2024 Non-Core Asset Management Plan

Prepared for:

The Municipality of West Grey

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Ontario Regulation 588/17

Objectives as defined by the Ontario reg. 588/17
A Municipality's asset management plan must include for each asset category, the current levels of service being provided, determined in accordance with qualitative descriptions and technical metrics based on data from at most the two calendar years prior to the year in which all information required under this section is included in the asset management plan.

For each asset category, a summary of the assets in the category, the replacement cost of the assets in the category, the average age of the assets in the category, determined by assessing the average age of the components of the assets, the information available on the condition of the assets in the category, and a description of the Municipality's approach to assessing the condition of the assets in the category, based on recognized and generally accepted good engineering practices where appropriate.

For each asset category, the lifecycle activities that would need to be undertaken to maintain the current levels of service for each of the 10 years following the year for which the current levels of service are determined and the costs of providing those activities based on an assessment of the following: The full lifecycle of the assets, the options for which lifecycle activities could potentially be undertaken to maintain the current levels of service and the risks associated with the options.

Phase-in schedule

July 1, 2019: Date for municipalities to have a finalized strategic asset management policy that promotes best practices and links asset management planning with budgeting, operations, maintenance, and other municipal planning activities.

July 1, 2022: Date for municipalities to have an approved asset management plan for core assets (roads, bridges and culverts, water, wastewater, and stormwater management systems) that identifies current levels of service and the cost of maintaining those levels of service.

July 1, 2023: Date for municipalities to have an approved asset management plan for all municipal infrastructure assets that identifies current levels of service and the cost of maintaining those levels of service.

July 1, 2024: Date for municipalities to have an approved asset management plan for all municipal infrastructure assets that builds upon the requirements set out in 2023. This includes an identification of proposed levels of service, what activities will be required to meet proposed levels of service, and a strategy to fund these activities.

Council Responsibility

- Member of council play an important role in validating municipal level of service. Not only through the policies that they adopt, the yearly review and the ongoing involvement when levels are adversely affected.
- The frequency of these reviews should be established and followed by staff as part of the Asset Management Policy
- Council must be educated on the asset management strategies which comprise of an accurate inventory, required inspections, lifecycle events, risk mitigations, citizen engagement and financial sustainability.
- Council's responsibility is to provide direction to staff while supporting qualified staff in their decisions.
- Validate and support the amount of time it will take to reach expected Levels of Service

Societal Trends

- Upcoming Governmental trends
- Changes in society
- Technology changes
- Cyber security
- Environmental sustainability

Accessibility for Ontarians with Disability Act (AODA)

According to the legislation, the AODA aims to develop, implement and enforce standards related to goods, services, accommodation, employment and buildings before Jan. 1, 2025. The legislation applies to every person in both the public and private sector.

The *Accessibility for Ontarians with Disabilities Act, 2005* (AODA) is intended to reduce and remove barriers for people with disabilities so that Ontario can become more accessible and inclusive for everyone. Collaboration among businesses, organizations, communities and all levels of government is key to reaching this goal.

The O. Reg. 191/11, AODA is the law that sets out a process for developing, implementing and enforcing accessibility standards that government, businesses, non-profits and public sector organizations must follow to become more accessible. These laws and standards are intended to make Ontario open to everyone by helping to reduce and remove barriers.

Detailed information can be found on the Municipality website

https://www.westgrey.com/en/discover/resources/MYAP-2020-2024-AA.pdf

Asset Management Components

Accurate and detailed asset inventory

- a summary of the assets in the category
- condition of the assets in the category
- the average age of the assets in the category
- condition ratings
- collection of minimum data per asset category
- operations, such as increased maintenance schedules

Lifecycle Management

- When to remediate
- What to remediate
- How to remediate
- When to replace rather than remediate
- The options for which lifecycle activities could potentially be undertaken to maintain the current levels of service.
- The lifecycle activities undertaken for the lowest cost to maintain the current levels of service
- Lifecycle management and financial strategy that sets out the following information with respect to the assets in each asset category for the 10-year period.

Level of Service

- Establishment and Adoption of Technical Level of service
- Establishment and Adoption of end user Level of service
- Adoption of provincial standards
- Establishment and Adoption of Probability of Failure (PoF)
- Establishment and Adoption of Consequence of Failure (CoF)
- Establishment and Adoption of the risks associated with PoF and CoF

Financial Controls

- An estimate of the annual costs for each of the 10 years of undertaking the lifecycle activities separated into capital expenditures and significant operating costs.
- The replacement cost of the assets in the category
- If based on the funding projected to be available, the Municipality identifies a funding shortfall for the lifecycle activities
- An identification of the annual funding projected to be available to undertake lifecycle activities and an explanation of the options examined by the Municipality to maximize the funding projected to be available.

Climate change

- Energy efficiency
- Climate change adaption
- Climate change mitigation

Citizen Engagement

- Municipal residents and other interested parties to provide input
- Service request associated to location, deficiency type, and actions required. Input deficiency, create work orders, and manage the repairing, the deadlines and follow up comments.

Corporate Policy

- Adoption of risk matrix
- Adoption of financial strategy
- Create multiple scenarios
- Regular update of plan
- Establish aa asset replacement policy
- Enact a municipal bylaw

Time frames

The AM initiative comprises of several updates which are required at specific intervals.

Tasks	**Timelines**	**Description**
Update AM plan	biannual	Edit the updated document
Update asset repository	ongoing	Continuously update the inventory repository
Capital plan	yearly	Create annual capital plans establishing a link between capital, operational and corporate strategic plan
Level of Service/financial	yearly	Define individual inspection which culminates with LoS
Financial capabilities	yearly	Link LoS to financial capabilities. Integrate tax increases, levy's, user fees
Building Condition Index (BCI)	5 – 10 years	Buildings constitute the large part of non-core assets. Request BCI for buildings and assets

Non-Core assets

The Municipality will focus on physical non-core assets which includes

- Land (municipal properties, parks, and trails)
- Buildings (community hall, fire department)
- Fleet /Equipment (Trucks, and associated equipment)

Additionally over time the Municipality will based on its capacity choose to expand the list to include,

- Information Technology
- Data Electronic (electronic, paper, documents)
- Purchasing procedures (green compliancy)
- Human Resources (Staffing, recruiting, retention)

Hierarchy	Category	Subtype
Land (roll number)	administration public works/ Recreation/	• Parking lots • Vacant properties • Cemeteries • Community hall • Emergency; fire, ambulance • Salt / Storm shed. •
Building	Building structure/Outer shell	• Interior/exterior • Roof/shell structure/walls • Foundations/footings/slabs •
Inventory	Capital assets within building	• Electrical/ • Mechanical/ • Structural • Emergency • Miscellaneous •
Fleet/Equipment	Vehicle	• Heavy duty • Medium duty • Light duty • Recreational • Emergency •

Data Collection structure

Land Related Assets

Collection of land related parcel information includes;

- Total number of parcels
- Parcels connected to municipal infrastructure
- Parcels with emergency access within specified timeframe
- Parcels on maintained roads

Construction pricing

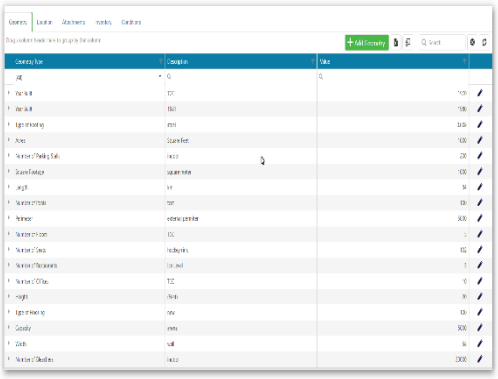
Square footage construction pricing as of 2022

- Maintenance facilities $500.00 sq. ft.
- Municipal offices $500.00 sq. ft.

Building Geometry

Necessary geometry fields associated to each facility including;

- AODA compliancy
- square footage
- number of floors
- year built
- parking lot
- capacity



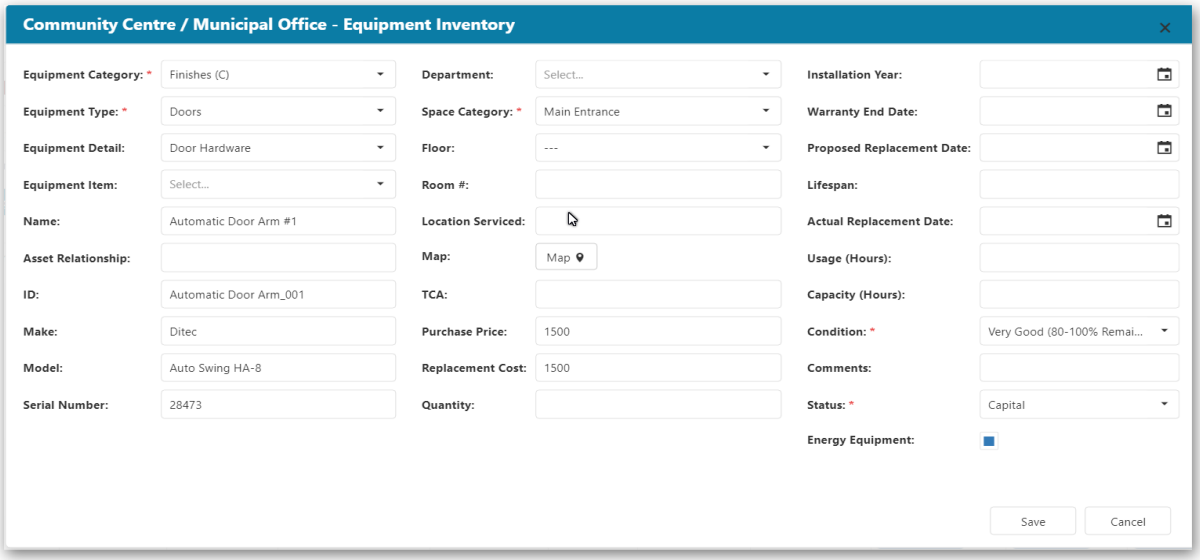
Data Collection structure

The Municipality has begun by adopting a standard and establishing the minimum data fields of information to be collected. The Municipality has adopted the UNIFORMAT standard for collection of building data.

In Ontario, municipalities who are members of “Ontario Recreation Facilities association have access to the RFAM inventory module at no cost as part of their member services. RFAM is built on industry standards through an ecosystem of collaborative municipalities which can share best practices. One such standard is the ASTM UNIFORMAT II level 3 Standard E1557 classification.

Asset attributes

Collection of all mandatory fields is necessary in order to produce valid reports



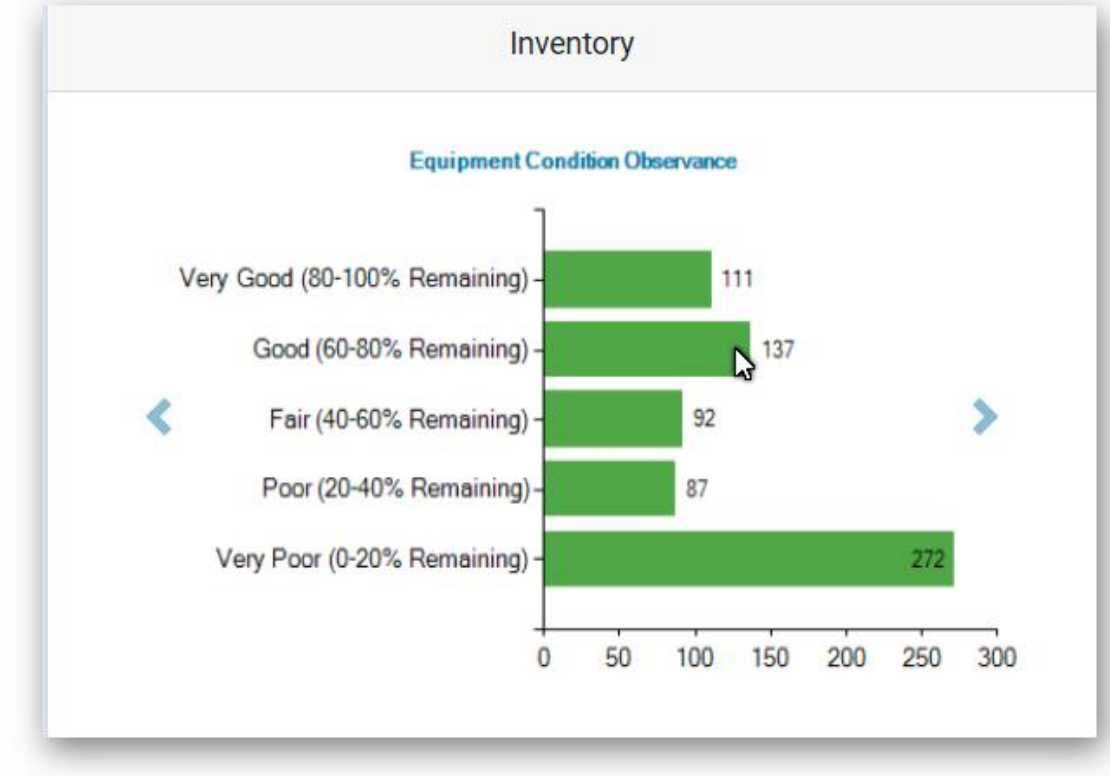
Asset breakdown

Asset category	Asset Categories	Asset Attributes
Land	Administration, Green space, Public Works Environmental	Roll Number
Buildings	Envelope Foundations Roof	Uniformat II
Building Inventory	Plumbing HVAC Electrical	Make, model, SN, dates
Fleet	Heavy duty Medium duty Light duty Environmental	Make, model, Vin, dates
Equipment	Recreation, Emergency, Public Works Environmental	Make, model, dates

Facility Inventory – Replacement values

Facility type	Total number of assets within Facilities	Total replacement value
Public Works	100	$ 7,719,103.00
Leisure	170	$7,722,097.00
emergency	187	$4,158,414.00
fleet	47	$10,549,077.00
administration	82	$2,482,547.00

Facility Inventory – condition ratings



Building Inventory – Replacement cost

Based on replacement cost of $500.00 /square foot

Facility type	Total number of buildings	Total replacement value
Public Works	15	$ 26,278,000.00
Leisure	25	$ 63,513,000.00
emergency	5	$ 11,121,500.00
environmental	12	$ 5,231,500.00
administration	8	$ 2,482,547.00

Lifecycle Activities

Asset lifecycle activities consist of the following components.

Rehabilitate	lifecycle events which may extend the life of the asset
Replace	activities once the asset has reach its end of life
Disposal	accounting and engineering activities which may have ongoing activities
Climate Change	Impact and access to renewable technologies

Accurate lifecycle

Accurate lifecycle for each asset category is fundamental to establishing proper AM plan. Each lifecycle event is directly attributed to the proper inventory data collection. Each building comprises of various asset categories. Each asset category has a defined life expectancy. Each life expectancy is further defined by the amount of usage. The amount of usage is directly proportional to the efficiency of the unit and overall building.

Category	Life Expectancy (years)	Usage /Consumption
Land		
Parks	50	Remaining useful life
Parking lots	25	Remaining useful life
Cemeteries	50	Remaining useful life
Building		
Structural	50	Remaining useful life
Shell	40	Remaining useful life
Electrical	15	Condition rating / Run Hours
Mechanical	20	Condition rating / Run Hours
Inventory	10-20	Condition rating / Run Hours
Fleet / Equipment		
Emergency services	20	Condition rating / Run Hours/ Km
Public Works	20	Condition rating / Run Hours/ Km
Recreation	20	Condition rating / Run Hours/ Km

Asset Condition Information

Category	Current Condition rating	Optimal condition rating
Land	Estimated remaining useful life	Estimated remaining useful life
Buildings	Estimated remaining useful life	BCI
Inventory	Estimated remaining useful life	Condition rating
Fleet /Equipment	Estimated remaining useful life	Inspections

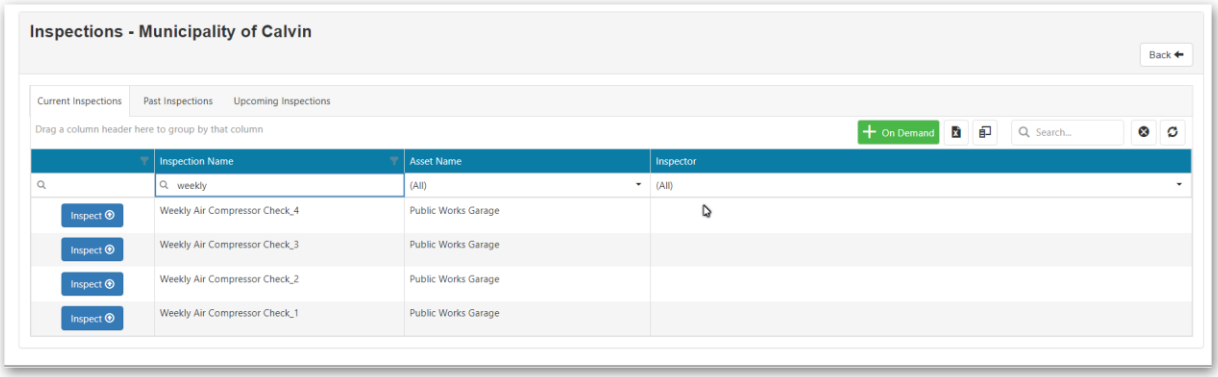
Inspections

The Municipality has taken a proactive approach to measuring LoS, by adopting the ORFA's RFAM solution and cataloging each piece of inventory. The Municipality should create Inspections which will be classified as Predictive, Preventative and Reactive. These typical Inspections are categorized as regulatory, mandatory, health and safety and occours daily, weekly, quarterly and annually. Sample of these inspections are;

Fleet	MTO inspections, Fire truck inspections
Building	subject to internal building inspections
Land	staff inspection, CSA, play structures
Inventory	subject to regulatory Inspections
Emergency	Personal Preventative Equipment sent to manufacturer

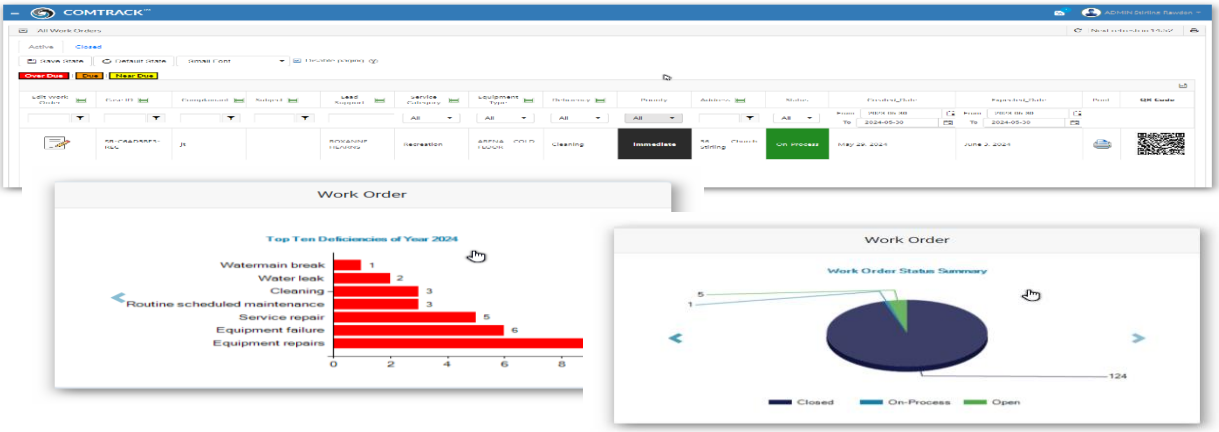
Routine inspections

As an integral part of level of service, the Municipality could consider electronically collecting and manage inspections to both facilities and individual assets. The Municipality could increase and customize the inspection which would translate to proposed level of service and the Municipality's ability to financially afford the established levels of service.



Work orders

The Municipality could consider adopting an electronic work order system. Failed inspection leads to the creation of work orders. Work orders status can be monitored to validate established LoS.



Level of Service Overview

Level of Service (LoS) is a balance between user expectations for overall quality, performance, availability, and safety versus affordability.

LoS requires asset category, performance measurement, a current measurement, a target measurement, an achievement date, an approximate cost, and a priority assigned to each performance measurement.

AMPs typically comprise of theoretical models which need to be vetted against operational models concluding with practical realities. LoS can be considered the practical component of an AMP. Operational and practical data is used to establish and validate LoS which in turn will feed into the financial component. This closed-loop approach will either validate the AMP or indicate required changes to the financial strategy. LoS is a key driver which influences asset management decisions, and depending on asset type can be either condition or age based.

LoS outlines the overall quality, performance, availability and safety of the service being provided. LoS contains a number of distinct categories:

- Service Identification
- Financial
- Municipal risk
- Community Expectations
- Technical component
- Strategic component

Level of Service (LoS) Policies

The core purpose of a Municipality is to provide services to residents and other stakeholders. Physical assets are simply a portion of what is required to deliver the various LoS as determined by the Municipality. The Municipality needs to ensure that the infrastructure performs to meet the level of service goals at an affordable and sustainable cost. An objective of LoS analysis is to find a balance between the expected levels of service and the cost of providing that LoS. Determining municipal LoS policies requires first developing a baseline for acceptable and affordable levels of service. This is done by first examining present-day service levels, community needs, regulatory or legal obligations and the cost-of-service delivery. Once present-day service levels have been examined, this baseline can be compared against LoS expectations.

The Process

Levels of Service analysis may involve:

1. Developing
    - Customer vs. Technical Levels of Service
    - Current vs. Expected Levels of Service
    - Use of performance measures
    - Financial validation

2. Communication
    - Receive input from staff
    - Receive input from citizens
    - Communicate the Levels of Service to stakeholders
    - Council approval of Levels of Service strategies

3. Update
    - Updating the Levels of Service Analysis on a yearly basis

Financial investment

The management of physical assets, their **selection, maintenance, inspection and renewal** plays a key role in determining the operational performance and viability of organizations that operate assets as part of their core business. Operational data is used to establish and validate LoS which in turn will feed into the financial component. This closed-loop approach will either validate the LoS strategies or indicates required changes to the financial strategy.

Level of Service Matrix

Determining the desired levels of service for asset is achieved with consideration of a number of factors including costs, user expectations and government mandated and minimum requirements. LOS outlines the overall quality, performance, availability, and safety associated to municipal assets and services. Each asset category can have its own Key Performance Indicator, current measurements, target measurements, achievement date, approximate costs associated to each component and a priority listing based on staff and council consensus.
There are three (3) distinct categories of LoS:

- Municipal risk
- Asset life cycle cost implications
- Financial options

LoS outlines the overall quality, performance, availability and safety of the service being provided. Technical levels of Service (TLS) outline the operating, maintenance, rehabilitation, and renewal strategies.

TLS outline the operating, maintenance, rehabilitation, renewal and upgrade activities expected to occur. TLS must be considered that also look at the risk associated with providing the service. Proposed targets for customer and technical levels of service must be included as part of the asset management strategy. Performance measures should be developed, and the actual results achieved reported and updated annually.

The target levels of service must be reviewed on a regular basis to determine if they are appropriate and achievable. Consideration should be given to risk and cost in the development of target levels of service.

All assets carry a level of risk for their users. Generally, when conducting risk assessment, two key factors that come into consideration are frequency of use and cost of improvement. Acceptable levels of risk may vary depending on their frequency of use.

Citizen level of service

Asset category	LEVEL OF SERVICE	Compliancy
land	landscape maintenance	
	Landfill monitor report	
Buildings	Safe buildings	Building Inspections
	Meet legislative requirements	AODA Compliant
	Emergency accessibility	Distance from fire hall
	Building Condition Index (BCI)	UNIFORMAT II STANDARD
	Inventory	TSSA, CSA
	Energy Efficiency	O.Reg. 507/18 broader public Sector energy reporting
Fleet/Equipment	Routine inspections	MTO regulations
	Routine maintenance	

Technical Level of service

Asset category	LEVEL OF SERVICE	Tracking Methodology
land	landscape	
	Maintenance	
Buildings	Foundation	BCI
	Structure	BCI
	Roof	BCI
	Safety	RFAM Inspections
	Electrical	RFAM Inspections
	HVAC	RFAM Inspections
	Plumbing	RFAM Inspections
Fleet/Equipment	Routine Maintenance	RFAM Inspections

Risk

Prioritization Matrix

Assigning a base line value from 10 – 100 for each municipal asset category will enable to prioritize and compare various asset categories.

Probability of Failure (PoF)

Not all assets deteriorate at the same level. In some cases the deterioration may be quantitative as 2 Building Condition Index (BCI) per year while others may be based on asset longevity. As the assets deteriorate the probability of failure increases. PoF for an asset category requires a combination of attributes including baseline weight, material, classification, condition rating and useful life. These values are normalized to a value from 1-5. The condition rating and useful life are matched against a desired level of service for a visual representation. The results including percentage weight, produce a PoF rating from 1-5

PoF Matrix

PoF	Rating	Remaining useful life	Condition Index
1	Very Good	0-10% of UL	90 – 100
2	Good	11-30 % of UL	75 - 89
3	Fair	31-50 % of UL	50 - 74
4	Poor	51-65 % of UL	35 - 50
5	Very Poor	66 > % of UL	<34

Consequence of Failure (CoF)

Not all assets pose the same Consequence of Failure level. Even within the same category various pieces of equipment pose different risk or consequence of failure. CoF can be derived for each asset category from the calculation of an asset category baseline weight, and 5 criteria including; safety, operational, environment, finance, and legal.

Risk lookup

Environmental conditions; Values from 1- 5 with associated description and details outlining the severity of the consequence associated to the environment
Financial conditions; Values from 1- 5 with associated description and details outlining the severity of the consequence associated to the financial
Health and safety conditions; Values from 1- 5 with associated description and details outlining the severity of the consequence associated to the Health and safety
Legal; Values from 1- 5 with associated description and details outlining the severity of the consequence associated to the Legal
Operational conditions; Values from 1- 5 with associated description and details outlining the severity of the consequence associated to the Operational

Asset Risk

Category	Type	Data Confidence	PoF	CoF	RISK
Land	Municipal owned land	Fair	1	1	low
Buildings	Envelopes, Roof, foundations	Fair	2	3	Medium
Inventory	A collection of all capitalized inventory	Fair	2	2	Medium
fleet	Vehicles	Fair	2	3	Medium
Equipment	Various machinery	Fair	2	2	Medium

Climate change

Energy Demands

The Municipality collects energy consumption and will incorporate this as part of future AM requirements.

- Meter each individual building
- Identify inventory assets which consume energy
- Collect water usage by building and associated various assets

O.Reg. 507/18 broader public Sector energy reporting and conservation and demand management plans include the summary for a year must include the following information for each of the public agency's prescribed operations:

1. The name of the building or facility.
2. The address of the building or facility.
3. The total floor area of the indoor space of the building or facility.
4. The type of the building or facility.
5. A description of the days and hours in the year during which the building or facility is operated and, if the building or facility is operated on a seasonal basis, the period or periods during the year when it is operated.
7. The total amount of each type of energy that was consumed in the year to operate the building or facility and that was purchased by the public agency, regardless of when it was purchased.

The Municipality has posted its climate change and energy reporting on its website

https://www.westgrey.com/en/government/resources/Documents/WestGrey-climate-change-action-plan.pdf

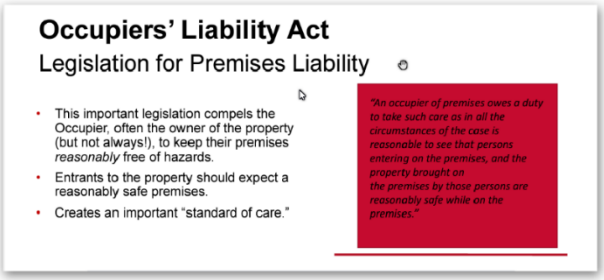
Citizen engagement

The Municipality has made citizen engagement a priority. It has adopted innovative technologies to collect and analyze citizen satisfaction. The Municipality is measuring 5 key indicators including, operational, security, amenities, professionalism, accessibility

The Municipality's website offers a number of ways to stay informed about what are the Corporation of the Municipality of West Grey's programs and services; who to contact at the Municipal office to obtain those services; when Council is meeting, what are they discussing and what were Council's past meeting results.

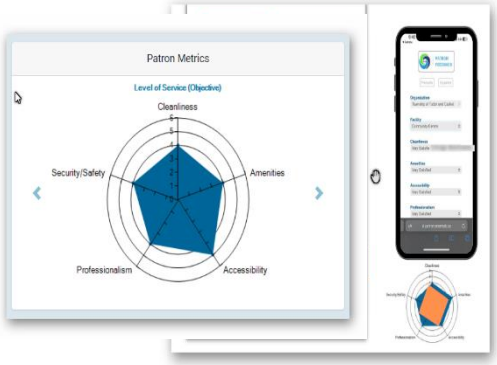
Occupiers liability act

The Municipality may wish to review its property assets to insure that premises are reasonably free of hazards. That entrants are reasonably safe, and establish and maintain a "standard of care"



Patron feedback

The same QR code technology used for inventory can be implemented within the Municipality facilities to gather pertinent user satisfaction.

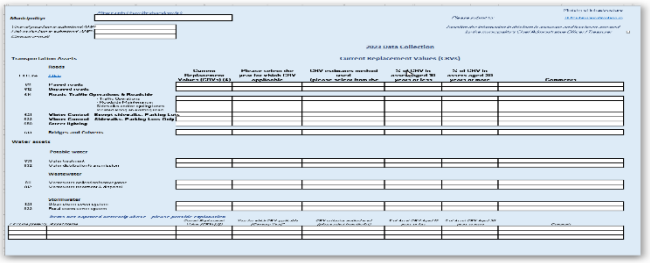


Incident reporting

From both a liability and LoS perspective, the Municipality may wish to begin to electronically collect and manage incident occurrences with municipal owned properties.

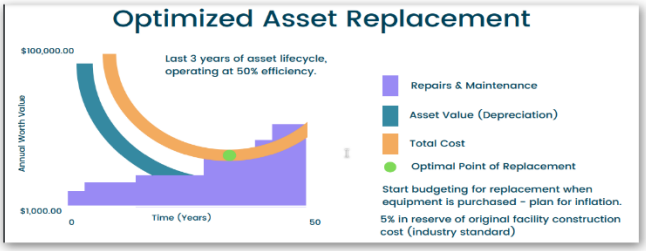
Financial

Application for any OCIF funding, the Municipality is required to provide Current Replacement Value. The Municipality has established a replacement cost at the inventory level.



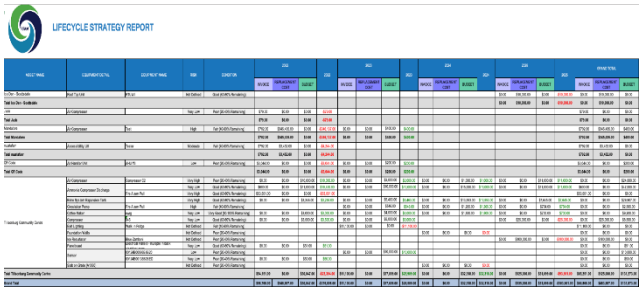
Optimized Asset replacement

The Municipality has begun to collect the financial investment for each asset, and establish a policy to determine cost remediation versus cost replacement



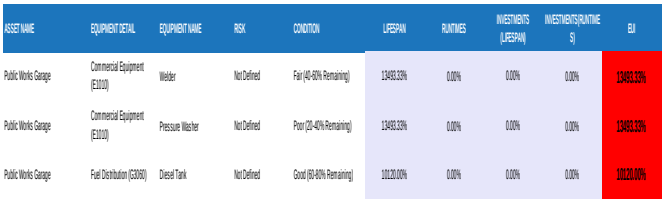
Budget forecasting

Through the collection of proper inventory and appropriate data fields the Municipality has created a 5 - 50 years dynamic capital plan



Equipment Utilization

The Municipality has begun to adopt an equipment Utilization index strategy to more accurately define assets which require immediate attention. This approach will indicate which similar assets have a shorter lifespan as a result of their daily usage, and thereby provide a more accurate replacement and lifecycle date.



ASSET NAME	EQUIPMENT DETAIL	EQUIPMENT NAME	RISK	CONDITION	LIFESPAN	RUNTIMES	INVESTMENTS (LIFESPAN)	INVESTMENTS(RUNTIME S)	EUI
Public Works Garage	Commercial Equipment (E3100)	Welder	Not Defined	Fair (40-60% Remaining)	13493.33%	0.00%	0.00%	0.00%	13493.33%
Public Works Garage	Commercial Equipment (E3100)	Pressure Washer	Not Defined	Poor (20-40% Remaining)	13493.33%	0.00%	0.00%	0.00%	13493.33%
Public Works Garage	Fuel Distribution (G3060)	Diesel Tank	Not Defined	Good (60-80% Remaining)	10120.00%	0.00%	0.00%	0.00%	10120.00%