2025

MIDDLESEX COUNTY

ASSET MANAGEMENT PLAN

399 Ridout St. North | London, ON N6A 2P1

middlesex county

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Executive Summary

The Middlesex County Asset Management Plan is a strategic document developed to guide the County in managing its capital assets responsibly and sustainably. This plan aligns with Ontario's regulatory requirements and builds on Middlesex County's commitment to providing high-quality, sustainable and resilient services.

The Middlesex County Asset Management Plan provides a comprehensive view of the current state of the County's assets, identifies service level expectations, and projects future investment needs. The Middlesex County Asset Management Plan covers all core and non-core assets categorized across the following service areas:

- Middlesex County
- Middlesex County Library
- Strathmere Lodge
- Middlesex-London Paramedic Services (MLPS)

Each service area is organized into sections that assess asset inventory, condition, lifecycle management, risk, and financial requirements. This structured approach provides a clear understanding of each service areas needs and ensures compliance with applicable funding structures and provincial standards.

The Middlesex County Asset Management Plan outlines a balanced approach to asset management, aiming to align the County's capital asset needs with financial capacity. By integrating asset management with long-term financial planning, Middlesex County will continue to meet the evolving demands of its communities in an efficient and cost-effective manner.

Legislative Overview

Asset management planning in Ontario has evolved significantly over the past decades. Before 2009, capital assets were recorded by municipalities as expenditures in the year of acquisition or construction. The long-term issue with this approach was the lack of a capital asset inventory, both in the County's accounting system and financial statements. As a result of revisions to Section 3150 of the Public Sector Accounting Board Handbook, effective for the 2009 fiscal year, municipalities were required to capitalize tangible capital assets, creating an inventory of assets.

In 2012, the province launched the Municipal Infrastructure Strategy. As part of that initiative, municipalities and local service boards seeking provincial funding were required to demonstrate how any proposed project fits within a detailed Asset Management Plan. In addition, Asset Management Plans encompassing all municipal assets needed to be prepared by the end of 2016 to meet Federal Gas Tax requirements. To assist in defining the components of an Asset Management Plan, the Province produced a document entitled Building Together: Guide for Municipal Asset Management Plans. This guide documented the components, information, and analysis that were required to be included in municipal Asset Management Plans under this initiative.

The Infrastructure for Jobs and Prosperity Act, 2015 was proclaimed on May 1, 2016. This legislation detailed principles for evidence-based and sustainable long-term infrastructure planning. The Infrastructure for Jobs and Prosperity Act, 2015 also gave the Province the authority to guide municipal asset management planning by way of regulation. In late 2017, the Province introduced Ontario Regulation 588/17 under the Infrastructure for Jobs and Prosperity Act, 2015. The intent of Ontario Regulation 588/17 is to establish a standard format for municipal Asset Management Plans. Specifically, the regulations require that Asset Management Plans be developed that define the current and proposed levels of service, identify the lifecycle activities that will be undertaken to achieve these levels of service, and provide a financial strategy to support the levels of service and lifecycle activities.

July 1, 2019	July 1, 2022	July 1, 2024	July 1, 2025
Municipalities were required to **adopt a Strategic Asset Management Policy.**	Asset Management Plans (AMPs) **must include** a inventory and analysis of **core infrastructure assets** (e.g. roads, bridges, water, wastewater), detailing current levels of service, condition assessments, and lifecycle management strategies.	AMPs **must** expand to **include all non-core municipal assets**, with comprehensive data on service levels, asset condition, and financial strategies.	AMPs must integrate proposed levels of service and **long-term financial strategies** to support a **10-year outlook** for service and cost expectations.

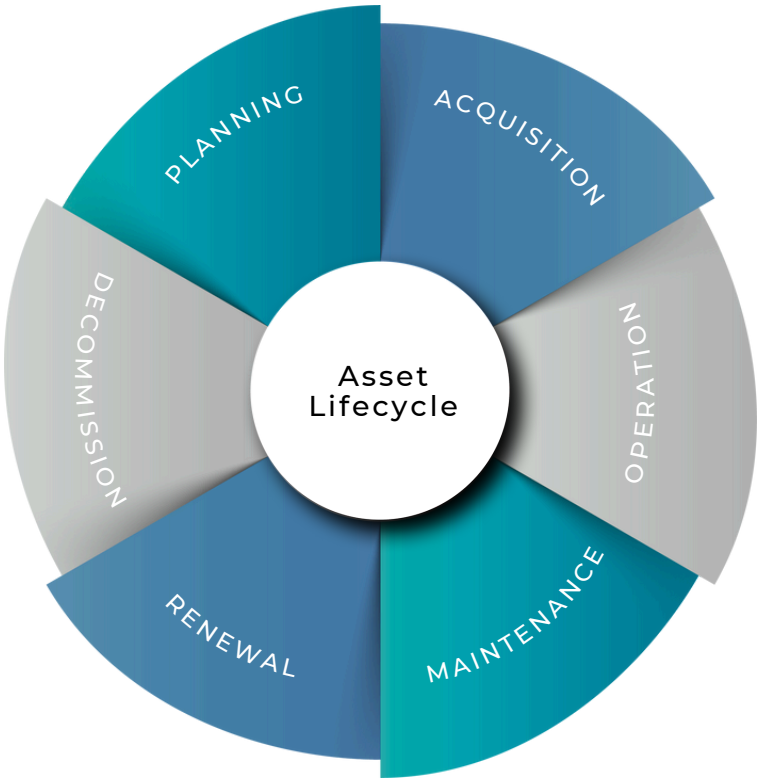
The Middlesex County Asset Management Plan has been developed to address the requirements of Ontario Regulation 588/17.

Strategic Asset Management Policy

The Middlesex County Strategic Asset Management Policy establishes the policies and strategies that create a cohesive framework for the County's asset management practices. This framework is designed to enable consistent, evidence-based decisions, anticipate future infrastructure needs, and maintain public confidence in the County's management of its assets.

Middlesex County's asset management efforts focus on delivering effective municipal services aligned with expected service levels and sustainable financial practices. Through this policy, Middlesex County aims to manage its assets so that they continue to meet community expectations, adhere to the County's strategic intent, and support long-term fiscal responsibility.

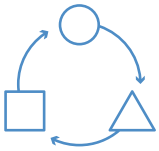
The Middlesex County Asset Management Plan is a core component of the County's overarching corporate strategy. It provides key data on asset attributes, including inventory, replacement costs, and useful life estimates, and assesses the physical health of capital assets. The Middlesex County Asset Management Plan also outlines the financial strategies required to close funding gaps, reduce infrastructure deficits, and achieve sustainable asset management practices.



The Infrastructure for Jobs and Prosperity Act, 2015 sets out principles to guide asset management planning in municipalities in Ontario. Middlesex County will commit to the following principles when making decisions in respect of its assets and asset management planning.

Fiscal Responsibility

The County commits to evidence-based decision-making, assessing service levels, risks, and costs to maximize value across assets and services. Middlesex County will ensure that assets are managed within their systems context and evaluated on net value.



Holistic Approach

Middlesex County's asset management approach considers the entire asset lifecycle—from planning to disposal—and recognizes the interdependencies between various assets and their impact on service delivery. This approach supports long-term, strategic infrastructure decisions that account for demographic and economic trends, productivity, competitiveness, accessibility, health, safety, and environmental impact.

Innovative

The County will continue to be progressive with the use of technology for asset management purposes. Further, the County will continue to monitor industry best practices and innovation opportunities to make use of innovative technologies, services, and practices.

Public Engagement

The County values transparency and public involvement in asset management. Input from residents and interested parties will be sought, where applicable, through channels such as annual budget consultations. Decisions related to infrastructure will be based on information accessible to the public, provided through the County's website or other suitable platforms.

Service Delivery

Middlesex County's asset management policy prioritizes defining and achieving service levels and performance targets. Service levels will, at a minimum, comply with the qualitative descriptions and technical metrics required by Ontario Regulation 588/17, ensuring that infrastructure aligns with community expectations and regulatory standards.

Sustainability

The County integrates considerations for climate resilience and environmental sustainability into asset management planning. Climate-related risks, such as increased maintenance demands and lifecycle impacts, will be evaluated. The County will also incorporate mitigation measures, such as contingency funding, and disaster preparedness, to support resilient infrastructure planning.

Strategic Alignment

The Middlesex County Asset Management Plan implementation actions will be identified, aligned, and implemented each year via the annual operating and capital budget. The actions will be informed by municipal studies, plans and policies, including but not limited to the:

- Middlesex County Pavement Condition Index (PCI) Reports
- Middlesex County Bridge & Culvert Inspections (OSIM)
- Middlesex County Facility Audits
- Middlesex County Official Plan
- Middlesex County Strategic Plan
- Middlesex County ITS Strategic Plan
- Middlesex County Economic Development Opportunities & Initiatives Plan
- Middlesex County Emergency Management Plan
- Middlesex County Accessibility Plan
- Middlesex County Tangible Capital Asset Policies
- Middlesex County Library Strategic Plan
- MLPS Master Plan
- Middlesex County Attainable Housing Review
- Middlesex County Development Charges Background Study

The Middlesex County Strategic Asset Management Policy provides a foundation for the County's asset management planning. By adhering to these principles, the County will ensure that capital assets are managed in a way that supports fiscal responsibility, environmental sustainability, and service excellence for current and future generations.

Roles & Responsibilities

The successful implementation of the Middlesex County Strategic Asset Management Policy requires active commitment from key interested parties across the County's organization. This section outlines the roles and responsibilities essential to maintaining, reviewing, and updating the County's Asset Management Plan. Clear accountability will support consistent application, alignment with legislative requirements, and a focus on the long-term sustainability of County assets. The Middlesex County Asset Management Plan will be informed by the following contributors:

Group	Responsibilities
County Council	County Council is ultimately responsible for the oversight of the County's Asset Management Plan, supporting the vision of sustainable, effective asset management across all County services. Council's responsibilities include: • Approving the Asset Management Plan and any necessary updates. • Reviewing the implementation of the Asset Management Plan during annual budget processes, ensuring alignment with the County's financial and service priorities. • Providing strategic guidance to improve the Asset Management Plan, ensuring that it continues to meet the needs of County residents and visitors, and that resources are allocated to support long-term infrastructure sustainability.
County Engineer	The County Engineer will serve as the lead in overseeing asset management processes, assuming responsibility for implementing, monitoring, and reporting on the County's Asset Management Plan. Specific responsibilities include: • Ensuring the Asset Management Plan complies with all applicable regulations and legislation. • Leading the maintenance of data on the condition, lifecycle, and levels of service for infrastructure, ensuring it is kept current and reflects changes in service requirements or asset conditions. • Reviewing and updating the Asset Management Plan as needed and recommending any adjustments to County Council. • Coordinating with Department Heads to gather asset data on assets.
County Treasurer	The County Treasurer is accountable for integrating the Asset Management Plan into the County's financial planning and budgeting processes. Responsibilities include: • Ensuring that the Plan is reflected in the County's annual budget, supporting sustainable funding for lifecycle activities and service levels. • Reporting on funding levels for asset management, identifying potential funding gaps, and coordinating with County Council and departments to explore solutions. • Preparing annual budget recommendations in alignment with asset service levels and lifecycle needs as outlined in the Asset Management Plan, ensuring fiscal responsibility in asset management decisions.

Group	Responsibilities
Department Heads	Department Heads play a crucial role in supporting asset management by providing insights into the condition and performance of assets within their respective service areas. Their responsibilities include: • Assisting in the development of long- and short-term asset requirements, utilizing condition assessment information and service level requirements. • Participating in regular reviews and updates of the Asset Management Plan to ensure that they reflect current operational needs and are integrated into departmental strategies. • Annually reviewing asset-related needs and conditions to inform budget deliberations, coordinating with the County Engineer and County Treasurer to align with asset management priorities
Staff	Staff play a key role in supporting the Middlesex County Asset Management Plan through the following responsibilities: • Identifying and allocating the necessary resources for effective Asset Management Plan implementation, including personnel, technology, and financial support. • Supporting the annual review process, providing updated information on asset status and performance to maintain alignment with service goals. • Applying lifecycle costing and service level considerations when prioritizing asset investments, supporting balanced and cost-effective infrastructure management.
Residents, Constituents & Interested Parties	Residents, constituents, and interested parties contribute valuable insights to the asset management process by: • Providing feedback through budget consultation processes, offering perspectives on service expectations and priorities. • Advising on community expectations regarding service levels to help guide infrastructure planning and resource allocation.

Asset Management Plan Development

The Middlesex County Asset Management Plan was developed using the County's asset management principles as outlined in the Strategic Asset Management Policy and leveraging information from the County's capital asset databases. The development process followed the steps below:

Asset Information Compilation

Gather detailed information on Middlesex County's capital assets, including attributes such as size/material type, useful life, age, accounting valuation, and current valuation. Where needed, current valuations are updated using benchmark costing data or relevant inflation indices.

Condition Assessment

Assess the current condition of assets using staff input, existing reports, and an age-based condition analysis to determine asset reliability and performance.

Service Level Documentation

Define and document current levels of service based on funding levels and insights from related reports, establishing a baseline for service delivery expectations.

Lifecycle Management Strategy

Develop a lifecycle management strategy that identifies the activities required to sustain defined service levels. This strategy includes forecasting annual capital and operating expenditures, informing the capital and operating budgets needed to maintain service level outcomes.

Financing Strategy

Establish a financing strategy that supports the lifecycle management approach, outlining how capital and operating expenses will be funded over the forecast period to ensure sustainable asset management.

Formal Documentation

Compile the comprehensive Middlesex County Asset Management Plan into a formal report to support future decision-making and to communicate the County's asset management planning to interested parties.

Data & Methodology

The dataset supporting the Middlesex County Asset Management Plan includes key asset attributes and data compliant with Section 3150 of the Public Sector Accounting Board Handbook, such as historical costs, in-service dates, field inspection data, asset health, and replacement costs.

A critical aspect of the Middlesex County Asset Management Plan is the level of confidence in the data used to assess infrastructure conditions and formulate financial strategies. Through ongoing monitoring, evaluation, and assessment, the County maintains a high degree of confidence in the accuracy, validity, and completeness of asset data across all categories in the Middlesex County Asset Management Plan. The County retains the opportunity to enhance data collection pertaining to asset performance indicators.

Condition Data

The County uses a straight-line amortization schedule to depreciate capital assets. While this approach may not fully reflect an asset's actual condition - since deterioration tends to accelerate toward the end of an asset's lifecycle - it provides a useful approximation in the absence of standardized decay models. Additionally, actual field condition data are incorporated to provide a more meaningful assessment of the County's infrastructure. Individual asset evaluations prior to aggregation and reporting help minimize inaccuracies that might otherwise arise at the individual level, allowing for a more accurate representation at the asset class level.

Financial Data

In the Middlesex County Asset Management Plan, the average annual financial requirement represents the amount the County should set aside annually for each asset class, based on levels of service and current replacement costs, to ensure assets are replaced at the end of their lifecycle.

To determine the County's current funding capacity, all reliable sources of funding, such as tax revenues, user fees, and other predictable income streams, are identified and combined. These figures are compared against the average annual requirements to calculate the annual funding shortfall (or surplus) and to support the formation of sustainable financial strategies. Given their unpredictability, ad-hoc government grants and other temporary capital injections are excluded from the Middlesex County Asset Management Plan. However, stable and predictable funding sources, such as the Canada Community-Building Fund and the Ontario Community Infrastructure Fund (OCIF) is included in the Middlesex County Asset Management Plan.

In accordance with the Middlesex County Tangible Capital Assets Policy 13.01, the County's capitalization threshold is generally set at:

- $5,000 for an individual asset
- $25,000 for a pooled asset

For expenditures to qualify under the capitalization threshold, they must meet the following criteria:

- Replacement or overhaul of an asset or major component that extends its life.
- Improvements that enhance service quality, capacity, operational efficiency, or reduce associated operating costs.

Limitations & Assumptions

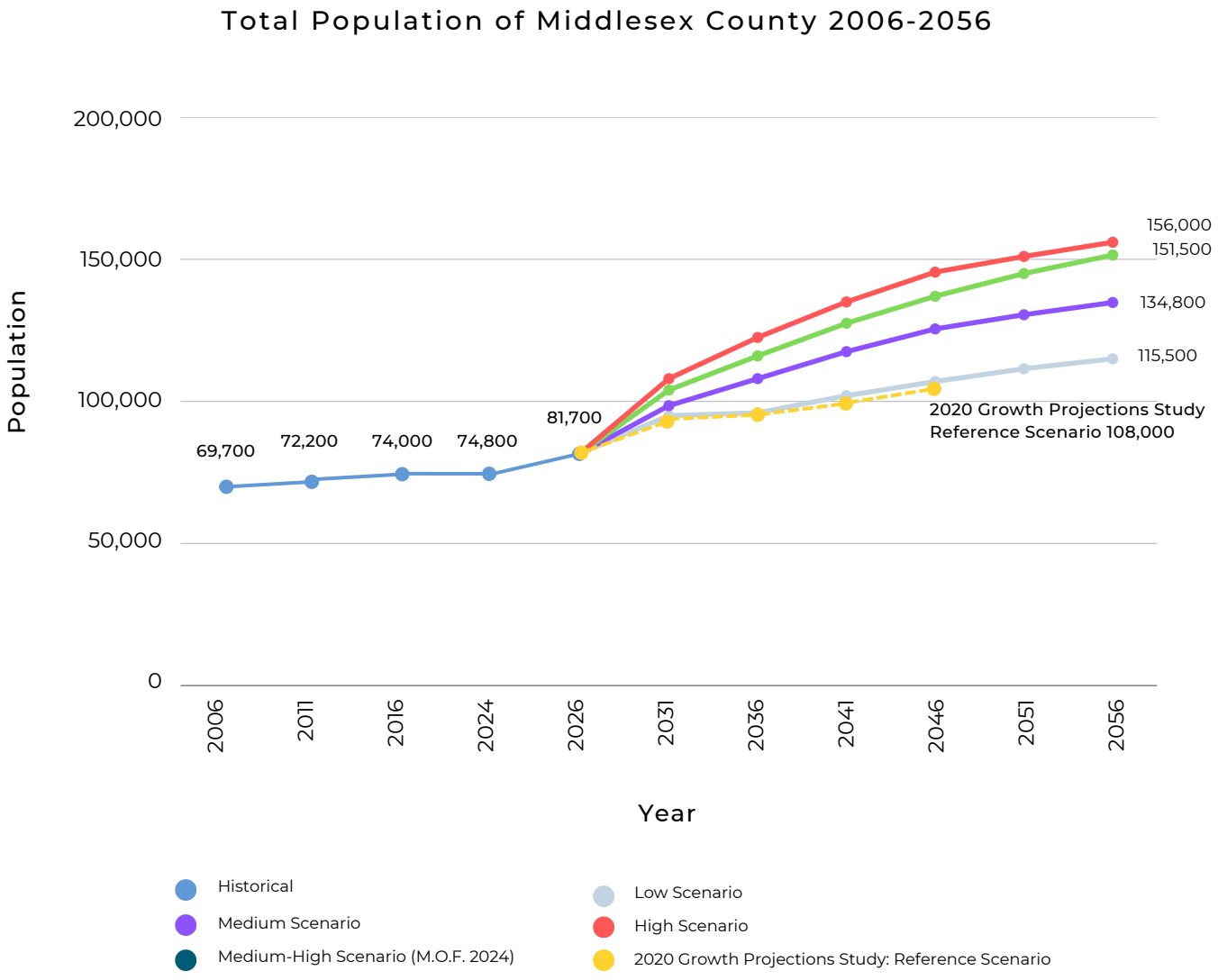
The Middlesex County Asset Management Plan incorporates the following limitations and assumptions:

- When available, field condition assessments are used to represent the state of infrastructure and develop financial strategies. In the absence of observed data, asset age is used to estimate physical condition.
- Inflation measures, such as the CPI or NRBCPI, are used to inflate historical costs when actual replacement costs are unavailable. While reasonable, these multipliers may not fully capture market conditions and may lead to understated or overstated valuations of the County's asset portfolio.

Growth Projections

Middlesex County is projected to experience sustained population growth over the next two decades, driven by its proximity to urban centers and its appeal of its growing and diverse communities.

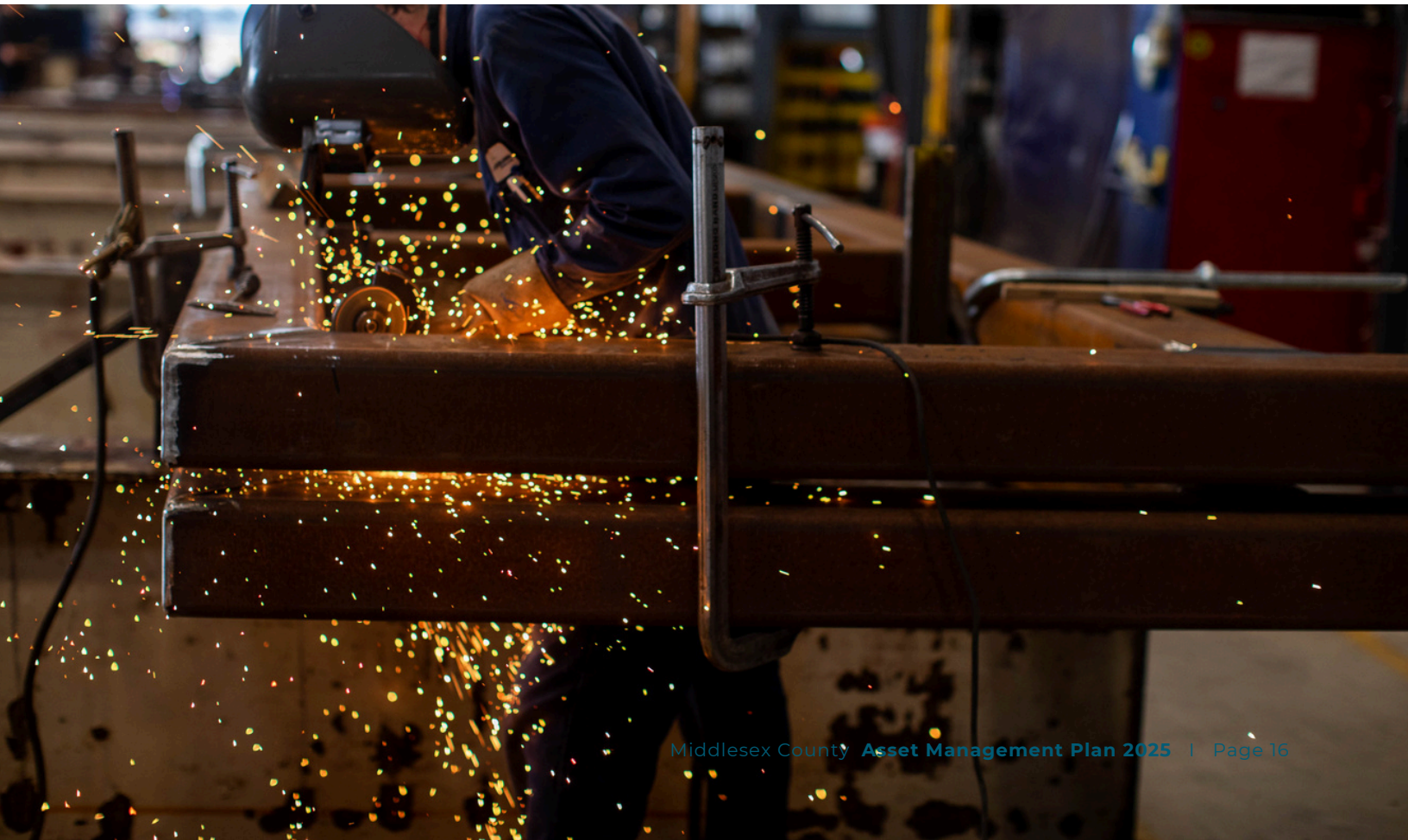
According to the adapted Ministry of Finance projections, the County's population is expected to increase from 81,700 in 2021 to 100,200 by 2031, reflecting a robust 22.4% growth rate over the 10-year period. This growth will be concentrated in key settlement areas and supported by strategic planning efforts to accommodate the increased demand for housing, infrastructure, and services.

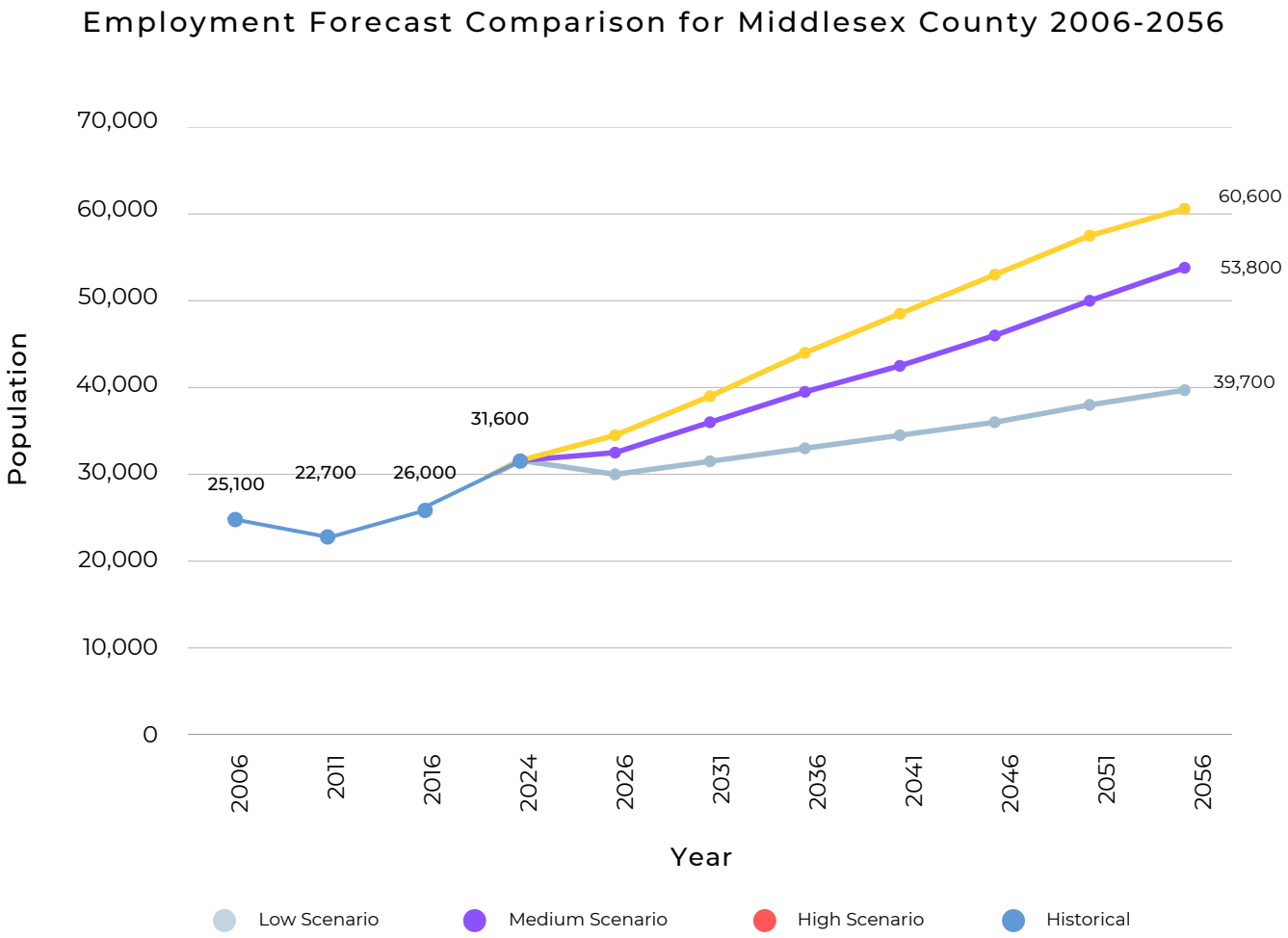


To meet the anticipated population growth, Middlesex County will require a significant expansion in its housing stock. The Official Plan estimates the need for approximately 8,760 additional housing units by 2031, with a strong emphasis on affordability and housing diversity. Key considerations include:

- Addressing the housing needs of smaller households, which make up a growing demographic trend.
- Providing affordable housing options to support very low- and low-income households.
- Ensuring that housing developments align with infrastructure availability in settlement areas.

Employment growth is expected to parallel population increases, requiring Middlesex County to expand and adapt its transportation networks and community services. Strategic investments will be essential to support industrial, service, and population-related employment sectors, ensuring the County remains economically competitive. Balancing urban expansion with rural sustainability will be critical, as growth across the County highlights the need for equitable infrastructure investments that address the unique needs of both urban and rural communities.





The Middlesex County Asset Management Plan incorporates these growth projections by:

- Evaluating infrastructure design and capacity to ensure existing assets can accommodate projected growth demands and identifying gaps requiring expansion or upgrades. Key to this is the Middlesex County Development Charges Background Study.

- Prioritizing investments by directing resources to areas required to maintain existing levels of service and aligning integrating lifecycle costs for new and expanded infrastructure to ensure long-term asset sustainability.

By aligning the Middlesex County Asset Management Plan with Ministry of Finance growth projections, Middlesex County is well-positioned to manage the impacts of population and economic expansion effectively. This approach ensures the County's infrastructure supports sustainable development and meets the needs of its growing and diverse communities

Climate Change

The impacts of climate change pose significant challenges to the assets managed by Middlesex County and the services these assets provide. Climate change factors, such as increased precipitation, temperature fluctuations, extreme weather events, and rising groundwater levels, introduce both future demands and risks to the County's infrastructure. In the context of asset management, these impacts necessitate proactive planning to enhance the resilience and sustainability of County assets. Climate change impacts vary depending on asset type, location, and service requirements, influencing how Middlesex County will respond to and manage these risks. At a minimum, the County must address two key aspects:

Adaptation of Existing Assets

Integrating climate resilience measures into the maintenance and operation of current infrastructure to mitigate the effects of climate change.

Resilience in New Assets and Acquisitions

Ensuring new infrastructure investments account for climate change projections, incorporating design enhancements to withstand potential climate impacts.

The table below outlines the primary climate change factors affecting Middlesex County assets, along with their potential impacts and management strategies to mitigate these risks.

Climate Change Description	Potential Impact on Assets & Services	Management
Increased Precipitation	• Overwhelmed drainage systems, causing flooding and infrastructure damage • Soil saturation leading to erosion and landslides • Increased load on stormwater management facilities	• Regularly inspect drainage infrastructure for capacity and blockages • Increase cleaning frequency of stormwater systems to prevent clogging • Construct future drainage systems with increased capacity and redundancy for storm events
Erosion & Soil Degradation	• Erosion undermining structural foundations • Accumulation of sediment in culverts, streams, and drainage channels	• Inspect and reinforce foundations, clear sediment buildup regularly • Use erosion-resistant vegetation along waterways and slopes • Enhance foundations and use erosion control measures on vulnerable structures
Extreme Heat Events	• Accelerated material degradation (e.g., asphalt softening, cracking of concrete) • Increased demand on cooling systems and energy usage	• Use materials and coatings resilient to high temperatures. • Adjust road materials and design standards for heat resilience, where applicable • Retrofit cooling systems for high-efficiency operation to handle peak loads during heatwaves
Increased Wind Speed	• Dynamic loads on tall and exposed structures, affecting stability • Increased risk of wind-borne debris damage	• Modify structural designs to withstand higher wind loads • Regularly trim trees near infrastructure to minimize debris hazards • Retrofit critical infrastructure with additional bracing where feasible

Middlesex County will integrate climate adaptation and mitigation measures across its asset management processes:

- Evaluate lifecycle costs by incorporating climate projections, factoring in the increased frequency and severity of climate impacts over time.
- Update infrastructure design standards, where applicable, to account for projected climate stressors, such as extreme weather events, to extend asset lifespan and improve reliability.
- Implement periodic climate risk assessments for critical assets to identify emerging risks and inform adaptation strategies, prioritizing high-risk assets for upgrades.
- Prepare for sudden climate-related events by developing contingency plans for infrastructure recovery and continuity of essential services within the County Emergency Plan.

Through these strategies, Middlesex County is committed to proactively addressing climate change impacts, ensuring that its infrastructure is resilient, adaptable, and capable of supporting the community's needs for the long term.

Risks

The purpose of infrastructure risk management in the Middlesex County Asset Management Plan is to systematically identify, assess, and mitigate risks that could impact the County's ability to deliver essential services reliably and safely. The County's risk management framework addresses potential threats to asset service levels, safety, financial stability, and the environment, ensuring that proactive measures are taken to safeguard public assets and community well-being.

The risk assessment process involves the periodic evaluation of credible risks associated with service delivery. Each risk is assessed based on:

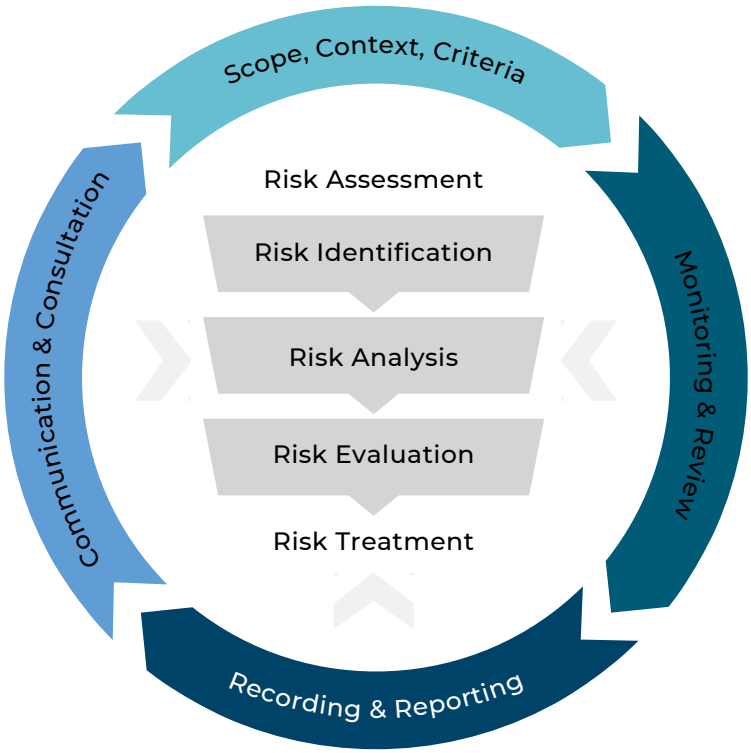
Likelihood

The probability of the risk event occurring.

Impact

The potential consequences of the risk event, which may include service disruption, public safety risks, environmental impacts, financial strain, and reputational damage.

By using this systematic approach, Middlesex County can prioritize risks based on their significance and develop targeted treatment plans to mitigate or manage each risk. The primary risk management steps include identifying and assessing risks, developing mitigation strategies, and regularly reviewing risk levels to ensure ongoing alignment with County objectives



Beyond climate-related risks, the following table outlines critical risks that could impact the Middlesex County Asset Management Plan, along with the associated treatment strategies and anticipated residual risks after mitigation:

Risk Indicator	Outcome	Risk Rating	Risk Treatment Plan	Residual Risk
Lack of Information	Insufficient data leading to underinvestment, resulting in unsafe and unreliable infrastructure	Very High	• Fund and conduct regular infrastructure inspections and assessments • Improve data management and reporting for infrastructure assets	Low
Lack of Funding	Inadequate funding, leading to delayed repairs and increased risk of service failure or infrastructure degradation	Very High	• Secure sustainable funding sources and pursue grants where possible • Implement a phased funding plan for high-priority infrastructure needs	Medium
Aging Infrastructure	Increased maintenance and repair costs, and higher risk of failure as infrastructure reaches end of life	High	• Prioritize replacements based on asset condition and risk • Update lifecycle management strategies to account for aging assets	Moderate
Regulatory Compliance	Risk of penalties or forced closures if infrastructure fails to meet new regulations	Medium	• Monitor regulatory changes and incorporate compliance updates into asset planning • Allocate funding to address compliance-related needs	Low
Technological Challenges	Difficulty in adopting and integrating new technologies into asset management practices	Medium	• Train staff on new technologies and tools • Gradually incorporate technology into asset data management systems	Low
Environmental Risks	Risks to infrastructure from non-climate-related environmental factors, such as soil erosion and ground movement	Medium	• Conduct regular environmental assessments • Use construction techniques and materials that mitigate environmental impacts	Low

To ensure the effectiveness of risk management strategies, Middlesex County will:

Review and Update Risk Assessments

Periodically reassess infrastructure risks and update mitigation strategies based on new data or emerging threats.

Incorporate Risk Analysis into Decision-Making

Use risk assessment findings to inform budget prioritization, resource allocation, and long-term planning for infrastructure investments.

Engage in Interested Parties Consultation

Collaborate with interested parties to identify local risk concerns and improve overall resilience of County assets.

By applying these risk management practices, Middlesex County is committed to mitigating critical risks, supporting sustainable infrastructure management, and protecting community welfare through a proactive approach.

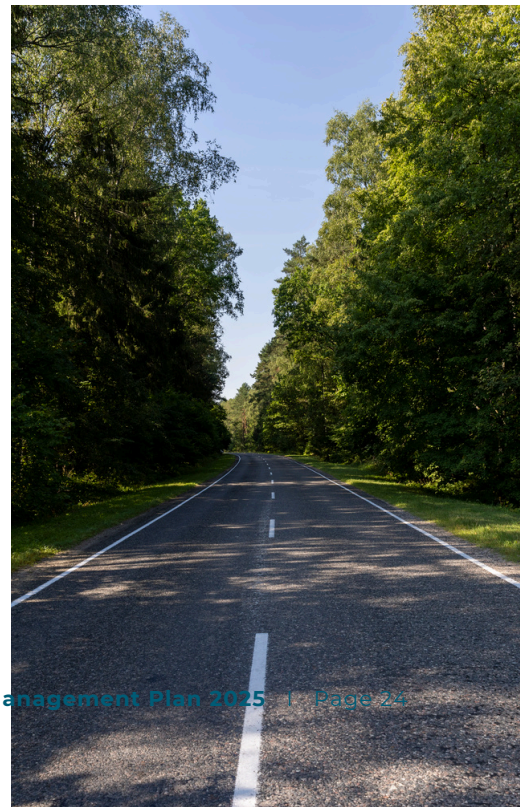
Review & Monitoring Process

The Middlesex County Asset Management Plan is a dynamic, evolving document, designed to adapt to changing infrastructure needs, strategic priorities, and community expectations. To ensure the Asset Management Plan remains aligned with these factors, Middlesex County will update the plan on an annual basis. This annual review considers updates to the state of infrastructure, levels of service, lifecycle management, and financial strategies, all of which are interdependent.

The October 1 annual review will include:

- A review of Middlesex County's progress in implementing the Asset Management Plan, assessing achievements against defined objectives and performance indicators.
- Documentation of any factors impeding the County's ability to execute the plan, including resource limitations, regulatory changes, or unforeseen infrastructure demands.
- Development of strategies to address identified challenges, ensuring that corrective actions are taken to keep the Asset Management Plan on track.

Middlesex County is committed to continuous improvement in asset management, updating its policies, data, and practices regularly to address emerging challenges and integrate new information. This commitment to adaptation ensures that the Asset Management Plan evolves to meet the County's asset needs and supports the community's long-term interests.



Communication of the Middlesex County Asset Management Plan

The Middlesex County Asset Management Plan is a cornerstone of the County's commitment to transparency and accountability in infrastructure planning and management. Ensuring the accessibility of this plan encourages public awareness, fosters trust, and invites valuable feedback from interested parties.

To promote accessibility of information the Middlesex County Asset Management Plan will be available in the following locations:

Middlesex County Administration Office

The Corporation of the County of Middlesex
399 Ridout St. North
London, ON
N6A 2P1

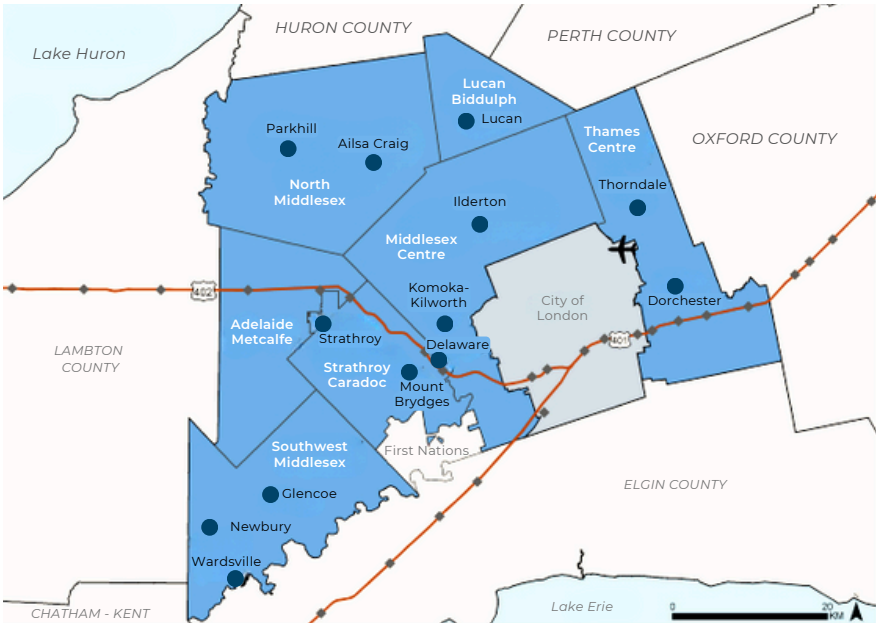
Middlesex County Website

The plan will be accessible for download on the County's official website at www.middlesex.ca, allowing interested parties easy access to view and review the County's strategic approach to asset management.

Middlesex County encourages interested parties to review the Asset Management Plan and provide feedback. Input from the community plays a valuable role in shaping the County's approach to infrastructure sustainability and service delivery, helping to ensure that asset management practices reflect the needs and expectations of those it serves.

State of the Infrastructure

Middlesex County is an upper-tier municipality, covering a sprawling area of over 2,800 square kilometres in the heart of southwestern Ontario. The County serves a vibrant, growing community of 81,700 people and is home to the municipalities of North Middlesex, Adelaide Metcalfe, Strathroy-Caradoc, Southwest Middlesex, Thames Centre, Middlesex Centre, Lucan Biddulph, and the Village of Newbury.



Middlesex County owns a sizeable portfolio of assets, which vary significantly in terms of their function, attributes, age, durability, and condition. This section of the Middlesex County Asset Management Plan aggregates technical and financial data across all asset classes, categorized into four key service areas:

Middlesex County

Includes transportation networks, bridges, culverts, and infrastructure that supports transportation, administration and governance.

Middlesex County Library

Encompasses the assets that provide access to education, information, and vibrant community spaces that encourage knowledge, relationship-building, creativity, and life enhancement.

Strathmere Lodge

Includes the facilities and systems that ensure high-quality long-term care services at the not for-profit, long-term-care home owned by Middlesex County. Rebuilt in 2006, this facility sits on a five-acre site on the outskirts of Strathroy. The home provides care to 160 residents in accordance with Ontario legislation and standards established and monitored by the Ministry of Long-Term Care.

Middlesex-London Paramedic Service (MLPS)

Covers the assets required to deliver 24-hour pre-hospital emergency and non-emergency care to the residents and visitors of Middlesex County and the City of London, including vehicles, equipment, and operational supplies.

This information provides an objective measure of the County's asset portfolio, identifying areas of strength and opportunities for targeted investment. By understanding the aggregate condition, value, and remaining service potential of these assets, Middlesex County is positioned to maintain and enhance its capital asset responsibly and effectively, ensuring service reliability for current and future generations.

Middlesex County Summary Statistics

Middlesex County assets analyzed in this service area of the asset management plan have a total 2024 replacement valuation of $1,356,747,512.

Middlesex County Assets

Service Area	Asset Replacement Value
Information Technology Services	$1,199,772
Transportation - Bridges	$459,636,000
Transportation - Culverts	$99,614,000
Transportation - Fleet	$16,548,200
Transportation - Machinery & Equipment	$2,929,867
Transportation - Traffic Signals	$9,075,000
Transportation - Roads - Base	$457,479,217
Transportation - Roads - Surface	$246,010,268
Transportation - Facilities	$36,923,604
MLPS - Facilties	$27,331,584
Total	$1,356,747,512

The below table presents a comprehensive overview of Middlesex County's assets, categorized by category, subcategory, and key performance metrics, including quantity, average age (years), lifecycle (years), and 2024 replacement value.

The table reflects the following key Middlesex County asset categories:

- **Middlesex County Information Technology Services (ITS) Assets** includes ITS equipment required and infrastructure to deliver all services.
- **Transportation Assets** covers bridges, culverts, fleet, machinery, equipment, traffic signals, road bases, and road surfaces critical to mobility and connectivity.
- **Facilities** encompasses buildings and related systems supporting operations, including foundations, building envelopes, electrical, plumbing, HVAC, and fire protection and accessibility systems across two facility portfolios:
    1. Twenty-four (24) Transportation Facilities across seven (7) sites
    2. Four (4) MLPS Facilities across four (4) sites.[1]

Middlesex County ITS Assets

Category	Subcategory	Quantity	Average Age (Years)	Lifecycle	2024 Replacement Value
County ITS	ITS Equipment	48	2	2	$21,153
County ITS	ITS Equipment	222	2	4	$239,210
County ITS	ITS Equipment	6	4	5	$5,104
County ITS	ITS Equipment	19	2	6	$18,393
County ITS	ITS Equipment	148	5	7	$659,798
County ITS	ITS Equipment	7	4	8	$2,723
County ITS	ITS Equipment	249	4	10	$253,391

Transportation - Bridges

Category	Subcategory	Quantity	Average Age (Years)	Lifecycle	2024 Replacement Value
Infrastructure	Bridge	122	56	75	$459,636,000

Transportation - Culverts

Category	Subcategory	Quantity	Average Age (Years)	Lifecycle	2024 Replacement Value
Infrastructure	Culvert	22	47	50	$10,023,000
Infrastructure	Culvert	105	56	75	$89,591,000

1 *Middlesex County maintains ownership of MLPS facilities that are not leased from third parties in accordance with the MLPS Creation By-law.*

Transportation - Fleet

Category	Subcategory	Quantity	Average Age (Years)	Lifecycle	2024 Replacement Value
Fleet	Vehicles	12	3	5	$675,535
Fleet	Vehicles	17	7	7	$976,651
Fleet	Vehicles	40	11	10	$11,659,101
Fleet	Vehicles	3	10	12	$1,157,057
Fleet	Vehicles	13	14	15	$1,519,288
Fleet	Vehicles	3	19	20	$560,568

Transportation - Machinery & Equipment

Category	Subcategory	Quantity	Average Age (Years)	Lifecycle	2024 Replacement Value
Machinery & Equipment	Transportation	4	7	5	$66,329
Machinery & Equipment	Transportation	1	3	10	$54,705
Machinery & Equipment	Transportation	2	11	12	$423,858
Machinery & Equipment	Transportation	2	19	15	$60,852
Machinery & Equipment	Transportation	4	16	20	$212,732
Machinery & Equipment	Transportation	1	11	25	$150,000
Machinery & Equipment	Transportation	3	14	35	$1,961,391

Transportation - Traffic Signals

Category	Subcategory	Quantity	Average Age (Years)	Lifecycle	2024 Replacement Value
Infrastructure	Traffic Signals	33	19	40	$9,075,000

Transportation - Roads

Category	Subcategory	Quantity	Average Age (Years)	Lifecycle	2024 Replacement Value
Infrastructure	Road Base	1,727 Lane km	81	100	$457,479,217
Infrastructure	Road Surface	1,727 Lane km	12	20	$246,010,268

Transportation - Facilities Assets

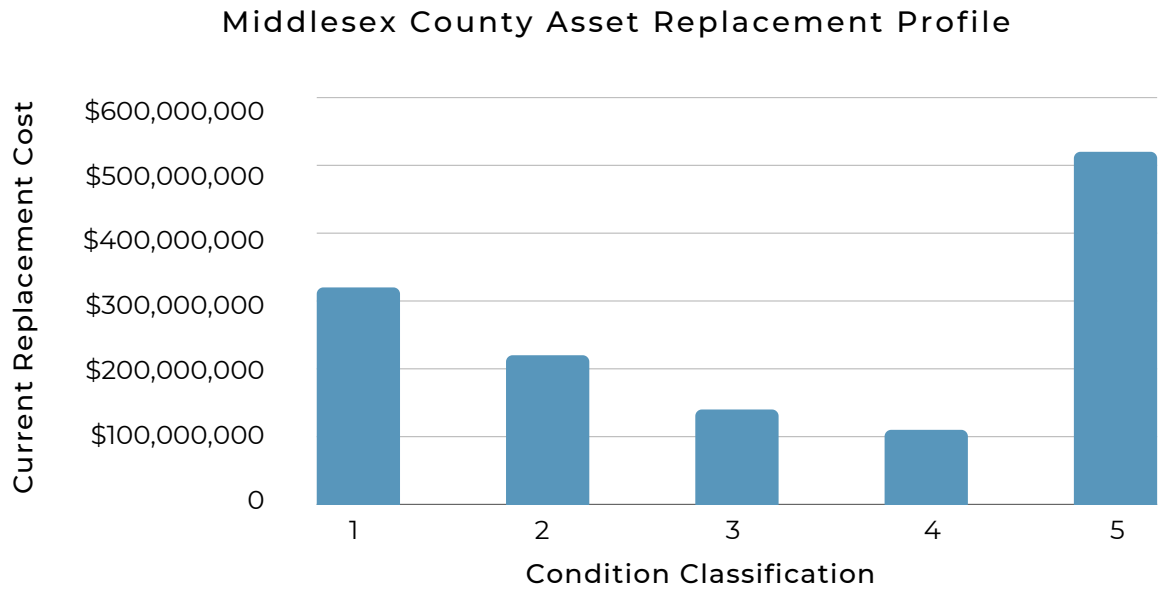
Category	Subcategory	Quantity	Average Age (Years)	Lifecycle	2024 Replacement Value
Facilities	Foundations (A10)	21	28	100	$2,296,356
Facilities	Superstructure (B10)	23	28	75	$5,380,236
Facilities	Exterior Enclosure (B20)	21	27	40	$2,519,370
Facilities	Roofing (B30)	23	28	25	$6,996,948
Facilities	Interior Construction (C10)	8	24	25	$256,866

Category	Subcategory	Quantity	Average Age (Years)	Lifecycle	2024 Replacement Value
Facilities	Stairs (C20)	6	25	40	$73,656
Facilities	Interior Finishes (C30)	22	29	15	$8,572,182
Facilities	Accessibility (C33)	5	15	15	$19,530
Facilities	Plumbing (D20)	9	24	30	$777,666
Facilities	HVAC (D30)	10	24	20	$629,796
Facilities	Fire Protection (D40)	8	25	40	$14,880
Facilities	Electrical (D50)	18	28	40	$1,270,752
Facilities	Equipment (E10)	5	26	15	$296,298
Facilities	Site Improvements (G20)	13	28	20	$6,855,216
Facilities	Site Electrical Utilities (G40)	5	24	50	$963,852

MLPS - Facilities Assets

Category	Subcategory	Quantity	Average Age (Years)	Lifecycle	2024 Replacement Value
Facilities	Foundations (A10)	4	22	100	$1,779,834
Facilities	Superstructure (B10)	4	22	75	$2,153,322
Facilities	Exterior Enclosures (B20)	4	22	40	$3,804,816
Facilities	Roofing (B30)	4	22	25	$3,972,216
Facilities	Interior Finishes (C30)	4	22	25	$501,084
Facilities	Stairs (C20)	2	38	40	$53,754
Facilities	Interior Finishes (C30)	4	22	15	$6,603,930
Facilities	Accessibility (C33)	3	6	15	$46,686
Facilities	Conveying (D10)	1	7	25	$130,014
Facilities	Plumbing (D20)	4	22	30	$856,158
Facilities	HVAC (D30)	4	22	20	$1,778,718
Facilities	Fire Protection (D40)	4	22	40	$304,482
Facilities	Electrical (D50)	4	22	40	$2,937,312
Facilities	Equipment (E10)	4	22	15	$434,682
Facilities	Site Improvements (G20)	4	22	20	$1,888,644
Facilities	Site Electrical Utilities (G40)	3	6	50	$85,932

The County utilizes a straight-line amortization schedule approach to depreciate capital assets. In general, this approach may not be reflective of an asset's actual condition and the true nature of its deterioration, which tends to accelerate toward the end of the asset's lifecycle. The Middlesex County GIS Asset Management Plan also incorporates actual field condition data which provides a more meaningful and representative presentation of the County's state of infrastructure. The table and chart below show the distribution of assets based on the assessed condition and replacement cost of the same.



Condition Classification No.	Condition Classification	Description of Condition
1	Very Poor	Asset is near or at the end of its service life, with significant degradation potentially affecting functionality. Action or replacement is required to avoid potential service disruptions.
2	Poor	Asset is below acceptable condition, showing substantial wear and requiring higher levels of maintenance or rehabilitation to restore reliable performance.
3	Fair	Asset is performing its intended function but exhibits moderate wear and signs of aging. Maintenance or minor rehabilitation may be needed in the near term.
4	Good	Asset is in sound condition with only minor signs of wear. Regular maintenance is sufficient to sustain performance and service levels.
5	Very Good	Asset is in excellent condition, with little to no signs of wear. Only routine maintenance is required to ensure continued functionality.

The condition assessment of Middlesex County's assets reveals that the majority of the County's infrastructure replacement value is concentrated in assets classified as Good (Condition 4) and Very Good (Condition 5), accounting for a combined total of $670,090,064. This represents approximately 50% of the total replacement value, indicating a strong baseline for the County's asset portfolio. These assets exemplify effective past investment and management practices, ensuring their continued functionality and reliability.

The remaining replacement value is distributed across assets in Fair (Condition 3), Poor (Condition 2), and Very Poor (Condition 1) conditions, which collectively account for $686,657,448 (approximately 50%). While these assets are functional, they demonstrate varying degrees of wear and deterioration requiring maintenance or significant rehabilitation efforts to mitigate risks and ensure service continuity.

This distribution highlights the County's commitment to maintaining a significant portion of its assets in good or better condition, while also emphasizing the need for strategic investments in aging and deteriorated assets.

Middlesex County Library Summary Statistics

Middlesex County Library assets analyzed in this service area of the asset management plan have a total 2024 replacement valuation of $6,237,078.

Middlesex County Library Assets

Service Area	Asset Replacement Value
Information Technology Services	$1,098,378
Fleet	$80,000
Land Improvements	$140,000
Machinery & Equipment	$4,918,700
Total	**$6,237,078**

The below table presents a comprehensive overview of Middlesex County Library's assets, categorized by category, subcategory, and key performance metrics, including quantity, average age (years), lifecycle (years), and 2024 replacement value.

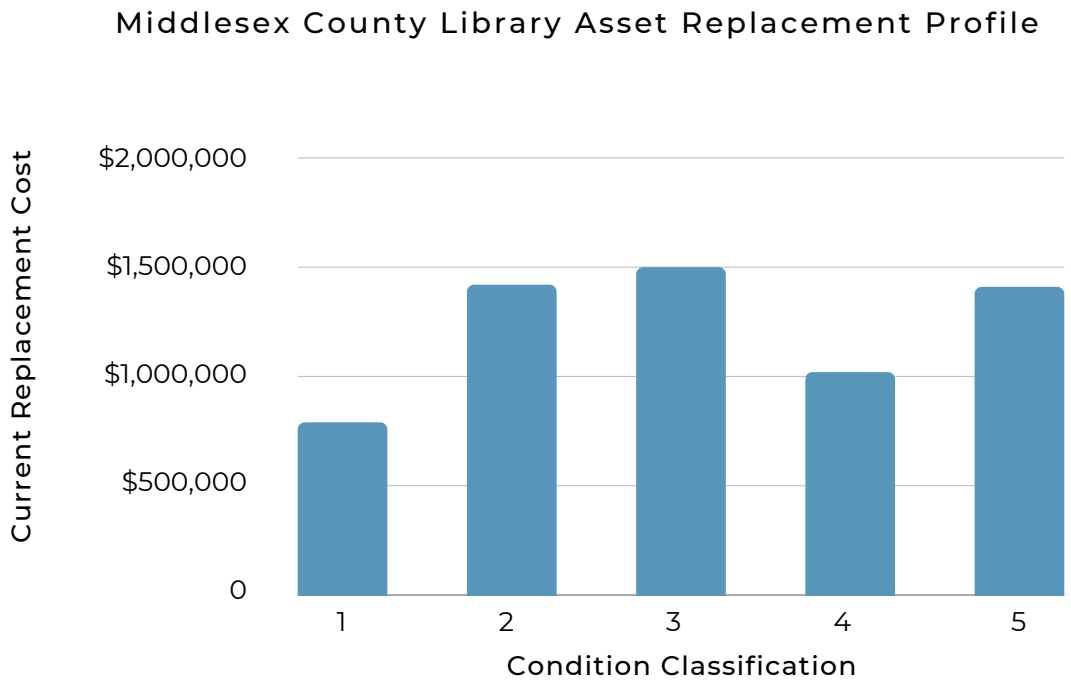
The table reflects the following key Middlesex County Library asset categories:

- **Middlesex County Library ITS Assets** includes ITS equipment required for technology infrastructure to deliver all library services.
- **Machinery and Equipment** includes library furniture and physical media collections.
- **Fleet Assets** is the library delivery vehicle.
- **Land Improvements** covers library signage at branches and locations throughout the County.

Middlesex County Library Assets

Category	Subcategory	Quantity	Average Age (Years)	Lifecycle (Years)	2024 Replacement Value
Library ITS	ITS Equipment	12	4	2	$5,394
Library ITS	ITS Equipment	259	3	4	$222,242
Machinery & Equipment	Books - Paperback, Media	15,500	4	5	$484,200
Library ITS	ITS Equipment	20	4	5	$18,911
Library Vehicles	Library Fleet	1	0	5	$80,000
Library ITS	ITS Equipment	51	4	6	$32,841
Library ITS	ITS Equipment	152	4	7	$264,300
Library ITS	ITS Equipment	417	6	10	$554,673
Machinery & Equipment	Furniture	729	4	15	$1,218,000
Machinery & Equipment	Books - Hardcover	98,100	6	15	$3,216,500
Land Improvements	Library Signs	4	9	20	$140,000

The Middlesex County Library utilizes a straight-line amortization schedule approach to depreciate capital assets. In general, this approach may not be reflective of an asset's actual condition and the true nature of its deterioration, which tends to accelerate toward the end of the asset's lifecycle. The Middlesex County Asset Management Plan also incorporates actual field condition data which provides a more meaningful and representative presentation of the Middlesex County Library's state of infrastructure. The table and chart below show the distribution of assets based on the assessed condition and replacement cost of the same.



Condition Classification No.	Condition Classification	Description of Condition
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2	Poor	Asset is below acceptable condition, showing substantial wear and requiring higher levels of maintenance or rehabilitation to restore reliable performance.
3	Fair	Asset is performing its intended function but exhibits moderate wear and signs of aging. Maintenance or minor rehabilitation may be needed in the near term.
4	Good	Asset is in sound condition with only minor signs of wear. Regular maintenance is sufficient to sustain performance and service levels.
5	Very Good	Asset is in excellent condition, with little to no signs of wear. Only routine maintenance is required to ensure continued functionality.

The condition assessment of Middlesex County Library assets reveals a diverse distribution of replacement values across condition ratings. A portion of the replacement value is concentrated in assets classified as Good (Condition 4) and Very Good (Condition 5), totaling $2,516,487. This represents approximately 40% of the total replacement value, reflecting effective past investment and maintenance practices that ensure continued functionality and reliability.

The remaining replacement value is distributed across assets in Fair (Condition 3), Poor (Condition 2), and Very Poor (Condition 1) conditions, which collectively account for $3,719,592 (approximately 60%). While these assets remain functional, they exhibit varying degrees of wear and deterioration, requiring ongoing maintenance or significant rehabilitation efforts to mitigate risks and maintain service continuity.

This distribution highlights the County's commitment to maintaining a significant portion of its library infrastructure in good or better condition, while also emphasizing the need for strategic investments to address aging and deteriorated assets.

Strathmere Lodge Summary Statistics

Strathmere Lodge assets analyzed in this service area of the asset management plan have a total 2024 replacement valuation of $45,002,990.

Strathmere Lodge Assets

Service Area	Asset Replacement Value
Information Technology Services	$295,833
Facilties	$41,268,936
Fleet	$104,124
Land Improvements	$132,291
Machinery & Equipment	$3,201,806
Total	**$45,002,990**

The next table presents a comprehensive overview of Strathmere Lodge assets, categorized by category, subcategory, and key performance metrics, including quantity, average age (years), lifecycle (years), and 2024 replacement value.

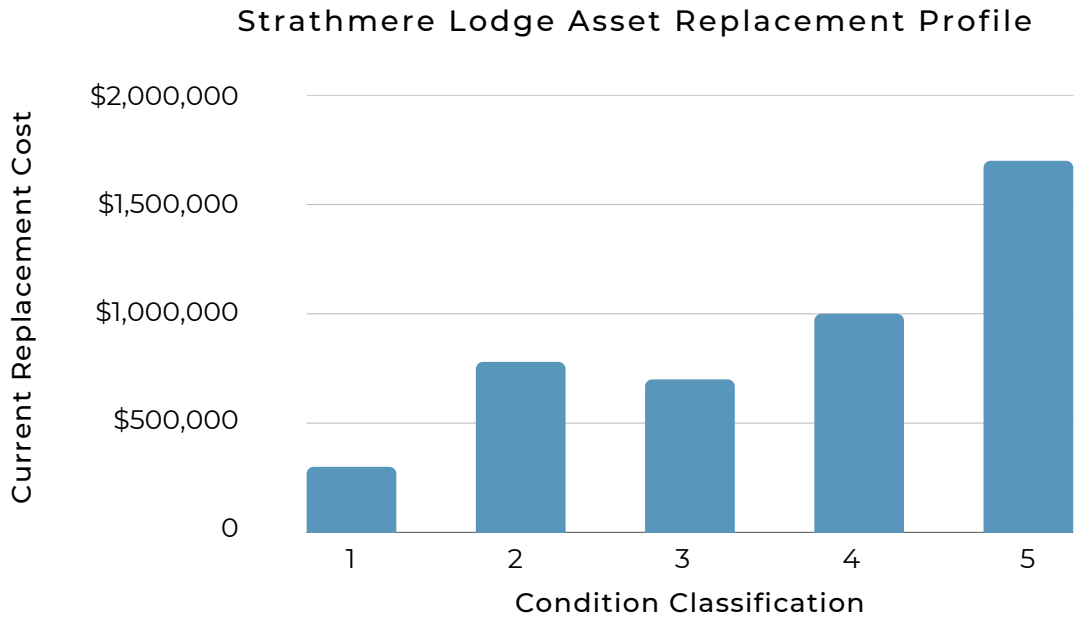
The table reflects the following key Strathmere Lodge asset categories:

- **Strathmere Lodge ITS Assets** includes ITS equipment required for technology infrastructure to deliver all Strathmere Lodge administration and care related services.
- **Facilities** encompasses the buildings and related systems supporting operations, including foundations, building envelopes, electrical, plumbing, HVAC, and fire protection and accessibility systems across the seven (7) structures located at Strathmere Lodge.
- **Machinery and Equipment** includes administration and care related equipment at Strathmere Lodge.
- **Fleet Assets** is the transportation van.
- **Land Improvements** covers gardens, and resident areas outside of the main structure.

Strathmere Lodge Assets

Category	Subcategory	Quantity	Average Age (Years)	Lifecycle	2024 Replacement Value
Facilities	Foundations (A10)	4	17	100	$1,520,922
Facilities	Basement Construction (A20)	1	18	100	$1,204,722
Facilities	Superstructure (B10)	3	15	75	$9,935,934
Facilities	Exterior Enclosure (B20)	2	17	40	$4,098,696
Facilities	Roofing (B30)	4	16	25	$6,129,258
Facilities	Interior Construction (C10)	1	18	25	$997,332
Facilities	Stairs (C20)	1	18	40	$152,520
Facilities	Interior Finishes (C30)	1	18	15	$7,258,278
Facilities	Accessibility (C33)	1	18	15	$225,990
Facilities	Conveying (D10)	1	18	25	$260,028
Facilities	Plumbing (D20)	1	18	30	$1,697,622
Facilities	HVAC (D30)	1	18	20	$2,087,664
Facilities	Fire Protection (D40)	1	18	40	$674,250
Facilities	Electrical (D50)	1	18	40	$2,291,148
Facilities	Equipment (E10)	2	18	15	$341,124
Facilities	Site Improvements (G20)	6	14	20	$2,393,448
Lodge ITS	ITS Equipment	39	0	2	$17,830
Lodge ITS	ITS Equipment	77	2	4	$74,661
Machinery & Equipment	Care Related Equipment	10	9	5	$39,198
Lodge ITS	ITs Equipment	3	5	5	$2,185
Lodge ITS	ITs Equipment	12	2	6	$7,530
Lodge ITS	ITs Equipment	114	6	7	$112,743
Land Improvements	Land Improvements	3	8	10	$44,617
Machinery & Equipment	Care Related Equipment	24	8	10	$868,442
Lodge ITS	ITs Equipment	126	5	10	$80,884
Fleet	Vehicles	1	10	10	$104,124
Land Improvements	Land Improvements	1	18	20	$111,403
Machinery & Equipment	Care Related Equipment	225	12	15	$33,627
Machinery & Equipment	Care Related Equipment	1,602	15	20	$1,984,101
Machinery & Equipment	Care Related Equipment	189	11	25	$129,166
Land Improvements	Land Improvements	34	19	40	$20,888
Machinery & Equipment	Care Related Equipment	14	19	40	$16,179
Machinery & Equipment	Care Related Equipment	1	44	50	$90,492

Strathmere Lodge utilizes a straight-line amortization schedule approach to depreciate capital assets. In general, this approach may not be reflective of an asset's actual condition and the true nature of its deterioration, which tends to accelerate toward the end of the asset's lifecycle. The Middlesex County Asset Management Plan also incorporates actual field condition data which provides a more meaningful and representative presentation of the Strathmere Lodge's state of infrastructure. The table and chart below show the distribution of assets based on the assessed condition and replacement cost of the same.



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1	Very Poor	Asset is near or at the end of its service life, with significant degradation potentially affecting functionality. Action or replacement is required to avoid potential service disruptions.
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3	Fair	Asset is performing its intended function but exhibits moderate wear and signs of aging. Maintenance or minor rehabilitation may be needed in the near term.
4	Good	Asset is in sound condition with only minor signs of wear. Regular maintenance is sufficient to sustain performance and service levels.
5	Very Good	Asset is in excellent condition, with little to no signs of wear. Only routine maintenance is required to ensure continued functionality.

The condition assessment of Strathmere Lodge assets reveals that the majority of the facility's infrastructure and asset replacement value is concentrated in assets classified as Good (Condition 4) and Very Good (Condition 5), accounting for a combined total of $27,142,687. This represents approximately 61% of the total replacement value, indicating a solid baseline for the facility's asset portfolio. These assets reflect effective past investment and maintenance practices, ensuring their continued functionality and reliability in supporting long-term care services.

The remaining replacement value is distributed across assets in Fair (Condition 3), Poor (Condition 2), and Very Poor (Condition 1) conditions, collectively accounting for $17,860,303 (approximately 39%). While these assets remain functional, they exhibit varying degrees of wear and deterioration, necessitating ongoing maintenance or significant rehabilitation to mitigate risks and ensure service continuity.

This distribution highlights Strathmere Lodge's commitment to maintaining a substantial portion of its infrastructure in good or better condition, while emphasizing the need for strategic investment in aging and deteriorated assets to sustain high-quality long-term care services for residents.

MLPS Summary Statistics

MLPS assets analyzed in this service area of the asset management plan have a total 2024 replacement valuation of $22,898,493.

MLPS Assets

Service Area	Asset Replacement Value
Information Technology	$620,294
Fleet	$16,271,000
Machinery & Equipment	$6,007,199
Total	**$22,898,493**

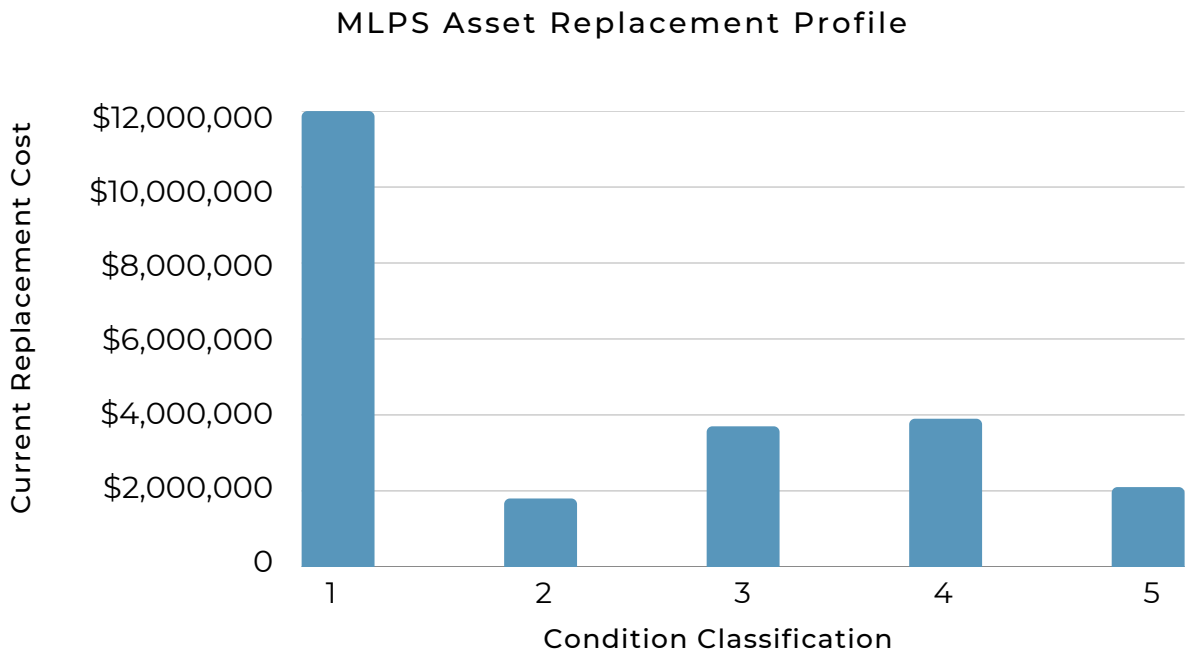
The below table presents a comprehensive overview of MLPS assets, categorized by category, subcategory, and key performance metrics, including quantity, average age (years), lifecycle (years), and 2024 replacement value. The table reflects the following key MLPS asset categories:

- **MLPS ITS Assets** includes ITS equipment required to deliver all MLPS administration and emergency care related services.
- **Fleet** encompasses all vehicles required to deliver MLPS administration and emergency care related services.
- **Machinery and Equipment** includes administration, training and emergency care related equipment.

MLPS Assets

Category	Subcategory	Quantity	Average Age (Years)	Lifecycle	2024 Replacement Value
MLPS ITS	ITS Equipment	55	2	2	$18,538
Machinery & Equipment	Patient Care Equipment	90	2	3	$67,500
MLPS ITS	ITS Equipment	261	2	4	$378,439
MLPS ITS	ITS Equipment	14	3	5	$12,358
Vehicles	Land Ambulance Fleet	40	2	5	$7,624,000
MLPS ITS	ITS Equipment	20	5	6	$16,016
Vehicles	Land Ambulance Fleet	16	5	6	$3,675,000
MLPS ITS	ITS Equipment	61	5	7	$114,047
Machinery & Equipment	Patient Care Equipment	238	2	7	$4,761,600
Vehicles	Land Ambulance Fleet	12	6	7	$2,800,000
Machinery & Equipment	Patient Care Equipment	9	7	8	$67,649
Vehicles	Land Ambulance Fleet	10	8	8	$1,902,000
MLPS ITS	ITS Equipment	154	5	10	$80,896
Machinery & Equipment	Patient Care Equipment	76	3	10	$634,850
Machinery & Equipment	Patient Care Equipment	92	4	12	$69,000
Vehicles	Land Ambulance Fleet (Training)	2	13	15	$270,000
Machinery & Equipment	Training & Support Equipment	5	13	20	$406,000

MLPS utilizes a straight-line amortization schedule approach to depreciate capital assets. In general, this approach may not be reflective of an asset's actual condition and the true nature of its deterioration, which tends to accelerate toward the end of the asset's lifecycle. The Middlesex County Asset Management Plan also incorporates actual field condition data which provides a more meaningful and representative presentation of the MLPS state of the infrastructure. The table and chart below show the distribution of assets based on the assessed condition and replacement cost of the same.



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4	Good	Asset is in sound condition with only minor signs of wear. Regular maintenance is sufficient to sustain performance and service levels.
5	Very Good	Asset is in excellent condition, with little to no signs of wear. Only routine maintenance is required to ensure continued functionality.

The condition assessment of Middlesex-London Paramedic Services (MLPS) assets reveals that a substantial portion of the infrastructure replacement value is currently classified as Very Poor (Condition 1), accounting for $11,956,909, or approximately 53% of the total replacement value. However, this figure is significantly overstated due to extended ambulance order times. Upon delivery and in-service dates of all ordered ambulances, the majority of the replacement value will transition to Very Good (Condition 5), reflecting the County's proactive approach to fleet renewal and asset management.

The remaining replacement value is distributed across assets in Poor (Condition 2), Fair (Condition 3), Good (Condition 4), and Very Good (Condition 5) conditions, which collectively account for $10,941,584 (approximately 47%). This includes $3,772,453 in Good condition and $2,340,385 in Very Good condition, representing approximately 21% of the total replacement value. These assets highlight effective past investment and maintenance, ensuring continued reliability in service delivery.

This distribution underscores the County’s commitment to addressing aging and deteriorated assets while ensuring operational readiness. The anticipated transition of a significant portion of assets to Very Good condition following the deployment of new ambulances demonstrates Middlesex County’s proactive and forward-thinking approach to asset management, which will strengthen the long-term reliability and effectiveness of Middlesex-London Paramedic Services.

Levels of Service

The two primary risks to Middlesex County's financial sustainability are the total lifecycle costs of assets and the establishment of levels of service (LOS) that exceed the County's financial capacity. In this regard, municipalities face a critical choice:

- Overpromise and underdeliver, which risks public dissatisfaction and financial instability;
- Underpromise and overdeliver, which can undermine long-term planning and limit community potential; or
- Promise only that which can be delivered efficiently, balancing community needs with fiscal sustainability and equity for ratepayers.

In general, there is a trade-off between political expedience and prudent, long-term fiscal stewardship. Middlesex County is committed to the third approach—developing realistic, achievable levels of service that align with available resources while supporting the County's strategic objectives.

Middlesex County's approach to levels of service is guided by Ontario Regulation 588/17 and the Middlesex County Strategic Asset Management Policy. These frameworks serve as the foundation for establishing LOS that reflect community priorities, support fiscal responsibility, and leverage key performance indicators (KPIs) to evaluate and communicate the performance of each asset class.

Developing realistic LOS using these guiding principles is instrumental in managing public and interested party expectations, identifying asset classes or areas requiring higher investment or attention, driving organizational performance and accountability, and securing the highest value for money from public assets through proactive planning. For the purposes of this version of the Middlesex County Asset Management Plan, current levels of service are proposed to remain as the future levels of service. This approach ensures stability in service delivery and aligns with the County's financial capacity while addressing ongoing infrastructure needs.

To ensure LOS standards are meaningful and actionable, Middlesex County has adopted a structured approach to defining and monitoring service levels. Each asset class subsection within this Asset Management Plan includes a qualitative description, which provides a narrative summary of the service provided by the asset class, focusing on its purpose, role in the community, and alignment with County objectives; quantitative performance metrics, which include measurable technical indicators specific to the asset type (e.g., Pavement Condition Index for roads, Bridge Condition Index for bridges) and align with regulatory requirements and industry standards; and key performance indicators (KPIs), which track performance trends over time to evaluate whether the County is meeting its established LOS. KPIs are updated annually and used to identify compliance or deviations from expected service levels.

Middlesex County recognizes that monitoring and continuous improvement are essential to maintaining sustainable LOS. The County annually collects data on its KPIs to establish compliance with LOS targets, identify deviations or performance gaps, prioritize investments in underperforming asset classes, and make informed, data-driven decisions that align with strategic goals. This proactive monitoring framework ensures that Middlesex County's LOS remain responsive to changing community needs, emerging risks, and evolving financial realities. By focusing on achievable and meaningful service levels, Middlesex County ensures that its infrastructure investments and maintenance activities align with strategic objectives, regulatory requirements, and long-term financial sustainability.

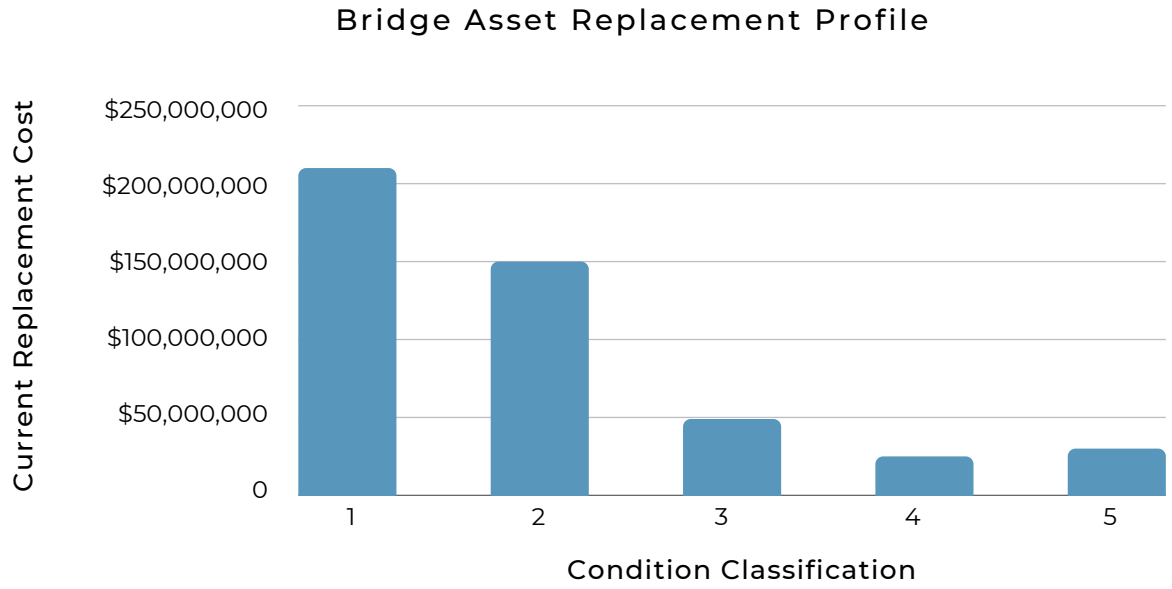
Bridges

Middlesex County manages a significant inventory of bridge infrastructure that is essential for connectivity and supporting the transportation needs of the community. Middlesex County's bridge network consists of 122 bridges, varying in age, condition, and structural attributes. The Middlesex County GIS Asset Management Dashboard illustrates the location and distribution of these assets across the County's road network.

Bridge Assets

Category	Subcategory	Quantity	Average Age (Years)	Lifecycle	2024 Replacement Value
Infrastructure	Bridge	122	56	75	$459,636,000

The County applies a straight-line amortization schedule to depreciate capital assets, as outlined in its financial policies.



However, the Middlesex County Asset Management Plan supplements this financial data with field condition assessments to provide a more accurate evaluation of the bridge network's state of infrastructure. To assess bridge condition, the County relies on the Ontario Structure Inspection Manual (OSIM) reports and the Bridge Condition Index (BCI). The BCI is a standardized measure used to evaluate the overall health of bridges and guide decisions on maintenance, rehabilitation, or replacement. Based on detailed inspections conducted by County staff and qualified bridge inspectors, the BCI assigns a numeric rating ranging from 0 to 100, with higher values indicating better condition.

The following table outlines the classifications used within the BCI range to describe maintenance urgency:

Bridge Condition Index

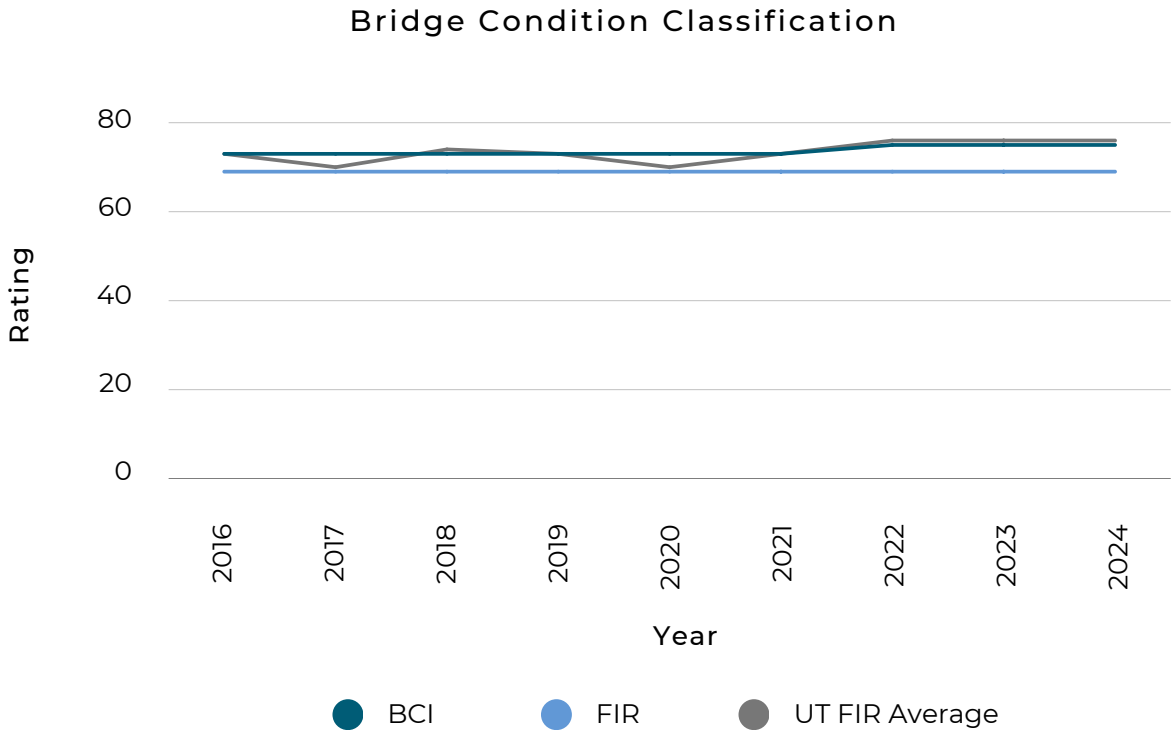
Rating	Classification	Description
100-90	Very Good	• The bridge is in near-new condition with no visible structural defects. • Preventative maintenance is sufficient to preserve condition. • No immediate action is required.
89-70	Good	• Minor wear and tear, with no significant structural issues. • Routine maintenance required to prevent further degradation.
69-50	Fair	• Noticeable signs of aging, such as minor cracks or surface deterioration. • The bridge may require moderate rehabilitation work to address deficiencies.
49-30	Poor	• Significant deterioration or structural defects, such as larger cracks, exposed reinforcement, or corrosion. • Bridge requires major rehabilitation to restore functionality and safety.
29-0	Critical	• Severe structural deficiencies that compromise safety and functionality. • Immediate intervention is required, possibly including load restrictions or closure. • Replacement or complete reconstruction is often necessary.

In addition to OSIM assessments, the County adheres to Financial Information Return (FIR) reporting standards as required by the Ministry of Municipal Affairs and Housing (MMAH). Section 80D of the FIR requires municipalities to report the number of bridges with a BCI rating of Very Good or Good.

The chart below highlights the stability and overall good condition of Middlesex County's bridge inventory from 2016 to 2024. During this period, the average BCI consistently remained at 73, which falls within the "Good" range. This reflects a structurally sound network requiring routine maintenance or minor repairs. in alignment with long-term planning objectives and community needs.

Additionally, 69% of the County's bridges, equivalent to 84 structures, have primary components rated as being in Very Good to Good condition. These bridges generally lack significant structural concerns and demonstrate robust performance, further reflecting the County's commitment to proactive maintenance and effective asset management. For reference, the chart below also includes the Ontario upper-tier municipality Section 80D average BCI, for comparative purposes.

This consistent performance underscores the resilience of the County's bridge infrastructure and provides confidence in its ability to manage and sustain these assets in alignment with long-term planning objectives and community needs.



Lifecycle Replacement Profile

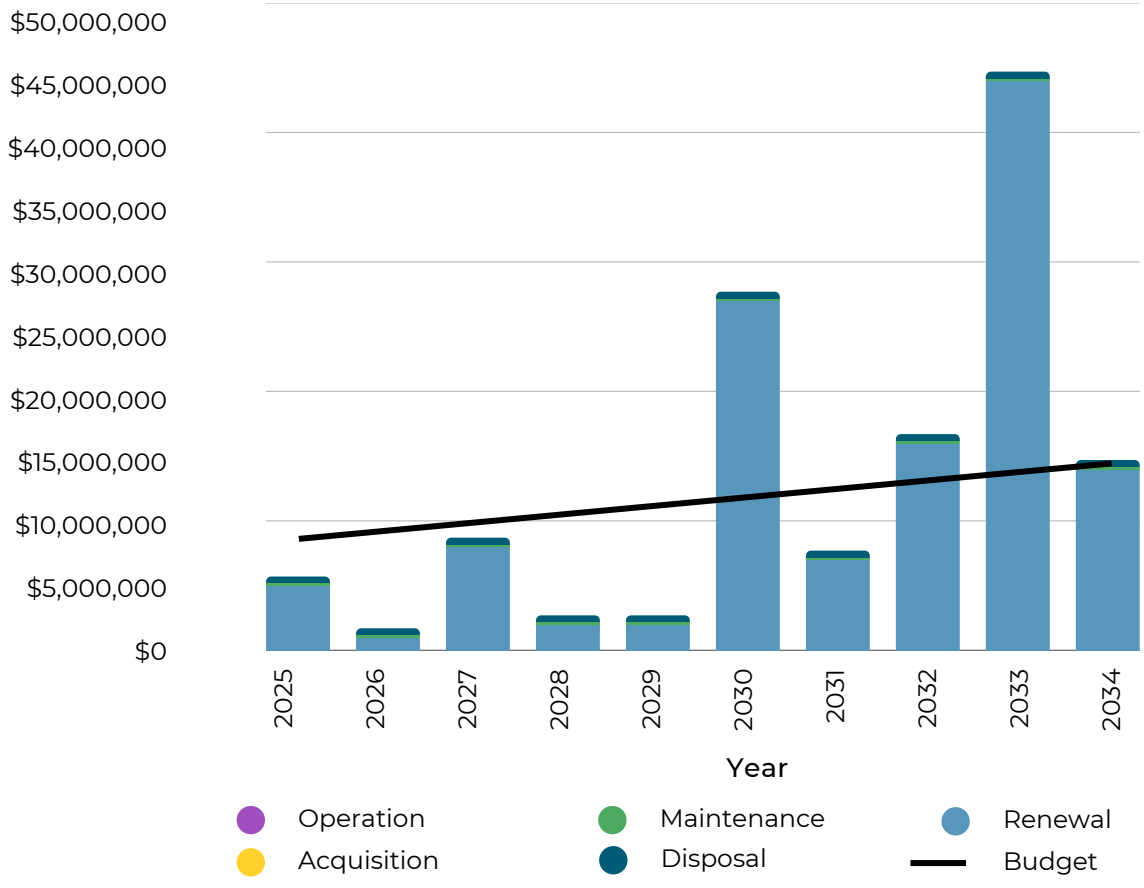
The total bridge replacement cost over a 10-year forecast period is estimated at $12,594,358 per year. The anticipated annual budget for bridges over this period totals $10,628,319, covering 84% of the cost needed to sustain the current level of service at the lowest lifecycle cost. This leaves an annual shortfall of $1,966,039 in the forecast lifecycle costs required to meet service needs.

The forecast lifecycle replacement costs necessary to provide bridge infrastructure include:

 **Acquisition**	The activities to provide a higher level of service or a new service that did not exist previously.
 **Operation**	The regular activities to provide services.
 **Maintenance**	The activities necessary to retain an asset as near as practicable to an appropriate service condition. Maintenance activities enable an asset to provide service for its planned life: • Brushing • Flushing • Patching • Structure Repairs
 **Renewal**	The activities that return the service capability of an asset up to that which it had originally provided: • Rehabilitation • Deck Reconstruction
 **Disposal**	The activities associated with the disposal of a decommissioned asset including sale, demolition, or relocation.

Lifecycle Activity	Current Performance	Budget/Year
Acquistion	No lifecycle costs projected.	$0
Operation	No lifecycle costs projected.	$0
Maintenance	Maintenance activities can be completed within the planned budget.	**$251,558**
Renewal	Renewal funding shows an annual shortfall of $1,966,039	**$12,342,800**
Disposal	No lifecycle costs projected.	$0

The chart below represents the forecast costs, in current dollars, needed to minimize lifecycle costs associated with bridge service provision. The proposed budget line indicates available funding, while the gap between forecast work and the proposed budget highlights the balance needed between costs, service levels, and risk to achieve optimal outcomes.



Middlesex County is committed to addressing funding shortfalls through targeted advocacy for external funding, optimizing capital expenditures, and improving lifecycle planning. Regular monitoring and updates to the OSIM inspection database will remain critical to managing risks and ensuring sustainable service delivery. These strategies are detailed further in the Financial Strategy.

Levels of Service

Bridge assets are subject to prescribed levels of service reporting under Ontario Regulation 588/17, which requires reporting at two levels:

Community Levels of Service (Qualitative) Describes service levels in terms understood by interested parties, reflecting the scope and quality expectations of bridges.

Technical Levels of Service (Quantitative) Uses performance measures to describe the scope and quality of bridges, detailing how effectively the County delivers services

Levels of Service - Bridges

Community Level of Service	
Year	2024
Description of the traffic that is supported by County bridges.	The road system serving Middlesex County, including bridges, consists of Provincial Highways, County Roads, and Municipal Roads. County Roads function as arterial and collector routes, facilitating efficient movement of people, goods, and services. The system supports all transportation modes.
Description or images of the condition of bridges and culverts and how this would affect use of the bridges.	Please refer to the Middlesex County GIS Asset Management Dashboard and Middlesex County OSIM Inspection Reports. The current level of service does not negatively impact the use of the structures in the immediate timeframe.
Technical Levels of Service	
Year	2024
Percentage of bridges in the County with loading or dimensional restrictions.[2]	1.5%
For bridges in the County, the average bridge condition index value.	73.3
Key Performance Indicators	
Year	2024
Ministry of Municipal Affairs and Housing (MMAH) Financial Information Return (FIR) – Number of structures where the condition of primary components is rated as good to very good	84

[2] *Single Unit Load Posting Limit*

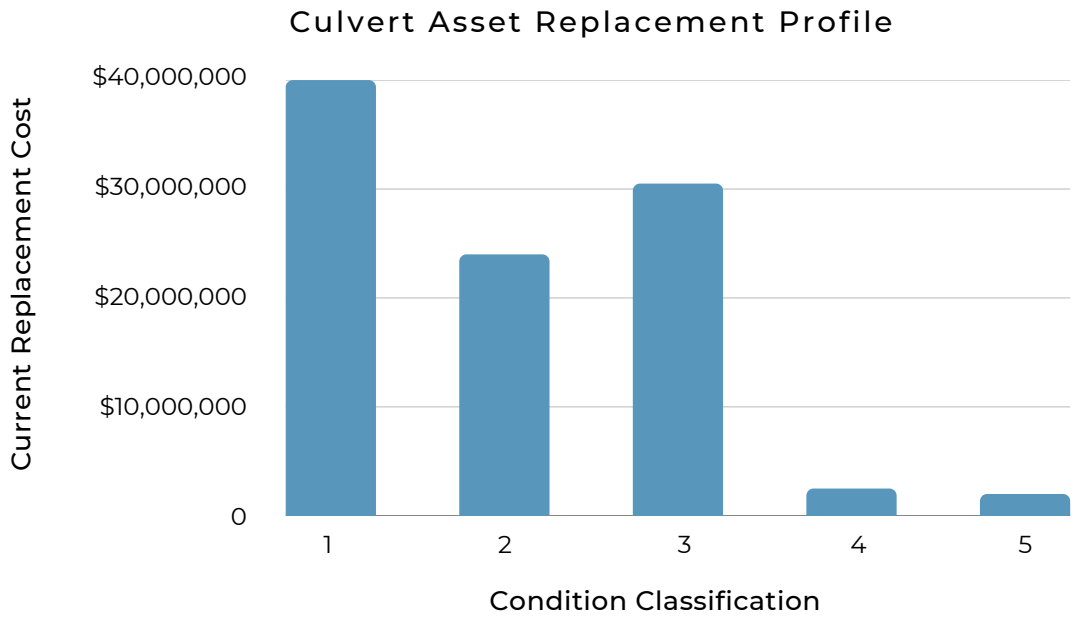
Culverts

Middlesex County manages a significant inventory of culvert infrastructure that is essential for connectivity and supporting the transportation needs of the community. Middlesex County's culvert network consists of 127 culverts, varying in age, condition, and structural attributes. The Middlesex County GIS Asset Management Dashboard illustrates the location and distribution of these assets across the County's road network.

Culvert Assets

Category	Subcategory	Quantity	Average Age (Years)	Lifecycle	2024 Replacement Value
Infrastructure	Culvert	22	47	50	$10,023,000
Infrastructure	Culvert	105	56	75	$89,591,000

The County applies a straight-line amortization schedule to depreciate capital assets, as outlined in its financial policies.



However, the Middlesex County Asset Management Plan supplements this financial data with field condition assessments to provide a more accurate evaluation of the culvert network's state of infrastructure. To assess culvert condition, the County relies on the Ontario Structure Inspection Manual (OSIM) reports and the Culvert Condition Index (CCI). The CCI is a standardized measure used to evaluate the overall health of culverts and guide decisions on maintenance, rehabilitation, or replacement. Based on detailed inspections conducted by County staff and qualified culvert inspectors, the CCI assigns a numeric rating ranging from 0 to 100, with higher values indicating better condition.

The following table outlines the classifications used within the CCI range to describe maintenance urgency:

Culvert Condition Index

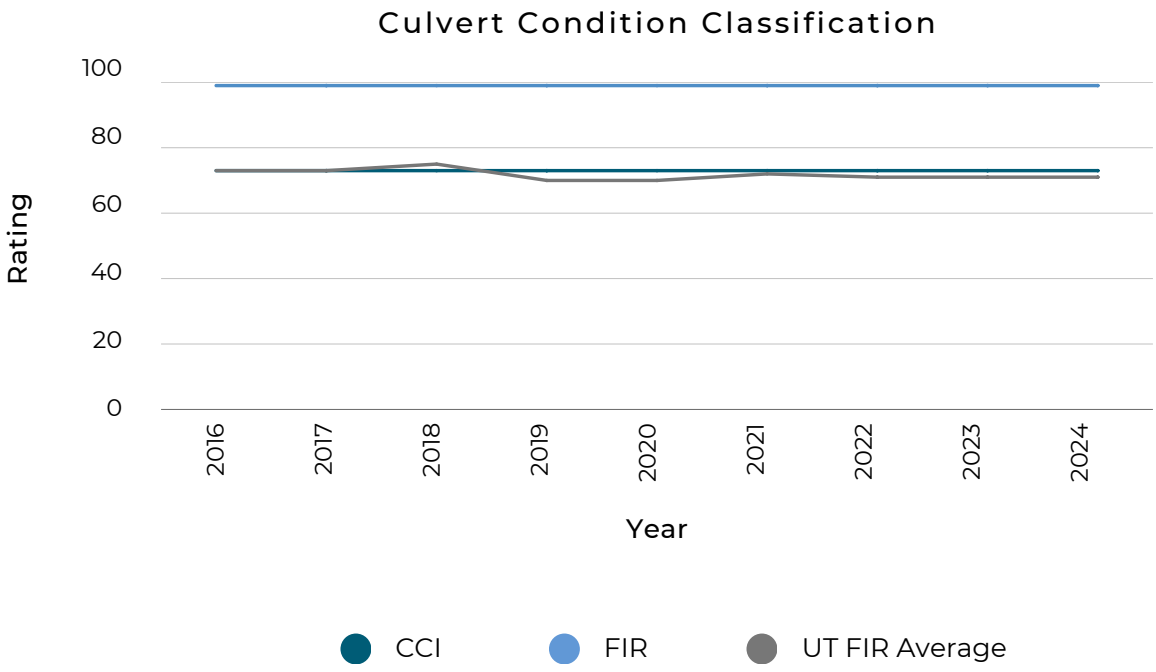
Rating	Classification	Description
100-90	Very Good	• The culvert is in near-new condition with no visible structural defects. • Preventative maintenance is sufficient to preserve condition. • No immediate action is required.
89-70	Good	• Minor wear and tear, with no significant structural issues. • Routine maintenance required to prevent further degradation.
69-50	Fair	• Noticeable signs of aging, such as minor cracks or surface deterioration. • The culvert may require moderate rehabilitation work to address deficiencies.
49-30	Poor	• Significant deterioration or structural defects, such as larger cracks, exposed reinforcement, or corrosion. • Culvert requires major rehabilitation to restore functionality and safety.
29-0	Critical	• Severe structural deficiencies that compromise safety and functionality. • Immediate intervention is required, possibly including load restrictions or closure. • Replacement or complete reconstruction is often necessary.

In addition to OSIM assessments, the County adheres to Financial Information Return (FIR) reporting standards as required by the Ministry of Municipal Affairs and Housing (MMAH). Section 80D of the FIR requires municipalities to report the number of culverts with a CCI rating of Very Good or Good.

The chart below highlights the stability and overall good condition of Middlesex County's culvert inventory from 2016 to 2024. During this period, the average CCI consistently remained at 71, which falls within the "Good" range. This reflects a structurally sound network requiring routine maintenance or minor repairs.

Additionally, 98% of the County's culverts, equivalent to 124 structures, have primary components rated as being in Very Good to Good condition. These culverts generally lack significant structural concerns and demonstrate robust performance, further reflecting the County’s commitment to proactive maintenance and effective asset management. For reference, the chart below also includes the Ontario upper-tier municipality Section 80D average CCI, for comparative purposes..

This consistent performance underscores the resilience of the County’s culvert infrastructure and provides confidence in its ability to manage and sustain these assets in alignment with long-term planning objectives and community needs.



Lifecycle Replacement Profile

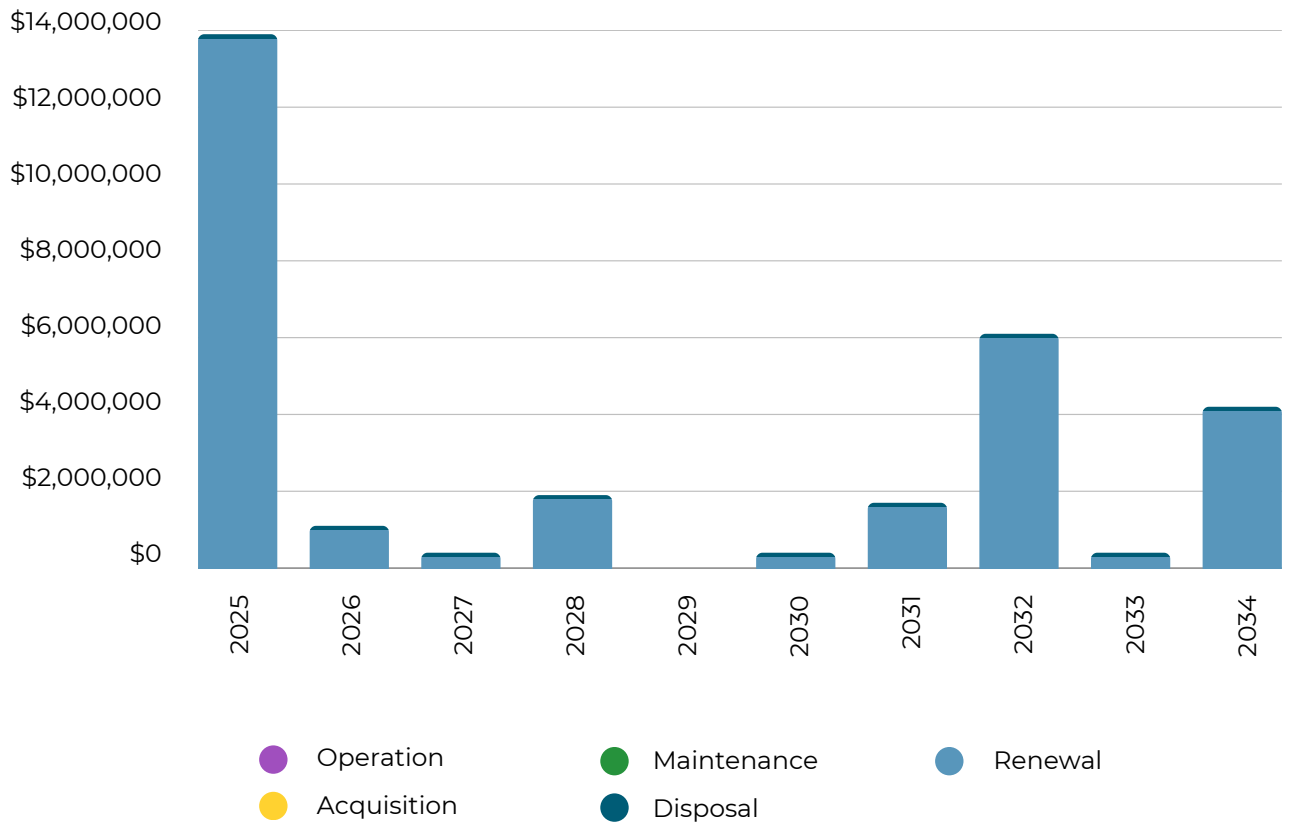
The total culvert replacement cost over a 10-year forecast period is estimated at $3,360,257 per year. The anticipated annual budget for culverts over this period totals $138,357, covering 4% of the cost needed to sustain the current level of service at the lowest lifecycle cost. This leaves an annual shortfall of $3,221,900 in the forecast lifecycle costs required to meet service needs.

The forecast lifecycle replacement costs necessary to provide culvert infrastructure include:

 **Acquisition**	The activities to provide a higher level of service or a new service that did not exist previously.
 **Operation**	The regular activities to provide services.
 **Maintenance**	The activities necessary to retain an asset as near as practicable to an appropriate service condition. Maintenance activities enable an asset to provide service for its planned life: • Brushing • Flushing • Patching • Structure Repairs
 **Renewal**	The activities that return the service capability of an asset up to that which it had originally provided: • Rehabilitation
 **Disposal**	The activities associated with the disposal of a decommissioned asset including sale, demolition, or relocation.

Lifecycle Activity	Current Performance	Budget/Year
Acquisition	No lifecycle costs projected.	$0
Operation	No lifecycle costs projected.	$0
Maintenance	Maintenance activities can be completed within the planned budget.	$138,357
Renewal	Renewal funding shows an annual shortfall of $3,221,900	$3,221,900
Disposal	No lifecycle costs projected.	$0

The chart below represents the forecast costs, in current dollars, needed to minimize lifecycle costs associated with culvert service provision. The proposed budget line indicates available funding, while the gap between forecast work and the proposed budget highlights the balance needed between costs, service levels, and risk to achieve optimal outcomes.



Middlesex County is committed to addressing funding shortfalls through targeted advocacy for external funding, optimizing capital expenditures, and improving lifecycle planning. Regular monitoring and updates to the OSIM inspection database will remain critical to managing risks and ensuring sustainable service delivery.

These strategies are detailed further in the Financial Strategy

Levels of Service

Culvert assets are subject to prescribed levels of service reporting under Ontario Regulation 588/17, which requires reporting at two levels:

Community Levels of Service (Qualitative) Describes service levels in terms understood by interested parties, reflecting the scope and quality expectations of culverts.

Technical Levels of Service (Quantitative) Uses performance measures to describe the scope and quality of culverts, detailing how effectively the County delivers services

Levels of Service - Culverts

Community Level of Service	
Year	2024
Description of of the traffic that is supported by County culverts.	The road system serving Middlesex County, including culverts, consists of Provincial Highways, County Roads, and Municipal Roads. County Roads function as arterial and collector routes, facilitating efficient movement of people, goods, and services. The system supports all transportation modes.
Description or images of the condition of culverts and how this would affect use of the culverts.	Please refer to the Middlesex County GIS Asset Management Dashboard and Middlesex County OSIM Inspection Reports. The current level of service does not negatively impact the use of the structures in the immediate timeframe.
Technical Levels of Service	
Year	2024
Percentage of culverts in the County with loading or dimensional restrictions.	0%
For culverts in the County, the average culvert condition index value.	71.2%
Key Performance Indicators	
Year	2024
Ministry of Municipal Affairs and Housing (MMAH) Financial Information Return (FIR) – Number of structures where the condition of primary components is rated as good to very good.	124

Road Network

Middlesex County manages 1,727 lane kilometres of road network, paved with hot mix asphalt, that is essential for connectivity and supporting the transportation needs of the community. The Middlesex County Asset Management Dashboard illustrates the location and distribution of these assets across the County's road network.[3]

Transportation Road Assets

Category	Subcategory	Quantity	Average Age (Years)	Lifecycle	2024 Replacement Value
Infrastructure	Road Base	1,727 Lane km	81	100	$457,479,217
Infrastructure	Road Surface	1,727 Lane km	12	20	$246,010,268

Beyond noting road base replacement costs, this section does not consider road base renewal costs. A well-constructed road base is designed to provide long-term structural stability and does not require renewal if adequately protected. Unlike the road surface, which is subject to wear from traffic loads and environmental conditions, the base remains intact as long as surface maintenance—such as resurfacing, crack sealing, and preservation treatments—is performed in a timely manner. Proper surface management prevents moisture infiltration and structural degradation, ensuring the base remains functional for the lifespan of the roadway. As a result, lifecycle cost assessments focus solely on surface renewal.

Middlesex County classifies its road network using two systems:

- Functional Classification
- Ontario Maintenance Standards (OMS) Classification.

Functional Classification organizes roads by their role, from primary arterial routes to local roads, ensuring effective planning and resource allocation. The Ontario Maintenance Standards Classification, based on Ontario Regulation 239/02, dictates the level of maintenance required to ensure safety and compliance with provincial legislation, assigning roads to classes from high-priority arterial roads to lower-priority local roads. Together, these systems guide road management, balancing service needs with legislative requirements.

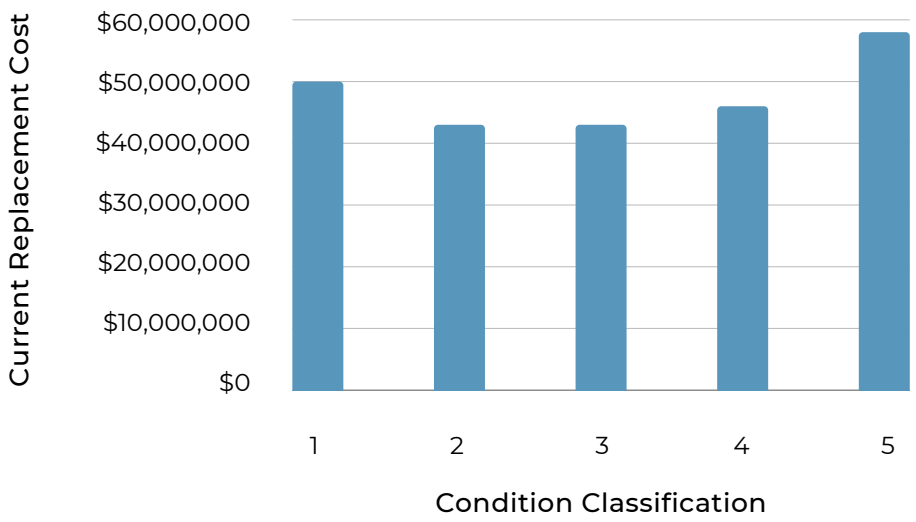
3 *Stormwater infrastructure is included in road network calculations and lifecycle costs where applicable, as it is typically managed collaboratively with local municipalities and integrated into urban road asset management. Road signs and guiderail are currently pooled assets within the road surface asset.*

Middlesex County Road Network Classifications

Functional Classification (Lane km)		Ontario Maintenance Standards Classification (Lane km)	
1	30.6	1	89
2	724.4	2	841.8
3	852.4	3	682.6
4	119.6	4	113.6

The County applies a straight-line amortization schedule to depreciate capital assets, as outlined in its financial policies.

Road Surface Asset Replacement Profile



However, the Middlesex County Asset Management Plan supplements this financial data with field condition assessments to provide a more accurate evaluation of the road network's state of infrastructure. To assess the road network condition, the County relies on the Pavement Condition Index (PCI). The PCI is a standardized measure used to evaluate the overall health of roads and guide decisions on maintenance, rehabilitation, or replacement. Based on detailed inspections the PCI assigns a numeric rating ranging from 0 to 100, with higher values indicating better condition.

The following table outlines the classifications used within the PCI range to describe maintenance urgency:

Pavement Condition Index

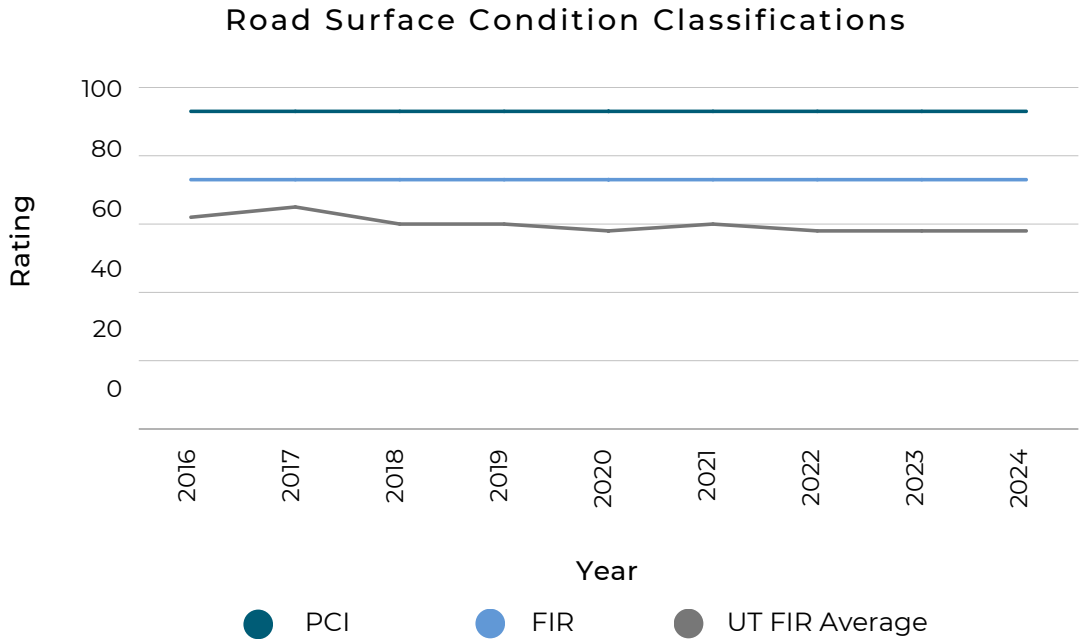
Rating	Classification	Description
100-90	Very Good	• Pavement is nearly in new condition with minimal surface distress. • Routine maintenance is sufficient; no immediate intervention is required.
89-70	Good	• Minor surface distresses are present, but the pavement performs well. • Monitoring is recommended along with timely preventive maintenance.
69-50	Fair	• Noticeable distresses are beginning to affect pavement performance. • Preventive maintenance or minor rehabilitation may be needed to avoid further deterioration.
49-30	Poor	• Significant distress impacts ride quality and structural integrity. • Substantial rehabilitation is necessary to restore functionality and extend service life.
29-0	Critical	• Pavement is heavily deteriorated, posing safety and performance concerns. • Immediate repair or reconstruction is required to ensure safe operation.

In addition to PCI assessments, the County adheres to Financial Information Return (FIR) reporting standards as required by the Ministry of Municipal Affairs and Housing (MMAH). Section 80D of the FIR requires municipalities to report the lane kilometres of road network with a PCI rating of Very Good or Good.

The chart below highlights the stability and overall good condition of the Middlesex County road network from 2016 to 2024. During this period, the average PCI consistently remained at 90, which falls within the “Very Good” range. This reflects a structurally sound network requiring routine maintenance or minor repairs.

Additionally, 71% of the County's road network, equivalent to 1,226 lane kilometres, are rated as being in Very Good to Good condition. These roads generally lack significant structural concerns and demonstrate robust performance, further reflecting the County’s commitment to proactive maintenance and effective asset management. For reference, the chart below also includes the Ontario upper-tier municipality Section 80D average PCI, for comparative purposes.

This consistent performance underscores the resilience of the County’s road network and provides confidence in its ability to manage and sustain these assets in alignment with long-term planning objectives and community needs



This pavement condition data is reinforced by the Middlesex County Pavement Program assessment by Streetlogix. The webpage provides a point in time interactive overview of the county's road network conditions including a detailed map highlighting various road segments, color-coded to represent their PCI scores, allowing users to easily identify areas in need of attention. Additionally, it offers insights into the assessment methodology, emphasizing the importance of regular inspections and data-driven planning in maintaining road infrastructure.

Lifecycle Replacement Profile

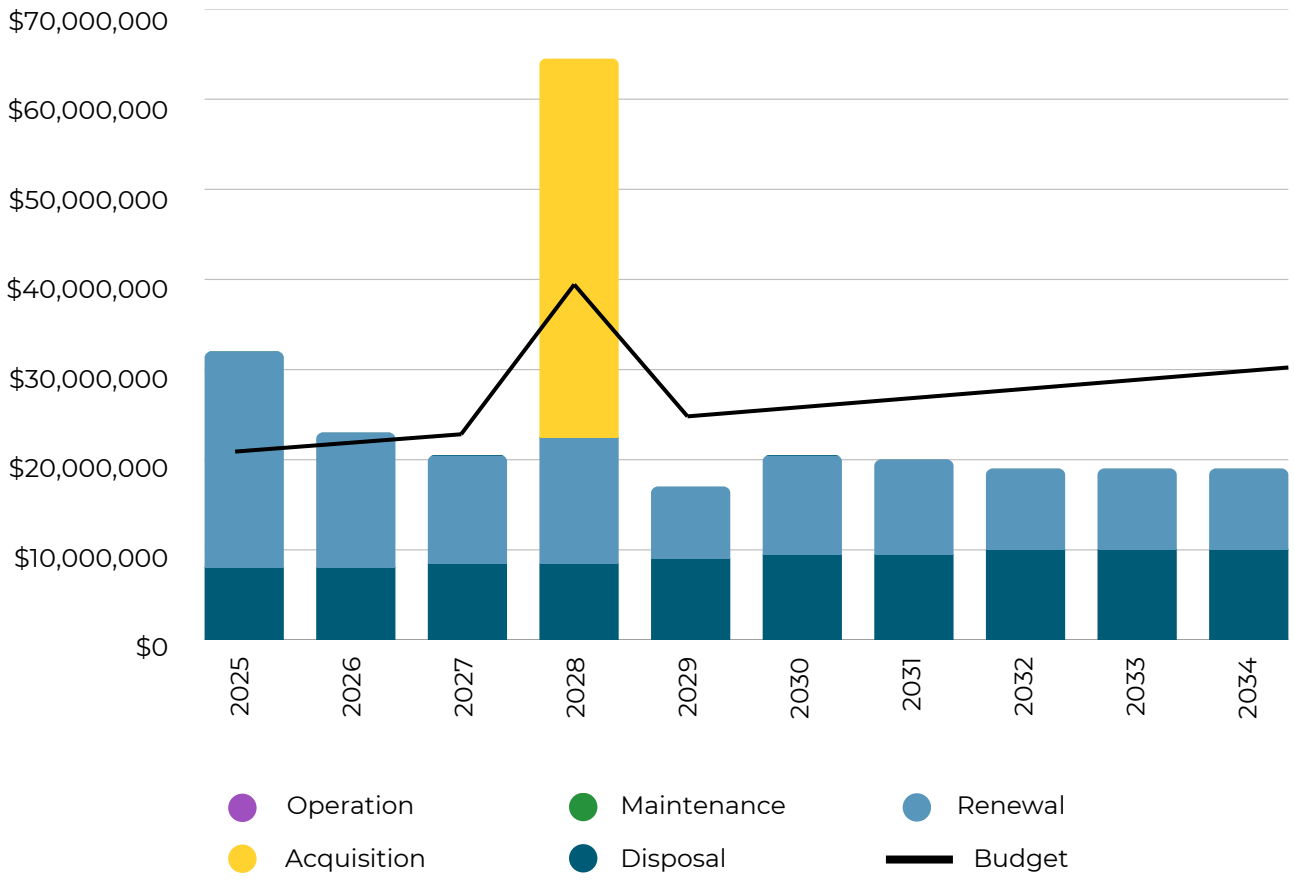
The total road replacement cost over a 10-year forecast period is estimated at $25,888,621 per year. The anticipated annual budget of the road network over this period totals $27,316,162, covering 106% of the cost needed to sustain the current level of service at the lowest lifecycle cost. This leaves an annual surplus of $1,427,541 in the forecast lifecycle costs required to meet service needs.

The forecast lifecycle replacement costs necessary to provide the road network include:

Acquisition	The activities to provide a higher level of service or a new service that did not exist previously as identified in the Middlesex County Development Charges Background Study.
Operation	The regular activities required to provide safe and functional roadways.
Maintenance	The activities necessary to retain an asset as near as practicable to an appropriate service condition. Maintenance activities enable an asset to provide service for its planned life: • Crack Sealing • Minor Resurfacing • Pothole Patching • Surface Sealing
Renewal	The activities that return the service capability of an asset up to that which it had originally provided: • Asphalt Overlay • Asphalt Recycling • Cold In-Place Recycling • Micro Surfacing • Mill and Pave • Reconstruction
Disposal	The activities associated with the disposal of a decommissioned asset including sale, demolition, or relocation.

Lifecycle Activity	Current Performance	Budget/Year
Acquisition	Acquisition costs include the projects identified in the Middlesex County Development Charges Background Study. Acquisition funding shows an annual shortfall of $2,646,600	**$4,235,000**
Operation	No lifecycle costs projected.	$0
Maintenance	Maintenance activities can be completed within the planned budget.	**$9,362,666**
Renewal	Renewal funding shows an annual surplus of $4,074,141.	**$12,290,955**
Disposal	No lifecycle costs projected.	$0

The chart below represents the forecast costs, in current dollars, needed to minimize lifecycle costs associated with road network service provision. The proposed budget line indicates available funding, while the gap between forecast work and the proposed budget highlights the balance needed between costs, service levels, and risk to achieve optimal outcomes.



Middlesex County is committed to addressing funding requirements through targeted advocacy for external funding, optimizing capital expenditures, and improving lifecycle planning. Regular monitoring and updates to the PCI inspection database will remain critical to managing risks and ensuring sustainable service delivery.

These strategies are detailed further in the Financial Strategy.

Levels of Service

Road network assets are subject to prescribed levels of service reporting under Ontario Regulation 588/17, which requires reporting at two levels:

Community Levels of Service (Qualitative) Describes service levels in terms understood by interested parties, reflecting the scope and quality expectations of the road network.

Technical Levels of Service (Quantitative) Uses performance measures to describe the scope and quality of the road network, detailing how effectively the County delivers services.

Levels of Service - Road Network

Community Level of Service	
Year	2024
Description of connectivity and the traffic that is supported by County roads.	The road system serving Middlesex County, including culverts, consists of Provincial Highways, County Roads, and Municipal Roads. County Roads function as arterial and collector routes, facilitating efficient movement of people, goods, and services. The system supports all transportation modes.
Description or images that illustrate the different levels of road class pavement condition.	Please refer to the Middlesex County GIS Asset Management Dashboard and Middlesex County PCI Inspection Reports. The current level of service does not negatively impact the use of the road network in the immediate timeframe.
Technical Levels of Service	
Year	2024
Number of lane-kilometres of County roads as a proportion of square kilometres of land area of the County (2,897 km2)	0.596
The average pavement condition index value.	91.17
Key Performance Indicators	
Year	2024
Ministry of Municipal Affairs and Housing (MMAH) Financial Information Return (FIR) – Number of lane kilometres where the is rated as good to very good	1,226

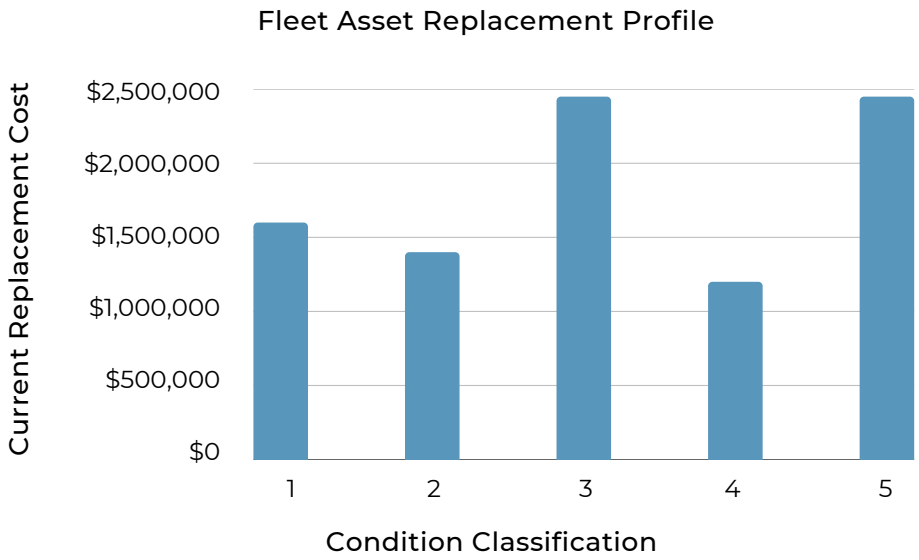
Fleet

Middlesex County manages a diverse inventory of 88 fleet assets essential for maintaining its linear infrastructure and supporting transportation needs across the community. The County's fleet includes a range of vehicles and equipment, such as light-duty pickups for general operations, tandem trucks for road maintenance and snow clearing, and specialized equipment like graders and loaders for heavy-duty infrastructure work. This variety ensures the County has the capacity to address routine maintenance, emergency repairs, and seasonal operations effectively, supporting the overall functionality and safety of the transportation network.

Transportation Fleet Assets

Category	Subcategory	Quantity	Average Age (Years)	Lifecycle	2024 Replacement Value
Fleet	Vehicles	12	3	5	$675,535
Fleet	Vehicles	17	7	7	$976,651
Fleet	Vehicles	40	11	10	$11,659,101
Fleet	Vehicles	3	10	12	$1,157,057
Fleet	Vehicles	13	14	15	$1,519,288
Fleet	Vehicles	3	19	20	$560,568

The County applies a straight-line amortization schedule to depreciate capital assets, as outlined in its financial policies.



Middlesex County is strategically elongating the lifecycles of its fleet assets as part of a proactive and fiscally responsible approach to asset management. This strategy reflects a strong commitment to regular maintenance and condition monitoring, which ensures that assets remain operational and reliable for longer periods. By prioritizing preventive maintenance and targeted repairs, the County maximizes the value derived from its investments, reduces the frequency of costly replacements, and minimizes environmental impacts associated with asset turnover. This approach not only demonstrates stewardship of public resources but also ensures that infrastructure and service levels are maintained efficiently, supporting the County's long-term sustainability goals.

Middlesex County actively tracks and monitors fleet fuel consumption data. This data provides valuable insights into operational efficiency, sustainability, and long-term asset planning. Detailed information is available on the Middlesex County Asset Management Dashboard.

Lifecycle Replacement Profile

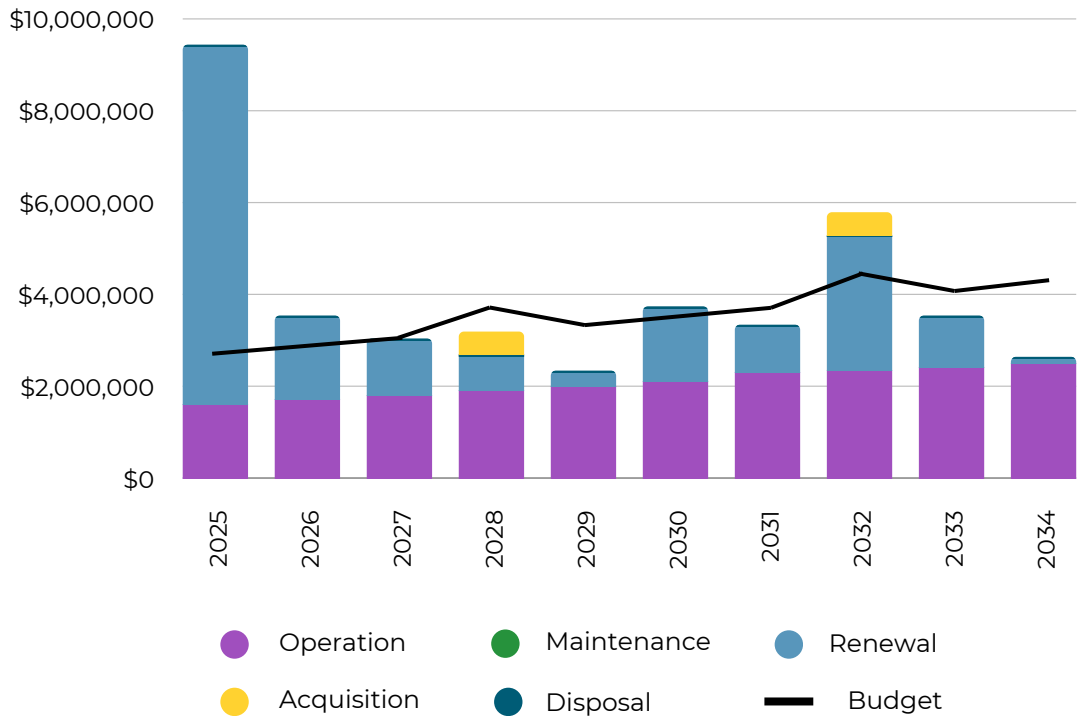
The total fleet replacement cost over a 10-year forecast period is estimated at $4,024,240 per year. The anticipated annual budget for fleet assets over this period totals $3,719,855 covering 92% of the cost needed to sustain the current level of service at the lowest lifecycle cost. This leaves an annual shortfall of $304,385 in the forecast lifecycle costs required to meet service needs.

The forecast lifecycle replacement costs necessary to provide fleet assets include:

 **Acquisition**	The activities to provide a higher level of service or a new service that did not exist.
 **Operation**	The regular activities to provide services. • Fuel
 **Maintenance**	The activities necessary to retain an asset as near as practicable to an appropriate service condition. Maintenance activities enable an asset to provide service for its planned life: • Equipment Service Requests
 **Renewal**	The activities that return the service capability of an asset up to that which it had originally provided: • Replacement
 **Disposal**	The activities associated with the disposal of a decommissioned asset including sale, demolition, or relocation.

Lifecycle Activity	Current Performance	Budget/Year
Acquisition	Acquisition activities can be completed within the planned budget.	$110,000
Operation	Operation activities can be completed within the planned budget.	$2,100,508
Maintenance	No lifecycle costs projected.	$0
Renewal	Renewal funding shows an annual shortfall of $304,385	$1,813,732
Disposal	No lifecycle costs projected.	$0

The chart below represents the forecast costs, in current dollars, needed to minimize lifecycle costs associated with fleet service provision. The proposed budget line indicates available funding, while the gap between forecast work and the proposed budget highlights the balance needed between costs, service levels, and risk to achieve optimal outcomes.



Middlesex County is committed to addressing funding shortfalls through targeted advocacy for external funding, optimizing capital expenditures, and improving lifecycle planning.

These strategies are detailed further in the Financial Strategy.

Levels of Service

Fleet assets do not have prescribed levels of service reporting requirements under Ontario Regulation 588/17. Instead, the County is required to establish levels of service

Levels of Service - Fleet

Community Level of Service	
Year	2024
Description of Fleet	The County's fleet includes a range of vehicles and equipment, such as light-duty pickups for general operations, tandem trucks for road maintenance and snow clearing, and specialized equipment like graders and loaders for heavy-duty infrastructure work.

Machinery & Equipment

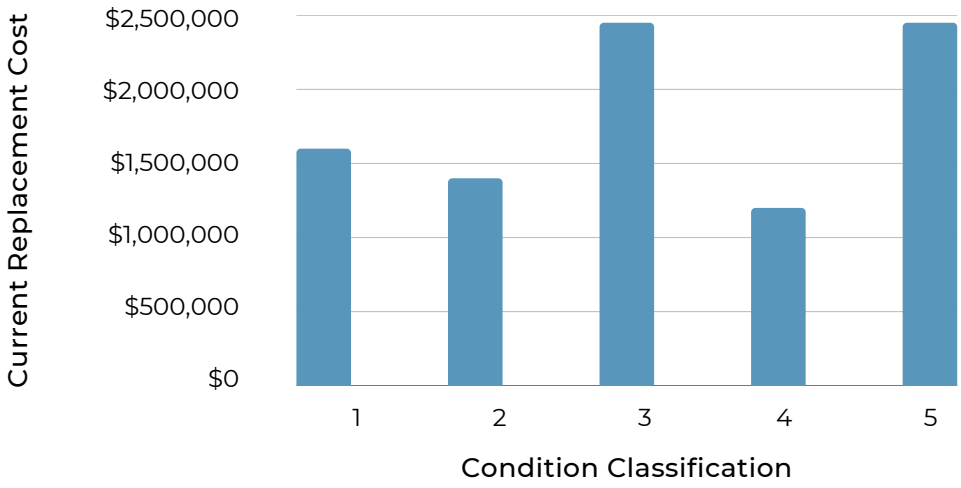
Middlesex County manages a diverse range of 17 machinery and equipment assets that play a vital role in supporting operations, maintaining infrastructure, and ensuring public safety. These assets encompass a broad spectrum of specialized tools and equipment, including mowers, robotic surveying devices, compressors, water tanks, and signage systems, as well as communication equipment like fire dispatch radio systems. This "catch-all" category of capital assets highlights the County's commitment to maintaining operational efficiency and readiness by investing in versatile and essential tools. Regular maintenance and strategic lifecycle management ensure these assets remain reliable and effective, maximizing their utility and aligning with the County’s long-term asset management goals.

Transportation Machinery & Equipment Assets

Category	Subcategory	Quantity	Average Age (Years)	Lifecycle	2024 Replacement Value
Machinery & Equipment	Transportation	4	7	5	$66,329
Machinery & Equipment	Transportation	1	3	10	$54,705
Machinery & Equipment	Transportation	2	11	12	$423,858
Machinery & Equipment	Transportation	2	19	15	$60,852
Machinery & Equipment	Transportation	4	16	20	$212,732
Machinery & Equipment	Transportation	1	11	25	$150,000
Machinery & Equipment	Transportation	3	14	35	$1,961,391

The County applies a straight-line amortization schedule to depreciate capital assets, as outlined in its financial policies.

Machinery and Equipment Asset Replacement Profile



Lifecycle Replacement Profile

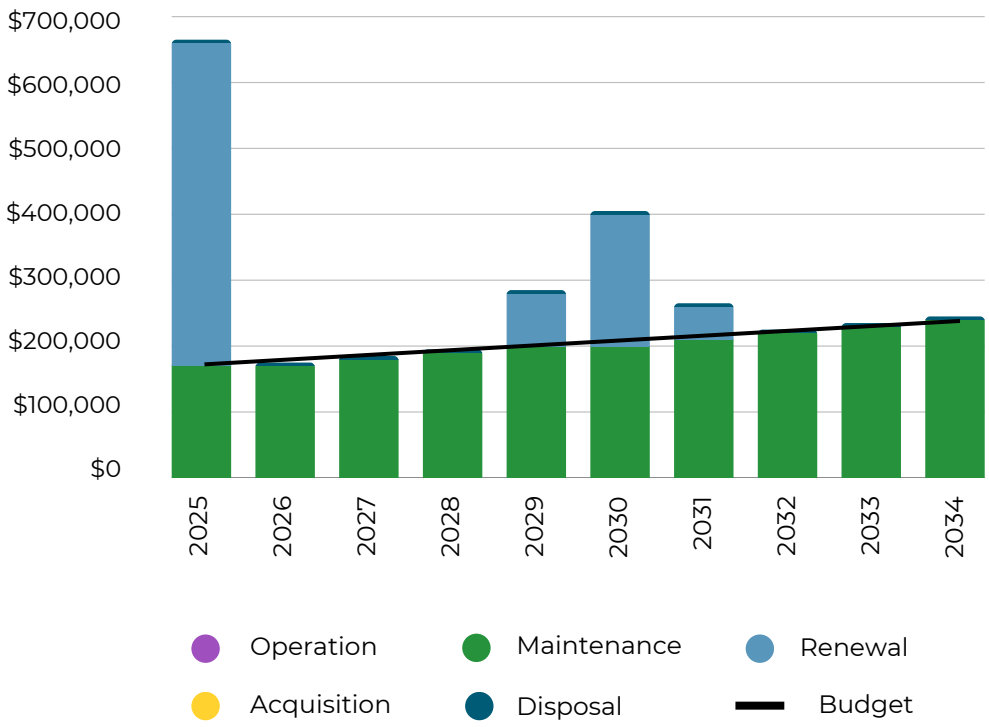
The total machinery and equipment replacement cost over a 10-year forecast period is estimated at $287,648 per year. The anticipated annual budget for machinery and equipment assets over this period totals $203,762 covering 71% of the cost needed to sustain the current level of service at the lowest lifecycle cost. This leaves an annual shortfall of $83,886 in the forecast lifecycle costs required to meet service needs.

The forecast lifecycle replacement costs necessary to provide machinery and equipment infrastructure include:

Acquisition	The activities to provide a higher level of service or a new service that did not exist previously.
Operation	The regular activities to provide services.
Maintenance	The activities necessary to retain an asset as near as practicable to an appropriate service condition
Renewal	The activities that return the service capability of an asset up to that which it had originally provided.
Disposal	The activities associated with the disposal of a decommissioned asset including sale, demolition, or relocation.

Lifecycle Activity	Current Performance	Budget/Year
Acquisition	No lifecycle costs projected.	$0
Operation	No lifecycle costs projected.	$0
Maintenance	Maintenance activities can be completed within the planned budget.	**$203,762**
Renewal	Renewal funding shows an annual shortfall of $83,886	**$83,886**
Disposal	No lifecycle costs projected.	$0

The next chart represents the forecast costs, in current dollars, needed to minimize lifecycle costs associated with machinery and equipment service provision. The proposed budget line indicates available funding, while the gap between forecast work and the proposed budget highlights the balance needed between costs, service levels, and risk to achieve optimal outcomes.



Middlesex County is committed to addressing funding shortfalls through targeted advocacy for external funding, optimizing capital expenditures, and improving lifecycle planning.

These strategies are detailed further in the Financial Strategy.

Levels of Service

Machinery and equipment assets do not have prescribed levels of service reporting requirements under Ontario Regulation 588/17. Instead, the County is required to establish levels of service.

Levels of Service - Machinery & Equipment

Community Level of Service	
Year	2024
Description of Machinery and Equipment	These assets encompass a broad spectrum of specialized tools and equipment, including mowers, robotic surveying devices, compressors, water tanks, and signage systems, as well as communication equipment like fire dispatch radio systems.

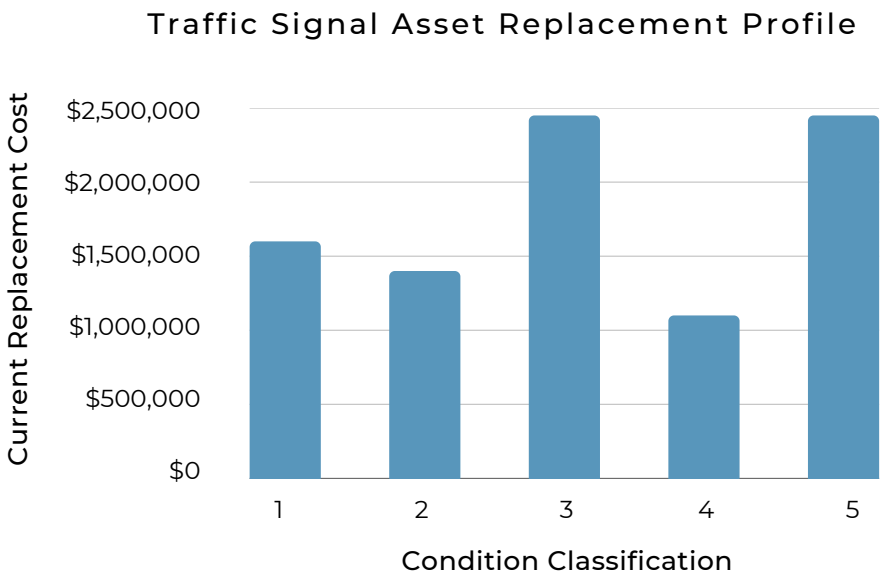
Traffic Signals

Middlesex County manages a network of 33 traffic signals that play a critical role in supporting safe and efficient transportation throughout the community. These assets are essential for regulating traffic flow, enhancing public safety, and reducing congestion. The County's traffic signals are strategically located at key intersections and undergo regular maintenance and upgrades to ensure their reliability and effectiveness. This commitment to proactive lifecycle management demonstrates the County's dedication to operational efficiency and public safety, while aligning with long-term transportation and infrastructure goals.

Traffic Signal Assets

Category	Subcategory	Quantity	Average Age (Years)	Lifecycle	2024 Replacement Value
Infrastructure	Traffic Signals	33	19	40	$9,075,000

The County applies a straight-line amortization schedule to depreciate capital assets, as outlined in its financial policies.



Lifecycle Replacement Profile

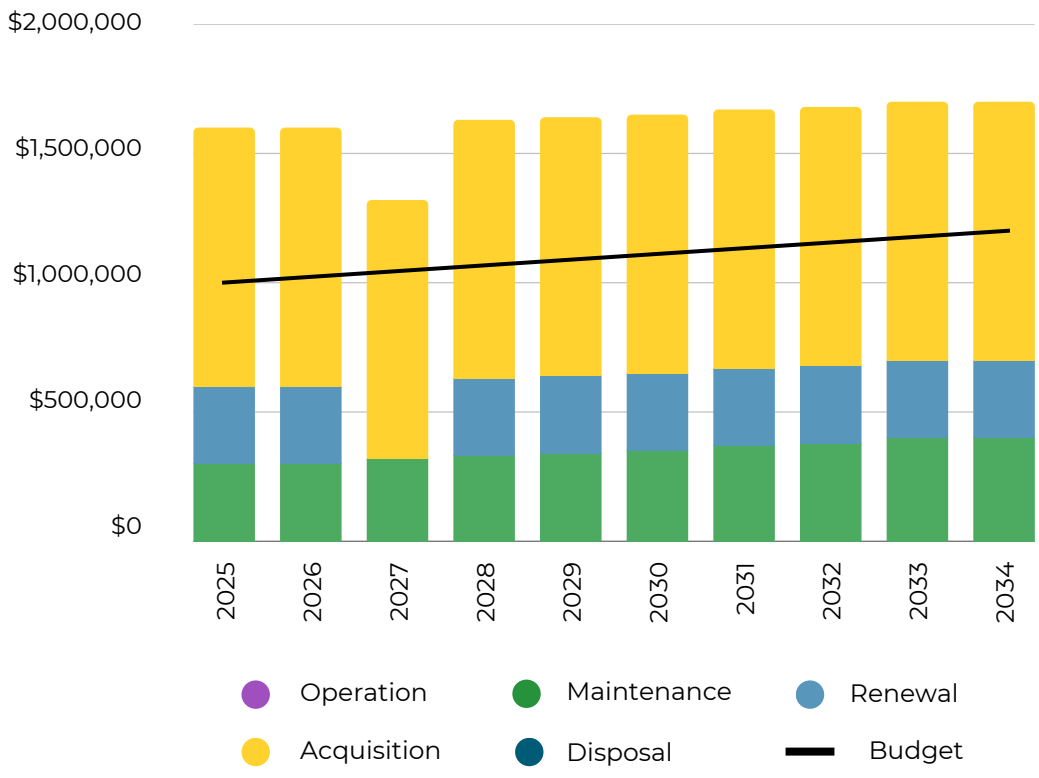
The total traffic signal replacement cost over a 10-year forecast period is estimated at $1,606,319 per year. The anticipated annual budget for traffic signal assets over this period totals $1,058,819 covering 66% of the cost needed to sustain the current level of service at the lowest lifecycle cost. This leaves an annual shortfall of $547,500 in the forecast lifecycle costs required to meet service needs.

The forecast lifecycle replacement costs necessary to provide traffic signal infrastructure include:

Acquisition	The activities to provide a higher level of service or a new service that did not exist previously.
Operation	The regular activities to provide services.
Maintenance	The activities necessary to retain an asset as near as practicable to an appropriate service condition.
Renewal	The activities that return the service capability of an asset up to that which it had originally provided.
Disposal	The activities associated with the disposal of a decommissioned asset including sale, demolition, or relocation.

Lifecycle Activity	Current Performance	Budget/Year
Acquisition	Acquisition funding shows an annual shortfall of $300,000	**$1,000,000**
Operation	No lifecycle costs projected.	$0
Maintenance	Maintenance activities can be completed within the planned budget.	**$358,819**
Renewal	Renewal funding shows an annual shortfall of $247,500	**$247,500**
Disposal	No lifecycle costs projected.	$0

The chart below represents the forecast costs, in current dollars, needed to minimize lifecycle costs associated with traffic signal service provision. The proposed budget line indicates available funding, while the gap between forecast work and the proposed budget highlights the balance needed between costs, service levels, and risk to achieve optimal outcomes.



Middlesex County is committed to addressing funding shortfalls through targeted advocacy for external funding, optimizing capital expenditures, and improving lifecycle planning.

These strategies are detailed further in the Financial Strategy.

Levels of Service

Traffic Signal assets do not have prescribed levels of service reporting requirements under Ontario Regulation 588/17. Instead, the County is required to establish levels of service.

Levels of Service - Traffic Signals

Community Level of Service	
Year	2024
Description of Traffic Signals	Middlesex County manages a network of 33 traffic signals that play a critical role in supporting safe and efficient transportation throughout the community. These assets are essential for regulating traffic flow, enhancing public safety, and reducing congestion. The County's traffic signals are strategically located at key intersections and undergo regular maintenance and upgrades to ensure their reliability and effectiveness.

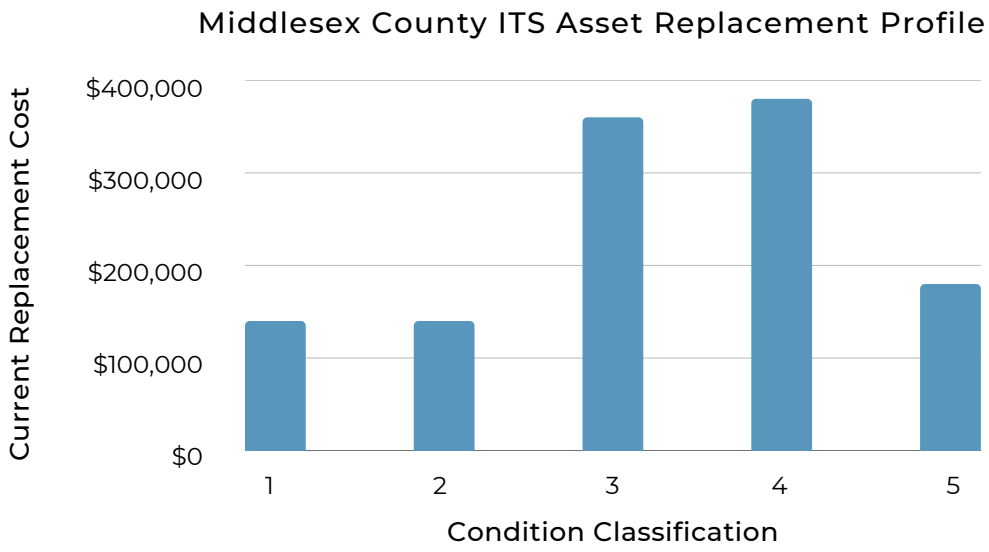
Middlesex County Information Technology Services Assets

Middlesex County manages 699 Information Technology Services (ITS) assets that are essential for supporting the County's operations, service delivery, and communication infrastructure. These assets include hardware such as desktop computers, laptops, servers, printers, scanners, phones, tablets, and network equipment, along with peripheral devices like docking stations and projectors. These assets play a critical role in ensuring the efficiency and reliability of technological systems that drive daily activities and public services. The County's ITS assets are maintained and upgraded regularly to ensure they remain effective and up to date with modern requirements. This commitment to proactive lifecycle management demonstrates the County's dedication to operational excellence, technological innovation, and long-term service delivery goals.

Middlesex County ITS Assets

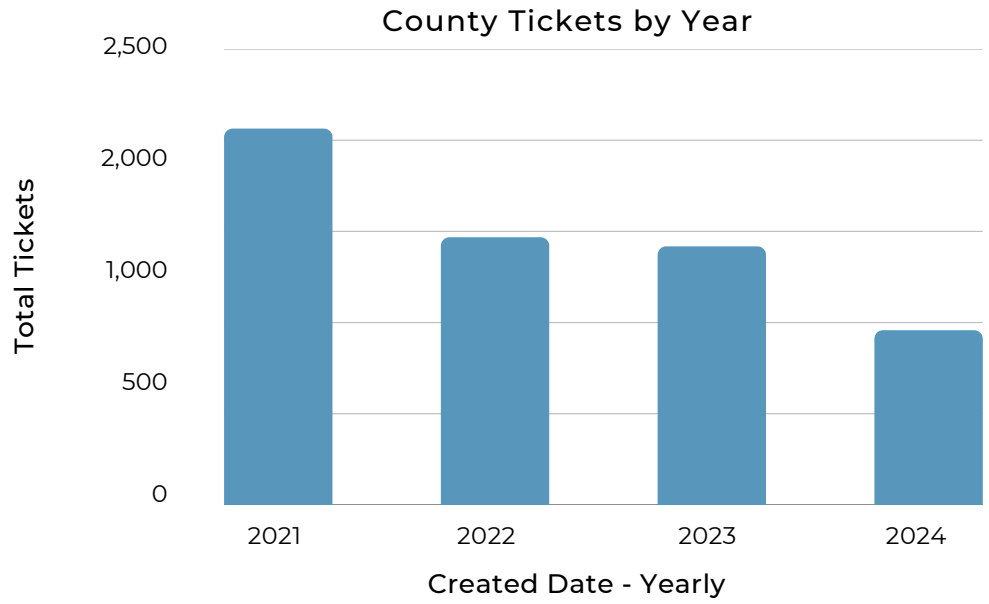
Category	Subcategory	Quantity	Average Age (Years)	Lifecycle	2024 Replacement Value
County ITS	ITS Equipment	48	2	2	$21,153
County ITS	ITS Equipment	222	2	4	$239,210
County ITS	ITS Equipment	6	4	5	$5,104
County ITS	ITS Equipment	19	2	6	$18,393
County ITS	ITS Equipment	148	5	7	$569,798
County ITS	ITS Equipment	7	4	8	$2,723
County ITS	ITS Equipment	249	4	10	$253,391

The County applies a straight-line amortization schedule to depreciate capital assets, as outlined in its financial policies



Middlesex County ITS closely monitors service tickets associated with ITS assets. The chart below demonstrates the significant reduction in ITS tickets from 2021 to 2024, reflecting the positive impact of Middlesex County's proactive ITS management and excellent asset stewardship. Over this period, ticket volumes decreased from 2,064 in 2021 to 958 in 2024, showcasing an ongoing trend of improvement.

This reduction highlights the County's focus on preventive maintenance, end-user training, timely system updates, and efficient issue resolution, which have collectively contributed to reducing service disruptions and improving system reliability. Middlesex County's ITS team continues to prioritize effective lifecycle management and responsive support to ensure the sustained functionality and performance of its ITS assets. These results underscore the County's commitment to delivering reliable technology services while aligning with long-term operational objectives.



Lifecycle Replacement Profile

The total ITS asset replacement cost over a 10-year forecast period is estimated at $195,333 per year. The anticipated annual budget for ITS assets over this period totals $195,333, covering 100% of the cost needed to sustain the current level of service at the lowest lifecycle cost.

The forecast lifecycle replacement costs necessary to provide County ITS assets include:

Acquisition The activities to provide a higher level of service or a new service that did not exist previously.

Operation The regular activities to provide services.

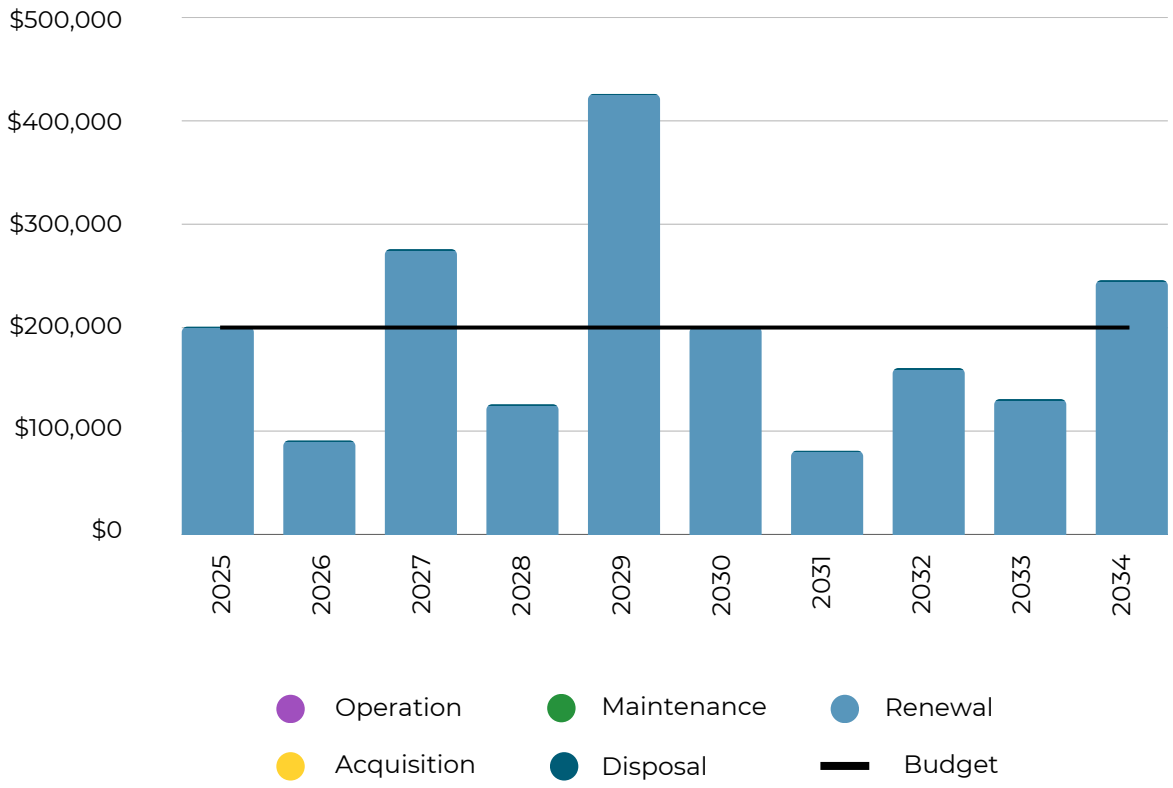
Maintenance The activities necessary to retain an asset as near as practicable to an appropriate service condition.

Renewal The activities that return the service capability of an asset up to that which it had originally provided.

Disposal The activities associated with the disposal of a decommissioned asset including sale, demolition, or relocation.

Lifecycle Activity	Current Performance	Budget/Year
Acquisition	No lifecycle costs projected.	$0
Operation	No lifecycle costs projected.	$0
Maintenance	No lifecycle costs projected.	$0
Renewal	Renewal activities can be completed within the planned budget.	$195,333
Disposal	No lifecycle costs projected.	$0

The chart below represents the forecast costs, in current dollars, needed to minimize lifecycle costs associated with ITS asset service provision. The proposed budget line indicates available funding, while the gap between forecast work and the proposed budget highlights the balance needed between costs, service levels, and risk to achieve optimal outcomes.



Middlesex County is committed to addressing funding shortfalls through targeted advocacy for external funding, optimizing capital expenditures, and improving lifecycle planning.

These strategies are detailed further in the Financial Strategy.

Levels of Service

ITS assets do not have prescribed levels of service reporting requirements under Ontario Regulation 588/17. Instead, the County is required to establish levels of service.

Levels of Service - ITS Assets

Community Level of Service	
Year	2024
Description of ITS Assets	ITS assets include hardware such as desktop computers, laptops, servers, printers, scanners, phones, tablets, and network equipment, along with peripheral devices like docking stations and projectors.
Key Performance Indicators	
Year	2024
Numbers of ITS tickers processed annually	958

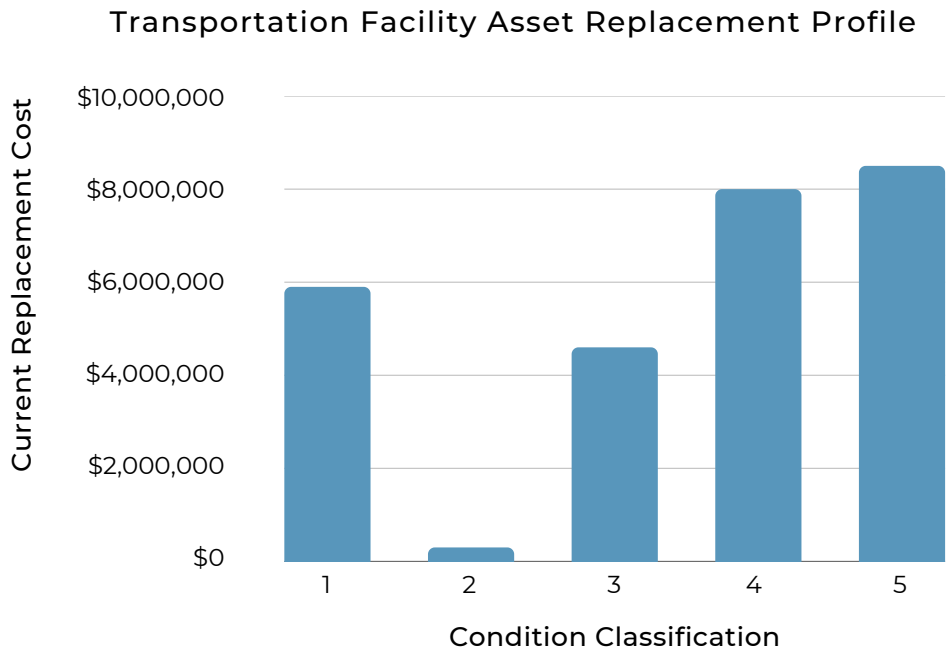
Transportation Facilities

Middlesex County manages a diverse portfolio of 24 transportation facilities across 7 sites, which are critical to supporting County operations and service delivery. These facilities consist of attributes including foundations, superstructures, building envelopes, electrical and plumbing systems, HVAC, fire protection systems, accessibility features, and interior finishes. Together, these assets form the backbone of the County's operational support, ensuring safety, functionality, and continuity in service provision. The Middlesex County Asset GIS Management Dashboard illustrates the location and distribution of these assets across the County.

Transportation Facility Assets

Category	Subcategory	Quantity	Average Age (Years)	Lifecycle	2024 Replacement Value
Facilities	Foundations (A10)	21	28	100	$2,296,356
Facilities	Superstructure (B10)	23	28	75	$5,380,236
Facilities	Exterior Enclosure (B20)	21	27	40	$2,519,370
Facilities	Roofing (B30)	23	28	25	$6,996,948
Facilities	Interior Construction (C10)	8	24	25	$256,866
Facilities	Stairs (C20)	6	25	40	$73,656
Facilities	Interior Finishes (C30)	22	29	15	$8,572,182
Facilities	Accessibility (C33)	5	15	15	$19,530
Facilities	Plumbing (D20)	9	24	30	$777,666
Facilities	HVAC (D30)	10	24	20	$629,796
Facilities	Fire Protection (D40)	8	25	40	$14,880
Facilities	Electrical (D50)	18	28	40	$1,270,752
Facilities	Equipment (E10)	5	26	15	$296,298
Facilities	Site Improvements (G20)	13	28	20	$6,855,216
Facilities	Site Electrical Utilities (G40)	5	24	50	$963,852

The County applies a straight-line amortization schedule to depreciate capital assets, as outlined in its financial policies.



However, the Middlesex County Asset Management Plan supplements this financial data with facility condition assessments to provide a more accurate evaluation of the facility portfolios state of infrastructure. To assess the facility portfolio condition, the County relies on the Facility Condition Index (FCI).

The Facility Condition Index (FCI) is a standardized metric used to evaluate a facility's condition by comparing the cost of immediate maintenance, repair, or renewal needs to its current replacement value (CRV). The formula for FCI is:

FCI = Immediate (Year 1+2) Costs ÷ Current Replacement Value.

A higher FCI score indicates a poorer facility condition, with the following scale provided by the International Facility Management Association (IFMA):

Facility Condition Index

Rating	Classification	Description
0%-2.5%	Very Good	Facility is in excellent condition with minimal maintenance or repair needs. Routine inspections suffice.
2.6%-5%	Good	Facility is in good condition with manageable repair needs. Regular monitoring and preventive actions recommended.
5%-10%	Fair	Facility condition is declining, and noticeable maintenance or repairs are required to maintain functionality.
10%-30%	Poor	Facility is in poor condition with significant repair needs. Major rehabilitation is necessary to extend its useful life.
> 30%	Critical	Facility is in critical condition with severe deficiencies. Immediate intervention or replacement is required.

The FCI serves as a key tool for prioritizing maintenance and determining a facility's operational lifespan, enabling data-driven decision-making to optimize resources and sustain service levels. For example, facilities with higher FCI ratings nearing redevelopment may focus on cost-effective maintenance to remain functional, deferring expensive projects unless critical.

In 2024, walk-through non-invasive facility assessments were conducted in accordance with the ASTM E2018-15 Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process. For Transportation Facilities, the average FCI is 7.9%, indicating that most facilities fall within the "Fair" range. This underscores the importance of strategic planning to address maintenance needs and extend the useful life of critical infrastructure.

Middlesex County also actively tracks and monitors facility energy consumption data, including Electricity (kWh), Natural Gas (m^3), and Greenhouse Gas (GHG) Emissions (kg). This data provides valuable insights into operational efficiency, sustainability, and long-term asset planning. Detailed information is available on the Middlesex County Asset Management Dashboard.

Lifecycle Replacement Profile

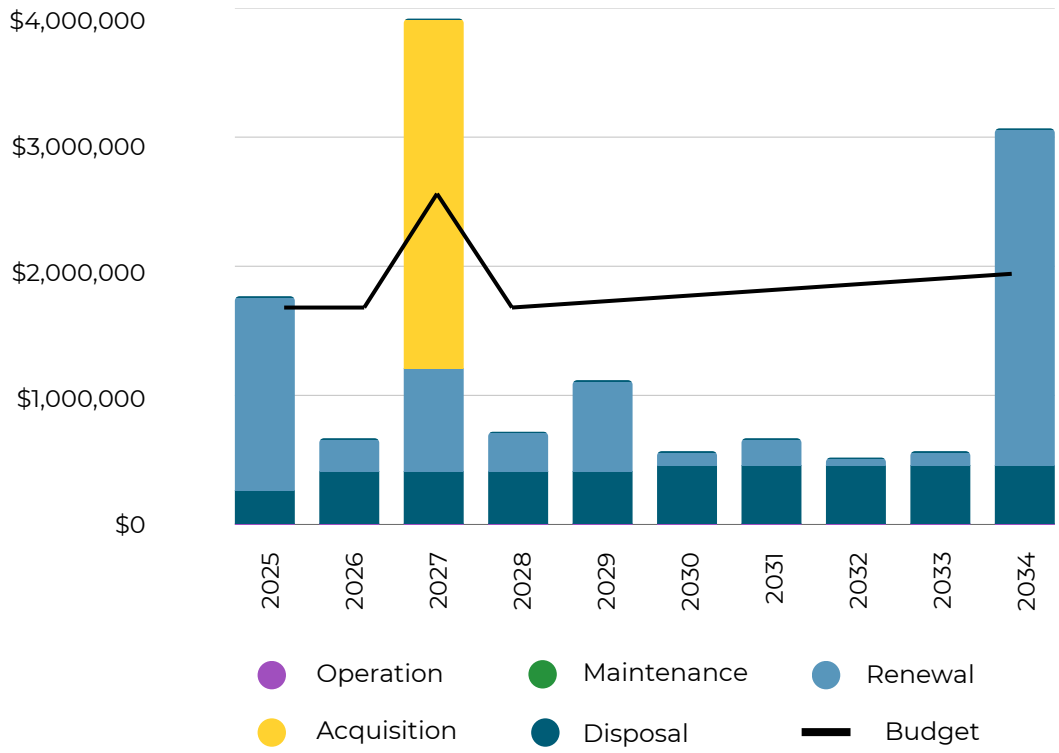
The total transportation facility replacement cost over a 10-year forecast period is estimated at $1,418,903 per year. The anticipated annual budget for transportation facilities over this period totals $1,427,656, covering 101% of the cost needed to sustain the current level of service at the lowest lifecycle cost. This leaves an annual surplus of $8,753 in the forecast lifecycle costs required to meet service needs.

The forecast lifecycle replacement costs necessary to provide the transportation facilities include:

Acquisition	The activities to provide a higher level of service or a new service that did not exist previously.
Operation	The regular activities to provide services. • Utilities
Maintenance	The activities necessary to retain an asset as near as practicable to an appropriate service condition: • Building Maintenance • Service Contracts
Renewal	The activities that return the service capability of an asset up to that which it had originally provided: • Reconstruction • Rehabilitation
Disposal	The activities associated with the disposal of a decommissioned asset including sale, demolition, or relocation.

Lifecycle Activity	Current Performance	Budget/Year
Acquisition	Acquisition costs include the projects identified in the Middlesex County Development Charges Background Study. Acquisition funding shows an annual shortfall of $180,000	$270,000
Operation	Operation activities can be completed within the planned budget.	$104,321
Maintenance	Maintenance activities can be completed within the planned budget.	$362,832
Renewal	Renewal funding shows an annual surplus of $188,753	$681,759
Disposal	No lifecycle costs projected.	$0

The chart below represents the forecast costs, in current dollars, needed to minimize lifecycle costs associated with transportation facility service provision. The proposed budget line indicates available funding, while the gap between forecast work and the proposed budget highlights the balance needed between costs, service levels, and risk to achieve optimal outcomes activities that return the service capability of an asset up to that which it had originally provided.



Middlesex County is committed to addressing funding requirements through targeted advocacy for external funding, optimizing capital expenditures, and improving lifecycle planning. Regular monitoring and updates to the FCI inspection database will remain critical to managing risks and ensuring sustainable service delivery.

These strategies are detailed further in the Financial Strategy.

Levels of Service

Transportation facility assets do not have prescribed levels of service reporting requirements under Ontario Regulation 588/17. Instead, the County is required to establish levels of service.

Levels of Service - Transportation Facilities

Community Level of Service	
Year	2024
Description of Transportation Facilities	Middlesex County manages a diverse portfolio of 24 transportation facilities across 7 sites, which are critical to supporting County operations and service delivery. These facilities consist of attributes including foundations, superstructures, building envelopes, electrical and plumbing systems, HVAC, fire protection systems, accessibility features, and interior finishes.
Technical Levels of Service	
Year	2024
The average facility condition index	7.9%

Middlesex County MLPS Facilties

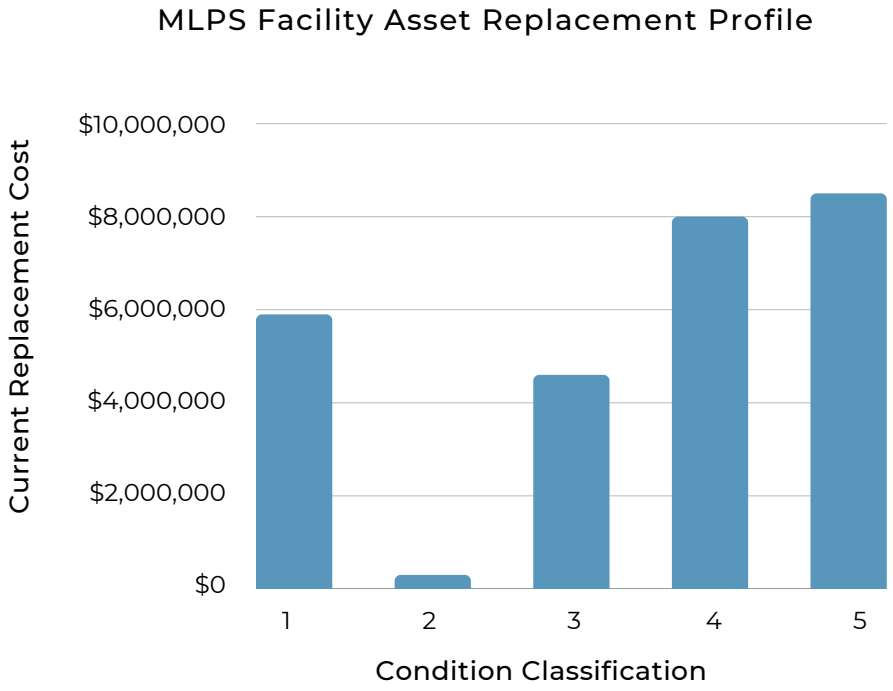
Middlesex County owns a portfolio of four (4) Middlesex-London Paramedic Service (MLPS) facilities across four (4) sites, which are critical to supporting the operations and service delivery of MLPS. These facilities include key attributes such as foundations, superstructures, building envelopes, electrical and plumbing systems, HVAC, fire protection systems, accessibility features, and interior finishes.

While MLPS operates within these facilities, Middlesex County retains ownership of them, in accordance with the MLPS Creation By-law. This arrangement reflects the funding structure and ownership model, where capital investments for MLPS facilities are supported and managed by the County. This approach ensures alignment with broader County asset management strategies and facilitates effective lifecycle planning and funding for these critical emergency service facilities. The Middlesex County GIS Asset Management Dashboard illustrates the location and distribution of these assets across the County.

MLPS Facility Assets

Category	Subcategory	Quantity	Average Age (Years)	Lifecycle	2024 Replacement Value
Facilities	Foundations (A10)	4	22	100	$1,779,834
Facilities	Superstructure (B10)	4	22	75	$2,153,322
Facilities	Exterior Enclosure (B20)	4	22	40	$3,804,816
Facilities	Roofing (B30)	4	22	25	$3,972,216
Facilities	Interior Construction (C10)	4	22	25	$501,084
Facilities	Stairs (C20)	2	38	40	$53,754
Facilities	Interior Finishes (C30)	4	22	15	$6,603,930
Facilities	Accessibility (C33)	3	6	15	$46,686
Facilities	Conveying (D10)	1	7	25	$130,014
Facilities	Plumbing (D20)	4	22	30	$856,158
Facilities	HVAC (D30)	4	22	20	$1,778,718
Facilities	Fire Protection (D40)	4	22	40	$304,482
Facilities	Electrical (D50)	4	22	40	$2,937,312
Facilities	Equipment (E10)	4	22	15	$434,682
Facilities	Site Improvements (G20)	4	22	20	$1,888,644
Facilities	Site Electrical Utilities (G40)	3	6	50	$85,932

The County applies a straight-line amortization schedule to depreciate capital assets, as outlined in its financial policies.



However, the Middlesex County Asset Management Plan supplements this financial data with facility condition assessments to provide a more accurate evaluation of the facility portfolios state of infrastructure. To assess the facility portfolio condition, the County relies on the Facility Condition Index (FCI).

The Facility Condition Index (FCI) is a standardized metric used to evaluate a facility's condition by comparing the cost of immediate maintenance, repair, or renewal needs to its current replacement value (CRV). The formula for FCI is:

FCI = Immediate (Year 1+2) Costs ÷ Current Replacement Value.

A higher FCI score indicates a poorer facility condition, with the following scale provided by the International Facility Management Association (IFMA):

Facility Condition Index

Rating	Classification	Description
0%-2.5%	Very Good	Facility is in excellent condition with minimal maintenance or repair needs. Routine inspections suffice.
2.6%-5%	Good	Facility is in good condition with manageable repair needs. Regular monitoring and preventive actions recommended.
5%-10%	Fair	Facility condition is declining, and noticeable maintenance or repairs are required to maintain functionality.
10%-30%	Poor	Facility is in poor condition with significant repair needs. Major rehabilitation is necessary to extend its useful life.
> 30%	Critical	Facility is in critical condition with severe deficiencies. Immediate intervention or replacement is required.

The FCI serves as a key tool for prioritizing maintenance and determining a facility's operational lifespan, enabling data-driven decision-making to optimize resources and sustain service levels. For example, facilities with higher FCI ratings nearing redevelopment may focus on cost-effective maintenance to remain functional, deferring expensive projects unless critical.

In 2024, walk-through non-invasive facility assessments were conducted in accordance with the ASTM E2018-15 Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process. For MLPS, the average FCI is 4.1%, indicating that most facilities fall within the "Good" range. This reflects the effectiveness of Middlesex County's strategic approach to MLPS facility management, which includes leases that fully fund lifecycle costs. These agreements ensure that maintenance and renewal needs are proactively addressed, supporting the long-term sustainability and functionality of these critical facilities.

Middlesex County also actively tracks and monitors facility energy consumption data, including Electricity (kWh), Natural Gas (m^3), and Greenhouse Gas (GHG) Emissions (kg). This data provides valuable insights into operational efficiency, sustainability, and long-term asset planning. Detailed information is available on the Middlesex County Asset Management Dashboard.

Lifecycle Replacement Profile

The total MLPS facility replacement cost over a 10-year forecast period is estimated at $1,406,367 per year. The anticipated annual budget for MLPS facilities over this period totals $1,116,777, covering 79% of the cost needed to sustain the current level of service at the lowest lifecycle cost. This leaves an annual shortfall of $289,590 in the forecast lifecycle costs required to meet service needs.

The forecast lifecycle replacement costs necessary to provide the MLPS facilities include:

Acquisition

The activities to provide a higher level of service or a new service that did not exist previously.

Operation

The regular activities to provide services.

- Utilities

Maintenance

The activities necessary to retain an asset as near as practicable to an appropriate service condition:

- Building Maintenance
- Service Contracts

Renewal

The activities that return the service capability of an asset up to that which it had originally provided:

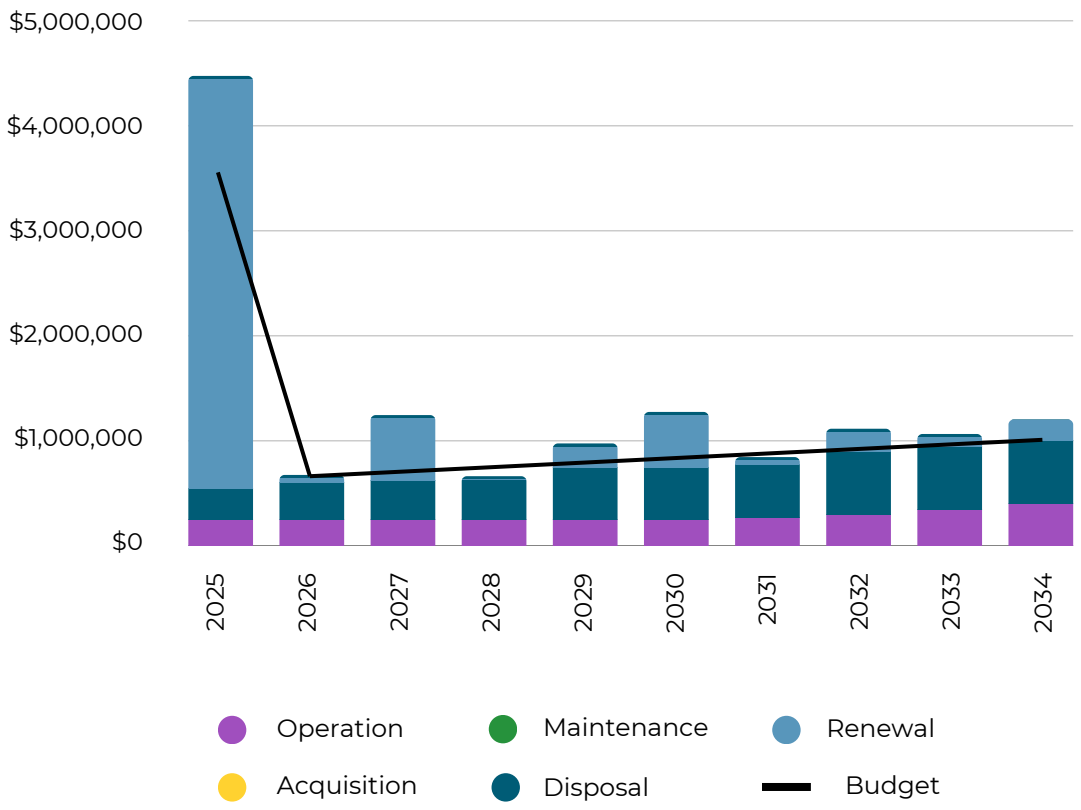
- Reconstruction
- Rehabilitation

Disposal

The activities associated with the disposal of a decommissioned asset including sale, demolition, or relocation.

Lifecycle Activity	Current Performance	Budget/Year
Acquisition	No lifecycle costs projected.	$0
Operation	Operation activities can be completed within the planned budget.	**$327,269**
Maintenance	Maintenance activities can be completed within the planned budget.	**$489,508**
Renewal	Renewal funding shows an annual deficit of $289,590	**$589,590**
Disposal	No lifecycle costs projected.	$0

The chart below represents the forecast costs, in current dollars, needed to minimize lifecycle costs associated with MLPS facility service provision. The proposed budget line indicates available funding, while the gap between forecast work and the proposed budget highlights the balance needed between costs, service levels, and risk to achieve optimal outcomes.



Middlesex County is committed to addressing funding requirements through targeted advocacy for external funding, optimizing capital expenditures, and improving lifecycle planning. Regular monitoring and updates to the FCI inspection database will remain critical to managing risks and ensuring sustainable service delivery.

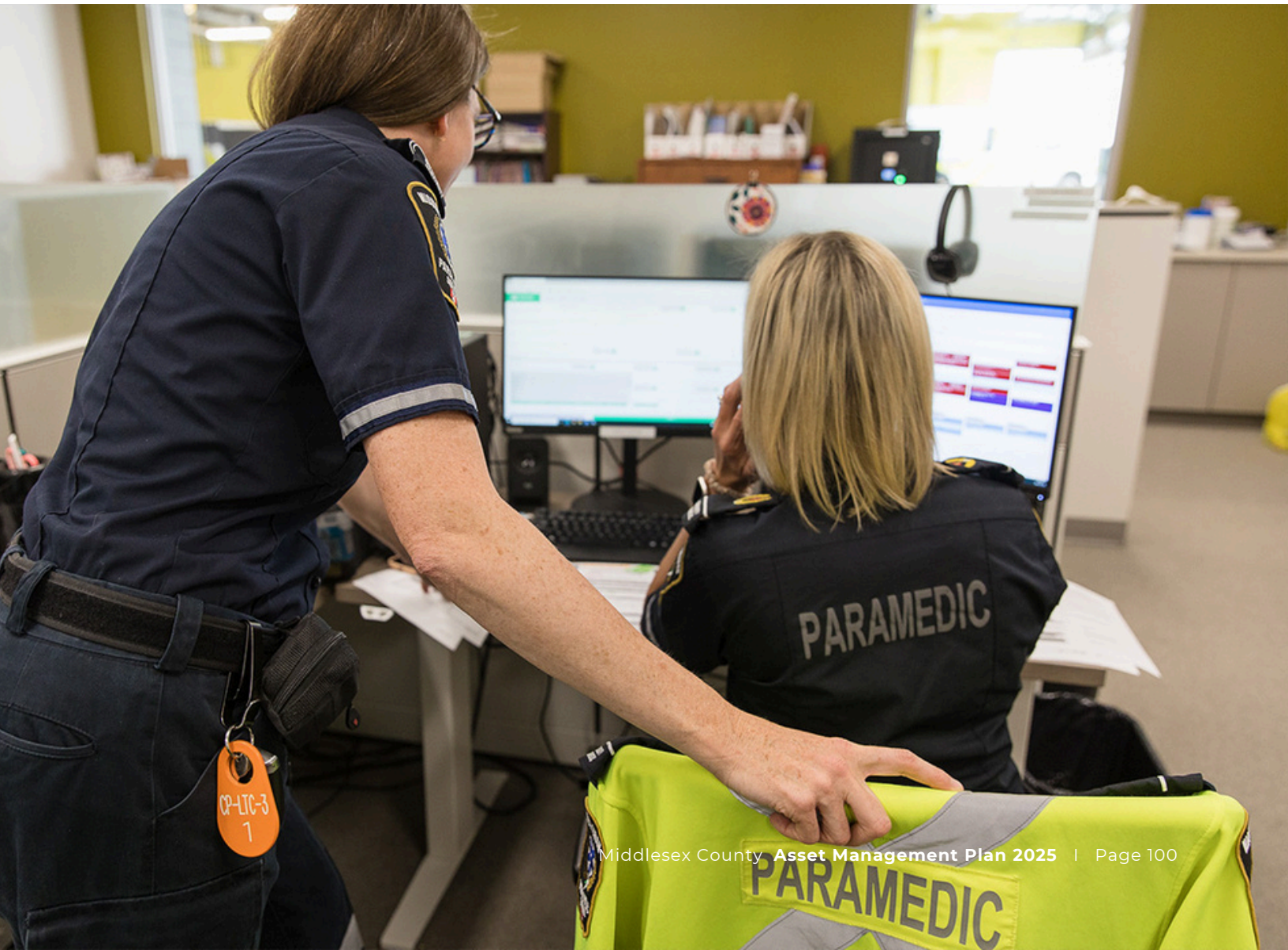
These strategies are detailed further in the Financial Strategy.

Levels of Service

MLPS facility assets do not have prescribed levels of service reporting requirements under Ontario Regulation 588/17. Instead, the County is required to establish levels of service.

Levels of Service - MLPS Facilities

Community Level of Service	
Year	2024
Description of MLPS Facilities	Middlesex County owns a portfolio of four (4) Middlesex-London Paramedic Service (MLPS) facilities across four (4) sites, which are critical to supporting the operations and service delivery of MLPS. These facilities include key attributes such as foundations, superstructures, building envelopes, electrical and plumbing systems, HVAC, fire protection systems, accessibility features, and interior finishes.
Technical Levels of Service	
Year	2024
The average facility condition index	4.1%



Middlesex County Library

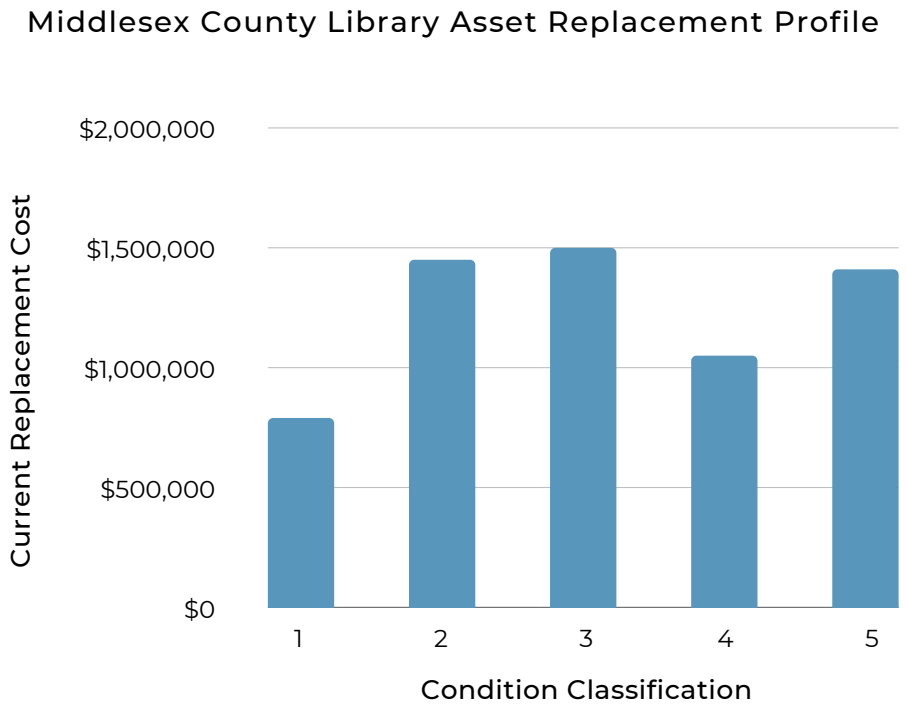
The Middlesex County Library system encompasses a wide range of assets that provide access to education, information, and vibrant community spaces, fostering knowledge, relationship-building, creativity, and life enhancement. Middlesex County manages 115,245 library assets, which include books, digital resources, technological infrastructure, and facilities that serve as community hubs.

These assets play a critical role in supporting library services, enabling public access to resources and programs that enhance quality of life for residents. The County ensures these assets are maintained, upgraded, and aligned with evolving community needs through proactive lifecycle management. This commitment highlights Middlesex County's dedication to fostering accessible and innovative library services, supporting lifelong learning, and strengthening community connections

Middlesex County Library Assets

Category	Subcategory	Quantity	Average Age (Years)	Lifecycle	2024 Replacement Value
Library ITS	ITS Equipment	12	4	2	$5,394
Library ITS	ITS Equipment	259	3	4	$222,242
Machinery & Equipment	Books - Paperback, Media	15,500	4	5	$484,200
Library ITS	ITS Equipment	20	4	5	$18,911
Library Vehicles	Library Fleet	1	0	5	$80,000
Library ITS	ITS Equipment	51	4	6	$32,841
Library ITS	ITS Equipment	152	4	7	$264,300
Library ITS	ITS Equipment	417	6	10	$554,673
Machinery & Equipment	Furniture	729	7	15	$1,218,000
Machinery & Equipment	Books - Hardcover	98,100	6	15	$3,216,500
Land Improvements	Library Signs	4	9	20	$140,000

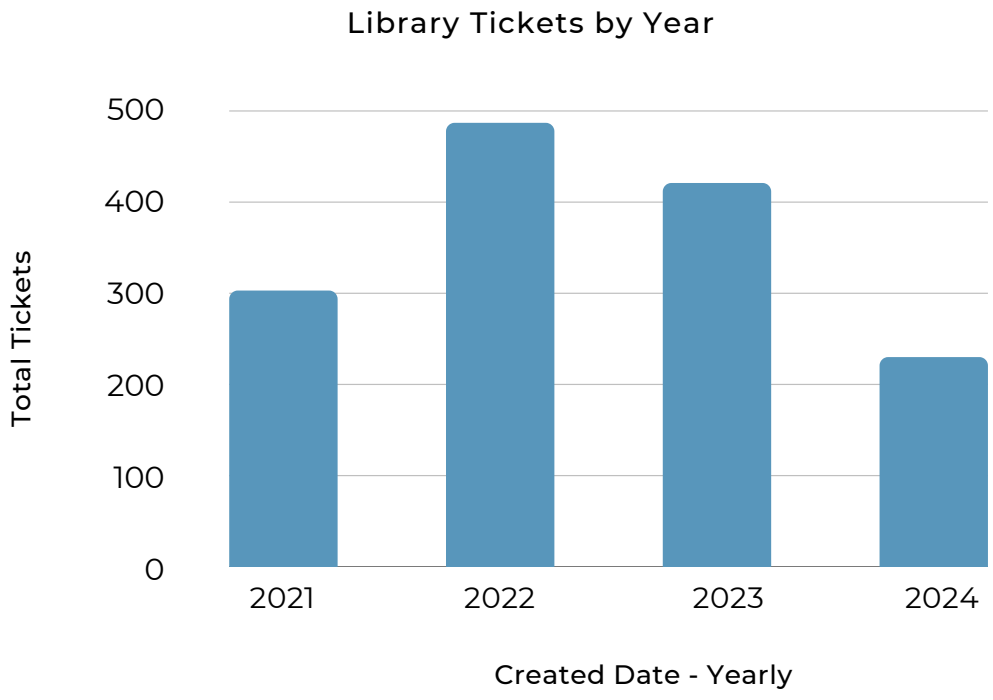
The County applies a straight-line amortization schedule to depreciate capital assets, as outlined in its financial policies.



Middlesex County ITS closely monitors service tickets associated with Library ITS assets. The reduction in ITS tickets serves as an effective key performance indicator (KPI) for Middlesex County Library, highlighting the efficiency and reliability of technological systems that support library operations and service delivery. Given the library's role in providing access to digital resources, public computers, and other IT-dependent services, the decline in ITS tickets demonstrates the County's commitment to maintaining robust, user-friendly systems that meet the needs of the community while minimizing service disruptions. This improvement reflects the positive impact of proactive asset management and continuous support for library technology infrastructure.

The chart below demonstrates a reduction in ITS tickets from 2021 to 2024, reflecting the positive impact of Middlesex County's proactive ITS management and excellent asset stewardship. Over this period, ticket volumes decreased to 230 in 2024, showcasing an ongoing trend of improvement.

This reduction highlights the County's focus on preventive maintenance, end-user training, timely system updates, and efficient issue resolution, which have collectively contributed to reducing service disruptions and improving system reliability. Middlesex County's ITS team continues to prioritize effective lifecycle management and responsive support to ensure the sustained functionality and performance of its ITS assets. These results underscore the County's commitment to delivering reliable technology services while aligning with long-term operational objectives.



Lifecycle Replacement Profile

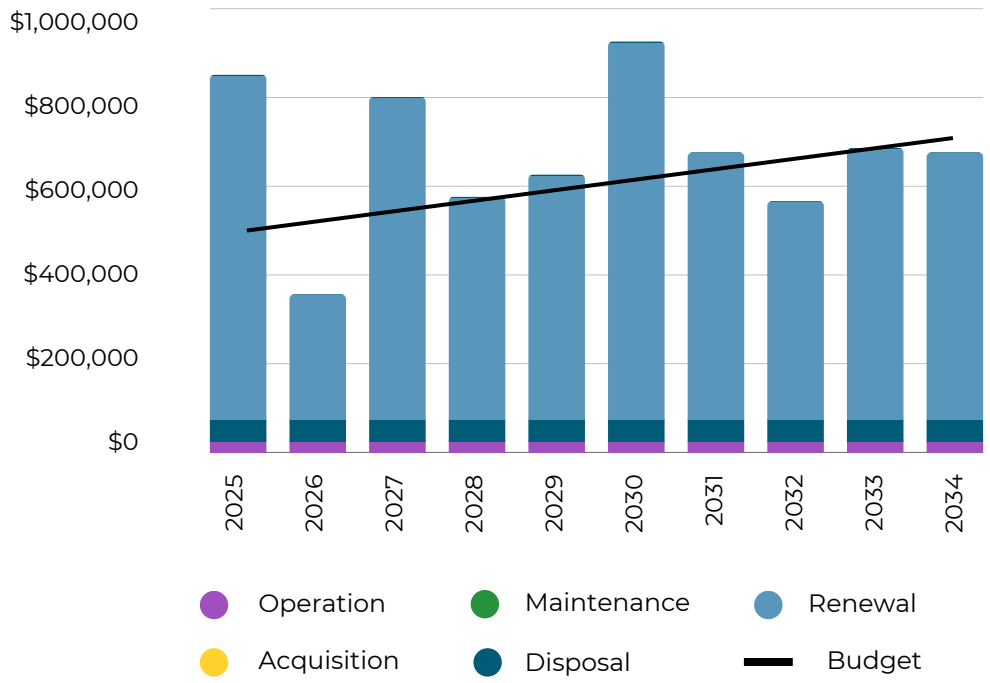
The total Middlesex County Library asset replacement cost over a 10-year forecast period is estimated at $666,398 per year. The anticipated annual budget for library assets over this period totals $630,731, covering 95%% of the cost needed to sustain the current level of service at the lowest lifecycle cost. This leaves an annual shortfall of $35,667 in the forecast lifecycle costs required to meet service needs.

The forecast lifecycle replacement costs necessary to provide Middlesex County Library assets include:

 **Acquisition**	The activities to provide a higher level of service or a new service that did not exist previously.
 **Operation**	The regular activities to provide services.
 **Maintenance**	The activities necessary to retain an asset as near as practicable to an appropriate service condition.
 **Renewal**	The activities that return the service capability of an asset up to that which it had originally provided.
 **Disposal**	The activities associated with the disposal of a decommissioned asset including sale, demolition, or relocation.

Lifecycle Activity	Current Performance	Budget/Year
Acquisition	No lifecycle costs projected.	$0
Operation	Operation activities can be completed within the planned budget.	$22,188
Maintenance	Maintenance activities can be completed within the planned budget.	$50,000
Renewal	Renewal funding shows an annual deficit of $35,667	$594,210
Disposal	No lifecycle costs projected.	$0

The chart below represents the forecast costs, in current dollars, needed to minimize lifecycle costs associated with Middlesex County Library asset service provision. The proposed budget line indicates available funding, while the gap between forecast work and the proposed budget highlights the balance needed between costs, service levels, and risk to achieve optimal outcomes.



Middlesex County is committed to addressing funding shortfalls through targeted advocacy for external funding, optimizing capital expenditures, and improving lifecycle planning.

These strategies are detailed further in the Financial Strategy.

Levels of Service

Middlesex County Library assets do not have prescribed levels of service reporting requirements under Ontario Regulation 588/17. Instead, the County is required to establish levels of service

Levels of Service - Middlesex County Library

Community Level of Service	
Year	2024
Description of Middlesex County Library Assets	Assets include hardware such as desktop computers, laptops, servers, physical literature collections, printers, scanners, phones, tablets, and network equipment, along with peripheral devices like docking stations and projectors.
Key Performance Indicators	
Year	2024
Number of ITs tickets processed annually	230

Strathmere Lodge

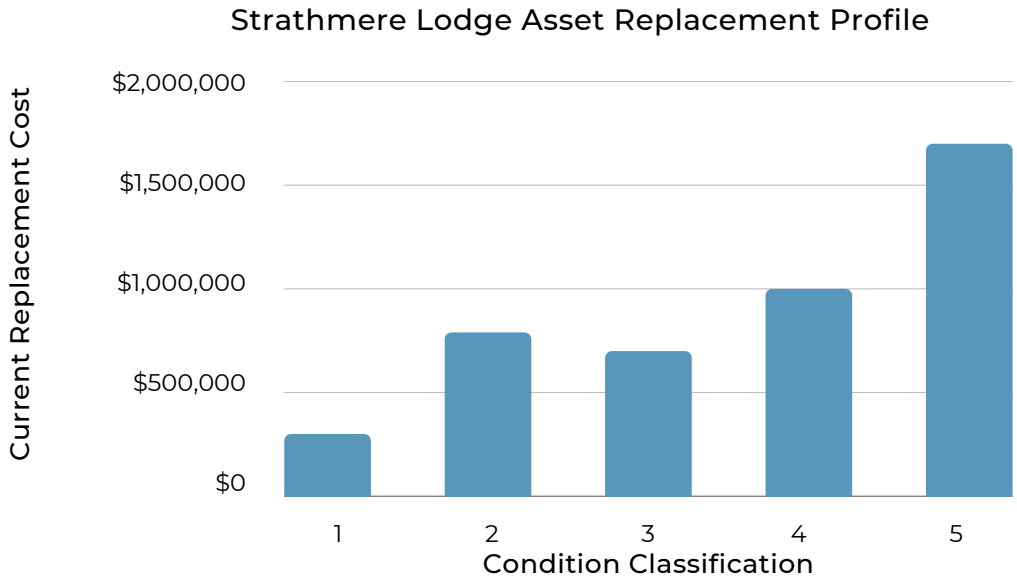
Strathmere Lodge encompasses a diverse portfolio of assets that support high-quality care, resident services, and operational efficiency. Middlesex County manages 2,506 assets at Strathmere Lodge, including facilities, ITS equipment, machinery, and land improvements that collectively ensure a safe, comfortable, and engaging environment for residents. The Middlesex County GIS Asset Management Dashboard illustrates the location of Strathmere Lodge.

These assets play a critical role in enabling Strathmere Lodge to deliver essential services, from advanced technology systems supporting administration and care to well-maintained facilities, resident gardens, and transportation resources. The County is committed to maintaining and upgrading these assets through proactive lifecycle management, ensuring they align with evolving needs and continue to support exceptional care for residents. This approach highlights Middlesex County's dedication to operational excellence and the well-being of Strathmere Lodge residents.

Strathmere Lodge Assets

Category	Subcategory	Quantity	Average Age (Years)	Lifecycle (Years)	2024 Replacement Value
Facilities	Foundations (A10)	4	17	100	$1,520,922
Facilities	Basement Construction (A20)	1	18	100	$1,204,722
Facilities	Superstructure (B10)	3	15	75	$9,935,934
Facilities	Exterior Enclosure (B20)	2	17	40	$4,098,696
Facilities	Roofing (B30)	4	16	25	$6,129,258
Facilities	Interior Construction (C10)	1	18	25	$997,332
Facilities	Stairs (C20)	1	18	40	$152,520
Facilities	Interior Finishes (C30)	1	18	15	$7,258,278
Facilities	Accessibility (C33)	1	18	15	$225,990
Facilities	Conveying (D10)	1	18	25	$260,028
Facilities	Plumbing (D20)	1	18	30	$1,697,622
Facilities	HVAC (D30)	1	18	20	$2,087,664
Facilities	Fire Protection (D40)	1	18	40	$674,250
Facilities	Electrical (D50)	1	18	40	$2,291,148
Facilities	Equipment (E10)	2	18	15	$341,124
Facilities	Site Improvements (G20)	6	14	20	$2,393,448
Lodge ITS	ITS Equipment	39	0	2	$17,830
Lodge ITS	ITS Equipment	77	2	4	$74,661
Machinery & Equipment	Care Related Equipment	10	9	5	$39,198
Lodge ITS	ITS Equipment	3	5	5	$2,185
Lodge ITS	ITS Equipment	12	2	6	$7,530
Lodge ITS	ITS Equipment	114	6	7	$112,743
Land Improvements	Land Improvements	3	8	10	$44,617
Machinery & Equipment	Care Related Equipment	24	8	10	$868,442
Lodge ITS	ITS Equipment	126	5	10	$80,884
Fleet	Vehicles	1	10	10	$104,124
Land Improvements	Land Improvements	1	18	20	$111,403
Machinery & Equipment	Care Related Equipment	225	12	15	$33,627
Machinery & Equipment	Care Related Equipment	1602	15	20	$1,984,101
Machinery & Equipment	Care Related Equipment	189	11	25	$129,166
Land Improvements	Land Improvements	34	19	40	$20,888
Machinery & Equipment	Care Related Equipment	14	19	40	$16,179
Machinery & Equipment	Care Related Equipment	1	44	50	$90,492

The County applies a straight-line amortization schedule to depreciate capital assets, as outlined in its financial policies.



However, the Middlesex County Asset Management Plan supplements financial data pertaining to the Strathmere Lodge with facility condition assessments to provide a more accurate evaluation of the facility portfolios state of infrastructure. To assess the facility portfolio condition, the County relies on the Facility Condition Index (FCI).

The Facility Condition Index (FCI) is a standardized metric used to evaluate a facility's condition by comparing the cost of immediate maintenance, repair, or renewal needs to its current replacement value (CRV). The formula for FCI is:

FCI = Immediate (Year 1+2) Costs ÷ Current Replacement Value.

A higher FCI score indicates a poorer facility condition, with the following scale provided by the International Facility Management Association (IFMA):

Facility Condition Index

Rating	Classification	Description
0%-2.5%	Very Good	Facility is in excellent condition with minimal maintenance or repair needs. Routine inspections suffice.
2.6%-5%	Good	Facility is in good condition with manageable repair needs. Regular monitoring and preventive actions recommended.
5%-10%	Fair	Facility condition is declining, and noticeable maintenance or repairs are required to maintain functionality.
10%-30%	Poor	Facility is in poor condition with significant repair needs. Major rehabilitation is necessary to extend its useful life.
> 30%	Critical	Facility is in critical condition with severe deficiencies. Immediate intervention or replacement is required.

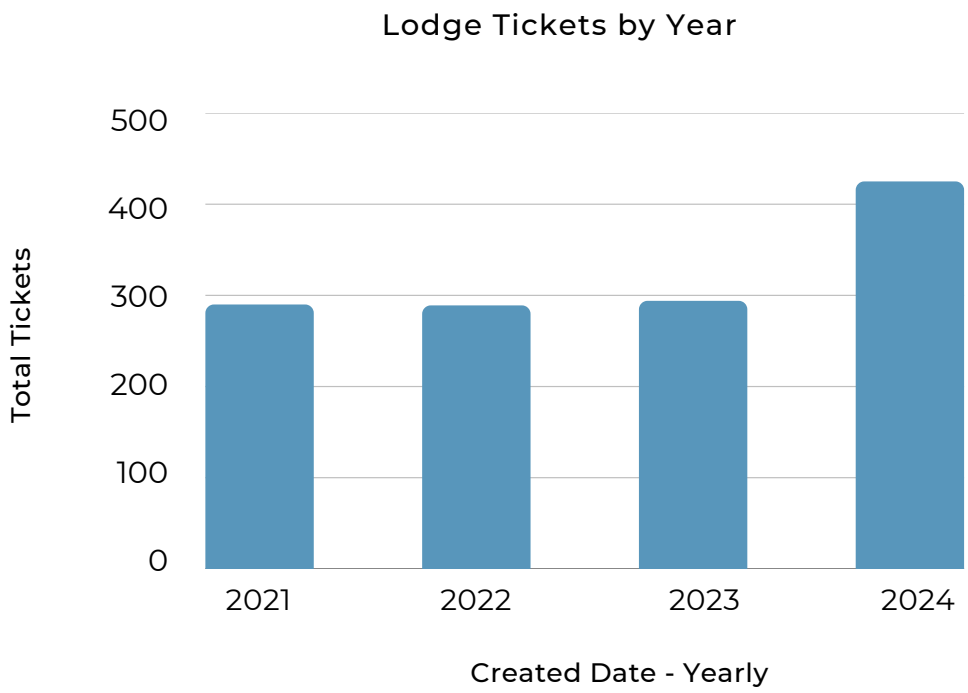
The FCI serves as a key tool for prioritizing maintenance and determining a facility's operational lifespan, enabling data-driven decision-making to optimize resources and sustain service levels. For example, facilities with higher FCI ratings nearing redevelopment may focus on cost-effective maintenance to remain functional, deferring expensive projects unless critical.

In 2024, walk-through non-invasive facility assessments were conducted in accordance with the ASTM E2018-15 Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process. For Strathmere Lodge, the average FCI is 0.3%, indicating that most facilities fall within the "Very Good" range. This reflects the effectiveness of Middlesex County's strategic approach to Strathmere Lodge facility management, ensuring that maintenance and renewal needs are proactively addressed to support the long-term sustainability, functionality, and delivery of high-quality care within these critical facilities.

Middlesex County ITS closely monitors service tickets associated with Strathmere Lodge ITS assets The increase in ITS tickets serves as an important key performance indicator (KPI) for Strathmere Lodge, reflecting the Lodge's efforts to modernize its processes and enhance levels of care in alignment with provincial direction. As Strathmere Lodge adopts more technology-driven solutions to improve care delivery, administration, and resident services, the rise in ITS tickets demonstrates the County's focus on supporting these advancements through robust ITS infrastructure and responsive issue resolution.

Middlesex County also actively tracks and monitors facility energy consumption data, including Electricity (kWh), Natural Gas (m^3), and Greenhouse Gas (GHG) Emissions (kg). This data provides valuable insights into operational efficiency, sustainability, and long-term asset planning. Detailed information is available on the Middlesex County Asset Management Dashboard.

This trend underscores the County's commitment to enabling Strathmere Lodge's modernization initiatives by addressing the technological demands of enhanced care standards. The increase in ticket volumes highlights the proactive efforts of Middlesex County's ITS team to support the integration of new technology, train end-users, and resolve issues efficiently. This focus on technology adoption ensures the Lodge can continue to deliver high-quality, innovative care while advancing its operational objectives.



Lifecycle Replacement Profile

The total Strathmere Lodge asset replacement cost over a 10-year forecast period is estimated at $1,147,854 per year. The anticipated annual budget for Strathmere Lodge assets over this period totals $1,104,614, covering 96% of the cost needed to sustain the current level of service at the lowest lifecycle cost. This leaves an annual shortfall of $43,240 in the forecast lifecycle costs required to meet service needs.

The forecast lifecycle replacement costs necessary to provide Strathmere Lodge assets include:

Acquisition The activities to provide a higher level of service or a new service that did not exist previously.

Operation The regular activities to provide services.

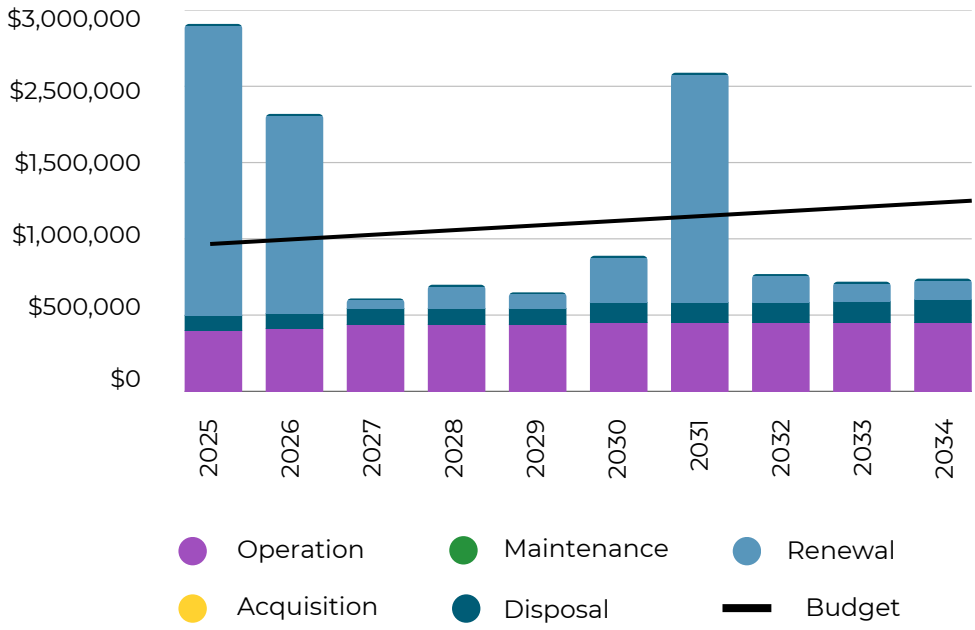
Maintenance The activities necessary to retain an asset as near as practicable to an appropriate service condition.

Renewal The activities that return the service capability of an asset up to that which it had originally provided.

Disposal The activities associated with the disposal of a decommissioned asset including sale, demolition, or relocation.

Lifecycle Activity	Current Performance	Budget/Year
Acquisition	No lifecycle costs projected.	$0
Operation	Operation activities can be completed within the planned budget.	$458,555
Maintenance	Maintenance activities can be completed within the planned budget.	$141,006
Renewal	Renewal funding shows an annual deficit of $43,240	$548,293
Disposal	No lifecycle costs projected.	$0

The chart below represents the forecast costs, in current dollars, needed to minimize lifecycle costs associated with Strathmere Lodge asset service provision. The proposed budget line indicates available funding, while the gap between forecast work and the proposed budget highlights the balance needed between costs, service levels, and risk to achieve optimal outcomes.



Middlesex County is committed to addressing funding shortfalls through targeted advocacy for external funding, optimizing capital expenditures, and improving lifecycle planning.

These strategies are detailed further in the Financial Strategy.

Levels of Service

Strathmere Lodge assets do not have prescribed levels of service reporting requirements under Ontario Regulation 588/17. Instead, the County is required to establish levels of service.

Levels of Service - Strathmere Lodge Assets

Community Level of Service	
Year	2024
Description of Strathmere Lodge Assets	Assets include Strathmere Lodge, including facilities, ITS equipment, machinery, and land improvements that collectively ensure a safe, comfortable, and engaging environment for residents
Key Performance Indicators	
Year	2024
Number of ITs tickets processed annually	425
The average facility condition index	0.3%

Middlesex-London Paramedic Service (MLPS)

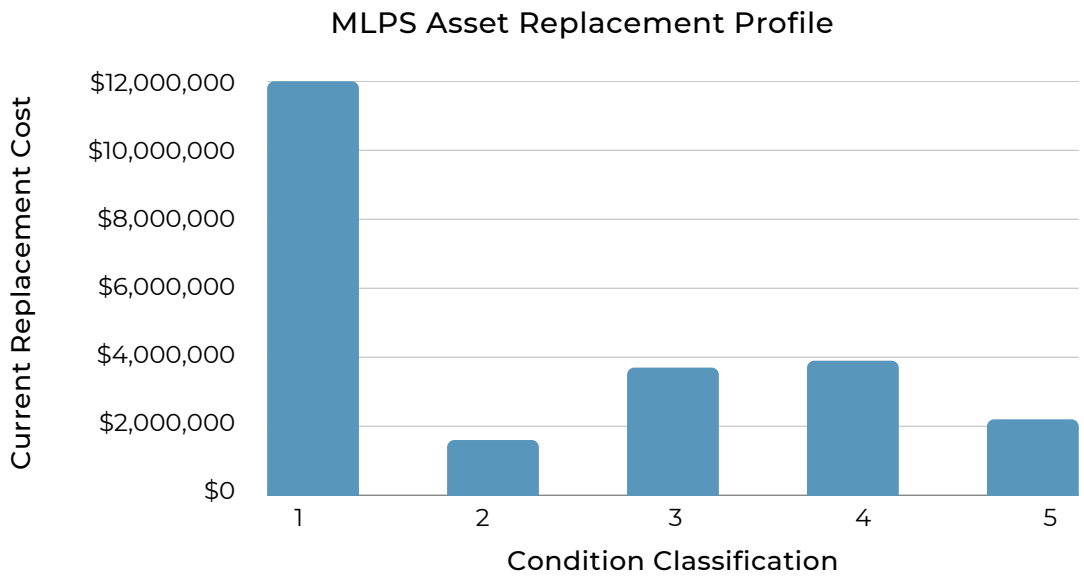
The Middlesex-London Paramedic Service (MLPS) encompasses a diverse range of emergency medical services (EMS) equipment essential to delivering high-quality emergency care and supporting operational efficiency. MLPS manages 1,155 assets, which include medical equipment, technology infrastructure, and vehicles that enable sector leading responsive and reliable paramedic services.

These assets play a critical role in supporting MLPS operations, ensuring the delivery of timely and effective care to the community. MLPS ensures these assets are maintained, upgraded, and aligned with evolving service demands through proactive lifecycle management. This commitment highlights MLPS's dedication to supporting innovative and sustainable paramedic services, prioritizing community safety, and strengthening emergency response capabilities.

MLPS Assets

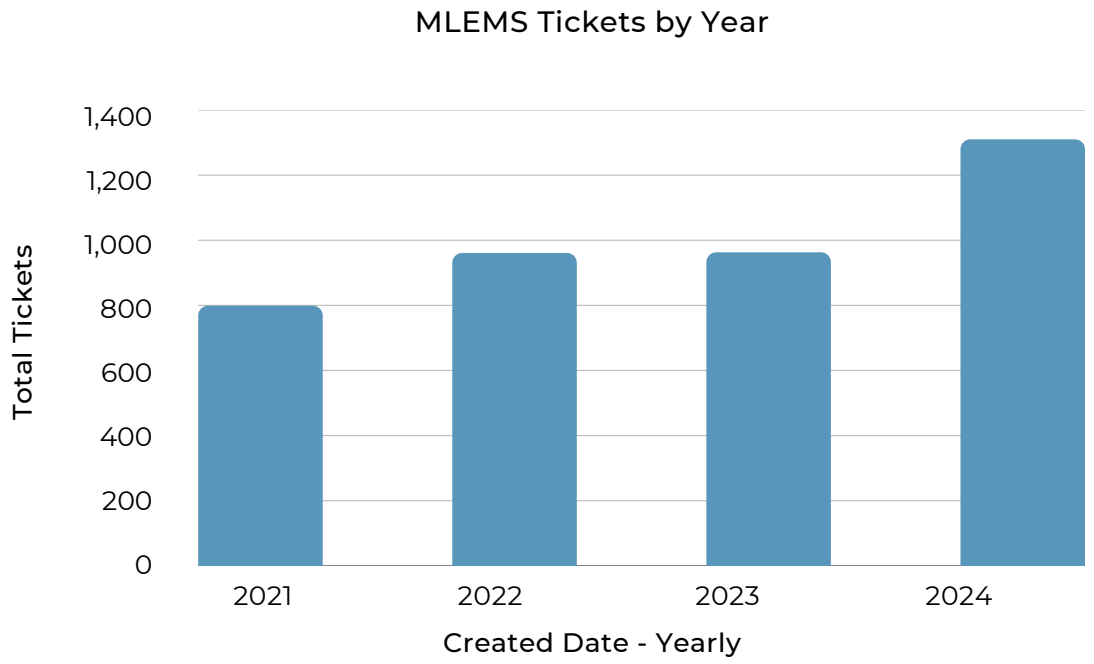
Category	Subcategory	Quantity	Average Age (Years)	Lifecycle (Years)	2024 Replacement Value
MLPS ITS	ITS Equipment	55	2	2	$18,538
MLPS Machinery & Equipment	Patient Care Equipment	90	2	3	$67,500
MLPS ITS	ITS Equipment	261	2	4	$378,439
MLPS ITS	ITS Equipment	14	3	5	$12,358
MLPS Vehicles	Land Ambulance Fleet	40	2	5	$7,624,000
MLPS ITS	ITS Equipment	20	5	6	$16,016
MLPS Vehicles	Land Ambulance Fleet	16	5	6	$3,675,000
MLPS ITS	ITS Equipment	61	5	7	$114,047
MLPS Machinery & Equipment	Patient Care Equipment	238	2	7	$4,761,600
MLPS Vehicles	Land Ambulance Fleet	12	6	7	$2,800,000
MLPS Machinery & Equipment	Patient Care Equipment	9	7	8	$67,649
MLPS Vehicles	Land Ambulance Fleet	10	8	8	$1,902,000
MLPS ITS	ITS Equipment	154	5	10	$80,896
MLPS Machinery & Equipment	Patient Care Equipment	76	3	10	$634,850
MLPS Machinery & Equipment	Patient Care Equipment	92	4	12	$69,000
MLPS Vehicles	Land Ambulance Fleet (Training)	2	13	15	$270,000
MLPS Machinery & Equipment	Training & Support Equipment	5	13	20	$406,600

MLPS applies a straight-line amortization schedule to depreciate capital assets, as outlined in its financial policies.



Middlesex County ITS closely monitors service tickets associated with MLPS ITS assets. The increase in ITS tickets serves as an important key performance indicator (KPI) for Middlesex-London Paramedic Service (MLPS), reflecting the rapid growth in call volume and the evolving demands placed on its emergency medical services (EMS) equipment. As MLPS continues to modernize operations and adopt innovative technologies, the rise in ITS tickets highlights the increasing utilization of assets, ensuring they are effectively maintained to support enhanced care delivery and operational efficiency.

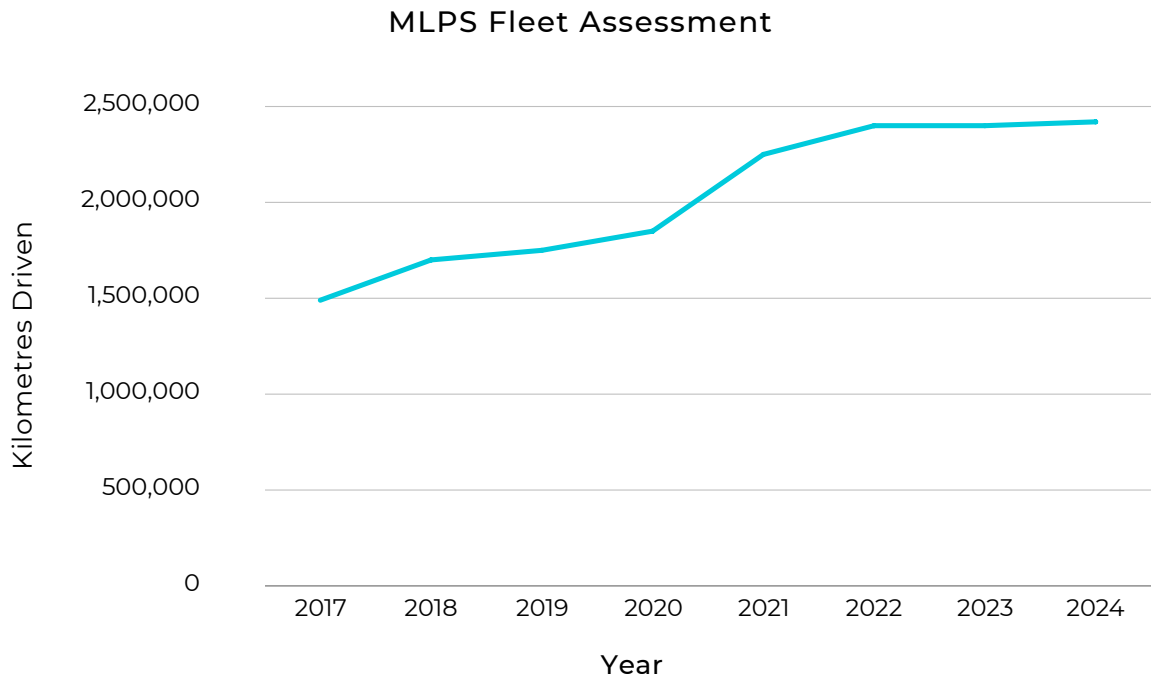
This trend underscores Middlesex County's commitment to supporting MLPS assets through proactive issue resolution, timely updates, and targeted maintenance to address the growing needs of a dynamic emergency service environment. The increase in ticket volumes demonstrates the County's focus on sustaining the functionality and reliability of EMS equipment, enabling MLPS to meet the demands of rapid call volume growth while continuing to deliver high-quality, innovative emergency medical services.



MLPS also closely monitors fleet kilometres driven as a critical key performance indicator (KPI), reflecting the increasing operational demands placed on its fleet. Since 2017, MLPS vehicles have experienced a steady rise in utilization, growing from 1,490,165 kilometres in 2017 to 2,382,913 kilometres in 2024, an increase of over 60%. This trend highlights the growing need for emergency medical services in the region and the ability of the fleet to meet these demands effectively.

The continued functionality and reliability of the MLPS fleet are directly attributable to MLPS's strategic approach to lifecycle maintenance. Proactive measures, such as regular servicing, preventative repairs, and timely component replacements, have ensured that vehicles remain operational despite higher mileage and usage. This approach not only sustains vehicle performance under increasing pressure but also extends their lifecycles, reducing the need for premature replacements and optimizing long-term asset management costs.

By prioritizing lifecycle maintenance, MLPS demonstrates its commitment to ensuring the MLPS fleet operates efficiently and reliably, supporting the delivery of high-quality emergency medical services and aligning with the County's long-term operational objectives. This data underscores the importance of robust asset management practices in meeting the evolving needs of the community.



Lifecycle Replacement Profile

The total MLPS asset replacement cost over a 10-year forecast period is estimated at $6,718,052 per year. The anticipated annual budget for MLPS assets over this period totals $6,718,052, covering 100% of the cost needed to sustain the current level of service at the lowest lifecycle cost.

The forecast lifecycle replacement costs necessary to provide MLPS assets include:

Acquisition — The activities to provide a higher level of service or a new service that did not exist previously.

Operation — The regular activities to provide services.

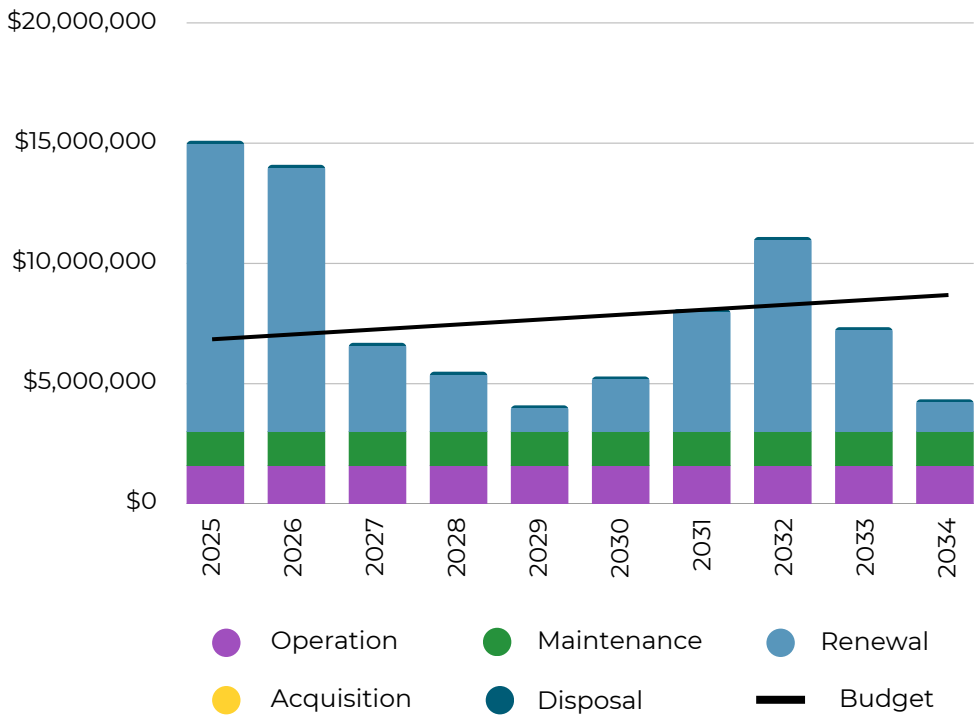
Maintenance — The activities necessary to retain an asset as near as practicable to an appropriate service condition.

Renewal — The activities that return the service capability of an asset up to that which it had originally provided.

Disposal — The activities associated with the disposal of a decommissioned asset including sale, demolition, or relocation.

Lifecycle Activity	Current Performance	Budget/Year
Acquisition	No lifecycle costs projected.	$0
Operation	Operation activities can be completed within the planned budget.	$1,472,738
Maintenance	Maintenance activities can be completed within the planned budget.	$1,043,744
Renewal	Renewal activities can be completed within the planned budget.	$4,201,570
Disposal	No lifecycle costs projected.	$0

The chart below represents the forecast costs, in current dollars, needed to minimize lifecycle costs associated with MLPS asset service provision. The proposed budget line indicates available funding, while the gap between forecast work and the proposed budget highlights the balance needed between costs, service levels, and risk to achieve optimal outcomes.



Middlesex County is committed to addressing funding shortfalls through targeted advocacy for external funding, optimizing capital expenditures, and improving lifecycle planning.

These strategies are detailed further in the Financial Strategy.

Levels of Service

MLPS assets do not have prescribed levels of service reporting requirements under Ontario Regulation 588/17. Instead, the County is required to establish levels of service.

Levels of Service for MLPS Assets

Community Level of Service	
Year	2024
Description of MLPS Assets	Assets include medical equipment, technology infrastructure, and vehicles that enable sector leading responsive and reliable paramedic services.

Key Performance Indicators	
Year	2024
Number of ITs tickets processed annually	1,310
Total Fleet kilometers	2,382,913

Financial Strategy - Middlesex County Assets

The financial strategy for Middlesex County assets within the Middlesex County Asset Management Plan is to focus on ensuring sustainable asset management. This section outlines the financial realities, challenges, and strategies designed to maintain service levels while addressing funding shortfalls.

The forecasted annual lifecycle costs over the next 10 years for Middlesex County assets total $50,782,046. These costs include acquisition, operation, maintenance, renewal, and disposal activities necessary to sustain current levels of service at the lowest lifecycle cost. Please refer to Appendix 'A' for a detailed lifecycle assessment of Middlesex County assets.

The County's planned budget for the same period amounts to $45,805,040 annually, leaving an annual funding shortfall of $4,977,006.

The Lifecycle Financial Ratio stands at 90%, slightly lower in the indicative target range of 90%-110%, highlighting a need for strategic measures to address the funding gap.

Middlesex County will consider the following approaches to address the funding shortfall and align closer to the target lifecycle ratio:

1. Optimizing Asset Lifecycles

- Prioritize preventive maintenance to extend the useful life of assets.
- Implement efficient lifecycle strategies to reduce total costs while maintaining functionality.

2. Incremental Capital Budget Adjustments

- Annual increases to the Capital Budget indexed to inflation or other cost indicators.
- Utilize assessment growth to add funds to capital reserves, where appropriate.

3. Enhanced Revenue Streams

- Explore additional grants, partnerships, and other funding mechanisms.
- Align projects with available senior government funding programs.

4. Risk-Based Prioritization

- Prioritize high-impact projects based on service levels and risk assessments.
- Shift resources to critical assets in need of urgent attention.

5. Revised Service Levels

- Adjust service levels where feasible to reflect financial realities while ensuring core services remain unaffected.

6. Debt Utilization

- Employ strategic debt financing for long-term assets with multi-generational benefits.

The County aims to achieve and maintain the target Asset Renewal Funding Ratio and Lifecycle Financial Ratio within the range of 90%-110%. Currently, the financial ratios for specific asset categories vary.

The Middlesex County Asset Management Plan serves as a guiding framework for capital and operating budgets. Financial planning focuses on:

- Ensuring reserve contributions align with lifecycle needs.
- Smoothing financial impacts on ratepayers through predictable budgeting.
- Incorporating new revenue tools and non-traditional funding strategies.

Middlesex County's financial strategy emphasizes proactive lifecycle management, equitable cost distribution, and sustainable funding practices. By addressing funding shortfalls and optimizing asset performance, the County remains committed to providing reliable infrastructure and maintaining service levels in alignment with community needs and long-term objectives.

Financial Strategy - Middlesex County Library Assets

The financial strategy for the Middlesex County Library assets within the Middlesex County Asset Management Plan focuses on ensuring sustainable management and addressing identified funding shortfalls.

The forecasted annual lifecycle costs over the next 10 years for library assets total $666,398, while the planned budget for the same period is $630,731. This leaves an annual funding shortfall of $35,667 and a Lifecycle Financial Ratio of 95%. Although slightly lower in the indicative target range of 90%-110%, the County remains committed to proactive measures to close the funding gap. Please refer to Appendix ‘B’ for a detailed lifecycle assessment of Middlesex County Library assets.

Strategies include prioritizing preventive maintenance to extend asset lifespans, leveraging grants or partnerships for additional funding, and aligning capital budgets with lifecycle needs. These efforts ensure library facilities and technological systems continue to support Middlesex County’s educational and community-building goals.

Financial Strategy - Strathmere Lodge Assets

The financial strategy for Strathmere Lodge assets focuses on addressing funding shortfalls while maintaining high-quality service delivery.

The 10-year forecast for lifecycle costs totals $1,147,854 annually, with a planned budget of $1,104,614. This results in a funding shortfall of $43,240 and a Lifecycle Financial Ratio of 96%, close to the target range of 90%-110%. The County prioritizes maintaining these assets' functionality through strategic lifecycle management and efficient allocation of resources. Please refer to Appendix ‘C’ for a detailed lifecycle assessment of Strathmere Lodge assets.

To address the funding shortfall, Middlesex County will focus on preventive maintenance, optimizing lifecycle management, and exploring revenue-generating opportunities. These actions will ensure the Lodge continues to provide excellent care and services to residents while addressing long-term financial sustainability.

Financial Strategy - MLPS Assets

The financial strategy for Middlesex-London Paramedic Services (MLPS) focuses on achieving full funding sustainability.

The 10-year lifecycle costs for MLPS assets total $6,718,052 annually, with an equal planned budget, resulting in no funding shortfall and a Lifecycle Financial Ratio of 100%. This aligns perfectly with the target range of 90%-110%, demonstrating efficient lifecycle planning and financial management. Please refer to Appendix ‘D’ for a detailed lifecycle assessment of MLPS assets.

Middlesex County's proactive approach to maintaining MLPS assets ensures the operational effectiveness and reliability of these critical emergency services. This strategy supports the ongoing delivery of high-quality emergency medical care while maintaining alignment with long-term fiscal objectives.

Appendix A
Middlesex County Assets Lifecycle Assessment

Middlesex County
Average Annual Lifecycle Summary

2025-2034

Lifecycle Summary

Service Area	Lifecycle Financial Ratio	Planned Budget	Lifecycle Forecast	Shortfall
Middlesex County ITS	100%	$195,333	$195,333	$0
Middlesex County MLPS Facilties	79%	$1,116,777	$1,406,367	$289,590
Middlesex County Transportation Facilities	101%	$1,427,656	$1,418,903	($8,753)
Bridges	84%	$10,628,319	$12,594,358	$1,966,039
Culverts	4%	$138,357	$3,360,257	$3,221,900
Fleet	92%	$3,719,855	$4,024,240	$304,385
Machinery & Equipment	71%	$203,762	$287,648	$83,886
Traffic Signals	66%	$1,058,819	$1,606,319	$547,500
Roads - Base	100%	$0	$0	$0
Roads - Surface*	106%	$27,316,162	$25,888,621	($1,427,541)
Total	**90%**	**$45,805,040**	**$50,782,046**	**$4,977,006**

**20 Year lifecycle -CIPR w 1 Lift - Growth*

Acquisition

	Planned Budget	Lifecycle Forecast	Shortfall
Middlesex County ITS	$0	$0	$0
Middlesex County MLPS Facilties	$0	$0	$0
Middlesex County Transportation Facilities	$90,000	$270,000	$180,000
Bridges	$0	$0	$0
Culverts	$0	$0	$0
Fleet	$110,000	$110,000	$0
Machinery & Equipment	$0	$0	$0
Traffic Signals	$700,000	$1,000,000	$300,000
Roads - Base	$0	$0	$0
Roads - Surface	$1,588,400	$4,235,000	$2,646,600
Total	**$2,488,400**	**$5,615,000**	**$3,126,600**

Operation

	Planned Budget	Lifecycle Forecast	Shortfall
Middlesex County ITS	$0	$0	$0
Middlesex County MLPS Facilties	$327,269	$327,269	$0
Middlesex County Transportation Facilities	$104,321	$104,321	$0
Bridges	$0	$0	$0
Culverts	$0	$0	$0
Fleet	$2,100,508	$2,100,508	$0
Machinery & Equipment	$0	$0	$0
Traffic Signals	$0	$0	$0
Roads - Base	$0	$0	$0
Roads - Surface	$0	$0	$0
Total	**$2,532,098**	**$2,532,098**	**$0**

Maintenance

	Planned Budget	Lifecycle Forecast	Shortfall
Middlesex County ITS	$0	$0	$0
Middlesex County MLPS Facilties	$489,508	$489,508	$0
Middlesex County Transportation Facilities	$362,832	$362,832	$0
Bridges	$251,558	$251,558	$0
Culverts	$138,357	$138,357	$0
Fleet	$0	$0	$0
Machinery & Equipment	$203,762	$203,762	$0
Traffic Signals	$358,819	$358,819	$0
Roads - Base	$0	$0	$0
Roads - Surface	$9,362,666	$9,362,666	$0
Total	**$11,167,502**	**$11,167,502**	**$0**

Renewal

	Planned Budget	Lifecycle Forecast	Shortfall
Middlesex County ITS	$195,333	$195,333	$0
Middlesex County MLPS Facilties	$300,000	$589,590	$289,590
Middlesex County Transportation Facilities	$870,503	$681,750	($188,753)
Bridges	$10,376,761	$12,342,800	$1,966,039
Culverts	$0	$3,221,900	$3,221,900
Fleet	$1,509,347	$1,813,732	$304,385
Machinery & Equipment	$0	$83,886	$83,886
Traffic Signals	$0	$247,500	$247,500
Roads - Base	$0	$0	$0
Roads - Surface	$16,365,096	$12,290,955	($4,074,141)
Total	**$29,617,040**	**$31,467,446**	**$1,850,406**

Disposal

	Planned Budget	Lifecycle Forecast	Shortfall
Middlesex County ITS	$0	$0	$0
Middlesex County MLPS Facilties	$0	$0	$0
Middlesex County Transportation Facilities	$0	$0	$0
Bridges	$0	$0	$0
Culverts	$0	$0	$0
Fleet	$0	$0	$0
Machinery & Equipment	$0	$0	$0
Traffic Signals	$0	$0	$0
Roads - Base	$0	$0	$0
Roads - Surface	$0	$0	$0
Total	**$0**	**$0**	**$0**

Appendix B
Middlesex County Library Assets Lifecycle Assessment

Middlesex County Library
Average Annual Lifecycle Summary

2025-2034

Lifecycle Financial Ratio	Planned Budget	Lifecycle Forecast	Shortfall
95%	$630,731	$666,398	$35,667

	Planned Budget	Lifecycle Forecast	Shortfall
Acquisition	$0	$0	$0
Operation	$22,188	$22,188	$0
Maintenance	$50,000	$50,000	$0
Renewal	$558,543	$594,210	$35,667
Disposal	$0	$0	$0

Appendix C

Stratmere Lodge Assets Lifecycle Assessment

Strathmere Lodge
Average Annual Lifecycle Summary

2025-2034

Lifecycle Financial Ratio	Planned Budget	Lifecycle Forecast	Shortfall
96%	$1,104,614	$1,147,854	$43,240

	Planned Budget	Lifecycle Forecast	Shortfall
Acquisition	$0	$0	$0
Operation	$458,555	$458,555	$0
Maintenance	$141,006	$141,006	$0
Renewal	$505,053	$548,293	$0
Disposal	$0	$0	$0

Appendix D
MLPS Assets Lifecycle Assessment

MLPS
Average Annual Lifecycle Summary

2025-2034

Lifecycle Financial Ratio	Planned Budget	Lifecycle Forecast	Shortfall
100%	$6,718,052	$6,718,052	$0

	Planned Budget	Lifecycle Forecast	Shortfall
Acquisition	$0	$0	$0
Operation	$1,472,738	$1,472,738	$0
Maintenance	$1,043,744	$1,043,744	$0
Renewal	$4,201,570	$4,201,570	$0
Disposal	$0	$0	$0

Appendix E
Middlesex County Land Assets Inventory

Middlesex County Land Assets Inventory

Land is a unique asset class within Middlesex County's infrastructure portfolio, as it does not generally depreciate and does not require lifecycle costing in the same manner as traditional infrastructure assets. However, land is a critical component of municipal service delivery, supporting transportation networks, public facilities, natural assets, and future development. While land itself does not require capital reinvestment, it is essential for strategic decision- making related to growth, service levels, and financial planning.

This appendix provides a comprehensive overview of Middlesex County's land holdings through two key tables:

1. Individual Land Assets Inventory

A detailed listing of County-owned land assets.

2. Land Summary Table

A consolidated summary of grouped land assets.

The Middlesex County GIS Asset Management Dashboard is an interactive tool that plots all County land assets spatially, enabling real-time visualization and analysis. By incorporating this dashboard into the County's asset management framework, Middlesex County ensures that land assets are integrated into long-term planning, growth management, and service optimization strategies.

AMP Classification	Area (Ha)
Transportation - Melbourne	4.03
Transportation - Misc.	0.93
Transportation - Misc.	0.30
Transportation - Dorchester	2.79
Transportation - Misc.	0.40
Transportation - Mills Pit	4.04
Transportation - Misc.	0.33
Transportation - Misc.	0.09
Transportation - Misc.	0.11
Transportation - Gross Pitt	14.20
Transportation - Misc.	2.21
County Forest - McLaren Tract	42.09

AMP Classification	Area (Ha)
Transportation - Misc.	1.13
County Forest - Leech Tract	39.43
Transportation - Misc.	0.07
County Forest - Hurdle Tract	29.48
County Forest - Squire Tract	79.38
Transportation - Misc.	0.09
County Forest - Big Swamp Tract	41.41
County Forest - Sayler Tract	42.49
Transportation - Parkhill	3.13
Transportation - Parkhill	0.57
County Forest - Newbury Tract	83.09
County Forest - Big Swamp Tract	41.88
County Forest - Big Swamp Tract	30.76
Transportation - Strathroy	0.60
County Forest - Miller Tract	81.97
County Forest - Vey Tract	32.16
County Forest - Moore Tract	8.26
County Forest - Ritchie Tract	34.76
County Forest - Purdy Tract	21.16
Transportation - Misc.	0.16
County Forest - Atkinson Tract	41.01
County Forest - Robinson Tract	18.29
County Forest - Clark Tract	20.66
Transportation - Glencoe	3.86
County Forest - Robinson Tract	15.69
County Forest - McMaster Tract	95.55
County Forest - Livingston Tract	20.24
Transportation - Central	4.02

AMP Classification	Area (Ha)
County Forest - Lockwood Tract	20.36
County Forest - Plaine Tract	35.23
County Forest - Bank Tract	38.60
Transportation - Misc.	0.01
Transportation - Bryanston	0.46
MLPS - Dorchester MLPS Station	0.20
Transportation - Misc.	0.44
Transportation - Misc.	0.05
County Forest - Tunks Tract	69.90
County Forest - Gardiner Tract	41.39
Transportation - Misc.	16.18
MLPS - Vacant Land	0.63
Strathmere Lodge	5.32
Transportation - Misc.	0.15
MLPS - Trafalgar MLPS Station	0.40
MLPS - Waterloo MLPS Station	0.14
MLPS - MLPS Headquarters	2.83

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AMP Classification	Area (Ha)
County Forest	1,025.23
Transportation - Garages	19.46
Transportation - Misc.	40.90
MLPS - Stations	4.20
Strathmere Lodge	5.32
Total	**1,095.11**

Appendix F Glossary

Glossary

Term	Definition
Acquisition	Lifecycle activities to provide a higher level of service or new services that did not previously exist.
Asset Management Plan (AMP)	An accounting method where revenues are recognized in the accounting period in which they are earned, and expenses are recognized in the period in which they are incurred. Sometimes referred to as full accrual to distinguish it from modified accrual basis accounting.
Asset Renewal Funding Ratio	A financial measure comparing the funds allocated for asset renewal to the total cost required for asset renewal.
Bridge Condition Index (BCI)	A standardized numeric measure (0-100) assessing the overall health of bridges
Community Levels of Service	Qualitative descriptions of service levels that focus on the perspective and experience of residents and interested parties.
Culvert Condition Index (CCI)	A standardized numeric measure (0-100) assessing the overall health of culverts
Current Replacement Value (CRV)	The estimated cost of replacing an asset at current market prices.
Disposal	Lifecycle activities associated with the decommissioning of an asset, including sale, demolition, or relocation.
Facility Condition Index (FCI)	Facility Condition Index (FCI)
Financial Information Return (FIR)	A reporting standard required by the Ministry of Municipal Affairs and Housing in Ontario.
Information Technology Services (ITS)	The Middlesex County service area that manages infrastructure and equipment used to deliver digital and technological services.
Key Performance Indicator (KPI)	A measurable value used to evaluate the success of an organization or its infrastructure in meeting objectives.
Level of Service (LOS)	Defined qualitative and quantitative measures describing the quality and scope of services provided by assets.
Lifecycle Cost	The total cost of ownership of an asset, including acquisition, operation, maintenance, renewal, and disposal costs.
Maintenance	Lifecycle activities necessary to retain an asset in appropriate service condition, such as regular inspections and repairs.
Operation	Lifecycle activities necessary to operate an asset at appropriate levels of service
Pavement Condition Index (PCI)	A standardized numeric measure (0-100) assessing the overall health of pavement
Risk Assessment	The systematic identification and evaluation of risks that could impact the functionality, safety, or sustainability of assets.
Renewal	Lifecycle activities that restore the service capability of an asset to its original level, such as rehabilitation or reconstruction
Service Life	The expected duration during which an asset can perform its intended function.
Technical Levels of Service	Quantitative measures of asset performance, condition, or capacity, often tied to operational or regulatory requirements

middlesex county

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