Town of Oakville

Corporate Asset Management Plan – Part B

Fleet, Equipment
Parks Network,
Facilities and Information Technology
Assets

June 2024

Table of Contents

LIST OF FIGURES

LIST OF TABLES

Chapter 1

Introduction

Table of Contents

1.1 Background

Nestled along the shores of Lake Ontario, Town of Oakville stands as a picturesque lakeside town, boasting a vibrant and impressive community within the Greater Toronto Area (GTA). Established in 1857, this charming town has evolved into one of Ontario's most sought-after residential and business hubs, and for good reason:

- Rich heritage, treasured and celebrated by both residents and visitors

- Coveted residential and business centers

- Well-maintained schools with a focus on quality education

- Full-service acute care community hospital

- Proximity to Lake Ontario and recreational areas

- Convenient access via QEW, 403, 407, and GO Transit

- Enchanting shopping districts in the downtown core

- Great neighborhoods

- Wonderful places for business

- A 30-minute drive from downtown Toronto and an hour from the U.S. border

Oakville is not only a desirable destination for residents but also a welcoming haven for visitors. The community offers an array of services, including acres of parks and outdoor spaces, well-maintained hiking trails, multi-use pathways, recreation and cultural centers, and libraries providing programs for all ages.

Roadway Network   Active Transportation Network   Transit   Fire and Emergency Management   Parks & Outdoor Leisure   Storm Water Management   Natural Space   Recreation / Culture / Library

The infrastructure/assets of the Town of Oakville serve as the fundamental support for our community, underpinning a variety of municipal services that contribute to the quality of life for residents, businesses, and other stakeholders. The town's Corporate Asset Management Program is crafted to facilitate the management of infrastructure/assets, aligning Council strategies and community objectives with day-to-day investment decisions.

Embarking on the asset management journey in 2013, the town has been working towards the ISO 55000 standards and has set specific objectives to further enhance the Asset Management plan. These objectives aim to establish a comprehensive asset management strategy, policy, and governance structure that maintains coordination with Council's strategic vision, fully integrating the town's organizational goals with the principles of asset management.

In February 2018, the staff presented the inaugural comprehensive Asset Management Plan to Council, concurrently with the 2018 Long-term Capital Forecast. To adhere more closely to the stipulations in O. Reg. 588/17 and align with Council's latest Strategic Plan for 2023-2026, staff undertook revisions to several asset management documents to realign them with Council's Strategic Plan.

    a. Asset Management Strategy (2021): (will update in late 2024 to reflect new Council Priorities)

    b. State of Infrastructure Report (SOIR) – Oct 2023

    c. Asset Management Maturity Assessment (Nov 2023 updated. Chapter 9 maturity Summary)

1.2   Legislative Context for the Asset Management Plan

Over the past decade, asset management planning in Ontario has undergone a significant evolution. Prior to 2009, municipalities recorded capital assets as expenditures in the year of acquisition or construction, leading to a lack of a comprehensive capital asset inventory in both the municipality's accounting system and financial statements. The revision of section 3150 of the Public Sector Accounting Board (PSAB) handbook in 2009 mandated municipalities to capitalize tangible capital assets, thereby establishing an inventory.

In 2012, the province initiated the municipal Infrastructure Strategy, making it mandatory for municipalities and local service boards seeking provincial funding to demonstrate how proposed projects align with detailed asset management plans. Additionally, municipalities were required to prepare asset management plans encompassing all municipal assets by the end of 2016 to meet Federal Gas Tax agreement requirements. The province provided guidance through the document "Building Together: Guide for Municipal Asset Management Plans," outlining the necessary components, information, and analysis for such plans.

The Infrastructure for Jobs and Prosperity Act, 2015 (IJPA), proclaimed on May 1, 2016, laid out principles for evidence-based and sustainable long-term infrastructure planning. The IJPA granted the province authority to guide municipal asset management planning through regulation. In late 2017, O. Reg. 588/17 was introduced under IJPA, aiming to establish standard content for municipal asset management plans. The regulation specified requirements for defining current levels of service, identifying lifecycle activities, and providing a financial strategy to support both.

Ontario Regulation 588/17 outlines key requirements for asset management in the coming years, including the preparation of the first strategic asset management policy by July 1, 2020, with subsequent reviews every five years. The Town of Oakville intends to update its policy with each new council term. Furthermore, every municipality is required to prepare an asset management plan for core municipal infrastructure assets by July 1, 2022, and for all other municipal infrastructure assets by July 1, 2024. Core infrastructure assets include Water, Wastewater, Storm Water, Roads, Bridges, and Culverts, while the remaining assets are considered non-core. This plan has been developed to meet the July 1, 2024, requirements of O. Reg. 588/17, utilizing the best available information at the current time.

1.3   Asset Management Policy and Strategy

Ontario Regulation 588/17 has been crafted in response to escalating demands for enhanced transparency and scrutiny surrounding investment decisions in infrastructure assets, originating from both the province and the residents and stakeholders of municipalities. It integrates key concepts derived from the well-established discipline of Asset Management, now formally encapsulated in the international standard ISO 55000.

In ISO 55000, Asset Management is defined as the "coordinated activities of an organization to realize value from its assets." In the municipal context, this value materializes through the delivery of levels of service at the lowest achievable whole life cost and an acceptable level of risk. The Town of Oakville has been overseeing its assets since its inception but has embraced this more comprehensive Asset Management philosophy as a crucial approach to realizing value for the community and addressing current and future challenges.

Over the years, the town has undertaken the development and implementation of an asset management improvement program aligned with ISO 55000 requirements. This program encompasses fundamental aspects now mandated by Regulation 588, including policy formulation, defining levels of service, and creating asset management plans. The town has also cultivated an Asset Management culture through the continual provision of Asset Management Training courses and educational initiatives.

The town's Asset Management Policy and Asset Management Strategy jointly satisfy regulatory requirement (1) and establish a framework for the successful fulfillment of regulatory requirements for asset management plans. Both documents are accessible on the Corporate Asset Management page of the town's website.

Initially approved by Council in 2017, the town's Asset Management Policy underwent a recent revision in 2021 to incorporate principles related to the town's climate change strategy. The following is the revised policy, endorsed by Council in May 2021.

Town of Oakville
Asset Management Policy

The Town's asset management mission is to protect and enhance the quality of life in Oakville by making the best possible decisions regarding Town of Oakville (town) assets in a way that provides targeted levels of service and manages risk in a cost-effective manner throughout the entire asset life cycle in order to create customer value through enhancing community asset management.

The town will manage infrastructure assets in a strategic, comprehensive, enterprise-wide manner through an integrated business approach that relies on well-devised strategies, trained knowledgeable staff, and good communication with all stakeholders to achieve desired levels of service. This requires that all assets be treated as interrelated components in a unified system, rather than as isolated parts.

This Policy supports our four Key Strategic Directions, as detailed in our Strategic Plan, and defines the principles by which we will develop our asset management capability, ensuring we understand our asset needs and develop effective solutions. Successfully delivering these principles will drive the required service and value from our assets, meeting or exceeding our customer expectations.

The scope of this Policy covers the management of all of the Town's infrastructure asset portfolio. The principles below have been established in line with leading practices.

Our Key Strategic Directions

Create it! How we will create our community	**Live it!** How we will live in our community	**Preserve it!** How we will preserve our environment	**Afford it!** How we will afford our future

Our Asset Management Principles

Forward Looking and Sustainable	Sound Asset Information
We will incorporate social, legislative, environmental and financial considerations into decisions, taking into account present and future service commitments, giving due attention to the long-term stewardship of assets	We will collect, collate, control, and circulate the right asset information, at the right time, informing the right asset management decision-making.
Robust, Repeatable, & Transparent Decision-Making	**Whole Life Cycle Cost Perspective**
We will utilize a formal but scalable, consistent, and repeatable approach to manage infrastructure assets, enabling services to be provided in the most efficient and cost-effective manner.	We will consider the combined impact of all aspects of the asset life-cycle – acquiring, operating, maintaining, renewing, and retiring assets. No new assets will be constructed/acquired without considering future operating and maintenance costs. Asset performance will be monitored throughout the asset life cycle and will be used to inform recommendations on future asset acquisition.
Risk-Based Perspective	**People-Focused(Customers and Staff)**
We will direct resources, expenditures, and priorities to achieve the agreed service outcomes and benefits, at acceptable levels of risk and proactively plan for climate related impacts that have the potential to compromise town assets.	We will adopt a serviceability-based approach to managing our assets and will only accommodate additional demand for services without detriment to current levels of service. The town will recruit, train, and retain the right staff.

This Asset Management Strategy is crafted to reinforce the implementation and sustained adherence to the principles articulated in the Asset Management Policy, aligning seamlessly with the Town of Oakville's overarching vision of "**a vibrant and livable community for all**". The strategic guidance provided by the Council Strategic Plan (2023-2026), and Livable Oakville Official Plan serves as the cornerstone for the Asset Management Strategy, setting high-level

direction and strategic objectives while offering guidance for decision-making in pursuit of the unified vision for the future.

The Asset Management Strategy is intricately interwoven with and supportive of the Sustainable Community Framework's delivery. A pivotal concept in Asset Management is the creation of a "line of sight" connecting the town's strategic objectives, corresponding asset management objectives, and the associated asset management plans that delineate specific activities (such as capital projects, operation, and maintenance regimes) to be undertaken on the asset portfolio. The town's Asset Management strategy aligns with the recommended framework for Asset Management outlined in ISO 55000, providing a robust foundation for effective asset management practices.

Organizational Strategic Plan
- Sometimes also referred to as a "Business Plan"
- Sets out organizations high level vision and mission
- Defines overarching Organizational Objectives

Council Decisions

Asset Management Policy
- Articulates senior management commitment to Asset Management and Continual Improvement
- Provides "top down" direction regarding expectations and mandatory requirements for Asset Management and defines the key principles that underpin Asset Management at the organization.

SMART Objectives

Strategic Asset Management Plan (SAMP)
- Translates Stakeholder Needs into AM Decision Making Criteria
- Confirms the Scope of AM System
- Expands on how the AM Policy will be delivered through the AM System
- Defines a suite of AM Objectives that align with Organizational Objectives

Executive Management Team Decisions

Asset Management Plans (AMPs)
- Sets out the specific life cycle related activities for managing the assets over the short, medium & long term including consideration of asset condition, service expectations, timelines, funding and other resource requirements

Line of Sight

The "Organizational Strategic Plan" must align with the Guiding Principles and Strategic Directions outlined in the Sustainable Community Framework. The Asset Management Policy articulates the principles to be embraced from an asset management standpoint to achieve these organizational objectives.

Subsequently, the Asset Management Strategy, presented in this document, details the implementation of these asset management principles within the organization. It elucidates how the high-level strategic objectives are to be translated into more tangible asset management objectives, guiding asset management decision-making processes.

Asset Management Plans subsequently outline the activities, timelines, and resources—encompassing both capital and operational expenditures—needed to fulfill the previously

established asset management objectives. The Asset Management Plan encapsulates the Asset Management System as depicted below.

Asset Management Model

| Asset Management "System" | Opportunities | Decision Making | Value Drivers: Quality, Reliability, Functional | Performance & Condition / Risk / Financial Cost | Service Value |
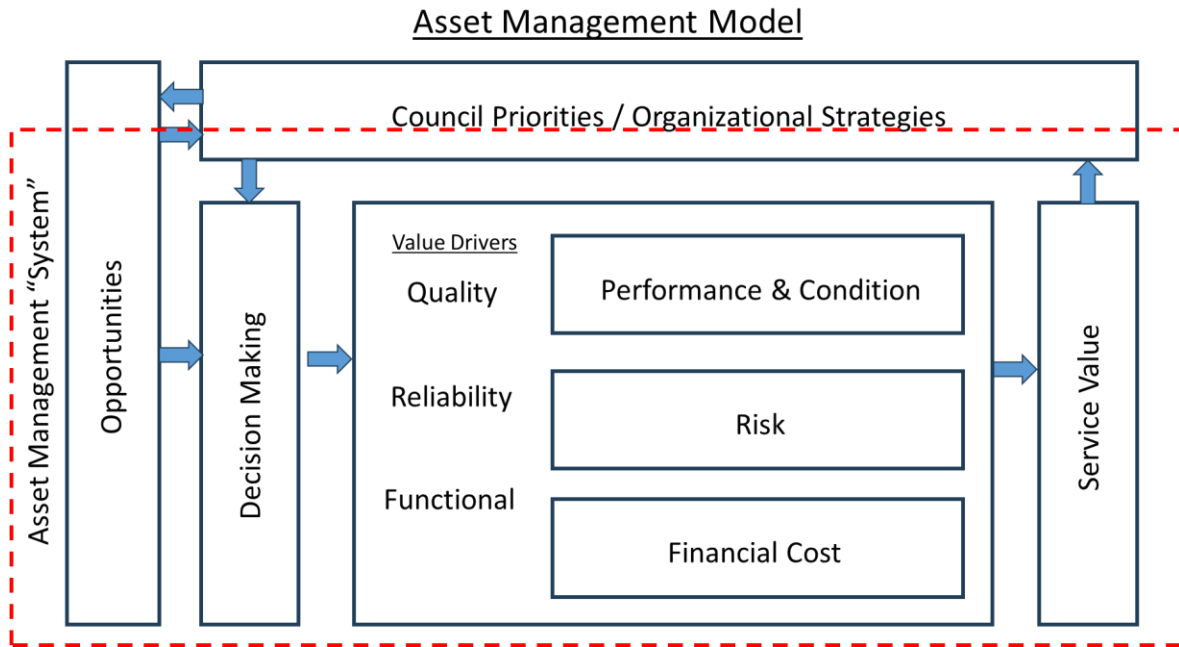
1.4 Land Use Planning and Growth Asset Management

Oakville functions as a lower-tier municipality within the Region of Halton. According to the "A Place to Grow – Growth Plan for the Greater Golden Horseshoe," Halton Region anticipates a population increase to 780,000 by 2031. The current Regional Official Plan guides growth and development to the year 2031. As part of the Municipal Comprehensive Review process, Regional Official Plan Amendment (ROPA) 49 updates the current Regional Official Plan to implement the results of the Region's Integrated Growth Management Strategy (IGMS) in accordance with the Province's 2019 Growth Plan for the Greater Golden Horseshoe. This strategy considers how to accommodate growth in Halton to the year 2051 and accommodates population and employment growth by expanding the Regional Urban Boundary to add new community lands and employment lands in Halton Region, this represents an additional 332,000 people and 150,000 jobs.

The Region's OP establishes the fundamental guidelines for the overall Regional Structure, defining Halton's fundamental stance on land use and natural resource utilization within its planning area. This framework serves as the basis for the preparation of Local Official Plans, amendments, and by-laws.

In accordance with the Region's most recent Official Plan and ROPA 49 Amendment, Oakville is allocated a target population of 349,990 and a target employment of 181,120 jobs by 2051, as outlined in the table below.

Municipality	Population 2021	Population 2041	Population 2051	Employment 2021	Employment 2041	Employment 2051
Burlington	195,000	240,050	265,160	98,340	114,330	124,390
Oakville	220,000	313,460	349,990	111,980	160,880	181,120
Milton	137,980	277,000	350,870	44,390	100,120	136,270
Halton Hills	66,010	98,890	132,050	24,510	45,900	65,460
Halton Region	620,990	929,400	1,098,070	279,220	421,230	507,240

The Town of Oakville's official planning document, known as "Livable Oakville," embodies the policies and land use designations that bring to life the town's vision of being "a vibrant and livable community for all." The Livable Oakville Plan, encompassed within the 2009 Town of Oakville Official Plan and approved amendments, applies to all lands in the town, excluding the North Oakville East and West Secondary Plan areas. This plan delineates Council's policies for land use and growth management, aligning with Halton Region Integrated Growth Management Strategy, the requirements of the Places to Grow Act, 2005, and conforming to the Province of Ontario's Growth Plan for the Greater Golden Horseshoe, 2006.

As the town grows, the town is required to manage the infrastructure needs to ensure services and functions remain at the levels and standards that are currently enjoyed by residents. To ensure services are maintained and are financially sustainable, the town undertakes several studies that help predict growth demands and identify future infrastructure requirements through service-related Master Plans, Planning and Land Use studies, Community Benefit Charge study and Development Charges Background Study.

Municipalities are required to complete a Development Charges (D.C.) Background study every 5 years which helps translate the population and employment growth into housing and commercial/industrial unit forecasts which enable the town to anticipate future demand for town services and the related infrastructure required. Also, an analysis must be undertaken to assess the long-term operating cost impacts for the capital infrastructure projects identified within the development charge study. The incremental operating expenditures directly associated with these capital projects as well as life-cycle replacement costs are estimated within the 2022 Development Charges Study. The D.C. study allows the town to collect development charge fees to recover capital costs arising from growth and currently has a municipal-wide D.C. charge for services related to a highway, transit services, fire protection services, parks and recreation, library services, by-law enforcement and growth studies. A technical update of town's D.C. study is available on the town website titled: "2022 Development Charges Background Study".

Planning for growth related infrastructure needs is an integral part of the Corporate Asset Management Plan. The initial purchase or construction capital costs of an asset are significant, but the costs associated with operating and maintaining the assets through the duration of their lifecycle can often be more significant than the initial capital costs. The principles outlined in the CAMP will help ensure growth needs of the town are considered along-side of on-going renewal of existing assets to provide a comprehensive plan that realizes the greatest value of the town investments and minimize any risk.

Chapter 8 of this report outlines the planning strategies and procedures used to incorporate long-term capital and operating costs identified through the D.C. study into the CAMP and Budget forecasts. The estimated capital expenditures related to the lifecycle activities required to maintain the current levels of service considering the projected increases in demand caused by growth are included in the 10-year capital forecasts presented.

1.5 Asset Management Plan & Climate Change

The Town of Oakville has undertaken significant efforts to align asset management decisions with climate change considerations. Notably, the town recently declared a climate emergency and has formulated climate change action plans, along with establishing climate targets, including net-zero greenhouse gas (GHG) objectives. Recognizing the parallel need for long-term and forward-thinking approaches in both asset management and climate change, the town has initiated the integration of climate adaptation activities into its asset life cycle strategies.

Given the understanding that climate change introduces chronic stresses impacting both built and natural infrastructure, the town has proactively incorporated climate adaptation measures into its asset management planning. This proactive approach is in accordance with O. Reg. 588/17, which mandates municipalities to articulate their commitment to considering actions necessary to address vulnerabilities caused by climate change to the municipality's infrastructure, encompassing:

- Adaptation Opportunities

- Mitigation Approaches

- Disaster Planning and Contingency Funding

- The town's asset management plans address and mitigate the impact of climate change on infrastructure through:

  - Acknowledging the imperative to integrate and regularly update our comprehension of climate change and climate prediction models within plans influenced by climate considerations.

  - Evaluating infrastructure performance in alignment with predictive climate models and formulating responsive action plans to address identified needs.

  - Adapting and improving infrastructure standards to ensure that new developments meet anticipated demands in the future.

  - Amplifying and enhancing green infrastructure initiatives.

  - Reducing energy consumption across infrastructure systems.

  - Facilitating proactive inspections and maintenance, such as before the occurrence of adverse weather events.

  - Enhancing functional redundancy within the infrastructure to bolster resilience.

The town has several climate initiatives listed on the town's website at Environment (oakville.ca). Some highlights are listed below.

- **Climate Change Primer**

  This report depicts the expected trends in climate related to temperature, precipitation, wind, snow and ice under both high and low GhG emission scenarios. Each climate variable is compared to the baseline years of 1976-2005 and projected into the two future timeframes of 2021-2050 and 2051-2080. The findings of this report are being used to inform the town's asset and emergency management programs.

- **2020 Energy Conservation and Demand Management Plan**

  The town's 2020 CDM Plan provides a comprehensive framework for energy conservation and management at town facilities, parks and street and road infrastructure. It also sets out the targets and areas of focus that corporate operations will focus on to reduce energy use and greenhouse gas (GHG) emissions from all of our corporate operations, including facilities. Work related to this plan will include the development of studies and standards that will determine the direction of the town's efforts to greatly reduce energy use and GHG emissions, in alignment with our corporate commitment to GHG emissions reductions. Energy efficiency and GHG emissions will become more important as our facilities are renewed.

- **Environmental sustainablity indicators**

  The town's Environmental Sustainability Plan (ESP) provides an overarching framework for the town's environmental sustainability efforts. The Town of Oakville tracks selected indicators that provide a snapshot of how we are doing on environmental sustainability.

- **Protecting our urban forest**

  The urban forest is made up of all the trees growing in Oakville, including town-owned street and park trees, trees in forested areas, as well as trees on private property. The Town of Oakville strengthened our Private Tree Protection By-law to help us preserve healthy trees and protect our community's urban forest.

- **2024 Annual Service Plan – Oakville Transit**

  The Annual Plan provides a roadmap to guide the necessary work on key projects and initiatives for Oakville Transit in the upcoming year. The plan will be finalized in the fall of 2024 this includes the includes the implementation of battery electric buses.

The Town of Oakville maintains a strong focus on asset management. Since 2013, the town has been diligently working towards incorporating ISO 55000 principles and meeting current legislation. The town has a comprehensive Asset Management Plan presented to Council in 2018 and subsequent revisions to align with regulatory requirements. Oakville's Asset Management Policy and Strategy, rooted in transparency and the ISO 55000 framework, ensure the effective management of municipal assets while aligning with long-term strategic objectives. Amidst anticipated growth The Town of Oakville integrates climate change considerations into its asset management practices, proactively addressing vulnerabilities and embracing sustainability initiatives to create a resilient and livable community for all.

Chapter 2
Overview

Table of Contents

List of Figures

List of Tables

The Corporate Asset Management Plan (CAMP) functions as a strategic blueprint outlining management's approach for assets directly owned by the town over a designated timeframe. This plan defines the characteristics and condition of assets, the expected level of service derived from them, planned lifecycle activities, technical measures to ensure the assets meet service levels, and financial strategies for implementing these initiatives. This CAMP encompasses non-core municipal assets, which include the Parks Network, Licensed Fleet, Equipment, Information Technology, and Facilities. The comprehensive asset classes and sub-categories utilized in this CAMP are detailed in Table 2-1

Table 2-1 Asset Classes and Categories of town's None-Core Assets

Asset Class	Asset Category
Parks Network	▪ Courts and Related Components (Basketball, Tennis) ▪ Play Amenities and Related Components (Splash Pads, Playgrounds) ▪ Roadway & Parking Lots ▪ Site Improvements (Walkways, Irrigation ...) ▪ Sport fields and Related Components (Soccer, Baseball, Cricket) ▪ Structures and Related Components (Shade, Picnic and Gazebo structures) ▪ Trail System - Bridge & Stairs
Licensed Fleet	▪ Buses ▪ Fire Suppression Vehicles ▪ Heavy Duty Type Vehicles ▪ Light & Medium Duty Type Vehicles ▪ Trailers
Equipment	▪ Earth Moving & Road Equipment ▪ Emergency & Safety Equipment ▪ Facility Operational Equipment ▪ Grounds Maintenance Equipment ▪ Material Handling Equipment ▪ Program Equipment (Fitness, Hoists, Floor Scrubbers ...) ▪ Vehicular Service Equipment ▪ Waste Handling Equipment
Facilities	▪ Recreation/Culture ▪ Operations Depot ▪ Administration ▪ Fire Buildings ▪ Library ▪ Storage/Vacant ▪ Washroom/Changeroom/Clubhouse ▪ Leased ▪ Parking Garage ▪ Museum/Heritage
Information and Technology (IT)	▪ Software ▪ Hardware (Computers, Printers, Servers ...) ▪ Security and Communication Equipment (CCTV, Radios, Radio Towers, Fiber Optics)

2.1   State of Infrastructure

The State of Infrastructure assessment is an analysis of the town's assets, considering factors such as current replacement value, condition, age, and stage of life. This analysis proves invaluable in guiding capital investment decisions, particularly in situations where condition and performance information are difficult to assess, or interdependencies exist among different assets.

Within this Corporate Asset Management Plan (CAMP), the State of Infrastructure information is examined for each asset with the asset class and asset category. The gathered information is utilized with the capital budget process and updating for updating the town's asset management strategies and planning for future capital renewal needs.

2.1.1   Current Replacement Value (CRV)

As shown in Figure 2-1, The current replacement value of the town's non-core assets is estimated at $1.2 billion, representing 27% of the total worth of the town's assets.

Figure 2-1 Current Replacement Value of the town's Assets (2023$)
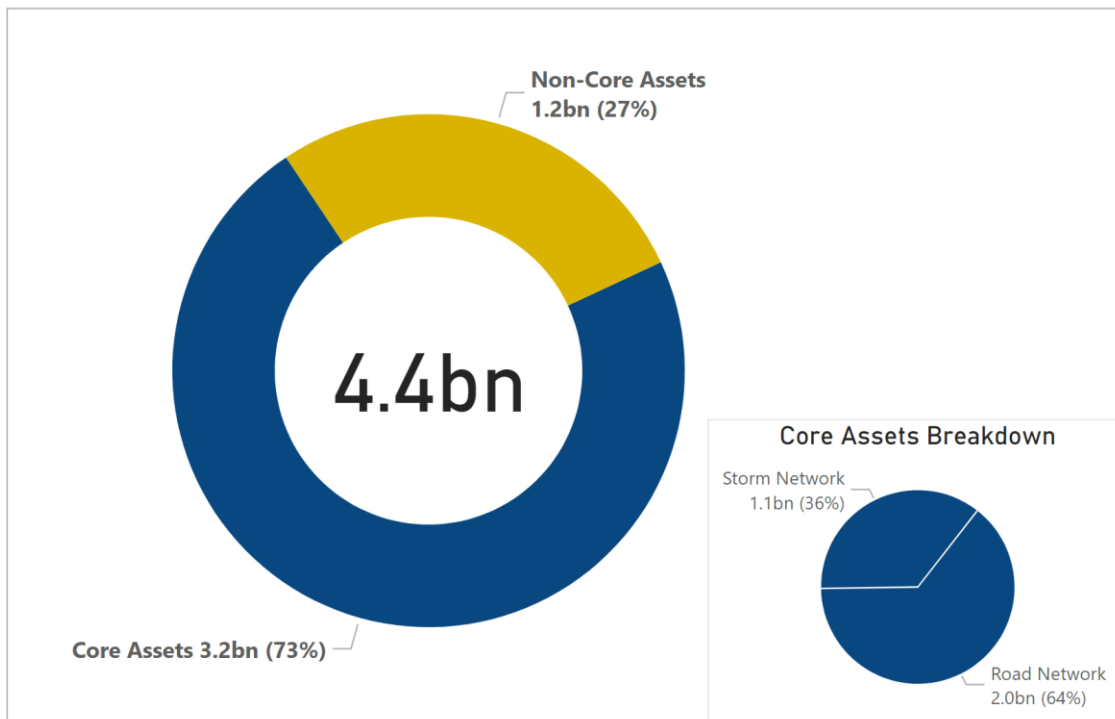
Figure 2-2 provides a breakdown of the total CRV by non-core asset classes. Facilities accounts for $810 million of the CRV, representing the major portion of the total CRV at 65%. IT and Equipment account for smaller portions of the total CRV at $36 million (or 3%) and $53 million (or 4%), respectively.

Figure 2-2 Asset Classes and Current Replacement Value (2023$)

Asset Grouping	CRV
Facilities	$810M
Licensed Fleet	$181M
Parks Network	$154M
Equipment	$53M
IT	$36M
Total	**$1.2bn**
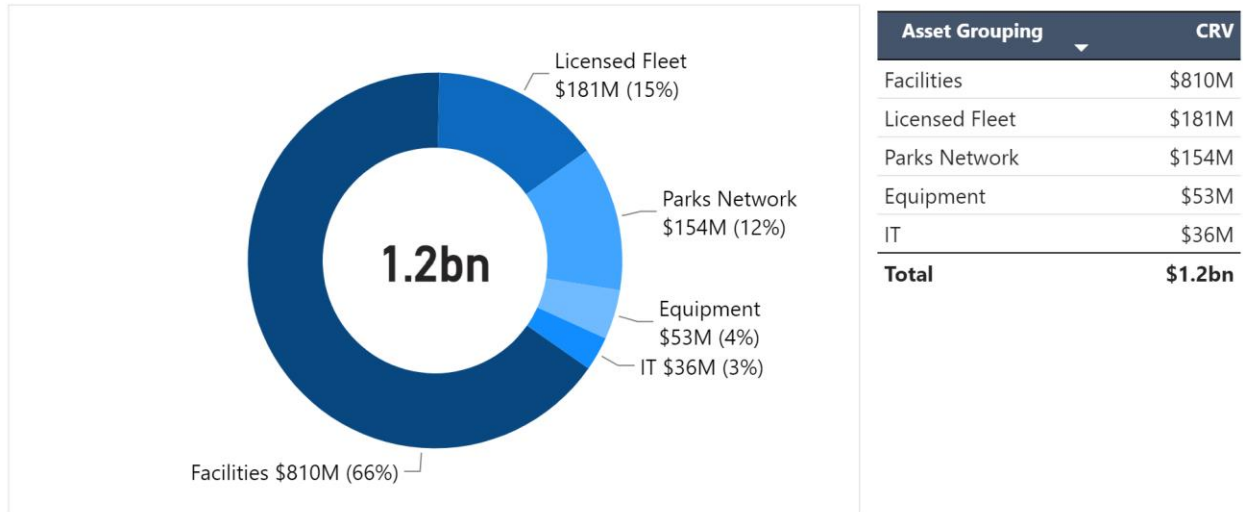
2.1.2 Condition

Understanding the current condition of the assets is important for determining life cycle strategies and planning asset renewals. The condition rating framework used in this CAMP is described and summarized in Table 2-2.

- ▪ A 5-point grading system is used for condition assessment, with 1 representing 'Very Good' and 5 representing 'Very Poor'. The 5-point ratings correspond to the alphabetical rankings of A, B, C, D, and F, with A representing 'Very Good' and F representing 'Very Poor'.

- ▪ The 5-point ratings are grouped into three qualitative condition states of "Good", "Fair", and "Poor", with "Good" representing 1(A) and 2(B), "Fair" representing 3(C) and 4(D), and "Poor" representing 5(F).

- ▪ In absence of physical condition information, the asset conditions have been calculated based on the age and expected remaining useful life of the asset.

Table 2-2 Condition Rating Frame and Scale

Rank	Description of Condition	General Description	This CAMP
A/1	Very good condition. Only normal maintenance is required	Performing as expected. Operational and functional, appearance looks new	Good
B/2	Minor defects only. Minor maintenance required	Operational and functional, minor wear and tear.	
C/3	Regular maintenance and inspection are required to monitor the asset is still performing as expected	Operational. Minor breakdowns may occur. Performing as expected.	Fair
D/4	Significant maintenance and inspection are required to monitor that the asset is still performing as expected. Planning for renewal is required.	Operational with functional concerns. Serious Breakdowns may occur.	
F/5	Asset requires replacement	Not able to consistently provide expected service performance.	Poor

Assets in Good condition are generally new or are supported by robust maintenance schedules. Assets in Fair condition are midlife and still performing well but may need increased monitoring or minor repairs. Assets in Poor condition are typically reaching end of life and will be planned for renewal or replacement in the near term.

Figure 2-3 and present the overall condition of the assets summarized by CRV. In general, the assets are largely in Good to Fair condition. The minor portions of non-core assets in Poor condition are primarily within the asset classes of Equipment and Parks Network.

Figure 2-3 Overall Condition of the Assets (Non-Core) by CRV
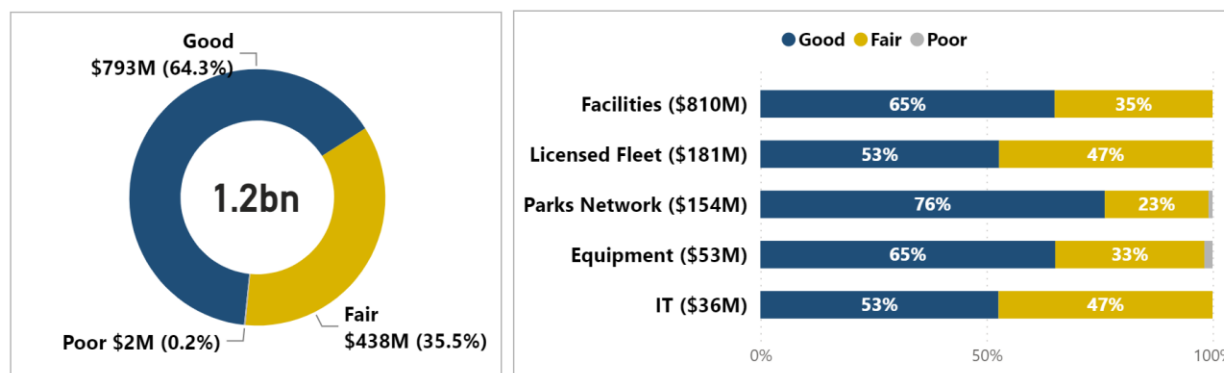
2.1.3 Stage of Life

The age of assets assists with long-term planning from a high-level perspective, as well as estimating the timing of future financial outlays particularly for assets with an extremely long useful life.

For many assets, the estimated remaining useful life is considered a good starting point to estimate the overall well-being of an asset. When information on condition or performance is limited, and when interdependencies exist among different assets, age would be primarily used to determine life cycle strategies or facilitate prioritization in asset renewals.

Examples of useful life in relation to maintenance activities are listed as follows.

- Certain assets, e.g., buildings categorized as vacant, receive little maintenance and/or rehabilitation throughout the asset life. Therefore, the assets may require replacement or renewal at end or close to end of life.

- Certain assets, e.g., playgrounds, receive proactive maintenance and/or regular rehabilitation to maintain their intended purpose. Therefore, the life of the asset may be prolonged beyond its useful life.

- Some assets, e.g., fleet and equipment, have a very proactive maintenance program with many variables factoring into assessing renewal. Therefore, it would be acceptable to let the asset run beyond its assigned end of life.

- Poor design, quality of build/installation, or improper/incorrect use of the asset would contribute to early asset failure. Therefore, it is necessary to routinely review the condition and performance of an asset.

- Climate factors such as extreme heat, Freeze Thaw cycles, increased participation contribute to assets having a shorter than expected useful life.

Stage of life is calculated as the ratio of age and useful life of an asset. The ratio is characterized into three stages: Early Life represents current age less than 1/3 of its estimated useful life, Mid Life represents current age between 1/3 to 2/3 of its estimated useful life, and Late life represents current age greater than 2/3 of its estimated useful life.

Figure 2-4 presents the overall condition of the assets summarized by CRV. In general, 48% of the assets are in Early and Mid-Life and 52% are in Late Life. Relatively larger proportions of assets are identified in the Late Life. Note that Late Stage of Life of an asset does not represent Poor Condition, which can be attributed to the proactive maintenance program.

Figure 2-4 Overall Stage of Life Summary of the Assets (Non-Core)
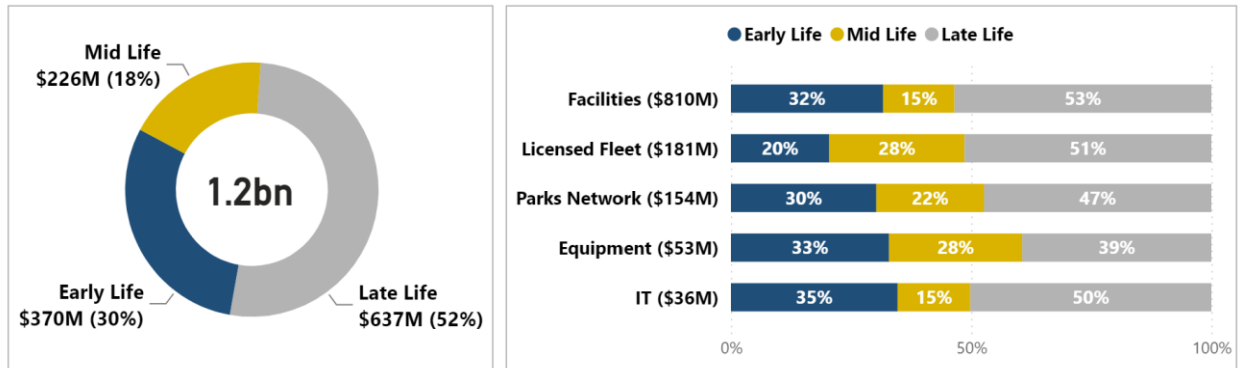
Overall, based on the analysis of the State of Infrastructure assets are grouped into several categories. Monitor stage this incorporates schedule performance inspection and increased maintenance. Renewal Stage this incorporates an inspection and placement within the 10 yr capital forecast. Performing stage this may include an inspection within a set time period but otherwise regular planned maintenance.

2.2   Level of Service

The ISO 55000 standards advocate for a comprehensive set of Levels of Service (LOS) measures. When these measures are strategically positioned within the organization, as depicted in Figure 2-5, they play a pivotal role in ensuring alignment from the corporate performance vision down to day-to-day asset management decision-making. This alignment empowers customers to evaluate the suitability, affordability, and equity of the services provided.

Levels of Service (LOS) statements delineate the outputs or objectives that the town aims to deliver to its customers. The provision of LOS fundamentally defines the town's purpose. LOS can be articulated at three distinct levels:

- **Corporate LOS –** answers the question 'why we're here' and are typically high-level statements.

- **Customer LOS –** answers the question 'what does the customer get,' are typically quantitative, and are written in language that the customer understands.

- **Technical LOS –** answers the question 'what we do' and describes things about assets/activities that are measurable.

Figure 2-5 Level of Service Objectives
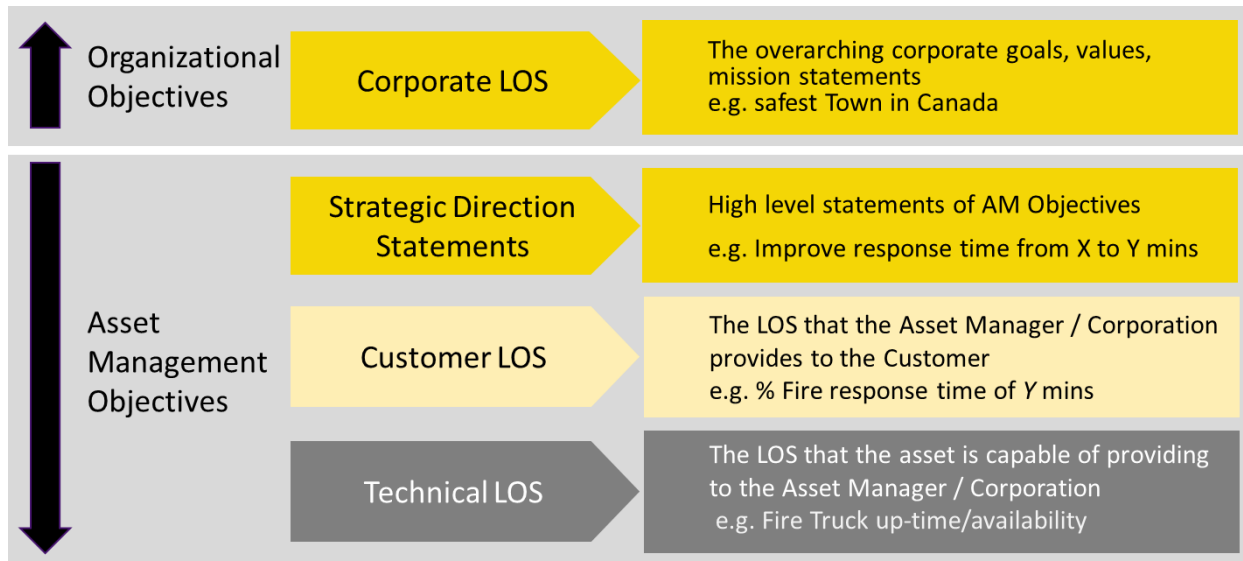
A service delivery approach involves identifying LOS and then costing how much is required to maintain the LOS. This approach can be used as the basis for assessing the benefits/costs associated with enhancing specific areas of service. It also enables the justification and prioritization of investment, considering the capability of a system of assets to deliver LOS to customers, now and into the future. The LOS framework and associated measures are useful for the town staff as they are used:

- As a basis to inform customers of the proposed LOS to be offered.

- To identify the costs and associated benefits of the services offered – through linking investment to customer outcomes.

- To assess the suitability, affordability and equity of the services offered.

- As a measure of the effectiveness of the AMP and asset management principles.

- As a focus for developing the asset management strategies to deliver the agreed LOS.

Building on the ISO 55000 framework, the town has developed a Service Level Profile Framework which is also aligned with the stipulations of OReg 588/17. The Service Level Profile where is outlined the Table 2-3.

Table 2-3 Level of Service Profile Framework

Customer Expectations	The primary expectations of customers or stakeholders regarding service delivery, i.e. what is important to them?
Service Commitment	A short statement which sets out at a high level <u>what</u> the town will do, who it will do it for, and why
Service Values	Keywords which identify aspects of service important to Customers and which will be expanded upon in service outcome statements. Each service has defined at least 3 Service Values, typically - Quality, Functional, Reliable.
Service Objective	A set of succinct statements for each service value which expand upon the mission statement to clearly state what the town commits to deliver with regards to certain aspects of service
Customer Level of Service Measures	A suite of metrics which allow the town to measure and report upon performance against the service objectives in a way that is meaningful to customers and stakeholders
Programs (capital and operating)	The major capital and operational activities that contribute towards delivery of the Service Objective and associated Level of Service Measures
Technical Level of Service Measures	A range of metrics which allow town staff to track asset and operational performance characteristics, or programs performance, and how they may contribute to delivery of both current and target Customer Level of Service measures

As of 2023, the town has renewed it's [Council Strategic Plan (2023 – 2026)](#) with the vision as "A vibrant and livable community for all".

In addition to the prescribed LOS metrics identified in O. Reg. 588/17, the town has also established a set of customer LOS and technical LOS measures to quantify the customer service objectives, the objectives are based on the Customer Values that relate to service. The three (3) Customer Value words selected for this CAMP are:

- **Quality**, which relates to overall condition of an asset and the asset refurbishment, renewal, and replacement programs.

- **Reliable**, which refers to daily maintenance and operation activities required to minimize breakdown and service interruption.

- **Functional**, which ensures assets continue to meet the service needs and consider changes in demand/growth/climate.

2.3   Lifecycle Management Strategy

An asset lifecycle management strategy offers a thorough and efficient approach to asset management, as the stages of an asset are depicted in Figure 2-6 . This strategy empowers the town to effectively manage and optimize the cost and performance of an asset by considering its entire lifecycle. Within this lifecycle management strategy, consideration is given to climate change mitigation and adaptation measures. These measures aim to enhance the resilience of infrastructure to climate variations, mitigating the impact of extreme weather events and minimizing service disruptions.

Figure 2-6 Asset Lifecycle
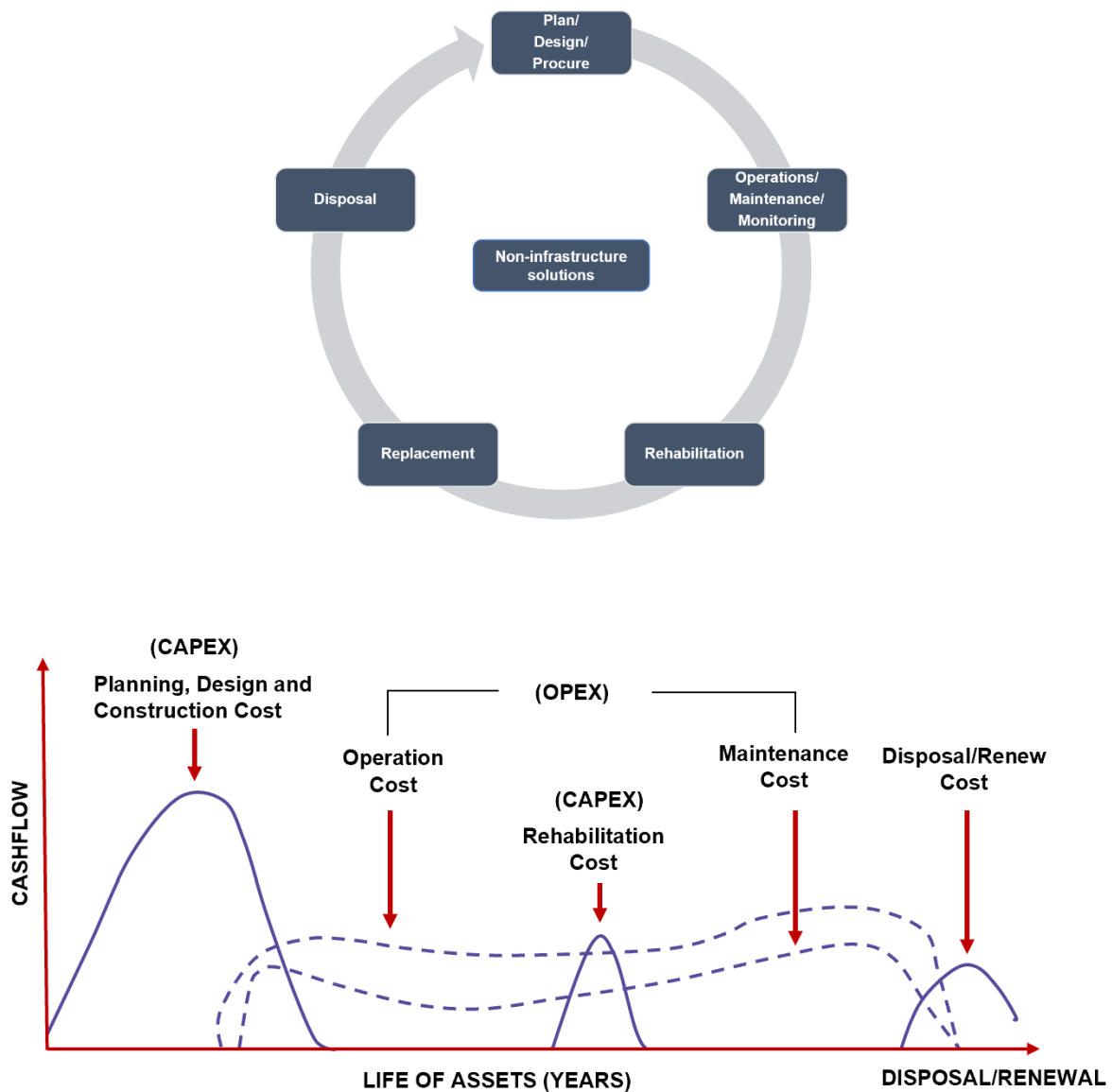
There are a variety of strategies to cost-effectively manage an asset throughout its life cycle. The optimal strategy depends on the type of asset, the criticality of the asset, and the customer LOS that the asset is contributing to. The following are asset lifecycle stages:

- ▪ **Plan/Design/Procure –** the phase involves identifying the need, assessing requirements, and planning its acquisition and or construction. This includes planned activities to extend services to previously unserved areas or expand services to meet growth demands (e.g., Master Plan).

- ▪ **Operations/Maintenance/Monitoring –** This phase involves regular operations, maintenance, and monitoring to ensure optimal asset performance and longevity. This is the longest and usually the most expensive.

- ▪ **Rehabilitation –** when significant repairs are required to extend the asset's life and keep the asset meeting the required level of service performance.

- ▪ **Replacement –** when the asset can no longer be cost-effectively operated, maintained, or rehabilitated to meet the required level of service; this is the time that the asset is to be replaced.

- ▪ **Disposal –** the phase in the asset life when it is required to be disposed of because it has reached the end of its useful life or is otherwise no longer needed by the municipality.

- ▪ **Non-infrastructure solutions –** actions or policies that can lower costs or extend useful lives.

The town takes all these lifecycle stages into account when defining the suite of lifecycle management activities and programs required to meet Service objectives. Where affordability or other relevant constraints are present, the town uses an overall asset level risk ranking to set the priority of individual assets in any given year.

2.3.1   Asset Management Programs

The asset management strategies and programs play a vital role in guiding the town's investment decisions regarding its assets, aiming to maximize their value for the organization. Traditionally, the town has employed an asset stewardship approach to determine the appropriate level of capital maintenance - capital expenditure required to sustain the current Level of Service (LOS) to the community and other stakeholders. This approach relies on three key parameters: condition, performance, and age.

The town has implemented various programs and services to effectively manage the overall lifecycle of its infrastructure. These programs are categorized to align with three selected Customer Values (Quality, Reliable, and Functional) and offer transparency regarding the financial investment required to deliver the identified customer LOS.

This Corporate Asset Management Plan (CAMP) provides an overview of the strategies and programs implemented to ensure the delivery of established LOS for each asset class.

2.3.2 Risk Assessment

The risk assessment aims to pinpoint assets that play a more critical role in service delivery. For instance, the impact of a service disruption due to the closure of an individual trail differs significantly from the disruption caused by a road failure. Therefore, the town's approach to assessing risks involves evaluating both the Likelihood of Failure (LoF) and the Consequence of Failure (CoF). These factors are then amalgamated into an overall risk score, which guides the determination of risk levels and the identification of suitable risk mitigation actions.

Likelihood of Failure (LoF)

Condition or age is a common indicator of LoF for an asset. However, an asset in poor condition or at the end of its useful life does not directly translate into a need for major intervention or capital replacement. The impact on the service, i.e., the consequence, needs to be taken into consideration as well.

Consequence of Failure (CoF)

The town has developed a scoring system to quantity the CoF based on a set of five (5) criteria in terms of health/safety/environmental impact, service impact, regulatory compliance, single point failure, and replacement times (ref. Table 2-4). The score of each criterion is determined for individual asset classes, based on available data combined with the experience and knowledge of town staff.

Table 2-4 Consequence Factors and Scoring System

Consequence Criteria and Percent Weight	Scoring Description	Score
Health & Safety/ Environmental Impact (35%)	Fatality/Serious illness/Reportable environmental incident	5
	Disabling injury (Long Term)	4
	Lost time injury (Set period of time)	3
	Minor injury	2
	No injury	1
Customer Service Impact (25%)	Major interruption in service until mitigation	5
	Moderate interruption/break in service until mitigation	4
	Minor break in service/customer concerns; no mitigation required	3
	Repeat occurrences/regular complaints; constant minor	2
	No effect	1
Regulatory Impact (20%)	Direct regulatory (Legislative effect)	5
	town policy or procedure	3
	No effect	1
Single Point Failure (15%)	Multiple/asset network effect	5
	One parent asset effect	3
	Single effect	1
Replacement Time (5%)	Major planned replacement (potentially more than 12 months)	5
	Requires planned replacement but can be done within 6-12 months	3
	replacement within normal operations (0-6months)	1

The weighted overall score of the five criteria represents Criticality, which identifies critical assets that will have greater impact on the service and the relevant importance of an asset over others. The Criticality Score ranges from 1 to 5 for each assessed asset class, with 1 representing very minor criticality and 5 representing major criticality. The criticality levels and the corresponding weighted criteria percent are outlined in Table 2-5.

Table 2-5 Summary of Criticality Levels

Criticality Level	Criticality Score	Weighted Consequence Criteria
Very Minor	1	0 - 20%
Minor	2	21 - 40%
Important	3	41 - 60%
Significant	4	61 - 80%
Major	5	80 - 100%

This CAMP presents the assessment of the average criticality for each asset class and asset category.

The average criticality for each non-core asset class is presented in Figure 2-7. The average criticality scores range from 1.4 to 3.7 (Minor to Significant Criticality), with the overall mean score of 3.1 (Important Criticality).

Figure 2-7 Average Criticality of Non-Core Asset Classes
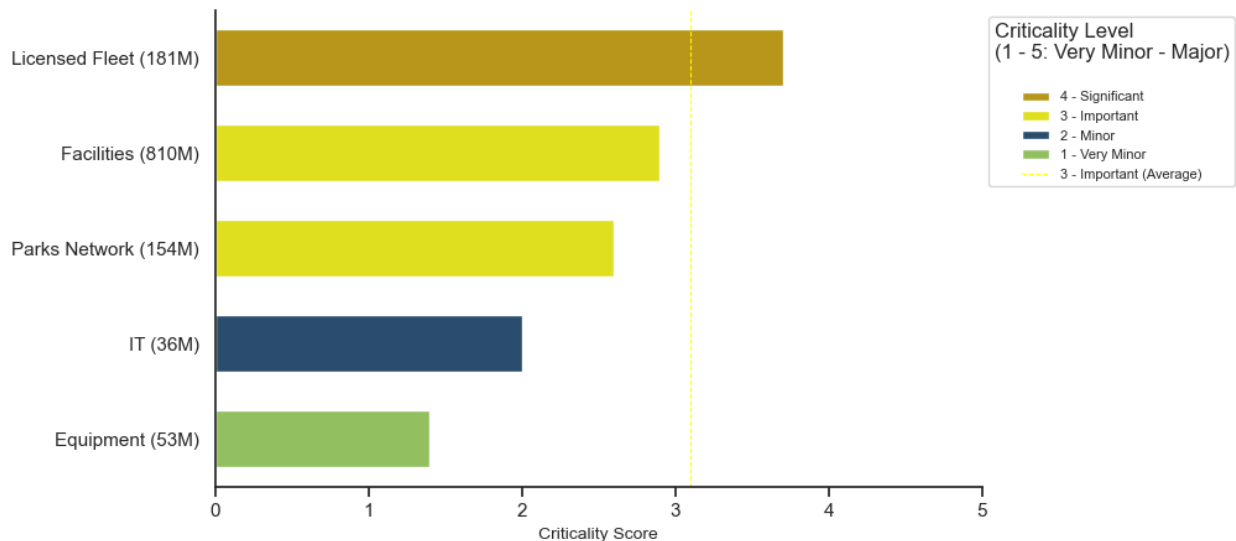
Overall Risk Rating

The Overall Risk Rating, i.e., the continuum of LoF (Condition) and CoF (Criticality), is illustrated in Figure 2-8. The Matrix is able to assess impact on service by:

- Identifying critical assets with the highest consequences
- Considers the likelihood of failure(condition) with the consequences to determine most urgent needs.
- Links asset management activities to service levels
- Draw upon institutional knowledge and experience.

As indicated in the matrix, assets in good condition and low criticality would be ranked at the bottom of the scale therefore have a low risk/priority; alternatively, assets in poor condition and high criticality would bed ranked at the top of the scale therefore has a high risk/priority. Note that as the asset ages and the condition begin to deteriorate, the priority ranking of the individual asset would increase.

As a direction of the town's asset management strategy, assets that exhibit high risks are typically targeted for action with a higher priority such as capital replacement. Alternative strategies to capital replacement can be considered if the consequence of failure is lower, such as monitoring with increased inspections or undertaking preventative maintenance. If consequence is high but likelihood is low, then contingency plans can be put in place in the event where a service failure occurs.

Figure 2-8 Asset Lifecycle Continuum of Asset Risk Strategies
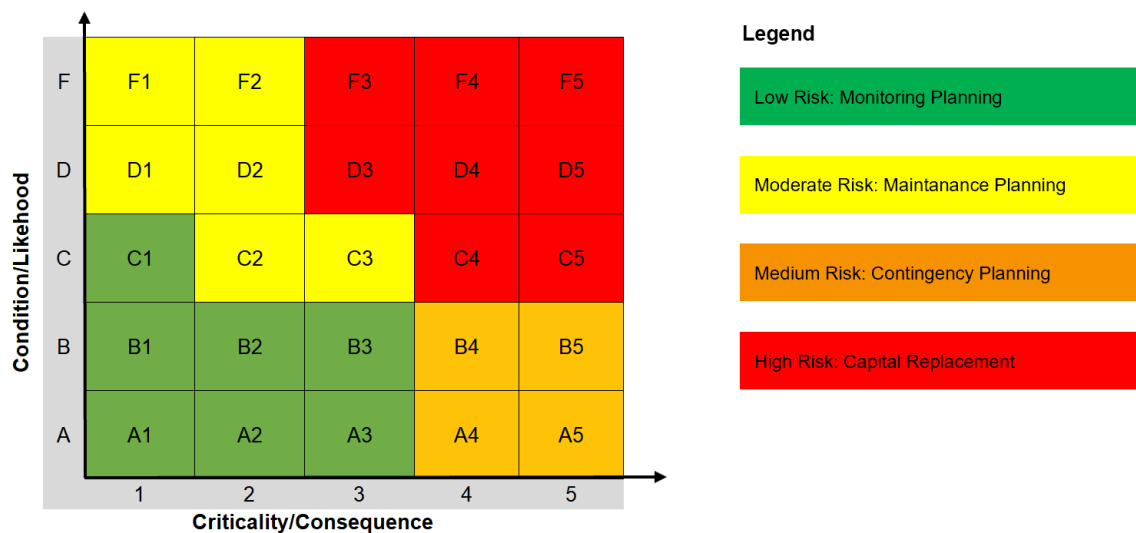
Currently, asset risk is routinely but informally considered when proposing lifecycle management activities, based on the experience of the town's planning and operational staff. However, as identified as a next step in the Asset Management Improvement Plan, it will become a formal process to incorporate the risk assessment framework into the planning process and assess risk across all town assets.

Based on the town's Asset Lifecycle Continuum of Asset Risk Strategies, the overall risk of the overall non-core assets, summarized by CRV, is presented in Figure 2-9.

Figure 2-9 Overall Risk of Non-Core Assets Summarized by CRV
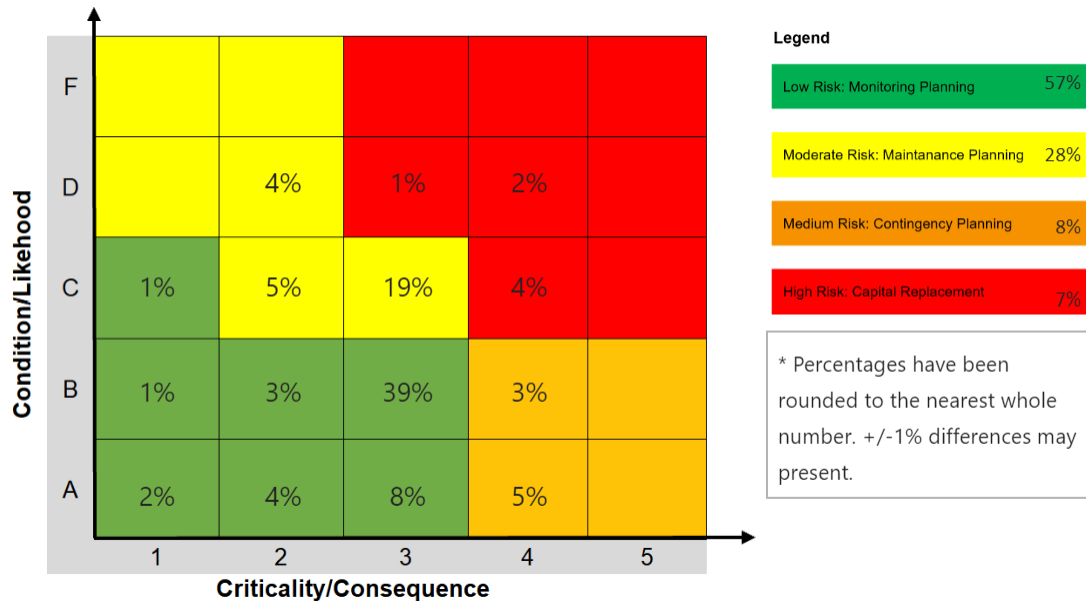
In general, out of total $1.2 Billion CRV of the non-core assets, 6% are classified as High Risk and are earmarked for Capital Replacement, 8% fall into the Medium Risk category and are planned for contingency measures, 29% are categorized as Moderate Risk and are slated for Maintenance Planning, and 57% are deemed Low Risk and are designated for Monitoring.

2.4   Asset Management Planning

2.4.1   Asset Management Planning Practices and Procedures

As indicated in the Asset Management Strategy, the principles and practices used to guide the development of Asset Management planning for the town have been built on the foundation of Council's vision "**a vibrant and livable community for all**." The 2057 Sustainable Community Framework and Council's Strategic plan set out the high-level direction and strategic objectives and provides guidance for decision making towards this unified vision for the future.

Overall, the annual update of the Operating Budget and Long-term capital plan incorporates the various asset life cycle needs to be identified through the asset management plans and processes to ensure current service levels are maintained for the various programs and services offered across the town. The town's budget forecasts not only plan for renewal and replacement of existing infrastructure used to support town services, but also takes into consideration future needs.

Section 7 of the Asset Management Strategy (AMS) outlines the risk-based approach and decision-making principles used to identify, evaluate, and prioritize asset replacement, renewal, and maintenance needs. In particular, the table in section 7.6 of the AMS outlines the project prioritization and selection hierarchy that outlines broad strategies on how capital projects are evaluated or prioritized within the town. These strategies consider health and safety or legislative requirements, the benefit of the project to the community and alignment of the project with council's strategic goals. These principles have been adopted in the development of the Long-term Capital Forecast and have been explained in the Executive Summary of the budget document.

2.4.2   Current Budget Practices

The Town of Oakville's budget is prepared using a performance-based, program-based budgeting (PB2) methodology. PB2 focuses on programs rather than departments, and the emphasis is on the allocation of resources based on desired outcomes and measurement of actual program results against expected outcomes.

In general, asset maintenance activities, including regularly scheduled inspections, preventative maintenance, and minor repairs are planned for in the town's work order management system and are funded from the town's operating budget. The operating budget is also used to address unplanned repairs where emergency repairs are dealt with through the town's emergency repair policy. The capital budget includes larger life-cycle expenditures to address renewal/rehab activities, major repairs, and replacements for all asset types.

One of the key budget principles included in the annual budget is the need to address "Interdependency" and the need for "Multi-Year Budgets." "Interdependency" means that the operating and capital budgets must be reviewed with a coordinated effort as capital expenditures and financing decisions will impact future operating budgets. "Multi-Year Budgets" means that multi-year budgets will be developed for operating and capital expenditures according to an approved guideline.

Multi-year budgets will incorporate the operating impacts of capital initiatives. As such, it is the town's practice to forecast all anticipated operational costs as part of the capital plan development particularly for growth. These operating impacts include additional personnel, materials and

supplies, utilities, contracted services, transfers to reserve for future replacement of assets and any revenues associated with fees for service. As a result, the Long-term Capital Forecast not only outlines the 10-Year capital requirements but also a 10-Year forecast of the operating cost required to support those assets.

In general, the Long-term Capital Forecast is built on a framework based on "drivers" in which the capital projects needs are reviewed and assessed. The projects are characterized into three categories: Infrastructure Renewal, Growth, and Service Enhancement / Strategic Priorities.

Infrastructure Renewal - The information stored in the Corporate Information System (CIS) is used to prepare the Infrastructure Renewal Capital Plan based on life cycle replacement and scheduled maintenance programs. Condition of assets is then evaluated at the beginning of each budget cycle to optimize the life of the assets while balancing risk of unanticipated failures. It is the town's practice that as replacement of assets are executed, existing assets are disposed, and any salvage value is transferred into the capital reserves.

Growth – Every 5 years a Development Charges Background Study is undertaken which outlines in detail the infrastructure required in order to maintain service levels as the town's population and employment grows. Detailed projects are included for the various asset classifications that would be required to meet program needs. The asset classifications involve Fire, Library, Recreation, Parks, By-law Enforcement, Roads, Road Operations and Transit, which have been identified through various Master Plans and assessments of needs. As a result of legislative changes to the *Planning* Act, the town has initiated a Community Benefits Charge Strategy, which will be completed every 5 years. The Strategy includes detailed projects to meet program needs for services that are ineligible for development charges and involves asset classifications of Parking, Civic Administration and Culture. On an annual basis project needs are re-evaluated based on actual population and employment growth development.

Service Enhancement and Strategic Priorities – These projects are for planned expansion activities that support infrastructure requirements to meet various community needs, as identified through Master Plan updates and to meet Council's strategic goals.

For the purpose of identifying the expenditures required to support the asset life cycle activities, the town's operating and capital budgets have been organized to align with the three (3) selected Customer Values (i.e., Quality, Reliable, and Functional) and key asset management programs. Note that these costs represent direct costs only and will not match entirely to the related program budgets in the budget document.

2.4.3 10-Year Forecast

The 10-Year Forecast presents a preliminary estimate of the costs associated with maintaining the town's assets at their current level of service, based on information in the 2023 budget and long-term forecast. The cost estimate considers a combination of factors such as:

- ▪ deterioration models
- ▪ inspection and maintenance programs
- ▪ asset treatment strategies
- ▪ repair, rehabilitation and replacement recommendations.
- ▪ facilitated discussions between town's Finance and Asset Management Departments on the selection of proposed capital investment projects over the long-term planning period.

This CAMP presents the 10-year forecast of the budget for each asset class, categorized by the three (3) selected Customer Values (i.e., Quality, Reliable, and Functional) and key asset management programs.

The 10-year lifecycle of expenditure forecast for the overall non-core assets is presented in Figure 2-10. The forecast predicts that the total expenditure for the non-core will amount to $2.4 Billion over the 10-year period, with allocations of $494 Million for the customer service value of Quality, $1.3 Billion for Reliable, and $672 Million for Functional.

On an annual basis, the average investment expenditure will be $242 Million, with $49 Million dedicated to Quality, $126 Million to Reliable, and $67 Million to Functional customer service values.

Figure 2-10 Overall Lifecycle Expenditure Forecast by Customer Value for Non-Core Assets
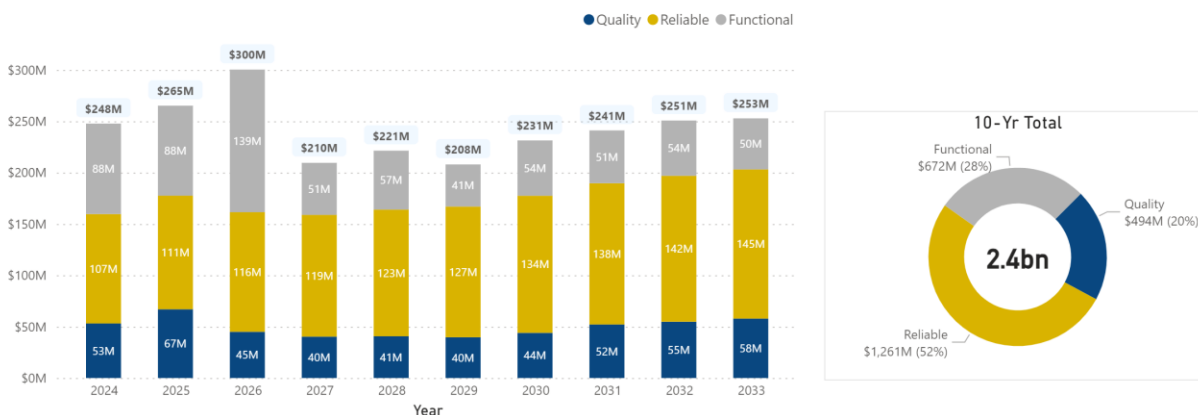
Additionally, Table 2-6 through Table 2-9 offers a breakdown of the lifecycle expenditure forecast by programs and asset classes.

Table 2-6 Summary of Lifecycle Expenditure Forecast for Non-Core Assets (2023$ Millions)

Programs by Customer Value	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total
⊟ **Reliable**	107	111	116	119	123	127	134	138	142	145	1,261
⊞ Facilities	40	43	46	46	47	49	51	52	54	55	482
⊞ Licensed Fleet	31	33	35	36	38	41	43	45	48	49	398
⊞ Parks Network	27	29	30	30	31	31	32	33	34	34	312
⊞ Equipment	4.6	4.6	4.8	4.8	4.9	5.0	6.2	6.2	5.6	5.8	52
⊞ IT	4.2	1.2	1.3	1.0	1.9	1.3	1.2	1.2	1.4	1.3	16
⊟ **Functional**	88	88	139	51	57	41	54	51	54	50	672
⊞ Facilities	29	16	84	8.0	19	8.6	7.8	14	22	15	221
⊞ Parks Network	34	48	30	26	11	12	25	15	10	4.1	216
⊞ Licensed Fleet	19	18	19	11	20	15	15	17	16	25	173
⊞ Equipment	5.3	5.4	5.0	5.5	7.3	5.2	5.8	6.0	6.0	6.0	57
⊞ IT	0.6	0.7	1.1	0.2	0.2	0.5	0.8	0.2	0.4	0.2	4.9
⊟ **Quality**	53	67	45	40	41	40	44	52	55	58	494
⊞ Parks Network	14	19	16	9.9	9.6	9.9	12	16	19	22	147
⊞ Facilities	16	24	11	8.2	8.4	9.4	9.3	6.7	7.1	6.5	107
⊞ Licensed Fleet	10	11	6.5	8.4	4.8	6.3	7.8	15	16	14	100
⊞ IT	7.6	8.6	8.9	9.0	9.4	9.4	9.8	9.7	9.8	9.9	92
⊞ Equipment	5.6	4.2	3.0	4.7	8.5	4.6	4.9	5.0	2.5	5.4	48
Total	248	265	300	210	221	208	231	241	251	253	2,428

Table 2-7 Summary of Lifecycle Expenditure Forecast for Non-Core Assets (2023$ Millions) - Quality

SOIR Grouping	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total
⊟ **Parks Network**	14	19	16	9.9	9.6	9.9	12	16	19	22	147
Park & Amenities Mtce & Renewal	11	16	15	7.5	8.4	8.8	9.9	12	17	20	127
Trails Mtce & Renewal	2.5	2.4	1.0	2.5	1.1	1.1	2.4	3.4	1.5	1.9	20
⊟ **Facilities**	16	24	11	8.2	8.4	9.4	9.3	6.7	7.1	6.5	107
Facility Asset Renewal Program	14	16	9.6	7.8	8.1	9.1	8.8	6.3	6.9	6.3	92
Facility Minor Renovation Program	2.2	8.6	1.5	0.4	0.3	0.3	0.4	0.4	0.2	0.2	14
⊟ **Licensed Fleet**	10	11	6.5	8.4	4.8	6.3	7.8	15	16	14	100
Transit Bus Refurbishment & Renewal Program	2.0	2.0	2.0	2.0	2.0	2.0	2.0	11	9.8	6.3	41
Vehicle Renewal Program	4.5	3.8	4.0	2.5	2.5	2.8	2.7	3.4	3.4	5.8	35
Emergency Vehicle Renewal Program	3.6	5.3	0.5	3.9	0.3	1.4	3.1	1.1	3.3	1.8	24
⊟ **IT**	7.6	8.6	8.9	9.0	9.4	9.4	9.8	9.7	9.8	9.9	92
Hardware Renewal Program	6.1	6.2	6.5	6.6	6.7	6.8	7.2	7.1	7.3	7.4	68
New Hardware	1.6	2.4	2.4	2.4	2.7	2.6	2.6	2.6	2.5	2.6	24
⊟ **Equipment**	5.6	4.2	3.0	4.7	8.5	4.6	4.9	5.0	2.5	5.4	48
Equipment Renewal Program	5.6	4.2	3.0	4.7	8.5	4.6	4.9	5.0	2.5	5.4	48
Total	53	67	45	40	41	40	44	52	55	58	494

Table 2-8 Summary of Lifecycle Expenditure Forecast for Non-Core Assets (2023$ Millions) - Reliable

SOIR Grouping	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total
⊟ **Facilities**	**40**	**43**	**46**	**46**	**47**	**49**	**51**	**52**	**54**	**55**	**482**
Facility Operational Mtce & Repair Program	39	43	45	46	47	49	50	52	54	55	480
Building Condition Audit Program	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	1.8
⊟ **Licensed Fleet**	**31**	**33**	**35**	**36**	**38**	**41**	**43**	**45**	**48**	**49**	**398**
Tranist Bus Maintenance Program	22	24	25	27	28	31	33	34	36	37	297
Vehicle Maintenance Program	5.5	5.8	5.9	6.1	6.2	6.4	6.7	6.9	7.2	7.4	64
Emergency Vehicle Mtce Program	3.3	3.6	3.6	3.6	3.7	3.7	3.8	3.9	4.0	4.0	37
⊟ **Parks Network**	**27**	**29**	**30**	**30**	**31**	**31**	**32**	**33**	**34**	**34**	**312**
Parks Inpsection & Mtce & Repair Program	27	29	30	30	31	31	32	33	34	34	312
⊟ **Equipment**	**4.6**	**4.6**	**4.8**	**4.8**	**4.9**	**5.0**	**6.2**	**6.2**	**5.6**	**5.8**	**52**
Equipment Maintenance Program	4.6	4.6	4.8	4.8	4.9	5.0	6.2	6.2	5.6	5.8	52
⊟ **IT**	**4.2**	**1.2**	**1.3**	**1.0**	**1.9**	**1.3**	**1.2**	**1.2**	**1.4**	**1.3**	**16**
Software Upgrade	3.9	1.1	1.3	1.0	1.9	1.3	1.1	1.2	1.4	1.3	15
Cyber Security Program	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Total	**107**	**111**	**116**	**119**	**123**	**127**	**134**	**138**	**142**	**145**	**1,261**

Table 2-9 Summary of Lifecycle Expenditure Forecast for Non-Core Assets (2023$ Millions) - Functional

SOIR Grouping	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total
⊟ **Facilities**	**29**	**16**	**84**	**8.0**	**19**	**8.6**	**7.8**	**14**	**22**	**15**	**221**
Facility Provision, Expansion and Revitalization Program	29	15	83	7.6	18	8.1	7.4	13	21	14	216
Facility Energy Efficiency Program	0.3	0.8	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	4.7
⊟ **Parks Network**	**34**	**48**	**30**	**26**	**11**	**12**	**25**	**15**	**10**	**4.1**	**216**
Land Purchase Program	22	38	26	16	3.0	4.1	7.0	5.0	5.0	4.0	129
Master Plan Implementation	8.6	7.6	3.7	5.9	6.0	6.8	17	9.1	4.8	0.0	70
Park Enhancement Program	3.2	1.2	0.3	3.1	1.1	0.3	0.3	0.3	0.3	0.1	10
Trail Enhancement Program	0.7	1.9	0.3	1.2	1.1	0.3	0.3	0.3	0.0	0.0	6.1
⊟ **Licensed Fleet**	**19**	**18**	**19**	**11**	**20**	**15**	**15**	**17**	**16**	**25**	**173**
Transit Electrification Plan	15	16	18	10	20	15	14	16	15	23	161
Growth Fleet Plan Implementation	4.1	1.7	0.8	0.4	0.2	0.3	0.6	0.8	0.5	0.5	9.9
Vehicle Utilization & Electrification Plan	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.1	0.9	2.0
⊟ **Equipment**	**5.3**	**5.4**	**5.0**	**5.5**	**7.3**	**5.2**	**5.8**	**6.0**	**6.0**	**6.0**	**57**
Equipment Electrification Plan	4.5	4.6	4.6	4.8	4.8	4.9	5.1	5.4	5.3	4.3	48
Growth Equipment Plan Implementation	0.8	0.8	0.4	0.7	2.5	0.3	0.7	0.7	0.7	1.7	9.2
⊟ **IT**	**0.6**	**0.7**	**1.1**	**0.2**	**0.2**	**0.5**	**0.8**	**0.2**	**0.4**	**0.2**	**4.9**
Program Development	0.5	0.6	1.0	0.1	0.1	0.4	0.7	0.1	0.3	0.1	3.9
Growth IT Plan Implementation	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.0
Total	**88**	**88**	**139**	**51**	**57**	**41**	**54**	**51**	**54**	**50**	**672**

Chapter 3
Licensed Fleet

Summary

Licensed Fleet ⌄

Total Current Replacement Value ($)

181M

Quick Facts

# of Licensed Fleet	554
# of Electric Buses	15
# of 1/2 Ton Pick Up	44
# of Fire Pumpers	13

Overall Condition

Good / Fair / Poor gauge

10-Year Lifecycle Expenditure Forecast (Million)
Capital & Operating

Year	Value
2024	63.4
2025	65.1
2026	63.1
2027	58.7
2028	66.3
2029	65.5
2030	69.0
2031	80.8
2032	83.5
2033	91.3
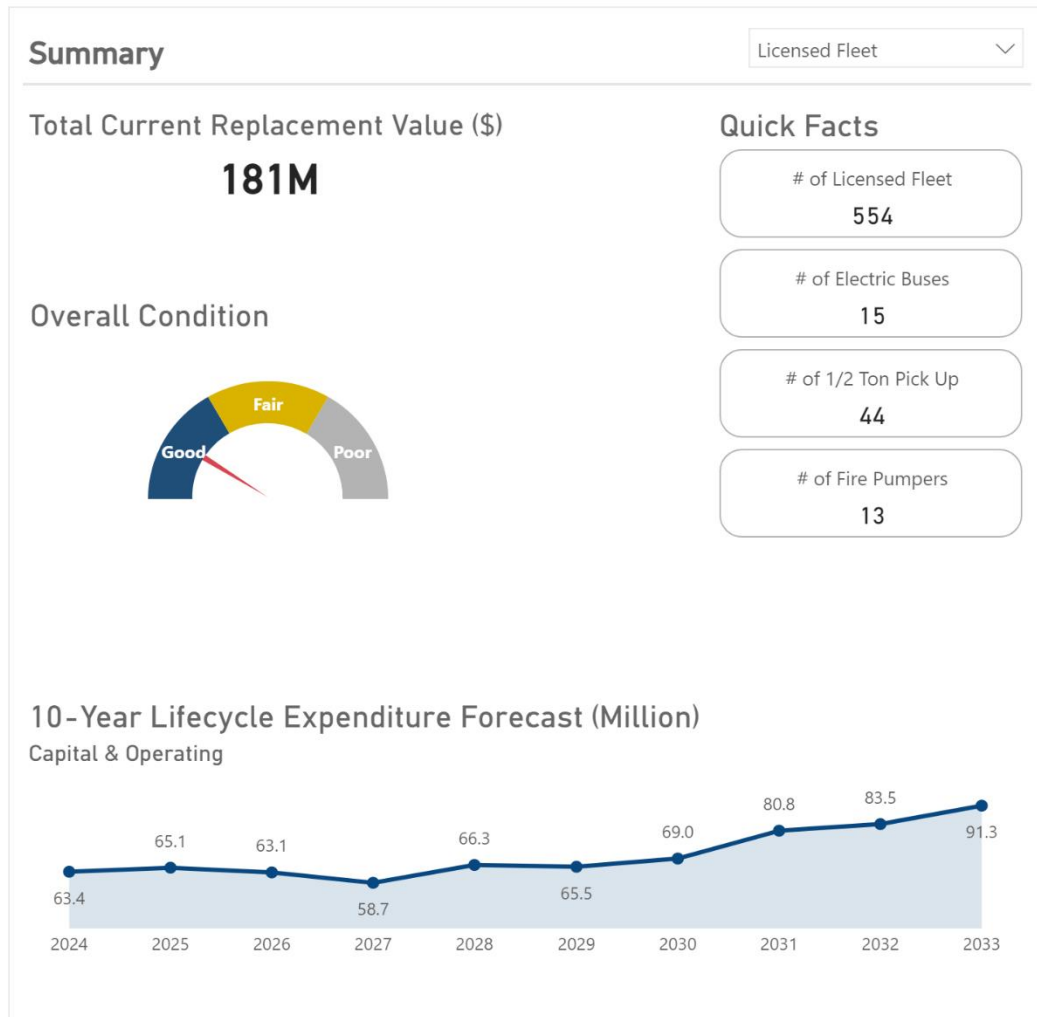
Asset Category	Examples
Bus	Conventional & Specialized
Fire Suppression Vehicle	Pumpers, Aerials, Rescue
Heavy Duty Type Vehicle	Dump, 550's, Packers
Light & Medium Duty Type Vehicle	Pick Ups, 450s, SUV
Trailer	Single, Tri, Dump

Table of Contents

List of Figures

List of Tables

3.1 State of Infrastructure

In Section 2.1, the town's method for assessing the condition of its infrastructure assets is outlined. This assessment includes determining the Current Replacement Value (CRV), evaluating their condition, and considering their age (Stage of Life).

The Licensed Fleet comprises of five (5) categories. The five categories are Buses (e.g. Conventional & Specialized), Fire Suppression Vehicles (e.g. Pumpers, Aerials and Rescue presented in Table 3-1), Heavy Duty Type Vehicles (e.g. Dump, 550's, Packers), Light & Medium Duty Type Vehicles (e.g. Pick Ups, 450s, SUV), and Trailers (e.g. Single, Tri, Dump).

Table 3-1 Examples of Fire Suppression Vehicles

Fire Suppression Vehicles			
Pumpers		Aerials	
Rescue		Platoon Chief Vehicle	
ATV Rescue			

3.1.1 Current Replacement Value (2023)

The estimated 2023 current replacement value (CRV) of the Licensed Fleet assets is approximately $181 Million. As shown by category in Figure 3-1, Buses accounts for the major proportion of the total CRV at $128 Million (or 71%), followed by Fire Suppression Vehicles at $24 Million (or 13%), Heavy Duty Vehicles at $13 Million (or 7%) and Light & Medium Duty Vehicles at $11 Million (or 6%). Trailers accounts for the smallest portion of the total CRV at $5 Million (or 3%).

Figure 3-1 2023 Replacement Values by Asset Category – Licensed Fleet
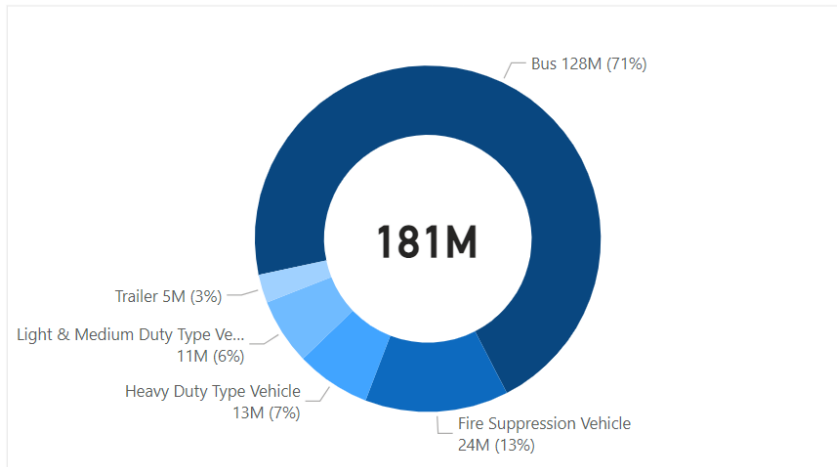
Asset Category	CRV	Quantity
Bus	128M	138
Fire Suppression Vehicle	24M	22
Heavy Duty Type Vehicle	13M	50
Light & Medium Duty Type Vehicle	11M	197
Trailer	5M	147
Total	**181M**	**554**

3.1.2 Condition

The conditions of Licensed Fleet assets are assessed during annual safety inspections. In absence of physical condition information, the asset conditions have been based on the age and expected useful life of the asset.

The ratings as well as example images are summarized in Table 3-2.

Table 3-2 Condition States – Licensed Fleet

Rating	Letter Score	Condition State	Example Image
1 (Very Good)	A	Good	
2 (Good)	B		
3 (Fair)	C	Fair	
4 (Fair)	D		
5 (Very Poor)	F	Poor	

Figure 3-2 offers an overview of Licensed Fleet asset conditions, categorized by type and CRV. Generally, the Licensed Fleet assets are in Good or Fair condition. On average, 53% are classified as Good condition and 47% as Fair condition. Among the 147 trailers assessed, only 6 were found

to be in poor condition, constituting approximately 2% of the CRV for trailers and a small percentage of the total CRV for the Licensed Fleet assets.

Figure 3-2 Asset Average Condition by CRV and Asset Category – Licensed Fleet
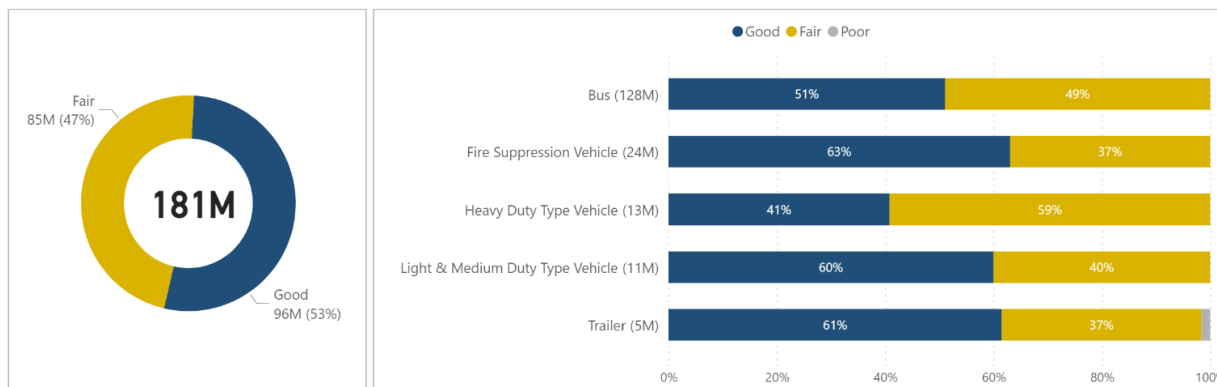
3.1.3 Age

The estimated average useful life of asset categories varies from 7 to 12 years, with the average age ranging from 6 to 12 years. Fire Suppression Vehicles are handled slightly differently, as their useful life is determined by their ability to function as front-line response vehicles. This is due to the requirement from underwriters that response vehicles not exceed 10 years of service before being transferred to a backup position for the remaining years. Generally, these vehicles have surpassed their expected useful life by 2 years, largely because of the extended lead time required for receiving replacement vehicles.

Figure 3-3 illustrates the average stage of life categorized by type and CRV. Overall, 48% of the assets are in the Early and Mid-Life stages, while 51% are in the Late Life stage. Each of the five categories shows a significant proportion of assets in the Late Life stage, ranging from 43% to 81%.

It's important to note that conditions are assessed annually for all vehicles to ensure they remain in good condition regardless of their stage of life. Renewal programs are implemented to review usage and explore potential electrification of vehicles. Furthermore, Fire Suppression Vehicles are renewed based on useful life according to fire guidelines and legislation. Therefore, being in the Late Stage of Life for an asset does not necessarily indicate poor condition, as evidenced by examining the average condition depicted in the figure.

Figure 3-3 Asset Average Stage of Life by CRV and Asset Category – Licensed Fleet
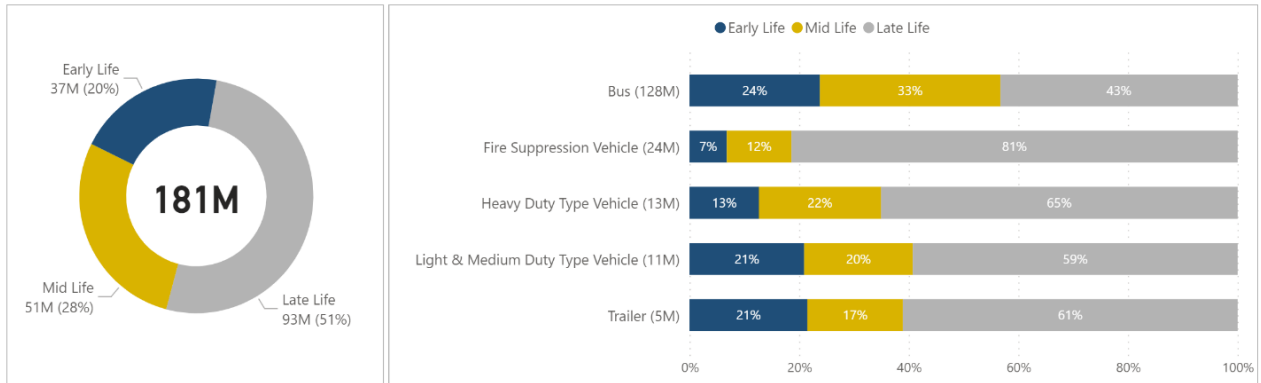
The 81% of Fire Suppression vehicles identified as late life is a reflection of practice noted above whereby once a vehicle reaches 10 years of age it is retained as back up vehicle to be used when front-line is in need servicing or in the event of a breakdown. Of the 22 Fire Suppression Vehicles, twelve (12) are front-line emergency vehicles. As shown in Figure 3-4, eight (8) of the front-line emergency vehicles are in the Early and Mid Life and four (4) are in the Late Life. Out of the 4 Late Life front-line emergency vehicles, one (1) is at the limit of useful life for Front-line emergency vehicles and has been budgeted for renewal for 2024. Fire Suppression Vehicles are handled slightly differently, as their useful life is determined by their ability to function as front-line response vehicle. This is due to the NFPA 1900 Standard that Fire Suppression Vehicles do not exceed 10 years of front-line service before being transferred to a backup position for the remaining years.

Figure 3-4 Stage of Life – Front Line Emergency Vehicles
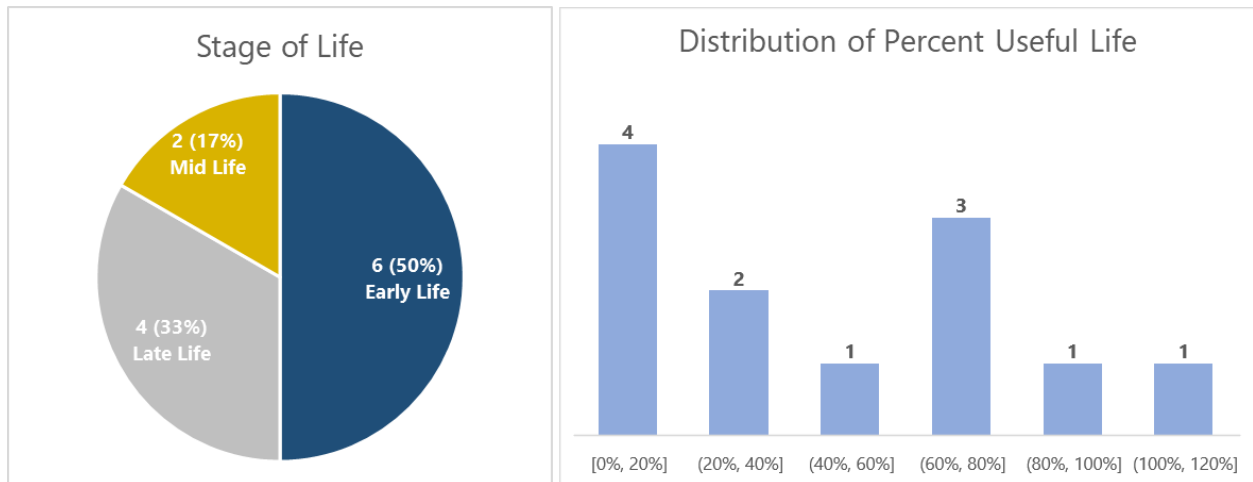
3.2   Levels of Services

Section 2.2 of the document outlines the town's Level of Service Framework. Table 3-3 summarizes the Level of Service objectives for Licensed Fleet at both the Corporate Level and the Customer Level. These objectives are aligned with three chosen Customer Values: Quality, Reliable, and Functional.

Table 3-3 Customer Service Objectives – Licensed Fleet

LOS Level			Statement/Objective
Corporate	Organizational Objective/Vision		A vibrant and livable community for all.
	Customer Expectation		Vehicles are in operational condition, appropriate for the intended use and available when required.
	Service Commitment		To provide programs with appropriate and reliable vehicles to achieve the town's service delivery commitments
Customer	Customer Service Values	**Quality**	To manage the vehicle conditions to a reasonable quality to minimize service interruption.
		Reliable	To ensure vehicles are well maintained, available and dependable meeting prescribed standards and legislative requirements.
		Functional	To plan appropriately for vehicle needs, ensuring alignment with changes in service need, growth, and climate policies.

To quantify the customer service objectives, a set of customer LOS and technical LOS metrics have been established based on the Customer Service Values, i.e., Quality, Reliable, and Functional. The metrics along with the performance in 2023 are summarized in Table 3-4 and Table 3-5.

Table 3-4 Town of Oakville's Customer LOS Metrics – Licensed Fleet

Performance Metric		Asset Category	2023 Performance
Quality	To manage the vehicle conditions to a reasonable quality to minimize service interruption.		
	The percentage of fleet vehicles be maintained in a "fair" or better rated condition[1].	All	99%
Reliable	To ensure vehicles are well maintained, available and dependable meeting prescribed standards and legislative requirements.		
	Maintain the ratio of preventive maintenance work orders to 80%[2].	Buses	77%
		Fleet	52%
Functional	To plan for vehicles needs ensuring alignment with changes in service needs, growth, and climate policies.		
	Percentage of growth buses purchased to date vs the total planned (42) to meet projected growth in transit ridership to 2031[3].	Buses	10% On Target
	To maintain the current 10 year average # of vehicle & equipment quantity per capita as the town grows[4]	Emergency Vehicle/Equipment Target (.0003)	.0002 (2021)
		Fleet /Equipment Target (.0046)	.0044 (2021)

1. This is based on reviewing asset condition inspection information. Greater analysis is necessary to standardize the condition information and to determine what the lower limit of this target should be given the wide variation of vehicle types and service redundancies requirements.
2. The Preventative Maintenance Program (PM): The work order data and related data capture processes are being reviewed to better align the reporting requirements to the PM Metric and be reflective of the goal of the PM program.
3. From 2020 Energy Conservation and Demand Management Plan
4. From 2022 Development Study Background Study

Table 3-5 Town of Oakville's Specific Technical LOS Metrics – Licensed Fleet

	Performance Metric	Related Asset Category	2023 Performance
Quality	To manage the vehicle conditions to a reasonable quality to minimize service interruption.		
	The percentage of disposed vehicles prior to reaching the end of their useful life.	All	12%
	The percent of front-line firefighting apparatus meet the NFPA[2] 1900/ ULC[3] S515 Standard for automotive firefighting apparatus with a target of 10 years or less of front-line service.	Fire Suppression Vehicle	92%
Reliable	To ensure vehicles are well maintained, available and dependable meeting prescribed standards and legislative requirements.		
	Ensure that all scheduled MTO maintenance inspections are carried out punctually, achieving a 100% on-time completion rate.	Fleet & Buses	100%
	The number of work orders per 10,000 km traveled.	Bus	.9
		Fleet	.8
Functional	To plan for vehicles needs ensuring alignment with changes in service needs, growth, and climate policies.		
	The percentage of pickup trucks that travel less than the 25th percentile of the average annual mileage, set at 7,000 kilometers[9]	Fleet	20%
	Ensure that all buses comply with AODA legislation, achieving a 100% adherence rate	Bus	100%
	Achieve a 40% electric bus fleet composition by the year 2026.	Bus	3% On target
	Per Capita Greenhouse gas emissions from fleet emissions be at 10 percent or less from 2014 levels by 2030[2].	All	To Be Calculated

5. National Fire Protection Association 1900 Standard for Firefighting Vehicles and Fire apparatus.
6. Underwriters' Laboratories of Canada (ULC) establishes safety standards that are used in many industries.
7. As this is our inaugural year with electric buses, a specific target has not been established yet.
8. From 2022 Development Study Background Study
9. Based determine from the Fleet Utilization and Optimization Study July 2020.

3.3   Life Cycle Management Strategy

In Section 2.2, the document details the stages of asset lifecycles, the town's method for identifying asset management programs, and its risk assessment framework, which includes a scoring system for evaluating asset criticality.

3.3.1   Asset Management Programs

Table 3-6 to Table 3-8 provide summaries of the asset management programs aimed at ensuring the established Level of Service (LOS) for Licensed Fleet assets is maintained. These programs are divided into the three chosen Customer Values: Quality, Reliable, and Functional.

Table 3-6 Asset Management Programs (Quality) – Licensed Fleet

AM Programs – Quality
Vehicle Renewal Program
The objective of this program is to ensure vehicles are available and reliable through ensuring vehicles replacements are planned for based on a prioritization framework considering factors such as vehicle condition, usage, mileage and procurement timelines.
Transit Bus Refurbishment & Renewal Program
The objective of this program is to guarantee the availability and reliability of buses by implementing a mid-life refurbishment strategy, ensuring buses remain operational until their end-of-life phase, where planned replacements are scheduled.
Emergency Vehicle Renewal Program
The objective of this program is to ensure the availability and reliability of emergency vehicles by meticulously planning for their replacements, in adherence to legislative requirements and standards

Table 3-7 Asset Management Programs (Reliable) – Licensed Fleet

AM Programs – Reliable
Vehicle Maintenance Program
The goal of this program is to establish a comprehensive preventative maintenance and corrective repair program, ensuring the availability and reliability of vehicles meeting the service area demands. Additionally, annual safety inspections are carried out to ensure compliance with MTO requirements, thus fulfilling legislative mandates.
Transit Bus Maintenance Program
The goal of this program is to establish a strong preventative maintenance and corrective repair program, ensuring that all required maintenance and inspections are diligently carried out on transit buses. Semi-annual safety inspections are conducted to fulfill legislative obligations. Additionally, annual safety inspections and prompt corrective repairs are executed to maintain the availability and reliability of transit buses.
Emergency Vehicle Maintenance Program
The goal of this program is to set up a comprehensive preventative maintenance and corrective repair program, guaranteeing that emergency vehicles are always available and dependable to meet the demands of the Fire service area.

Table 3-8 Asset Management Programs (Functional) – Licensed Fleet

AM Programs - Functional
Transit Bus Electrification Plan   The aim of this program is to decrease greenhouse gas emissions by substituting conventional transit buses with electric ones. Oakville Transit buses cover over six million kilometers each year, with diesel fuel being the primary source of greenhouse gas emissions from the town's operations. Battery electric buses represent a sustainable technology capable of generating zero emissions from energy production to bus operations. Implementing these technological advancements will not only lessen environmental harm but also enhance the overall customer experience.   **Vehicle Utilization & Electrification Plan**   The aim of this program is twofold: first, to decrease greenhouse gas emissions by substituting traditional vehicles with electric ones, and second, to optimize vehicle usage through regular reviews. By replacing traditional vehicles with electric ones, we aim to significantly reduce GHG emissions. Additionally, our plan involves closely monitoring and reviewing vehicle usage patterns to ensure efficient utilization. Through ongoing assessment and adjustments, we can maximize the benefits of electrification while meeting operational needs.   **Growth Fleet Plan Implementation**   The goal of this program is to ensure that as the town expands, service areas maintain ongoing access to the appropriate vehicles needed to meet growing demands.

3.3.2 Criticality

According to the town's scoring system for assessing asset criticality, which quantifies the consequence of failure, the Criticality Score varies from 1 to 5 for each evaluated category. A score of 1 denotes very minor criticality, while a score of 5 represents major criticality.

Figure 3-5 displays the average criticality of the Licensed Fleet assets, categorized by type and CRV.

Figure 3-5 Average Criticality by CRV and Asset Category – Licensed Fleet
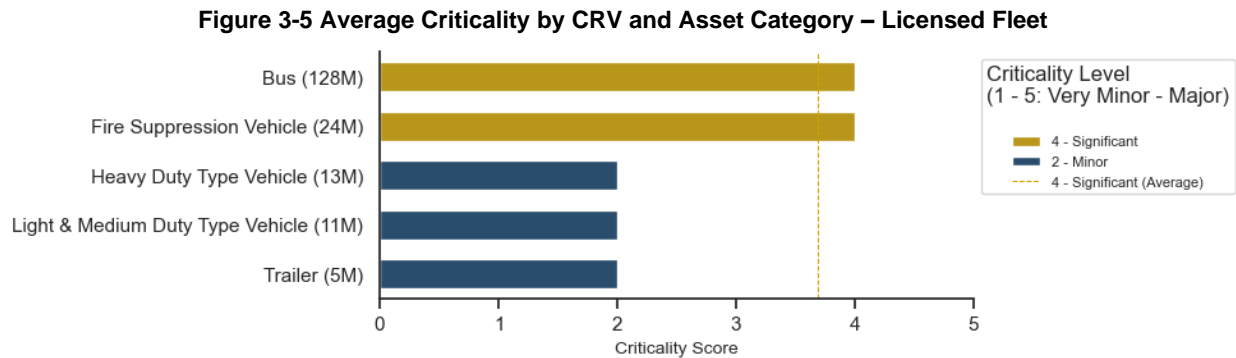
Overall, the Licensed Fleet exhibits considerable criticality, with an average rating of 3.8. Buses, comprising the majority of the CRV, as well as Fire Suppression Vehicles, carry a higher criticality rating of 4, indicating significant criticality. Light & Medium Duty Type Vehicles, Trailers, and Heavy-Duty Type Vehicles would range from minor to significant criticality levels.

3.3.3 Risk

Based on the town's Asset Lifecycle Continuum of Asset Risk Strategies, the overall risk of the Licensed Fleet assets, summarized by CRV, is presented in Figure 3-6.

Figure 3-6 Overall Risk Summarized by CRV – Licensed Fleet
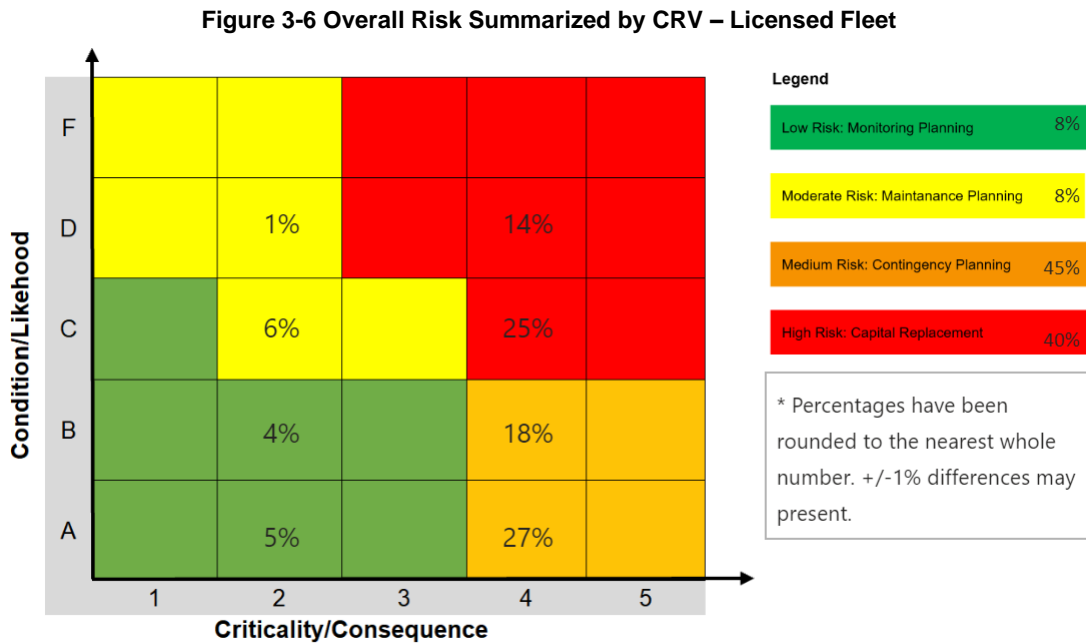
The figure illustrates that 40% of the assets are classified as High Risk and are earmarked for Capital Replacement, while 45% fall into the Medium Risk category and are planned for contingency measures. Assets with High or Medium Risk predominantly include Buses and Fire Suppression Vehicles.

Additionally, 8% of the assets are categorized as Moderate Risk and are slated for Maintenance Planning, whereas 8% are deemed Low Risk and are designated for Monitoring. These lower-risk assets primarily consist of Heavy-Duty Type Vehicles, Light & Medium Duty Type Vehicles, and Trailers.

3.4   Lifecycle Expenditure 10-Year Forecast

The 10-year lifecycle of expenditure forecast for the Licensed Fleet assets is presented in Figure 3-7, summarized by the three (3) selected Customer Values (i.e., Quality, Reliable, and Functional).

Figure 3-7 Lifecycle Expenditure Forecast by Customer Value - Licensed Fleet (2023$)
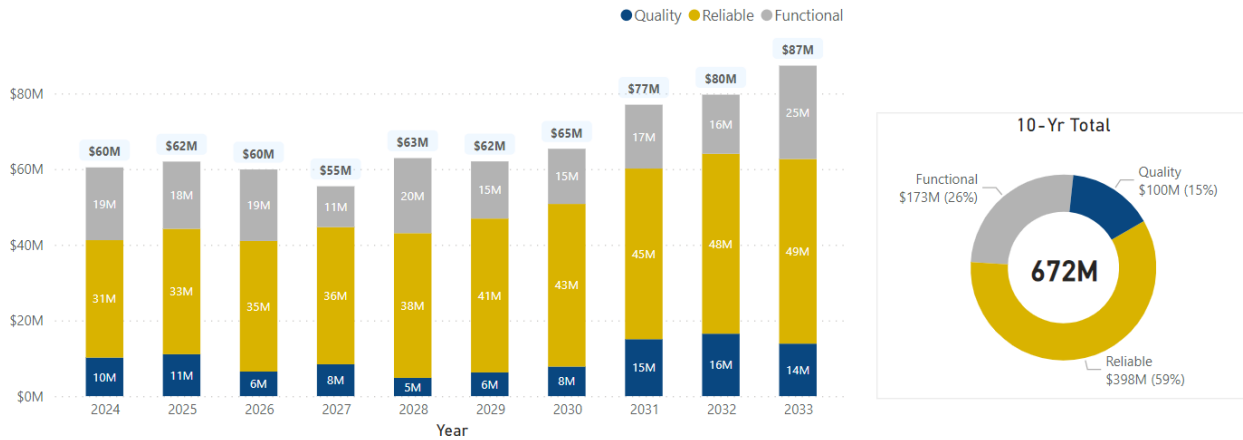
The forecast indicates that the total expenditure for the Licensed Fleet will amount to $672 million over the 10-year period. This allocation includes $100 million designated for the customer service value of Quality, $398 million for Reliable, and $173 million for Functional.

On an annual basis, the average investment expenditure is estimated to be $67 million. Of this, $10 million is allocated for Quality, $40 million for Reliable, and $17 million for Functional customer service values.

Additionally, Table 3-9 offers a detailed breakdown of the lifecycle expenditure forecast by programs.

Table 3-9 Lifecycle Expenditure Forecast – Licensed Fleet (2023$)

Programs by Customer Value	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total
⊟ **Reliable**	**$31,039,155**	**$33,154,175**	**$34,516,905**	**$36,250,205**	**$38,241,529**	**$40,664,414**	**$42,984,347**	**$45,096,711**	**$47,558,009**	**$48,796,928**	**$398,302,378**
Tranist Bus Maintenance Program	$22,221,600	$23,805,400	$24,976,000	$26,609,200	$28,330,484	$30,503,993	$32,502,873	$34,275,932	$36,414,150	$37,331,132	**$296,970,764**
Vehicle Maintenance Program	$5,483,855	$5,776,875	$5,949,905	$6,050,005	$6,248,225	$6,424,345	$6,670,676	$6,933,765	$7,179,105	$7,421,747	**$64,138,503**
Emergency Vehicle Mtce Program	$3,333,700	$3,571,900	$3,591,000	$3,591,000	$3,662,820	$3,736,076	$3,810,798	$3,887,014	$3,964,754	$4,044,049	**$37,193,111**
⊟ **Functional**	**$19,217,600**	**$17,764,600**	**$18,894,500**	**$10,791,400**	**$19,834,600**	**$15,108,600**	**$14,576,800**	**$16,874,400**	**$15,613,000**	**$24,673,200**	**$173,348,700**
Transit Electrification Plan	$14,637,400	$16,095,400	$18,088,100	$10,404,400	$19,631,500	$14,808,000	$13,926,700	$15,564,400	$14,974,000	$23,319,100	**$161,449,000**
Growth Fleet Plan Implementation	$4,145,200	$1,669,200	$806,400	$387,000	$203,100	$300,600	$613,500	$755,200	$544,900	$466,800	**$9,891,900**
Vehicle Utilization & Electrification Plan	$435,000	-	-	-	-	-	$36,600	$554,800	$94,100	$887,300	**$2,007,800**
⊟ **Quality**	**$10,184,400**	**$11,066,300**	**$6,489,400**	**$8,413,900**	**$4,829,900**	**$6,265,500**	**$7,808,500**	**$15,048,400**	**$16,499,400**	**$13,870,000**	**$100,475,700**
Transit Bus Refurbishment & Renewal Program	$2,012,000	$2,012,000	$2,012,000	$2,012,000	$2,012,000	$2,012,000	$2,012,000	$10,542,000	$9,839,200	$6,331,500	**$40,796,700**
Vehicle Renewal Program	$4,528,400	$3,787,500	$3,957,300	$2,543,400	$2,520,800	$2,840,000	$2,689,700	$3,374,100	$3,358,200	$5,751,300	**$35,350,700**
Emergency Vehicle Renewal Program	$3,644,000	$5,266,800	$520,100	$3,858,500	$297,100	$1,413,500	$3,106,800	$1,132,300	$3,302,000	$1,787,200	**$24,328,300**
Total	**$60,441,155**	**$61,985,075**	**$59,900,805**	**$55,455,505**	**$62,906,029**	**$62,038,514**	**$65,369,647**	**$77,019,511**	**$79,670,409**	**$87,340,128**	**$672,126,778**

Chapter 4
Equipment

4.   Equipment

Summary

	Equipment ⌄

Total Current Replacement Value ($)

53M

Quick Facts

# of Equipment
3,041

# of Electric Ice Resurfacers
2 out of 16

# of Tractors
30

Overall Condition

Good | Fair | Poor

10-Year Lifecycle Expenditure Forecast (Million)
Capital & Operating

2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
15.4	14.2	12.7	15.0	20.8	14.9	16.9	17.1	14.1	17.2
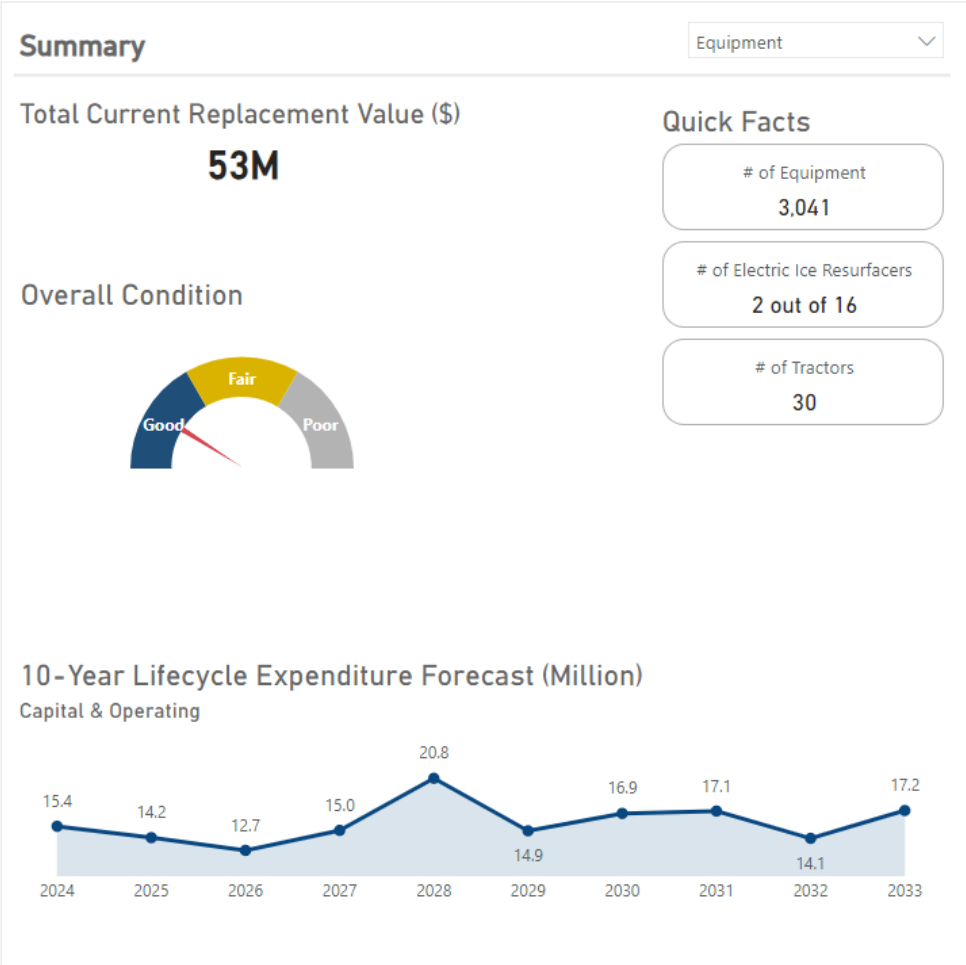
s

Asset Category	Examples
Earth Moving & Road Equipment	excavator, backhoe, loader, tractor
Emergency & Safety Equipment	bunker gear, Self-Contained Breathing Apparatus
Facility Operational Equipment	ice resurfacer, floor scrubbers
Grounds Maintenance Equipment	mower, sweeper, dump, groomer
Material Handling Equipment	forklift, gantry
Program Equipment	audio/visual equipment, fitness equipment, pay and display machines
Vehicular Service Equipment	cranes, welder, hoist
Waste Handling Equipment	in-ground waste receptacle

Table of Contents

List of Figures

List of Tables

4.1 State of Infrastructure

In Section 2.1, the town's method for assessing the condition of its infrastructure assets is outlined. This assessment includes determining the 2023 Current Replacement Value (CRV), evaluating their condition, and considering their age (Stage of Life).

The Equipment Asset Class comprises of eight (8) categories which are Earth Moving & Road Equipment, Emergency & Safety Equipment, Facility Operational Equipment, Grounds Maintenance Equipment, Material Handling Equipment, Program Equipment, Vehicular Service Equipment, and Waste Handling Equipment.

Example of Types of Equipment

4.1.1 Current Replacement Value (2023)

The Equipment assets have an estimated current replacement value (CRV) of around $53 million. Figure 4-1 illustrates this breakdown by category. Program Equipment represents the highest portion of the total CRV at $22 million (or 42%), followed by Facility Operational Equipment at $9 million (or 17%), Earth Moving & Road Equipment also at $9 million (or 17%), and Grounds Maintenance Equipment at $6 million (or 11%).

Figure 4-1 2023 Replacement Values by Asset Category – Equipment

Asset Category	CRV
Program Equipment	22M
Facility Operational Equipment	9M
Earth Moving & Road Equipment	9M
Grounds Maintenance Equipment	6M
Emergency & Safety Equipment	2M
Material Handling Equipment	2M
Vehicular Service Equipment	1M
Waste Handling Equipment	0.8M
Total	**53M**

Program Equipment 22M (42%)
Facility Operational Equipment 9M (17%)
53M
Vehicula... 1M (2%)
Material Handling Equipment 2M (4%)
Grounds Maintenance Equipment 6M (11%)
Earth Moving & Road Equipment 9M (17%)

4.1.2 Condition

Asset condition programs are vital for maintaining the reliability and performance of various town assets. These programs involve systematically inspecting asset conditions, often on a recurring basis, to evaluate their overall health and functionality. Regular inspections enable a thorough assessment of both condition and performance, aiding in the timely identification of potential issues and facilitating proactive maintenance measures. However, certain assets may present challenges in terms of assessment due to limitations in accurately gauging their condition. In such cases, where assessing condition becomes difficult, a life cycle degradation calculation is performed based on the remaining useful life. Specialized strategies are then implemented to monitor and manage these assets effectively.

By employing asset infrastructure condition programs, the town can improve operational efficiency, prolong asset lifecycles, and minimize unexpected disruptions, ultimately contributing to a more resilient and sustainable infrastructure. The conditions of Earth Moving and Road Equipment assets are assessed during annual safety inspections. Additionally, routine condition inspections are conducted for Vehicle Service equipment, such as hoists and cranes, as part of the safety program. For the remaining assets, conditions are calculated based on their age and expected remaining useful life.

The ratings as well as example images are summarized in Table 4-1.

Table 4-1 Condition States – Equipment

Rating	Letter Score	Condition State	Example Image	
1 (Very Good)	A	Good		
2 (Good)	B			
3 (Fair)	C	Fair		
4 (Fair)	D			
5 (Very Poor)	F	Poor	No Picture Available	

Figure 4-2 offers a summary of Equipment asset conditions, categorized by type and CRV. Overall, the Equipment assets are predominantly in Good or Fair condition. On average, 65% are categorized as Good condition, while 33% are classified as Fair condition. A small portion, ranging from 1% to 4%, of the equipment assets have been identified as being in Poor condition within the categories of Program Equipment, Facility Operational Equipment, Grounds Maintenance Equipment, and Vehicular Service Equipment.

Figure 4-2 Asset Average Condition by CRV and Asset Category – Equipment
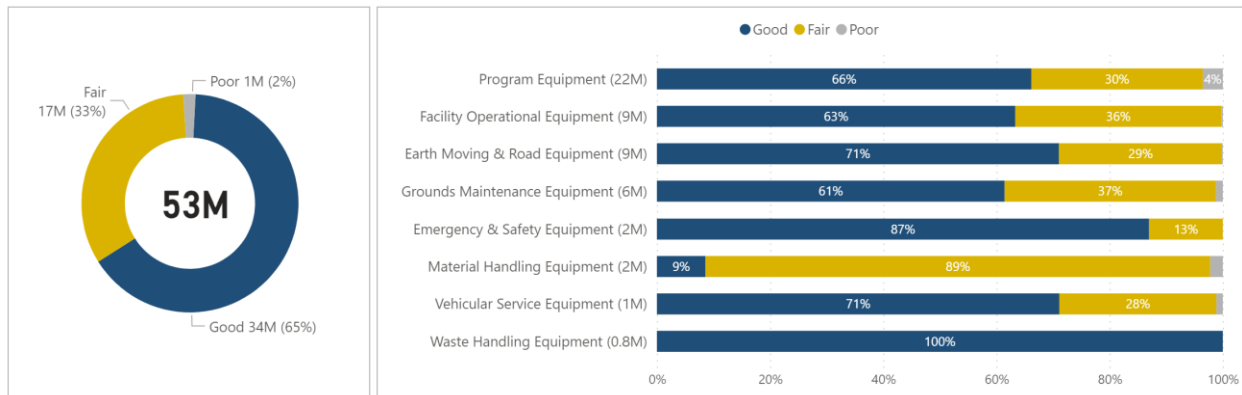
4.1.3 Age

The estimated average useful life of the asset categories ranges from 8 to 21 years and the average age ranges from 3 to 11 years.

Figure 4-3 displays the average stage of life categorized by type and CRV. Generally, 61% of the assets fall within the Early and Mid Life stages, while 39% are in the Late Life stage. With the exception of Waste Handling Equipment, all categories show a significant portion of assets in the Late Life stage, ranging from 22% to 65%.

It's important to note that there are renewal programs in place that assess the usage and potential electrification of equipment. Therefore, an asset being in the Late Stage of Life does not necessarily indicate Poor Condition, as indicated by examining the average condition depicted in the figure.

Figure 4-3 Asset Average Stage of Life by CRV and Category – Equipment

Early Life • Mid Life • Late Life

Category	Early Life	Mid Life	Late Life
Program Equipment (22M)	37%	41%	22%
Facility Operational Equipment (9M)	29%	21%	50%
Earth Moving & Road Equipment (9M)	24%	12%	65%
Grounds Maintenance Equipment (6M)	29%	15%	56%
Emergency & Safety Equipment (2M)	65%	11%	24%
Material Handling Equipment (2M)		37%	61%
Vehicular Service Equipment (1M)	66%	6%	27%
Waste Handling Equipment (0.8M)	43%	57%	

Donut chart:
53M
- Mid Life 15M (28%)
- Late Life 21M (39%)
- Early Life 17M (33%)

4.2 Levels of Services

Section 2.2 outlines the town's Level of Service Framework. The objectives for Equipment at both the Corporate Level and the Customer Level are summarized in Table 4-2. The customer service objectives are in line with three selected Customer Values: Quality, Reliability, and Functionality.

Table 4-2 Customer Service Objectives – Equipment

LOS Level			Statement/Objective
Corporate	Organizational Objective/Vision		A vibrant and livable community for all.
	Customer Expectation		Equipment is appropriate and in operational condition and available when required
	Service Commitment		To have available appropriate and reliable equipment to achieve the town's program service delivery commitments
Customer	Customer Service Values	**Quality**	To manage the equipment conditions to a reasonable quality and minimize service interruption.
		Reliable	To take appropriate actions to ensure equipment are available and dependable and meets standards and legislative requirements.
		Functional	To plan for equipment needs ensuring alignment with changes in service needs, growth, and climate policies.

To measure the customer service objectives, a collection of customer Level of Service (LOS) and technical Level of Service metrics have been set up, grounded on the Customer Service Values: Quality, Reliability, and Functionality. The metrics, along with their performance in 2023, are outlined in Table 4-3 and Table 4-4.

Table 4-3 Town of Oakville's Customer LOS Metrics – Equipment

Performance Metric		2023 Performance
Quality	To manage the equipment conditions to a reasonable quality and minimize service interruption.	
	The percentage of equipment be maintained in a "fair" or better rated condition[1].	96%
Reliable	To take appropriate actions to ensure equipment are available and dependable and meets standards and legislative requirements.	
	Maintain the ratio of preventive maintenance work orders to 80%[2]	40%
Functional	To enhance the efficiency of fuel operated equipment in terms of energy consumption, ensuring alignment with growing demands and adherence to climate policies.	
	Incrementally raise the proportion of electric motorized and power equipment[3].	7%

1. This is based on reviewing asset condition inspection information. Greater analysis is necessary to standardize the condition information and to determine what the lower limit of this target should be given the wide variation of equipment and service redundancies requirements.
2. The Preventative Maintenance Program (PM): The work order data and related data capture processes are being reviewed to better align the reporting requirements to the PM Metric and reflective of the goal of the PM program.
3. An Electrical/Battery equipment strategy is being developed along with the associated metrics. These metrics will be used in future AMPS.

Table 4-4 Town of Oakville's Specific Technical LOS Metrics – Equipment

	Performance Metric	Related Asset Category	2023 Performance
Quality	To manage the equipment conditions to a reasonable quality and minimize service interruption.		
	The percentage of disposed equipment prior to reaching the end of their useful life[1].	All Equipment Categories	15%
	Ensure that 100% of emergency-related equipment does not surpass its life expectancy[2].	All Equipment Categories	100%
Reliable	To take appropriate actions to ensure equipment are available and dependable and meets standards and legislative requirements.		
	The number of engine hours per corrective work order	Equipment using Hrs.	42 Hrs.
Functional	To enhance the efficiency of fuel operated equipment in terms of energy consumption, ensuring alignment with growing demands and adherence to climate policies.		
	That 90% of ice re-surfacers will be electric by 2033[3].	Ice re-surfacer	13% On Target
	To maintain the current 10 year average # of vehicle & equipment quantity per capita as the town grows[4].	Fleet /Equipment Target (.0046)	.0044 (2021)

1. This number usually equates to about 1 to 2 pieces of equipment per year where the maintenance cost is exceeding the remaining value left on the equipment.
2. The NFPA 1901 Standard for automotive fire apparatus or CAN/ULC S515 Standard for automobile fire fighting apparatus
3. From 2020 Energy Conservation and Demand Management Plan
4. From 2022 Development Study Background Study

4.3   Life Cycle Management Strategy

The asset lifecycle stages, the town's approach of identifying asset management programs, and the town's risk assessment framework including the scoring system for assessing asset criticality, are described in Section 2.2.

4.3.1   Asset Management Programs

Table 4-5 through Table 4-7 summarize the asset management programs for Equipment assets that are being implemented to ensure the established LOS are delivered. The programs have been categorized into the three (3) selected Customer Values (i.e., Quality, Reliable, and Functional).

Table 4-5 Asset Management Programs (Quality) – Equipment

AM Programs - Quality
Equipment Renewal Program
The aim of this program is to effectively oversee equipment conditions and renewals to maintain uninterrupted service delivery. Renewal projects are prioritized within a 10-year forecast, taking into account asset conditions as determined by inspections and the potential consequences of failure.

Table 4-6 Asset Management Programs (Reliable) – Equipment

AM Programs - Reliable
Equipment Maintenance Program
The goal of this program is to conduct inspections and upkeep of equipment to ensure uninterrupted service provision.

Table 4-7 Asset Management Programs (Functional) – Equipment

AM Programs - Functional
Equipment Electrification Plan
The aim of this program is to decrease greenhouse gas emissions by substituting traditional equipment with electric alternatives. These technological upgrades are intended to enhance fuel economy, decrease fuel expenses, and minimize environmental impact.
Growth Equipment Plan Implementation
The goal of this program is to ensure that as the town expands, service areas maintain ongoing access to the appropriate equipment needed to meet growing demands.

4.3.2 Criticality

Based on the town's scoring system for evaluating asset criticality, which quantifies the consequence of failure, the Criticality Score varies from 1 to 5 for each evaluated asset category. A score of 1 denotes very minor criticality, while a score of 5 indicates major criticality.

Figure 4-4 illustrates the average criticality of the Equipment assets, categorized by asset type and CRV.

.

Figure 4-4 Average Criticality by CRV and Asset Category – Equipment
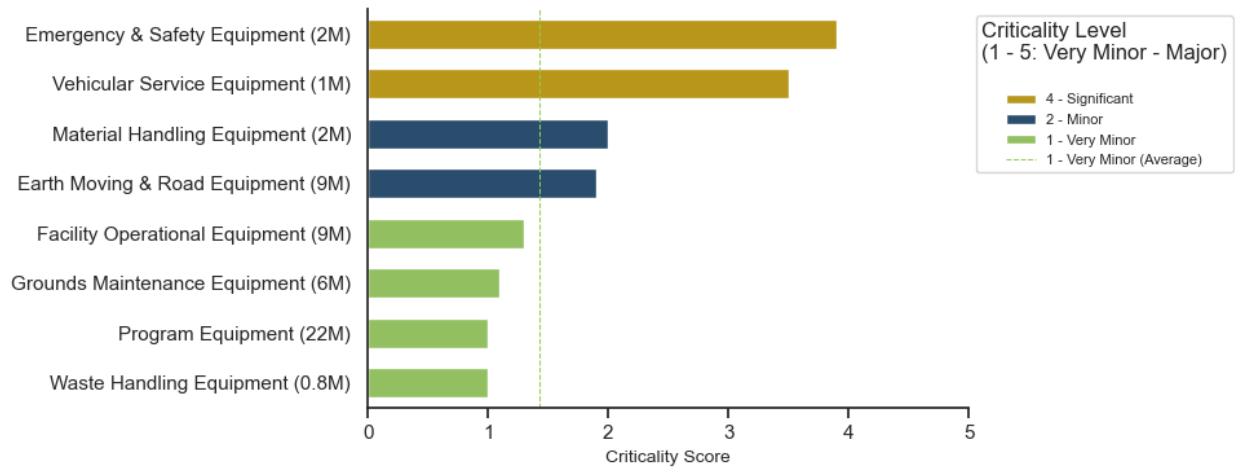
In General, Equipment assets would have Very Minor Criticality, with the average rating of 1.4. Emergency & Safety Equipment and Vehicular Service Equipment would have a higher criticality between 3 and 4, i.e., Important Criticality. The remaining categories would have the criticality ratings ranging from 1 to 2, representing Very Minor and Minor Criticality.

4.3.3 Risk

Based on the town's Asset Lifecycle Continuum of Asset Risk Strategies, the overall risk of the Licensed Fleet assets, summarized by CRV, is presented in Figure 4-5.

Figure 4-5 Overall Risk Summarized by CRV – Equipment
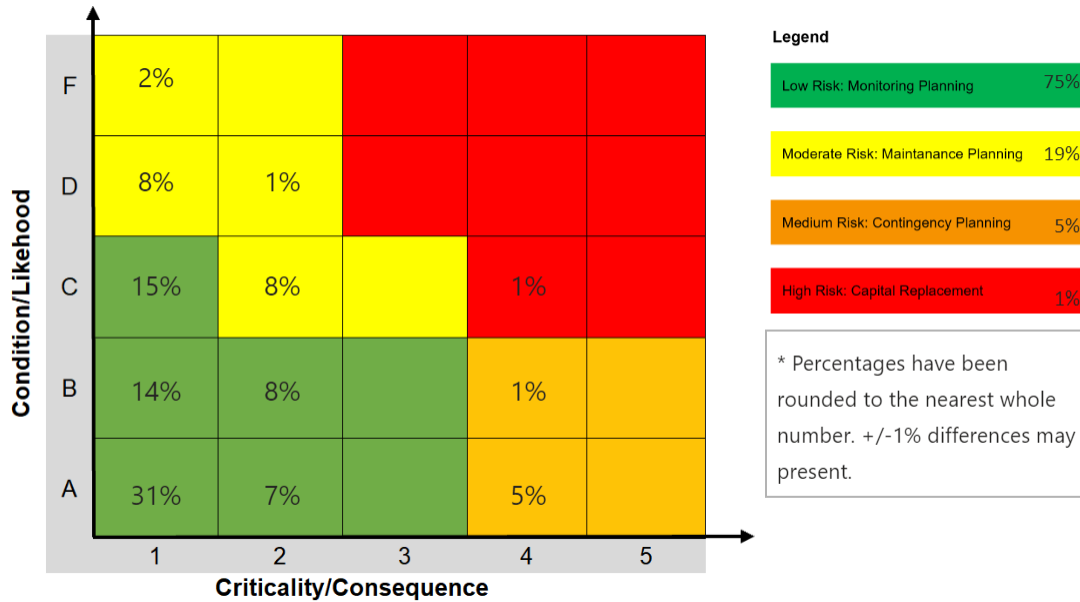
The figure shows that the Equipment assets carry a low level of risk. Only 1% of the Equipment falls into the High-risk category, indicating that they should be included in a 10-year renewal forecast. Around 5% of the assets fall into the Medium-risk category, which includes higher critical categories such as Emergency & Safety Equipment and Vehicular Service Equipment. Approximately 19% of the assets, spanning various categories, fall into the Moderate-risk category.

4.4 Lifecycle Expenditure 10-Year Forecast

The 10-year lifecycle of expenditure forecast for the Equipment assets is presented in Figure 4-6, summarized by the three (3) selected Customer Values (i.e., Quality, Reliable, and Functional).

Figure 4-6 Lifecycle Expenditure Forecast by Customer Value - Equipment (2023$)
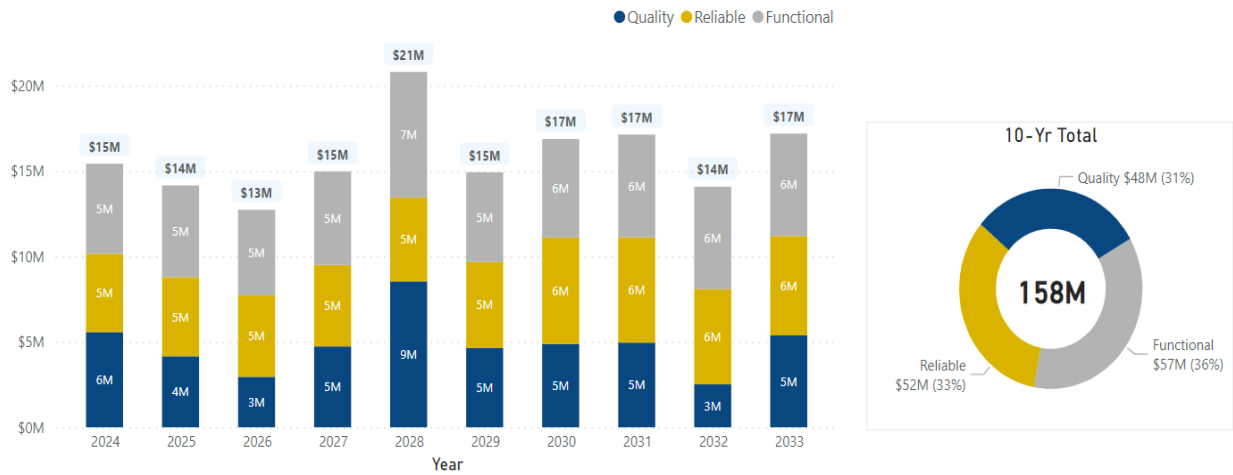
The forecast predicts that the total expenditure for Equipment will amount to $158 million over the 10-year period, with allocations of $48 million for the customer service value of Quality, $52 million for Reliable, and $57 million for Functional.

On an annual basis, the average investment expenditure will be $16 million, with $5 million dedicated to Quality, $5 million to Reliable, and $6 million to Functional customer service values.

Additionally, Table 4-8 offers a detailed breakdown of the lifecycle expenditure forecast by programs.

Table 4-8 Lifecycle Expenditure Forecast – Equipment (2023$)

Programs by Customer Value	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total
⊟ **Functional**	**$5,274,100**	**$5,371,600**	**$5,006,300**	**$5,464,800**	**$7,349,000**	**$5,240,500**	**$5,762,000**	**$6,016,100**	**$5,989,300**	**$6,001,100**	**$57,474,800**
Equipment Electrification Plan	$4,521,600	$4,560,800	$4,647,800	$4,756,600	$4,842,100	$4,934,400	$5,053,800	$5,356,200	$5,323,300	$4,324,400	**$48,321,000**
Growth Equipment Plan Implementation	$752,500	$810,800	$358,500	$708,200	$2,506,900	$306,100	$708,200	$659,900	$666,000	$1,676,700	**$9,153,800**
⊟ **Reliable**	**$4,594,445**	**$4,626,725**	**$4,772,695**	**$4,769,595**	**$4,908,067**	**$5,034,974**	**$6,231,327**	**$6,158,419**	**$5,573,192**	**$5,813,249**	**$52,482,688**
Equipment Maintenance Program	$4,594,445	$4,626,725	$4,772,695	$4,769,595	$4,908,067	$5,034,974	$6,231,327	$6,158,419	$5,573,192	$5,813,249	**$52,482,688**
⊟ **Quality**	**$5,561,400**	**$4,157,400**	**$2,956,300**	**$4,736,200**	**$8,542,700**	**$4,645,600**	**$4,875,000**	**$4,959,800**	**$2,515,700**	**$5,378,200**	**$48,328,300**
Equipment Renewal Program	$5,561,400	$4,157,400	$2,956,300	$4,736,200	$8,542,700	$4,645,600	$4,875,000	$4,959,800	$2,515,700	$5,378,200	**$48,328,300**
Total	**$15,429,945**	**$14,155,725**	**$12,735,295**	**$14,970,595**	**$20,799,767**	**$14,921,074**	**$16,868,327**	**$17,134,319**	**$14,078,192**	**$17,192,549**	**$158,285,788**

Chapter 5
Parks Network

Summary

Parks Network

Total Current Replacement Value ($)
154M

Overall Condition

Good | Fair | Poor

Quick Facts

# of Neigbourhood Parks **208**	# of Sportsfields **111**
# of Community Parks **41**	# of Splashpads **21**
# of Playgrounds **142**	# of Courts **124**

10-Year Lifecycle Expenditure Forecast (Million)
Capital & Operating

2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
75.0	95.8	76.2	66.5	51.8	52.8	69.6	63.2	62.8	60.6
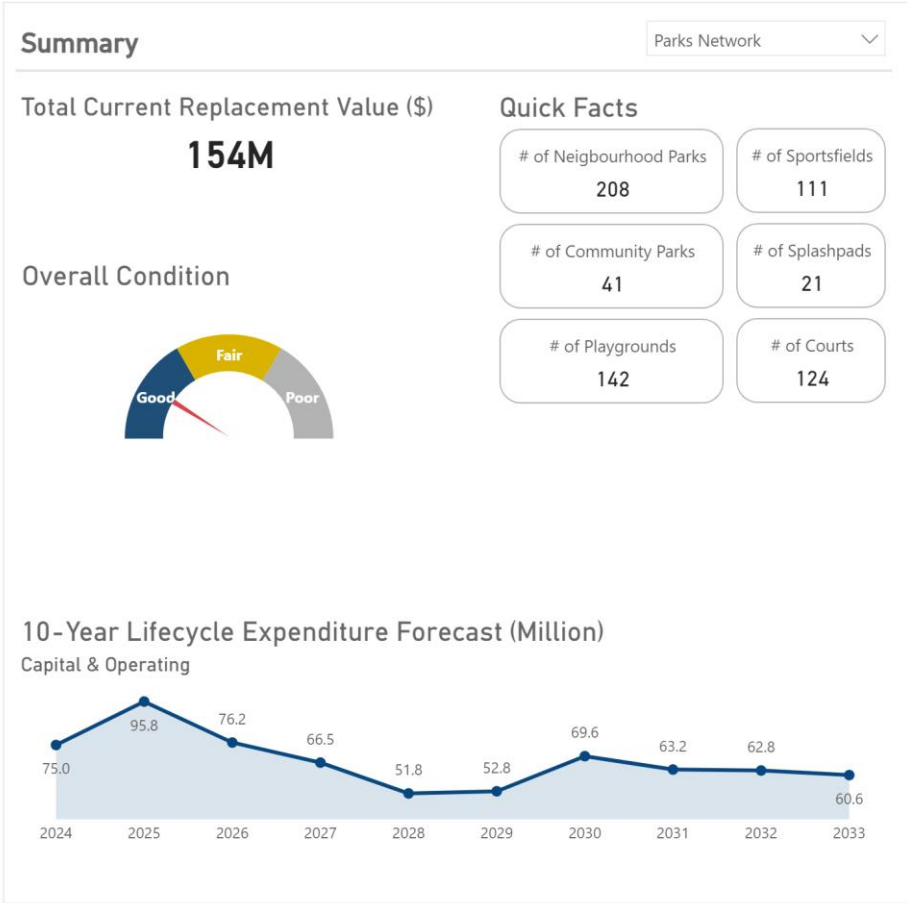
Asset Category	Park Network Examples
Sports fields and Related Components	Ball Diamonds, Cricket Pitches, Soccer, Field Hockey, Football
Site Improvements	Irrigation Systems, Lighting, Walkways
Play Amenities and Related Components	Playground, Skateboard Park, Splash Pad
Structures and Related Components	Shade Structures
Roadway & Parking Lot	Driveways, Parking Lots
Trail System - Bridge & Stairs	Park Bridges, Park Stairs
Courts and Related Components	Basketball Court, Tennis Courts, Pickleball Courts, Ball Hockey

Table of Contents

List of Figures

List of Tables

5.1 State of Infrastructure

In Section 2.1, the town's method for assessing the condition of its infrastructure assets is outlined. This assessment includes determining the 2023 Current Replacement Value (CRV), evaluating their condition, and considering their age (Stage of Life).

The Parks Network amenities encompasses seven (7) asset categories, collectively aimed at fulfilling customer expectations of accessible, high-quality parks. The assets fall within Community Parks, Neighbourhood Parks and the trail system assets. These categories include Courts and Related Components, Play Amenities and Related Components, Roadways & Parking Lots, Site Improvements, Sportfields and Related Components, Structures and Related Components, and Bridges & Stairs.

The town's major parks and trails are illustrated spatially in Figure 5-1. More details can be explored on the town's interactive map Town of Oakville Information Map.

Figure 5-1 Parks Network
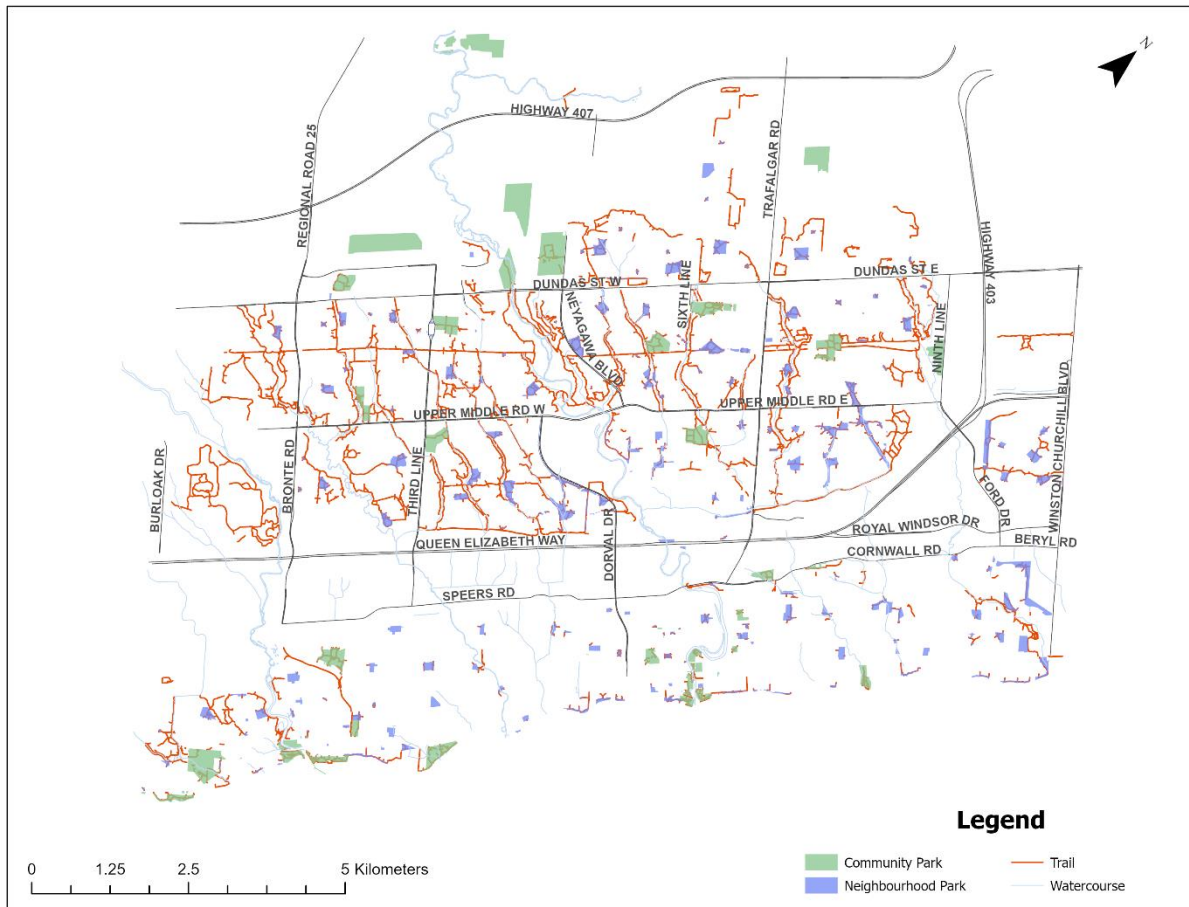
5.1.1 Current Replacement Value (2023)

The estimated 2023 current replacement value (CRV) of the Parks Network assets stands at around $156 million. Illustrated by asset category in Figure 5-1, the distribution of the Total CRV appears relatively balanced. Sportfields and Related Components hold the largest proportions of the total CRV, totaling $34 million (or 22%), followed by Play Amenities and Related Components at $28 million (or 18%), and Site Improvements at $24 million (or 16%). CRV for Structures and Related Components, Roadways & Parking Lots, and Trail System – Bridge & Stairs range from $21 million to $23 million (or 14 -15%). Courts and Related Components account for the smallest proportion of the total CRV at $9 million (or 6%).

Figure 5-1 2023 Replacement Values by Asset Category - Parks Network

Asset Category	CRV
Sportfields and Related Components	34M
Play Amenities and Related Components	28M
Site Improvements	24M
Structures and Related Components	23M
Trail System - Bridge & Stairs	21M
Roadway & Parking Lot	14M
Courts and Related Components	9M
Total	**154M**
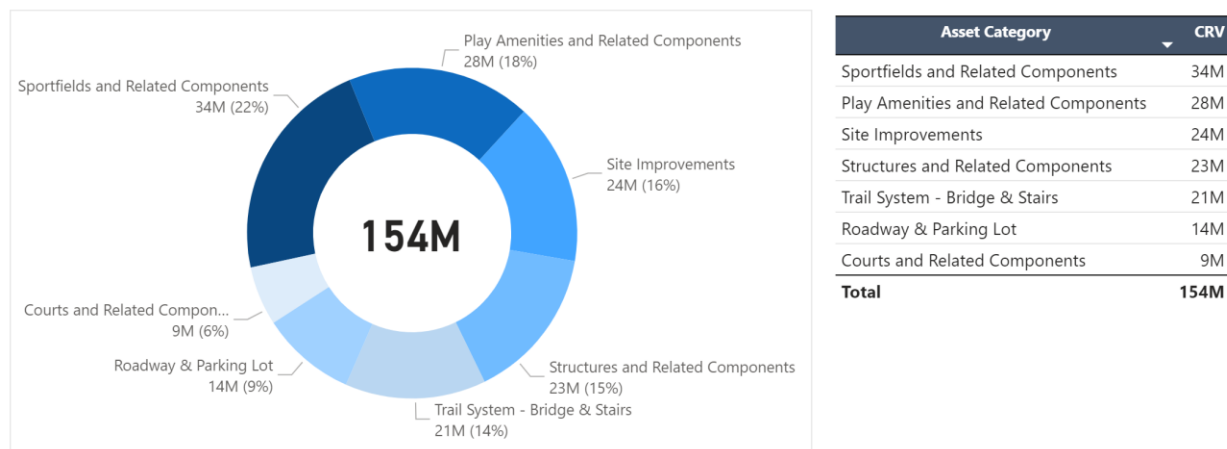
5.1.2 Condition

Parks Network assets undergo scheduled condition assessments. Bridges and stairs in parks are inspected by an engineering firm every two years, while shade structures are inspected every five years. The remaining assets are inspected annually by town's Parks staff. In cases where there is no physical condition information available, the asset conditions are determined based on their age and expected remaining useful life.

The ratings, along with example images, are summarized in Table 5-1 through Table 5-5.

Table 5-1 Condition States - Bridges

CIRC Rating	Letter Score	Condition State	Example Image
1 (Very Good)	A	Good	
2 (Good)	B		
3 (Fair)	C	Fair	
4 (Fair)	D		
5 (Very Poor)	F	Poor	

Table 5-2 Condition States - Stairs
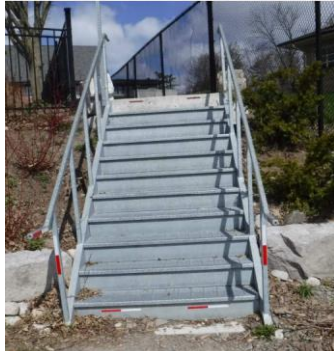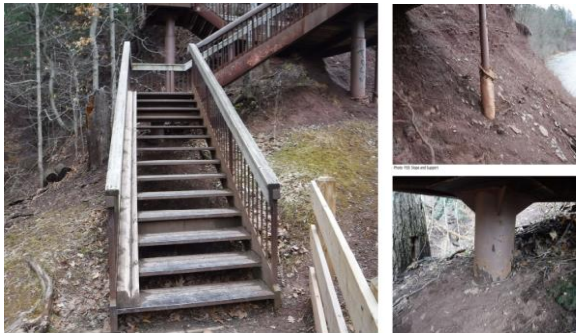
CIRC Rating	Letter Score	Condition State	Example Image
1 (Very Good)	A	Good	
2 (Good)	B		
3 (Fair)	C	Fair	
4 (Poor)	D		
5 (Very Poor)	F	Poor	

Table 5-3 Condition States - Trails

CIRC Rating	Letter Score	Condition State	Example Image
1 (Very Good)	A	Good	
2 (Good)	B		
3 (Fair)	C	Fair	
4 (Fair)	D		
5 (Very Poor)	F	Poor	

Table 5-4 Condition States - Splashpads

CIRC Rating	Letter Score	Condition State	Example Image
1 (Very Good)	A	Good	
2 (Good)	B		
3 (Fair)	C	Fair	
4 (Fair)	D		
5 (Very Poor)	F	Poor	No Picture Available

Table 5-5 Condition States - Playgrounds

CIRC Rating	Letter Score	Condition State	Example Image
1 (Very Good)	A	Good	
2 (Good)	B	Good	
3 (Fair)	C	Fair	
4 (Fair)	D	Fair	
5 (Very Poor)	F	Poor	No Picture Available

Figure 5-2 presents an overview of Parks Network asset conditions, categorized by asset category and CRV. Overall, the Parks Network assets predominantly fall into the Good to Fair condition range. On average, 76% are classified as good condition, while 24% are classified as Fair condition.

Figure 5-2 Asset Average Condition by CRV and Asset Category - Parks Network
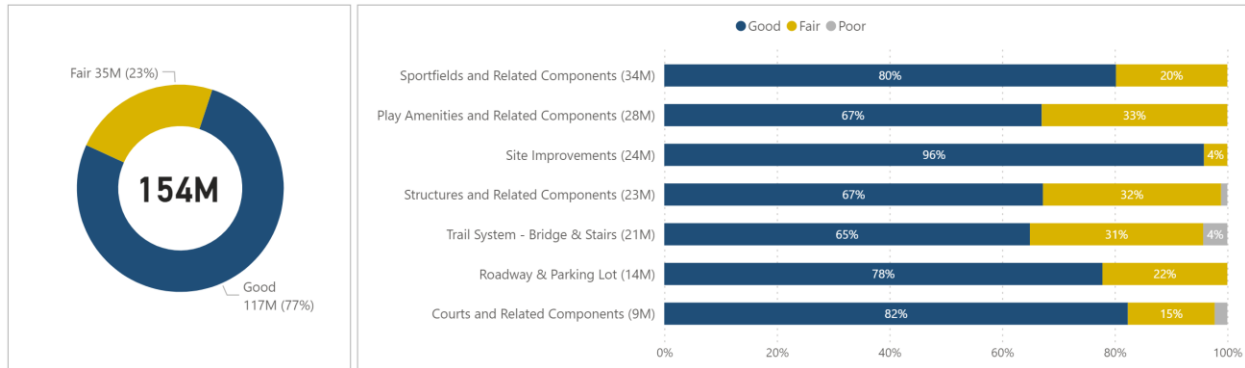
5.1.3 Age

The estimated average useful life of the asset categories ranges from 17 to 33 years, with the average age ranging from 5 to 24 years.

Figure 5-3 illustrates the average stage of life categorized by asset category and CRV. Overall, 55% of the assets are in the Early and Mid-Life stages, while 45% are in the Late Life stage. Each of the seven categories has a proportion of assets in the Late Life stage, ranging from 5% to 65%.

It is important to note that all Parks Network assets undergo cyclic inspections for condition and performance to ensure overall good condition regardless of their stage of life. Asset renewal programs are implemented to support servicing objectives outlined in the Parks master planning. Therefore, being in the Late Stage of Life for an asset does not necessarily indicate poor condition, as evidenced by reviewing the figure of the average condition.

Figure 5-3 Asset Average Stage of Life by CRV and Asset Category - Parks Network
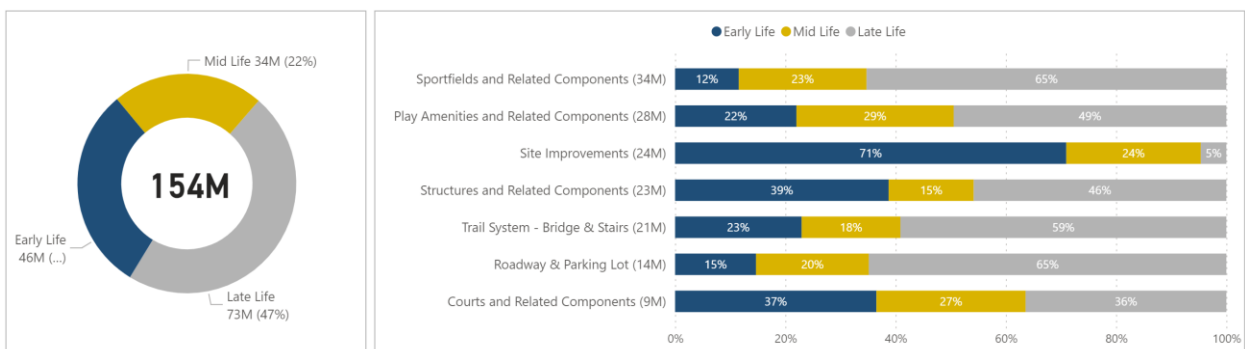
5.2   Levels of Services

Section 2.2 of the document outlines the town's Level of Service Framework. Table 5-6 summarizes the Level of Service objectives for Parks Network at both the Corporate Level and the Customer Level. These objectives are aligned with three chosen Customer Values: Quality, Reliable, and Functional.

Table 5-6 Customer Service Objectives – Parks Network

LOS Level			Statement/Objective
Corporate	Organizational Objective/Vision		A vibrant and livable community for all.
	Customer Expectation		Accessible quality parks and outdoor leisure spaces.
	Service Commitment		Ensure that our parks are safe, welcoming, and enjoyable, helping people and families to discover, participate, belong, and thrive.
Customer	**Customer Service Values**	**Quality**	To manage the condition of park assets to a reasonable quality and minimize service interruption.
		Reliable	To take appropriate actions to ensure park network assets are available and dependable and meets standards and legislative requirements.
		Functional	To plan the current and future connectivity of Parks and Open Spaces, aligning them with the town's growth and the evolving needs of the community and climate policies.

To measure the customer service objectives, a series of customer Level of Service (LOS) and technical Level of Service metrics have been developed, grounded in the Customer Service Values: Quality, Reliable, and Functional. These metrics, along with their performance in 2023, are outlined in Table 5-7 and Table 5-8.

Table 5-7 Town of Oakville's Customer LOS Metrics – Parks Network

	Performance Metric	Related Asset Category	2023 Performance
Quality	To manage the condition of park network assets to a reasonable quality and minimize service interruption.		
	The percentage of Park Amenities be maintained in a "fair" or better rated condition[1]	Park Amenities	94.5%
Reliable	To take appropriate actions to ensure park network assets are available and dependable and meets standards and legislative requirements.		
	That 100% of Park Asset Inspections are completed according to Canadian Standards Association guidelines[2]	All parks with Playground & Splashpads	100%
Functional	To plan the current and future connectivity of Parks and Open Spaces, aligning them with the town's growth and the evolving needs of the community and climate policies.		
	To maintain the current 10-year average # of parkland amenities at .0038 per capita[3]	Park Network	.0038 amenities per capita (2021)
	To maintain the current 10-year average total hectares of parkland at .0044 hectares per capita[3].	Park Network	.0044 Hectares per capita (2021)
	To maintain the current 10-year average # parkland trails of .0007 linear kilometers of per capita[3]	Park Network	.0006 km per capita (2021)

1. This is based on reviewing asset condition inspection information. Greater analysis is necessary to standardize the condition information and to determine what the lower limit of this target should be given the wide variation of park amenities and service redundancies requirements.
2. Canadian Standards Association CSA Z614:20 guidelines for Children's playground equipment and surfacing
3. From 2022 Development Study Background Study

Table 5-8 Town of Oakville's Specific Technical LOS Metrics – Parks Network

	Performance Metric	Related Asset Category	2023 Performance
Quality	To manage the condition of park network assets to a reasonable quality and minimize service interruption.		
	The percentage of Parks Assets disposed prior to reaching the end of their useful life[4].	Park Network	18%
Reliable	To take appropriate actions to ensure park network assets are available and dependable and meets standards and legislative requirements.		
	Maintain the ratio of preventive maintenance work orders to unplanned maintenance work orders at 80%[5].	Park Network	97%
Functional	To plan the current and future connectivity of Parks and Open Spaces, aligning them with the town's growth and the evolving needs of the community and climate policies.		
	To ensure current year usage is within the 80% of the 3 year usage average.	Sportsfields, Community Parks	85%
		Sportfields, Neighbourhood Parks	89%
		Turf	90%
		Diamond	108%
		Cricket	102%
		Picnics	133%

4. This number usually equates to about 1 to 2 park amenities per year and aligns with any park upgrades.
5. The Preventative Maintenance Program (PM): The work order data and related data capture processes are being reviewed to better align the reporting requirements to the PM Metric and reflective of the goal of the PM program.

5.3   Life Cycle Management Strategy

In Section 2.2, the document details the stages of asset lifecycles, the town's method for identifying asset management programs, and its risk assessment framework, which includes a scoring system for evaluating asset criticality.

5.3.1   Asset Management Programs

Table 5-9 through Table 5-11 provide summaries of the asset management programs implemented for the Park Network assets to ensure the established Level of Service (LOS) is delivered. These programs are categorized into the three selected Customer Values: Quality, Reliable, and Functional

Table 5-9 Asset Management Programs (Quality) – Park Network

Programs - Quality
Trails Rehabilitation and Renewal Program
This program aims to oversee the maintenance of trail conditions and the renewal of stairs and bridges to guarantee continuous access. Asset selection for the program is primarily determined by their conditions, evaluated through the following inspection schedule: • Trails undergo an annual inspection. • Bridges and stairs are inspected every two years by an engineer from a third-party source.
Park and Amenities Maintenance & Renewal Program

The primary goal of this program is to oversee the renewal process of parks and their associated amenities. Selection of parks and related amenities for the program is primarily based on their conditions, evaluated according to the following inspection schedule:
 	
• Shade structures undergo assessment by a third-party engineer every five years.
• All other park amenities meeting the criteria below are annually assessed by town staff:
   o Assets with 7 years or less of remaining useful life.
   o Assets with more than 7 years of remaining useful life and a current condition rating of C, D, or F.
   o Assets that are not run-to-fail and have planned replacements.

Table 5-10 Asset Management Programs (Reliable) – Park Network

Programs - Reliable
Parks Operational Maintenance & Repair Programs
The primary aim of this program is to ensure uninterrupted operations through maintenance activities for parks.
Park Amenities Inspection & Repair Program
The primary aim of this program is to ensure uninterrupted operations through regular inspections and maintenance activities for all park assets.

Table 5-11 Asset Management Programs (Functional) – Park Network

Programs - Functional

Master Plan Implementation

The Parks, Recreation & Library Master Plan outlines the types of Parks and related assets to be developed for growth-related developments. In accordance with the Master Plan, developers for all newly identified developments are mandated to allocate a percentage of land for parks. The selection of Parks assets, such as sports fields and playgrounds, within each park is determined based on the anticipated demographics of the development.

A review of the Master Plan is currently underway and is expected to be completed in early 2024. This review will utilize the updated provision targets to identify and plan for new parks and facilities, ensuring the continued alignment of the town's parks and related amenities with the evolving needs of the community.

> **Parks Plan 2031** provides direction to address long-term needs with changes to land needs allowing for flexibility in parks design and use.
>
> As an example, the strategic growth area will provide the highest order of amenities for adjacent residents and businesses, as well as a full array of housing forms and tenures. Therefore, it is important to understand the trade-off between the suburban and urban park systems.
>
> **North Oakville Trails Plan** is a unique trail system designed specifically for the New Communities of Oakville located north of Dundas Street. The plan serves as a guide to the planning, development, and management of a sustainable trail network which embraces the diversity of users and user groups, and supports social, cultural, health, economic and environmental benefits for the local communities.
>
> **North Oakville Parks Facilities Distribution Plan** is to guide the location, configuration, design, and development of the hierarchy of parks as defined within the North Oakville East Secondary Plan. As outlined in the agreement signed between the town and the developers for the developments in North Oakville, there would be a finite amount of parkland that the town will acquire, as well as the approximate locations of parks and hundreds of hectares of natural open space lands. In addition, The Municipal Lighting Study has placed restrictions on which sports fields can be lit. As such, the town is actively looking to update the Parks Facilities Distribution Plan in combination with the 2023 review of the Parks Master Plan.

Land Purchase Program

The objective of this program is to acquire land to create more parkland. In addition to the agreement signed between the town and the developers, the town is currently working on a land acquisition strategy. In brief, when land becomes available, the town reviews the business case for purchase or lease. Acquiring land is a complex process that requires consideration of timing with respect to land prices and availability, as well as consideration of the town's long-term goals for future development and anticipated land use needs. As an example, the town has an Official Plan policy is to have a continuous linear trail at the waterfront which will require land acquisition over time.

Park Enhancement Program

The aim of this program is to upgrade parks to meet community needs and modernizations.

Trail Enhancement Program

The aim of this program is to upgrade trails to meet community needs and modernizations.

5.3.2 Criticality

Based on the town's scoring system for assessing asset criticality, i.e., the quantified consequence of failure, the Criticality Score ranges from 1 to 5 for each assessed asset category, with 1 representing very minor criticality and 5 representing major criticality.

The criticality of Parks Network assets is closely related to the park classification, which are characterized as Active Community Parks (AC), Active Neighbourhood Parks (AN), Passive Community Parks (PC), and Passive Neighbourhood Parks (PN).

An Active Community Park (AC) is a type of park designed to accommodate a wide range of recreational activities and events, encouraging community engagement and physical activity. These parks typically offer various amenities such as playgrounds, sports fields, picnic areas, walking and biking trails. The emphasis is on providing opportunities for active pursuits, social interaction, and healthy living within the local community

An Active Neighbourhood Park (AN) is a park located within or near a residential area, designed to serve the recreational and social needs of the local neighborhood. These parks are typically smaller in size compared to larger community parks and often include amenities such as playgrounds, sports fields, or courts, walking paths, picnic areas, and benches. The focus of active neighborhood parks is to provide opportunities for outdoor activities, community gatherings, and leisure pursuits for residents living nearby.

A Passive Community Park (PC) is a type of park designed for relaxation, contemplation, and enjoying nature, rather than active recreational activities. These parks often feature amenities such as walking trails, open green spaces, gardens, ponds, and seating areas. Unlike active parks, which typically include sports fields and playgrounds, passive parks are more tranquil and serene, providing opportunities for quiet reflection and leisurely strolls.

A Passive Neighborhood Park (PN) is a type of park situated within or near residential areas, primarily designed for quiet enjoyment, relaxation, and appreciation of nature. These parks typically feature amenities such as walking paths, open green spaces, benches, and perhaps small garden areas. Unlike active neighborhood parks, which may include playgrounds or sports facilities, passive neighborhood parks are designed to provide a tranquil environment for residents to unwind, enjoy peaceful walks, or engage in low-impact activities such as reading or picnicking.

Therefore, the average criticality of the Parks Network assets, are summarized by Park Type and CRV and are presented in Figure 5-4 through Figure 5-7.

Figure 5-4 Average Criticality by CRV and Asset Category – Active Community Parks
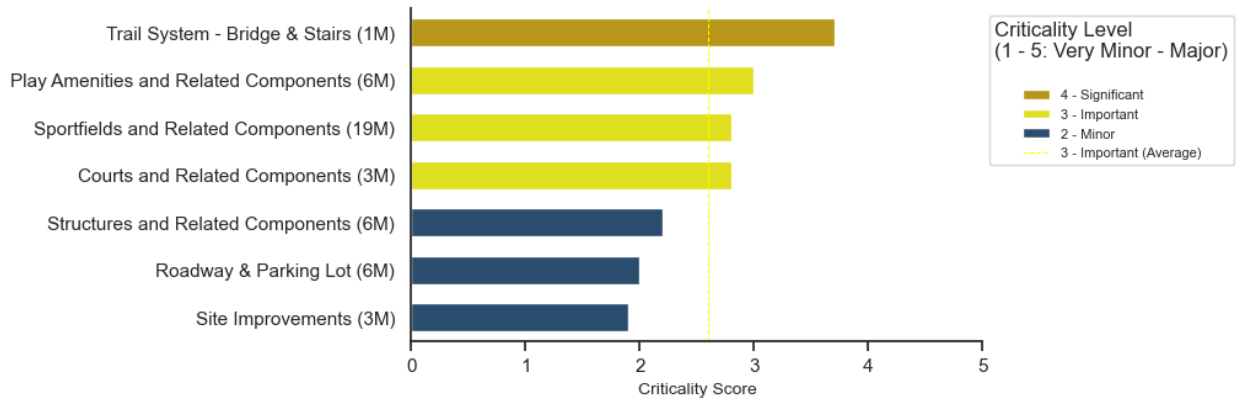
Figure 5-5 Average Criticality by CRV and Asset Category – Active Neighbourhood Parks
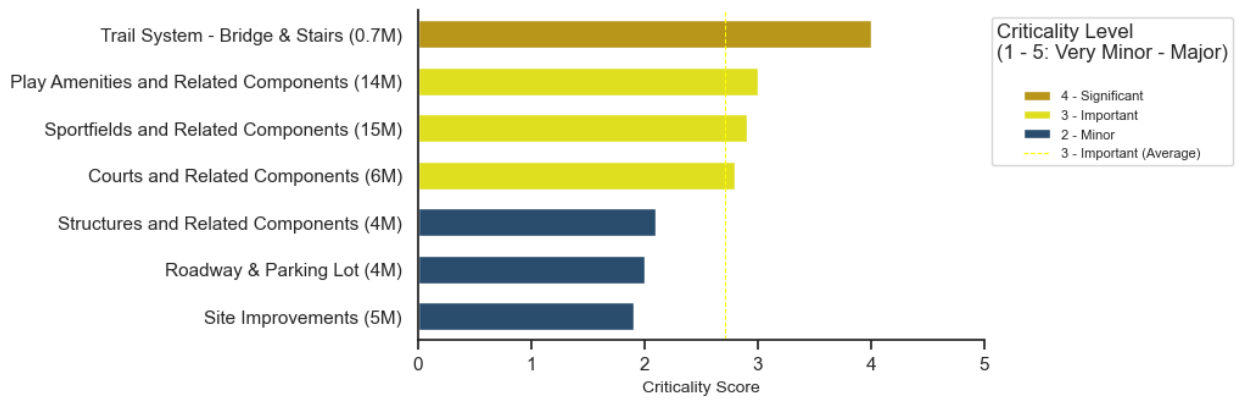
Figure 5-6 Average Criticality by CRV and Asset Category – Passive Community Parks
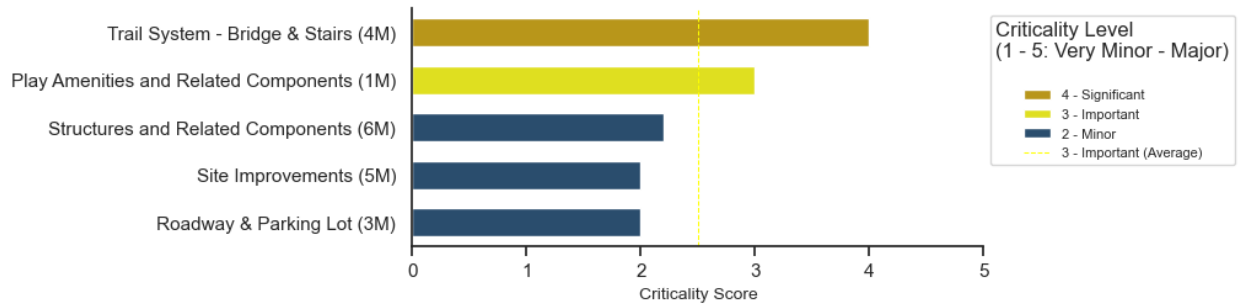
Figure 5-7 Average Criticality by CRV and Asset Category – Passive Neighborhood Parks
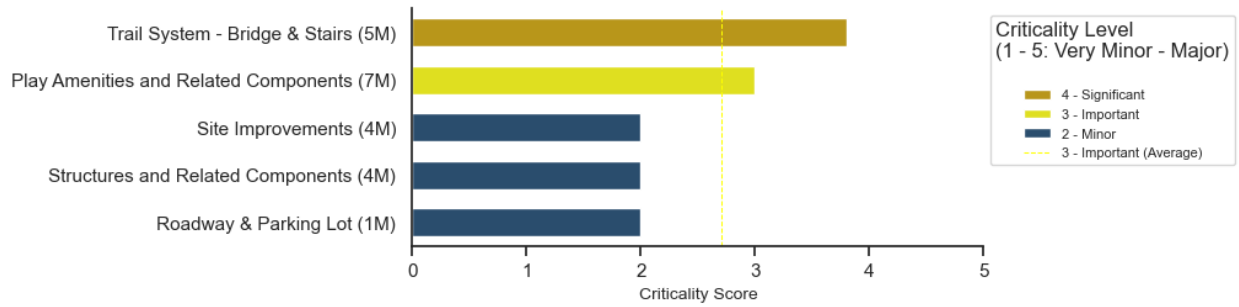
Table 5-12 Summary of Criticality by Park Type and Asset Category

Asset Category	1 - Very Minor				2 - Minor				3 - Important				4 - Significant				5 - Major			
	AC	AN	PC	PN	AC	AN	PC	PN	AC	AN	PC	PN	AC	AN	PC	PN	AC	AN	PC	PN
Site Improvements					X	X	X	X												
Play Amenities and Related Components									X	X	X	X								
Roadway & Parking Lot					X	X	X	X												
Structures and Related Components					X	X	X	X												
Trail System - Bridge & Stairs													X	X	X	X				
Courts and Related Components									X	X										
Sportfields and Related Components									X	X										

5.3.3 Risk

Based on the town's Asset Lifecycle Continuum of Asset Risk Strategies, the overall risk of the Parks Network assets, summarized by park type and CRV, is presented in Figure 5-8 through Figure 5-11.

Figure 5-8 Overall Risk Summarized by CRV – Active Community Parks
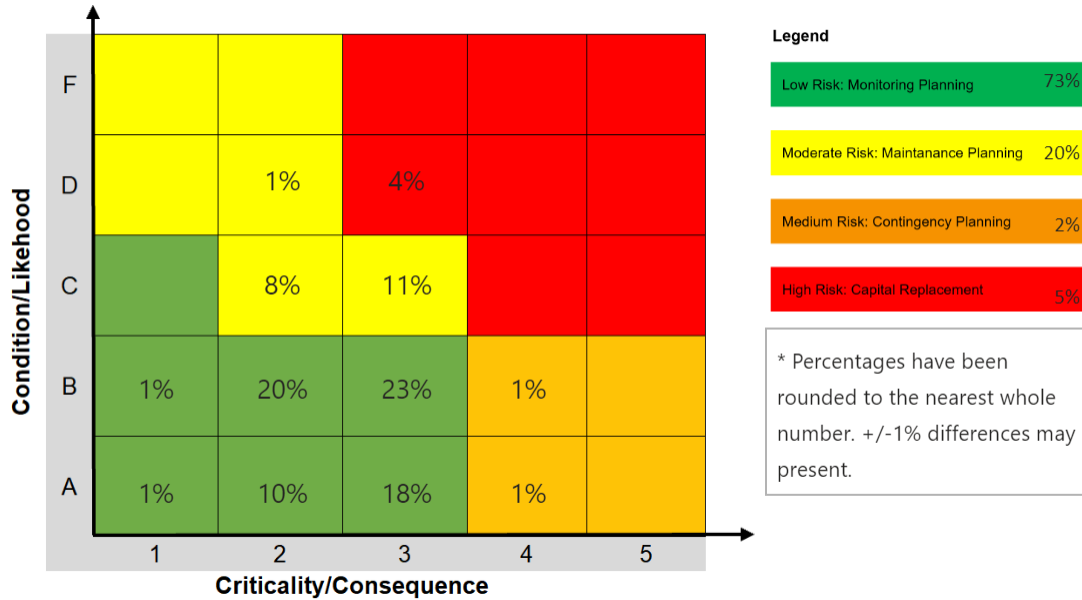
Figure 5-9 Overall Risk Summarized by CRV – Active Neighborhood Parks

Legend

Low Risk: Monitoring Planning	74%
Moderate Risk: Maintanance Planning	20%
Medium Risk: Contingency Planning	1%
High Risk: Capital Replacement	4%

* Percentages have been rounded to the nearest whole number. +/-1% differences may present.
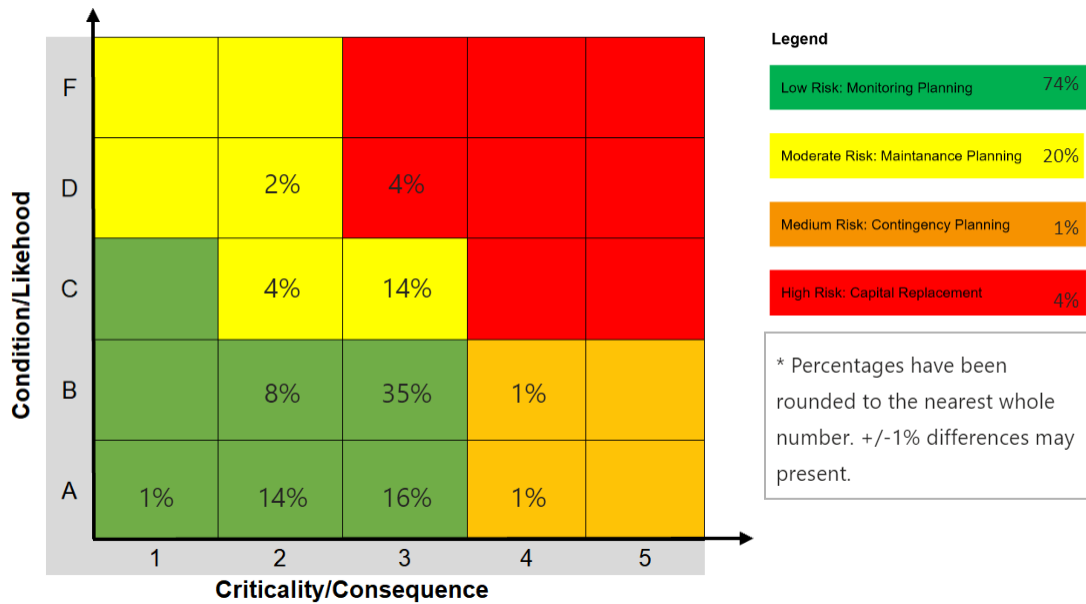
Figure 5-10 Overall Risk Summarized by CRV – Passive Community Parks

Legend

Low Risk: Monitoring Planning	67%
Moderate Risk: Maintanance Planning	13%
Medium Risk: Contingency Planning	12%
High Risk: Capital Replacement	7%

* Percentages have been rounded to the nearest whole number. +/-1% differences may present.
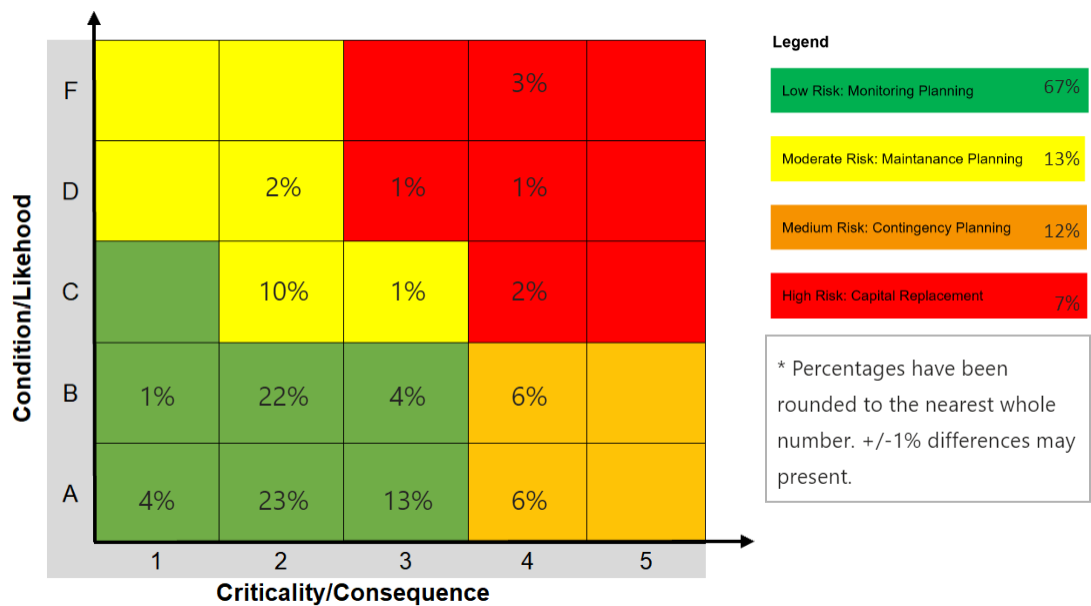
Figure 5-11 Overall Risk Summarized by CRV – Passive Neighborhood Parks
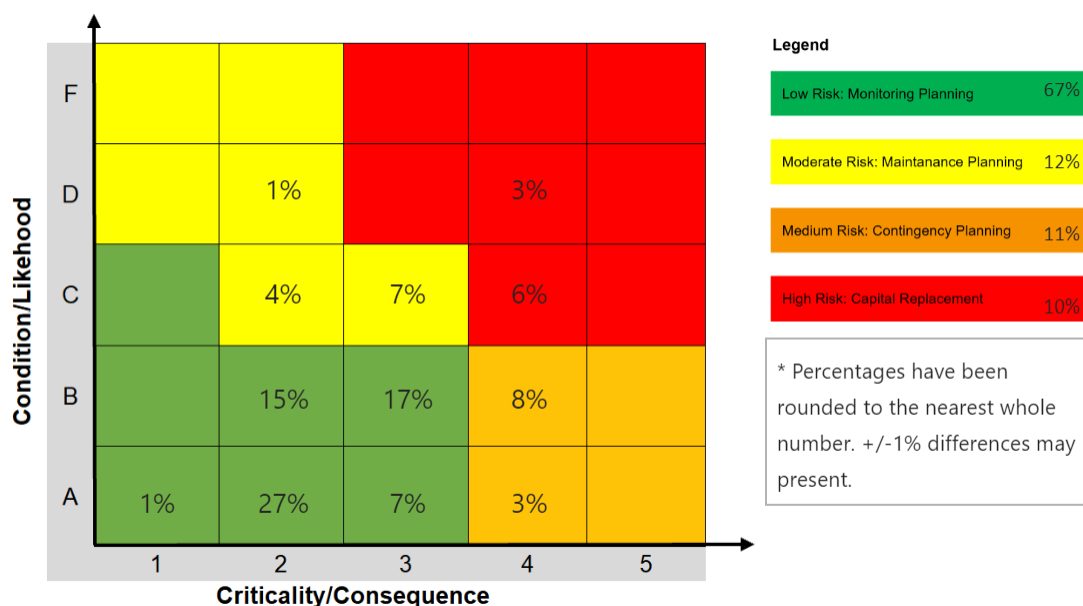
Table 5-13 provides a summary of the Current Replacement Value (CRV) at each risk level by park type. The summary indicates that 6% of the Parks Network assets fall into the High-Risk category, requiring planning for Capital Investment, while 5% are classified as Medium Risk, necessitating Contingency Planning. Generally, assets categorized as High Risk and Medium Risk largely belong to Trail System – Bridge & Stairs, Courts/Play Amenities/Structures and related components. Moderate and Low Risk assets span various categories.

Table 5-13 Risk Summarized by CRV and Park Type

Risk and Action	AC	AN	PC	PN	Total
1-Low: Monitorning Planning	73%	74%	67%	67%	**72%**
2-Moderate: Maintanance Planning	20%	20%	13%	12%	**18%**
3-Medium: Contingency Planning	2%	1%	12%	11%	**5%**
4-High: Capital Investment	5%	4%	7%	10%	**6%**
Total	**100%**	**100%**	**100%**	**100%**	**100%**

5.4 Lifecycle Expenditure 10-Year Forecast

The 10-year lifecycle of expenditure forecast for the Parks Network assets is shown in Figure 5-12, summarized by the three (3) selected Customer Values (i.e., Quality, Reliable, and Functional).

Figure 5-12 Lifecycle Expenditure Forecast by Customer Value - Parks Network (2023$)
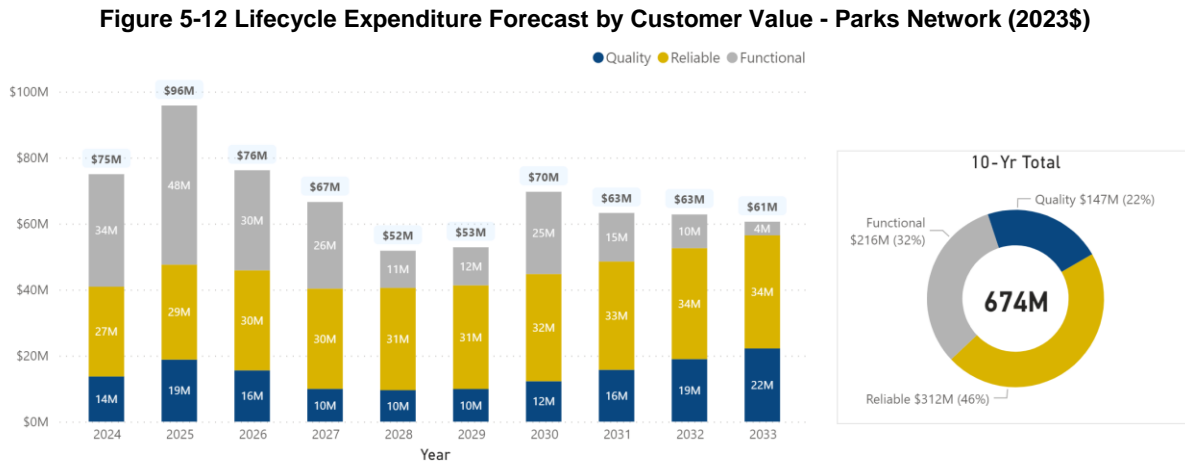
The forecast indicates that the total expenditure for the Parks Network will amount to $674 million over the 10-year forecast period. This allocation includes $147 million designated for the customer service value of Quality, $312 million for Reliable, and $216 million for Functional.

On an annual basis, the average investment expenditure is estimated to be $68 million. Of this, $15 million is allocated for Quality, $31 million for Reliable, and $22 million for Functional customer service values.

Additionally, Table 5-14 offers a detailed breakdown of the lifecycle expenditure forecast by programs

Table 5-14 Lifecycle Expenditure Forecast - Parks Network (2023$)

Programs by Customer Value	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total
⊟ **Reliable**	**$27,190,400**	**$28,760,000**	**$30,305,900**	**$30,379,200**	**$30,975,296**	**$31,402,717**	**$32,490,066**	**$32,823,187**	**$33,627,827**	**$34,277,639**	**$312,232,232**
Parks Inpsection & Mtce & Repair Program	$27,190,400	$28,760,000	$30,305,900	$30,379,200	$30,975,296	$31,402,717	$32,490,066	$32,823,187	$33,627,827	$34,277,639	**$312,232,232**
⊟ **Functional**	**$34,099,300**	**$48,224,300**	**$30,317,500**	**$26,235,700**	**$11,263,600**	**$11,522,800**	**$24,908,400**	**$14,699,300**	**$10,192,500**	**$4,121,900**	**$215,585,300**
Land Purchase Program	$21,537,800	$37,528,800	$26,037,600	$16,032,700	$3,021,800	$4,115,000	$7,030,800	$5,036,200	$5,035,200	$4,035,200	**$129,411,100**
Master Plan Implementation	$8,582,300	$7,557,000	$3,689,100	$5,850,100	$6,038,500	$6,844,200	$17,236,500	$9,099,500	$4,841,500	$25,400	**$69,764,100**
Park Enhancement Program	$3,239,100	$1,249,800	$315,800	$3,114,700	$1,107,800	$299,200	$315,800	$299,200	$315,800	$61,300	**$10,318,500**
Trail Enhancement Program	$740,100	$1,888,700	$275,000	$1,238,200	$1,095,500	$264,400	$325,300	$264,400	-	-	**$6,091,600**
⊟ **Quality**	**$13,688,200**	**$18,799,000**	**$15,543,600**	**$9,932,600**	**$9,550,500**	**$9,903,600**	**$12,245,300**	**$15,710,900**	**$18,952,700**	**$22,176,800**	**$146,503,200**
Park & Amenities Mtce & Renewal	$11,152,200	$16,407,600	$14,528,400	$7,474,100	$8,436,300	$8,760,200	$9,878,900	$12,313,200	$17,411,900	$20,313,400	**$126,676,200**
Trails Mtce & Renewal	$2,536,000	$2,391,400	$1,015,200	$2,458,500	$1,114,200	$1,143,400	$2,366,400	$3,397,700	$1,540,800	$1,863,400	**$19,827,000**
Total	**$74,977,900**	**$95,783,300**	**$76,167,000**	**$66,547,500**	**$51,789,396**	**$52,829,117**	**$69,643,766**	**$63,233,387**	**$62,773,027**	**$60,576,339**	**$674,320,732**

Chapter 6
Facilities

Summary

Facilities ⌄

Total Current Replacement Value ($)

810M

Total Current Value of Building Sub-Systems

	HVAC	Roofing	Site Improvements	Total
	51M	50M	29M	129M

Overall Condition

Good | Fair | Poor

HVAC | Roofing | Site Improvements

Quick Facts

of Buildings
121

Total Building Footprints (sq.ft)
2,313,714

# of Recreation Buildings
19

10-Year Lifecycle Expenditure Forecast (Million)
Capital & Operating

2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
84.5	82.8	140.2	62.3	74.4	66.9	67.7	72.5	82.6	76.3

Table of Contents

List of Figures

List of Tables

6.1 State of Infrastructure

The town's approach of assessing the State of Infrastructure of the assets is described in Section 2.1. The evaluation consists of 2023 Current Replacement Value (CRV), Condition, and Age (Stage of Life).

The Facilities are grouped into ten (10) categories: Recreation/Culture, Administration, Fire, Library, Operations, Storage/Vacant, Washroom/Changeroom/Clubhouse, Leased, Museum/Heritage and Parking Garage.

Additionally, selected major building sub-systems of Roofing, HVAC, and Site Improvements (parking lots, driveways, exterior lighting, fencing etc.) have been analyzed for the State of Infrastructure.

Figure 6-1 Facilities by Category
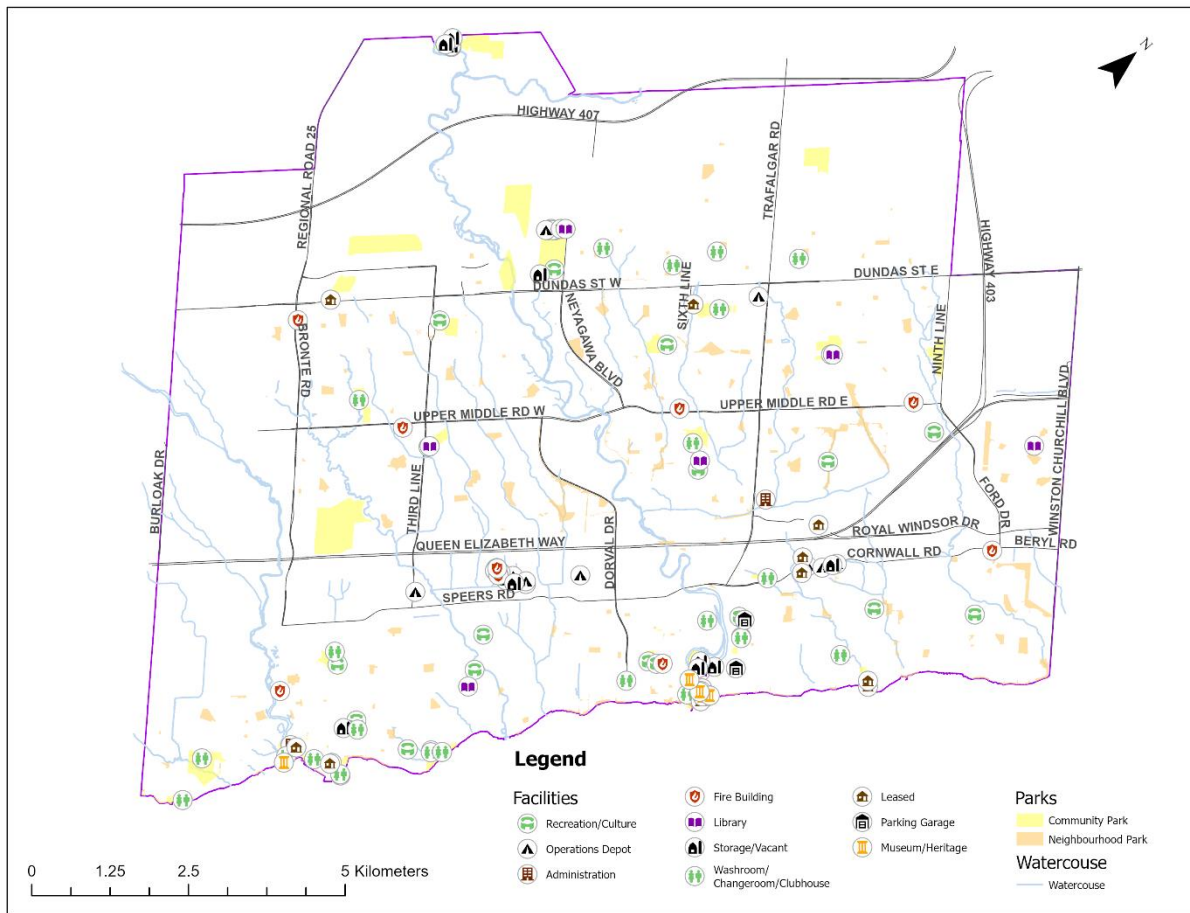
6.1.1 Current Replacement Value (2023)

The estimated current replacement value (CRV) of the facilities is $810 Million.

The facility usage category chart in Figure 6-2 below summarizes CRV by facility usage. Recreation/ Culture buildings account for the majority of the total CRV at $475 Million (or 59%), Operations Depot buildings account for $125 Million (or 15%), and Administration buildings account for $73 Million (or 9%). The CRV of the remaining categories ranges from $0.4 to $36 Million (or 0.4% to 4%).

Figure 6-2 2023 Replacement Values by Facility Usage Category

Asset Category	Quantity	CRV
Recreation/Culture	19	475M
Operations Depot	16	125M
Administration	2	73M
Fire Building	18	39M
Library	7	31M
Storage/Vacant	14	22M
Washroom/Changeroom/Clubhouse	26	19M
Leased	10	13M
Parking Garage	2	7M
Museum/Heritage	7	6M
Total	**121**	**810M**
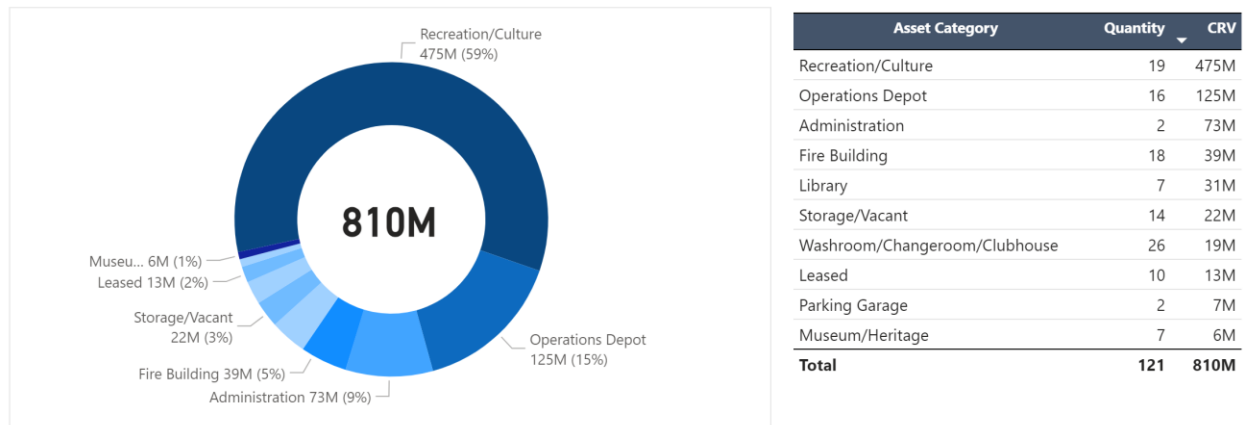
As shown by Figure 6-3 Current Replacement Values by Facility Sub-system, the estimated current replacement value (CRV) of major building systems is approximately $129 Million, representing 16% of the total CRV of facilities. HVAC and Roofing assets contribute to an equivalent CRV of approximately $50 Million. Site Improvement assets contribute to $29 Million of the CRV.

Figure 6-3 Current Replacement Values by Facility Sub-system

Asset Category	CRV
HVAC	51M
Roofing	50M
Site Improvements	29M
Total	**129M**
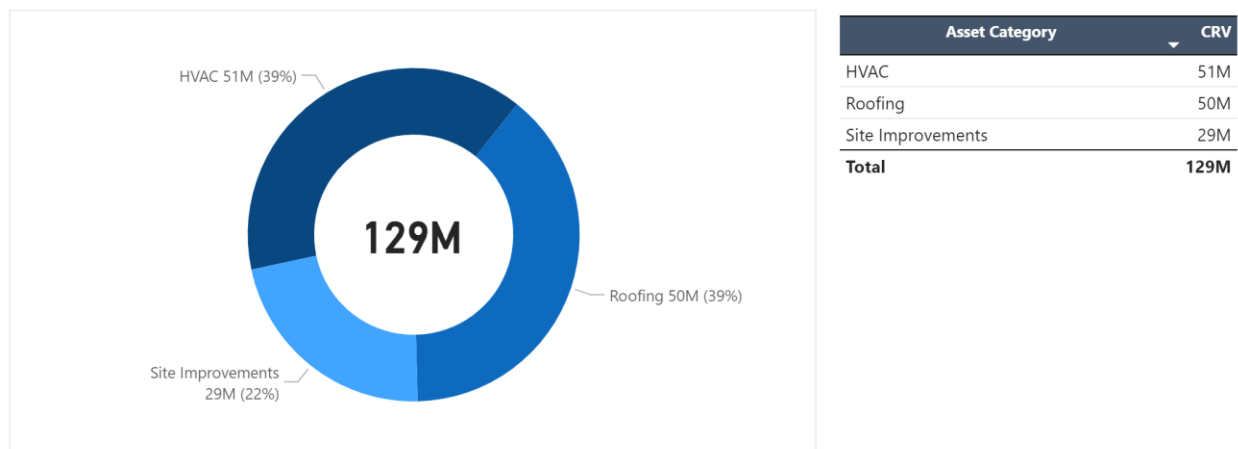
6.1.2 Condition

Annual Building Condition Audits (BCAs) are conducted on town facilities. Over the past three years, a total of 28 BCAs have been completed, accounting for 33% of all facilities. In addition, when a facility asset is due for renewal within the initial three years of the capital investment plan, the town's staff physically inspect the asset. Facility assets also undergo inspection and root cause analysis after significant service disruptions or unexpected failures. In cases where physical condition data is unavailable, the conditions of assets are determined based on their age and anticipated remaining useful life.

Condition ratings as well as example images are summarized in Table 6-1 through Table 6-3.

Table 6-1 Condition States – Facilities - Roof
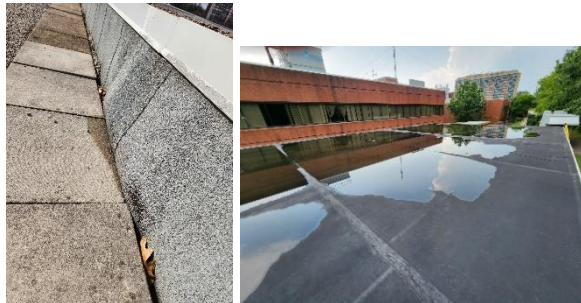
Rating	Letter Score	Condition State	Example Image
1 (Very Good)	A	Good	
2 (Good)	B		
3 (Fair)	C	Fair	
4 (Fair)	D		
5 (Very Poor)	F	Poor	

Table 6-2 Condition States – Facilities - HVAC

Rating	Letter Score	Condition State	Example Image
1 (Very Good)	A	Good	
2 (Good)	B		
3 (Fair)	C	Fair	
4 (Fair)	D		
5 (Very Poor)	F	Poor	

Table 6-3 Condition States – Facilities – Driveways / Parking Lots

Rating	Letter Score	Condition State	Example Image
1 (Very Good)	A	Good	
2 (Good)	B	Good	
3 (Fair)	C	Fair	
4 (Fair)	D	Fair	
5 (Very Poor)	F	Poor	

Figure 6-4 gives an overview of the condition of the facilities, categorized by their usage and current replacement value (CRV). Overall, most facility assets are in good or fair condition. On average, 65% are in good condition, while the remaining 35% are in fair condition. Similarly, the facility systems, as depicted in Figure 64, are predominantly in good or fair condition.

Figure 6-4 Asset Average Condition by CRV and Facility Usage Category
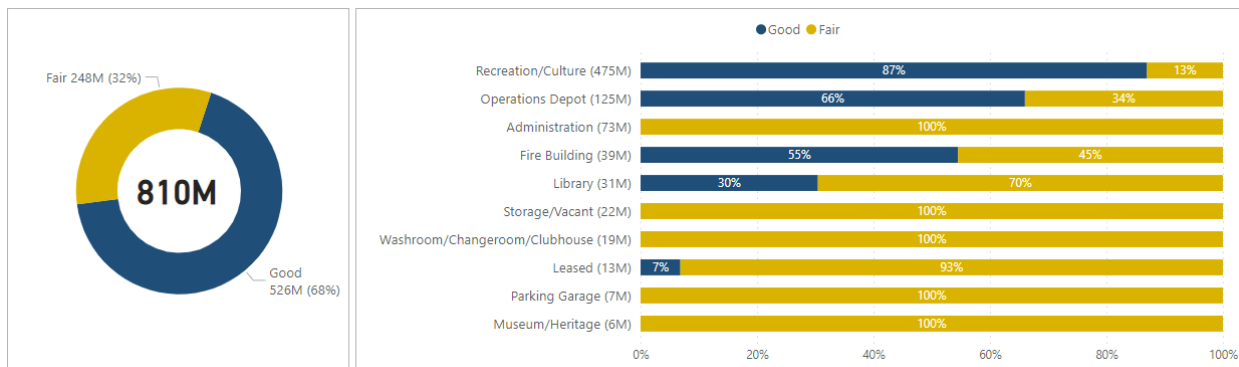
Figure 6-5 Asset Average Condition by CRV and Facility Sub-system
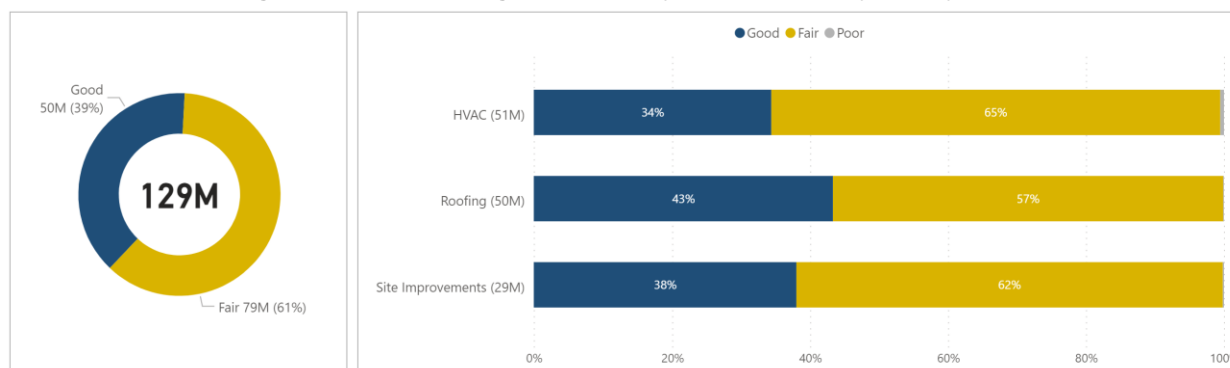
6.1.3   Age

Heritage buildings have been excluded from the analysis regarding age and stage of life because these buildings are preserved. Similarly, Storage/Vacant and Leased buildings have also been excluded from the analysis as they are typically slated for demolition or repurposing, and major renovations have not yet been scheduled.

The estimated average lifespan of the facilities varies from 32 to 45 years, with average ages ranging from 17 to 59 years. For facility sub-systems, the estimated average useful life ranges from 23 to 29 years, with average ages ranging from 15 to 17 years.

In Figure 6-6, the average stage of life is displayed based on facility usage category and CRV. 47% of the assets fall into the Early and Mid-Life category, while 53% are in the Late Life category. Apart from Operation Depot, all categories show a significant portion of assets in the Late Life stage, ranging from 56% to 100%.

-Note that the renewal planning for facility system assets involves utilizing Building Condition Audits, in-house inspections, and evaluating asset performance. It is important to understand that being in the Late Stage of Life does not necessarily mean the asset is in poor condition, as indicated by reviewing the average condition in Figure 66.

As depicted in Figure 6-7, 60% of the facility systems are categorized as Early and Mid-Life, while the remaining 40% are in the Late Life stage. This distribution does not imply poor condition or performance, as facility system assets benefit from a robust and comprehensive preventative maintenance program.

Figure 6-6 Asset Average Stage of Life by CRV and Facility Usage Category
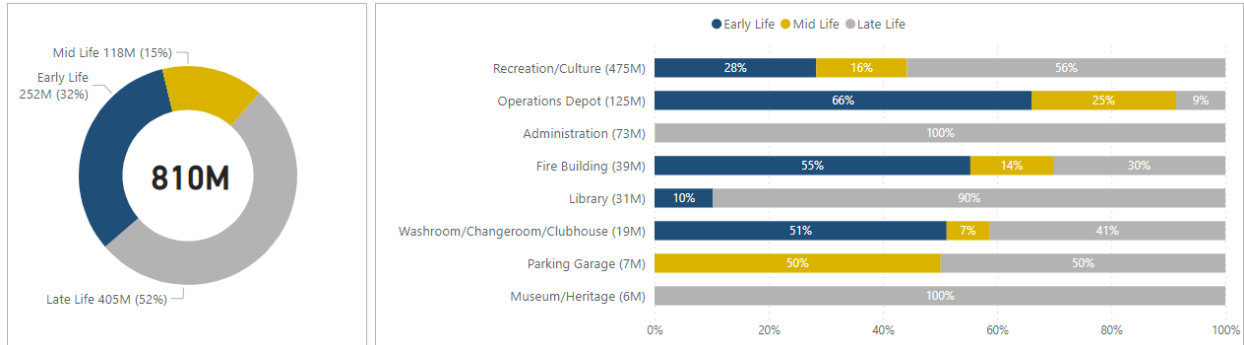
Figure 6-7 Asset Average Stage of Life by CRV and Facility Sub-system
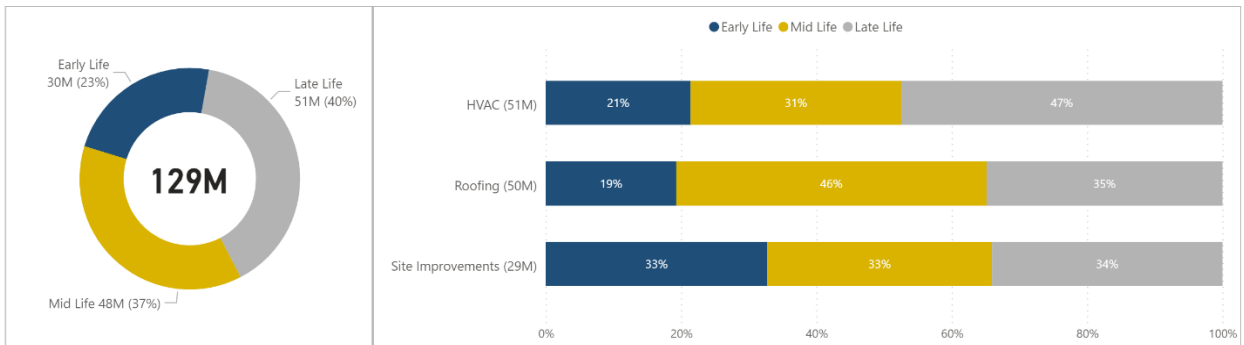
6.2   Levels of Services

The town's Level of Service Framework is described in Section 2.2. The Level of Service objectives at the Corporate Level and the Customer Level for Facilities are summarized in Table 6-4. The customer service objectives align with the three (3) selected Customer Values, i.e., Quality, Reliable, and Functional.

Table 6-4 Customer Service Objectives – Facilities

LOS Level		Statement/Objective	
Corporate	Organizational Objective/Vision	A vibrant and livable community for all.	
	Customer Expectation	Facilities are safe and in satisfactory condition, capable of meeting their intended purpose and accessible as needed.	
	Service Commitment	Facilities are safe, welcoming, and enjoyable, helping people and families to discover, participate, belong, and thrive.	
Customer	Customer Service Values	**Quality**	To manage the condition of facility assets to a reasonable quality and minimize service interruption.
		Reliable	To take appropriate actions to ensure facilities are available and meet standards and legislative requirements.
		Functional	To plan appropriately for facility needs, ensuring alignment with changes in service needs, growth, and climate policies.

To quantify the customer service objectives, a set of customer LOS and technical LOS metrics have been established based on the Customer Service Values, i.e., Quality, Reliable, and Functional. The metrics along with the performance in 2023 are summarized in Table 6-5 and Table 6-6.

Table 6-5 Town of Oakville's Customer LOS Metrics – Facilities

	Performance Metric	Related Facility Use Category	2023 Performance
Quality	To manage the condition of facility assets to a reasonable quality and minimize service interruption.		
	The percentage of all facilities be maintained in a "fair" or better rated condition[1].	All Facility Type Categories	70%
Reliable	To take appropriate actions to ensure facilities are available and meet standards and legislative requirements.		
	Maintain the ratio of preventive maintenance work orders to unplanned maintenance work orders at 80%[2]	All Facility Type Categories	70%
Functional	To plan appropriately for facility needs, ensuring alignment with changes in service needs, growth, and climate policies.		
	To maintain the current 10-year average # square foot of facilities (excluding transit) at 6.8 per capita[3]	All Facility Type Categories excluding Transit	6.4 sq ft per capita (2021)
	Achieve a 20 percent reduction in natural gas energy consumption by 2024 from 40,012,661 ekWh to 31,217,891 ekWh[4]	All Facility Type Categories	On Target

1. This is based on reviewing asset condition inspection information. Greater analysis is necessary to standardize the condition information and to determine what the lower limit of this target should be given the wide variation of vehicle types and service redundancies requirements.
2. The Preventative Maintenance Program (PM): The work order data and related data capture processes are being reviewed to better align the reporting requirements to the PM Metric and be reflective of the goal of the PM program.
3. From 2022 Development Study Background Study
4. From 2020 Energy Conservation and Demand Management Plan

Table 6-6 Town of Oakville's Specific Technical LOS Metrics – Facilities

	Performance Metric	Related Asset Category	2023 Performance
Quality	To manage the condition of facility assets to a reasonable quality and minimize service interruption.		
	The percentage of disposed facility assets prior to reaching the end of their useful life[1].	All Facility Type Categories	23%
Reliable	To take appropriate actions to ensure facilities are available and meet standards and legislative requirements.		
	To achieve annual completion of at least 9 Building Condition Audits or structural inspections.	All Facility Type Categories	100%
Functional	To plan appropriately for facility needs, ensuring alignment with changes in service needs, growth, and climate policies.		
	100% of facilities will meet AODA legislation by Jan 1 by 2025.	Exclude Storage/Vacant/Leased Facilities	74% On Target
	Amount of indoor space at town-owned culture, recreation and library facilities per resident[2]	Culture, Recreation and Library facilities	.54m^2
	Per Capita Greenhouse gas emissions from town building emissions be at 30 percent or less from 2014 levels by 2030[3].	All Facility Type Categories	On Target

1. This number usually equates to about 1 to 2 facility assets per year and aligns with any facility upgrades.
2. From Council Strategic Plan Dashboard (oakville.ca)
3. From 2020 Energy Conservation and Demand Management Plan

6.3   Life Cycle Management Strategy

Section 2.2 outlines the various stages of the asset lifecycle, the town's method of identifying asset management programs, and the town's risk assessment framework, which includes the scoring system used to evaluate asset criticality.

6.3.1   Asset Management Programs

Table 6-7 through Table 6-9 summarize the asset programs for Facilities assets that are being implemented to ensure the established LOS are delivered. The programs have been categorized into the three (3) selected Customer Values (i.e., Quality, Reliable, and Functional)

Table 6-7 Asset Management Programs (Quality) – Facilities

AM Programs - Quality
Facility Asset Renewal Program   This program aims to oversee the renewal of facility systems and components.   Renewal initiatives are strategically prioritized within a 10-year plan, utilizing data from inspections to assess asset conditions. The objective is to manage the renewal of facility systems and components.   Renewal projects are prioritized within the 10-year plan based on asset condition output from inspections, ensuring efficient maintenance and upkeep.   **Facility Minor Renovation Program**   The program focuses on identifying opportunities for minor renovation to improve aesthetics, and overall user experience within the facilities.

Table 6-8 Asset Management Programs (Reliable) – Facilities

AM Programs - Reliable
Facility Operational Maintenance & Repair Program   The primary aim of this program is to uphold facilities assets in a state of optimal repair, guaranteeing dependable service delivery.   By prioritizing regular maintenance and efficient repair protocols, this program ensures that facilities remain operational, reliable, and available to meet service demands effectively.   **Building Condition Audit Program**   The primary goal of this program is to safeguard operational continuity by conducting thorough inspections, analyzing findings, and developing comprehensive plans for asset renewal and maintenance.

Table 6-9 Asset Management Programs (Functional) – Facilities

AM Programs -Functional
Facility Provision, Expansion and Revitalization Program
The objective of this program is to revitalize and expand existing facilities outlined in the Master Plan while also accommodating the town's growth with new facilities. Our commitment includes adhering to the guidelines set forth in the Accessibility for Ontarians with Disabilities Act (AODA)
Facility Energy Efficiency Program
The energy management program aims to decrease the town's expenditures on electricity, natural gas, and water while also lowering carbon emissions in municipal buildings. This aligns with the town's objective of achieving Net Zero by 2050 and addresses the Council's declaration of a Climate Emergency.

6.3.2 Criticality

Based on the town's scoring system for assessing asset criticality, i.e., the quantified consequence of failure, the Criticality Score ranges from 1 to 5 for each assessed asset grouping, with 1 representing no criticality and 5 representing significant criticality.

The average criticality of the facilities, summarized by asset category and CRV, is presented in Figure 6-8.

Figure 6-8 Average Criticality by CRV and Asset Category – Facilities
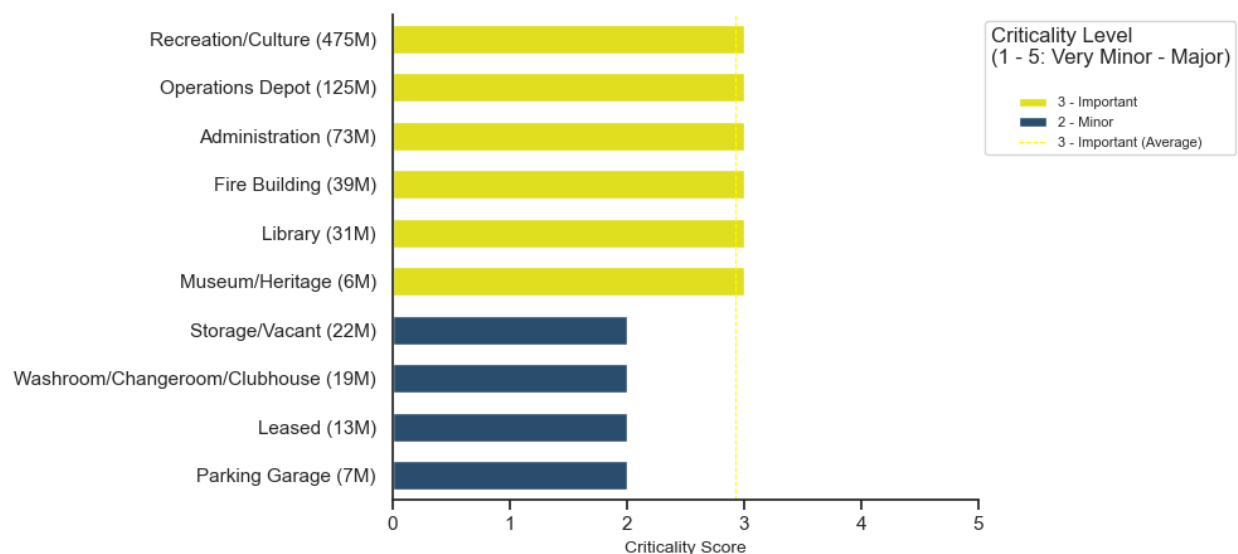
In General, the facilities would have an Important Criticality, with the average rating of 2.9. recreation/culture buildings, operations depots, administration buildings, fire buildings, libraries, and museums/heritage buildings would have Important Criticality with the rating of 3. The remainder of the facilities would have Minor Criticality with the rating of 2.

6.3.3 Risk

Based on the town's Asset Lifecycle Continuum of Asset Risk Strategies, the overall risk of the facilities, summarized by CRV, is presented in Figure 6-9.

Figure 6-9 Overall Risk Summarized by CRV – Facilities
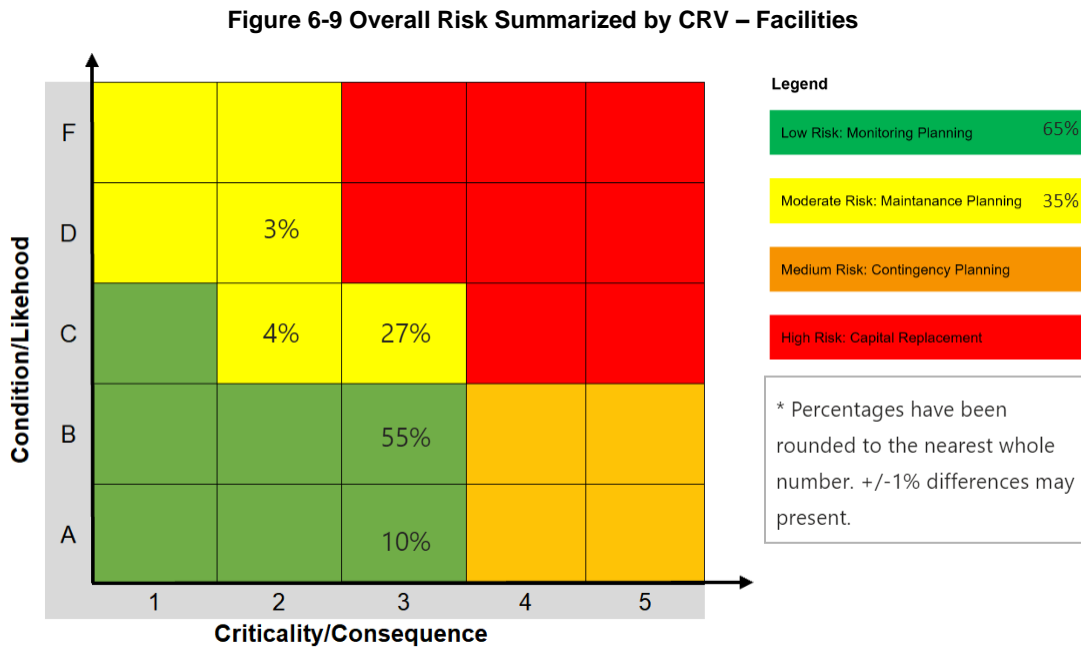
The data shows that 35% of the facilities are classified as Moderate Risk and are designated for Maintenance. These include facilities in the Recreation/Culture, Library, Fire Building, Museum/Heritage, and Operation Depot categories. 65% of the facilities are classified as Low Risk and are scheduled for Monitoring. These encompass facilities in the Storage/Vacant, Washroom/Change Room/Clubhouse, Leased, and Parking Garage categories.

6.4   Lifecycle Expenditure 10-Year Forecast

The 10-year lifecycle of expenditure forecast for the Facilities assets is presented in Figure 6-10, summarized by the three (3) selected Customer Values (i.e., Quality, Reliable, and Functional).

Figure 6-10 Lifecycle Expenditure Forecast by Customer Value - Facilities (2023$)
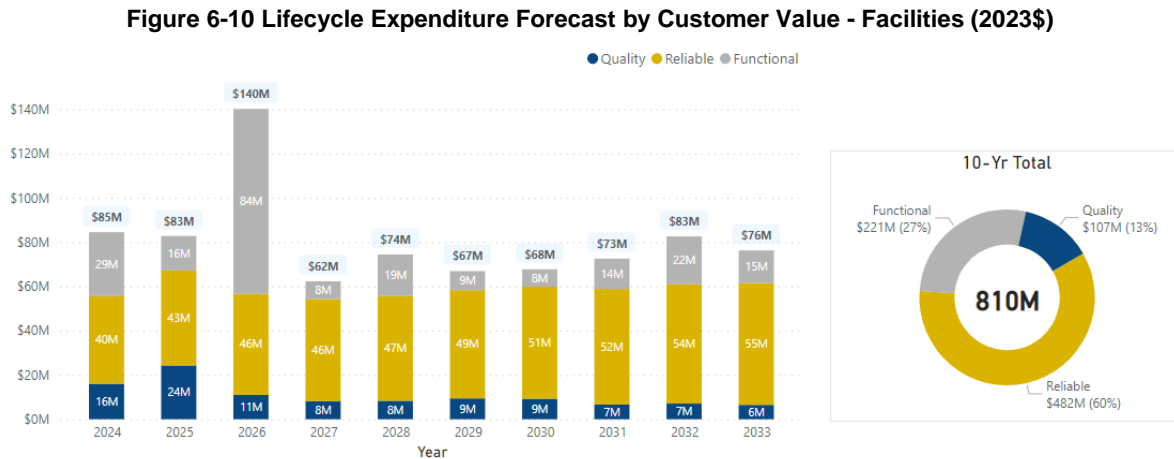
The projected forecast outlines a total expenditure of $810 Million for Facilities over the 10-year forecast period. Within this, $107 million to the customer service value of Quality, $482 million is allocated to the customer service value of Reliable, and $221 million to the customer service value of Functional.

On an annual basis, the average expenditure investment is $81 million, distributed as follows: $11 million for the customer service value of Quality, $48 million for the customer service value of Reliable, and $22 million for the customer service value of Functional.

A further breakdown of the lifecycle expenditure forecast by programs is provided in Table 6-10.

Table 6-10 Lifecycle Expenditure Forecast – Facilities (2023$)

Programs by Customer Value	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total
⊟ **Reliable**	$39,544,700	$42,933,000	$45,606,500	$46,112,500	$47,329,330	$48,919,224	$50,635,895	$52,229,655	$53,885,064	$55,052,069	$482,247,937
Facility Operational Mtce & Repair Program	$39,301,200	$42,763,400	$45,436,900	$45,942,900	$47,159,730	$48,749,624	$50,466,295	$52,060,055	$53,715,464	$54,882,469	$480,478,037
Building Condition Audit Program	$243,500	$169,600	$169,600	$169,600	$169,600	$169,600	$169,600	$169,600	$169,600	$169,600	$1,769,900
⊟ **Functional**	$28,913,800	$15,566,100	$83,518,200	$8,001,100	$18,753,800	$8,580,400	$7,807,800	$13,637,600	$21,611,200	$14,720,100	$221,110,100
Facility Provision, Expansion and Revitalization Program	$28,594,800	$14,727,100	$83,073,700	$7,556,600	$18,309,300	$8,135,900	$7,363,300	$13,193,100	$21,166,700	$14,275,600	$216,396,100
Facility Energy Efficiency Program	$319,000	$839,000	$444,500	$444,500	$444,500	$444,500	$444,500	$444,500	$444,500	$444,500	$4,714,000
⊟ **Quality**	$16,042,300	$24,297,200	$11,061,700	$8,205,500	$8,350,700	$9,420,100	$9,268,300	$6,673,500	$7,082,200	$6,498,800	$106,900,300
Facility Asset Renewal Program	$13,858,600	$15,730,800	$9,611,000	$7,844,400	$8,065,300	$9,093,900	$8,847,700	$6,300,900	$6,850,100	$6,269,600	$92,472,300
Facility Minor Renovation Program	$2,183,700	$8,566,400	$1,450,700	$361,100	$285,400	$326,200	$420,600	$372,600	$232,100	$229,200	$14,428,000
Total	$84,500,800	$82,796,300	$140,186,400	$62,319,100	$74,433,830	$66,919,724	$67,711,995	$72,540,755	$82,578,464	$76,270,969	$810,258,337

Chapter 7
Information Technology (IT)
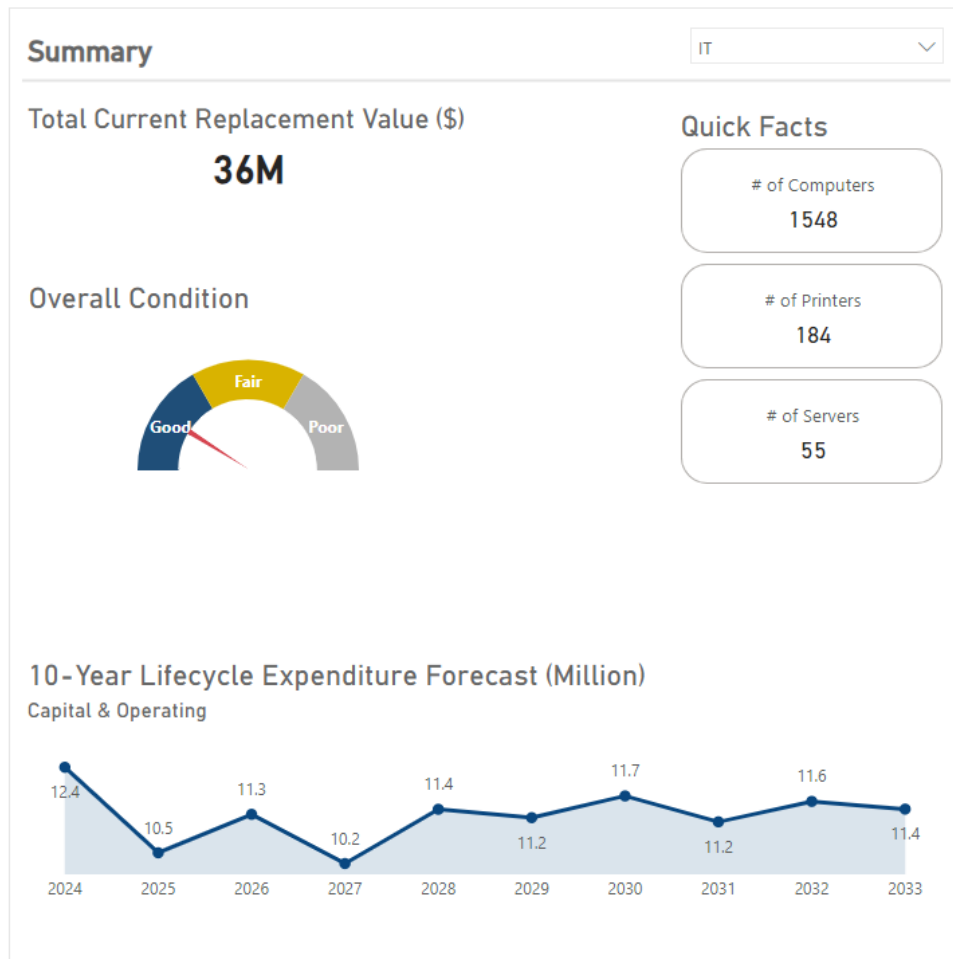
Asset Category	Examples
Software	applications
Hardware	laptop, desktop, tablet, server, Printer, plotter, scanner, wireless access point, network equipment
Security & Communication Equipment	CCTV security camera, fibre optics, radio tower

Table of Contents

List of Figures

List of Tables

7.1 State of Local Infrastructure

The town's method of evaluating the State of Infrastructure of its assets is outlined in Section 2.1. This assessment involves considering the 2023 Current Replacement Value (CRV), Condition, and Age (Stage of Life).

The Information Technology (IT) Service encompasses three asset categories: Software, Hardware, and Security & Communication Equipment.

7.1.1 Current Replacement Value (2023)

The estimated current replacement value (CRV) of the Information Technology (IT) assets is approximately $36 million. According to the asset categories depicted in Figure 7-1, Software and Hardware collectively represent the majority of the total CRV, amounting to $31 million (or 86%).

Figure 7-1 2023 Replacement Values by Asset Category – IT

Asset Category	CRV
Hardware	16M
Software	15M
Security & Communication Equipment	5M
Total	**36M**
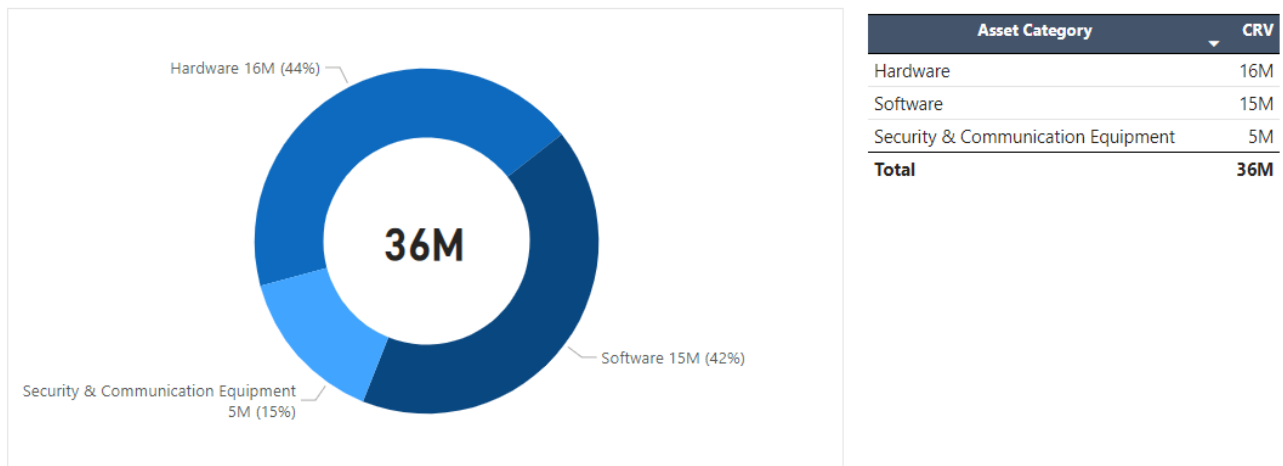
7.1.2 Condition

Figure 7-2 offers an overview of the condition of IT assets, categorized by asset category and CRV. Overall, the IT assets are primarily in Good or Fair condition. On average, 79% are classified as good condition, while the remaining 20% are in Fair condition. Table 7-1 provides a summary of the life cycle compliance of endpoint assets as of January 2024.

Figure 7-2 Asset Average Condition by CRV and Asset Category – IT
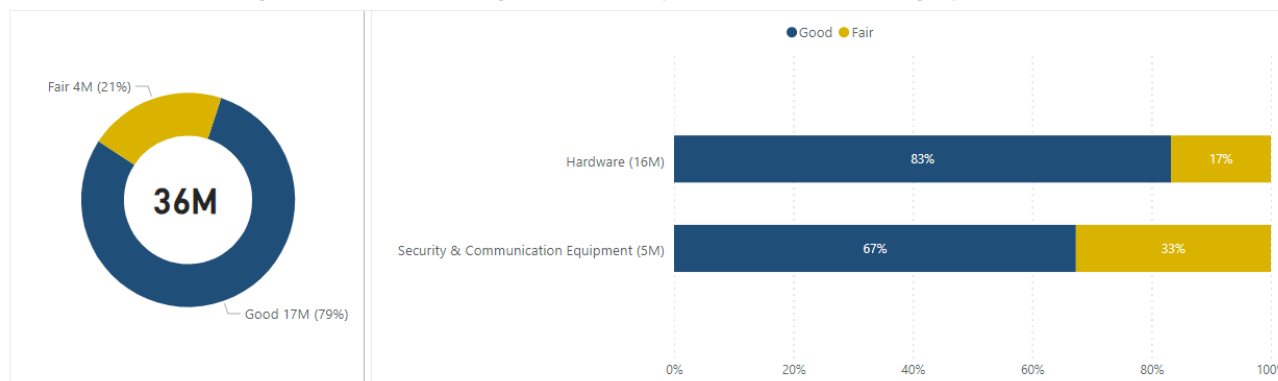
Table 7-1 IT Endpoint Asset Standardization (As of January 2024)

Category	Lifecycle (years)	In Service	End-Of-Life (2024)	Deployed (2024)	Lifecycle Compliance
Laptops & Tablets	4	1061	63	0	94%
Desktops (Communal)	4	487*	259	0	47%
Smart Phones	3	719	161	1	78%
Printers (Communal)	5	184**	1	0	99%

 * End Target is 350 units once One Device Policy is complete implemented
** Excludes individual printers (e.g. Director's Offices) -- these are run to failure

7.1.3 Age

Software has been excluded from the analysis of age and stage of life due to corporate policy, which mandates that software be maintained up to the current version. In general, Hardware has an average useful life of 7 years and an average age of 3 years. Security & Communication Equipment has an average useful life of 22 years and an average age of 9 years.

Figure 7-3 illustrates the average stage of life categorized by asset category and CRV. Overall, 75% of the assets are in the Early and Mid-Life stages, while 25% are in the Late Life stage. It's important to note that renewal programs are in place to review the utilization of IT assets to meet service performance requirements.

 Therefore, Late Stage of Life of an asset does not represent Poor Condition, which can be observed by reviewing the figure of the average condition.

Figure 7-3 Asset Average Stage of Life by CRV and Asset Category – IT
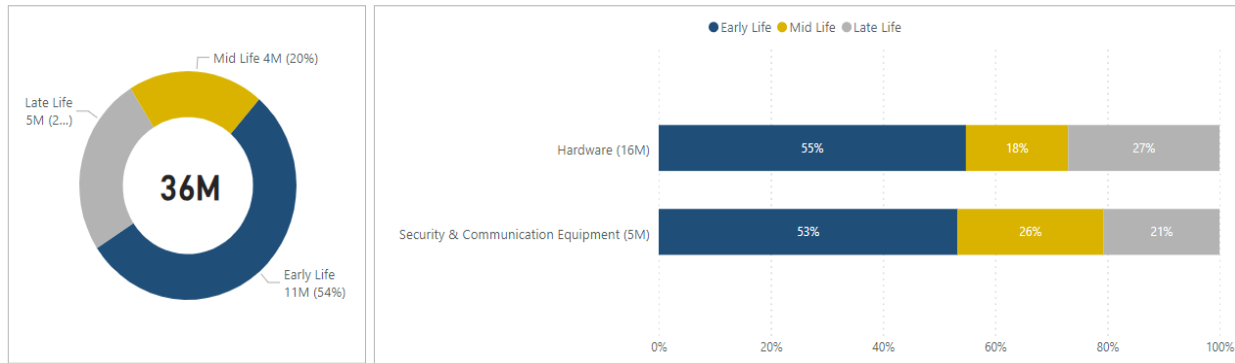
7.2 Levels of Services

Section 2.2 of the document outlines the town's Level of Service Framework. Table 7-2 summarizes the Level of Service objectives for Information Technology (IT) at both the Corporate Level and the Customer Level. These objectives align with three selected Customer Values: Quality, Reliable, and Functional.

Table 7-2 Customer Service Objectives – IT

LOS Level		Statement/Objective	
Corporate	Organizational Objective/Vision	A vibrant and livable community for all.	
	Customer Expectation	Access to appropriate systems and information wherever and whenever required.	
	Service Commitment	Provide reliable, relevant, and secure information technology	
Customer	Customer Service Values	**Quality**	To manage the conditions of the IT Assets in accordance with standards and business needs
		Reliable	To maintain optimal functionality, security, and availability of IT assets.
		Functional	To implement suitable technological solutions to ensure it meets business requirements.

To measure the customer service objectives, a series of customer Level of Service (LOS) and technical Level of Service metrics have been developed based on the Customer Service Values: Quality, Reliable, and Functional. The metrics, along with their performance in 2023, are summarized in Table 7-3 and Table 7-4.

Table 7-3 Town of Oakville's Customer LOS Metrics – IT[1]

	Performance Metric	Asset Category	2023 Performance
Quality	To manage the conditions of the IT Assets in accordance with standards and legislative requirements.		
	Ensure that a minimum 75% of End Point devices adhere to the standard Useful life	Hardware	83%
Reliable	To maintain optimal functionality, security, and availability of IT assets.		
	Acknowledge and assign 60% of ITS calls within a 24-hour timeframe	All IT Asset Categories	68%
Functional	To implement suitable technological solutions to ensure it meets business requirements.		
	The percentage of the budget allocated for accommodating the growth of the town's population should be a minimum of 4%	All IT Asset Categories	5%

Table 7-4 Town of Oakville's Specific Technical LOS Metrics – IT[1]

	Performance Metric	Asset Category	2023 Performance
Quality	To manage the conditions of the IT Assets in accordance with standards and legislative requirements.		
	Ensure that a least 70% of technology (hardware and software) is current and/or meets business needs	All IT Asset Categories	58%
Reliable	To maintain optimal functionality, security, and availability of IT assets.		
	Maintain the average number of help desk tickets per year per town employee with log-in rights to remain below [1]	All IT Asset Categories	4.7
	Ensure that the internal network availability, represented by the percentage of network uptime, remains at or above 95%	All IT Asset Categories	97%
Functional	To implement suitable technological solutions to ensure it meets business requirements.		
	Maintain a satisfaction rate of 90% from clients ranging from satisfied to very satisfied with the support provided	All IT Asset Categories	96%

1.More effective metrics are being investigated to track the performance of the IT services and will be reflected in the future AMP.

7.3   Life Cycle Management Strategy

Section 2.2 of the document outlines the stages of asset lifecycles, the town's method for identifying asset management programs, and its risk assessment framework, which includes a scoring system for evaluating asset criticality.

7.3.1   Asset Management Programs

Table 7-5 through Table 7-7 summarize the asset management programs for IT assets that are being implemented to ensure the established LOS are delivered. The programs have been categorized into the three (3) selected Customer Values (i.e., Quality, Reliable, and Functional).

Table 7-5 Asset Management Programs (Quality) – IT

AM Programs – Quality
Hardware Renewal Program   This program aims to oversee the hardware lifecycle, e.g. endpoint devices, servers, network, and security appliances, to guarantee continuous access. Asset selection for the program is based on an obsolesce and end of life criteria.   **New Hardware Program**   The aim of this is to ensures that information management systems (software and hardware) run seamlessly and efficiently.

Table 7-6 Asset Management Programs (Reliable) – IT

AM Programs – Reliable
Software Upgrade Program   The program aims to ensure that software is up to date and meet the functionality requirement.   **Cybersecurity Program:**   The program ensures the confidentiality, integrity, and availability of our information systems and data through comprehensive risk management, robust security policies, and continuous monitoring.

Table 7-7 Asset Management Programs (Functional) – IT

AM Programs - Functional
<u>**Program Development / Growth IT Program Implementation**</u>
The aim of the program is to provide application infrastructure enhancements for lifecycle management of IT hardware and modernization of network/telecom.

7.3.2 Criticality

Based on the town's scoring system for evaluating asset criticality, which quantifies the consequence of failure, the Criticality Score varies from 1 to 5 for each evaluated asset category. A score of 1 denotes very minor criticality, while a score of 5 indicates major criticality. IT assets play a vital and critical role throughout all the services within the town and because of this the network was designed to be resilient and have built in redundancies to ensure continued operations for the critical services.

The average criticality of the IT assets, summarized by asset category and CRV, is presented in Figure 7-4.

Figure 7-4 Average Criticality by CRV and Asset Category – IT
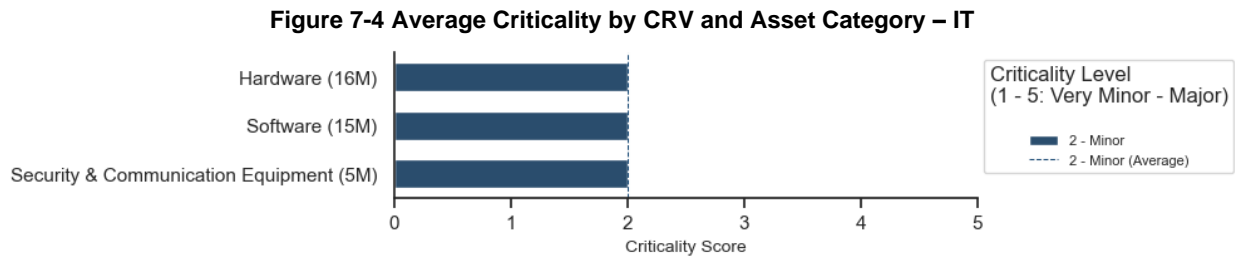
In general, each category would have a criticality rating of 2, i.e. Minor Criticality, resulting in an overall Minor Criticality.

7.3.3 Risk

Based on the town's Asset Lifecycle Continuum of Asset Risk Strategies, the overall risk of the IT assets, summarized by CRV, is presented in Figure 7-5.

Figure 7-5 Overall Risk Summarized by CRV – IT
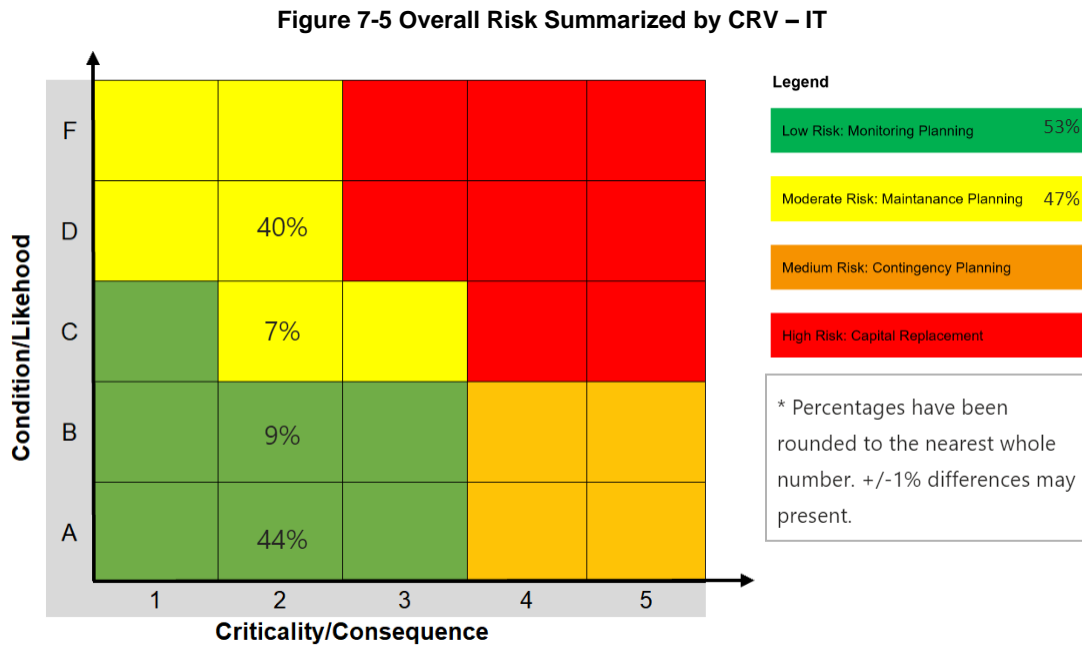
The figure shows that 47% of the assets are classified as Moderate Risk and scheduled for Maintenance, while the remaining 53% are deemed Low Risk and scheduled for Monitoring. Since the IT assets have a consistent criticality rating of 2, the level of risk and associated activities are determined by the age of the assets because of how quickly technology progresses.

7.4 Lifecycle Expenditure 10-Year Forecast

The 10-year lifecycle of expenditure forecast for the IT assets is presented in Figure 7-6, summarized by the three (3) selected Customer Values (i.e., Quality, Reliable, and Functional).

Figure 7-6 Lifecycle Expenditure Forecast by Customer Value – IT (2023$)
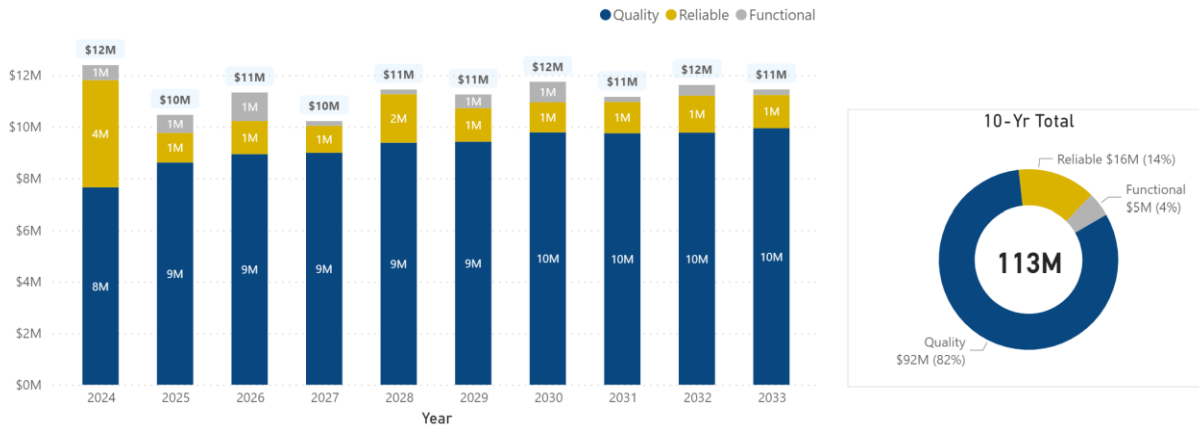
The forecast indicates that the total expenditure for the Information Technology (IT) would amount to $113 Million over the 10-year forecast period. This allocation includes $92 Million designated for the customer service value of Quality, $16 Million for Reliable, and $5 Million for Functional.

On an annual basis, the average investment expenditure is estimated to be $11 Million. This includes $9 Million for Quality, $2 Million for Reliable, and $0.5 Million for Functional customer service values.

A further breakdown of the lifecycle expenditure forecast by programs is provided in Table 7-8.

Table 7-8 Lifecycle Expenditure Forecast – IT (2023$)

Programs by Customer Value	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total
⊟ **Quality**	**$7,642,600**	**$8,609,000**	**$8,933,400**	**$8,986,700**	**$9,376,302**	**$9,416,020**	**$9,777,002**	**$9,743,798**	**$9,767,758**	**$9,939,434**	**$92,192,014**
Hardware Renewal Program	$6,078,000	$6,229,300	$6,538,600	$6,586,900	$6,704,702	$6,819,920	$7,165,902	$7,127,698	$7,252,358	$7,373,634	**$67,877,014**
New Hardware	$1,564,600	$2,379,700	$2,394,800	$2,399,800	$2,671,600	$2,596,100	$2,611,100	$2,616,100	$2,515,400	$2,565,800	**$24,315,000**
⊟ **Reliable**	**$4,161,400**	**$1,150,600**	**$1,284,600**	**$1,046,900**	**$1,882,500**	**$1,300,700**	**$1,168,100**	**$1,216,000**	**$1,435,500**	**$1,292,600**	**$15,938,900**
Software Upgrade	$3,909,800	$1,140,500	$1,274,500	$1,026,800	$1,862,400	$1,280,600	$1,148,000	$1,185,800	$1,405,300	$1,262,400	**$15,496,100**
Cyber Security Program	$251,600	$10,100	$10,100	$20,100	$20,100	$20,100	$20,100	$30,200	$30,200	$30,200	**$442,800**
⊟ **Functional**	**$583,100**	**$696,600**	**$1,107,100**	**$180,200**	**$180,200**	**$532,700**	**$794,600**	**$195,400**	**$412,900**	**$210,500**	**$4,893,300**
Program Development	$502,500	$616,000	$1,026,500	$84,600	$84,600	$437,100	$683,800	$84,600	$302,100	$84,600	**$3,906,400**
Growth IT Plan Implementation	$80,600	$80,600	$80,600	$95,600	$95,600	$95,600	$110,800	$110,800	$110,800	$125,900	**$986,900**
Total	**$12,387,100**	**$10,456,200**	**$11,325,100**	**$10,213,800**	**$11,439,002**	**$11,249,420**	**$11,739,702**	**$11,155,198**	**$11,616,158**	**$11,442,534**	**$113,024,214**

Chapter 8
Financing Strategy

Table of Contents

List of Figures

List of Tables

The financing strategy serves as a blueprint for effectively managing funds to execute the asset management plan. Drawing upon the latest financial data from the ongoing budget cycle, as outlined in the comprehensive 2024 Operating and Long-term Capital Forecast, accessible through the municipality's official website, ensures informed decision-making. Enhancing the caliber of information and planning methodologies stands as a pivotal endeavor for the sustained progress of the town's Corporate Asset Management Plan (CAMP) in the future.

Ensuring the effective execution of the Corporate Asset Management Plan (CAMP) necessitates strong integration with the municipality's financial planning, long-term budgeting, and departmental strategies. Developing a comprehensive financial blueprint that aligns with asset maintenance schedules enables the town to accurately assess the funds required for sustainable asset management. This encompasses considerations such as long-term asset needs, agreed-upon Levels of Service (LOS), regulatory obligations, and anticipated growth trajectories.

An effective financial strategy is paramount for implementing the CAMP. It demonstrates the municipality's commitment to harmonizing asset management planning with financial planning and budgetary processes. This optimization leverages available financing mechanisms for infrastructure development.

8.1   Financing Policies and Assumptions

The long-term capital forecast and financial strategy has been developed with the following financing policies and assumptions. These financial strategies form the basis of the town's strong financial position and are monitored to ensure the town's long-term financial position is sustained into the future:

- ▪ Debt re-payment levels remain within the council approved policy limits.
- ▪ Outstanding debt to reserve levels do not exceed the 1:1 ratio to maintain AAA credit rating.
- ▪ The 1% Capital levy increase is maintained over the 10-year period.
- ▪ Timing of Growth projects aligns with anticipated residential and non-residential development.
- ▪ Development Charge reserve funds maintain a surplus position.
- ▪ Capital reserves are maintained at sufficient levels to minimize risk, support future initiatives, and provide for unknown contingencies.
- ▪ Equipment reserves are maintained at sufficient levels to support on-going life cycle replacements; and
- ▪ Building replacement reserve contributions are maintained and as new facilities are built contributions are increased.

The long-term capital forecast is built on a framework based on drivers to review and assess capital project needs. As some financing sources are specific for only certain types of projects, all financial tools available to the town need to be managed with the overall fiscal picture in mind.

The capital investment program is funded from a wide range of sources. Broadly speaking there are five main sources:

- ▪ Capital Levy– is annual tax revenue received in the fiscal year that is allocated directly to the capital program.
- ▪ Debt – external borrowing within strict limits.
- ▪ Reserves – the town maintains several reserves that are built up and drawn down to cover peaks in expenditures.
- ▪ Other levels of government – Provincial and Federal grants, subsidies and programs that may be ongoing or time limited; and
- ▪ Growth Funding Tools – such as development charges, community benefits charges and parkland dedications

The operating budget is primarily financed through the tax levy, which is offset by user fees and external recoveries for specific programs. Table 8-1 provides an outline of all the sources of funding that may be available to the town; not all are currently utilized.

Table 8-1 Source of Funding

Source	Description
Property Taxation	Each year the town levies and collects property taxes for the provision of services. These are based on a tax rate applied to assessed values of land and buildings.
User Fees	Charges to residents or the public for use of certain amenities, such as entry fees to recreation centers (swimming pools and ice arenas) and transit fees.
Capital Reserves	Funds that are set aside for future purchases (new and replacement) of assets. These reserves are increased through one-time funding (ex. Sale of land) and through annual operation transfers calculated according to different formulas, such as equivalent to a year's worth of depreciated value of an asset.
Growth Funding Tools	Monies are collected from developers under the town bylaws for growth fundings tools. Development Charges, Community Benefit Charges and parkland (Cash in lieu or dedication) are used to finance the development (growth) share of the capital programs and are stored in designated reserve funds until they are needed to pay for growth-related land and infrastructure as prescribed in the Bylaws.
Capital Levies	Current revenues, including property taxes collected from residents, are used to finance tax-supported programs. Rate supported budgets which are separate from property tax supported budgets are used finance self-support programs (such as Harbours, Cemeteries and Parking)
Grants & Subsidies	Transfers from Provincial and Federal government, such as Gas Tax Funding. Grants are often the result of a stimulus or other one-time funding events.
Donations	Monies that are given to the organization.
Public-Public Partnerships	A capital project delivery method whereby two or more public entities co-operate for the purpose of delivering public infrastructure
Public Private Partnerships (P3s)	A form of cost sharing. A capital project delivery method whereby the town (public entity) partners with a private entity for the purpose of delivering public infrastructure. The Federal government may offer grants in support of these shared initiatives.
Contribution from operating	A surplus in the operating fund is re-appropriated towards a capital expense.
Prior years surplus brought forward	Unspent surplus from the operating budget is brought forward as an input to the following year as revenue.
Contingencies	Funds are set aside within the operating budget to address unknown, unbudgeted expenditures that arise during the year.
Stabilization	The utilization of an operating reserve for one-time initiatives that impact the current year's operations only.
Debt Funding/ Debt Management	The province sets a debt-capacity guideline for municipalities which is currently 25% of the individual municipality's operating revenues

8.2   Funding Allocation

As indicated in the preceding sections, the total 10-year expenditures includes the costs to support renewal, operating and growth based on council's strategic priorities. The forecasted 10-year expenditures to provide relevant services is summarized for each asset classification by the three customer values and presented in Table 8-2.

Table 8-2 Summary of 10 Yr. Capital and Operation Expenditures by Customer Value ($ in Millions)

Asset Class	Quality	Reliable	Functional	Total
Facilities	$107	$482	$221	$810
Parks Network	$147	$312	$216	$674
Licensed Fleet	$100	$398	$173	$672
Equipment	$48	$52	$57	$158
IT	$92	$16	$4.9	$113
Total	**$494**	**$1,261**	**$672**	**$2,428**

Figure 8-1, titled "Summary of Expenditures by Customer Value," illustrates the allocation of total expenditures over a 10-year period by asset classes. The expenditures are categorized into three customer values areas: Quality (renewal), Reliable (operating), and Functional (growth). These categories reflect the strategic priorities set forth by the council, ensuring that resources are allocated efficiently to maintain services. The chart highlights how each asset class contributes to these values over the 10 years, demonstrating an approach to sustaining current operations, investing in new developments, and renewing existing assets to meet future demands.

Figure 8-1 Summary of Expenditures by Customer Value

10-Yr Total Budget (2023$)

● Quality ● Reliable ● Functional

(Bar chart by asset class: Facilities, Parks Network, Licensed Fleet, Equipment, IT. Y-axis: $0M, $200M, $400M)

% of Asset Class 10-Yr Total Budget

● Quality ● Reliable ● Functional

	Facilities	Parks Network	Licensed Fleet	Equipment	IT
Functional	27%	32%	26%	36%	14%
Reliable	60%	46%	59%	33%	
Quality	13%	22%	15%	31%	82%
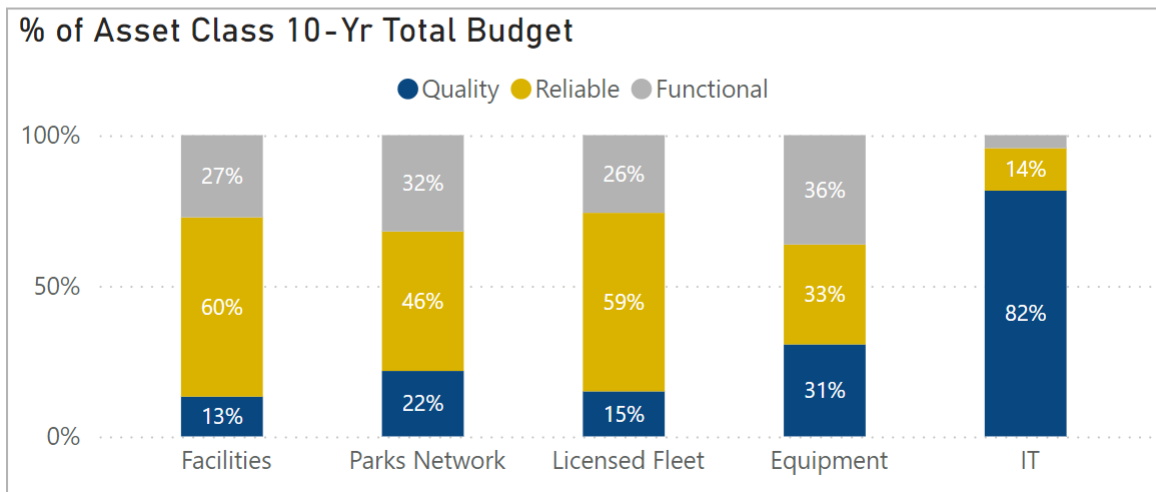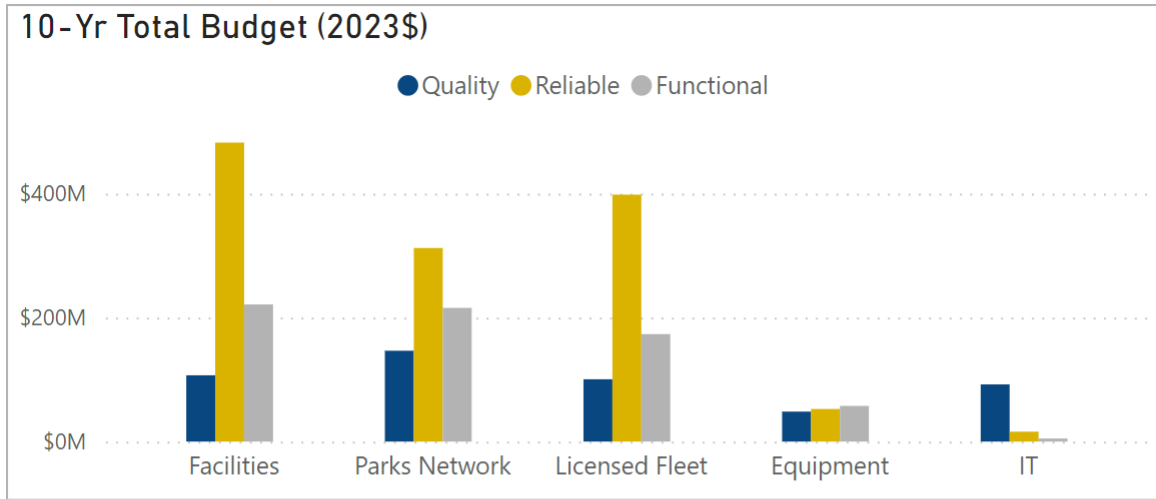
As noted in the preceding sections, funding is available through various sources to support the required services. It is through the long-term financial plan that future reserve and reserve fund requirements are determined. The Adopted 2024 Operating and Capital Budget (pg. 27 – 28) provides the Capital Financing Summary for this 10 year period.

The financing strategy outlined serves as a guideline for managing funds to execute the long-term capital forecast and the Corporate Asset Management Plan (CAMP), ensuring continued review of the latest financial data from the ongoing budget cycle as well as the various service master plans. The town aims to enhance the caliber of financial and asset information for the sustainability of the town's Corporate Asset Management Plan. Key financial policies and assumptions, including debt repayment levels, capital levy increases, and reserve maintenance strategies, are integral to maintaining the town's strong financial position and supporting future initiatives. The capital investment program relies on various funding sources, such as capital levies, debt, reserves, government grants, and development charges, with a focus on addressing renewal, operating, and growth needs. Through careful allocation and management of these resources, the plan aims to ensure sustainable asset management and support the evolving needs of the community.

Chapter 9
Asset Management Improvement Plan

9.   Plan Improvement

Table of Contents

9.1   Overview

An effective asset management plan is based on having a culture of continuous improvements around information, operations and people. Because of this approach an asset management maturity assessment is updated every 5 years. This maturity assessment allows the town to benchmark our progress along the asset management journey as well as highlight an areas that may need additional resources to improve asset planning.

Effective asset management necessitates a forward-thinking, integrated approach that considers entire system with a long-term perspective. Implementing such plans requires enhancements in asset management practices, competencies, and capabilities across both individual services and the entire municipality. In 2017, a Comprehensive Asset Management Review and Assessment (CAMRA) tool was employed for an asset management maturity assessment, aligning with ISO55000 Asset Management requirements. The resulting roadmap aimed to elevate the organization from a "developing" to a "competent" maturity level and concluded in 2021. A subsequent CAMRA assessment in 2023 led to the creation of a new five-year roadmap, charting a course for continuous improvement in the town's asset management practices. This updated roadmap identifies initiatives to advance the town's current asset maturity level.

The average results of the 2023 maturity assessment viewed in isolation have limited utility, they serve as a tool to assess the general progress of the Asset Management program over the preceding 5 years. The average maturity scores for 2016/2017 and 2022/23 are 2.6 and 3.0, respectively.

While the overall improvement may not be immediately apparent, it is crucial to recognize that only a selected few of the 33 topic areas were prioritized in the initial 5-year roadmap. The focused topic areas resulted maturity changes in their scores. The Asset Management roadmap should be viewed as part of a long-term continual improvement strategy, anticipating multiple iterations to propel the organization toward overall sustainable competence (level 4). The average scores for each question are outlined below for a comprehensive overview.

CAMRA+
COMPREHENSIVE ASSET MANAGEMENT
REVIEW & ASSESSMENT+

Jacobs — Challenging today. Reinventing tomorrow.

#	Focus Area	Topic	Storm	Roads	Parks	Buildings	Fleet	Transit
1	Organizational Context	Organizational Strategic Plans	3.0	3.5	3.5	2.5	2.5	4.0
2	Organizational Context	Scope of the Management System for Asset Management (the Asset Managem	3.0	3.0	3.5	2.5	3.0	2.0
3	AM Vision & Leadership	Asset Management Policy & Strategic Asset Management Plan	3.5	3.5	2.5	3.5	3.5	3.0
4	AM Vision & Leadership	Asset Management Leadership & Governance	4.0	4.0	2.5	3.5	4.0	3.0
5	AM Vision & Leadership	Asset Management Roles & Responsibilities	2.5	3.0	3.5	3.0	3.5	2.0
6	AM Vision & Leadership	Master Plan For Development Of Asset Management Business Processes & P	2.5	2.5	2.5	3.0	2.5	1.5
7	AM Vision & Leadership	Master Plan for Development of Asset Management Skills & Competences	2.5	2.5	2.0	2.5	3.0	2.0
8	AM Vision & Leadership	Master Plan For Development of Asset Management Information Technology	1.5	1.5	1.5	1.5	2.0	1.0
9	Asset Management Objectives & Targets	Service Performance Measures/ Levels of Service	3.5	3.5	3.5	2.0	2.5	4.0
10	Asset Management Objectives & Targets	Future Trends (Impact Of Growth)	4.0	4.0	3.5	4.0	3.0	4.0
11	Asset Management Objectives & Targets	Legal, Regulatory & Statutory Requirements	2.0	2.5	3.5	3.0	4.0	5.0
12	Asset Management Information Requirements	Asset Inventory	4.0	3.5	4.5	3.5	4.5	3.5
13	Asset Management Information Requirements	Asset Information	2.5	3.0	4.0	3.0	4.5	3.0
14	Asset Management Information Requirements	Information Management	2.5	3.5	4.0	3.0	4.0	3.0
15	Asset Management Information Requirements	Business Applications	3.0	3.0	3.5	3.0	3.0	3.0
16	Planning To Achieve Asset Management Objectives	Risk Framework - Strategic Level & Asset Level	2.5	2.5	2.5	2.0	2.0	2.0
17	Planning To Achieve Asset Management Objectives	Asset Strategies	3.0	2.5	2.5	2.5	3.0	3.5
18	Planning To Achieve Asset Management Objectives	Long Term Renewals Planning	3.0	2.5	3.5	3.5	3.5	3.5
19	Planning To Achieve Asset Management Objectives	Optimized Asset Intervention Planning	3.0	2.0	3.0	2.5	2.5	2.5
20	Planning To Achieve Asset Management Objectives	Asset Management Plans	4.0	3.5	3.0	2.5	3.0	3.0
21	Planning To Achieve Asset Management Objectives	Capital Investment Plan Development & Governance	3.0	3.0	3.0	3.0	3.5	2.5
22	Operational Planning & Control	Capital Projects - Planning, Design & Construction	2.5	2.0	3.5	3.5	4.0	4.0
23	Operational Planning & Control	Operations Management	3.0	3.0	3.5	3.5	4.0	3.5
24	Operational Planning & Control	Maintenance Management	3.5	3.0	3.0	3.0	4.0	3.5
25	Operational Planning & Control	Investigation And Recording Of Routine Asset Failures & Reactive Work	2.5	3.0	2.0	3.0	4.0	3.0
26	Operational Planning & Control	Materials Management	2.0	3.0	3.5	2.5	4.0	3.5
27	Operational Planning & Control	Emergency Preparedness & Response	3.5	2.0	3.5	3.5	3.5	4.5
28	AM Enablers & Support	Control of Documented Information	2.0	3.5	2.5	3.0	4.0	3.5
29	AM Enablers & Support	Learning & Development	2.0	2.5	2.0	2.0	2.0	2.0
30	AM Enablers & Support	Knowledge Retention & Succession Planning	2.5	2.5	2.5	2.5	2.5	2.5
31	AM Enablers & Support	Asset Management Quality Assurance & Management Review	2.0	2.0	2.0	2.5	2.5	2.5
32	AM Enablers & Support	Continual Improvement Culture	3.0	2.5	3.0	3.0	2.5	3.0
33	AM Enablers & Support	Communication & Change Management	3.5	3.0	2.5	3.0	2.5	2.5

The plot below shows these 2023 average results (green line) compared with the 2017 average results (red line). As a general observation slight improvements were made in most areas and a normalization of scores in others.
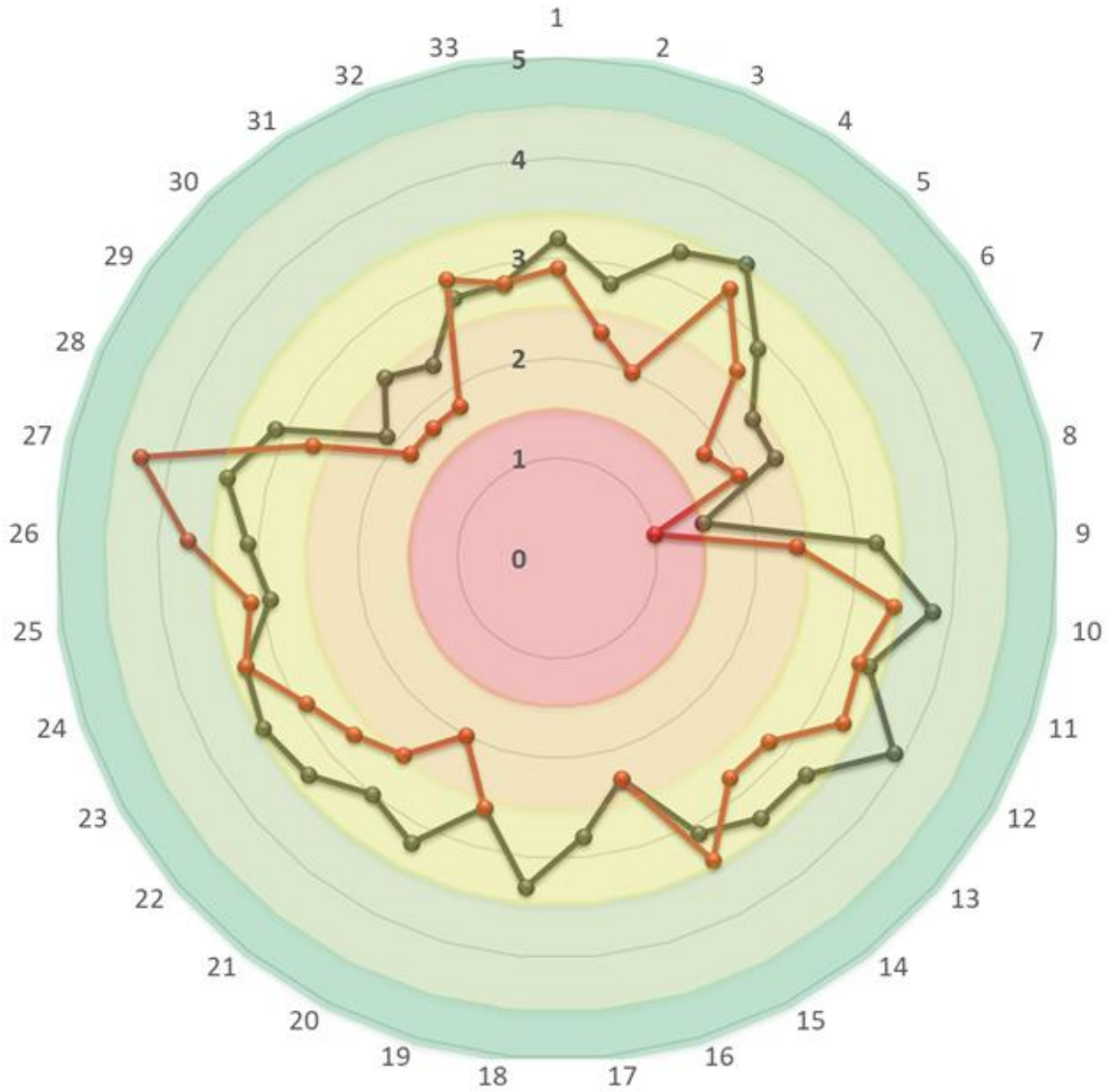
The diagram below highlights the proposed roadmap over the next 4 years. The details of the roadmap will need to be resourced accordingly as the town continues the asset management journey.

Q3 2023	Q4 2023	Q1 2024	Q2 2024	Q3 2024	Q4 2024	2025	2026	2027

Scope of AM System

SAMP Update

Comms & Change Mgmt

Reg 588/17 Non-Core AMPs v1

Reg 588/17 Core AMPs v2

Reg 588/17 Non- Core AMPs v2

DSS Implementation

Strategic & Asset Risk

Asset Failure Investigation & Recording

Optimized Intervention Planning

AM Learning & Development Plan

AM Knowledge Retention

AM Processes

Capital Investment Plan

Natural Asset Roadmap Development

From strategic planning and organizational alignment to operational efficiency and continuous improvement, ISO 55000 maturity topic areas offer a structured approach to assess and enhance an organization's asset management capabilities. These topic areas serve as a comprehensive framework, guiding the town towards optimizing their asset management practices to maximize value, minimize risks, and ensure continued sustainability. By delving into these areas, the town can systematically evaluate their maturity levels, identify areas for enhancement, and establish a roadmap for achieving excellence in asset management practices.

In the short-term horizon, the focus on these six critical areas ensures that the foundational elements of asset management are robust and aligned with organizational goals. Updating the Strategic Asset Management Plan (SAMP) with council priorities and integrating Master Plans with asset renewal plans are immediate priorities to maintain alignment with the broader organizational strategic objectives. Clearly defining the scope of the Asset Management System and updating processes and roles by 2025 are essential steps to establish a structured and effective asset management framework. Developing and disseminating the Asset Management Policy and SAMP will guide decision-making and improve organizational maturity. Establishing a comprehensive risk framework is crucial for managing both strategic and asset-level risks, ensuring that resources are efficiently allocated to mitigate potential failures. Planning for long-term renewals and integrating these plans into current financial strategies will create a sustainable approach to asset management. Lastly, robust development and governance of Capital Improvement Plans (CIPs) will ensure that immediate capital investments are well-justified and

aligned with strategic priorities, setting a strong foundation for future growth and resilience. Table 9-1 summarizes the 6 focus areas over the next 12 months.
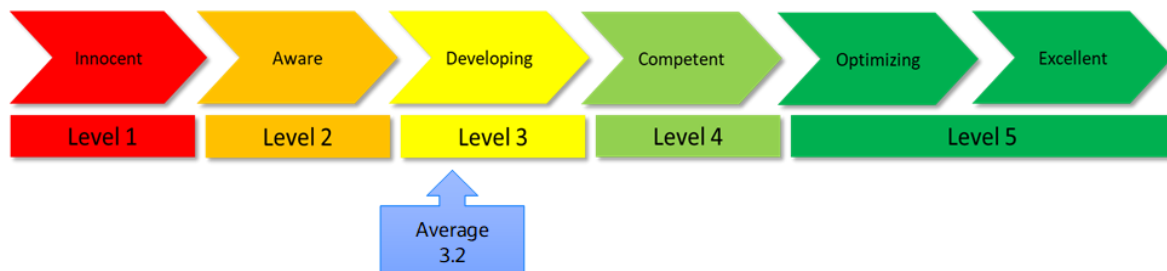
Table 9-1 Short Term Focus Areas

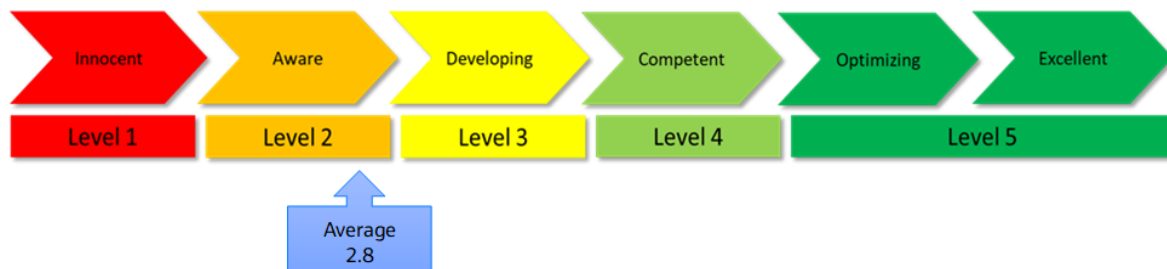| Focus Area	Objectives
Organizational Strategic Plans	• Align asset management objectives with organizational goals. • Update the Strategic Asset Management Plan (SAMP) with council priorities every election cycle to ensure a "line of sight" to organizational objectives. • Integrate Master Plans with asset renewal plans to progress from the developing to the competent stage.
Scope of the Asset Management System	• Update processes by 2025 to reflect changes in roles and responsibilities, moving towards a competent level of maturity.
Risk Framework - Strategic & Asset Level	• Update the risk framework and align with strategic objectives to manage both strategic and asset-level risks.
Long Term Renewals Planning	• Plan for long-term asset renewal and refurbishment by developing an understanding of the required investment and factoring this into asset management plans and financial decision-making. • Model lifecycle behaviors and estimate costs over a suitable time horizon (e.g., 25 years) to ensure sustainability.
Capital Investment Plan Development & Governance	• Prioritize projects based on asset risk and business case evaluations, ensuring that capital investments are justified and aligned with strategic goals.
Service Performance Measures / Levels of Service	• Track current performance and establish targets

9.2   Areas of Focus (Short Term)

9.2.1   Organizational Strategic Plans

A key concept in Asset Management is "line of sight" where asset management objectives and associated decision-making practices are clearly aligned with overarching organizational objectives. These organizational objectives set out what top management is aiming to achieve on behalf of customers and stakeholders – both internal and external; and should be clearly defined within an "Organizational Strategic Plan" or Council Strategic Priorities. The is one of the key reasons the Strategic Asset Management Plan (SAMP) is updated when the Council Strategic Priorities are refreshed after each election cycle. This ensures the SAMP maintains a line of sight to the organizational priorities. The Area of focus within the next several years is to further incorporate Master Plans (Recreation, Facilities, Parks ...) with current asset renewal plans. Currently we are within the developing stage and over the next several years should be able to be firmly within the Competent Stage.

Innocent	Aware	Developing	Competent	Optimizing	Excellent
Level 1	Level 2	Level 3	Level 4	Level 5	

Average
3.2

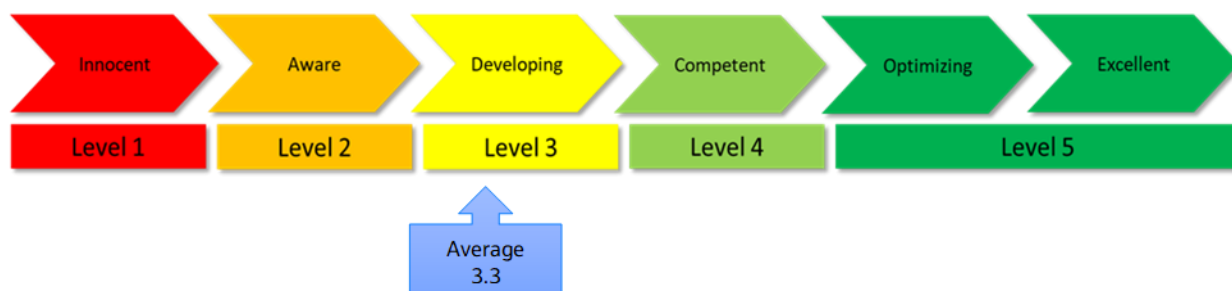### 9.2.2   Scope of the Asset Management System

The Asset Management System can be considered the collective set of documentation, processes and procedures guiding and controlling the application of Asset Management in the town. This question therefore seeks to determine if there is clear definition of the Asset Management System, usually in the form of an overarching high-level process map and accompanying documentation, together with clearly defined ownership and processes for ongoing review. This content may be included within the Strategic Asset Management Plan (SAMP). With the formation of an Asset Management Department the documentation, processes and procedures need to be updated to reflect those changes of roles and responsibilities. The plan is to update the processes and better define roles and responsibilities by end of 2025. This should put us close to the competent level.

Innocent	Aware	Developing	Competent	Optimizing	Excellent
Level 1	Level 2	Level 3	Level 4	Level 5	

Average
2.8

9.2.3 Asset Management Policy and Strategic Asset Management Plan

The Asset Management Policy is a formal document that sets out the high-level principles by which the town will manage its assets, as formally expressed by its leadership. Its main goal is to guide how asset management decision-making will support the achievement of organizational objectives. It should be formally endorsed by top management and communicated to all relevant staff.
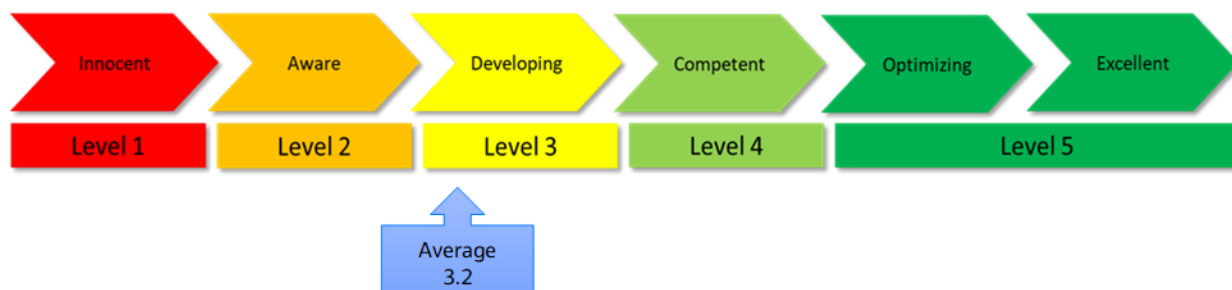
The AM Strategy (or SAMP) documents the approach to implementing the Asset Management Policy and how Asset Management will support the organizational objectives. The SAMP includes an overview of the town's services and assets, sets out the asset management objectives, its governance structure, decision making criteria (e.g. risk framework), roles and responsibilities and strategies for the implementation and development of the asset management system. The town is in the developing stage; the plan is to distribute and educate key positions within all asset intensive service areas on the SAMP. This should move our maturity from a 3.3 to a solid 4.

Innocent	Aware	Developing	Competent	Optimizing	Excellent
Level 1	Level 2	Level 3	Level 4	Level 5	

Average 3.3

9.2.4 Service Performance Measures / Levels of Service

To develop a clear line of sight, it is necessary to clearly define a suite of Asset Management objectives that clearly link back to the organizational strategic plan and organizational objectives. The asset management objectives referred to in this topic relate specifically to the performance of the assets and the value that they deliver for customers and stakeholders and are commonly referred to as Levels of Service.

Current performance should be tracked, and the costs associated with delivering performance analyzed to understand trends and facilitate forward planning. Targets should be established so that they meet the "SMART" criteria of being specific, measurable, achievable, realistic and time bound.

Innocent	Aware	Developing	Competent	Optimizing	Excellent
Level 1	Level 2	Level 3	Level 4	Level 5	

Average 3.2

9.2.5   Risk Framework - Strategic Level & Asset Level

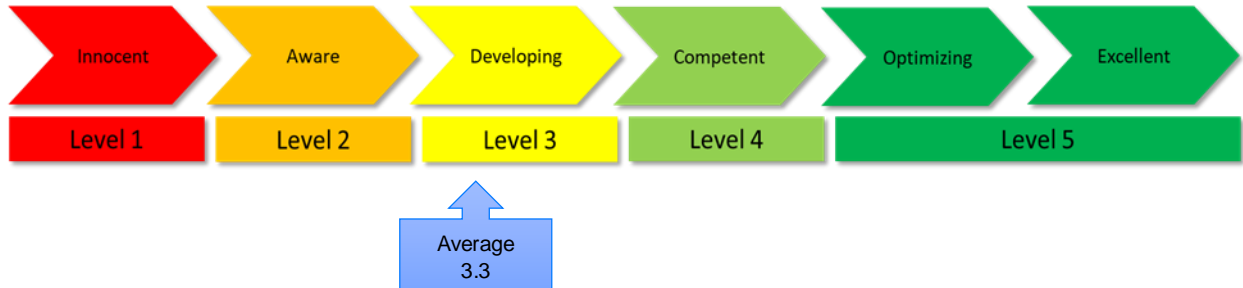Strategic Risk assessments typically consider high-level threats to objectives associated with both the internal and external environment in which the service area operates. External strategic risks may include threats to organizational objectives such as funding sources, the political environment, regulatory changes, changing demographics, etc. Internal strategic risks may include labor shortages, organizational culture issues, staffing competences and skill shortages, information technology aspects, budget constraints, major asset failures etc. To manage risks at the strategic level, a risk framework and risk register should be developed which is aligned with the organization's strategic objectives.

In addition to these "top-down" strategic risks, each Service Area should also consider the "bottom-up" risks associated with failures or deficiencies arising within the asset portfolio. Assets can fail in many ways and due to many causes. Such failures can significantly affect the achievement of levels of service and associated strategic objectives. A good understanding of asset-related risks is therefore essential to appropriately target capital investment or operations and maintenance resources to reduce the likelihood and consequences of asset failures. Typically, the short-term refurbishment and replacement program on the asset base should be driven by a rigorous understanding of asset risk based on available data and consultations with operations and maintenance staff. To ensure that the true priorities are identified and addressed, a consistent asset risk framework and associated risk assessment processes are required. The current risk framework will be reviewed and updated to incorporate service and asset risk.
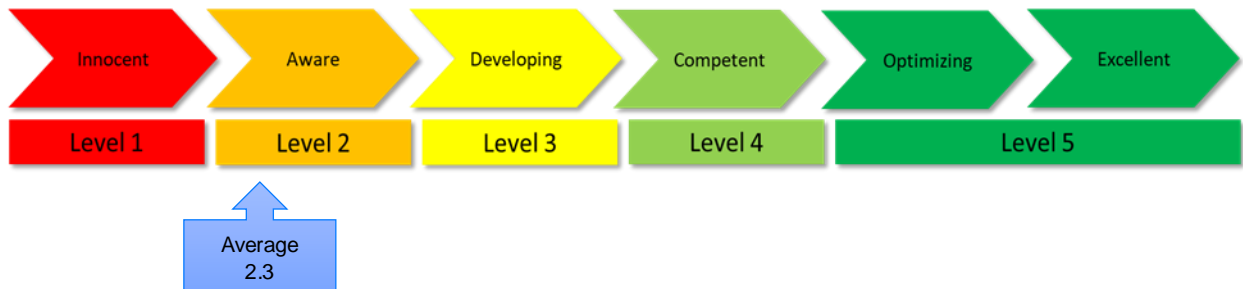
9.2.6 Long Term Renewals Planning

Assets typically deteriorate over time/with use and require refurbishment or replacement at appropriate points in their lifecycle. To plan for the long-term, it is necessary for organizations to develop an understanding of the underlying refurbishment and renewal investment that may be required and factor this into asset management plans and associated financial decision-making. This long-term planning involves the modelling of lifecycle behaviors over a suitable time horizon (i.e., 25 years or so) and applying cost estimates to the refurbishment and renewal actions that are projected.

Innocent	Aware	Developing	Competent	Optimizing	Excellent
Level 1	Level 2	Level 3	Level 4	Level 5	

Average 3.3

9.2.7 Capital Investment Plan Development & Governance

The typically high costs associated with asset related capital investments, requires robust processes and procedures for developing capital improvement plans (CIPs) to ensure that available funds are targeted at the highest priority needs in line with the asset management and organizational objectives. This topic considers the key elements of good CIP (capital improvement plans) development and governance, covering well documented rationales behind identified needs (including the use of asset risk), use of Business Case Evaluations which include Whole Life Cost comparison of options and prioritization of candidate projects based on clearly stated criteria.

Innocent	Aware	Developing	Competent	Optimizing	Excellent
Level 1	Level 2	Level 3	Level 4	Level 5	

Average 3.0