Service Business Plan

Service Name	Asset Management		
Service Lead Name	Andrew Mass	**Service Lead Title**	Manager of Infrastructure and Data

Service Description

An internal service to provide strategic infrastructure asset management, including managing rehabilitation, renewal and revitalization through the assets' full life cycle.

Strategic Alignment with Vision to Focus Plan

Supporting sustainable infrastructure and a resilient environment

Service Goals

Ensure the city's financial sustainability by recommending rehabilitation and replacement strategies that deliver the longest asset life at the lowest overall asset cost.

Ensure legislative compliance by coordinating and publishing the Corporate Asset Management Plan in accordance with provincial regulations.

Incorporate climate change resilience by identifying high risk assets and planning for their rehabilitation with the proper function and capacity, recommend sustainable materials and innovative construction techniques that can mitigate the effects of climate change, and integrate green infrastructure into the cities asset inventory and effectively manage it throughout its life cycle to ensure proper performance.

Current State

Customers & Their Expectations	This service is delivered to: City Council, senior management, infrastructure services and the public, with the following expectations: • Provide well maintained and safe infrastructure (assets) • Define and provide recommended financing to maintain/renew assets • Effectively manage the City's investment in infrastructure (i.e roads, buildings, parks, etc.) • In consultation with other services, establish priority setting for capital planning and forecasting • Maintain current condition and rehabilitation information/data.
Existing Service Delivery	Life cycle management of the City's tangible capital assets, which have a replacement value of $3.1 billion. Work includes life cycle assessment, priority setting for capital planning and forecasting, and the condition and financing requirements to maintain, rehabilitate and renew the City's infrastructure.

	Configuration and maintenance of the Asset Information System including source asset inventory's, condition information, replacement cost information, and decision support software. The decision support software system houses all life cycle information on City owned assets. The system calculates the optimum treatment, timing and cost for the asset type rehabilitation strategy. The system predicts rehabilitation requirements for the next60 years, and this data is used by the Financial Management service to develop the long term financing plan. This service is coordinated and delivered through the Asset Management Service in partnership with the Asset Management Committee that has representation from all the infrastructure asset categories (Roads, Facilities & Buildings, Parks & Open Space, RPM, Finance, Transportation, ITS etc.). Asset Management provides the overall framework, leadership, direction and coordination to all the infrastructure asset categories, and works with Financial Management Services to establish, update and champion the long-term asset management financial plan. The partner services work with Asset Management to carry out the physical work related to life cycle asset management.
Existing Customer Engagement Tools / Methods	Annual reports keep Council informed. Infrastructure services are engaged through participation on the asset management committee team and capital budgeting process. Asset Management web page in place to support public awareness. Surveys on acceptable levels of service.
Is this Service Provincially Legislated?	Yes Ontario regulation 588-17 mandates municipalities are now required to develop detailed asset management plans to accompany any request for provincial or federal infrastructure funding
For this Service are there Approved Service Standards?	No N/A

Programs

Asset Management Strategic Oversight	Responsible for coordinating the maintenance and operation of the asset management systems used to track the inventory, condition, replacement value, rehabilitation need, timing and cost of infrastructure assets. The information from these systems is used to plan, prioritize and establish the capital budget and forecast and long-range capital that fund maintenance, rehabilitation and renewal needs. Provides leadership on opportunities to integrate the various asset management systems. Establishes the standards, staff requirements and system requirements.

Long-Range Financial and Operational Planning	Provides leadership to establish the long-range asset management financing plan. Provides regular updates recommending the financing needed to rehabilitate and replace all infrastructure. Provides leadership and coordination for infrastructure funding opportunities through provincial and federal programs.

Recent Continuous Improvement Initiatives

In 2019, New condition data on Arterial and collector roads was acquired to update the Pavement Management Application. This new data will be used to gain more insight on the current condition of pavements which will help prioritize rehabilitation. The data can also be compared to the 2016 data collection in an attempt to understand the impacts of climate change.

In 2019, an interactive Asset Management story map was developed and posted to the Asset Management website. It is designed to help increase awareness and understanding of the infrastructure the city is responsible for managing.

In 2019, the Asset Management service brought forward a new Strategic Asset Management policy that is required by provincial regulation O.Reg 588/17, which was approved by council.

In 2019, an Asset Management awareness session was facilitated with city staff to gain a better understanding of Asset management, the benefits of using an asset management approach with respect to community outcomes, and an explanation of tangible steps that can be taken to implement legislated best practices

In 2018 an executive dashboard built on the City's Business Intelligence (BI) platform was initiated. The final dashboard will assist users in their ability to access, analyze and visualize data on the state of the City's infrastructure across most asset categories.

In 2018 the City's asset management plan was recognized by the Canadian Network of Asset Managers (CNAM) with the inaugural Ambassador Award. The award honours organizations whose efforts reflect a commitment above Canadian industry standards.

In 2018 a review of Ontario Regulation 588/17: Asset Management Planning for Municipal Infrastructure came into effect. The asset management committee conducted a review of the regulation and a response was issued to the Province. The regulation sets out requirements for municipal asset management planning to help municipalities understand their infrastructure needs and inform infrastructure planning and investment decisions.

In 2017 an Asset management specific web page was published as a resource for knowledge, documents, and news related to Asset Management System at the City. The site serves as a great communication tool for both internal and external stakeholders.

In 2016 an Asset Management Plan (AMP) was published and subsequently approved in 2017. The plan documented the asset management systems, level of service, risk, etc. The AMP is a key corporate document and its completion was important because senior levels of government require these plans as a condition of program and grant funding.

Environmental Considerations

Emerging Opportunities and Anticipated Risks

Emerging Opportunities	Implementation of the EAMS (Enterprise Asset Management System) will help provide better data on operational costs and a fuller understanding of total life cycle costs. With the approval of the long-term asset management financial strategy, the City will be well positioned financially to increase the number of renewal projects delivered each year. The additional funding will allow more work to proceed, addressing the backlog of projects in a more timely manner. As well, more work will be done at the appropriate time to avoid future increased costs. About 95% percent of assets (based on valuation) are now tracked through their life cycle in the Riva DS system (excluding Facilities & Buildings, which have their own system). Work on adding more assets to the Riva system is ongoing, with the goal of achieving 100% by 2018. Continue to monitor and pursue infrastructure funding opportunities through provincial and federal programs. Infrastructure spending has been a commitment from both levels of government and the city's asset management system is critical for prioritizing and quantifying projects eligible for Higher government level funding. Explore applying the corporate risk framework to assets in order to quantify the consequence of failure.
Anticipated Risks	Senior levels of government require asset management plans as a condition of funding starting December 31st, 2016. Bill 6 legislation will regulate the content of Asset Management plans, the city has been monitoring the evolution of the bill and will be positioned to satisfy the regulations once they are fully established. With increased funding, we will have to deliver more projects, putting increased workload on staff. We will have to continue improving our methods to increase project delivery output. We rely heavily on our various asset management systems. We need to ensure that we have backup in qualified and trained staff to continue to manage these systems effectively. Regulations for asset management plans will have an impact on workload in the future. Council and leadership commitment to ensuring sustainable levels of funding are available, as outlined in the long-term financial plan.

	Inflation greater than accounted for in the long-term financial plan will erode the funding purchasing power and affect the number of renewal projects that can be delivered. Other agencies are increasing infrastructure spending. Halton Region, CN Rail, Metrolinx, MTO are all investing in infrastructure in the coming years. Coordination with these agencies will ensure the city's investment is protected.
Enterprise Risk Considerations	Labour Market and Workforce - Attraction, Retention, Skills Financial Sustainability - Sustainability, Budget Climate Change - Severe Weather Events, Increasing Number of Severe Weather Events Technology - Funding required to upgrade existing tools for the data required to support the Long Term Financial Plan and the prioritization of renewal and new capital budget projects

Service Initiatives	Target Completion
Engage a consultant to review corporate asset data inventories, data suitability, reliability and produce a strategy for managing and integrating asset data into the Enterprise Asset Management System	Apr 2020
Integrate current decision support processes and data in the new Enterprise Asset Management System with the goal of understanding full life cycle costs and the connections to level of service.	Dec 2020
Aligning to corporate information governance and data management standards, establish formal QA/QC procedures for all Asset Information. Automate the process using FME and generate an exception report.	Jul 2021
Publish the City of Burlington's Asset Management Plan aligned to provincial regulation O. Reg 588/17	Jul 2021
Asset Management Regulations (Phase 1): All core infrastructure assets reported to Province of Ontario. This must address current service levels, asset performance, condition, age and replacement cost and the 10-year life cycle costs and funding to maintain those service levels.	Jul 2021
Asset Management Regulations (Phase 2): All remaining infrastructure assets reported to Province of Ontario. This must address current service levels, asset performance, condition, age and replacement cost and the 10-year life cycle costs and funding to maintain those service levels.	Jul 2023

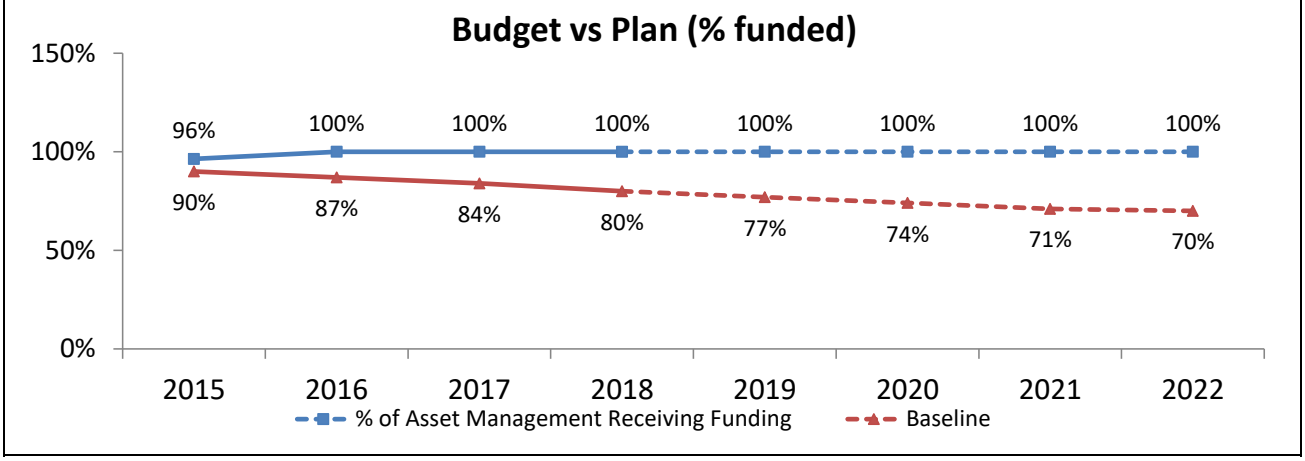
MEASURING SUCCESS

How much did we do?

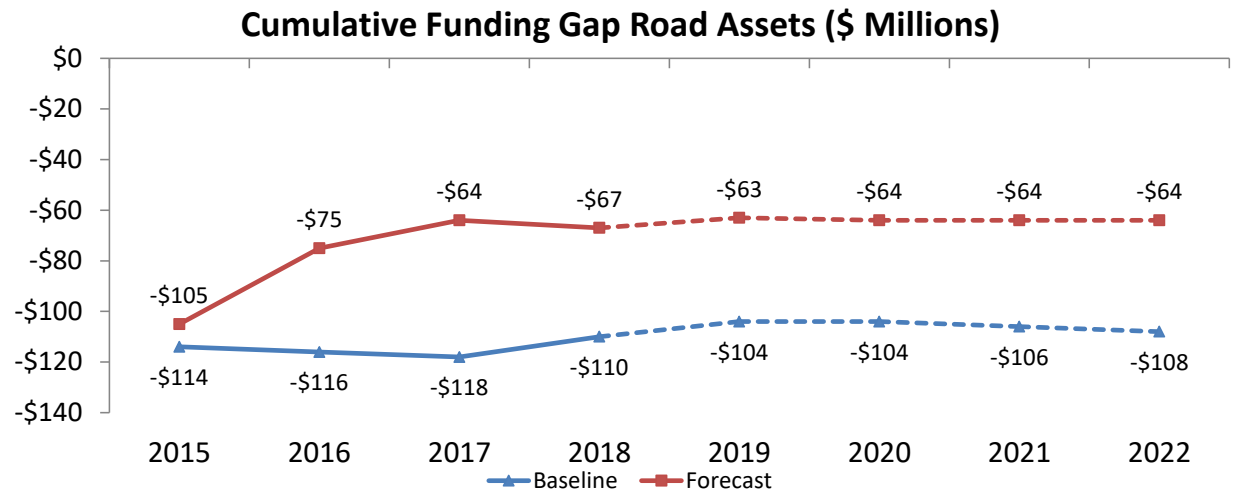
Performance Measurement	2015 Actual	2016 Actual	2017 Actual	2018 Actual	2019 Forecast	2020 Forecast	2021 Forecast	2022 Forecast
Replacement value of assets under management ($ millions)	$2,601	$2,838	$2,951	$3,010	$3,070	$3,131	$3,193	$3,500
Percentage of assets in Asset Management System	96%	97%	98%	99%	100%	100%	100%	100%

How well did we do it?

Performance Measurement	Budget vs Plan (% funded)
Story behind the data	This measure tracks the annual funding (Budget) divided by the Annual Need specified in the funding plan, presented as a percentage. In 2013 Council adopted a Long term Infrastructure funding plan to ensure that enough funding will be available to fund the rehabilitation requirements in a given year. The finance plan assumes that the Backlog is static. A value below 100% means the budget provided does not meet the requirements established in the funding plan.

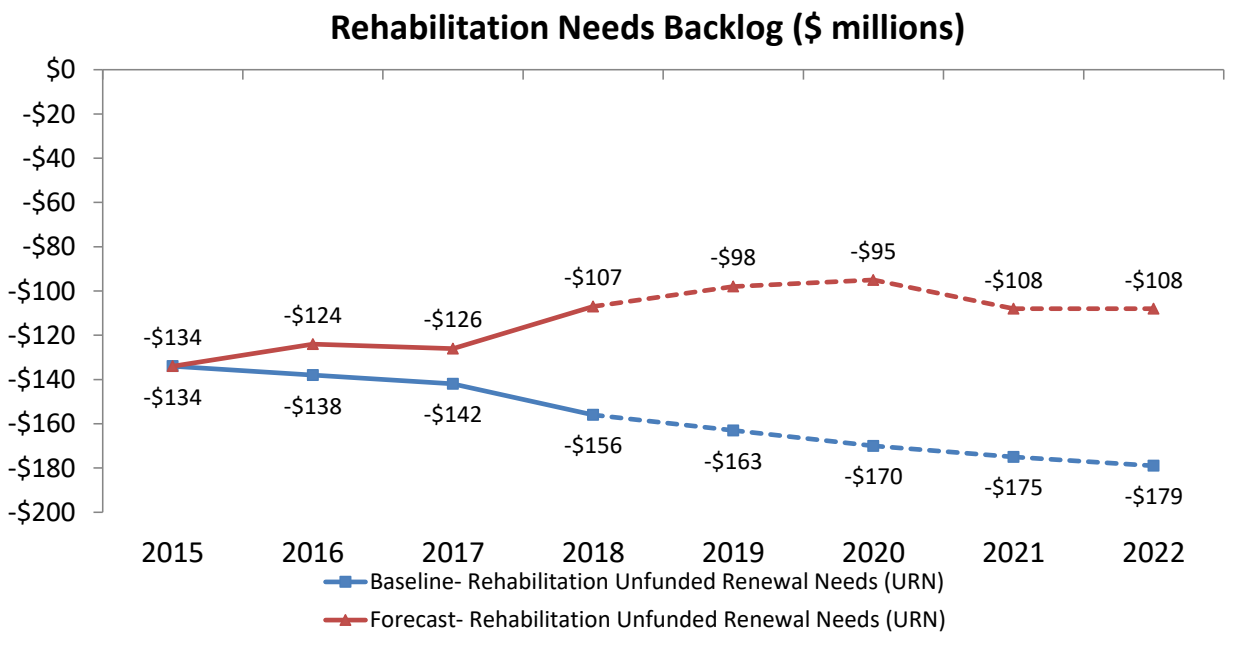


Performance Measurement	Cumulative Funding Gap Pavement Assets ($ Millions)
Story behind the data	The Road Needs Backlog is defined as the dollar value of the work that needs to be done but has not been completed due to insufficient funding. The backlog is now approximately $64 million, and based on existing funding levels, the gap will slowly close.

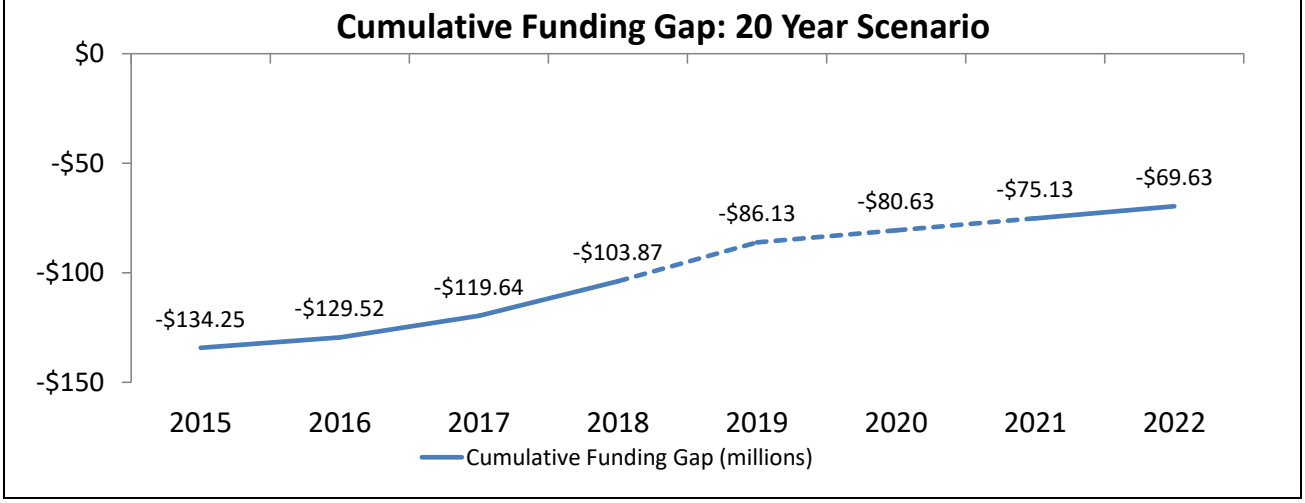


Is anyone better off?

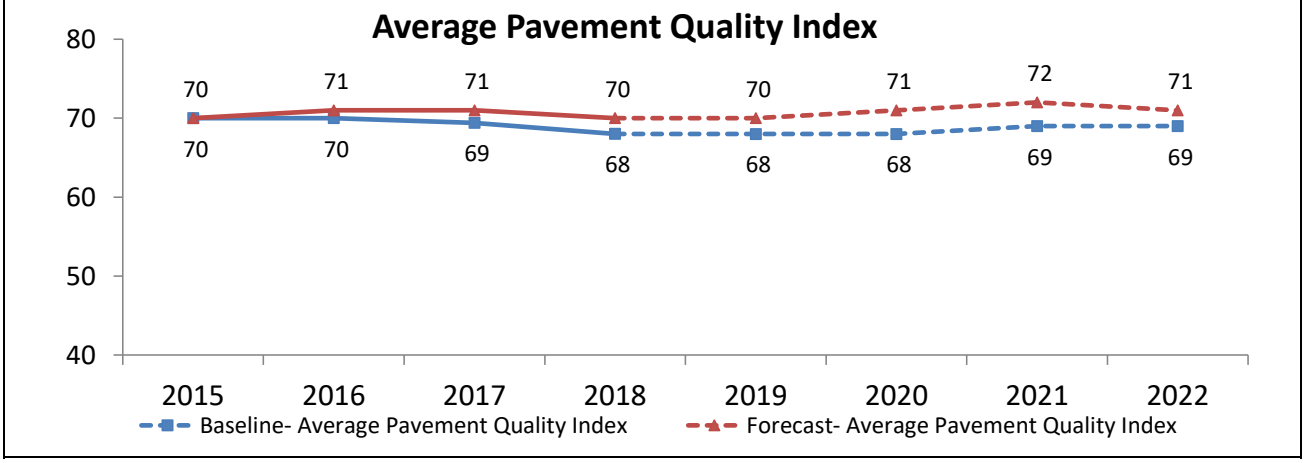
Performance Measurement	Rehabilitation Needs Backlog ($ millions)
Story behind the data	This graph illustrates the magnitude of the funding backlog for all assets that need rehabilitation. If not addressed the backlog will continue to grow to unmanageable levels and the Level of Service provided by city Infrastructure will decline.
Where do we want to go?	The long-term financial plan will increase funding and eliminate the backlog of assets needing rehabilitation by 2035



Performance Measurement	Cumulative Funding Gap: 20 Year Scenario
Story behind the data	This graph tracks the progress on addressing the City's Infrastructure backlog and is an important measure of the City's long-term financial health.
Where do we want to go?	Gradually reduce the funding backlog, and address all rehabilitation items in a timely manner.



Performance Measurement	Average pavement quality index (PQI)
Story behind the data	The Pavement Quality Index is a measure of the overall condition of the road pavement. A PQI of 100 would represent a brand new roadway while a PQI of 20 would represent a roadway that no longer provides acceptable service. The average PQI has been stabilized and is approaching the optimal band of 75/100 on the PQI scale. Arterial Resurfacing projects will help improve the overall network PQI.
Where do we want to go?	We need to increase capital budget funding to provide for appropriate levels of Maintenance, Rehabilitation and Replacement of pavement at the optimal time to reduce longer-term costs



Performance Measurement	Percentage of Structures with Bridge Condition Index (BCI) <70
Story behind the data	A Bridge or Culvert with a BCI of less than 70 is considered to be in Fair condition, usually needing rehabilitation work within five years. City structures are visually inspected every 2 years, in accordance with provincial legislation, and rehabilitation requirements are incorporated into the Capital Budget
Where do we want to go?	We need to increase funding to repair or replace aging Bridge and Culvert structures to maintain service levels and minimize risk to the public