5
			Industrial	4
			Semi-Urban	3
			Rural	2
	Social (30%)	Road Function (50%)	Expressway	5
			Collector	3
			Local	2
		Section AADT (50%)	0-100	1
			101-250	2
			251-750	3
			751-1500	4
			1500+	5
Bridges	Economic (80%)	Replacement Cost (100%)	$0-$100,000	1
			$100,001 - $250,000	2
			$250,001 - $750,000	3
			$750,001 - $1,500,000	4
			$1,500,000+	5
	Social (20%)	Detour Distance (50%)	< 5km	1
			6km – 10km	2
			11km – 15km	3
			16km – 20km	4
			20km+	5
		Section AADT (50%)	0-99	1
			100-249	2
			250-749	3
			750-1499	4
			1500+	5
Storm Sewer Network	Economic (100%)	Replacement Cost (100%)	$0 - $5,000	1
			$5,001 - $10,000	2
			$10,001 - $25,000	3
			$25,001 - $50,000	4
			$50,000+	5
Facilities	Economic (75%)	Replacement Cost (100%)	$0 - $25,000	1
			$25,001 - $100,000	2
			$100,001 - $500,000	3
			$500,001 - $1,000,000	4
			$1,000,000+	5
	Social (25%)	Segment (100%)	Cemeteries	1
			Community Centres	2
			Administration, Library, Parks & Trails	3

Asset Category	Risk Classification	Risk Criteria	Value/Range	Consequence of Failure Score
			Public Works, Recreation & Cultural	4
			Fire Halls	5
Equipment	Economic (50%)	Replacement Cost (100%)	$0 - $5,000	1
			$5,001 - $10,000	2
			$10,001 - $25,000	3
			$25,001 - $50,000	4
			$50,000+	5
	Social (50%)	Segment (100%)	Furniture & Fixtures, IT Equipment	1
			Custodial Equipment, Tools & Miscellaneous Equipment	2
			Industrial Equipment	3
			Recreation Equipment, Turf Equipment	4
			Emergency Services Equipment	5
Fleet & Machinery	Economic (60%)	Replacement Cost (100%)	$0 - $25,000	1
			$25,001 - $100,000	2
			$100,001 - $200,000	3
			$200,001 - $300,000	4
			$300,000+	5
	Operational (20%)	Fleet Type (100%)	Boats, Trailers	1
			Light Duty Machinery, Light Duty Vehicles	2
			Attachments	3
			Medium Duty Machinery, Heavy Duty Vehicles, Medium Duty Vehicles	4
			Heavy Duty Machinery	5
	Social (20%)	Department (100%)	Cemeteries, Facilities, IT, Planning	1
			Building, Bylaw, MHP	2
			Parks	3
			Fleet, Public Works	4
			Fire	5
Land Improvements	Economic (75%)	Replacement Cost (100%)	$0 - $5,000	1
			$5,001 - $10,000	2
			$10,001 - $30,000	3
			$30,001 - $100,000	4
			$100,000+	5
	Social (25%)	Segment (100%)	Landscaping/Irrigation	1
			Fencing, Trails	2
			Parking Lots	3
			Sport Fields & Courts, Waterfont	4
			Monuments/Statues, Playground Equipment	5