



Town of Fort Macleod
Asset Management Roadmap



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Intent & Scope

This Asset Management (AM) Roadmap provides a long-term plan to prioritize and resource asset management initiatives throughout the organization. Asset management aims to develop a sustainable process to maintain and operate infrastructure assets within the municipality through best practices. The concept of Asset Management is modern and evolving, generally, best practices include defining costs and quality of providing services, allocating infrastructure funding, risk assessments, condition assessments, renewal of assets, and replacement costs. Level of service is the expected quality or reliability of a service by the ratepayer, identifying gaps in levels of service is the first step towards creating change in the organization. A focus of the AM Roadmap is to close the identified gaps through a gap analysis, which is a comparison of current performance against desired performance and can be tracked using the readiness scale provided by the FCM (Federation of Canadian Municipalities, 2018). Although this is a long-term project the Roadmap will help set milestones that allow measurement of performance of the municipality and satisfaction of the residents along the way. These practices will establish long-term growth, sustainability, and guide the municipality along its asset management journey. This Roadmap is created to ensure that progress is made within asset management and that accountability is clear across the Town of Fort Macleod.

The purpose of the Roadmap is to prioritize asset management initiatives to meet the needs of the Town of Fort Macleod by:

- a) Conducting a gap analysis of the municipality
- b) Ensuring sufficient service delivery by assigning roles and responsibilities to municipal staff and considering the future needs of the municipality.
- c) Outline asset management practices that enable the Town of Fort Macleod to manage infrastructure assets in a way that is cost-effective and sustainable.
- d) Setting milestones to guide the Town towards long term asset management goals



Readiness Improvement Initiatives

Using recommendations from the FCM Readiness Scale (Federation of Canadian Municipalities, 2018), these initiatives can help improve competency in the five key areas of Policy and Governance, People and Leadership, Data, and Information, Planning and Decision-making, and Contribution to Asset Management Practice. The initiatives below are high-level and can act as a starting point for improvement in a certain category. All municipalities are unique and require a specific line of action depending on their current level of readiness.

Policy and Governance

- 1) Putting in place policies and objectives related to asset management
- 2) Bring policies to life with Roadmap along with the strategy
- 3) Measure progress and monitor implementation over time
 - a. Outcome: Organizational alignment and commitment

People and Leadership

- 1) Setting up cross-functional teams
 - a. Asset management requires an integration of multiple perspectives throughout the organization
- 2) Ensure accountability
 - a. Sustaining connections between the responsibilities of each department
- 3) Resourcing and commitment
 - a. Involving senior management and elected officials to advance asset management

Data and Information

- 1) Collecting and using Asset Data
 - a. Data regarding the inventory of all assets and life cycle investment requirements associated with most assets
- 2) Collecting and using Performance Data
 - a. Measurements of a defined level of service
- 3) Collecting and using Financial Information
 - a. Understanding trade-offs between investments and level of service



Planning and Decision-Making

- 1) Documentation and standardization of asset management procedures
 - a. Employing a consistent asset planning approach
 - b. Adapt to evolving organizational goals and objectives
- 2) Asset management plans
 - a. Devise integrated asset management plans for all services based on actual data that account for risks
- 3) Budgets and financial planning
 - a. Prepare multi-year capital and operating budgets based on short and mid-term needs

Contribution to Asset Management Practice

- 1) Training and development
 - a. Supporting staff in asset management training
- 2) Internal communication and knowledge sharing
 - a. Capture asset management knowledge and share it freely throughout the organization
- 3) External communication and knowledge sharing
 - a. Communicating the benefits of asset management to the public and stakeholders outside of the organization
- e) Risk management for all services considering environmental stewardship.



Gap Analysis

Gap analysis is an evaluation strategy used to compare the actual performance against the desired performance of aspects within the municipality. Following guidelines from the FCM (Federation of Canadian Municipalities, 2018) the five categories which best define a municipality's readiness for asset management are Policy & Governance, People & Leadership, Data & Information, Planning & Decision Making, and Contribution to Asset Management.

<i>AM Readiness Category</i>	<i>Current State</i>	<i>Desired Future State (Roadmap Timeframe)</i>
Policy & Governance	<p>Level: 1</p> <ul style="list-style-type: none"> Staff is committed to researching and formalizing an Asset Management Program Looking to implement within 2022 budget year to meet current and future requirements of the Alberta Provincial Asset Management Strategy Committed to participating in the AUMA Asset Management Cohort Have identified the benefits of Asset Management Goal to be proactive with municipal owned assets Working on centralizing existing asset data, implement guiding documents and train staff 	<p>Level: 3</p> <ul style="list-style-type: none"> Develop an AM Policy and have it endorsed by council Develop an AM Strategy and a 3-5 year Roadmap and have it detail implementation actions Implement an AM system and develop better tools to collect data on AM Practices Start to use AM Policy to guide actions Establish performance measures to monitor progress, outcomes, and benefits
People & Leadership	<p>Level: 2</p> <ul style="list-style-type: none"> Through the AM Cohort, identified AM Champion and supporting staff Adrian Pedro is the AM Champion Council has delegating administration to work on program 	<p>Level: 4</p> <ul style="list-style-type: none"> Operational AM roles and responsibilities across the organization Document changes to AM roles and responsibilities based on evolving evidence AM Team is tasked with supporting AM across the organization on an ongoing basis Council continuously monitors AM enhancement

Table 1: Gap Analysis



<i>AM Readiness Category</i>	<i>Current State</i>	<i>Desired Future State (Roadmap Timeframe)</i>
<p>Data & Information</p>	<p><i>Level: 1</i></p> <ul style="list-style-type: none"> • Have a basic asset inventory of critical assets to include some information such as size, material, location, etc. • Current approach is informal for collecting asset condition/performance • Currently using an Infrastructure Master Plan that supplements budgetary decisions • Currently in preliminary stages of developing level of service measurements for some areas • Currently have financial information supporting minimum PS-3150 reporting requirements 	<p><i>Level: 3</i></p> <ul style="list-style-type: none"> • Consolidate complete basic inventory of all assets • Defined life cycle investment requirements for critical assets • Standardized condition ratings for most asset groups • Have asset condition assessments on ALL critical assets • Have defined and captured current Level of Service measurements for some service areas • Ongoing conversation with council about service levels and asset performance • Have capital & O&M expenditure data for most if not all assets • Linked AM and financial information for ALL critical assets • Demonstrate gaps in forecasted infrastructure needs and current spending levels
<p>Planning & Decision Making</p>	<p><i>Level: 1</i></p> <ul style="list-style-type: none"> • Currently do not have a consistent asset planning approach throughout the organization • Reliant on expertise of long-term staff to create documentation • Reactive approach to asset replacement and maintenance • Critical failure is current focus before preventive maintenance • Primary resource for repairs and replacement budgeting is historical data and critical needs. Some consideration is given to Infrastructure Master Plan 	<p><i>Level: 3</i></p> <ul style="list-style-type: none"> • Have structured AM Planning in place • Set priorities using criteria based on organization goals and objectives • Have AM Plans for critical services based on mix of estimated and actual data • AM Plans include LOS (current and target) and Risk Management • AM Plans identify short term issues and priorities • Prepare annual capital budget based on annual assessment needs • Have 3-year capital plan that addresses short term issues & priorities

Table 1: Gap Analysis



<i>AM Readiness Category</i>	<i>Current State</i>	<i>Desired Future State (Roadmap Timeframe)</i>
<p>Contribution to Asset Management</p>	<p><i>Level: 1</i></p> <ul style="list-style-type: none"> • Certain staff have participated in the AM Cohort workshop • Current asset management processes are based on direction from leadership staff with limited targeted research • Asset management training and development is informal and inconsistent across the organization • Currently experiencing information loss from employee turnover and department information silos • Initiated a GPS program to capture up to date data and locations of infrastructure • Has identified a need to get an AM Program started and investigating asset management related organizations and resources to help with desired outcomes 	<p><i>Level: 3</i></p> <ul style="list-style-type: none"> • Provide all staff with basic AM awareness training • Some staff undergo advanced AM training specific to roles and responsibilities • Staff and Council can communicate value of AM in their own words • Emerging culture of sharing knowledge internally • Collect and maintain AM knowledge resources • Communicate the benefits of AM internally to staff and council • Members of AM organizations • Share basic information on assets, services provided and future needs with the public

Table 1: Gap Analysis



Asset Management Readiness Roadmap

Based on the gap analysis of the municipality, Table 2 below is a Roadmap to prepare The Town of Fort Macleod toward taking the necessary steps in elevating their preparation for managing assets. The criteria of the readiness scale were highlighted in the prior section and are based on the FCM Asset Management Readiness Scale (Federation of Canadian Municipalities, 2018).

Initiatives and Timeline

Table 3 is a timeline implements specific initiatives to be carried out and included during the decision-making process of the council. Planning, tracking, and monitoring are important steps to ensure the necessary budget, effort, and resources are met. As the previous AM Readiness Evaluation focused on the concepts of AM in your municipality, this initiative roadmap focuses on the asset management-related actions to be executed regarding infrastructure and reporting in your municipality. Table 3 below should be reviewed and updated periodically to reflect any change that might have occurred throughout the implementation timeline.

Roles, Responsibilities, and Resources

Table 4 below allows roles and responsibilities to be assigned to certain tasks, while also budgeting hours and costs. Based on this table, you can determine the time, level of effort, and financial and human resources requirements and plan for implementing the actions by allocating funds in your annual budget. Measuring the sense of preparedness of the council to carry out tasks for the community. This table should be reviewed and updated periodically to reflect any change that might have occurred.




 MuniSight [™] Competency	2022	2023	2024	2025	2026
Policy & Governance	<ul style="list-style-type: none"> - Endorse Asset Management roadmap to implement AM initiatives 		<ul style="list-style-type: none"> - Measure asset management progress and reflect on roadmap initiatives and goals 		<ul style="list-style-type: none"> - Review and track changes to AM Policy and Strategy
People & Leadership	<ul style="list-style-type: none"> -AM Team to create a direction to lead, communicate and support AM improvements -AM Team implements AM Program 	<ul style="list-style-type: none"> -AM roles and responsibilities are included in staff job descriptions 	<ul style="list-style-type: none"> -Get Council approval to champion AM as a core business function and has approved funding for further Roadmap activities 	<ul style="list-style-type: none"> -Operationalize AM roles and responsibilities across the organization 	<ul style="list-style-type: none"> -Permanentize AM team and task them with guiding and supporting AM across organization on an ongoing basis
Data & Information	<ul style="list-style-type: none"> - Centralize and review all known existing asset information -Ensure all critical assets are identified - Begin collecting condition information for critical assets 	<ul style="list-style-type: none"> -Complete condition assessments on critical assets - Collect performance data on critical assets -Begin collecting conditional data for other asset types 	<ul style="list-style-type: none"> -Develop a consolidated asset inventory of at least 30% 	<ul style="list-style-type: none"> -Develop a consolidated asset inventory of at least 60% 	<ul style="list-style-type: none"> - Develop a consolidated inventory of all assets - Link AM data to financial planning -Create Capital & O&M Expenditure data for all assets
Planning & Decision-making	<ul style="list-style-type: none"> - Familiarize all staff and council with AM plan 	<ul style="list-style-type: none"> -Standardize documentation approaches for all departments 	<ul style="list-style-type: none"> -Review financials in accordance with AM plan with estimated and actual data -Revise documentation standardization methods for all departments 	<ul style="list-style-type: none"> -Start applying short term priorities and issues into capital plans 	<ul style="list-style-type: none"> - Review AM Plan, integrate new Level of Service and risk management data
Contribution to AM practice	<ul style="list-style-type: none"> - Train all staff with AM responsibilities on AM principles and initiatives 		<ul style="list-style-type: none"> - Review and revise strategies for knowledge and information flow between experienced and onboarded staff 	<ul style="list-style-type: none"> - Provide workshops to all staff and council on asset management -Begin public information sharing 	

Table 2: Asset Management Readiness Roadmap




 Action	Measure Of Success	2022	2023	2024	2025	2026
Condition Assessments	Performance Of Assets Are Determined	Assess Identified Critical Assets	Assess Road Network Assets	Assess Water Network Assets	Assess Sewer Network Assets	Identify Any Gaps in Asset Inventory and Fill
Level Of Service (L.O.S)	Established L.O.S For Most Used Assets		Determine L.O.S For Critical Assets	Determine L.O.S For Roads	Determine L.O.S For Water Network Assets	Determine L.O.S For Sewer Network Assets
Install Dates	Collect Record Of Asset Install Dates	Gather 100% Install Dates And Expected Useful-Life For Critical Assets	If possible, gather 25% Install Dates And Expected Useful- Life For All Assets	If possible, gather 50% Install Dates And Expected Useful- Life For All Assets	If possible, gather 75% Install Dates And Expected Useful- Life For All Assets	If possible, gather 100% Install Dates And Expected Useful- Life For All Assets
Prepare And Maintain Asset Inventory	An Operating GIS Database That Is Maintained Based On The Information Management Plan	All Existing Critical Infrastructure Data Is Consolidated And Stored	Relevant Info For Critical Asset Replacement Costs and 20% of All Asset Replacement Cost Is Determined And Stored	Relevant Info For 50% Of All Asset Replacement Costs Is Determined And Stored	Relevant Info For 75% Of All Asset Replacement Costs Is Determined And Stored	Relevant Info For 100% Of Asset Replacement Costs Are Stored
Maintain Sewer Network	Perform CCTV Inspections And Organize Reports. Identify Failures.	Spring CCTV Sewer Inspection as needed w/ ~10% of Total Network	Spring CCTV Sewer Inspection as needed w/ ~10% of Total Network	Spring CCTV Sewer Inspection as needed w/ ~10% of Total Network	Spring CCTV Sewer Inspection as needed w/ ~10% of Total Network	Spring CCTV Sewer Inspection as needed w/ ~10% of Total Network

Table 3: Initiatives and Timeline



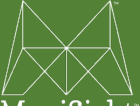
 MuniSight Action	Measure Of Success	2022	2023	2024	2025	2026
Road Network Data Collection	Sufficient Information Gathered To Determine Replacement Costs		Determine And/or Centralize Road Data and Expected Useful Life Data.			
Water Main Data Collection	Sufficient Information Gathered To Determine Replacement Costs			Determine And/or Centralize Water Main Diameter, Material, And Expected Useful Life Data		
Sewer Main Data Collection	Sufficient Information Gathered To Determine Replacement Costs				Determine And/or Centralize Sewer Main Diameter, Material, And Expected Useful Life Data	
All Remaining Asset Data Collection	Sufficient Information Gathered To Determine Replacement Costs					Determine And/or all Other Data Such As Expected Useful Life, Replacement Costs, Etc.

Table 3: Initiatives and Timeline



 Actions	Lead	Internal Support	External Support
Condition Assessments	TBD	TBD	TBD
Level Of Service (L.O.S)	TBD	TBD	TBD
Install Dates	TBD	TBD	TBD
Prepare And Maintain Asset Inventory	TBD	TBD	TBD
Maintain Sewer Network	TBD	TBD	TBD
Road Network Data Collection	TBD	TBD	TBD
Water Main Data Collection	TBD	TBD	TBD
Sewer Main Data Collection	TBD	TBD	TBD
Building, Fleet, And Recreational Asset Data Collection	TBD	TBD	TBD

Table 4: Roles, Responsibilities, and Resources



Summary

The Roadmap provides an innovative approach that prioritizes and assigns asset management initiatives throughout the organization. Asset management is a coordinated and adaptive approach that involves all departments of the Town of Fort Macleod to deliver sustainable services by effectively operating and maintaining infrastructure assets. Currently, Fort Macleod has a good foundation of organized policy and an established database of asset information to be built upon. Participating in the Asset Management Cohort has drastically improved the understanding of Asset Management within the municipality. The goals that will progress the Town forward with asset management focus on accurate data collection/consolidation, further developing capabilities in their staff and processes, and using asset information to enable proactive integrated infrastructure planning. The goals and milestones set out in this roadmap are an advised pathway but are subject to changes and revisions as asset management is an evolving process. This Roadmap measures progress and ensure that accountability is transparent across the Town of Fort Macleod.

References

ACEC, CCA, CPRA, CPWA, CSCE, CUTA, CNAM, FCM. (2019). *2019 Canadian Infrastructure Report Card*. Retrieved from Canadian Infrastructure: <http://canadianinfrastructure.ca/downloads/canadian-infrastructure-report-card-2019.pdf>

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