

**THE CORPORATION OF THE TOWN OF NEW TECUMSETH
CORPORATE POLICY**

Policy Title: Strategic Asset Management Policy
Policy No.: CS-001-2019
Name of Dept: Corporate Services
Approval Date: April 29, 2019 **Resolution No.:** 2019-115

1 POLICY STATEMENT:

1.1 The Town of New Tecumseth shall adopt a strategic Asset Management policy to meet the O.reg 588/17 guidelines and develop and apply recognized asset management practices in support of delivering services to its residents.

2 PURPOSE:

2.1 Asset management (AM) is an integrated approach, involving all town departments, to realize value from existing and new assets. The objective is to maximize benefits, manage risk, and provide satisfactory levels of service to the public in a sustainable manner. Asset management requires a thorough understanding of the characteristics and condition of infrastructure assets, as well as the service levels expected from them. It also involves setting strategic priorities to optimize decision making about when and how to proceed with investments. The goal of this policy is to develop a set of actions aimed at improving AM practices across the town and to ensure they are consistently applied. This Policy outlines the fundamental asset management principles, processes and guidelines that will be developed and implemented across New Tecumseth, indicating the Council's commitment to Asset Management.

2.2 Principals to influence our policy include:

- Developing a single source repository of assets to establish a basis for understanding our responsibilities
- Understanding, documenting and measuring current and future levels of service to our residents
- Providing evidence-based decision-making and transparency
- Improving communication and fostering an understanding of the services we provide both currently and into the future
- Reducing lifecycle costs while maintaining acceptable levels of service
- Linking infrastructure investment decisions to service outcomes

- Ensuring infrastructure services are provided at a sustainable level at a cost that is affordable to residents now and into the future.

2.3 The provincial guideline O.Reg. 588/17, Asset Management Planning for Municipal Infrastructure require all municipalities to have a strategic asset management policy in place by July 1, 2019.

3 SCOPE:

3.1 The strategic asset management policy of the Town of New Tecumseth covers all physical assets such as roads, bridges, sidewalks, watermains, sewers, storm water networks, pumping stations, treatment plants, fleet, technology systems, buildings, machinery and equipment, parks, trees and recreation assets. The policy is effective May 1, 2019 and will be formally revised every 5 years.

3.2 The town does not share any assets with the County of Simcoe, adjacent municipalities or the conservation authorities. However, the town is committed to coordinate with the neighboring municipalities, county, conservation authorities and all levels of government when any such assets become interrelated. The town is responsible for the asset management of the water pipeline between Collingwood and Alliston which is owned by the New Tecumseth Improvement Society.

3.3 The capitalization threshold for Town of New Tecumseth is \$5,000 below which the value of the assets is not taken into consideration for asset management purpose. However, if the pooled value of assets is more than \$5,000, then they are considered as assets for asset management purpose.

4 DEFINITIONS:

4.1 **Core Municipal Infrastructure Asset** means any municipal infrastructure asset that is a:

- Water asset that relates to collection, production, treatment, storage, supply or distribution of water.
- Wastewater asset that relates to collection, transmission, treatment or disposal of wastewater, including any wastewater from time to time manages storm water.
- Storm water management asset that relates to collection, treatment, retention, infiltration, control or disposal of storm water.
- Road
- Bridge or culvert as per OSIM (Ontario Structure Inspection Manual)

4.2 **Climate Change action plan** is a plan by the Government of Ontario, that sets out actions under a regulatory scheme designed to modify behavior that will enable Ontario to achieve its targets for the reduction of greenhouse gas emissions.

- 4.3 **Distinct or Vertical Asset** is a term sometimes used to refer to buildings and facilities as opposed to linear assets being things like roadways, storm sewers, water and wastewater assets. They include facilities, fleet, equipment, parks etc.
- 4.4 **Greenbelt area** is identified in the Ontario Regulation 59/05 under Greenbelt Act, 2005.
- 4.5 **Greenhouse Gas (GHG) Emission** is gas and such other contaminants as may be prescribed as greenhouse gas by the regulations. It includes:
- 1) Carbon dioxide.
 - 2) Methane.
 - 3) Nitrous oxide.
 - 4) Hydrofluorocarbons.
 - 5) Perfluorocarbons.
 - 6) Sulphur hexafluoride.
 - 7) Nitrogen trifluoride.
- 4.6 **Green Infrastructure Asset** are natural, and human made elements that provide ecological and hydrologic functions and processes. They include components such as natural heritage features and systems, storm water management systems, street trees, urban forests, natural channels, permeable surfaces, bioswales and green roofs.
- 4.7 **Greater Golden Horseshoe (GGH)** is the geographic area designated as Greater Golden Horseshoe growth plan area in Ontario Regulation 416/05.
- 4.8 **Lifecycle Activity** is undertaken with respect to a municipal infrastructure asset over its service life, including constructing, maintaining, renewing, operating and decommissioning, and all engineering and design work associated with these activities.
- 4.9 **Levels of Service (LOS)** defines the way in which the asset owners, operators, and managers want the system to perform in the long term. It can include technical, financial and managerial components as long as the regulatory requirements are met. It strives to provide its customers an efficient and economical way to deliver that service.
- 4.10 **Municipal Infrastructure Asset** is an infrastructure asset directly owned by the municipality or included in the consolidated financial statements of a municipality but does not include any asset that is managed by joint municipal water board.
- 4.11 **Oak Ridges Moraine Conservation Plan** is an ecologically based plan that provides land use and resource management direction for the 190,000 hectares of land and water within the Moraine. This ridge stretches 160 km from the Trent river in the east to the Niagara escarpment in the west. The moraine divides the watersheds draining south into western Lake Ontario from those draining north into Georgian Bay, Lake Simcoe and the Trent river system.
- 4.12 **Operating Cost** is the aggregate of costs, including energy costs, of operating a municipal infrastructure asset over its service life.

4.13 **Provincial Policy Statement** provides policy direction on matters of provincial interest related to land use planning and development. It was issued under the authority of section 3 of the Planning Act and came into effect on April 30, 2014.

4.14 **Service life** means the total period during which a municipal infrastructure asset is in use or is available to be used.

4.15 **Significant Operating Cost** is where the operating costs with respect to all municipal infrastructure assets within an asset category are in excess of a threshold amount set by the municipality, the total amount of those operating costs.

4.16 **Connection days** means the number of properties connected to a municipal system that are affected

5 **POLICY:**

5.1 An endorsed Asset Management (AM) policy instructs the municipal administration to implement an AM system guided by a set of principles. These principles represent the underlying philosophies that will guide asset management decision-making. They will remain constant throughout council transitions and other organizational changes. The principle statements should be aligned with the community vision and existing strategic plans to ensure connections between the municipality's strategic direction and asset management efforts. The principles will directly influence staff decision-making across the whole municipality.

5.2 New Tecumseth Strategic Plan Integration

The corporate mission of the Town of New Tecumseth is to support the community vision through accessible leadership, partnership and well managed municipal services. The asset management principals need to contribute towards New Tecumseth achieving their objectives as defined in their 2013 - 2018 Strategic Pan. The strategic objectives referred to in this policy include:

- Managing growth and development – and ensuring we serve our residents in a cost effective and efficient manner. This requires an understanding of the cost to acquire assets and the future cost to sustain and maintain them
- Preserve, protect and enhance our environment – utilizing responsible practices and recognizing our green assets are important to developing a healthy, well rounded community. A significant component of the new provincial requirements includes analysis and discussion on the impact of climate change on a municipalities' assets
- Provide accountable, responsive governance and excellence in service delivery – achieved through long term planning and budgeting, of which asset management is a fundamental component
- Maintain and rehabilitate town assets, roads and infrastructure – a direct reference to the importance of this policy

5.3 The asset management policy will support the delivery of the Town's strategic goals and objectives by ensuring the corporate vision for Infrastructure is aligned with the strategic asset management policy. This is done by having a plan that will promote:

- A complete and accurate repository for all assets
- A robust, transparent and customer-focused base for decision-making
- A calculated understanding of the risks in decision-making
- An understanding of lifecycle costing
- An inclusion of climate change factors

6 IMPLEMENTATION:

6.1 Road Map

The Asset management road map (**Appendix 1**) provides a five-year snap shot of the asset management activities planned for the Town. The road map provides an overview of building a strategic asset management policy followed by development of various strategies including maturity assessment, governance and communication. The Corporate Asset Management Plan will include specific elements such as:

- Asset hierarchy
- Governance strategy
- Communications strategy
- Asset repository
- Condition assessments
- State of local infrastructure
- Level of service framework
- Asset strategies
 - Risk framework
 - Lifecycle maintenance and demand management
 - Disposal & asset information
- Financing strategies

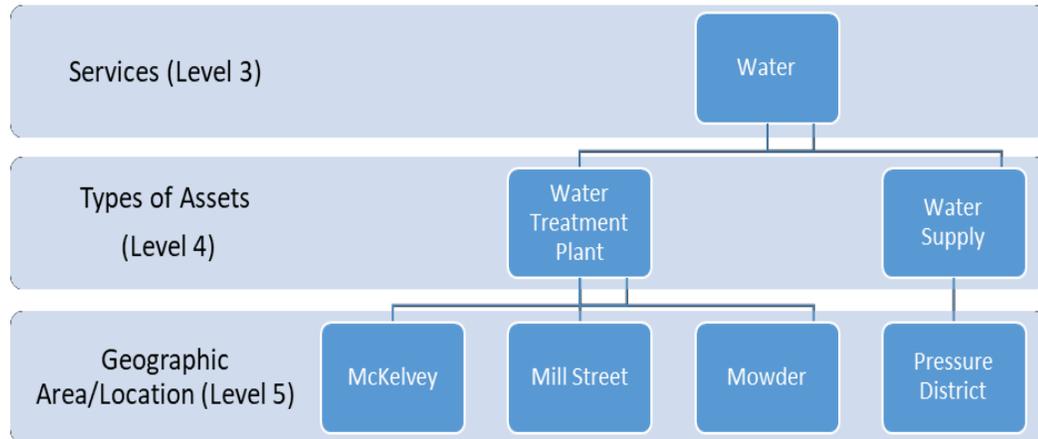
This plan will support an integrated approach to asset management which will ensure that the town provides evidence-based decision-making during budget preparation and long-term financial planning. This consolidated plan will form the basis for the detailed asset management plans required for each service area; Water, Waste Water, Storm Water, Roads, Parks, Facilities, Fleet and Fire.

6.2 Asset Hierarchy

Implementing a well thought out and well-constructed asset hierarchy is one of the most important steps in building an effective asset management program. Such a hierarchy provides both context and organization to the asset repository. Organization of an asset record in a hierarchy simplifies the search for the proper record when entering data and facilitates the roll up/drill down concept used for

summarizing data. The repository will also support all aspects of the asset's life cycle, from planning, acquisition, construction, maintenance, operations, renewal and ending with decommissioning or disposal. The various levels of hierarchy represent continuous detail in the asset categories.

Example of Asset Hierarchy for Water Services



6.3 Asset Management Governance (Appendix 2)

Every municipality has a responsibility for ensuring safe and reliable infrastructure to the public and providing a quality service to its citizens. The purpose of an Asset Management Governance is to establish a foundation on which any activity associated with asset management in the town can achieve objectives of the town's strategic plan. This enables the stakeholders of the town to understand their roles in improving and enhancing the services of the town by promoting better asset management techniques. The General Manager of Corporate Services will be the executive lead who will be supported by the Manager of Corporate Assets and the Asset Management team. The Manager is responsible for leading and coordinating the efforts of asset management including the requirements within the Provincial Ontario Regulation 588/17 and any future statutory requirements. A detailed description of the governance is in Appendix 2 attached to this report.

The success of asset management requires the commitment of key stakeholders within the town's organization to ensure the policy contains a clear plan that can be implemented, reviewed and updated.

Council, on behalf of the citizens, will be entrusted with the responsibility of overseeing the management of the assets. They will approve the Strategic Asset Management policy which will be updated every five years. They will consider the recommendations of the plan as part of the annual budget process. They will support efforts to improve the plan and ensure it considers changes due to updated circumstances and strategic and official plans.

Management will oversee the policy implementation and ensure both the Asset Management Plan and the policy are in compliance with the Ontario Regulation 588/17. Management will ensure that current year and long-range asset requirements are incorporated into the budget presented to Council annually.

Changes and updates to the Development Charge study, Roads Needs Study, Strategic Plan and other reports will be incorporated into Asset Management. The management will ensure the Strategic Asset Management Policy and Plan is updated appropriately and at minimum of every five years.

6.4 Asset Management Communication (Appendix 3)

Community engagement means having an ongoing dialogue with Alliston, Beeton, Tottenham and the rural communities for changes to the condition of assets, priorities and services. Stakeholders should be kept abreast of the performance targets and measures which are established and approved by council to develop standards of delivery of services. These results will be communicated to the residents and community members to evaluate satisfaction with the asset network and services.

Resident participation and feedback can come through emails, surveys, open houses, focus groups, council reports and web sites. This process starts with Council's involvement in defining the strategic goals and engaging with the Town's staff to meet these goals. A clear communication will be made to stakeholders indicating how the Town:

- delivers service - the focus will be on achieving a safe, serviceable and sustainable network to support the town's services
- defines levels of service – to successfully manage the towns assets which balance user and stakeholder needs and expectations for each asset against the municipality's financial resources
- employs lifecycle planning– to make the right investment at the right time to ensure that the asset delivers the required level of service over its full expected life at the minimum cost
- produces maintenance programs - to ensure that maintenance and improvements to our assets are carried out in a planned and coordinated way
- creates key measures – to ensure desired performance expectations are delivered
- seeks continued feedback from the community - to continually improve outcomes

There are various strategies and tools available to assist in keeping our stakeholders enlightened and part of the asset management process:

- Customer service updates - to deal with calls regarding the condition of the assets or customer's expectations on the service levels
- Community committees – briefing notes supplied to area committees to inform of asset management objectives, state of local infrastructure and asset management strategies within desired levels of service. This allows for further

engagement with the community as maturity in asset management is progressed

- Focus groups and surveys – keeping local members up to date is key to managing people’s expectations, especially about levels of service and performance metrics.
- Media releases – convey important notices and events to local media
- Website and social media visibility – making the strategic plan and its alignment to the asset management plans available along with performance data

6.5 Asset Repository and Information

The asset repository is a repository for data, inventory, attributes and various strategies that form part of asset management. The repository is a fundamental building block for asset management where every asset is recorded according to a unique identification against which attributes are recorded. The repository provides an inventory as well as strategies applied to each asset category to facilitate effective management. A repository organized in hierarchical order enables the effective assessment of the assets as individual components, composite assets, or groups of assets. The individual plans will create written rules and procedures that indicate which attributes of each asset are to be recorded in the repository and how they are to be recorded. The collection of relevant asset attributes is critical to generating the baseline information needed for asset evaluation.

6.6 Asset Condition

The repository consists of asset inventory with condition data from various studies, assessments and staff inspections. These studies include the Road Needs Study and The Municipal Structure Inventory & Inspection Update which will provide the Pavement and Structural Condition Indices commonly used to measure roads, bridges and culvert conditions. The Town will incorporate condition ratings converting study results into a percentage which can then be applied to the following standard condition matrix as per the Canada Infrastructure Report card as shown below. This will enable the town to adopt a standard across all assets. There will continue to be studies commissioned to provide additional condition information on other asset categories.

For those assets where condition is unavailable, the estimated service life remaining can be used as a starting point for condition assessment where older assets will be assumed to be in a lessor condition. As our asset management initiatives mature we will replace this approach with recurring condition assessments. This will enable the town to review the state of its assets annually which will be reflected in the State of Local Infrastructure report.

Very Good	Typically new or recently rehabilitated. A few elements show general signs of deterioration that require attention.
Good	Some elements show general signs of deterioration that require attention. A few elements exhibit significant deficiencies.
Fair	Shows general signs of deterioration and requires attention. Some elements exhibit significant deficiencies.
Poor	Mostly below standard, with many elements approaching end of service life. A large portion of the system exhibits significant deterioration.
Very Poor	Unacceptable condition with widespread signs of advanced deterioration. Many components exhibit signs of imminent failure, which is affecting service.

Don't have condition information? Using the amount of the estimated service life (ESL) remaining is a good starting point. Here is a guide that you can use:

CONDITION GRADE	% OF ESL REMAINING ON ASSET
Very Good	80-100%
Good	60-79%
Fair	40-59%
Poor	20-40%
Very Poor	<20%

6.7 Levels of Service (LOS)

A significant objective of asset management is to balance the relationship between asset costs, performance and risk. To develop this relationship, it is important to define, document and communicate base levels of service which can be used to:

- evaluate potential changes to services and measure the associated costs to provide change.
- measure performance against defined levels of service
- inform the residents/customers to consider the levels of service in the context of affordability

Levels of service are set by the Council in collaboration with the community and balanced by fiscal sustainability. They can relate to quality, quantities, responsiveness, reliability, environmental acceptability and the financial cost of the service our assets provide. The asset management framework will develop levels of service for each asset class and link the levels of service to performance metrics. The Town will categorize our levels of service into the following categories:

1. Essential LOS are legislation driven requirements from the Ministry of Transportation of Ontario (MTO) or Workplace Safety and Insurance Board (WSIB) for example. These type of LOS are mandated by provincial or

regulatory bodies and must meet the requirements.

2. Customer or community LOS are targeted to external stakeholders like the general public, contractors, customers and community groups. These are collaborated upon and approved through Council.
3. Technical LOS are targeted to the internal staff and users of the assets.

Performance measures will be developed within each category of level of service to monitor the overall quality of the service and value to the customer. Technical measures will focus on criteria that demonstrate organizational performance and statutory requirements. Performance measures will be used holistically, not just to measure performance, but also to:

- Track and trend performance over time
- Benchmark performance vs. industry peers
- Identify strengths and weaknesses in the service area
- Diagnose and understand the underlying drivers of performance gaps
- Prescribe actions to improve performance

The table below provides an example of what a service attribute means to a stakeholder:

Service Attribute	Summarized in customer/community terms
Accessibility	Adequate parking provided, parking controls enforced Adequate access to sidewalks Meeting AODA requirements of Ontario
Affordability	Reasonable prices to use recreation facilities Fair charging and value of money Water and Sewer rates comparable with other municipalities
Customer Service	Customers are treated fairly, politeness, demonstrating respect,
Efficiency	Traffic is effectively managed Roadworks are managed with minimum disruptions to traffic Major routes are free from congestions
Health and Safety	Water safe for drinking and meet health and safety standards Effective enforcement of safe roads
Reliability	Reliable water supply to the Town
Quality	Pot hole free road for road users Quality of drinking water for town consumption

An example of levels of service and corresponding performance measure is shown below:

WATER SERVICES		
Levels of Service	Service Attribute	Performance Measure
Community LOS	Customer Service	# of service requests per 1000 customer
		# of water quality complaints
Essential LOS	Health & Safety	# of boil water advisories
		Meeting the Clean Water Act and Safe Drinking Water Act
Technical LOS	Reliability	# of water main breaks
		# of PM tasks completed
	Capacity	# of watermains flushed

6.8 Asset Management Strategies

The asset management strategy defines the specific actions to be undertaken by the town to develop a structured set of maintenance, acquisition or disposal plans for a specific asset category. These strategies will utilize best practices already established through existing asset management practices used in other municipalities and organizations throughout the world. The following strategies are to be used in developing the future plans:

6.8.1 Risk Strategy

Risk is a future event that may or may not occur and would have a direct impact on the program's benefit or detriment. Risk management is the systematic identification, assessment, planning, and management of threats and opportunities faced by our programs. The town will follow the ISO 31000 framework for implementing risk management. The ISO 31000 framework includes the following steps:

- Establish Context - gathering information about future events, threats, and opportunities
- Identify Risks - what and how those future events trigger the threats and opportunities
- Analyze Risks - assessing the likelihood and impact of risks
- Evaluate Risks - prioritizing risks by their expected value and by their relative importance to a program, project or asset
- Treat risks - determining appropriate response strategies to risks
- Consult and communicate – to the public and stakeholders
- Monitor and Review – continuous monitoring and reviewing of strategies.

The town must identify risks and opportunities associated by implementing the strategic asset management plan. A risk matrix shall be adopted and developed as fundamental for identifying risks. A matrix is used to rank the likelihood versus consequence of failure for each asset. The assessment of

the likelihood of failure is based on condition or age of the asset using a worst-case consequence scenario. Consequence” refers to the actual, physical result of the asset failing, whereas the “impact” is the value that is put on those consequences by the Town or Service Area. The following is an example of a Consequence and Likelihood risk matrix.

RISK ASSESSMENT MATRIX

		Consequences of Failure					
			Negligible	Minor	Moderate	Major	Significant
Definition	Meaning	Value	1	2	3	4	5
Likelihood of Failure	Almost Certain	<ul style="list-style-type: none"> Occurs frequently Will be continuously experienced unless action is taken to change events 	5	10	15	20	25
	Likely	<ul style="list-style-type: none"> Occur less frequently if process is corrected Issues identified with minimal audit activity Process performance failures evident to trained auditors or regulators 	4	8	12	16	20
	Possible	<ul style="list-style-type: none"> Occurs sporadically Potential issues discovered during focused review 	3	6	9	12	15
	Unlikely	<ul style="list-style-type: none"> Unlikely to occur Minimal issue identification during focused review 	2	4	6	8	10
	Negligible	<ul style="list-style-type: none"> Highly unlikely to occur 	1	2	3	4	5

Risk Levels:



- Risk is High for anything 15 and above
- Risk is Medium High for anything above 8 but below 15
- Risk is Medium Low for anything 5 and above but 8 and below
- Risk is Low for anything below 5

Consequence of Failure

(1) Negligible	No regulatory action anticipated
	No compliance impact anticipated
	No evident security threat affected
(2) Minor	Does not affect the town's operations
	No regulatory action anticipated
	No compliance impact anticipated
(3) Moderate	No evident security threat affected
	Minor errors in compliance of Town's policies & procedures
	Errors containing quality and opportunities for improvement
(4) Major	Errors that pose consequences to the operation
	Security/confidentiality breaches in moderate levels
	Operational degradation due to non-compliance
(5) Significant	Security finding requiring immediate corrective action
	Reoccurring violation of any safety regulation
	Regulatory / Compliance violations/issues
	Construction/Service/ Production delays
	Security/Confidential breaches

Risk Assessment

When a risk assessment is done for an asset, all possible risks are evaluated on the asset and a rating of the consequence or impact on the service is assessed. The product of the consequence and likelihood will provide a value which should fall within the matrix above. Accordingly, the risks are assessed from insignificant to urgent action. The color code signifies with red indicating urgent action and green requiring no action.

Risk Response

The service areas of the town must come up with the best possible assessment of the risk and description of the options in order to select the right response to each risk. The response can be:

- Avoidance (change the scope of project to avoid risk)
- Transference (shift the impact of risk to third party like insurance)
- Mitigation (steps to reduce the impact of the risk like early action, close monitoring etc.)
- Acceptance (willing to accept the cost, scope and quality impacts on the service)
- Deferred (actions taken to defer the risk at a later time)

Risk Mitigation

Mitigation involves identifying the various activities or steps to reduce the probability and impact of an adverse risk and creation of a contingency plan to deal with the risk should it occur. All mitigation activities should be documented in the risk repository as shown in the example below and reviewed regularly. They include:

- Identifying of potential failure points for each risk mitigation solution
- Document the event that would raise a “flag” for each failure point, indicating that the event or factor has occurred or reached a critical condition.
- Provide alternatives for correcting the failure at each failure point.

Risk Matrix for Plated Vehicles						
Sr. #	Risk	Rick Factors	Likelihood	Consequence	Risk Rating	Mitigation Strategies
1	Risk due to non compliance of Ministry of Transport Semi or Annual Inspections	Legislative	Almost Certain - 5	Major - 4	Urgent Action-20	Comply with ministry guidelines with respect to inspecting transit vehicle safety every 6 months.
2	Risks due to delay in preventative maintenance	Asset condition	Almost Certain - 5	Major - 4	Urgent Action-20	Perform regular scheduled maintenance required to maintain an efficient fleet.
3	Risks due to collision	Asset condition	Possible - 3	Major - 4	Moderate-12	Send unit to authorized repair facility, stand by for completion
4	Risks due to unscheduled repairs	Asset condition	Possible - 3	Major - 4	Moderate-12	Delegate unscheduled repairs accordingly
5	Risk on sudden failure of vehicle and Road Call	Functionality	Possible- 3	Major - 4	Moderate-12	Dispatch Service Technician if repair is capable on road, Call towing service if unrepairable on road.
6	Risk due to non-compliance of Ministry of Environment regulations	Legislative	Minor-2	Major - 4	Low-8	Repairs take priority over other
7	Risk due to changes for greenhouse gas tax legislation	Legislative	Negligible - 1	Major - 4	Insignificant-4	Repairs to comply with regulations/emissions.
8	Risk of lost time due to injury	External factors	Negligible -1	Major - 4	Insignificant-4	Monitor and ensuring adequate staffing levels as backup
9	Risk due to Oil / fuel spill	Environment	Possible - 3	Significant -5	High-15	Spill kits provided in service vehicles and staff trained. Ops cars equipped with spill kits
10	Risk in Fuel delivery	External factors	Negligible- 1	Major - 4	Insignificant-4	Emergency fuel plan city wide / monitor levels and keep tanks full
11	Risk in drop in Vehicle Fluids (oil, coolant, window washer fluid,)	External Factors	Possible - 3	Major - 4	Moderate-12	Monitor and keep levels full, schedule regular deliveries.
12	Risk of delayed response to repair and maintenance request	Functionality	Almost Certain -5	Moderate-3	High-15	Ensure that repair and maint. Requests are prioritized and vehicles are road worthy
13	Risk of delay or failure of services that generate revenue like by-laws, building etc.	Financial	Minor-2	Major - 4	Low-8	A spare vehicle to be provided

Climate Risks

The town also would like to incorporate actions that may be required to address vulnerabilities caused by climate change and which can impact the town's infrastructure assets. The provincial O.Reg.588/17 specifically identifies a Town's responsibility to mitigate the effects of climate change. The Town is required to address vulnerabilities caused by climate change to the assets. Adaptation opportunities and mitigation approaches to climate change such as reducing greenhouse gas emissions must be included as part of risk assessment for all assets.

6.8.2 Lifecycle Strategy

The Town of New Tecumseth will develop a set of planned actions throughout each of the asset's lifecycle that will enable the assets to provide the desired levels of service while managing risk and minimizing lifecycle costs. As suggested in "The Building Together Guide" published by province of Ontario for Municipal Asset Management plans the Town will adopt the following categories of maintenance:

Non-Infrastructure solutions – actions or policies that can lower costs or extend asset life (e.g., better integrated infrastructure planning and land use planning, demand management, insurance, process optimization, managed failures etc.)

Maintenance Activities – actions for regularly scheduled inspection and maintenance programs and significant repair activity associated with breakdowns (e.g.; understanding and performing fleet maintenance will increase the longevity of the asset category)

Renewal/rehabilitation activities -significant repairs designed to extend the life of the asset. (e.g., the lining of iron watermain can defer the need for replacement.

Replacement activities – activities that are expected to occur once an asset has reached the end of its useful life and renewal/rehabilitation is no longer an option. (e.g., a replacement activity of a vehicle will contribute towards a healthy fleet that could prevent future investment on break fix issues).

Disposal activities –activities associated with disposing of an asset once it has reached the end of its useful life or is otherwise no longer needed by the municipality. (e.g., a strategy for disposal or impairment of assets that are decommissioned or beyond their service life due to obsolescence will enable the town to ensure that no investments are made to these assets and they are taken out of the asset repository).

Expansion activities – planned activities required to extend services to previously not serviced areas or expand services to meet growth demands. (e.g., the growth of new subdivisions in the town will require planned expansion of the collector roads and storm sewer network of the town).

6.8.3 Asset Information Strategy

Asset information is a combination of data and attributes of physical assets which will be used to inform decisions about how they are managed both for short term operational purposes and long-term strategic planning. Good asset information enables better decisions to be made, such as determining the optimal asset maintenance or renewal frequency for an asset. Asset information management is increasingly being viewed as a critical component in Asset Management. Asset information embodies a convergence of data quality, data management, data policies, data validation and risk management surrounding the handling of information in for the Town. The objective of having a consolidated asset information management system for the Town of New Tecumseth is to have a better control of inventory, condition assessments and other attributes to make appropriate decisions on asset lifecycle costing, budgeting and maintenance plans.

Asset information has many components such as:

- Asset repository – A central asset repository or inventory to manage assets. The repository can be a single data store or several linked and related data stores. A number of data sets put together will support effective management of assets which is essential to meet the business objectives.
- Asset history- All key information surrounding the assets like its creation, installation, operation, maintenance and retirement along with the activities undertaken should be stored in this database to create a history of the asset.
- Design information –Design standards, specifications, calculations related to the asset can help in understanding asset performance and lifecycle analysis.

- Documents – Supplier documents related to the asset and system/asset specific based documents should be housed in the database.
- Images and multimedia – Images of assets and its condition is an important asset information

For the Town of New Tecumseth an asset information strategy consists of:

- Understanding the importance of data/information for asset management
- Developing a consolidated asset registry with attributes
- Ensuring use of standard asset data guidelines and business processes across systems
- Adopting a system consolidation plan and practices to avoid data and business process duplication
- Developing data quality and integrity measure for evidence- based decision making

6.8.4 Demand Management Strategy

The asset management plan of the Town of New Tecumseth will be aligned with the Ontario's land-use planning framework as per the province's Planning Act, the Provincial Policy Statement and the Official Plan of the Town. The vision of land use planning for Ontario is long-term prosperity. A healthy and prosperous town will depend upon planning for strong, sustainable and resilient communities for all ages, a clean and healthy environment, and a strong and competitive economy. Asset Management will inform the Town to focus infrastructure development in growth areas and provide a 10-year demand forecast on infrastructure requirements for the Town. The demand strategy can be reviewed according to the Town's official plan and development charges.

The growth and demand requirements for the Town of New Tecumseth targets a population of 54,596 people, economic growth of 26,611 jobs and occupied dwellings of 20,929. As per the Town's Economic Development Strategic Plan, 58% of the labor force reside outside the community (largely a Honda influence) and 55% of the labor force commute outside of the community for work. The Growth Plan has extended the horizon to 2041 and has assigned additional population and employment figures to the County of Simcoe which have not been allocated at this time and until such, our time horizon will continue to be 2031. The Official Plan of the Town is prepared in accordance with the Oak Ridges Moraine Conservation Plan and Greenbelt Plan.

The demand for services is currently reviewed by council and staff in the context of an annual Long-Term Financial Plan. This allows for the discussion of potential capital projects over the 5 to 20-year horizon and the impacts on tax rates, reserves and debt. On an annual basis as each department reviews service requirements which translate into budget requests for capital and operating requirements. These requests take into consideration the

existing assets as well as population and economic growth initiatives. For example, more parks require more maintenance which require more equipment. The equipment acquisition needs to be assessed for its lifecycle costs. The asset management department will work with the planning department and prepare a long-term capital improvement plan that can consider the Town's needs for future. The capital improvement plan should look at the capital needs for major asset replacement, maintenance, town growth and changes in technology. This annual review will be incorporated into both the long-term financial plan and budget.

6.8.5 Asset Disposal Strategy

The purpose of an asset disposal strategy is to provide the town a framework for disposal of the town's assets that are not needed to provide the minimum level of basic municipal services or that are surplus to the Town's requirements. Disposal includes the process of preparing, negotiating and concluding a written contract by means of sale, lease or a donation. The following are the objectives of asset disposals:

- Ensure that assets that do not provide the minimum level of basic service are disposed of. (e.g., Frequent breakdowns on machines or fleet which are hindering services provided by the Town)
- Ensure that the assets that are uneconomical to maintain or to operate or not suitable for service delivery or where the technology is outdated are disposed of. (e.g., change in technology can lead to disposal of blackberry)
- Ensure that assets are not disposed of when the disposal of the asset or the terms of disposal of the asset could be a disadvantage to the town financially. (If the cost or terms of disposal has costs associated with disposal and it becomes a financial constraint to the town.)
- Ensure that the assets which no longer support a service area's objective due to a change in type of service being delivered or the delivery method.

6.8.6 Maintenance Strategy

Maintenance is the work undertaken to preserve or restore an asset in a state of good repair and efficient working order to an agreed acceptable standard. Maintenance can be two types: preventative or reactive. Preventive maintenance is performed to avoid breakdown of machinery or plants to avoid business interruption, provide compliance with statutory requirements, prolong the useful life of the asset or create a safe work environment. Reactive maintenance is triggered by either customer or staff requests or failure. An effective maintenance strategy contributes to:

- Maintaining the facilities and other assets in a state of good repair
- Identifying gaps in performance through monthly reporting of preventive and corrective maintenance tasks

- Setting targets for maintenance performance through response times within the facilities and fleet departments that provide service to other departments
- Identifying opportunities for asset replacements during capital or minor asset refurbishments

6.9 Finance Strategy

An asset management program can improve understanding by taking some of the mystery out of how and why decisions are made. It does this by clearly articulating goals in terms that are meaningful to stakeholders, by documenting current conditions of assets, and by estimating future conditions based on alternative policy strategies and investment levels. Standard funding strategies include:

- Reserves: Contributing revenues to a reserve account and drawing funds from the account. This strategy allows a reserve ‘threshold’ to be set to provide a buffer for unexpected expenditures. It also allows lifecycle contributions to be made on an annual basis which can be drawn upon when needed
- Debenture Financing: A loan issued to the town for building or acquiring an asset, which involves repayment annually with interest
- Grants and Third-party contributions: Contributions from external parties external like the Association of Municipalities of Ontario and Federation of Canadian Municipalities for gas tax, municipal asset management grants and climate change programs.
- User Fees: Rates charged to the users of a service like water, wastewater and recreation programs
- Alternative Service Delivery: services could be contracted to specialists who could provide a better service to the town. Generally, this is used in solid waste and transit but can be thought for other service areas for better financial management.
- Public-Private Partnership: This is a model generally used by transit services but could be used for huge capital projects

Utilization of these various financing strategies is fundamental to ensuring successful asset management plans which create a health and sustainable infrastructure.

6.10 Asset Management Integration

Asset Management does not work in a silo but integrates with many other aspects of the Town’s strategic and business activity. Firstly, the asset management plan will be aligned with town’s strategic plan. Many other studies and documents are used to support or direct the asset management plan. Once the asset management plan is created it provides a basis to develop the Town’s budget and long-term financial plans. Below you will find a list of the various studies and documents which work interactively with the asset management plan:

Asset Management System	Strategy	Supporting Document or Strategies
Asset Management Policy and Strategic Direction Guides the town in ensuring the corporate vision and goals of asset management	<u>Objective:</u> Strategic Asset Management Policy <u>Output:</u> Meet the O.Reg.588/17 Asset Management Planning Regulation	Strategic Asset Management Policy & Plan

<p>Asset Registry and Integration Maintain a centralized asset registry and update the registry</p>	<p>Objective: Central repository of town's assets and integration Output: Ensure that AM integrates with the TCA of Finance, GIS and work order management</p>	<p>Integration with GIS Esri and Work order</p>
<p>Levels of Service and Performance Metrics Establishes key levels of service criteria for each service area, service expectations and performance measures</p>	<p>Objective: Develop LOS Framework and associated measures Output: LOS framework for range of assets Performance measures for each of asset/services Ensure LOS and Performance metrics is tied to the budget</p>	<p>. Strategic Asset Management Plan</p>
<p>Growth and Demand Identifies the future growth areas of the town and subsequent demand patterns and capacity requirements</p>	<p>Objective: Develop demand management strategy to meet the growth in the town Output: A demand management strategy will encompass all the areas of growth and services and its impact on the town's long-term financial plan and financial plans for water and wastewater.</p>	<p>Storm water study . Financial plans for water & wastewater. Development Charge Study . Official Plan . Roads needs study . Economic Development Strategic Plan . Community Improvement Plan Site plan submission guidelines</p>
<p>Asset and Business Risks Identifies the asset risks and business risks associated with the assets and running services</p>	<p>Objective: Develop Risk management strategy for the town Output: A risk management strategy will help in developing risk matrix, likelihood and consequences, asset failures, condition assessments, capital planning and business risks like climate risks, revenue risks, associated with the services</p>	<p>. Develop a 5x5 Risk matrix for all assets and services . Climate Risks to be mentioned as part of O.Reg/588/17 . Risk discussions will have impact on town's insurance</p>
<p>Funding Strategies Identifies the future growth areas of the town and subsequent demand patterns and capacity requirements</p>	<p>Objective: Develop funding models and strategies for the town Output: Evaluate revenue and funding streams and outlines investments. Apply grants related to climate change like MAMP</p>	<p>Town's Budget General Reserves and Reserve Fund Policy</p>

<p>Operations and Maintenance Identifies the future growth areas of the town and subsequent demand patterns and capacity requirements</p>	<p>Objective: Develop maintenance management strategy to meet the growth in the town Output: Develop a strategy that informs operational and service delivery process and how it meets the Level of service</p>	<p>Town's Operating Budget Community Energy Initiative Maintenance Process followed by the town Community Energy Initiatives</p>
<p>Information Systems and Tools Identifies the future growth areas of the town and subsequent demand patterns and capacity requirements</p>	<p>Objective: Develop a central repository asset management database and help in integration of AM with GIS, mobile devices and financial system Output: Advance information systems and tools can enable evidence-based decisions and enable better reporting to the management</p>	<p>IT Masterplan</p>

6.11 Plan Improvement and Monitoring

Asset Management is an ongoing exercise, continually evolving by adapting to new information, technology, strategies, funding opportunities and priorities. We are in the early stages of our journey towards thorough and robust asset management. This policy sets the baseline requirements for our asset management approach and supports a work plan for continuous improvement. Our initial focus will be on developing and documenting asset management plans, levels of service and a risk framework. All this will improve decision-making by providing business cases for budget requests and a framework and data to support decision making when it comes to our investments in our infrastructure. This will be achieved by our investment in our asset management capabilities through training and understanding and measured by maturity assessments across all service areas.

Appendix - 1

 Alliston · Beeton · Tottenham			Developed By: Arun Chulliyil, Manager of Corporate Assets			
The Town of New Tecumseth - Work Plan						
Section No.	Sub-Section No.	Sub-sections	Description/Definition	Deliverables	Requirement	Target Date
1.00	Strategic Asset Management Policy					
1.01		Strategic AM Policy	Developing a Strategic Asset Management Policy for the town – Incorporate climate change, capitalization threshold, sustainability in SAMP	Develop a Strategic Asset Management Policy	O.Reg 588/17	December 31, 2018
2.00	Asset Management Strategy					
2.01		Assessment	Self Assessment for the Town's staff and maturity scale for the town's staff	Town's maturity with respect to Asset Management	Best practices	October 31, 2018
2.02	What is the current state of my assets	Asset Hierarchy	Developing a Asset Hierarchy for Work orders, Asset Mgt and develop structure on towns assets as to who owns and what services they provide	Develop a framework on the town's assets	Best practices	September 30, 2018
2.03		Asset Governance & Staffing	Asset Management Governance – Executive lead for AM , Reporting structure, Asset Management department	Develop a framework for AM Governance	O.Reg 588/17	December 31, 2018
2.04		Asset Management Communication	Asset Management Communication – Stakeholder communications (Internal & External)	Develop steps for Communications for internal & External stakeholders	O.Reg 588/17	October 31, 2018
3.00	Asset Management Plan - Corporate					
3.01	What is the current state of my assets	State of Local Infrastructure	Assess completeness of inventory data and replacement value, Discuss LOS, risks, strategies for the Corp. Asset Mgt Plan	Update inventory of the town	O.Reg 588/17	June 30, 2019
3.02		Implement Asset Repository	Implement Asset Management Repository System (AMS) that will enable the staff to have a work order and asset management systems	Centralized asset repository for AM and computerized work order processing for other service areas	Town's initiative	December 31, 2019
3.03	What is the required LOS?	Levels of Service for Infrastructure Assets	Develop a Current Levels of Service (LOS) framework for all assets and mapping them with Budget	Levels of Service framework for all Infrastructure Assets	O.Reg 588/17	October 31, 2019
3.04	Which assets are critical, best O&M strategy	Asset Management Strategies	Develop various asset management strategies for each service area	Develop Strategies for all the Corporate Assets	O.Reg 588/17	June 30, 2020
3.05	Best Funding strategy	Financing Strategies	Develop a 10 year forecast and show various tools for funding, annual expenditures for O&M, lifecycle costing	Develop financing Strategies for all the Corporate Assets	O.Reg 588/17	December 31, 2019
3.06		Asset Management Integration	Asset Management Integration –with other Town's Plans	Develop steps for integration of AMP with other plans	O.Reg 588/17	December 31, 2019
4.00	Department Asset Management Plan - Water & Wastewater					
4.01		Departmental Asset Mgt Plan	Develop Departmental Asset Management Plans (DAMP) for Water & Wastewater	Meet the regulation on core infrastructure AMPs	O.Reg 588/18	December 31, 2020
5.00	Department Asset Management Plan - Stormwater					
5.01		Departmental Asset Mgt Plan	Develop Departmental Asset Management Plans (DAMP) for Storm water	Meet the regulation on core infrastructure AMPs	O.Reg 588/18	December 31, 2020
6.00	Department Asset Management Plan - Transportation (Roads, Bridges, Right of Ways, Culverts etc.)					
6.01		Departmental Asset Mgt Plan	Develop Departmental Asset Management Plans (DAMP) for Transportation Services	Meet the regulation on core infrastructure AMPs	O.Reg 588/18	December 31, 2020
7.00	Department Asset Management Plan - Parks & Recreation and Facilities					
7.01		Departmental Asset Mgt Plan	Develop Departmental Asset Management Plans (DAMP) for Parks, Recreation and Facilities	Meet the regulation on other infrastructure AMPs	O.Reg 588/17	December 31, 2021
8.00	Department Asset Management Plan - Fleet					
8.01		Departmental Asset Mgt Plan	Develop Departmental Asset Management Plans (DAMP) for Fleet Services	Meet the regulation on other infrastructure AMPs	O.Reg 588/17	December 31, 2021
9.00	Department Asset Management Plan - Corporate Services (IT & Administration) & Fire					
9.01		Departmental Asset Mgt Plan	Develop Departmental Asset Management Plans (DAMP) for Corporate Services (IT Services & administrative services) and Fire	Meet the regulation on other infrastructure AMPs	O.Reg 588/17	December 31, 2021
10.00	Plan Improvement & Monitoring					
10.01		Monitoring and Review	Monitoring inventory, state of compliance and measuring & reporting compliance, review of goals and performance targets & discuss emerging technologies	Demonstrating continous Improvement Plan on AM, Performance metrics	Best Practices	December 31,2022

