

# FACILITIES ASSET MANAGEMENT PLAN



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# ACKNOWLEDGEMENTS

Facility Services

Recreation & Culture

Public Works Services

Office of D&IS Commission

Data Analytics and GIS

Finance

Procurement Services

Corporate Communications

Corporate Asset Management Office

Asset Management Steering Committee

Students

Roth IAMS

Infrastructure Solutions Inc

# INTRODUCTION

The Town of Newmarket is committed to good governance through fiscal responsibility and financial sustainability in striving to meet the program and service needs of the community and its customers, including residents, local businesses and visitors. The Town of Newmarket will adopt and apply recognized Asset Management (AM) practices to plan, design, construct, acquire, operate, maintain, renew, replace and dispose of the Town's assets in a way that preserves sound stewardship of public resources while balancing levels of service and risk in support of delivering services to its residents and customers.

## **What Is Asset Management?**

Asset Management is an integrated business approach involving planning, finance, engineering, maintenance and operations geared towards effectively managing existing and new infrastructure to maximize benefits, reduce risk and provide safe and reliable levels of service to community users at the best value. This is accomplished in a socially, culturally, environmentally and economically conscious manner. AM relies on four key organizational components integrating together to achieve the desired service outcomes: well-planned strategies, good physical assets, highly trained professionals with respect to practices and procedures, and integrated business processes. These components, supported by appropriate technologies, provide a robust foundation for efficient service delivery.

## **Why a Plan?**

AM plans are part of Newmarket's long term strategic, planning, and financial management. They also enable and support many Town operational processes. AM Plans guide Newmarket's processes to reflect sound and accountable governance of its municipal infrastructure. The plans provide an understanding of current and future asset needs, condition and costs, service levels, risks and future growth planning and funding. The AM Plans are a living document to be reviewed and updated as the environment changes. This includes considering and incorporating standards, adding new data, updates that demonstrate continuous improvement, changing demographics and trends, provincial policy, and corporate documents and studies. At a minimum, the

plans will be reviewed annually and updated every 5 years as mandated by O.Reg 588/17.

Each plan includes four chapters that build a holistic understanding of the Town’s assets and their future:

- Know Your Assets: Establishes the baseline of what the Town owns, its condition, and replacement cost to inform subsequent analysis, reporting, and decisions.
- Manage Service Delivery: Brings visibility to levels of service, risk, and activities that support services through a framework for managing asset-related services holistically.
- Future Ready: Showcases ongoing and future trends that will impact the Town’s assets and services. This includes growth in the asset base, and the impacts of climate change on assets.
- Financial Strategy: Uses capital financial modeling to show the cost of maintaining assets at their current level of service, the outcomes of current levels of funding, and options for future financial decisions.

### Scope & Service Areas:

In 2021, the Town produced its asset management plans for core assets: roads, bridges, water, wastewater, stormwater. In 2023, asset management plans were added for two areas: Parks, and Facilities (this document). Asset management plans will be updated and consolidated again in 2025 to produce the Proposed Levels of Service & Financial Strategy required by O.Reg. 588/17. The scope of this document and the Town’s series of AMPs is summarized in Figure 1.



Figure 1 - Overview of Asset Management Planning Documents

## **Links to 2021 Core Asset Management Plan**

The Facilities Asset Management Plan uses Town frameworks for asset management planning and reporting that were first developed in 2021 with core assets. The approach and rationale for all content in the Town's asset management plans is provided in a section called Concepts and Frameworks. The purpose of this information is educational but also to provide structure and consistency to all Town reporting.

## **Recommendations Made by the 2021 Core Asset Management Plan**

The 2021 Core Asset Management Plan provided several recommendations, many of which were specific to the assets considered (roads, water, etc.). There were also several strategic recommendations that were overarching to the Town's corporate asset management practice. These strategic recommendations apply to all assets including those included in this document and are referenced here. Their implementation will be guided by the Asset Management Steering Committee. The recommendations are:

1. Establish data management practices such as data owners, formats, collection and reporting frequencies, and links between data and decision-making.
2. Develop a condition assessment framework that supports condition scales and data collection programs.
3. Develop options for implementing an asset registry tool that can support reporting of the State of the Infrastructure, as well as other functions like Financial Information Return.
4. Develop a governance model for AM at all levels of the organization, and clarify roles and responsibilities across the asset portfolios.
5. Adopt the levels of service measures and create processes to support their data collection, reporting, and use in decision making in preparation for 2025 O.Reg. 588/17 requirements.
6. Develop Levels of Service targets for measures in the asset management plans.
7. Implement corporate risk management practices (ex. Corporate Risk Management Policy & Framework).
8. Build greater connections between the planning and asset management processes.

9. Advance climate change adaption and resilience policies to guide staff and inform on decision making.
10. Develop funding strategies for proposed Levels of Service targets to meet O. Reg 588/17 2025 requirements.
11. Look for continuous improvement opportunities to extend the life of assets and prevent early replacement through condition assessments and rehabilitation technologies.
12. Develop a strategy to increase capital delivery capacity to deliver on AM Plans.
13. Create risk management plans for the upcoming periods where renewal needs will exceed capital reinvestment capacity.
14. Create a reserve management strategy to inform how funds or new revenues are allocated to different reserves with different financial positions and different funding sources.
15. Facilitate the defining and quantifying of human resource requirements for asset lifecycle activities.



## KNOW YOUR ASSETS

The Town is responsible for \$3 Billion+ of assets. Assets exist to provide services to the community. Their ability to deliver services depends on Town stewardship and informed decision making. As assets age they have to be replaced. Key takeaways in this section will include:

- What do we own?
- What condition is it?
- What would it cost to replace?

Know Your Assets is the first section of the asset management plan, and sets the foundation for analysis by establishing an authoritative view of what assets the Town owns. The characteristics and history of these assets including their age, condition, and replacement cost inform future forecasting, which is an extrapolation of the current state of the infrastructure.

Continually monitoring the state of the infrastructure through Know Your Assets and annual infrastructure report cards allows these outlooks to be refined and updated with improved data and a log of past performance. As more data is gathered and improved, so too does the Town’s understanding.

Know Your Assets answers several questions (Table 1):

Table 1 – Summary of Key Information in the Know Your Assets Chapter

Know Your Assets Information	Impact to Town and Asset Management
<b>What is the Current State of Our Data?</b>	Asset management is a data driven practice. The success of the asset management plans is incumbent upon maintain good data and using it to make decisions.
<b>What Asset Do We Own?</b>	Quantifying and classifying assets in a standard manner allows for planning and analysis.
<b>What Age Are Our Assets?</b>	The history of when assets are constructed tell us what lifecycle stage they are in, how they are performing relative to their age, and when they may need a replacement.
<b>What Would It Cost to Replace?</b>	Up-to-date costing of assets ensures financial forecasting accounts for the full lifecycle cost while accounting for factors like inflation.
<b>What Condition Are They?</b>	Based on age or visual engineering observations, condition indicates the level of service and likelihood of failure for an asset, leading to the urgency or timeline for a potential replacement.
<b>What Are We Spending and Saving?</b>	The Town can influence the State of the Infrastructure by saving funds in reserves for future capital replacements and by spending funds on capital delivery to improve asset conditions. Reporting this alongside asset condition shows how these actions correlate.



# DATA GAP ANALYSIS

Asset data is the first part of Know Your Assets and forms the foundation for the State of the Infrastructure. Further information about the approach to Data Gap Analysis can be found in the 2021 Core Asset Management Plan.

Using the requirements of a standard asset registry, a gap analysis of the Facilities asset registry is provided in Figure 2 below. When viewing subsequent sections of the asset management plan that use asset data, consideration should be given to the data gaps described here.

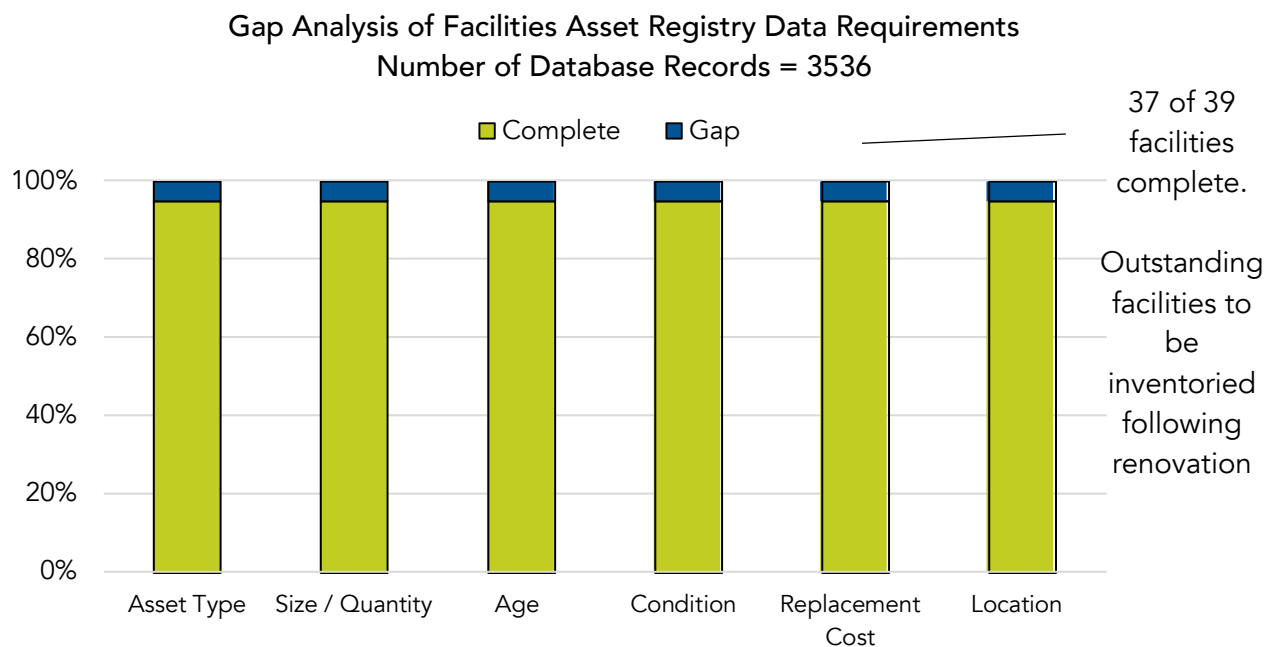


Figure 2 - Gap Analysis of Facilities Asset Registry Data Requirements

# CONTEXT OF THE STATE OF THE INFRASTRUCTURE

The State of the Infrastructure will combine inventory quantities, replacement costs, and condition ratings to provide a detailed breakdown of the Town’s assets.

**What Do We Own?** The inventory has been organized in a hierarchy to reflect the asset types providing the service, and to support reporting and planning. The Town’s inventory for the Facilities service area is organized in Figure 3

Within these facility services, the Town manages its assets and asset data using an asset as classification system shown in Figure 4.

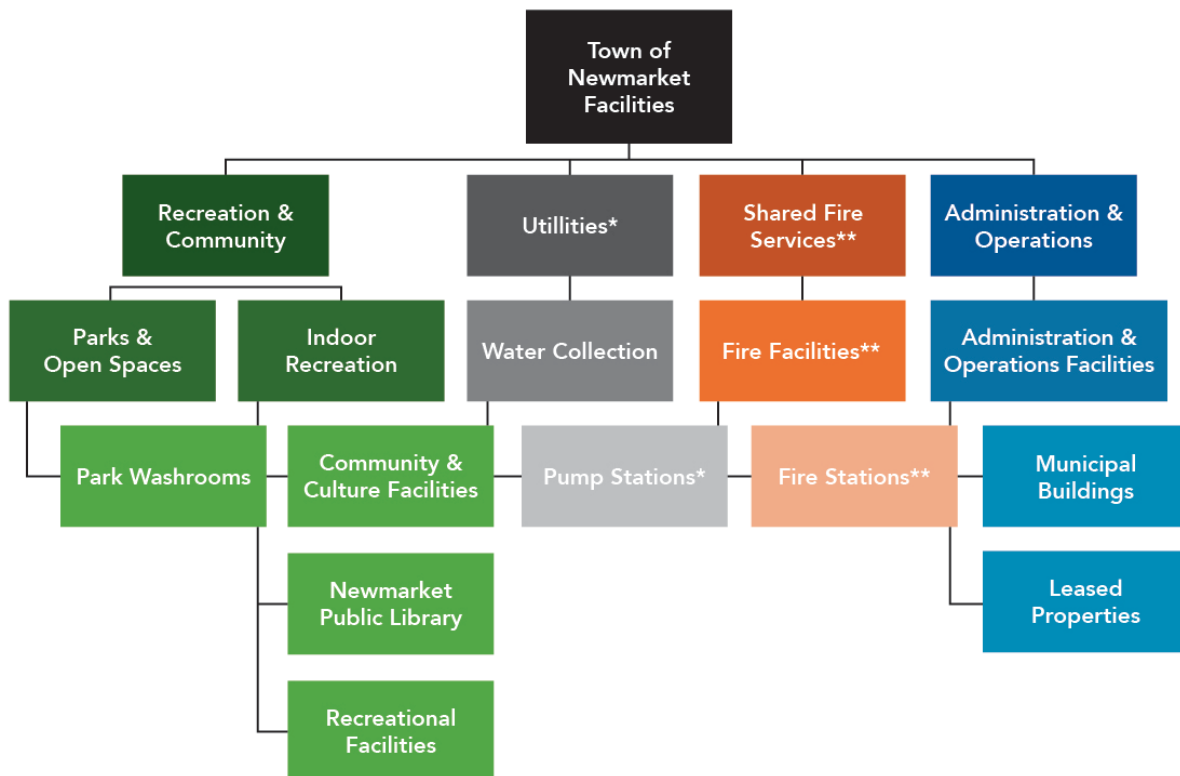
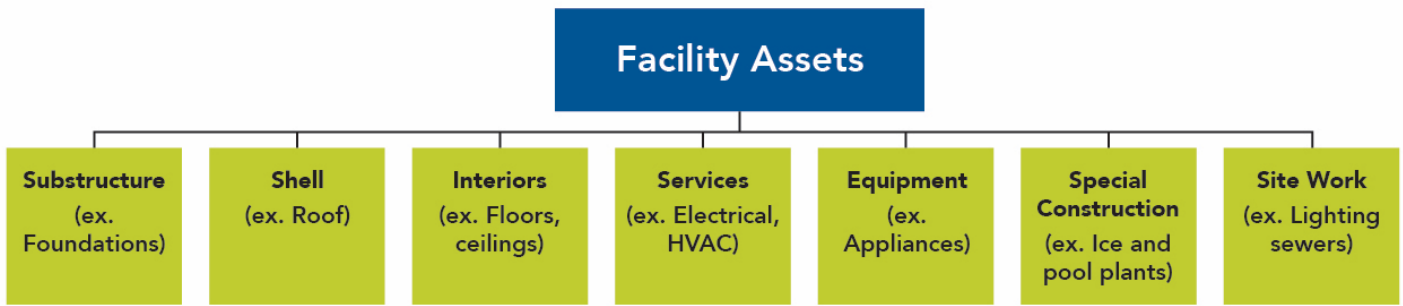


Figure 3 – Facilities Service Area Classification

\*Pump stations are addressed in the 2021 Wastewater Asset Management Plan and are out of scope for the 2023 Facilities Asset Management Plan.



\*\*Extent of fire services included in the 2023 Facilities Asset Management Plan depends on the ownership structure of the fire hall. All other fire halls fall within the asset management practice for Central York Fire Services (CYFS).

Figure 4 - Facilities Asset Classification

This inventory will be used for replacement valuations, service delivery, operations and maintenance, growth updates, capital planning, and financial reporting.

**What Does It Cost?** The total replacement cost for Facilities is ~\$237 million (2022 dollars). This is equivalent to 7% of all Town-owned assets, and 49% of non-core assets subset (parks, facilities etc.) not reported in 2021 as core assets (roads, bridges, water, wastewater, and stormwater). This is summarized in Figure 5.

**Summary of Facilities & Non-Core Asset Replacement Cost**

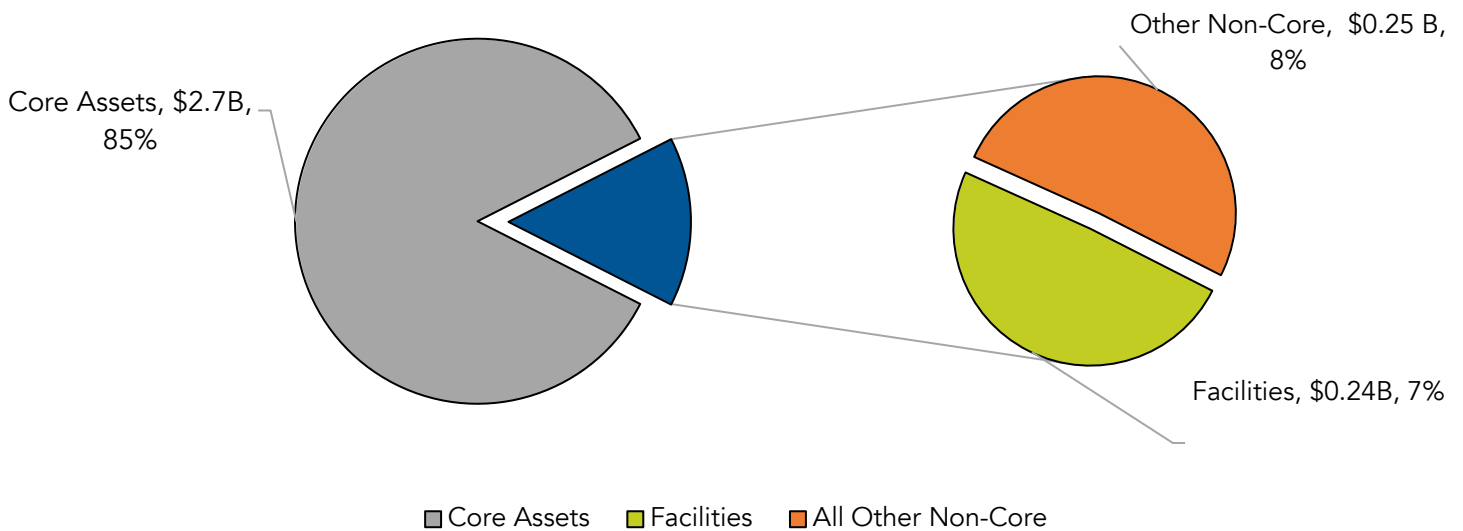


Figure 5 – Summary of Replacement Cost Compared with Total Town Core & Non-Core Assets

## What Condition Is It?

Assets are assigned condition ratings on a 5-point scale as seen in Table 2. Ratings are assigned based on a professional estimate of age, performance, and expected service life during inspections by contracted services for building condition assessments using an industry standard framework.

Table 2 – Facility Asset Condition Index

Condition Ratings – Facility Asset Condition Index Percentage of Remaining Useful Life		
Category	Percentage	Description
Very Good	100-80	The asset is fit for the future. It is well maintained, in good condition, new or recently rehabilitated.
Good	80-50	The asset is adequate. It is acceptable and generally approaching the mid-stage of its expected service life.
Fair	50-25	The asset requires attention. The asset shows signs of deterioration, and some elements exhibit deficiencies.
Poor	25-10	There is an increasing potential for its condition to affect the service it provides. The asset is approaching the end of its service life, the condition is below the standard and a large portion of the system exhibits significant deterioration.
Very Poor	10-0	The asset is unfit for sustained service. It is near or beyond its expected service life and shows widespread signs of advanced deterioration. Some assets may be unusable.



# Facilities Infrastructure Report Card



## INFRASTRUCTURE PURPOSE

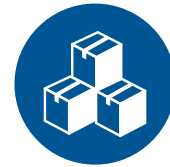
Town facilities support a number of indoor services to the public and stakeholders including recreation and culture, municipal operations, fire, and leased spaces for tenants. Programming can provide a wide range of community supports. Major facilities also serve as a hub for community resilience.



**REPLACEMENT COST:**  
\$237 Million



**AVERAGE NETWORK CONDITION**  
**GOOD**



**INVENTORY**  
37 Facilities  
(Town-owned, non-rate supported)

## DETAILS:

**Life Expectancy:** To date our facility assets have used, on average, 52% of their expected life span with 48% of their life span remaining.

**Average Rating:** Good

■ Current Average Age      ■ Average Remaining Life

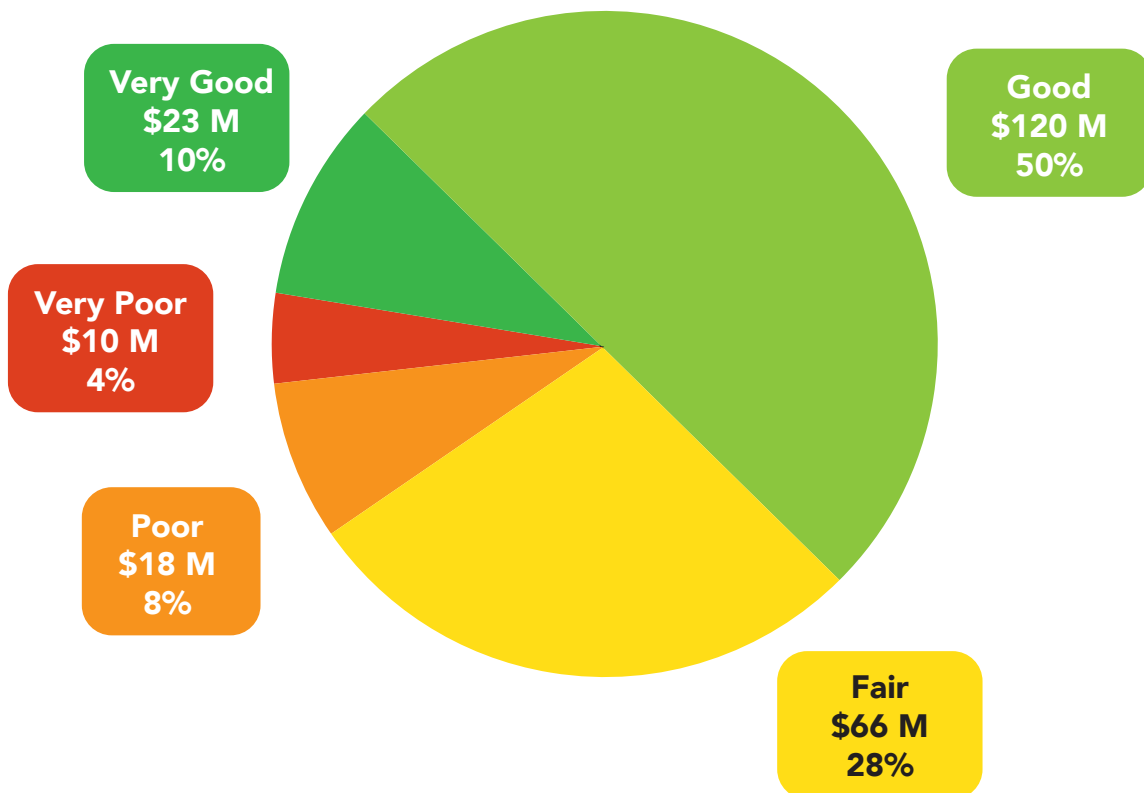


**Average Expected Life:** 33 Years (varies by building element)

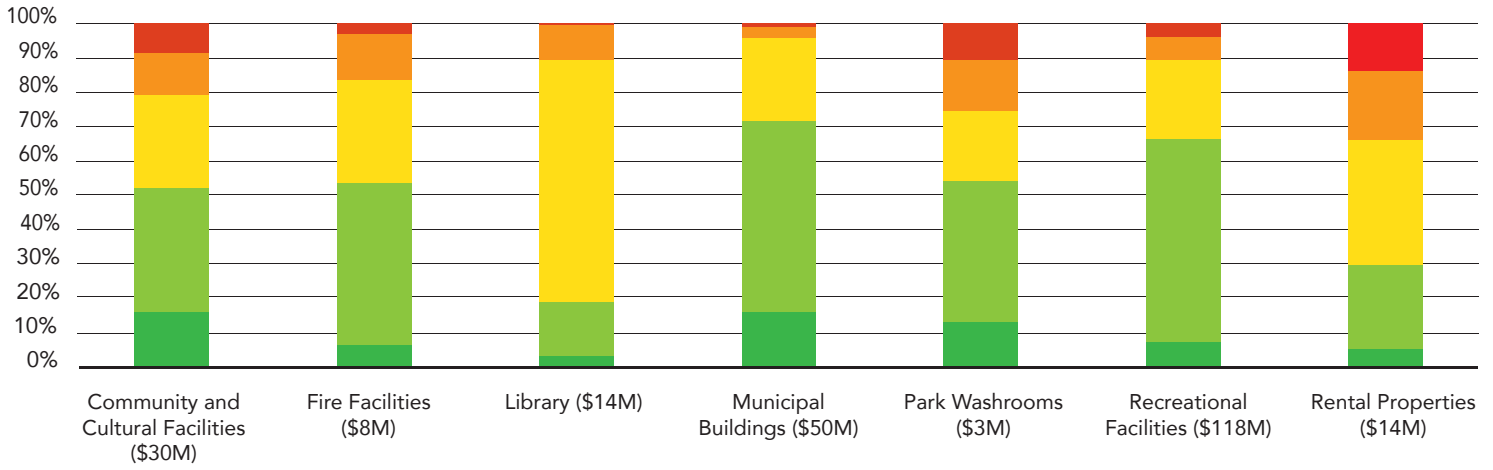
## WHAT CONDITION ARE OUR ASSETS IN?

■ Very Good   ■ Good   ■ Fair   ■ Poor   ■ Very Poor

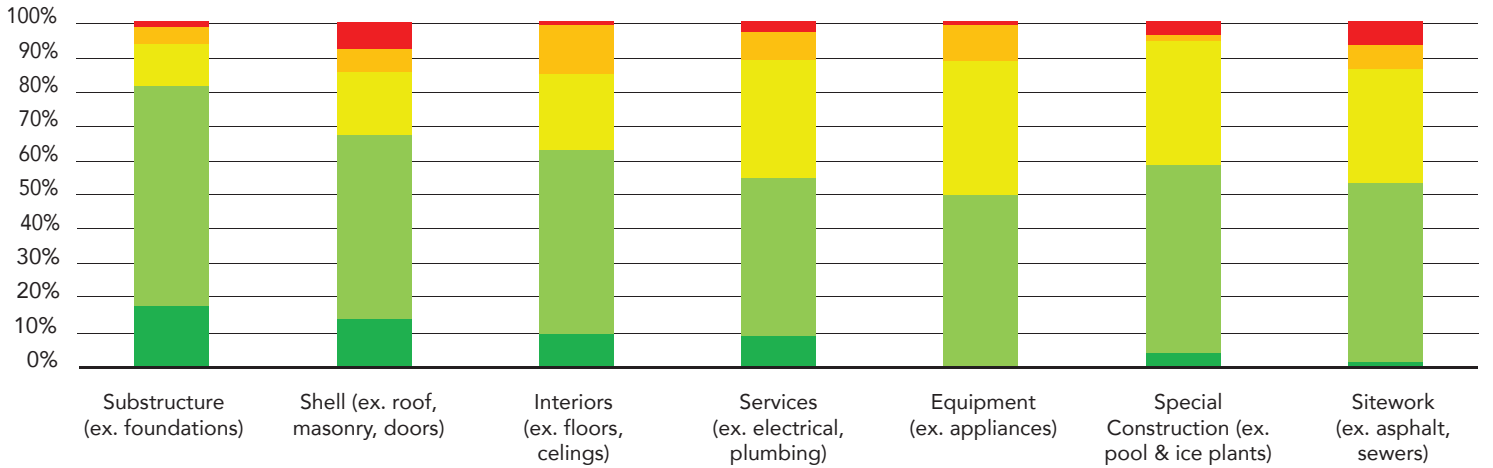
**Current Condition & Replacement Cost (Millions)**



## Condition Breakdown by Facility Service Type



## Condition Breakdown by Facility Asset Type

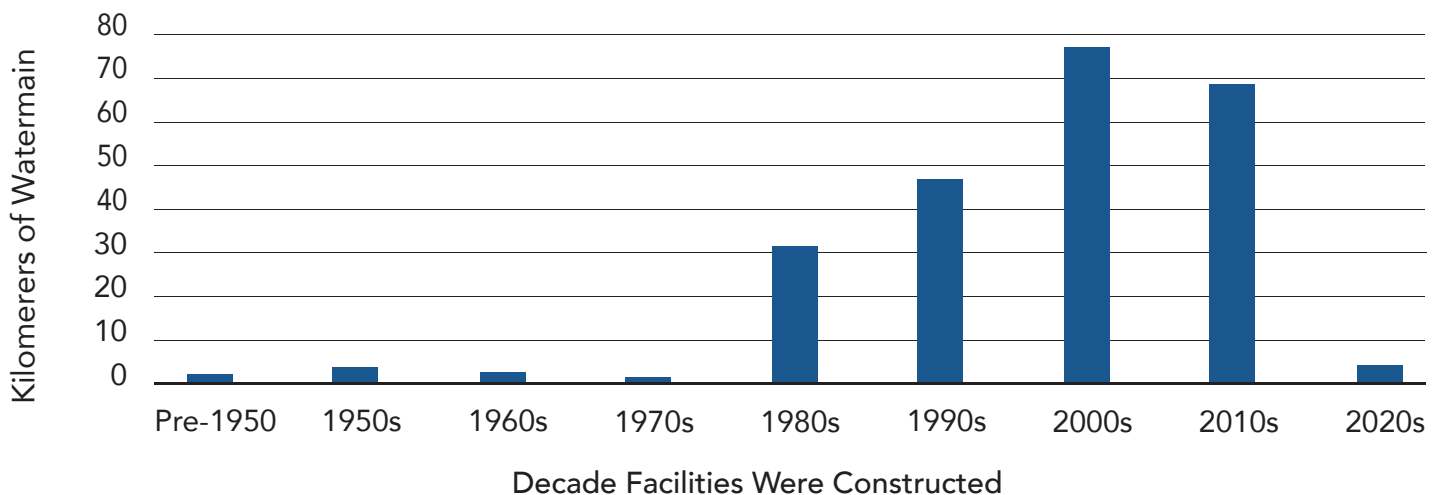


## WHAT ASSETS DO WE OWN?

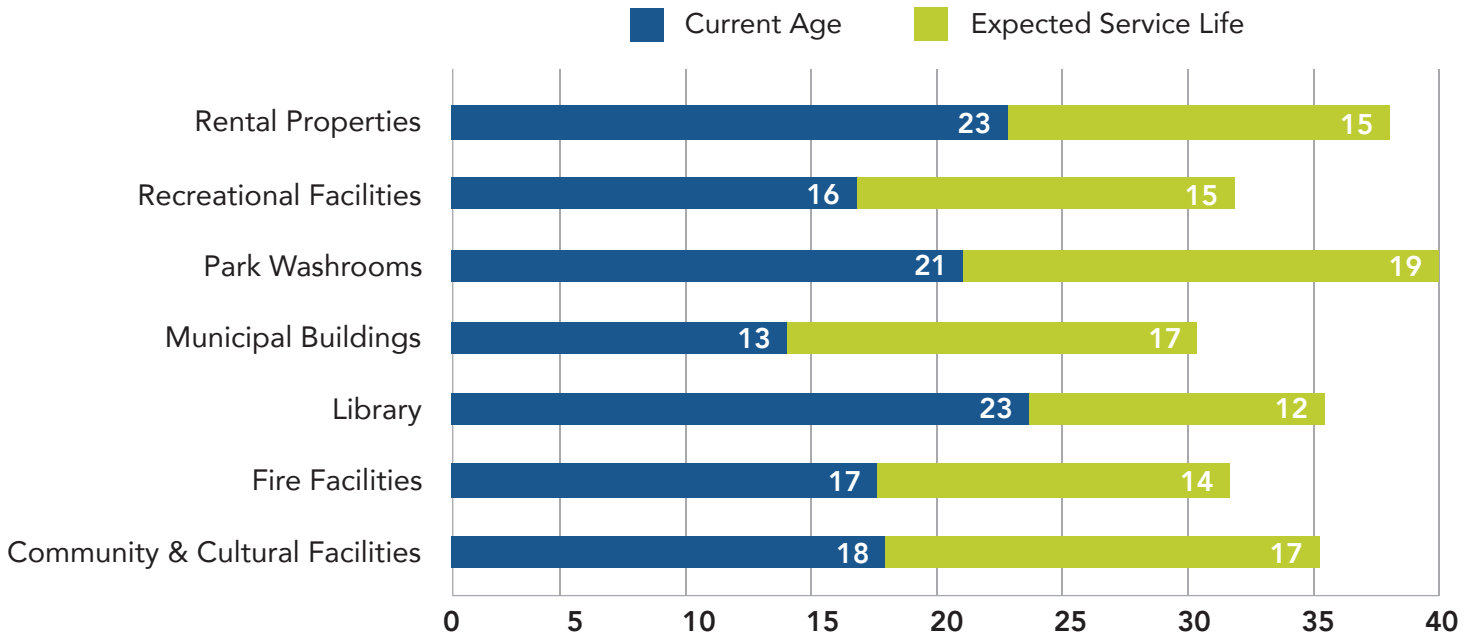
Facility Type	Number of Facilities
<b>Service: Administration and Operations</b>	
Municipal Buildings	4
Rental Properties	9
<b>Service: Recreation &amp; Community</b>	
Community and Cultural Facilities	5
Recreational Facilities	5
Library	1
Park Washrooms	11
<b>Service: Shared Fire Services</b>	
Fire Facilities	2
<b>TOTAL</b>	<b>37</b>

## HOW OLD ARE OUR ASSETS?

### Decades of Facilities Construction (Includes Renovations)

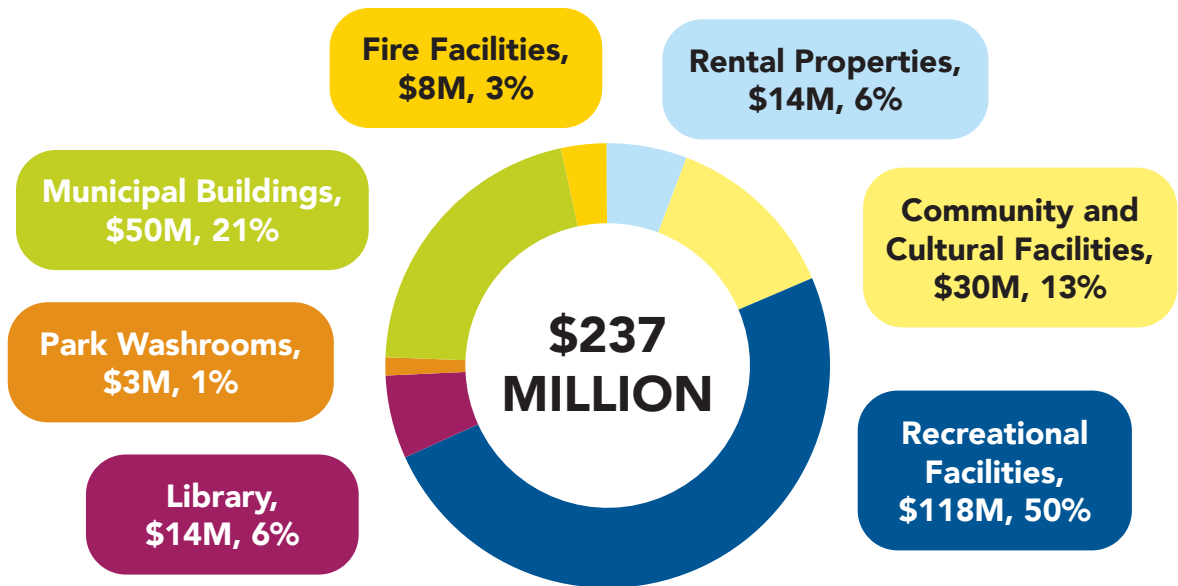


## Average Age and Expected Service Life of Facility Assets



## WHAT WOULD OUR ASSETS COST TO RECONSTRUCT IN 2023?

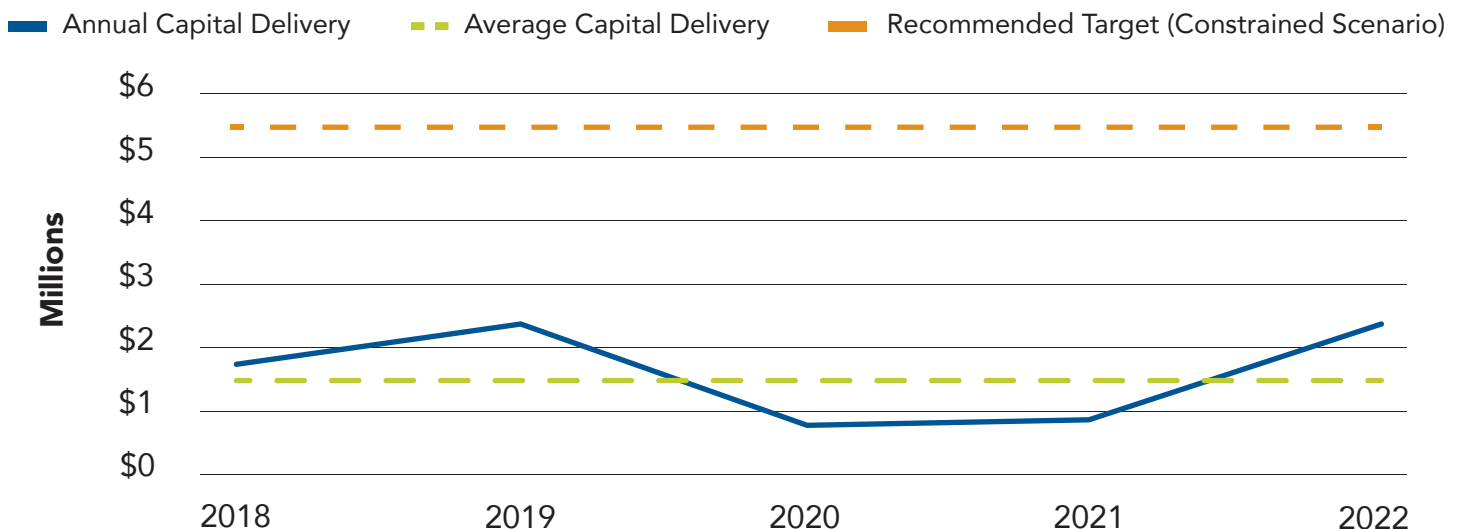
### Total Asset Replacement Cost of Facilities



## CURRENT CAPITAL SPENDING

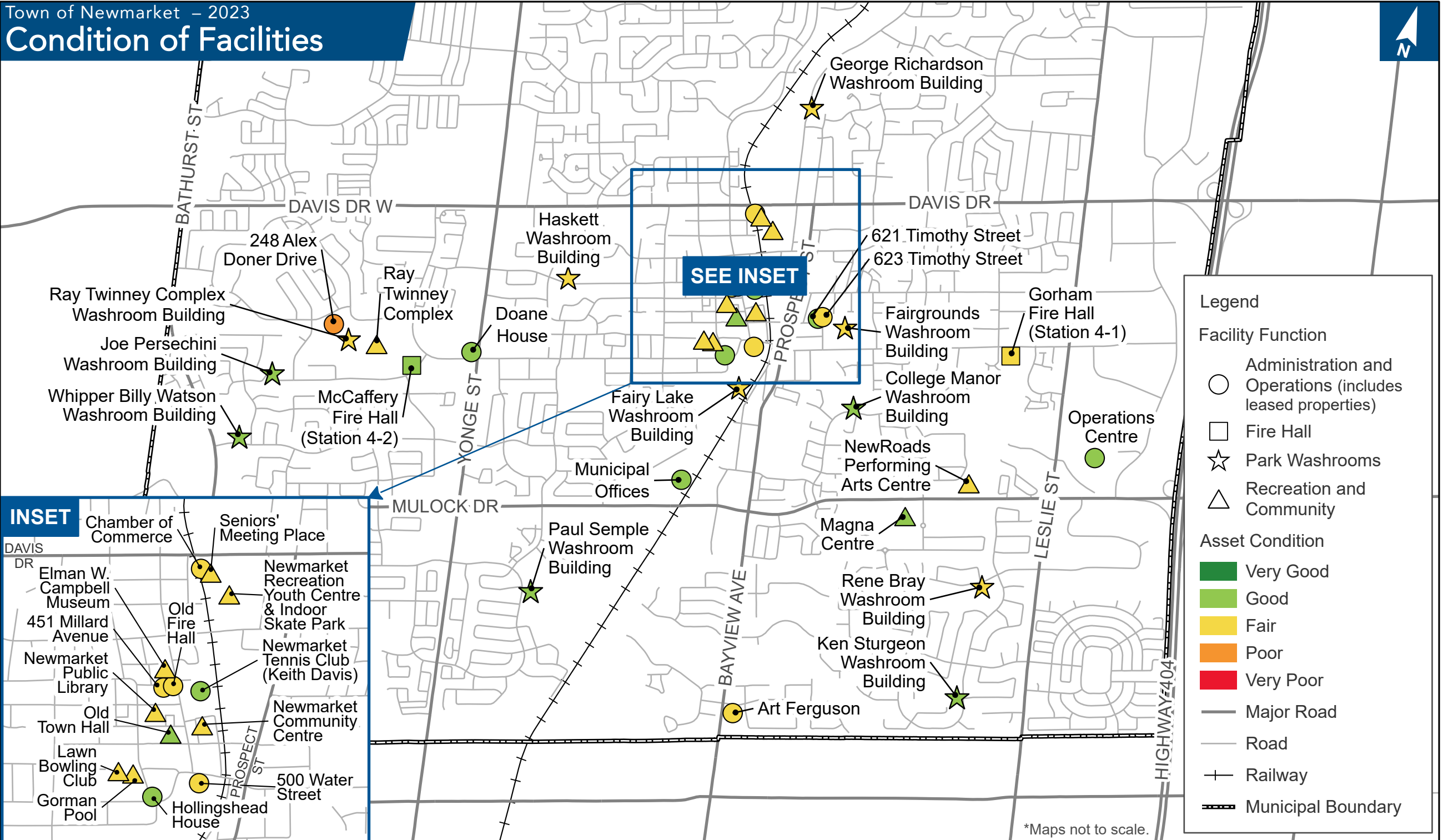


### Historical Capital Reinvestment in Facility Assets



Note the decrease in 2020-2022 capital delivery is attributed to the COVID-19 pandemic

# Town of Newmarket – 2023 Condition of Facilities



**Legend**

**Facility Function**

- Administration and Operations (includes leased properties)
- Fire Hall
- ☆ Park Washrooms
- △ Recreation and Community

**Asset Condition**

- Very Good
- Good
- Fair
- Poor
- Very Poor

— Major Road

— Road

+ Railway

--- Municipal Boundary

**INSET**

Chamber of Commerce

Seniors' Meeting Place

Elman W. Campbell Museum

451 Millard Avenue

Newmarket Public Library

Old Fire Hall

Newmarket Recreation Youth Centre & Indoor Skate Park

Newmarket Tennis Club (Keith Davis)

Newmarket Community Centre

Old Town Hall

Lawn Bowling Club

Gorman Pool

Hollingshead House

500 Water Street

\*Maps not to scale.



# CONDITION ASSESSMENT PLAN

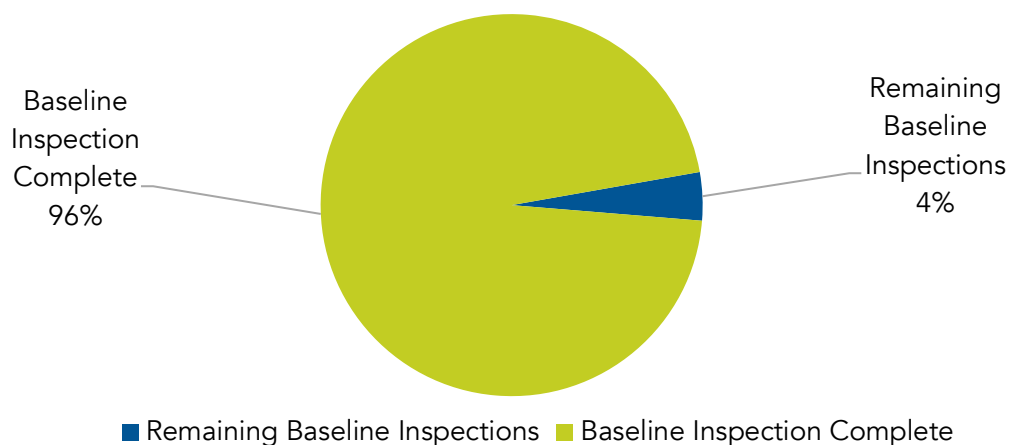
## Condition Assessment Plan for Facilities

Concluding Know Your Assets, the Town will use condition assessments to increase knowledge of the assets, monitor performance, and refine financial projections. The Town's approach to condition assessments is described within the Concepts and Frameworks presented in the 2021 Core Asset Management Plan.

## Strategy for Facilities

The Town has historically conducted staff investigations and periodic specialty inspections to address maintenance opportunities. In 2021 and 2022, the Town undertook a Town-wide building condition assessment to create a detailed inventory of its assets, a best practice that prepared the Town for the Facilities Asset Management Plan. Results are shown in Figure 6. With this detailed inventory established, the Town now needs to formalize its practices of data storage and analysis while planning for future condition monitoring activities.

**Summary Progress Towards Baseline Condition Data**



Remaining facilities (Mullock Estate and Fernbank House) are under renovation, updated

Figure 6 – Summary of Progress Towards Baseline Condition Data

### Summary of Next Steps and Target for Facilities

A summary of current achievements and future targets in the Town’s Condition Assessment Plan is outlined below in Table 3. Opportunities to complete the next milestone in the condition assessment plan are captured as recommendations to conclude the Know your Assets section.

Table 3 - Summary of Current Achievements and Future Targets for Facilities Condition Assessment Plan

Assessment Methods	Age-Based Assessment	Field Condition Assessment Baseline	Follow Up Condition Monitoring
Status	Complete	96% Complete	Next Steps
Methodology	Age, Service Life	Building Condition Assessments	
Responsible Party	Corporate Asset Management Office (CAMO)	Facility Services	Condition Assessment Coordination: Condition Assessment Program Manager
			Ongoing Data Management: Facility Services
Budget for Activities	n/a	Yes	Yes
Project Planning & Delivery Process	n/a	Yes	No
Current Progress	Complete	47 Completed Buildings	Processes for managing and updating 2022 data is under development.

Assessment Methods	Age-Based Assessment	Field Condition Assessment Baseline	Follow Up Condition Monitoring
Goal		Input Fernbank House and Mullock Estate in central database upon completed site improvements	Inspections completed every 3 to 5 years from the time of last assessment, subject to ongoing policy development.
Time to Achieve Goal		Within 1 year of completed site improvements	Next formal condition assessment in ~2026-2027

# KNOW YOUR ASSET RECOMENDATIONS

## Recommendations

1. Formalize the datasets collected to produce the Facilities Asset Management Plan by publishing them in a corporate database to set the foundation for data management, analysis, and applications.
2. Create a data management process for the datasets collected to produce the Facilities Asset Management Plan, including review cycles, methods of adding and retiring assets, updating attributes, and appending new condition assessment records.
3. Create a process for managing and updating the facilities asset hierarchy including the service classification of facilities as programming and utilization changes.
4. Establish tools for staff to access and analyze the datasets collected to produce the Facilities Asset Management Plan to enhance current duties.
5. Update the TCA process to itemize the assets reported in the Facilities Asset Management Plan, track asset acquisitions/disposals, and create a feedback cycle for asset unit costing.
6. Evaluate the potential for measuring and reporting aggregated Facility Condition Index values at the building level, expanding on the use of asset-level condition values, for the purpose of renewal decision making.
7. Define the approach to updating unit costs annually and inflating the value of facility asset unit costs, using RS-Means or an inflation index.
8. Create processes for future facility condition assessments including frequency, roles & responsibilities, staff input, role of contractors, and use of risk-based practices.
9. Create a process for managing and updating value appraisals of Town facilities.



## MANAGE SERVICE DELIVERY

**In This Section:** Asset management is not software, or a document. It is a way of doing business every day. Asset management requires processes to balance the services provided, the risks associated, and their cost. To make tradeoffs, visibility is needed into what is being done and why. Key takeaways will include:

- What services do we provide?
- What activities support services, and who does what?
- What are the risks of our services?

The expenses the Town incurs over the lifecycle of the asset are taken with the goal of ensuring residents and business continue to receive exceptional service from the Town. However, providing services like recreation or fire services through assets are not a cost-free or risk-free enterprise. Every day, owning assets presents risks, costs, and opportunities that need to be managed by people and processes that can make decisions. The intent of Manage Service Delivery is showing how asset management balances trade-offs to deliver value.

Manage Service Delivery is the second chapter of the individual asset management plans. This section shows levels of service, lifecycle activities, and risk. The approach to this section is provided in the 2021 Core Asset Management Plan's Concepts & Frameworks.

### **Measuring Levels of Service**

Levels of Service (LoS) are measured by the service outcomes, the performance of assets, and by activities that support the service. The Town is currently measuring three types of levels of service:

- Customer Levels of Service – This is the level of service the Town commits to providing the customers. These are often measured by how they are perceived by the customers and will require non-technical measures.
- Technical Level of Service – This is the established level of service the asset is expected to provide throughout its lifecycle and is specific and quantifiable for the asset.
- Regulatory Requirements (O. Reg 588/17) – The minimum levels of service measurements that the Town is required by the Province to measure and report on. The regulation does not require achieving a level of service, only the public reporting of the measurements.

Over time, the Town can strive to understand what aspects of a service are important to customers and align these with LoS decisions. Further performance measures will also need to be added as the Town develops a balanced LoS scorecard.

## **Legislative Requirements**

Legislative requirements describe the minimum activities or outcomes the Town must deliver through its service delivery as directed by laws, regulations, and directives from regulators like the Province. There are several constraints and requirements that steer how the Town delivers services. Compliance with regulations must always be ensured to avoid fines, legal action, or loss of funding opportunities. These requirements can be understood as the minimum Level of Service.

## **Lifecycle Activities at the Town**

Each asset management plan contains a breakdown of the lifecycle activities for each asset class in the service area. Lifecycle strategies are the planned actions and intended methods of maintenance management for an asset throughout its life. The purpose of lifecycle strategies is to maintain the asset in an appropriate state that will deliver the required level of service for least overall cost, while keeping risk within agreed boundaries.

## **Risk**

Each asset management plan presents the results of an asset-based risk assessment. The 2021 Core Asset Management Plan provides a roadmap to managing the two other types of risk – service level (operational) and strategic.

# LEVEL OF SERVICE ALIGNMENT

The levels of service measures are organized to create alignment between Town strategic objectives, a corporate goal for the service (e.g. recreation), and the subsequent service criteria and technical/customer measures. The benefit of this approach is ensuring the broader goal and outcomes of a service can be monitored and addressed through specific measures and actions. Metrics have been listed and aligned before presenting the results in the following section. The result of this process is shown as follows:







Figure 7 – Facilities Levels of Service Alignment with Newmarket Strategic Mission & Values



# PERFORMANCE AND RESULTS

Levels of service results are presented below using the metrics developed for the Facilities Asset Management Plan:

Legend			
Symbol	Meaning	Symbol	Meaning
	Trending up in the desired direction.		Trending down in an undesired direction.
	Trending down in the desired direction.		Trending up in an undesired direction.

## Customer Levels of Service

Measure	2023 Performance	2022 Performance	2021 Performance	Improvement Trend*
Total Number of Drop-In Program Participants	311,738	Historical data not available		Trends to be identified in next reporting year.
Total Number of Registered Program Participants	26,222			
Utilization of Ice Pads as a Percentage of Prime Time Hours	88%			
Booking of Available Multi-Use Spaces as a Percentage of Available Hours*	62% (before programming & passive use)			

\*Reporting for Old Town Hall, Seniors Meeting Place, and Newmarket Community Center & Lions Hall where space utilization is predominantly bookings (not programs). Does not include programs or passive uses.

\*Levels of service measures do not have endorsed targets. Trend observations are made on the basis of general recommendations related to the sustainability of assets, services, and finances.

## Technical Levels of Service

Measure	2022 Performance	2021 Performance	Improvement Trend*
Average Condition Rating (/100)			
Recreation Facility Assets	50 (Good/Fair)	Historical data not available	Trends to be identified in next reporting year.
Administration, Operations, and Leased Facility Assets	50 (Good/Fair)		
Fire Facility Assets (Town-owned only)	47 (Fair)		
Percentage of Assets in Very Poor Condition			
Recreation Facility Assets	4.8%	Historical data not available	Trends to be identified in next reporting year.
Administration, Operations, and Leased Facility Assets	3.7%		
Fire Facility Assets (Town-owned only)	3%		

## Regulatory Levels of Service

None prescribed by Ontario Regulation 588/17 – Asset Management Planning for Municipal Infrastructure.

# ILLUSTRATION OF CURRENT LEVELS OF SERVICE

As shown in Know Your Assets, the Town’s assets exist in a variety of condition states. The focus of the Facilities Asset Management Plan’s LoS is the condition of the assets forecasted in the Financial Strategy section. The benefit of this approach is that condition is a good proxy for many service criteria. Financial decisions about what asset conditions will be financed ultimately impacts LoS. To illustrate this impact, a collection of images has been collected depicting the differences in condition and LoS. See Table 4.

Condition	Images Illustrating Different Condition Levels of Assets	
Very Good		
Good		
Fair		





Condition	Images Illustrating Different Condition Levels of Assets	
Poor		
Very Poor		

Table 4 – Conditions and Levels of Service

# LEGISLATIVE REQUIREMENTS

Legislative requirements were gathered for Facilities Asset Management Plans to support future discussions about budget, service delivery, and minimum service level requirements.

## New Upcoming Legislative Requirements

The scan of legislative requirements during the production of the asset management plans did not identify major upcoming legislative requirements that would impact minimum levels of service requirements for the operations and maintenance of facility assets.

## Current Legislative Requirements

The Town currently operates within several regulatory requirements. As the regulatory environment changes, the minimum Level of Service the Town provides may also change. Current regulatory requirements are as follows (Table 5):

Table 5 - Current Regulatory Requirements

Legislation	Overview	Impact to Asset Management
AHRI (Air-Conditioning, Heating and Refrigeration Institute)	AHRI develops and maintains performance standards and certification programs for a wide range of HVACR equipment, such as air conditioners, furnaces, heat pumps, boilers, and commercial refrigeration systems. These standards help ensure product performance, safety, and energy efficiency.	AHRI's certification programs are essential for both manufacturers and consumers. Manufacturers use these programs to verify their equipment's performance, while consumers rely on them to ensure that the equipment they purchase meets industry standards.

Legislation	Overview	Impact to Asset Management
AODA (Accessibility for Ontarians with Disabilities Act)	The purpose of the AODA is to develop, implement, and enforce standards for accessibility related to goods, services, facilities, employment, accommodation, and buildings. The aim is to make Ontario more accessible and inclusive for people with disabilities.	Compliance during construction of new buildings, additions, and renovations through accessible design features.
Ontario Fire Code - O. Reg 213/07	The Ontario Fire Code is a regulation under the Ontario's Fire Protection and Prevention Act. It establishes minimum requirements for fire safety within and around existing buildings and facilities.	Requirements to comply with the Fire Code. Qualification requirements for persons performing work on fire protection systems. Testing and inspection requirements of fire protection systems. Administrative and record keeping requirements.

Legislation	Overview	Impact to Asset Management
<p>NFPA (National Fire Protection Association)</p>	<p>NFPA develops and publishes a wide range of codes and standards related to fire protection and safety. These codes and standards cover various aspects of fire safety, including the design and installation of fire protection systems, the safe operation of equipment, and the management of fire risk in different settings.</p>	<p>Building and Fire Protection Design: NFPA codes provide guidelines for architects, engineers, and building designers to ensure that structures are designed with appropriate fire protection features. This includes the installation of fire alarms, sprinkler systems, fire-resistant materials, and safe egress routes.</p>
<p>Ontario Electrical Code</p>	<p>The Ontario Electrical Code (OEC) is a set of regulations and standards that govern electrical installations in the province of Ontario, Canada. It is an essential document that ensures the safe design, installation, and maintenance of electrical systems within buildings and structures.</p>	<p>The code addresses various aspects of electrical installations, including electrical wiring, outlets, switches, circuits, grounding, bonding, lighting, panels, distribution systems and the use of electrical devices.</p> <p>Inspections are carried out by the Electrical Safety Authority to verify compliance.</p>



Legislation	Overview	Impact to Asset Management
Elevating Devices - O. Reg 209/01	Regulation 209/01 falls under TSSA and applies to all elevating devices. It establishes minimum standards for the design, construction, installation erection, maintenance, alteration, use and service.	Compliance during design, construction, installation, maintenance, alteration, use and service of Town-owned elevating devices.
Safety Code for Elevators and Escalators - CSA B44-2016	The CSA B44 Code establishes minimum standards for the design, installation, and maintenance of elevators, dumbwaiters, escalators, moving walks, and material lifts and its minimum requirements. The TSSA regulates the adoption of the CSA B44 Code.	Compliance during design, construction, installation, maintenance, alteration, use and service of Town-owned elevating devices.

Legislation	Overview	Impact to Asset Management
TSSA (Technical Standards and Safety Authority)	TSSA is one of Ontario's public safety regulators mandated to enforce provincial safety regulations. TSSA regulates the safety of amusement devices, boilers and pressure vessels, elevating devices, fuels, and operating engineers. The TSSA is responsible for registering, licensing and inspecting the manufacturing, installation, maintenance and operation of the devices and companies it regulates	Requirements to comply with TSSA. Qualification requirements for persons performing work (testing, inspecting, repairing, replacing, altering) on the devices regulated by TSSA. Testing and inspection requirements of the devices. Administrative and record keeping requirements.
ASHRAE (American Society of Heating, Refrigeration, and Air-Conditioning Engineers)	The American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) is a professional organization that focuses on advancing the heating, ventilation, air conditioning, and refrigeration (HVAC&R) industry. It has a significant impact on the built environment, energy efficiency, and indoor air quality.	ASHRAE has a significant impact on the design, construction, and operation of buildings, ensuring that they provide a comfortable and healthy indoor environment while minimizing energy consumption and environmental impact. It provides guidelines for temperature, humidity, air speed, and other factors.

Legislation	Overview	Impact to Asset Management
<p>AHRI (Air-Conditioning, Heating and Refrigeration Institute)</p>	<p>AHRI develops and maintains performance standards and certification programs for a wide range of HVACR equipment, such as air conditioners, furnaces, heat pumps, boilers, and commercial refrigeration systems. These standards help ensure product performance, safety, and energy efficiency.</p>	<p>AHRI's certification programs are essential for both manufacturers and consumers. Manufacturers use these programs to verify their equipment's performance, while consumers rely on them to ensure that the equipment they purchase meets industry standards.</p>
<p>Public Health – Pools &amp; Spas</p>	<p>Public health inspections are mandated by the Health Protection and Promotion Act and are carried out to ensure compliance with the Ontario Public Pools Regulation (R.R.O. 1990, Reg. 565). Water-related illnesses can be passed through contaminated recreational water and poor safety precautions can cause serious injury.</p>	<p>Operation of Town-owned pools and related equipment are guided by best practices and public health regulations.</p>

Legislation	Overview	Impact to Asset Management
Public Health – Air Quality	<p>Public health air quality requirements for buildings are designed to ensure that the air inside is safe and does not pose health risks to occupants. These requirements cover a range of factors that can affect indoor air quality. Monitoring and controlling carbon dioxide levels are important indicators of ventilation effectiveness.</p>	<p>Compliance with these public health air quality requirements for buildings is essential for creating healthy indoor environments, preventing health issues related to poor air quality, and promoting overall well-being among building occupants.</p>
Public Health – Lighting Levels	<p>Public health established the lighting levels to ensure that indoor environments have adequate illumination. Public health standards typically define minimum illuminance levels for different types of spaces.</p>	<p>Facility managers refer to established standards and guidelines to ensure that lighting systems meet the necessary criteria for different types of spaces within a building.</p>

Legislation	Overview	Impact to Asset Management
MOECP (Ministry of Environment, Conservation and Parks) – Noise	<p>The MOECP in Ontario is responsible for environmental regulations, including those related to noise pollution.</p> <p>Community noise guidelines are typically designed to manage and control noise levels to protect public health and the well-being of residents.</p>	<p>The guidelines specify acceptable noise levels for different land uses, such as residential, commercial, and industrial areas. These limits may vary based on the time of day. The MOECP enforces noise regulations, including monitoring and investigating complaints related to excessive noise.</p>
MOECP – Air Quality	<p>The MOECP works to improve air quality through legislation, targeted programs, and partnership agreements with other neighbouring airsheds.</p>	<p>Regulations may provide guidance on retrofitting existing equipment to use alternative, ozone-friendly refrigerants or replacing R22-based systems with newer, environmentally friendly options.</p>

Legislation	Overview	Impact to Asset Management
<p>Conservation Demand Management Plan and Energy Reporting - O Reg 507/18</p>	<p>Ontario Regulation 507/18 requires public agencies, including municipalities, to report on their energy consumption and greenhouse gas (GHG) emissions annually beginning in 2013, to develop and implement energy Conservation and Demand Management (CDM) Plans starting in 2014, and to update these plans every five years.</p>	<p>Annual reporting of conservation and demand management data for facilities.</p> <p>Production of conservation and demand management plans every 5 years.</p>
<p>Commercial Tenancies Act</p>	<p>The Act outlines tenants' and landlords' rights, responsibilities, and obligations, covering essential aspects such as rent, lease terms, security deposits, maintenance, repairs, and dispute resolution.</p>	<p>Maintain tenant relations and carry out landlord responsibilities for Town-owned leased facilities, including maintenance agreements for leased facilities.</p>

# LIFECYCLE ACTIVITIES

## **Lifecycle Activities - Results**

This section outlines the current business practices employed by the Town to manage assets and services throughout their lifecycle. Lifecycle activities are being developed concurrently with the Asset Management Plan through the 2023/2024 Informed Service Delivery Project – when complete, the project may provide greater detail and insight into the Town’s lifecycle activities. Using the results of Phase 1 for Informed Service Delivery, the Town’s lifecycle activities for Facilities are summarized in Table 6.

Table 6 - Lifecycle Activities and Improvement Opportunities for Facilities

Lifecycle Phase	Lifecycle Activity	Responsible Party
Acquire and Commission	Visioning, Planning, Design, Construction, and Commissioning	Engineering Services, Facilities Services, & Supporting Departments (Recreation, etc.)
Operations, Maintenance, and Inspections	Building Condition Assessments	Facilities Services
	Elevators & Conveying Systems Operations & Maintenance	
	Plumbing Operations & Maintenance	
	HVAC Operations & Maintenance	
	Fire Protection Inspection, Operations, Maintenance, & Alarm Response	
	Electrical Maintenance	
	Safety and Security Systems Operations, Maintenance, & Alarm Response	
	Maintain Interior & Exterior Features	
	Pest Control	
	Winter Maintenance	
	Janitorial Services	
	Arena Winter Operations & Ice Equipment Maintenance	
	Arena Summer Operations	
	Pool Operations & Equipment Maintenance	
	Splash Pad Operations & Maintenance	
Renewal and Rehabilitation	Foundation Repairs	
	Water Proofing	



Lifecycle Phase	Lifecycle Activity	Responsible Party
	Roofing	
	Exterior Wall Repairs	
	Interior Construction & Finishes	
Replacement	Capital Project Design, Construction , & Project Management	

# RISK

To conclude Manage Service Delivery, the approach and progress in applying risk based practices through asset management are provided. The Town has developed and is implementing a roadmap for risk-based practices. The 3 Steps reflect the types of risks – corporate, service level, and asset level, and follows the international standard for risk management (ISO 31000). See Table 7.

Table 7 - 3 Step Development Plan for Risk Management Practices

Recommendation Phase	Improvement Measures
<p>Step 1 – Near Term</p> <p>Goal of this Phase: Ensure existing risk components are consistent and broadly applied.</p>	<p>1.1 Review and update budget decision package form and process with risk and service-based considerations. <b>COMPLETE</b></p> <p>1.2 Establish a criticality rating methodology that is applicable across all asset classes and apply it to all core assets. <b>COMPLETE</b></p> <p>1.3 Assign roles and responsibilities, including accountability, for risk management in the Town – Establish Council and leadership’s accountability for ensuring risk is considered and incorporated into all levels of decision-making processes within the Town over time.</p>
<p>Step 2 – Mid Term</p> <p>Goal of this Phase: Formalize a Risk Management Framework that is directly</p>	<p>2.1 Development of a risk management policy that is endorsed by Council, and a corresponding strategy for implementing the policy across the Town.</p>

Recommendation Phase	Improvement Measures
<p>integrated within all relevant Town processes. It is important that the framework is supported by senior leadership to ensure it adds value and effectively impacts decision-making.</p>	<p>2.2 Develop a risk management framework to assess asset criticality, asset risk, service risks, and risks to achieving corporate (strategic) goals.</p> <p>2.3 Establish reporting processes to keep the Town’s management teams and Council aware of critical risks, and their associated mitigation actions.</p> <p>2.4 Develop service level risk registers for each area (parks, facilities, etc.) that can support a corporate risk register that may be monitored by senior leadership and used to support the management of service delivery.</p>
<p>Step 3 – Long Term</p> <p>Goal of this Phase: Leverage risk to be a core capability for the Town.</p>	<p>3.1 Establish a regular review process for identified risks as well as the Town’s risk framework.</p> <p>3.2 Employ risk as an optimization objective for funding allocation and other strategic decision-making. Once risk is strongly embedded within the Town’s processes, the Town may wish to employ software and other useful tools to evaluate risk and funding allocations to minimize residual risk accepted by the Town.</p>

## Asset Level Risk

As progress towards completing Step 1 of the 3 Step Development Plan for risk management, asset-level risk has been assessed for the Town’s Facilities using a risk framework. The results of this process are shown as follows (Figure 8):

Risk Inputs	Likelihood of Failure (LoF)	Consequence of Failure (CoF)
Facilities Risk Factors Assessed	<ul style="list-style-type: none"> <li>Age &amp; Expected Service Life</li> <li>Reports &amp; observations by operational staff.</li> <li>Condition as observed by contracted facility condition assessors.</li> </ul>	<ul style="list-style-type: none"> <li>Health &amp; Safety</li> <li>Impacts to Building Systems</li> <li>Interruptions to programming and operations</li> <li>Aesthetic impacts</li> <li>Nuisance impacts</li> </ul>



Facilities Risk (Consequence X Likelihood of Failure) Profile

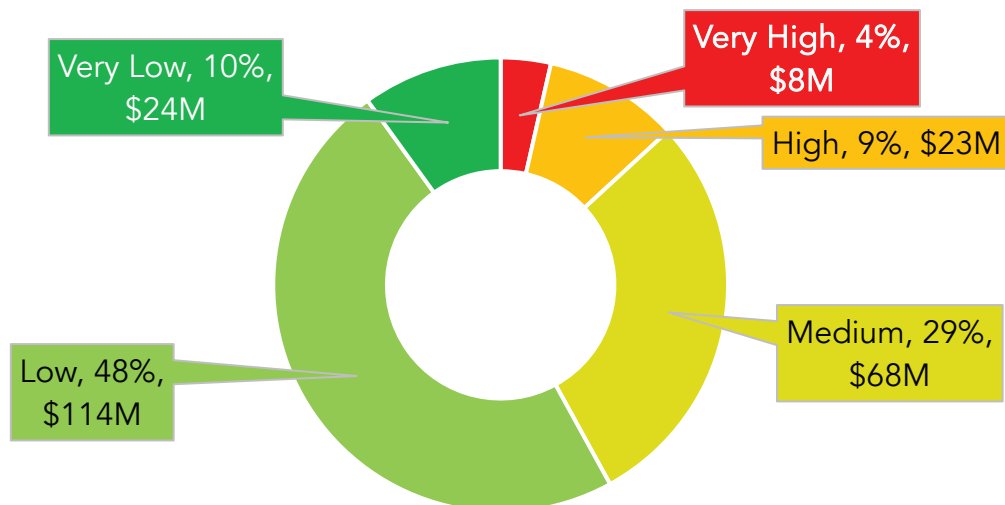


Figure 8 - Facilities Asset Risk Profile



## FUTURE READY

**In This Section:** What was once a small but thriving Town, today Newmarket is a desirable and affordable community. While the future is bright, trends like increasing service expectations, urbanization, and climate change are challenging the status quo. The future will change how the Town manages assets. Key takeaways will include:

- Impacts of growth on assets and budgets.
- Vulnerabilities and adaption and mitigation approaches to climate change.
- Aligning master plans with the management of existing assets.

Ongoing and future trends will impact the way the Town delivers its services and manages its assets. Proactively identifying these trends and pressures allows the Town to account for risk and take advantage of opportunities. Using planning to maintain a future outlook allows for a balance between maintaining present services while managing growth.

Key takeaways from the Future Ready section will include Growth, Climate Change and Future Ready Changes.

1. **Growth** – What increases in asset-related services are expected? To answer this question, an outlook of growth in the asset portfolio is forecasted, along with a calculation of operating impacts provided with background on growth drivers.
2. **Climate Change** – How will climate change impact assets? As described in the 2021 Core Asset Management Plan, the results of a flood risk assessment are provided. Flooding is the first of several types of climate considerations to be applied in the future.
3. **Future Ready Changes** – How will the way we deliver services evolve with changes in society and technology. A preliminary view of potential future trends that are believed to impact service delivery for the assets is provided to facilitate discussion about managing future risks and opportunities.

Trends in technology, society, climate and resources can shorten the life of assets and increase total cost of asset ownership. Considering these trends in the individual asset management plans ensures the Town has adequate budget, human resources and skills, and industry networks to prepare for future changes.

# GROWTH FORECAST

## Growth Planning in Newmarket & Populaton

Newmarket is poised for growth. According to provincial and regional plans, the Town of Newmarket is expected to grow from its current population of approximately 89,800 residents to a future population of 118,500 by 2051. At the same time, the employment base is projected to grow from 45,000 to 58,100 jobs. To support this population, more assets and new types of assets may be required to provide asset-related services. The asset management plans reflect planning efforts to coordinate assets and population growth.

The Town of Newmarket Official Plan is the Town's land use planning and policy document that guides the physical development and redevelopment of the Town, having regard for social, economic, and environmental matters. Asset management plans receive information from the Official Plan process along with other planning documents to ensure alignment.

## Identified Growth in Facility Assets



1. Urban expansion: The Town is undergoing urban expansion with some limited instances of facilities growth. Projected growth in facilities driven by expansion was identified by the Shining Hills agreement for provision of a clubhouse. The clubhouse is developer funded but will have ensuing operating impacts. Other growth projects and opportunities will continue to be monitored (recommendations provided). This includes the 10 Year Recreation Capital Plan, which was under development at the time of writing and will be incorporated into future AMP updates.



2. Urban intensification: Intensification projects are guided by documents like the 2019 Development Charges Study and the 2022 Community Benefits Charge Strategy. Projects identified in both documents were included in the AMP based on expected timelines of commissioning and the scope of facilities (growth in CYFS and Library were excluded for future asset management plans). From both documents, the Mulock

Estate is an ongoing Town growth project that will expand the existing facilities service but also add operating costs. This major project is a key focus of the current growth forecast. Note, heightened demand for existing facilities and increased programming also drives operating impacts but this was not part of the scope of the asset management plan (recommendations provided).



3. Changing standards: No changes to the facilities portfolio have been identified because of changing design standards or regulations. However, potential changes due to technology and resource philosophies have been identified in Table (Future Trends). Prevailing standards like the Accessibility for Ontarians with Disabilities Act (AODA) will also guide future changes to facilities with likely financial impacts (recommendations provided).



4. Climate change: No specific changes to the facilities portfolio to adapt to the effects of climate change have been identified yet; however, a high-level flood resilience assessment of Town-owned infrastructure has been undertaken. Recommended measures to advancing the study of risks and potential upgrades are provided. Once complete and asset improvements are identified, the asset management plan should be updated to incorporate these plans.

The following (Table 8) summarizes these asset increases in the asset portfolio, measured in their expected capital replacement value. The values and outlay are guided by the Development Charges Background Study and the Community Benefit Charge Study.

Table 8 - Facilities Portfolio Increase to 2032

Growth Category	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Growth Expansion & Intensification	\$0	\$2.83M	\$2.80M	\$4.7M	Future years to be developed through 10-Year Recreation Capital Plan in 2024					



# FINANCIAL IMPACTS OF GROWTH

When new assets are commissioned, a lifecycle of service delivery and cost is started. From the time an asset enters service, it will provide value but also incur costs. Assets must be operated, maintained, and eventually replaced. Therefore, the acquisition of a new asset also means the anticipation of future costs. Anticipating these costs from the outset allows for timely financial planning and a recognition of the total cost of ownership. To reflect this, the Financial Impact of Growth depicts two types of cost:

## 1. Annual Operating Impact

The annual operating impact of maintaining assets at an equivalent to the current level of service provided. Operations and maintenance (O&M) include activities like inspections, cleaning, or energy and fuel consumption. This is approximated by extrapolating current service levels proportionally to the amount of growth. It is expressed in operating dollars per year. This information should guide the budgeting of service delivery for new assets. It does not address programming.

Operating impacts of growth are depicted in Figure 7. By 2026, operations and maintenance costs are expected to rise by ~\$375,000 / year if equivalent service levels to present were applied to new growth assets. This is depicted in Figure 9. There may be reasons equivalent service levels are not a true proxy, as some new assets warrant different types of services.

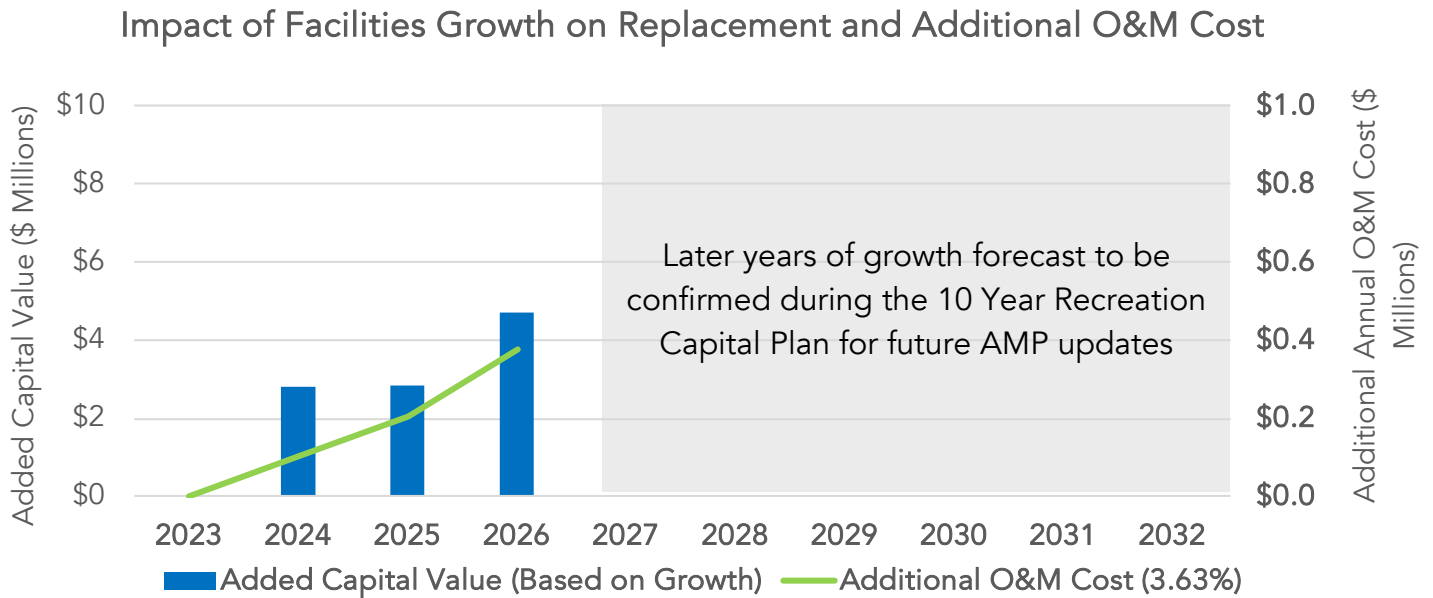


Figure 9 – Impact of Facilities Growth on Replacement Cost and Additional Annual O&M Cost

## 2. Reserve Fund Contribution for Sustainable Replacements

The annual contribution to a reserve that would be required to fund an asset replacement at the end of life, if cost were spread evenly over the useful life of the asset. Beginning these contributions now ensures assets are sustainable and a backlog of future replacements does not accumulate. This is the objective of the Asset Replacement Fund, described further in Financial Strategy. This is calculated using the average expected useful life of the assets, divided by their total replacement cost. It does not address other capital costs like upgrades.

Reserve contribution levels for sustainable growth are depicted in Figure 10. To maintain the amount of growth with future capital replacements, an annual asset replacement fund contribution of ~ \$322,000 would be needed.

### Reserve Contribution Requirements for Sustainable Asset Growth

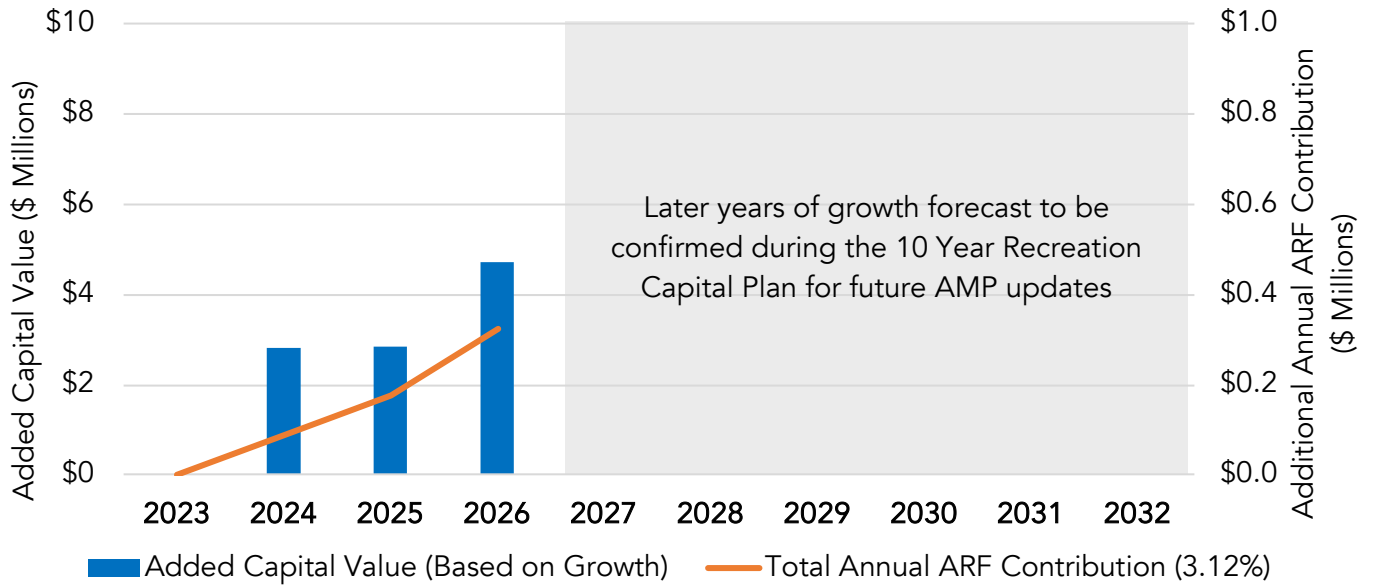


Figure 10 – Impact of Facilities Growth on Reserve Contributions for Future Replacements

Accounting for both operational and maintenance costs and reserve contribution requirements, the total annual cost of growth is summarized in Table 9. By 2026, the expected annual cost for the asset lifecycle is ~\$697,000.

Table 9 – Summary of Annual Operating Cost and Reserve Contributions for Facilities Growth

Financial Impact by Year	Growth in Assets (Replacement Value)	New Annual Operations and Maintenance Costs	New Reserve Contribution Target	Total Annual Financial Impact of Growth
2023	\$0	\$0	\$0	\$0
2024	\$2,800,000	\$101,754	\$87,500	\$189,254
2025	\$2,826,000	\$102,698	\$88,313	\$380,264
2026	\$4,700,000	\$170,801	\$146,875	\$697,940
2027 - 2032	Later years of growth forecast to be confirmed during the 10 Year Recreation Capital Plan for future AMP updates			

## Historical Context of Growth

To provide context to the future growth forecast, asset management plans also provide a review of historical growth to provide a relative baseline. Starting during the 2021 Core Asset Management Plan, growth was quantified by asset back to 2016. This practice was repeated for facilities. Facilities saw major growth prior to 2016 with new facilities like the Old Town Hall (2013) and the Community Center (2011) being commissioned. Growth in facilities between 2016 and 2022 included 621 Timothy Street (“NewMakelt”) and the Joe Persichini Park washroom.

Figure 11 shows that the asset base is expected to continue growing through projects like the Mullock Estate, which means the Town will need to continue to increase investments in O&M costs and reserve contributions.

**Facilities Historical Assumed Assets (2016-2022) and Projected Growth (2023-2032)**

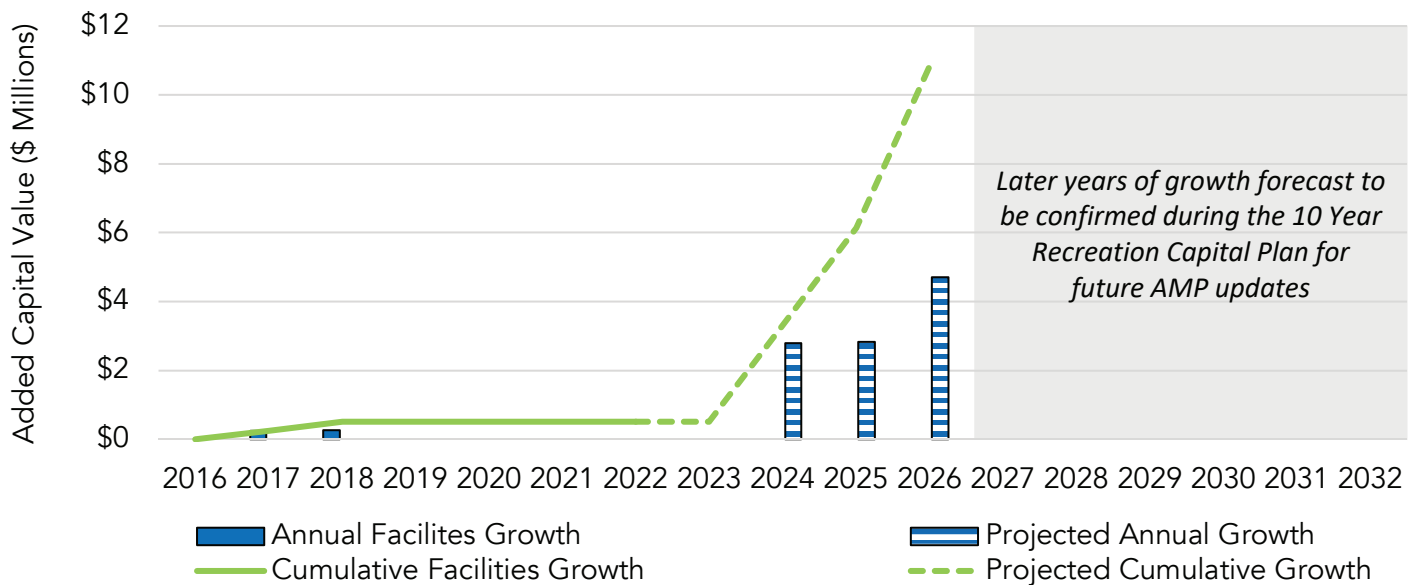


Figure 11 – Facilities Historical Assumed Assets and Projected Growth to 2032

# CLIMATE CHANGE ASSESSMENT

As part of the Town's efforts to prepare for the impacts of climate change, the Town engaged the Ontario Climate Consortium (OCC) to conduct a corporate-wide resilience assessment of Town-owned infrastructure. Flood risk has been selected as the focus of this assessment to leverage existing flooding-related data and develop a prototype of an approach that can be replicated in the future for other climate-related risks.

An indicator-based tool was developed to determine the current flood risk level for each asset based on the following components of flood risk:

1. Hazard was assessed based on analysis of geospatial factors contributing to the potential occurrence of riverine flooding, overland flooding, and groundwater flooding.
2. Vulnerability considered the current operational, social, economic, and environmental characteristics of each asset that can directly or indirectly increase the asset's propensity of being adversely affected by flooding.

## Results of the Flood Risk Assessment

One facility received a Very High flood risk rating and a second facility received a High flood risk rating. Meanwhile, 11 facilities received a Medium rating and 19 received a Low rating. To produce the overall flood risk rating, each facility was assessed individually for its potential hazard (likelihood or propensity) and vulnerability (service criticality). These results varied by facility as shown in Figure 12.

### Facilities Flood Risk Assessment Results (2019)

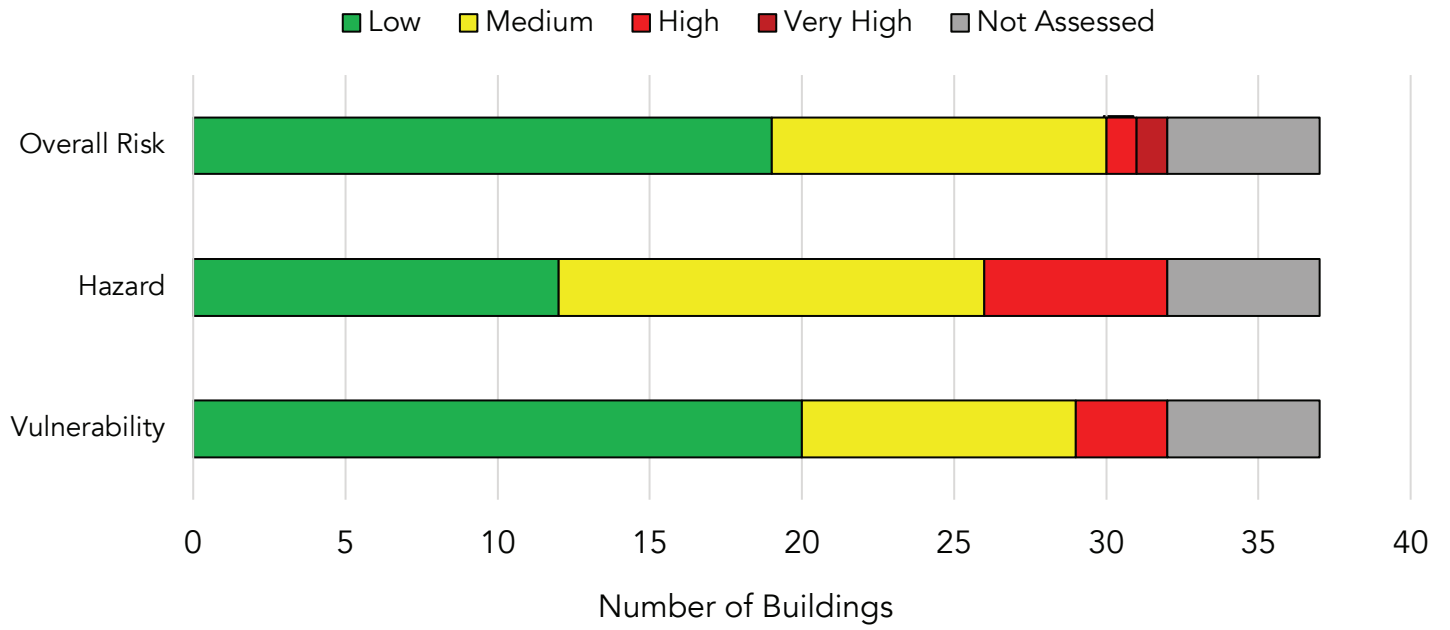




Figure 12 - Facilities Flood Risk Assessment Results (2019)

# FUTURE TRENDS AND ASSET IMPACTS


The Town’s asset management policy recognizes that our environment, society, resources, and technology are changing – managing service delivery is not just an exercise in maintaining the status quo, but responding and adapting to these changes. These changes can create pressures to expand or evolve services through growth. Trends are continually monitored by the Town, but not all trends have been formalized yet in the adoption of existing plans. The results of trend forecasting and the assessment of future impacts is provided in Table 10.

Table 10 - Implications of Future Trends on Facilities

Trend Category	Trend	Implications for the management of our assets (to maintain service levels)	In Existing Plans
Society 	Population growth & demand	Demand for facility services increases, drawing on capacity for facility recreation & bookings.	X
	Aging population	Increased need for facilities and programming catered to seniors (e.g. Seniors Center).	X
	Equitable & Inclusive services	Lens of inclusivity prompts facility design features and service delivery methods.	Y
	Changing recreational delivery models by programming organizing bodies	Future changes by recreational associations and organizers may lead to operational modifications and changes/enhancements to service delivery.	X
	Hybrid work arrangements of Town staff	Changing needs of office space, meeting rooms, collaboration spaces, technologies.	Y
	Hybrid work arrangements, public at large	Changing patterns, hours of preferred service, etc. for those accessing Town facilities.	Y

Trend Category	Trend	Implications for the management of our assets (to maintain service levels)	In Existing Plans
	Growing workforce, space planning & management	Capacity of administrative facilities as configured to accommodate size of future workforce.	Y
	Public health & COVID-19	Need for Town facilities providing community support and resilience measures during potential future public health events.	Y
	AODA Compliance	Modifications and future upgrades to facility assets, either proactively or as repairs become due.	X
	Potential for public-private amenity sharing (e.g. condominiums)	New delivery models lead to changing the mix of services Town facilities need to provide.	X
Technology 	Use of technology to support facility operations	Efficiency gained from building automation systems, building information models. New tools, training, and change management will be needed to realize benefits.	X
	Cyber security	Potential increased exposure of future digital systems to potential attacks, and ensuing measures needed to remain secure.	Y
Climate Change Mitigation & Adaption	Hotter weather	More potential use of facilities as cooling centers, more potential heat-related stress to exterior building elements.	X
	Higher rainfall intensity	Facilities may potentially need to withstand and drain more water to prevent flooding.	X



Trend Category	Trend	Implications for the management of our assets (to maintain service levels)	In Existing Plans
	Extreme weather response	Facilities are prepared for potential emergencies with power generation and other measures to provide shelter in the event of extreme weather.	X
	Clean energy	Facilities potentially need to provide carbon-free sources of energy like solar. Facilities may need to comply with future net-zero targets.	X
	Sustainable building designs	Future facilities may need to be designed and built with more sustainable features that promote measures like energy efficiency.	X

# RECOMMENDATIONS

1. Develop a Facilities Master Plan that reflects future growth requirements, and establish service level guidelines and design principles that can inform coordinated planning of facility renewals and modernizations.
2. Expanding on the growth assessment completed in the AMP, assess other historical and operational growth patterns that have impacted facility resource levels like the growing programming of existing facilities.
3. Integrate 10-year plans for recreation & culture with the facilities asset management plan so programming and expansion can be aligned.
4. Assess the impacts of climate change adaption and mitigation to facilities to plan for measures that develop resilience & emergency preparedness, and lower the Town's carbon emissions.
5. Create a data-driven approach to AODA compliance by integrating accessibility assessments with the new facilities asset database so prospective compliance measures may be tracked against assets and costs.
6. Develop service delivery plans for future facilities to refine operating cost estimates and to support change management.



# FINANCIAL STRATEGY

The Financial Strategy section takes all the data and analysis gathered in previous sections of the AMP to help paint the picture of Newmarket's financial outlook for its assets with scenarios that can support financial decision making.

The Town has made an important investment in infrastructure, and attention must now be paid to securing this investment. The sustainability of Town infrastructure depends on effective management and ensuring the optimal use of limited funds. The Town of Newmarket has developed a Financial Strategy to evaluate the relationship between current investment levels, service outcomes and risk of service failures. The financing strategy strengthens the budget process by reinforcing a long-term perspective of service levels. When developing the financial forecast, the Town was looking to answer three key questions:

1. What would it cost to maintain assets at the current level of service experienced today?
2. What level of service is achievable within the Town’s current funding?
3. How will spending requirements change over time, and what do these trends mean for the Town’s finances?

In order to answer these questions, the Town prepared an analysis of three scenarios using its corporate capital planning software. Three scenarios were modelled over a 50-year time horizon. To assist management with planning in the near term, the asset management plans then focus on a 10-year horizon.

**Historical Baseline**

Before presenting investment scenarios, it is important to understand the history of the Town’s financial contributions as well as to establish the current funding and practices that were used to inform the financial analysis performed as part of this plan. See table 11-12.

Table 11 – Historical Baseline of Reserve Contributions (2018-2022)

Year	Facilities Reserve Contribution	Reserve Contribution as a Percentage of 2022 Replacement Value
2018	\$2,644,800	1.11%
2019	\$1,118,081	0.47%
2020	\$1,118,081	0.47%
2021	\$1,153,493	0.49%
2022	n/a - Facilities Reserve Rebalancing (Fiscal Strategy)	

Table 12 – Historical Baseline of Capital Delivery Spending (2018-2022)

Year	Facilities Capital Spending on Existing Assets	Capital Spending as a Percentage of 2022 Replacement Value
2018	\$1,785,403	0.75%
2019	\$2,338,832	0.99%
2020	\$735,236	0.31%
2021	\$889,199	0.37%
2022	\$2,321,989	0.98%

# ESTIMATED FUTURE BUDGET

## Estimated Future Reserve Contributions Based on Current Position and Plans

Using the financial background and current financial position, the Town’s current reserve contributions were forecasted to support long term financial planning. These values were used for an assessment of the balance between budget and future renewal costs, and will be subject to internal processes and the annual budget process each year as approved by Council. See Table 13 and Figure 13.

Future reserve contributions are estimated to reflect current Town practice. Since the years following the creation of the Asset Replacement Fund, there has been an accepted practice of using a 1% increase in tax bills to ensure that Newmarket can afford to replacement future capital assets. It was assumed this practice would continue for a 10-year period for all tax-supported assets, of which facilities are a portion. Increasing in funding for facilities reflects a proportional subset of any raise among the tax-supported assets. Additional factors for facilities reserves from the Reserve & Reserve Fund Review were also incorporated.

Table 13 - Estimated Future Reserve Contributions based on Current Position and Plans

Year	Estimated Future Reserve Contributions Based on Current Practice*
2023	\$2,491,313
2024	\$2,741,856
2025	\$2,992,399
2026	\$3,242,942
2027	\$3,493,486
2028	\$3,744,029
2029	\$3,994,572
2030	\$4,245,116
2031	\$4,495,658
2032	\$4,746,200

\*Current Budget assumes: 10 Years (2023-2032) of 1% ARF Levy, shared among asset types (parks, facilities, roads, etc.)

### Estimated Future Budgets Based on Current Position and Plans

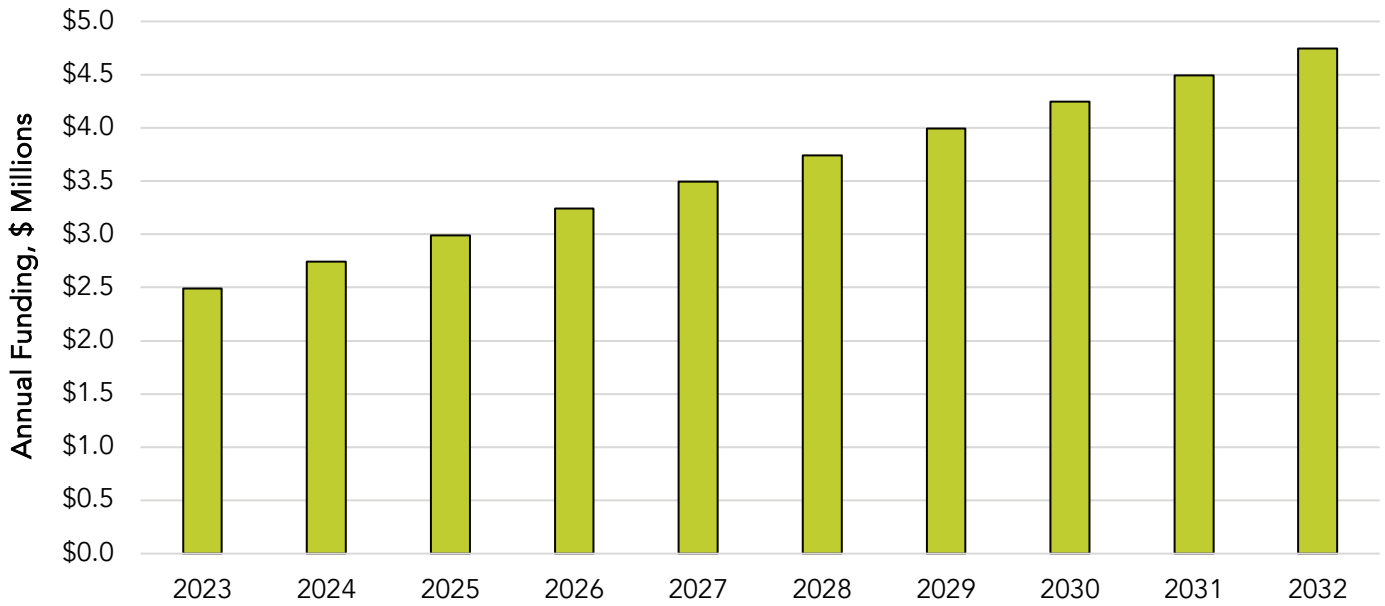


Figure 13 - Estimated Future Budgets Based on Current Position and Plans\*

\* Current Budget assumes: 10 Years (2023-2032) of 1% ARF Levy, shared among asset types (parks, facilities, roads, etc.)

# SCENARIO FORECAST

## Facilities Scenario Methodology

To model the investment need, consolidation of inventory, replacement cost, condition, levels of service, risk, and lifecycle activities as shown throughout the AMP was completed.

Three scenarios were created to answer the key questions identified in the Financial Strategy introduction about future requirements, sustainability, and comparisons with current practice. The scenarios also reflect corporate practice set for asset management planning started during the 2021 Core Asset Management Plan to support comparisons and consistency. See Table 14.

Table 14 - Facilities Financial Strategy Scenarios

Scenario	Description of Scenario Constraints and Objectives
#1 – Current Budget	<p>The purpose of the current budget scenario is to calculate the level of service achievable with current funding. Scenario parameters are:</p> <ul style="list-style-type: none"> <li>• Maximize network performance for limited funds.</li> <li>• Increase current funding by current practice for a period of 10 years. Hold year 10 funding levels for remainder of scenario (Years 11-50).</li> <li>• 50 years of analysis.</li> </ul>
#2 – Renewal Needs	<p>The purpose of the renewal needs scenario is to calculate the true cost of maintaining the full asset inventory at current service levels, so this full cost maybe compared with current practice. Scenario parameters are:</p> <ul style="list-style-type: none"> <li>• Limit the number of very poor assets to 5%</li> <li>• Minimize the cost of maintaining asset portfolio, but no budget constraint</li> <li>• Maintain current levels of services.</li> <li>• 50 years of analysis</li> </ul>



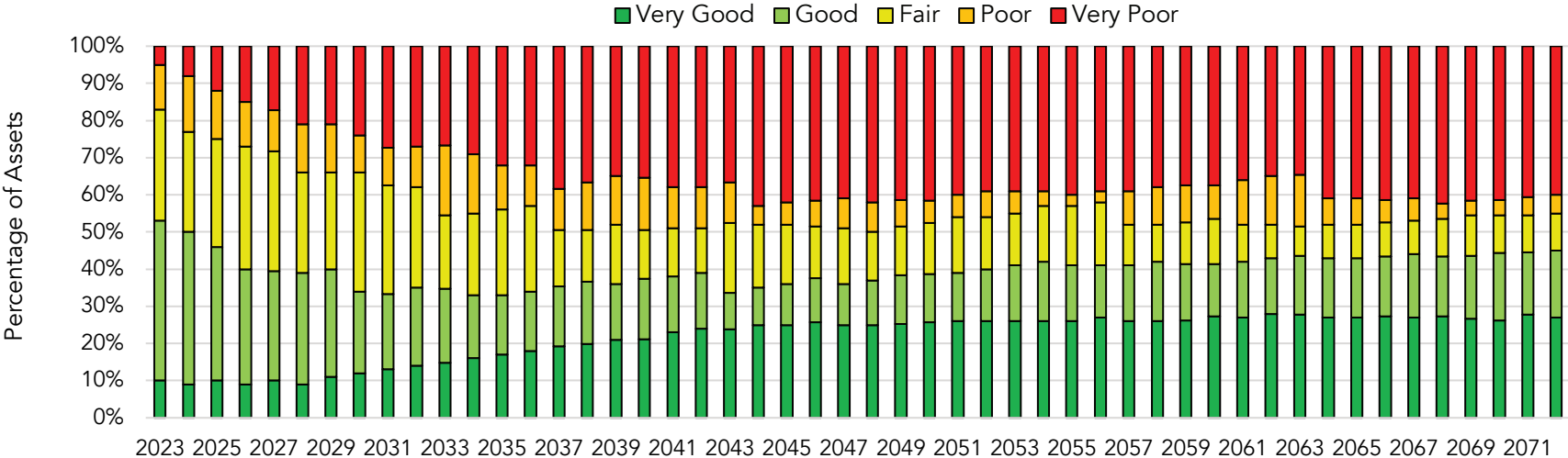
<p>#3 - Constrained</p>	<p>The purpose of the constrained scenario is provided an example investment alternative, serving as an approximate midpoint between current practice and cost of renewal need. Scenario parameters are:</p> <ul style="list-style-type: none"> <li>• Limit the number of very poor assets to 25%</li> <li>• Minimize the cost of maintaining asset portfolio, but no budget constraint.</li> <li>• 50 years of analysis</li> </ul>
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### Facilities Scenario Results

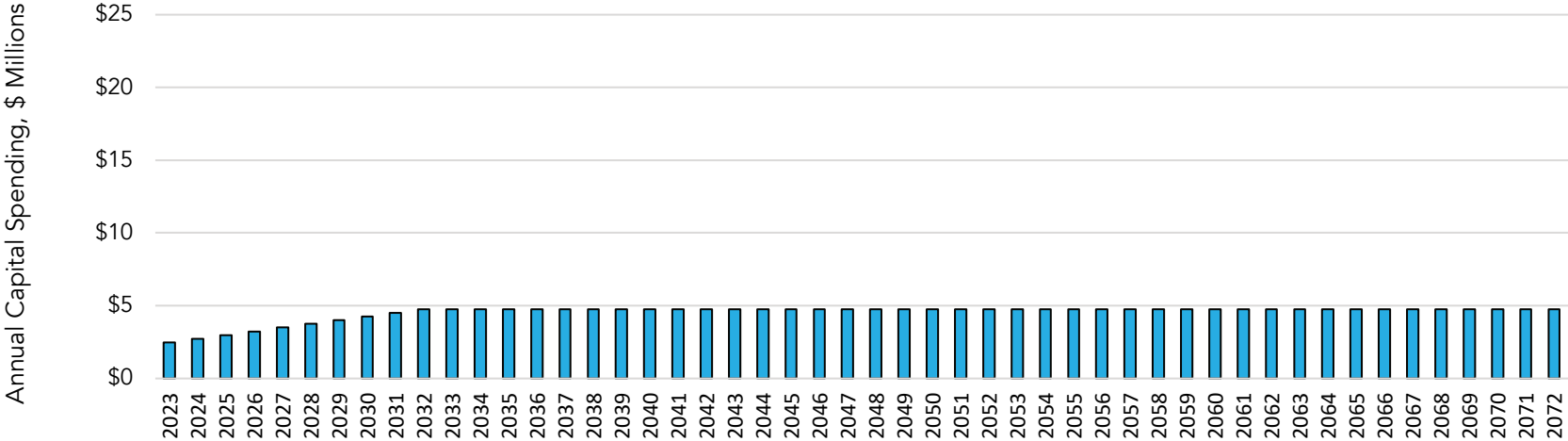
The following figures illustrate how the cost of renewals for different service targets and the condition of facilities are forecasted to change over time under all three investment scenarios.

# Scenario #1 – Current Budget

## Condition of Facility Assets with Scenario #1 - Current Budget

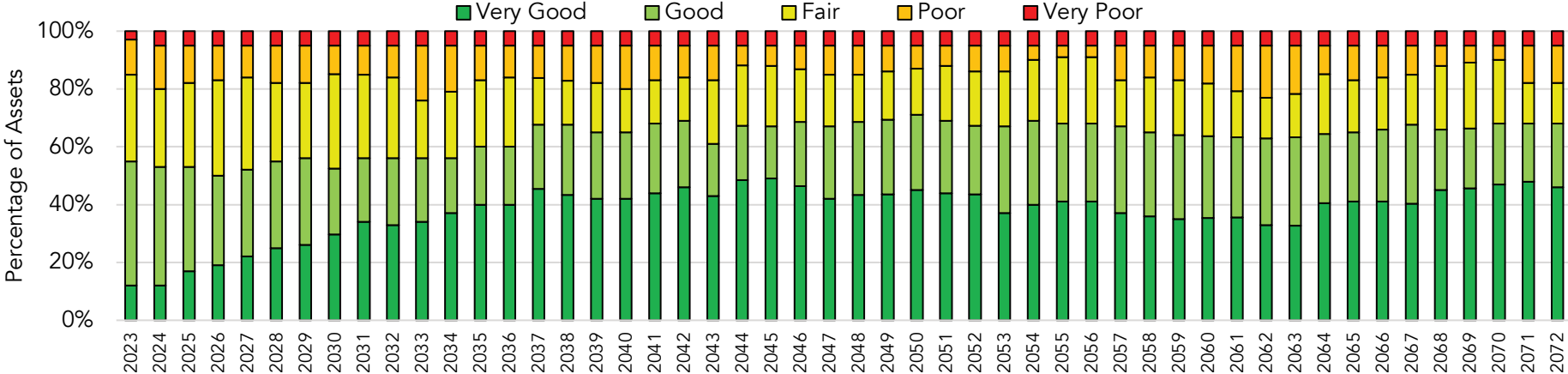


## Annual Capital Cost of Scenario #1 - Current Budget

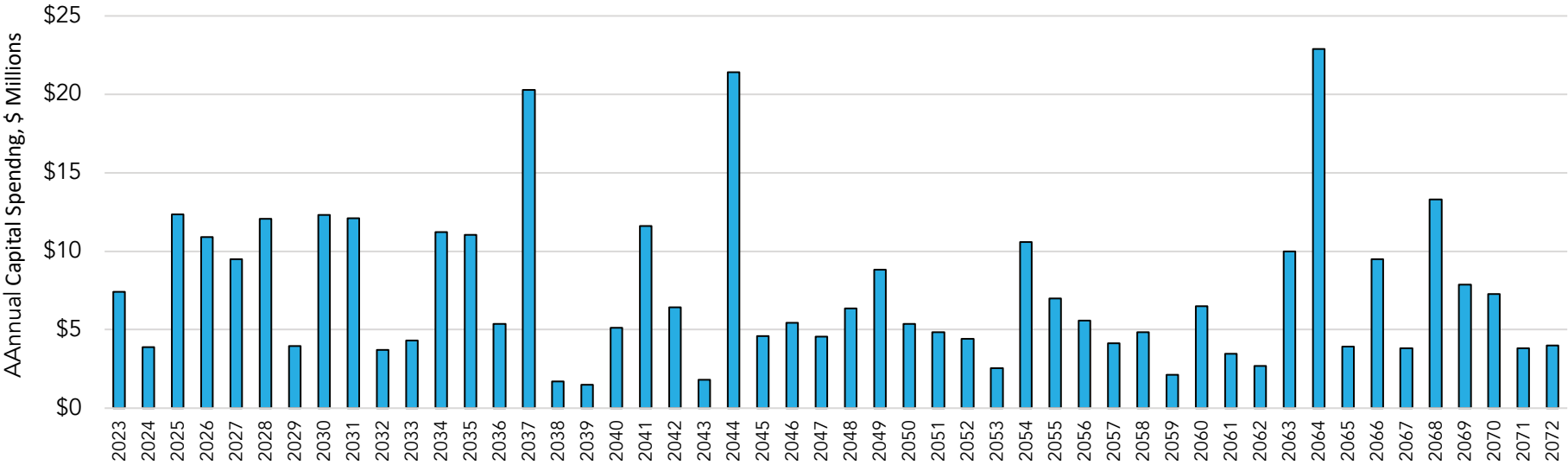


## Scenario #2 - Renewal Needs

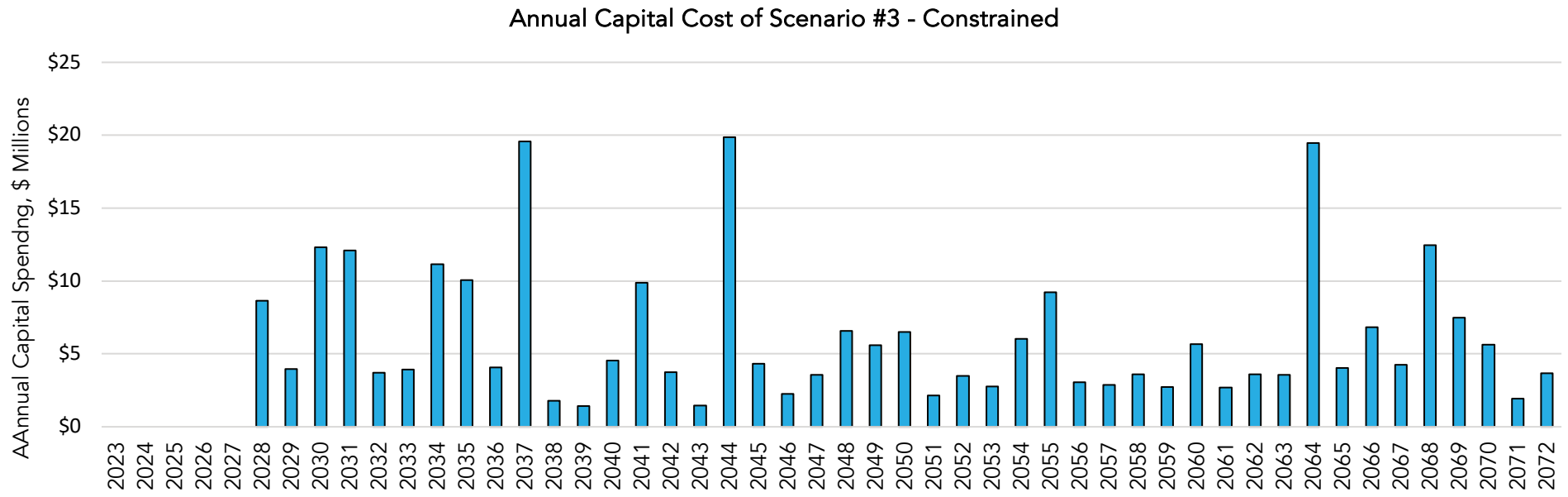
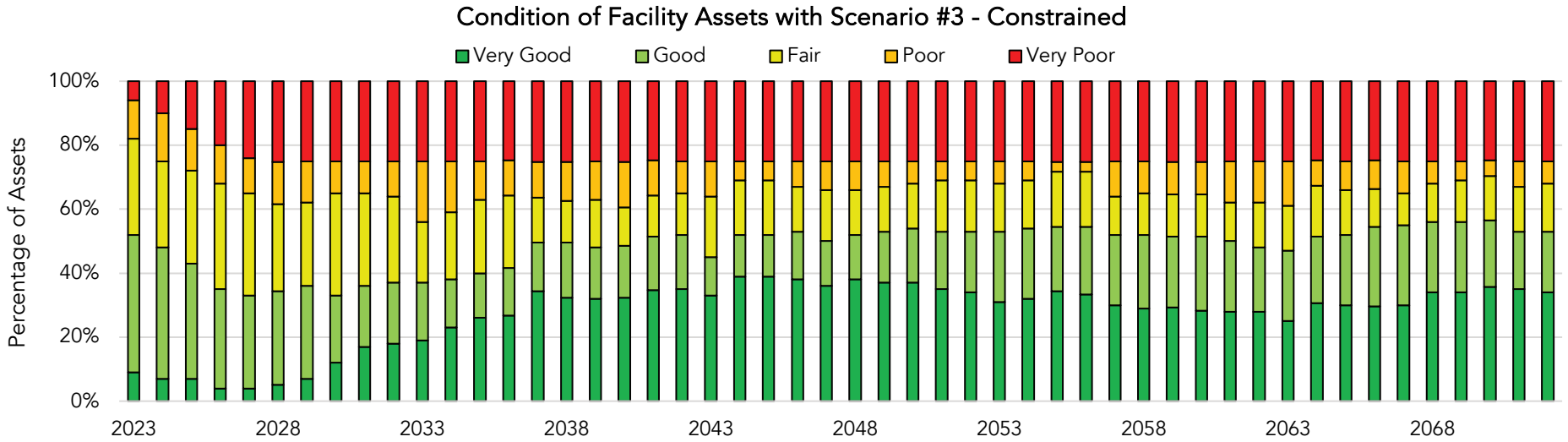
### Condition of Facility Assets with Scenario #2 - Renewal Needs



### Annual Capital Cost of Scenario #2 - Renewal Needs



### Scenario #3 - Constrained



### Scenario Forecast Observations

Several observations are important to note about the forecast:

- If investment continues at current levels, service levels will not be achieved, and the facilities portfolio will be in much poorer condition than it is currently.
- Under the constrained scenario, current service level targets are not achieved but remain stable at condition states lower than what is currently experienced.
- There is an upcoming “wave” of renewals for facility assets between now and ~2037 that will show increased annual capital requirements beyond what has been experienced until now.
- Within each scenario including those with service-level reductions, the use of a risk-based optimization software ensure relative risk is minimized and investments are distributed to all priority facilities. This does not mean any scenario is risk-free (recommendations to implement risk-based practices have been provided).

It is for these reasons that the constrained investment scenario was selected for future planning for this asset class. The significance of the constrained investment scenario for the Town’s is explained in the 2021 Core Asset Management Plan. For further details about how scenarios compare see Table 15.

Table 15 – Summary of Financial Scenario Results

Forecast Scenario	Observations
Scenario 1 – Current Funding	<ul style="list-style-type: none"> <li>• If investment continues at current levels, service levels will not be achieved, and the facilities portfolio will be in much poorer condition than it is currently.</li> <li>• ~35 to 45% of Park asset value will be in “Very Poor” condition (exceeding its intended service life) each year on average over the 50-year forecast.</li> <li>• \$4.6M average annual funding for renewals</li> </ul>

Forecast Scenario	Observations
Scenario 2 – Renewal Needs	<ul style="list-style-type: none"> <li>• The proportion of asset value in “Very Poor” condition was limited to 5% annually.</li> <li>• The average annual funding needed to reduce the backlog of assets in “Very Poor” condition to this level is approximately \$7.4M</li> </ul>
Scenario 3 - Constrained	<ul style="list-style-type: none"> <li>• Under the constrained scenario, current service level targets are not achieved but remain stable at condition states lower than what is currently experienced.</li> <li>• Under a constrained “balanced” scenario in which the proportion of assets in “Very Poor” condition is limited to 25%</li> <li>• \$5.5M average annual funding required for renewals</li> </ul>

# RECOMMENDED INVESTMENT STRATEGY

## Long Term Trend

Figure 14 summarizes the investment forecast for Facilities under all three scenarios.

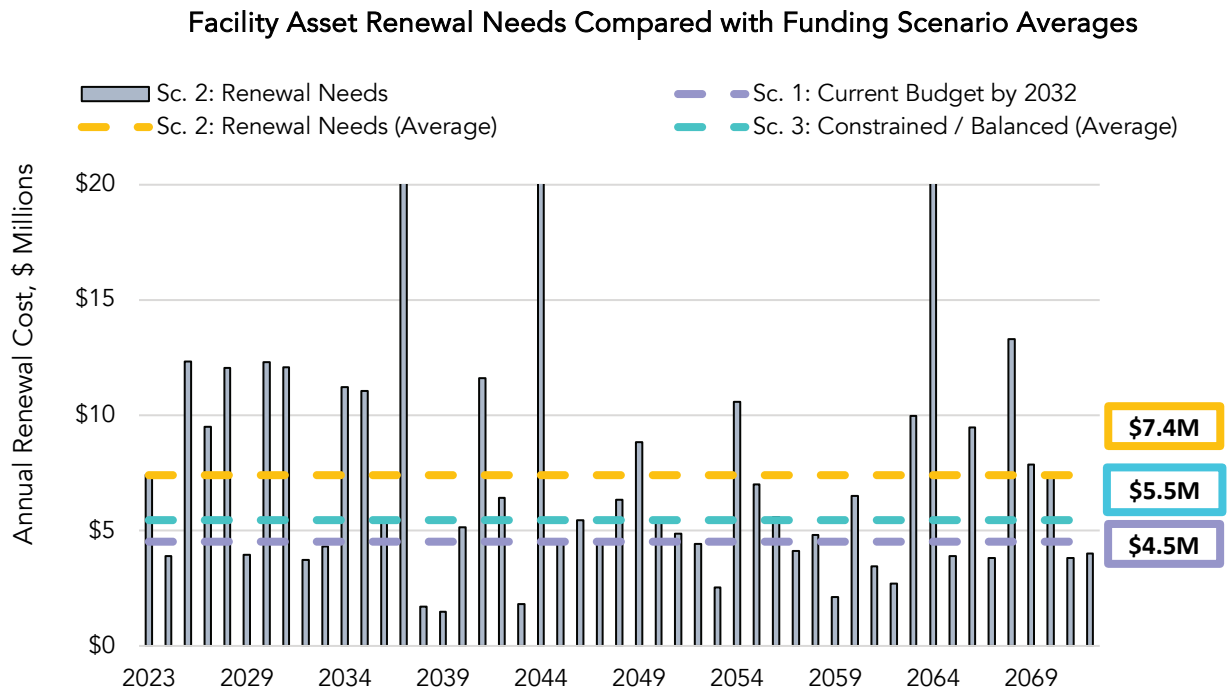


Figure 14 – Summary of Long Term Trends for 50 Year Scenarios

The annual average investment requirements over the next 50 years is \$7.4M/year for Facilities (in 2023 dollars). This is higher than current levels of investment, which are at \$2.5M in 2023 and expected to rise to \$4.6M by 2032 under current practice. The balanced scenario provides a potential funding alternative that would reduce long-term service levels but mark a higher incremental approach to increased funding of \$5.5M per year. These scenarios will continue to be monitored and reported over the long-term. To assist decision-makers weighing immediate risks, the long-term financial scenarios have been brought into the context of the next 10 years where immediate capital decisions take place. See below.

# 10 Year Budget

A 10-year focus shows the immediate decisions related to current asset needs and backlog, upcoming replacements, and aligns with the timelines provided by Ontario Regulation 588/17. Previously, figures were shown to compare the long-term financial envelopes and service outcomes of each scenario. With a 10-year focus, Figure 15 provides a year-by-year comparison of funding requirements.

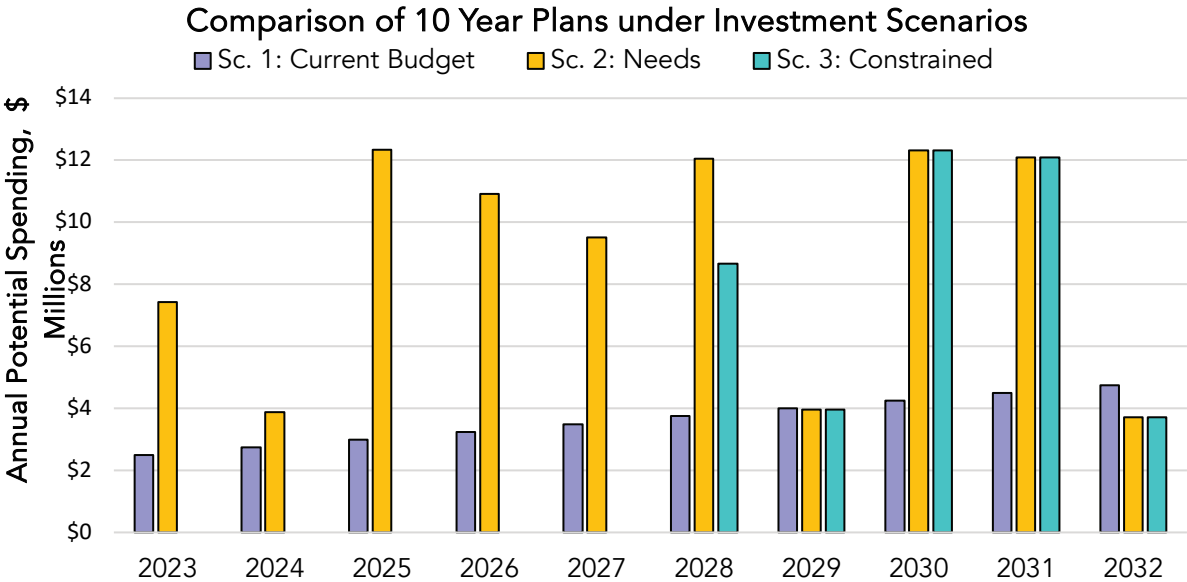


Figure 15 – Comparison of 10 Year Plans Under Investment Scenarios

Following the practice set by core assets in 2021, it is recommended that the constrained budget be used as a baseline for financial planning until targets are set in accordance with Ontario Regulation 588/17 in 2025. In the interim, specific allocations will remain subject to budget & capital planning processes considering factors like organizational capital delivery capacity. Table 16 summarizes the cost and balance of each scenario.



Table 16 - Proposed investment and a comparison to the Town's existing budget for Facilities

Year	Constrained Scenario Proposed Investment	Town's Current Reserve Contribution	Difference
2023	\$0*	\$2,491,313	\$2,491,313
2024	\$0	\$2,741,856	\$2,741,856
2025	\$0	\$2,992,399	\$2,992,399
2026	\$0	\$3,242,943	\$3,242,943
2027	\$0	\$3,493,486	\$3,493,486
2028	\$8,661,320	\$3,744,029	-\$4,917,291
2029	\$3,950,688	\$3,994,572	\$43,884
2030	\$12,309,977	\$4,245,115	-\$8,064,862
2031	\$12,086,164	\$4,495,659	-\$7,590,505
2032	\$3,717,151	\$4,746,202	\$1,029,051
Total	\$40,725,300	\$36,187,574	-\$4,537,726

\*Because the constrained scenario targets service levels below what is currently experienced, the model does not allocate funding until targets are achieved. This deferral leads to a delayed wave of replacements. In practice, the constrained scenario funding could be spread over the 10 years and marks an incremental increase above current practice.

# CONCLUSIONS

Newmarket's asset management planning process advances the Town's objectives for financial sustainability and demonstrates a commitment to Town values of being Well Beyond the Ordinary. Asset management is a continuous improvement process. Through iterations of development and implementation, new asset management capabilities can develop, and others can improve. The development of a Facilities Asset Management Plans is a significant milestone, and part of a broader implementation of asset management capabilities by the Corporate Asset Management Office (CAMO) and Town business units. Through the Facilities Asset Management Plan, it has been demonstrated that there are both challenges and opportunities. Current challenges include:

- Deteriorating assets providing service levels that could be unsustainable without additional funding.
- Newly acquired assets that will soon add operating costs.
- The impacts of climate change.
- An immediate 10-year infrastructure gap ranging from \$4.5 to \$52 Million for facility assets, depending on the selected condition target.
- Decisions about how to adjust risk tolerance.

With these challenges come opportunity:

1. Asset management is providing visibility to risks and improvement opportunities, allowing the Town to take the proactive measures needed to manage these issues.
2. Asset management will provide alignment across the organization about a common set of business objectives, paving the way for continuous improvement opportunities.
3. New capabilities will be adopted, efficiencies will be developed, and new technologies or processes will be deployed.
4. Condition assessment and maintenance practices are proving to stretch the life of assets beyond their expected service life when the right strategies are used.

The Facilities Asset management Plan is a significant milestone but only one aspect of a broad spectrum of asset management practices. Asset management is not a document or a software. It is a way of doing business every day, and a lifelong journey to improve the Town. Through this journey, the Town can truly become Well Beyond the Ordinary.