Corporate Asset Management Plan (CAMP)

2026

"This Corporate Asset Management Plan (CAMP) provides a City-wide view of how Calgary's infrastructure assets are performing, the risks they face, and the investments required to sustain reliable services."

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2026 Corporate Asset Management Plan (CAMP)

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Land acknowledgement

The Calgary area, where the Bow and Elbow rivers meet, is a place of confluence where the sharing of ideas and opportunities naturally come together.

Indigenous peoples have their own names for this area that have been in use long before Scottish settlers named this place Calgary.

The Métis call the Calgary area Otos-kwunee. In the Blackfoot language, they call this place, Moh'kinstsis. The Îethka Nakoda Wîcastabi refer to the Calgary area as Wicispa Oyade and the people of the Tsuut'ina nation call this area Guts'ists'i.

We appreciate and acknowledge that we live, work, and play on the ancestral and traditional territories of the Blackfoot confederacy, made up of the Siksika, Piikani, Amskaapipiikani and Kainai First Nations; the Îethka Nakoda Wîcastabi First Nations, comprised of the Chiniki, Bearspaw, and Goodstoney First Nations; and the Tsuut'ina First Nation.

The City of Calgary is also homeland to the historic Northwest Métis and to the Otipemisiwak Métis Government, Métis Nation Battle River Territory (Nose Hill Métis District 5 and Elbow Métis District 6). We acknowledge all Indigenous people who have made Calgary their home.

"Indigenous peoples have their own names for this area that have been in use long before Scottish settlers named this place Calgary."

Contents

Glossary of Abbreviations

AM	Asset Management
AMP	Asset Management Plan/ Asset Management Planning
BESI	Building Envelope and Structural Inspection
BU	Business Unit
CAMP	Corporate Asset Management Plan
CAMRIF	Canada-Alberta Municipal Rural Infrastructure Fund
CFD	Calgary Fire Department
CH	Calgary Housing
CHO	Chief Housing Office
CMA	Calgary Metropolitan Area
CMHC	Canada Mortgage And Housing Corporation
CoF	Consequence Of Failure
CP&BS	Capital Planning & Business Services (Plus 15)
CPL	Calgary Public Library
CPS	Calgary Police Services
CPTED	Crime Prevention Through Environmental Design
CRV	Current Replacement Value
CTCC	Calgary TELUS Convention Centre
ELT	Executive Leadership Team
ESL	Estimated Service Life
EY	Ernst & Young
HAF	Housing Accelerator Fund
ICF	Integrate Civic Facilities
IIMM	International Infrastructure Management Manual
IPWEA	Institute Of Public Works Engineering Australasia
ISO	International Organization For Standardization
ISR	Infrastructure Status Report
IT	Information Technology
KPI	Key Performance Indicator
LoF	Likelihood Of Failure
LoS	Level Of Service
LPSS	Lindsay Park Sport Society
LRFP	Long Range Financial Plan
MDP	Municipal Development Plan
NAMS	National Asset Management Strategy
O&M	Operations and Maintenance
P&OS	Parks & Open Spaces
R&SP	Recreation & Social Programs
SAMP	Strategic Asset Management Plan
SLA	Service Level Agreements
TOD	Transit-Oriented Development
WRS	Waste & Recycling Services

Glossary of Terms

Asset/Technical Level Of Service - A group of measurable asset performance standards required to support customer service outcomes.

Asset Class - A group of assets with similar characteristics, functions, or management approaches. The City has 18 Asset Classes. A full list can be referred to within the report.

Asset Hierarchy - A structured breakdown of assets into systems, subsystems, and components to support management and reporting. This aligns with The City's Asset Classes and Sub-Classes.

Asset Lifecycle - The phases through which an asset passes, from planning and acquisition through acquisition, operation & maintenance, renewal, and disposal.

Asset Management - The coordinated activities of an organization to realize value from assets while balancing performance, risk, and cost over their lifecycle.

Asset Management Maturity - A measure of how well AM practices align with recognized good practice. The City uses the IIMM NAMS+ framework to assess maturity.

Asset Stewardship - The responsibility to manage assets in a way that protects their value and supports service outcomes for current and future stakeholders.

Asset Sub-Class - A further breakdown of an asset class to support detailed analysis and management.

Business Unit - The City group responsible for delivering services and managing associated asset classes.

Consequence Of Failure - The severity of impacts that would occur if an asset fails across service, safety, financial, environmental, and regulatory dimensions. Full definition of CoF is contained within Appendix A for the CAMP.

Critical Asset - An asset whose failure would result in unacceptable impacts to service, safety, environment, compliance, or cost. This CAMP uses a basis of a CoF greater than 4 means an asset is critical.

Criticality - The relative importance of an asset based on the consequences of its failure. This term can be used interchangeably with CoF.

Current Replacement Value - The estimated cost to replace an asset with a modern equivalent capable of delivering the same service. Values contained in the CAMP have been inflated to align with a December 31st, 2025, value where historic values have been provided.

Customer Level Of Service - Service outcomes expressed in terms meaningful to users, such as reliability or responsiveness.

Estimated Service Life - The expected duration an asset can perform its intended function under normal conditions.

Funding Gap - The difference between required funding to sustain services and the funding currently available.

Level Of Service - A defined statement describing the quality, quantity, and reliability of service provided. The City uses Service Objectives, Customer Levels of Service and Asset/Technical Levels of Service to fully outline its commitment to Calgarians.

Lifecycle Cost - The total cost of owning an asset over its lifecycle, including capital, operating, maintenance, renewal, and disposal costs.

Lifecycle Management - The systematic management of assets across their lifecycle to achieve value for money and sustainable service delivery.

Likelihood Of Failure - The probability that an asset will fail within a defined period, often inferred from condition and performance. In the instance of the CAMP the assets condition is used as a proxy for LoF.

Optimization - Achieving the best overall outcome across performance, risk, and cost.

Redundancy - The provision of alternative assets or systems that allow service to continue if one component fails. For example – a parallel Feeder main.

Rehabilitation - Targeted work that extends asset life or improves performance without full replacement.

Reinvestment Rate - Annual renewal investment expressed as a percentage of total asset value.

Renewal - Planned intervention to restore or replace an asset or component to maintain required service performance.

Resilience - The ability of assets and systems to withstand, adapt to, and recover from disruptive events.

Risk Tolerance - The level of risk an organization is willing to accept in pursuit of its objectives. The City has determined a 3 layered system to define tolerance – Severe Consequence of Failure (Impacts at a City level), Criticality based according to impact, Likelihood of Failure (prioritizing assets in Poor and Very Poor condition)

Risk Informed Decision Making - Decisions that explicitly consider risk alongside cost and service outcomes.

Run To Failure - A maintenance strategy in which an asset is intentionally operated until it fails, with repair or replacement occurring only after failure. Typically applied to low criticality assets where the consequences of failure are acceptable.

Service Objective - A specific, measurable outcome that a service or asset is intended to achieve.

Severe Consequence - Where asset failure would result in City wide impacts due to an inability to deliver essential services, e.g. Feeder main failure.

Single Point Of Failure - An asset or component whose failure would cause disproportionate service disruption due to lack of redundancy.

State Of Good Repair - A condition in which assets are fit for purpose, safe, reliable, and capable of delivering intended service levels. Typically, this is aligned with assets in a Fair or better condition.

State Of Infrastructure - A snapshot assessment of the overall condition, performance, risk, and capacity of an organization's asset portfolio at a point in time, used to understand how well infrastructure is able to support current and future service delivery.

Executive summary

The condition of The City of Calgary's infrastructure remains largely in fair or better condition, but as the city grows, there is increasing pressure to keep up with costs and to maintain reliable service in the long-term.

This Corporate Asset Management Plan (CAMP) provides a City-wide view of how Calgary's infrastructure assets are doing, the risks they face, and the investments needed to keep services reliable. It supports both short and long-term investment planning by presenting information from a City perspective rather than focusing on one type of asset.

The 2026 CAMP goes beyond compiling asset data – it brings together risk, condition, and funding needs to help The City make evidence-based investment decisions. It pulls together information on what assets The City owns, their condition, risk, and constraints, and further identifies where funding is lacking and how to improve asset management (AM) practices. In doing so, it directly supports Council's priority on infrastructure reliability and helps ensure different asset types can work together. The CAMP acts as a bridge between corporate decisions and decisions made for specific assets, even when asset management maturity varies across The City. This Executive Summary describes The City's current infrastructure position and the direction it is taking to manage future challenges. It summarizes the current state of infrastructure, how we are improving the way we set and track service objectives and levels of service (LoS), and new ways The City's is dealing with risk and criticality.

It also highlights Asset Management maturity and the key actions underway to strengthen governance, improve data quality, and enhance decision-making. Together, these elements demonstrate how the CAMP aligns infrastructure planning with the proposed Calgary Plan and the current Municipal Development Plan to support sustainable, reliable services for Calgarians.

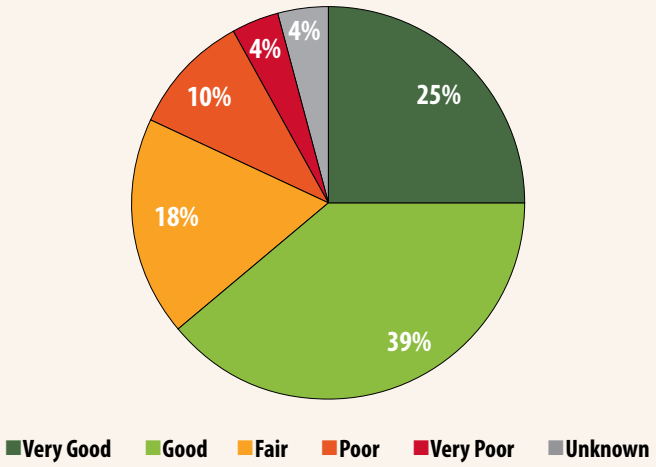
The Current Position

Calgary's infrastructure is valued at approximately **$155.4 billion**, an increase of $55 billion (55%), since the 2022 CAMP. This is due to inflation, changes in asset valuation methodologies, and growth in The City's infrastructure.

We check the condition of assets using methods specific to each type of asset, with most applying a 5-point scale ranging from Very Good to Very Poor. **Figure ES-1** presents a City-wide view of asset condition based on replacement value. ***Please note that percentages in the chart have been rounded off.***

Figure ES 1: City-wide Condition Distribution by Current Replacement Value

Condition	Value of Assets
Very Good	$39.2 B
Good	$60.7 B
Fair	$28.0 B
Poor	$15.1 B
Very Poor	$5.7 B
Unknown	$6.6 B
Total	$155.4 B



Overall, The City's assets remain in reasonable condition, with most assets rated Fair or better. **This means that, at a portfolio level, assets are generally able to support current service delivery needs.**

Approximately $6.6 billion of assets are reported with an unknown condition rating. Often these are low-risk assets that are typically managed using a run-to-failure approach, meaning they are allowed to operate till they fail, and maintenance only occurs after a breakdown. Despite being reactive, this is a planned strategy. For example, assets with extremely low risk of failure, such as individual water or sanitary connections, are purposely not checked using formal condition assessments. Instead, we us methods such as 311 service requests, operational experience, modelling, spot checks, and routine maintenance programs.

Other assets are reported as unknown because inspections have not yet occurred or condition data is outdated. As asset management improves, better information for these assets will be collected and included in future CAMP reports.

Assets with unknown condition fall into two broad categories:

1. Assets where an unknown rating is an accepted outcome of the chosen lifecycle strategy (such as run-to-failure for low-risk assets).
2. Assets where condition data is missing, outdated, or still under development.

While unknown condition does not always indicate unmanaged risk, it does introduce uncertainty. Further refinement - by clearly distinguishing tolerated unknowns and undesired unknowns – would improve transparency and support more consistent interpretation of condition results across asset classes.

"The 2026 CAMP goes beyond compiling asset data –it brings together risk, condition, and funding needs to help The City make evidence-based investment decisions."

Asset Condition

Figure ES-1 shows the condition of The City's assets based on their replacement value - **approximately $20.8 billion (13.4% without rounding) of assets are rated in Poor or Very Poor condition.**

Assets in Poor and Very Poor condition are mostly within Roads, Sidewalks & Pathways, and Water Infrastructure (Potable Water, Wastewater, and Stormwater). This shows that these types of assets make up a large amount of The City's asset value and the challenge of managing large, linear infrastructure networks such as pipes or roads. A relatively small number of asset sub-classes account for most of the assets in Poor and Very Poor condition. The top 10 sub-classes represent more than 75% of the total Poor and Very Poor value ($20.8 billion). Only one of these is non-linear, underscoring the greater challenge of maintaining and replacing linear infrastructure.

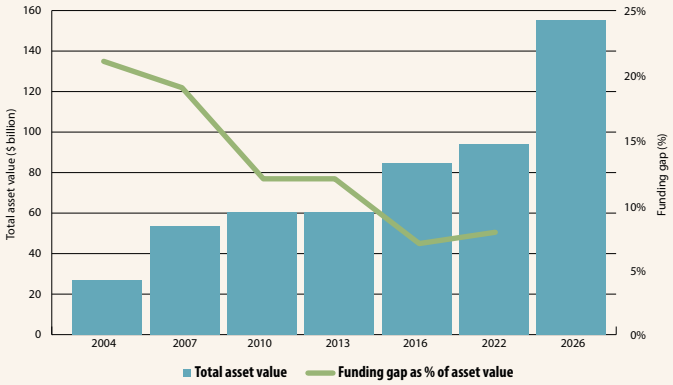
The top asset sub classes by value in Poor and Very Poor condition are:

1. **Local Roads - $3,139 million**
   (Roads, Sidewalks & Pathways, Pavement)
2. **Arterial Roads - $2,622 million**
   (Roads, Sidewalks & Pathways, Pavement)
3. **Collector /Industrial Roads - $2,201 million**
   (Roads, Sidewalks & Pathways, Pavement)
4. **Storm Pipes (450 mm> Diameter <1500 mm) - $1,693 million**
   (Stormwater, Conventional System Conveyance)
5. **Services & Service Valves - $1,593 million**
   (Potable Water, Linear Potable Water)
6. **Storm Pipes (Diameter <450 mm) - $1,580 million**
   (Stormwater, Conventional System Conveyance)
7. **Water Treatment Facilities - $1,402 million**
   (Potable Water, Non-linear Potable water)
8. **Sewer pipes (diameter <500 mm) - $802 million**
   (Wastewater, Wastewater Linear)
9. **Wires - $625 million**
   (Roads, Sidewalks & Pathways, Street Lights)
10. **Service Connection - $587 million**
    (Wastewater, Wastewater Linear)

Figure ES-2 highlights The City's growing infrastructure value since 2004. **Since 2004, The City has made measurable progress in how it manages assets and in lowering its infrastructure funding gap (i.e. funding shortfall) as a percentage of its current replacement value.** The City's funding gap decreased from more than 20% of the current replacement value in 2004 to less than 10% in 2022. This reflects better planning, ongoing reinvestment, and a better use of resources. An updated funding gap has not yet been confirmed for 2026.

These trends demonstrate progress toward long-term financial sustainability and infrastructure resilience. However, as the number of assets continues to grow **the total amount of the funding gap has gone up,** reinforcing the need to continue risk-based prioritization and long-term financial planning.

Figure ES-2: Historical Funding Gap Performance and Asset Value



Levels of Service (LoS)

Levels of Service (LoS) define the performance standards that describe what services The City intends to deliver and how those services are supported by infrastructure. This includes both Customer Levels of Service or Service Objectives (the services that residents experience) and Asset or Technical Levels of Service (how the assets should perform to provide those services.)

Table ES1 summarizes the current status of Levels of Service across different types of assets, showing where customer-focused service objectives and performance measures are established, and where further development is in progress.

The City is improving service standards through the LoS Program, focusing on consistency, measurability, and alignment with planning and budgeting processes. Ongoing progress across all services will improve The City's ability to link service expectations, asset performance, risk and funding decisions.

The table shows that different City services are at different stages of development. This provides an opportunity to better coordinate how services are delivered, how their performance is measured, and how funding decisions are made across the whole City.

LoS provide the critical link between what residents expect, how assets perform, and how funding and risk decisions are made. **Making Level of Service definitions clearer—especially the ones that focus on what customers need—will help make things more transparent, improve accountability, and support better long-term investment planning.**

Table ES 1: LoS Status Overview

Business Unit	Asset Class	Customer LoS Or Service Objectives	Asset LoS
Calgary Fire Department	Fire & Emergency Response		
Calgary Transit	Transit Infrastructure		
Capital Planning & Business Services	Plus 15		
Chief Housing Office	Affordable Housing		
Facilities	Buildings		
Fleet and Inventory	Vehicles and Equipment		
Information Technology	IT Solutions and Support		
Mobility	Bridges & Tunnels		
	Roads, Sidewalks & Pathways		
	Parking Infrastructure		
Partnerships	Civic Partners		
	Community Partners	NA	NA
Parks & Open Spaces	Parks & Open Spaces		
Recreation and Social Programs	Recreation		
Waste & Recycling Services	Waste & Recycling Infrastructure		
Water Services	Water Infrastructure for Potable Water		
	Water Infrastructure for Stormwater		
	Water Infrastructure for Wastewater		

* Community Partners are responsible for the strategic investment in the Community Partners buildings they operate, including decisions on where and when to reinvest. The City supports this role through the Capital Conservation Grant program under Facilities and provides guidance and investment support, where needed, to help keep assets safe and functional.

Performance measure(s) defined with targets
Performance measure(s) under development

Managing Risk

Understanding and managing risk is central to maintaining Levels of Service across The City while balancing costs and budget constraints. By making decisions based on risk, The City can ensure limited resources go to where they are needed the most and where failure would have the greatest impact. In the past, each asset class used its own way to measure risk and set its own limits for what was acceptable.

While this worked for individual services, this approach made it harder for The City to compare risk consistently across asset classes. For example, a "High" risk in a water treatment facility does not represent the same level of City-wide risk for Fleet and Equipment assets, highlighting the need for a common way to measure risk.

To address this challenge, the 2026 CAMP introduces a unified Consequence of Failure (CoF) matrix, allowing different types of assets to be compared across The City. This is based on five criteria: Cost, Regulatory, Reliability, Climate Risk and Safety Level. These factors help us look at the financial, operational, environmental, and social impacts in the same way for every asset.

Using this matrix and raw data provided by business units, **average risk for each asset class has gone up from 6.8 to 7.9[1] since the last CAMP. This is because the condition of assets has generally gotten worse.** After calibration several asset classes will have a lower City risk than reported asset class risk. This is mostly because some assets have a maximum consequence of failure threshold that is lower than others. The City-wide matrix attempts to address this but is limited in that it relies on data and qualitative assessments which can quickly change. Refer to **Table ES 2** for the risk score comparison with 2022.

1 The numbers refer to the calibrated risk scores, discussed in the preceding paragraphs, with supporting calculation outlined in Appendix A.

Table ES 2 – Risk Score Comparisons from 2022 (Risk calculation outlined in Appendix A)

Asset Class	2022		2026		City Risk	Change since the 2022 CAMP
	Condition (/5)	Asset Class Risk	Condition (/5)	Asset Class Risk		
Affordable Housing	2.4	4.6	1.4	3.9 ↓	2.7	Management of these assets transitioned to an Asset Management Agreement between The City of Calgary and Calgary Housing, effective July 2024. The Chief Housing Office uses Calgary Housing as the AM delivery partner for City-owned units.
Bridges & Tunnels	2.5	8	1.9	8.2 ↑	8.8	Previously Combined under Roads, Bridges and Tunnels.
Buildings	3	8.4	2.8	11.1 ↑	8.7	Since 2022, the facilities portfolio has changed, with the addition of 96 assets (including surface parking lots), such as Calgary Parking parkades, the Patterson Civic Building, IT Radio Site buildings, the Greyhound, the Meridian CPS building, and several water facilities.
Civic Partners	Unknown		1.9	2.9	4.3	Not included in the 2022 CAMP.
Community Partners*	Unknown		2.8	Not provided		Not included in the 2022 CAMP.
Fire & Emergency Response	2.7	11.9	2.7	10.8 ↓	8.1	No Change in Asset Stewardship.
IT Solutions and Support	1.9	5.8	1.7	6.8 ↑	6.7	No Change in Asset Stewardship.
Park & Open Spaces	3	9.2	2.7	9.3 ↑	4.8	Golf infrastructure was transferred to Parks, and pathways and trails were moved to Mobility in 2023.
Parking Infrastructure	Unknown		2.6	7.6	7.3	Not included in the 2022 CAMP.
Plus 15**	2.8	8	2.5	7.1 ↓	6.5	Previously included in Roads, Bridges and Tunnels.
Potable Water	1.5	5.1	1.8	4.7 ↓	5.2	No Change in Asset Stewardship.
Recreation	3	9.2	3.1	11.5 ↑	6.4	Previously Golf & Athletic Park Recreation Opportunities.
Roads, Sidewalks & Pathways	2.5	8	2.8	9.4 ↑	7.0	Previously elements of Parks, Pathways, Trails and Parks Infrastructure and Roads, Bridges and Tunnels. The current version includes all sidewalks and pathways.
Stormwater	1.5	3.7	2.4	7.7 ↑	5.8	No Change in Asset Stewardship.
Transit Infrastructure	2	6.1	2.2	6.8 ↑	6.9	Previously Transit Infrastructure & Fleet.
Vehicles & Equipment	Unknown		3.1	10.7	6.8	Not included in the 2022 CAMP.
Wastewater	1.9	4.6	1.9	4.6 ↓	5.1	No Change in Asset Stewardship.
Waste & Recycling Services	1.5	3	2.3	5.4 ↑	4.9	No Change in Asset Stewardship.

* Figures are presented as averages derived from business unit (BU) submissions.
** The City is currently responsible for the operations and maintenance of approximately 17% of Plus 15s, with 14% under City responsibility and 3% under civic partners. These percentages may change depending on downtown development.

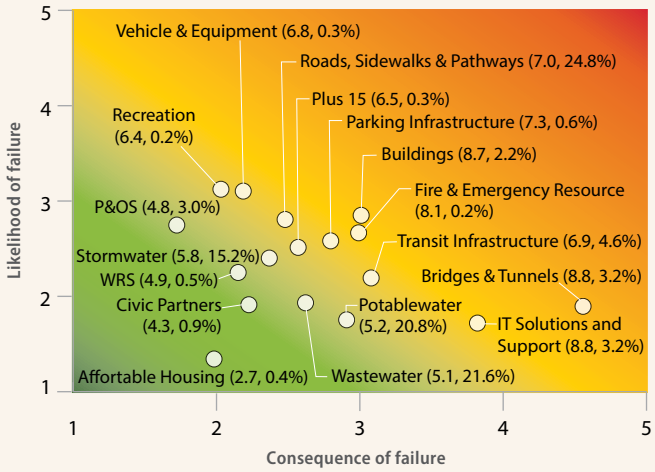
In **Figure ES-3**, each asset class is shown with its calibrated risk score and the percentage of The City's total current replacement value it represents. Risk scores represent replacement value-weighted averages at the asset class level, combining likelihood and consequence of failure. Average risk scores should be looked at alongside asset-specific risk profiles, as asset classes with large replacement values may contain high-consequence assets that are not fully reflected in an average score.

For example, within Potable Water, some assets have very high CoF. However, because the asset class has a large total replacement value, these risks may not be clear when averaged at the class level. As a result, we must separately look at asset sub-classes with very high risk or consequence to get a true sense of the risks and to make better decisions about what to fix or upgrade first.

While the CAMP introduces a consistent City-wide risk calibration approach, an explicit, organization-wide risk tolerance has not yet been formally defined. Setting a City-wide risk tolerance would make future decision making more consistent.

In summary, the 2026 CAMP establishes a consistent, City-wide approach to understanding and comparing asset risk. While average risk scores provide a useful high-level view, informed decision-making requires attention to high-consequence assets within major asset classes, especially if there aren't backup systems or if the consequences would be severe.

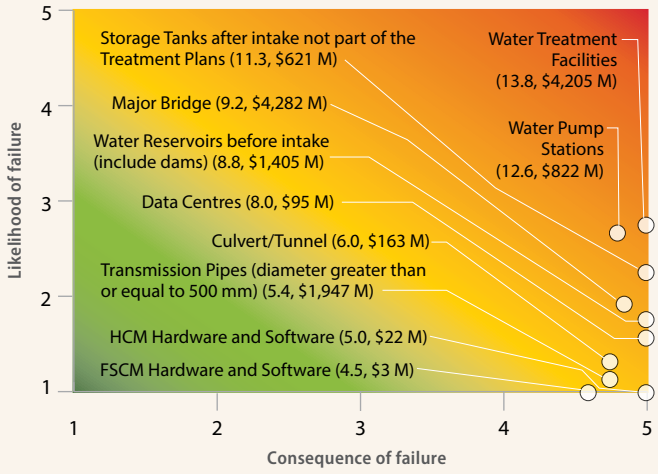
Figure ES 3: Comparable City Risk across asset classes



*Community Partners are not included in the above figure.

The top 10 most critical assets using the City-wide risk scale are shown in **Figure ES-4.** This figure shows that some of the highest CoF asset classes within the Water and Mobility BUs have significant impacts in the event of failure but due to the size of these business units, the average risk can be understated. **This does not consider backup systems (redundancy) and including this would improve risk understanding by fully appreciating the impact of failure, especially noting single points of failure.**

Figure ES-4: Highest CoF Assets across The City



"In summary, the 2026 CAMP establishes a consistent, City-wide approach to understanding and comparing asset risk."

Critical Assets in Poor & Very Poor Condition

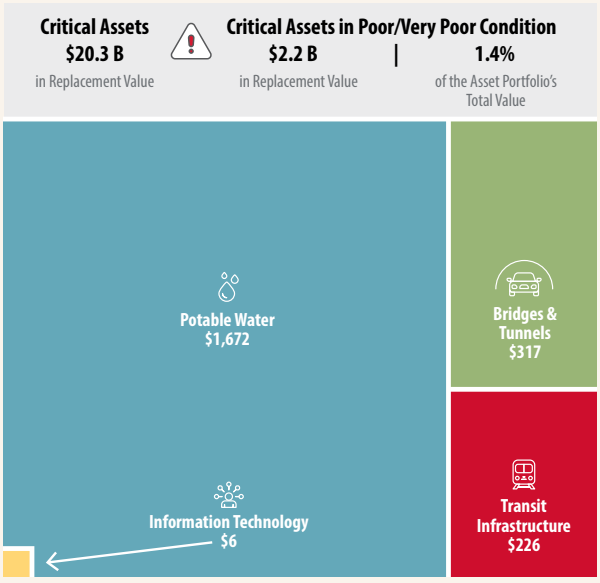
For the purposes of this CAMP, Critical Assets are defined as those having a calibrated Consequence of Failure (CoF) higher than 4 on the City-wide scale. Assets that meet this threshold are those whose failure would result in major to severe service disruption, safety impacts, regulatory consequences, or environmental harm, as outlined below:

- An asset replacement cost based on the CRV of greater than $5 million.
- Failure of any asset that leads to no service or a City-wide impact that needs a public response (e.g. water restrictions). For assets with no backup, the failure is often critical. The impact of a failure results in major City-wide disruption with a response recovery more than one year or ongoing impact to the organization.
- Multiple staff fatalities or serious injuries, any public fatalities or severe injuries, or failure that presents an immediate danger to life or health.
- Prosecution from failing to meet a mandatory obligation. Asset shutdown while waiting for regulatory or third-party review, and a legal vulnerability with significant adverse outcome to The City.
- Irreversible environmental damage, damage to a protected site of high ecological value, or very high emissions leading to localized or regional pollution on a frequent basis.

Figure ES-5 illustrates the value of critical assets across The City based on The City-wide CoF scores. Approximately $20.3 billion worth of critical assets (13.1% of total CRV) of which $2.2 billion are currently in Poor or Very Poor condition.

The values shown in **Figure ES-5** reflect the CRVs. They do not represent the costs required to repair, rehabilitate, or improve assets to a fair or better condition.

Figure ES 5: CoF at a City Level - Critical Assets CRV and Breakdown Per Class of Assets in Poor and Very Poor Condition



*Note: Cost in Millions.

Top 10 asset classes in Poor and Very Poor condition:

1. **Water Treatment Facilities** (Water Infrastructure for Potable Water, Non-linear Potable water)
2. **Major Bridge** (Bridges & Tunnels, Bridges)
3. **Water Pump Stations** (Water Infrastructure for Potable Water, Non-linear Potable water)
4. **Ballast Track** (Transit Infrastructure, Track and Way)
5. **Buildings** (Transit Infrastructure, Buildings)
6. **Transmission Pipes** (diameter greater than or equal to 500 mm) (Water Infrastructure for Potable Water, Linear Potable water)
7. **Storage tanks after intake not part of a treatment plant** (Water Infrastructure for Potable Water, Non-linear Potable water)
8. **In-Street Track** (Transit Infrastructure, Track and Way)
9. **Crossings** (Transit Infrastructure, Track and Way)
10. **Storage Hardware/Software** (IT Solutions and Support, Storage Hardware/Software)

By looking at both how important each asset is and what risks they carry, The City can figure out which ones matter most. This analysis groups assets into Severe Consequence and High Consequence categories based on the scale and immediacy of potential impact.

Severe CoF assets are those whose failure could result in city-wide or significant community impacts, including loss of essential services, serious safety risks, environmental harm, or long-term disruption. **Table ES-3** summarizes Severe CoF assets along with current nonfinancial risk mitigation measures in place or under development.

Table ES 3: Severe Consequence of Failure Assets

Asset Class	Comments and Risk Mitigation	Current Risk Mitigation (Non-Financial)
Potable Water (Water Treatment Plants)	"Single point of failure" assets within the plants without recent condition data.	Emergency Response Plan being developed with various asset assessments planned for 2026-2027, and asset replacement as possible.
Potable Water (Water Transmission Mains)	Bearspaw South Feeder Main Approximately 120 km of other transmission mains without redundancy and recent condition data (approximately 25% of transmission main network).	Condition assessment and redundancy upgrades by end of 2029. Emergency response plans in development.
Wastewater (Wastewater River Crossings)	9 large crossings with unknown condition.	Implementation of additional redundancies to allow for condition inspection of existing pipes by end of 2030. Emergency response and bypass plans in development for most severe consequence assets.
Wastewater (Reclaimed Wastewater service to ENMAX Shepard Energy Centre)	There was an asset failure in summer 2024 due to corroded metal fittings.	Emergency response plan in place to mitigate future asset failure. The City is working with ENMAX to coordinate condition assessment with Shepard Energy Centre plant outage.
Stormwater (Dams)	Discovery Ridge Dam assessed with lower than required safety factor in 2024.	Emergency response plan in place for the Discovery Ridge Pond dam. Water level reduced, dam to be removed. Other dams are to be reviewed. Regulated dams are managed in accordance with the Alberta Dam and Canal Safety Directive (2018), including regular reporting and emergency preparedness.
	Glenmore Dam and SE Dyke are both Extreme consequence classification facilities.	These assets are integral to the Glenmore WWTP and raw water and as per Discovery Ridge are managed in accordance with the Alberta Dam and Canal Safety Directive.

The City applies a three-pillar framework to decide which assets should be prioritized. This reflects the organization's current risk tolerance and can be applied directly to the outputs of risk analyses.

The first pillar addresses the most severe impacts, where asset failure would result in city-wide or significant community impacts due to an inability to deliver essential services. **(Table ES3)**.

The second pillar looks at how important each asset is to the overall service. It uses the impact measure chosen for each asset group, so assets can be ranked based on how much they matter and how they affect service delivery.

The third pillar considers assets in poor or very poor condition that are expected to affect service delivery over time, recognizing that while these assets present elevated risk, their consequences are generally lower in scale or immediacy than those identified under the first two pillars.

The City's highest infrastructure risks are concentrated in a relatively small number of critical assets that underpin essential services. While average risk scores provide useful context, **effective prioritization depends on identifying and managing severe-consequence assets—particularly those in poor condition or with limited redundancy.**

Asset Management Maturity and EY Infrastructure Review

The City continues to advance its asset management practices. An assessment carried out in 2023 using the IPWEA NAMS+ framework shows an average maturity score of 45, meeting the minimum standard and The City's target "Core" level overall (41–60%).

The assessment indicates stronger performance in Capital Works Planning, Demand Forecasting, Operational Planning, and Asset Data & Information. **Areas requiring focused improvement include the Strategic Asset Management Plan (SAMP), Risk & Resilience, Asset Management Process Management, and Continual Improvement.**

Findings from the internal maturity assessment **(Figure ES-6)** align with the independent EY Infrastructure Review[1]. This rated The City 3.4/5 for documentation and 2.6/5 for implementation, placing The City between Competent and Optimizing – consistent with a "Core" maturity level.

EY reported similar improvement priorities, including clearer governance and roles, standardized customer and technical LoS, a consistent City-wide criticality/risk framework, integrated data and reporting (including Finance) and stronger continuous improvement.

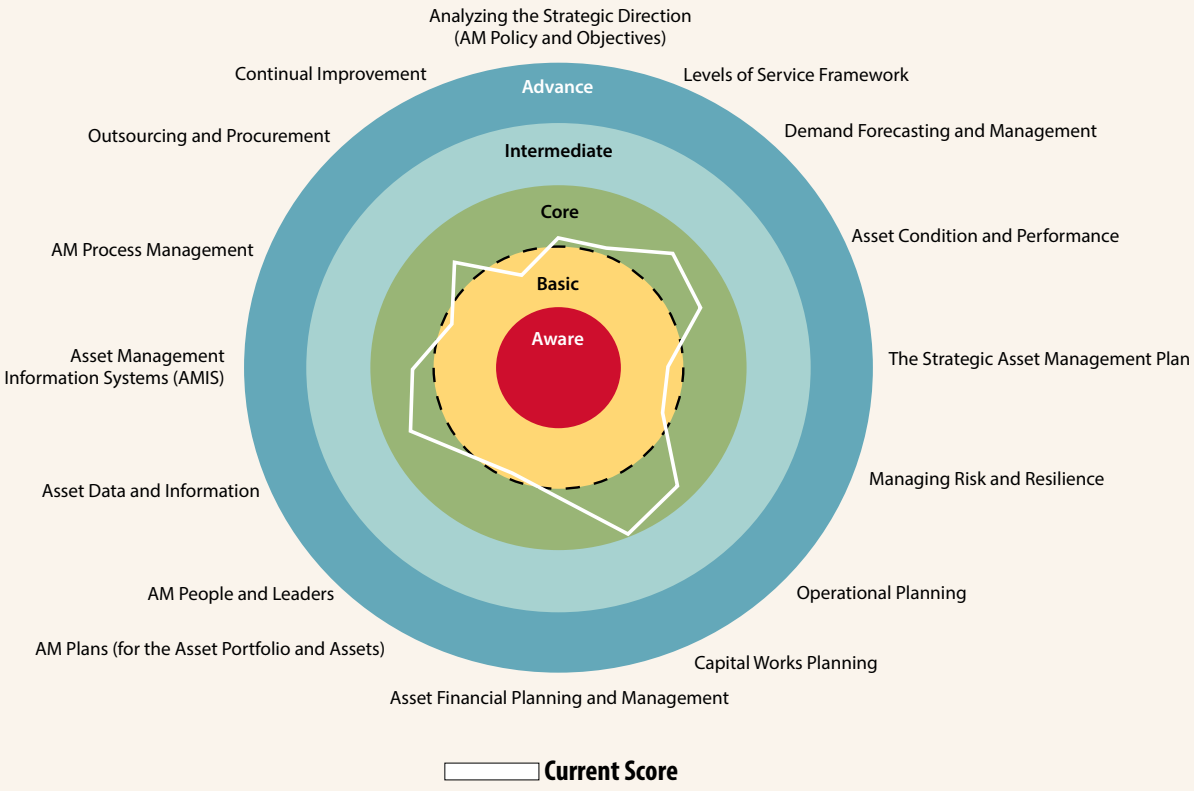
Together, the internal assessment and EY review confirm that The City has a solid foundation and a shared understanding of the actions needed to better connect corporate direction with service delivery.

Of the ten key recommendations provided by EY, along with actions emerging from individual maturity assessments, the 2026 CAMP lays the foundation for addressing several priority areas:

- **Establish a Consistent Criticality Criteria Framework:** This CAMP combines individual asset class approaches to create a consistent City-wide criticality framework, which provides the foundation for priorities to be comparable and defendable.
- **Implement Criticality Analysis for Budget Allocation:** A consistent definition of critical assets supports prioritizing capital investments. In parallel, several service areas apply Multi-Criteria Prioritization (MCP) approaches aligned with Corporate and Council priorities.
- **Build upon Customer Levels of Service:** Service objectives are increasingly aligned with the Capital Infrastructure Needs Assessment (CINA), supporting clearer links between service expectations and investment decisions.
- **Enhance Integrated Reporting:** Lessons learned from data consolidation in this CAMP highlight opportunities to improve data completeness, integration, and reporting in future reports.

The City has achieved its targeted "Core" level of asset management maturity, supported by both internal assessment and independent review. **Continued progress now depends on strengthening consistency in risk, service definition, and governance** to ensure asset management practices fully support City-wide decision-making.

Figure ES 6: City AM Maturity Radar (Current Score)



1 City of Calgary Infrastructure Review (2025) EY

Future Requirement

The CAMP looks forward to supporting Calgary's future infrastructure needs and align asset management with corporate priorities. It demonstrates how long-term strategic direction is translated into practical actions across service lines, linking corporate planning to day-to-day asset decisions. Corporate strategies guide how assets are planned, operated, renewed,
and replaced to maintain reliable services and meet community expectations.

At the same time, Calgary's asset base continues to grow, placing pressure on available funding. The City is facing an increased need for infrastructure investment alongside rising operating costs and constraints such as limited revenue tools, demographic change, and growing demand for services.

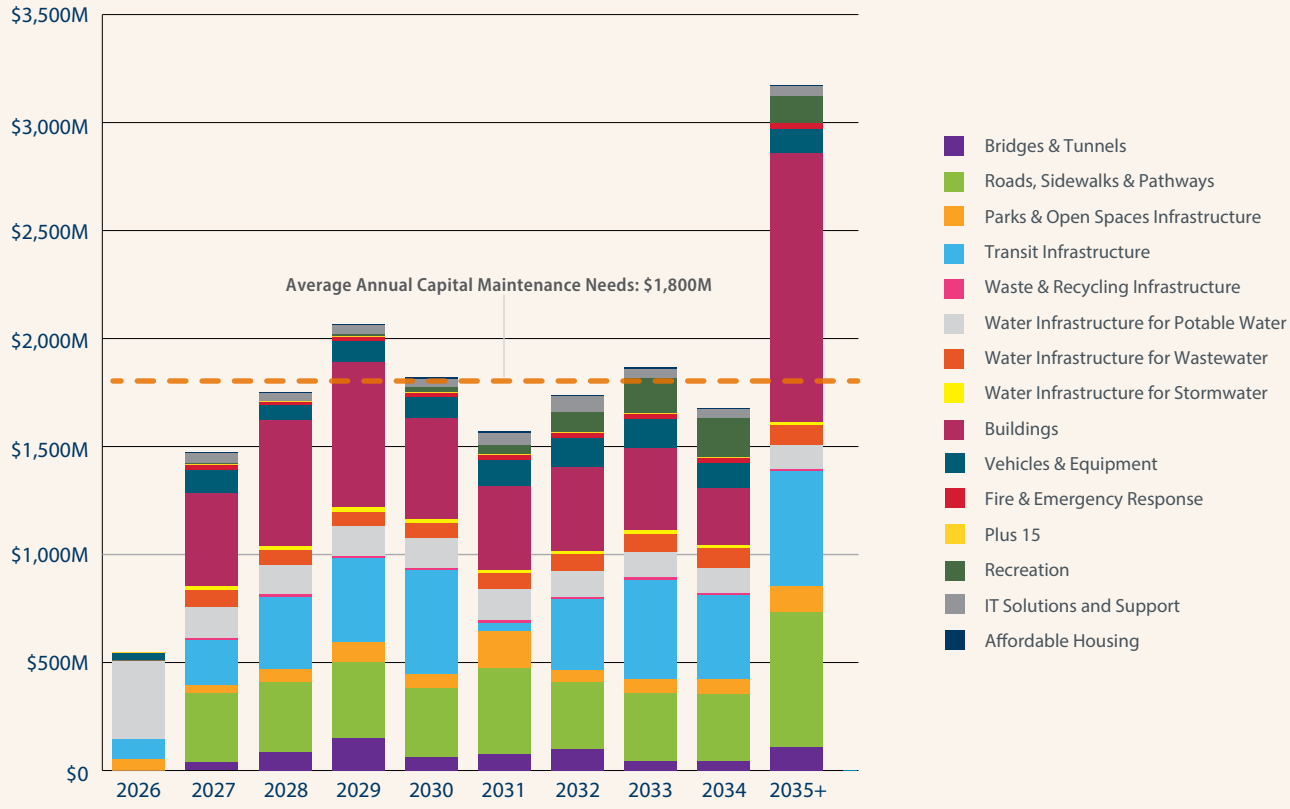
In response, The City is strengthening lifecycle planning, improving project prioritization, and expanding its revenue sources. This includes greater use of external funding and partnerships to support sustainable infrastructure investment and ongoing service delivery.

Funding Requirement

The 10-year capital plan **(Figure ES-7),** developed using **The City's Capital Infrastructure Needs Assessment, identifies an average annual maintenance capital investment need of $1.8 billion.** This represents a 1.2% annual reinvestment rate on The City's total CRV of $155.4 billion.

This figure reflects maintenance and renewal needs only. Capital investment, including Growth, Service Enhancement, and Transformative are discussed in Appendix B for each asset class.

***Figure ES-7: City of Calgary Proposed Maintenance Capital Investments**



*Note - Financial Planning:
- 2026 CAMP financial figures were based on the Dec 2025/Jan 2026 Capital Infrastructure Needs Assessments.
- Capital Infrastructure Needs Assessments are evolving and continue to be updated through the development of the 2027–2030 Budget and the 10-Year Capital Infrastructure Plan.

Strategies for Addressing the Infrastructure Needs

The City has several methods to address the infrastructure funding gap. These approaches focus on maintaining reliable service, prioritizing investments based on risk and asset condition, and improving how capital and operating funds are allocated over time. These actions are guided by four key philosophies: maintaining assets in a State of Good Repair; reducing risk by prioritizing assets with the greatest potential service, safety, or environmental impacts; supporting growth in a balanced and affordable manner; and ensuring sufficient operating budgets to sustain asset performance through preventive maintenance, inspections and workforce capacity.

The City's approach to closing the infrastructure funding gap includes both financial and non-financial strategies **(Figure ES-8).** Financial strategies focus on increasing and better aligning funding through revenues, grants, financing tools, and developer contributions. Non-financial strategies aim to maximize asset value through better planning and prioritization, policy and regulatory tools, optimizing operations and engineering solutions, and organizational effectiveness.

Together, these strategies support The City in sustaining current service levels where possible and making informed, transparent decisions where adjustments are necessary.

Figure ES-8: Strategies to address the Infrastructure Needs

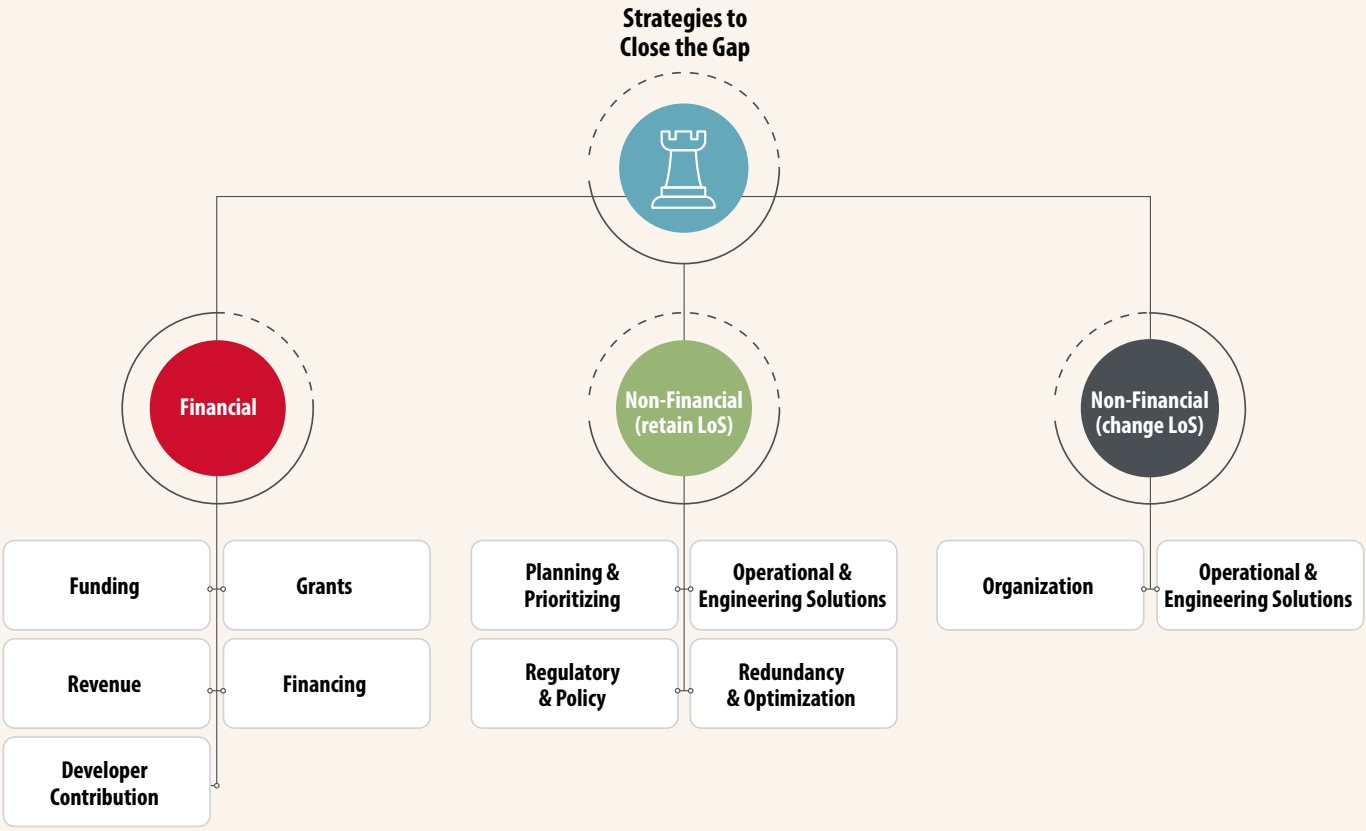


Table ES-4 presents the key methods and initiatives to address the funding gap across The City's service lines.

Table ES 4: Methods and Initiatives

Strategy	Description	
City-Wide Strategy	• Better value of City assets (BVCA) • Energy Performance Contract • Reserve Strategy – Optimize Funding • Condition based maintenance (CBM) – Linear	• Condition based maintenance (CBM) – Electrical / Rotating • Prioritize arterials strategy, Developer paid maintenance.
Financial Strategies	• Funding – Investment income, Donations and partnerships • Reserves. Revenue – Taxation Increase (Capital Reserves) • Levy (No Specific Levy), Metering/Rates (Charges for Use) • Fines/Penalties, User Fees (Covers All)	• Grants – Grant Focused Team • Financing – Infrastructure Bonds • Developer Contribution Charge (DCC) – Offsite capital taxation for growth related infrastructure (Community Revitalization Levy, Local improvement levy) • Special Tax
Non-Financial Strategy (retain LoS)	• Planning and Prioritization – Master Planning • Regulatory and Policy – Reducing design margins, for example by revising water consumption assumptions and maximum day demand criteria. • Rehabilitation optimization • Redundancy and Optimization – Asset rationalization – reduce redundancy across the city through consolidation and partnerships.	• Conservation (L/capita/day) / water loss reduction • Optimized capital investment (synergies) / build back better. • LoS definition – focus on service delivery. • Contracting – alternative finance/operate models. • Operational & Engineering Solutions – Condition based maintenance
Non-Financial Strategy (Change LoS)	• Operational & Engineering Solutions – reduce, condition targets / extend asset life prior to renewal – risk-based approach. • Alternative materials – meets the same function. • Optimize the condition assessment strategy (not on a run-to-failure basis).	• Run to failure for selected asset classes. • Optimize design (materials and maintainability) • Develop and maintain design guidelines for asset classes. • Conduct testing to increase the longevity of developer-built assets

Calgary's infrastructure funding challenge is driven by a growing asset base and rising service expectations. While current investment levels support maintenance and renewal, **long term sustainability depends on disciplined risk-based prioritization, balanced growth, and refining financial and non-financial strategies.**

Key Recommendations

This section summarizes the key recommendations emerging from the 2026 CAMP. These actions focus on strengthening risk management, improving data quality and service definition, while enhancing alignment between planning and budgeting, and advancing asset management maturity across the organization.

- **Asset Management Plans:** Require Asset Management Plans, or equivalent analysis, to support capital budget requests. At a minimum, all critical assets should be supported by up-to-date plans.
- **State of Infrastructure – Condition Data:** Improve clarity and transparency around assets with unknown condition by distinguishing between acceptable unknowns (intentional lifecycle strategies) and unacceptable unknowns (resulting from missing, outdated, or developing data).
- **Levels of Service:** Align Customer Levels of Service to a common City-wide framework to support consistent reporting, comparison, and informed decision making. Develop clear terms of reference for the LoS framework to guide discussion, accountability, and performance management.
- **Risk and Criticality – Governance:** Advance a single, City-wide risk framework with defined tolerances. A common risk matrix will reduce current limitations and enable more consistent risk assessment, comparison, and mitigation across services.
- **Risk and Criticality – Single Points of Failure:** Explicitly identify and manage single points of failure across City services, recognizing their disproportionate impact on service reliability and risk exposure.
- **Risk and Criticality – Risk Framework Application:** Formalize the use of the three guiding pillars for risk assessment within future strategic plans and the consolidated City-wide risk framework to support consistent decision-making.
- **Risk and Criticality – Likelihood of Failure:** Address condition assessment limitations by refining approaches and adding in additional indicators where appropriate to improve how asset condition informs risk.
- **Risk and Criticality – Critical Assets:** Ensure Severe and Critical assets have clearly defined condition assessment strategies within their asset management plans, supported by regular monitoring and compliance checks.
- **Risk and Criticality – Failure Modes:** Clearly define the failure modes in the risk framework and establish guidance to maintain consistency across asset classes.
- **Funding - Gap Strategy:** Embed the four guiding philosophies—State of Good Repair, risk-based prioritization, balanced growth, and lifecycle-based budget optimization—into future planning, budgeting, and decision-making processes.
- **Funding - Planning Alignment:** Align future CAMP and Capital Infrastructure Needs Assessment updates to avoid duplication and improve consistency of data and messaging.
- **Funding - Transparency:** Ensure asset management plans clearly identify full funding requirements to improve monitoring and reporting of the infrastructure funding gap.
- **Asset Management Maturity:** Complete asset management maturity assessments across all business units and consolidate results into future plans.

The 2026 CAMP recommendations focus on improving consistency, transparency, and risk-based decision making across The City. Progress in these areas will strengthen governance, improve investment prioritization, and support long-term service reliability.

1

"This updated plan is meant to be more than a technical report. It is a decision-support tool that helps Council, senior leadership, and Calgarians understand how today's infrastructure decisions shape The City's future."

1 Introduction

Calgary is one of Canada's fastest-growing cities and a recognized leader in energy, innovation, and community resilience. With a rich history spanning 150 years, Calgary has transformed from a small settlement at the confluence of the Bow and Elbow Rivers into a vibrant, forward-thinking municipality. The City's identity is a blend of tradition and progress. The City is defined by its diverse population of 1.78 million residents, thriving businesses, tourism and cultural scene. As Calgary moves toward a population of two million in the coming years, its future depends on the health of its infrastructure. From roads and transit to community facilities, emergency services, water utilities and waste & recycling services, Calgary's infrastructure is essential to delivering the services residents count on every day.

The Corporate Asset Management Plan (CAMP) is The City of Calgary's long-term strategic framework for managing its many types of infrastructure. It brings together information from all asset-owning business units to give a city-wide picture of what assets we have, what condition they are in, what services they support and what investments are needed to keep those services reliable.

The CAMP connects service, risk, and lifecycle decisions with The City's priorities and with internationally recognized asset management (AM) principles. This helps guide decisions about how to maintain, renew and invest in infrastructure so that Calgarians receive stable and sustainable services.

Calgary owns more than $155.4 billion worth of assets, including roads, bridges, transit, water and wastewater systems, parks, affordable housing, buildings, and digital systems. These assets are managed by many different business unit (BUs) across the organization. The CAMP brings their data and insights together in one place. This makes it easier to spot trends in asset condition, identify risks and understand funding needs across The City.

The 2026 CAMP builds on earlier plans from 2017 and 2022. It reflects better asset data, changing city priorities, and lessons learned from previous business cycles. It places more focus on connecting asset condition, service levels and financial planning, and it presents investment needs in a clearer city-wide way.

1.1 What are the Purposes and Goals for the CAMP Development

The CAMP plays several important roles in how Calgary plans and manages infrastructure. In August 2025, City staff and partners held a workshop to confirm and refine these purposes. The discussion focused on making the CAMP a stronger planning and communication tool for both internal and external audiences. The goals determined are shown in **Figure 1-1** and expanded below.

The primary purpose of the CAMP is to give a clear city-wide view of assets & needs and to support practical, risk-based investment decisions. To achieve this, the CAMP is guided by the following primary and supporting objectives. The CAMP informs City-wide prioritization and investment discussions but does not replace asset-class Asset Management Plans (AMPs) or Council approval processes.

Figure 1.1: The CAMP Purpose & Objectives

1 **Give a clear city-wide view of assets and needs -** The CAMP should answer basic but important questions for decision-makers such as:

- What assets does The City own?
- What condition are they in, and how do they compare to service targets?
- Where are the biggest risks and gaps?
- How much reinvestment is needed in the near and longer term?

By showing this information for The City as a whole, instead of by department, the CAMP gives a clearer picture of funding pressures and priorities.

2 **Support practical, risk-based decisions -** The CAMP needs to combine data on condition, risk, and service levels to help The City decide where to invest. It should help decision-makers weigh trade-offs between service expectations, financial limits, and different levels of risk. It should also help The City plan ahead for issues like growth, climate impacts, and regulatory changes, instead of reacting after problems occur.

3 **Align with strategic priorities -** The CAMP should link asset decisions to Council priorities and long-range planning, connecting day-to-day AM with four-year service plans, ten-year investment strategies, and broader community goals. This alignment helps different parts of the organization work toward the same objectives.

4 **Build stronger and more consistent practices -** The CAMP should also be a way to improve how asset data is collected and used. It should encourage common approaches to measuring condition, defining service levels, and assessing risk. This leads to more consistent reporting and better coordination across business units.

5 **Communicate clearly with stakeholders -** The CAMP is primarily a communication tool. It explains service levels, funding needs, and risks in a clear way for Council, the public, and other partners. A shared understanding of the challenges makes it easier to have informed conversations about priorities, trade-offs, and long-term planning.

1.2 Strategic Alignment

The CAMP does not stand alone, it supports and is shaped by The City's strategic direction, plans, policies, and governance structures. This section describes how the CAMP links to key Calgary strategies and policy frameworks, and how it helps translate high-level goals into infrastructure action.

One of the focus areas of Council Priorities 2027-2030 is Reliable and Sustainable Infrastructure with some outcomes being:

- All City assets, facilities and parks will be well-maintained and reliable.
- Calgarians can count on reliable water services through well-maintained infrastructure.

Relationship with Calgary's city planning and growth policy.

- The Calgary Plan (to be advanced through 2025–2026) is intended to be Calgary's foremost, long-term planning document, integrating land use and transportation policy and guiding growth decisions over 30 years.
- The City's corporate strategies (Housing, Transit, Public Safety, Infrastructure, Downtown, Climate, and Prairie Economic Gateway) all have an impact on asset-based decisions. The goals and objectives or each strategy guide long-term decision-making to support delivery of The Calgary Plan.
- Because infrastructure systems (roads, water, drainage, transit, etc.) tie directly into how and where The City grows, the CAMP must reflect, and help enable, those growth patterns. In other words, the infrastructure forecasts and investment priorities in the CAMP should align with how The City plans to grow and change.
- Earlier planning frameworks such as the Municipal Development Plan (MDP) and Calgary Transportation Plan (CTP) are already embedded in Calgary's strategic direction. The CAMP must work in concert with these documents to make sure infrastructure investments do not contradict land use or mobility goals.

Anchoring in The City's AM policy and practices

- The City has a formal Asset Management (AM) Policy (updated 2024), which lays out how Calgary will develop, operate, monitor, and improve its AM systems. The CAMP is a core document under that policy framework.
- Within The City, the Asset Management Planning (AMP) Group supports business units in applying consistent AM practices, reinforcing cross-business unit (BU) alignment and standardization.

The CAMP does not stand alone, it supports and is shaped by The City's strategic direction, plans, policies, and governance structures.

1.2.1 How the CAMP Supports Corporate Goals

In practice the CAMP guides and supports three methods of supporting the summarized corporate goals.

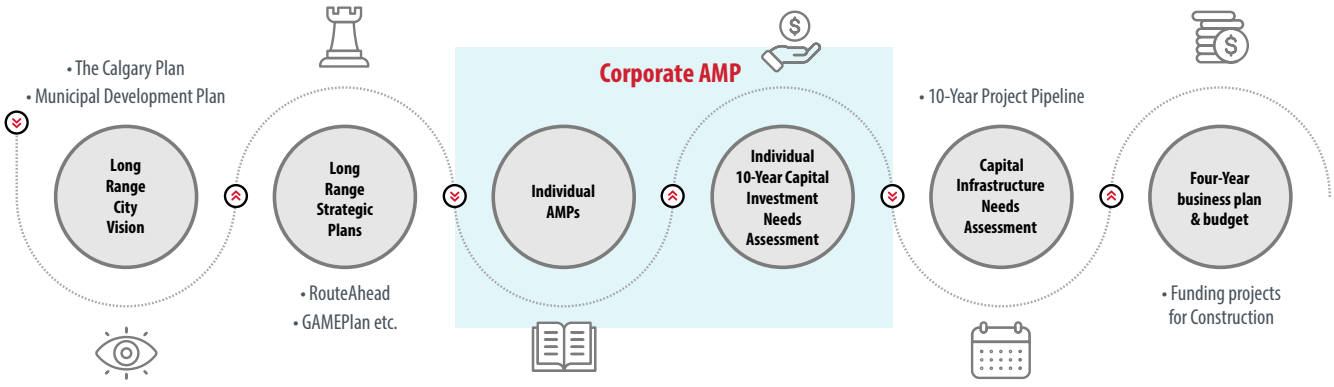
1. **Balancing service, risk, and cost:** Because the CAMP gives insight into condition, risk, and reinvestment needs, it helps The City make choices that reflect both strategic ambition and fiscal realism.
2. **Organizational integration:** By consolidating business-unit data and perspectives, the CAMP promotes coherence in decision-making and helps avoid silos.
3. **Transparency and accountability:** By showing how infrastructure needs map to strategic goals, the CAMP supports clearer reporting and oversight.

1.3 Strategic Initiatives

Figure 1-2 illustrates how The City's strategic initiatives and long-range vision cascade into practical investment planning. The 2026 CAMP serves as the integrator between individual BU plans (their own AMPs) and city-wide priorities and resource allocation, ensuring alignment with the long-range strategic and capital investment framework. The impact of the long-range strategic plans is discussed in **Section 4**.

Individual business unit AMPs provide the detailed, asset-level insights needed to inform the CAMP where documented. Together, this structure creates a transparent link between strategy, AM, and budgeting to help prioritize investments that best support The City's long-term goals and ultimately create the tactical four-year business plan and budget.

Figure 1-2: Strategic Initiative and Plan Line of Sight



1.4 Policy and Governance

Administration Policy

Policy Title:	Asset Management
Adopted by:	Executive Leadership Team (ELT)
Effective Date:	December 6, 2012
Last Updated:	September 4, 2024
Responsible Service(s):	Infrastructure & Engineering

Figure 1-3: AM Policy

The 2026 CAMP aligns closely with The City's AM Policy (updated in 2024 - **Figure 1-3**) by fulfilling its strategic, governance, and operational objectives across all relevant asset classes. It supports The City's AM vision by enabling cost-effective, risk-informed service delivery and aligning infrastructure decisions with Council priorities.

By consolidating data across asset classes, the CAMP provides a city-wide view of asset condition, risk, and service levels. It uses standardized frameworks for risk and service level reporting, enabling cross-unit comparisons and informed prioritization. The plan also supports the Plan-Do-Check-Act cycle through strategic planning, implementation, performance monitoring, and continuous improvement.

Governance is reinforced through centralized oversight, with the Corporate AMP Group and Executive Leadership Team (ELT) accountable for policy implementation and system effectiveness. The CAMP helps mitigate risks outlined in the policy, such as misaligned capital plans, infrastructure gaps, and inconsistent service delivery.

In summary, the CAMP operationalizes The City's AM Policy by embedding its principles into a unified, strategic framework that guides infrastructure planning, investment, and service delivery across the organization.

"It supports The City's AM vision by enabling cost-effective, risk-informed service delivery and aligning infrastructure decisions with Council priorities."

1.5 2026 CAMP Updates

The 2026 CAMP represents an advancement in Calgary's AM maturity, transitioning from a descriptive inventory to a strategic, risk-informed planning tool. The key differences are summarized as follows:

Narrative and Strategic Shift - The 2026 CAMP marks a significant evolution in purpose. It adopts a strategic, decision-oriented style, aligning closely with ISO 55000 principles and The City's broader planning frameworks, such as The Calgary Plan. The document is designed not just to report on assets, but to guide executive-level decision-making, support lifecycle-based investment strategies, and communicate risk and service trade-offs in a more integrated and comparative way.

Structure and Organization - The 2026 CAMP builds upon previous versions by reporting by asset class and including more assets within scope. It focuses on corporate-level strategy, risk, and maturity, as well as dives into asset-class-specific summaries.

Risk and Service Level Reporting – The 2026 CAMP introduces a calibrated City-wide risk framework, enabling consistent comparisons across asset classes. The plan highlights the service objectives of each asset class allowing "willingness to pay" discussions to take place.

Tone and Language - The 2026 CAMP adopts a more human-centered and strategic tone, using accessible language to explain complex concepts like lifecycle planning, risk calibration, and AM maturity. It is written with a broader audience in mind, including Council, executive leadership, and external partners, and it emphasizes transparency, accountability, and alignment with community values.

The 2026 CAMP introduces comparative visuals that allow readers to see trends over time, differences between asset classes, and risk profiles across asset groups. These visuals are used not just to present data, but to support strategic insights and decision-making.

1.6 CAMP In-Scope Business Units and Assets

The in-scope business units and asset classes, with the changes compared with the 2022 CAMP are summarized in **Table 1-1**.

Table 1-1: In-Scope Asset Classes

Asset Class	Comment	Responsible BU
Affordable Housing	Management of these assets transitioned to an Asset Management Agreement between The City of Calgary and Calgary Housing, effective July 2024. The Chief Housing Office uses Calgary Housing as the AM delivery partner for City-owned units.	Chief Housing Office
Bridges & Tunnels	Previously Combined under Roads, Bridges and Tunnels.	Mobility
Buildings	Since 2022, the Buildings asset portfolio within the Facilities BU has changed, with the addition of 96 assets (including surface parking lots), such as Calgary Parking parkades, the Patterson Civic Building, IT Radio Site buildings, the Greyhound, the Meridian CPS Building, and several water facilities.	Facilities
Civic Partners	Not included in the 2022 CAMP.	Partnerships
Community Partners	Previously not included.	Partnerships
Fire & Emergency Response	No Change in Asset Stewardship.	Calgary Fire Department
IT Solutions and Support	No Change in Asset Stewardship.	Information Technology
Park & Open Spaces	Golf infrastructure was transferred to Parks, and pathways and trails were moved to Mobility in 2023.	Park & Open Spaces
Parking Infrastructure	Previously not included.	Mobility
Plus 15	Previously included in Roads, Bridges and Tunnels.	Capital Planning & Business Services
Potable Water	No Change in Asset Stewardship.	Water Services
Recreation	Previously Golf & Athletic Park Recreation Opportunities	Recreation & Social Programs
Roads, Sidewalks & Pathways	Previously elements of Parks, Pathways, Trails and Parks Infrastructure and Roads, Bridges and Tunnels.	Mobility
Stormwater	No Change in Asset Stewardship.	Water Services
Transit Infrastructure	Previously Transit Infrastructure and Fleet.	Calgary Transit
Vehicles & Equipment	Previously not included.	Fleet and Inventory
Wastewater	No Change in Asset Stewardship.	Water Services
Waste & Recycling Services	No Change in Asset Stewardship.	Waste & Recycling Services

1.7 2026 Corporate Asset Management Plan (CAMP) Development

The CAMP is The City of Calgary's long-term strategic framework for managing its infrastructure portfolio, which is currently valued at $155.4 billion. As outlined in **Section 1**, the CAMP brings together information from all asset owning business units to provide a corporate level view of asset inventory, condition, risk, and investment needs. Its primary purpose is to support effective and sustainable municipal service delivery by aligning service levels, financial planning, and risk management with corporate priorities and recognized standards such as ISO 55000 and the International Infrastructure Management Manual. The plan identifies required investments, prioritizes funding based on risk and criticality, and supports decision-making to manage lifecycle costs and maintain service continuity for Calgarians. This section describes the content and methodology used to prepare this version of the CAMP.

Building on the 2022 CAMP as the corporate baseline and guided by The City's Asset Management Policy, the 2026 CAMP shifts from primarily descriptive reporting toward a more decision focused and risk and service-based planning approach. The plan presents a consistent city-wide financial picture by aggregating needs and identifying the overall corporate funding shortfall rather than separate gaps by business unit. This strengthens the CAMP's role in supporting executive level discussions on priorities and trade offs. The 2026 CAMP also expands risk-based analysis to identify critical assets and priority investment needs and more clearly describes lifecycle-based investment approaches that support long-term service delivery. To improve clarity and transparency, the plan compares previous financial forecasts to actual results, discloses data completeness and confidence levels, and applies consistent analytical scenarios across business units, including where modelling maturity differs.

The 2026 CAMP represents a meaningful shift in how The City approaches AM. Building on the foundation established in 2022, the plan moves beyond a primarily descriptive inventory of assets to a more strategic, risk-informed planning tool. This evolution reflects a greater focus on using AM information to support decision-making, investment prioritization, and long-term service sustainability.

The 2026 CAMP is organized to strengthen accountability and strategic alignment while making the current state of City assets clear. The 2026 CAMP is focused on asset classes to build upon the 2022 version and allow close comparison. It should be noted that due to asset reassignments within City departments, direct comparison is limited. This approach allows clear demonstration of asset ownership, improved cross-organizational comparisons, and stronger alignment between tactical AM activities and City-wide priorities.

The 2026 CAMP also introduces more consistent and mature approaches to risk and Level of Service (LoS) reporting. A calibrated city-wide risk framework allows for more meaningful comparisons across business units, while LoS reporting has advanced significantly, with approved service levels in Water Services and continued progress across other areas. The tone and presentation shift from a predominantly technical focus to a more accessible, strategic narrative, using comparative visuals and plain language to communicate risks, trade-offs, and investment choices to Council, executive leadership, and external stakeholders.

1.8 The Asset Management Landscape of Calgary

Identifying corporate AM pressures helps clarify the broader factors that influence how The City of Calgary plans, funds, and delivers infrastructure services. These pressures include aging infrastructure, rapid population growth and increasing demand, inflation and rising costs, and ongoing financial and budget constraints that contribute to underfunding and accelerated asset deterioration.

Additional pressures arise from regulatory, policy, and environmental requirements; heightened service delivery and reliability expectations; and capacity, workforce, and operational challenges that affect The City's ability to sustain desired service levels. The increasing frequency and severity of climate events further intensify risks to asset performance, resilience, and long-term investment needs.

Understanding these pressures allows The City to better anticipate risks, focus resources where they are most needed, and align AM practices with corporate priorities. This context supports a CAMP that reflects current asset conditions while accounting for the internal and external forces shaping future service levels and investment decisions.

2

"Business units have already begun reprioritizing investments toward critical infrastructure, closely monitoring assets in poor or very poor condition, assessing lifecycle costs, and exploring new funding and service delivery models. "

2 Asset Management Practices & Improvement Strategies

The City of Calgary continues to advance its AM practices through strategic updates to its policy, planning frameworks, and governance structures. Building on the foundations laid in 2022 and guided by international standards such as ISO 55000 and the IIMM.

This CAMP introduces key enhancements to align strategy with policy, improve data consistency, and strengthen organizational maturity, thereby ensuring infrastructure decisions are informed, sustainable, and aligned with long-term service goals.

2.1 Updates to Corporate Asset Management Policy and Strategy

Since the corporate realignment outlined in the previous CAMP under the Rethink to Thrive framework, The City has continued to advance its AM strategy. A major milestone was the September 4, 2024, revision of the AM Policy, which formally aligned The City's AM System with the ISO 55000 suite of standards. This alignment has driven more consistent and systematic risk management practices across asset classes, supported by enhanced data on condition, criticality, and risk that informs business planning and strengthens organizational maturity.

BUs have already begun reprioritizing investments toward critical infrastructure, closely monitoring assets in poor or very poor condition, assessing lifecycle costs, and exploring new funding and service delivery models. While these steps have closed many gaps, the 2026 CAMP recognizes that scaling these efforts further will be essential to sustain momentum and deliver long-term value.

There is a need for the previously developed AM Strategy to be updated to align fully with the revised AM Policy, ensuring consistency across governance, planning, and execution. In line with recommendations from EY, this CAMP highlights the importance of a dual approach to embed and sustain AM practices. This includes developing a more defined AM framework to clarify roles and responsibilities, implementing a stakeholder engagement and communication program to improve awareness and compliance, and fostering cross-functional collaboration through dedicated task forces and ongoing monitoring. Following the Plan, Do, Check, Act approach is one way of operationalizing these requirements.

The findings, updated policy, and strengthened strategy reflected here will feed directly into the next service planning and budgeting cycle (post-2026), ensuring that future decisions are grounded in the most up-to-date information on asset condition, lifecycle forecasting, risk assessment, and service level trade-offs.

2.2 CAMP VS. SAMP

The CAMP and a Strategic Asset Management Plan (SAMP) serve complementary but distinct purposes within an AM system. The CAMP is primarily a tactical and organization-wide plan, consolidating the current state of infrastructure, risks, lifecycle needs, and funding requirements across asset classes to inform day-to-day investment, maintenance, and service delivery decisions. In contrast, the SAMP sometimes referred to as the AM Strategy operates at a higher, more directional level. As outlined by the Institute of Asset Management (IAM), the SAMP translates the organization's mission, objectives, and AM policy into strategic objectives, priorities, and intended activities for the entire asset portfolio, providing the "line of sight" between corporate goals and operational execution[2]. While the CAMP focuses on "what we own and what we need to do" in the near to medium term, the SAMP defines "why and how" the organization will manage its assets over the long-term, including the governance principles, risk appetite, decision-making frameworks, and cross-functional collaboration methods that underpin delivery. Together, they create a vertically aligned framework top-down strategic intent guided by the SAMP, and bottom-up tactical planning captured in the CAMP ensuring resources, priorities, and asset performance objectives are consistently linked to organizational outcomes.

Several BUs have created their own asset-class-specific SAMP to assist in improvement. The City intends to create a Corporate SAMP in 2026. The Corporate SAMP, once developed, should formally establish risk appetite, governance expectations, and decision rules that the CAMP operationalizes.

2 Developing and Maintaining a Strategic Asset Management Plan (SAMP)

2.3 Asset Management Practices

Since establishing formal AM practices in 2004, The City of Calgary has made steadily increasing investments in aligning its infrastructure planning and management with international best practices, notably ISO 55000. Over time, The City took on the responsibility of managing a large and diverse asset portfolio, which by recent estimates has been valued at $155.4 billion This growth has been driven by improvements in data collection, valuation methodologies, and inclusion of varied asset types.

Despite this strong foundation, the previous CAMPs identified several inconsistencies across asset classes gaps in condition and criticality data, uneven reporting standards, variances in risk assessments, and insufficient dedicated staffing to maintain consistent data and practice levels. AM system improvements highlighted herein place special emphasis on reducing these inconsistencies. Key strategies include standardizing data collection and condition assessments, enhancing governance and accountability through more centralized coordination, and improving resourcing (both human and technical) within and across departments so that AM maturity is more uniform throughout The City.

By embedding these improvement strategies in the 2026 CAMP, Calgary aims not just to continue what has worked, but to systematically close gaps that have limited-service line alignment, data comparability, and reporting reliability. The intention is that these changes will yield more robust, comparable, and defensible data; more predictable lifecycle and capital planning; and a stronger, unified AM culture across all service areas.

"Over time, The City took on the responsibility of managing a large and diverse asset portfolio, which by recent estimates has been valued at $155.4 billion."

2.4 Asset Management Maturity Assessment and EY Infrastructure Review

Since the last CAMP, The City has undertaken two significant assessment exercises. The first was an infrastructure review conducted by EY (formerly Ernst & Young) through the Audit Office, initiated in response to the Bearspaw Feeder Main failure. This review applied an IAM (Institute of Asset Management) maturity framework. Independently, and unrelated to operational incidents, The City also performed a maturity assessment of selected Business Units using the IPWEA NAMS+ Maturity Assessment framework.

While the two assessments differ in scope and methodology, making direct comparisons and observations impractical, the resulting recommendations can be qualitatively analyzed for alignment. This comparative discussion is presented in **Section 2.4.3.**

2.4.1 City of Calgary Infrastructure Review

EY was retained in 2025 by The City of Calgary to conduct an independent review of its infrastructure[3] , focusing on how critical infrastructure is identified, how reinvestment decisions are made, and how investments are prioritized. EY evaluated The City's methodologies, identified opportunities for improvement, and provided actionable insights to strengthen the AM framework. **Table 2-1** highlights the key areas, findings, and recommendations that should be addressed as part of improving AM practices across The City and shows which components have already been addressed or are underway as part of the 2026 CAMP. The EY evaluation indicates that The City's maturity assessment places the organization between the Competent and Optimizing stages of the IAM AM framework (average score 3.4/5 for Documentation and 2.6/5 for Implementation). Rather than aiming for Level 5 "Excellence," the evaluation recommends targeting Level 4 "Optimizing," which reflects strong, well-documented practices applied consistently and reviewed regularly to enable continuous improvement. This approach balances ambition with practicality, recognizing resource constraints while emphasizing sustainable progress.

The maturity scoring uses a six-level scale (0 through 5) to reflect how developed an organization's AM practices are, ranging from Innocent (Level 0) up to Excellent (Level 5). Level 0 means there is no recognition or capability in that subject area, while Level 1 (Aware) means the need is recognized and there is intent to act. At Level 2 (Developing), some documented, resourced efforts are underway, though they may be inconsistent. Level 3 (Competent) corresponds to systematically meeting key requirements (for example, aligning with ISO 55001), with consistent practice, review, and reliable performance. Levels 4 (Optimizing) and 5 (Excellent) are more advanced and context-dependent: Level 4 means continually improving processes, integrating practices across the organization, and aligning them with organizational objectives, while Level 5 represents leading practice, innovation, and maximizing value in line with strategic context.

Figure 2-1: Current State Maturity Rating – Infrastructure Review by EY[4]

3 EY (2025) City of Calgary Infrastructure Review
4 City of Calgary Infrastructure Review, EY, 2025

Based on the observations from EY, the following recommendations were provided to the Audit Committee to strengthen The City's AM framework and support its progression toward Level 4 (Optimizing):

- **Recommendation #1 -** Alignment of Strategic Priorities within Administration, Council, and Community.
- **Recommendation #2 -** Enhance the AM Policy and Overall Framework.
- **Recommendation #3 -** Establish a Consistent Criticality Criteria Framework.
- **Recommendation #4 -** Implement Criticality Analysis for Budget Allocation.
- **Recommendation #5 -** Improve Integration of Corporate Finance into the Asset Management System.
- **Recommendation #6 -** Build upon Customer Levels of Service (LoS) Performance Metrics.
- **Recommendation #7 -** Enhance Integrated Reporting to Optimize Asset Information and Data.
- **Recommendation #8 -** Increase Investment in Training and Capacity Building.
- **Recommendation #9 -** Enhance Enterprise Risk Management (ERM).
- **Recommendation #10 -** Improve Integration of Climate Change and Sustainability Considerations.

Of these 10 key recommendations provided by EY, and activities identified from individual maturity assessments this CAMP lays the foundation for several of the recommendations:

- **Establish a Consistent Criticality Criteria Framework.** This CAMP combines individual asset class approaches to create a consistent criticality criteria across all asset classes that can act as the first step towards a single City-wide framework.
- **Implement Criticality Analysis for Budget Allocation.** The single consistent approach towards defining what is critical within this CAMP supports the prioritization scheme. In parallel The City also uses a Multi-Criteria Prioritization (MCP) approach within several asset classes to evaluate capital investments against Corporate and Council priorities.
- **Build upon Customer Levels of Service (LoS) Performance Metrics.** Service objectives for asset classes align with the Capital Investment Plan (now referred to as the Capital Investment Needs Assessment) and are collated herein.
- **Enhance Integrated Reporting to Optimize Asset Information and Data.** Learnings from the collation of asset information can be resolved for future iterations and the data gaps limiting risk analysis are summarized.

Table 2-1: EY Assessment Observation Summary and Audit Resource Management Recommendations to Audit Committee 4

Category	Observation	Relevant EY Recommendation									
		1	2	3	4	5	6	7	8	9	10
Review of the AM Policy and the CAMP Documentation: 4/5 Implementation: 2/5	• The AM Policy references non-conformance in Section 7 but does not define the specific consequences. • Several stakeholders indicated they are unfamiliar with the policy's terminology and their designated roles. • The policy has been updated in 2010, 2016, and 2024, yet it does not specify how often reviews must occur. • The Executive Leadership Team has endorsed the policy, and roles and responsibilities are clearly described. • The policy aligns with ISO 55000 standards and commits to continuous improvement; however, communication gaps with stakeholders have been identified.										
Review of the ISR Documentation: 3/5 Implementation: 3/5	• The ISR highlights infrastructure gaps, current replacement values (CRV), and physical condition of assets by service line. • It does not benchmark changes against previous reports to show asset condition trends over time. • Measuring customer LoS, funding gaps, and resource requirements across asset classes could improve understanding and identify disparities. • Additional detail would help ELT and City Council make better decisions, communicate implications clearly, and plan for long-term capital investment needs.										
Review of the Critical Infrastructure Identification Documentation: 3/5 Implementation: 2/5	• Asset classes follow different processes for identifying critical infrastructure, conducting condition assessments, and setting strategic priorities. • Budget and resource constraints limit the quality and completeness of asset data in some asset classes. • Some asset classes lack comprehensive asset condition data across their portfolios. • Improving asset data would enhance identification of critical infrastructure and support better investment prioritization.										
Review of Asset Re-Investment Decision-Making Process Documentation: 4/5 Implementation: 3/5	• Asset classes use different processes to identify needs and develop budgets. • Budget submissions vary in completeness and detail, limiting effective prioritization. • Funding decisions can be based on subjective criteria rather than consistent service level performance measures.										
Additional Observations for Consideration	• Council was formerly more engaged; Councillors want ward-level condition data for decision-making. • Role definitions vary across service lines after the reorganization. • There is no central repository for AM documentation. • Climate and environmental considerations are included, but early integration could improve resilience and budgeting. • Technical service levels are well established and measured, but customer service levels are only partly implemented and still show gaps across service lines. • The City has strong asset data but it's inconsistent and siloed across asset classes, with a need for more frequent reporting and up-to-date dashboards. • Reorganization improved collaboration but created skill gaps; The City is using training and practice events to build capacity and can expand these efforts further.										

2.4.2 Asset Management Maturity Assessment

In 2023, The City launched an AM maturity assessment program to drive continuous improvement and cost-effective, high-quality service delivery. Using the IPWEA NAMS+ Maturity Assessment framework, the program reviewed infrastructure-intensive service lines (e.g., Water, Parks, Buildings), identifying both good practices and areas for improvement. Findings are summarized across The City in Section 3 and per BU in Appendix B, with each receiving a tailored improvement plan to guide priorities and investment needs.

"The next phase of development involves strengthening alignment between corporate governance and service-line delivery."

2.4.3 Holistic Maturity

The City's AM program is well established and continues to advance. The 2023 IPWEA NAMS+ self-assessment yielded an average score of approximately 45, indicating a Core maturity level. In parallel, the independent EY (formerly Ernst & Young) review assesses The City's corporate AM profile as at a Competent–Optimizing level. Both assessments highlight consistent strengths in areas such as Capital Works Planning, Demand Forecasting, Operational Planning, Asset Data & Information. They also identify common opportunities for improvement, including the SAMP, Risk & Resilience, AM Process Management, Continuous Improvement).

The next phase of development involves strengthening alignment between corporate governance and service-line delivery. Key activities include adopting a consistent city-wide risk and criticality framework to guide budget decisions and investment priorities. Strengthen alignment between strategic goals, financial planning, and AM practices through an updated policy and framework. Improve integration of finance and asset data to support transparent reporting and better decision-making. Build on customer Levels of Service by linking performance, cost, and demand information. Enhance data governance and reporting across business units, and continue improving through staff training, regular maturity reviews, and clear improvement plans. Taken together, these actions will close the gap between policy intent and front-line practice and improve the credibility and outcomes of investment decisions for Calgarians. **Table 2-2** summarizes the Maturity Area alongside the corresponding EY (formerly Ernst & Young) Review areas to demonstrate the roadmap items which can support continuous improvement on both fronts.

Table 2-2: AM Maturity Roadmap per Assessment and Review Area

NAMS+ Area	EY Review Area	Maturity Road Map Activities
Analyzing the Strategic Direction	AM Policy and CAMP	• AM Objectives are documented in the SAMP or AMP. Governance and leadership expectations of the AM System are expressed through an approved AM policy and AM objectives which cover all aspects of the asset lifecycle. • The AM policy and objectives are being actively applied and are aligned to organizational objectives.
LoS Framework	Infrastructure Status Report (ISR)	• Customer groups needs or expectations are analyzed and documented. LoS statements cover a range of service attributes and are aligned with the organizational service planning and performance management processes, periodically measured and reviewed, aligned and integrated with performance measures. • LoS and cost relationship is understood and described in the AMP.
Demand Forecasting and Management	ISR / Asset Re-Investment Decision-Making	• Demand forecasts are based on relevant primary demand factors (e.g. population growth) and extrapolation of historic demand trends. • Demand forecasts are presented in the AMP with supporting assumptions and the risk associated with demand changes are broadly understood and documented in the AMP. • Strategies to manage demand are documented in the AMP and accordingly demand management is considered in investment evaluations.
Asset Condition and Performance	Critical Infrastructure Identification / ISR	• Adequate data and information is collected to report current performance against service objectives and LoS. • A condition and performance monitoring process is documented and followed for critical assets and information is suitable to be used to plan and prioritize short term maintenance and renewals. • Performance results are reviewed to identify areas failing to achieve targets.
The Strategic AM Plan	AM Policy & CAMP	• Corporate AM Objectives are documented within the SAMP where the scope of the AM System is defined as are links between organizational and AM objectives. • The process for establishing and maintaining the AM System is developed (e.g. the AM Improvement Plan) and strategic issues have been identified and options developed. • These aspects are documented in the SAMP or equivalent document and have been created from input from relevant teams and stakeholders (internal and external).
Managing Risk and Resilience	Critical Infrastructure Identification	• An organizational risk management policy, framework and process is in place. An asset criticality framework has been developed, and critical assets are recorded. • Activity risks are identified in the risk register and regularly updated and monitored. • Management strategies for highest risks and most critical assets are developed and documented (in the respective AMPs, risk management plan or similar) and the approach to managing asset network resilience is described in the AMP or other supporting document.
Operational Planning	ISR / Additional Observations	• Operating plans are available for all operational areas as well as incident and emergency management plans being in place. • Operational support requirements have been reviewed against good practice and are in place, including consideration of critical spares requirements. • Trends in planned and unplanned maintenance and renewal activities are analyzed and trade-offs considered in determining optimal maintenance and renewal frequencies.
Capital Works Planning	Asset Re-Investment Decision-Making	• Projects have been collated from a wide range of sources (e.g. through reviews of asset performance, growth, risk management and renewal analysis) and are collated into a project register. • These projects are tracked through capital planning stages. • Short term capital projects are fully scoped (including options analysis) and cost estimated. • Renewals program is based on age and limited condition data. • The CAPEX program is prioritized, based on agreed decision criteria, to rank the relative importance of capital projects and programs.

NAMS+ Area	EY Review Area	Maturity Road Map Activities
Asset Financial Planning and Management	Asset Re-Investment Decision-Making	• Depreciated replacement cost valuations aligned to asset information used in renewal forecasts. • Include increased asset deterioration from extreme weather events in renewal forecasts. • Asset expenditure categories are suitable to enable AM costing / forecasting analysis and asset-related financial forecasts are aligned to operational and capital planning and forecasting processes. • Consequential OPEX for all new assets is included in OPEX forecasts. • Asset and corporate long-term financial planning processes are aligned with funding strategies developed and documented.
AM Plans (for the Asset Portfolio and Assets)	AM Policy & CAMP / ISR	• BU AMPs contain core content including asset information, LoS, demand and lifecycle strategies linking to financial forecasts with key assumptions stated. • AMPs are aligned with corporate long-term strategic and financial plans and objectives and are signed off at a sufficient level. • AMPs are written with input from relevant teams and stakeholders, with internal and external reviews taking place. • AMPs are updated in accordance with the AM Policy / SAMP.
AM People and Leaders	Additional Observations for Consideration	• Regular ongoing AM coordination processes established which support an integrated and consistent approach across the organization. • Position descriptions incorporate the main AM roles and training is made available suitable to those roles. • Visible ownership and support of AM by governance and leadership and awareness of AM purpose across most of the organization (evident through interviews).
Asset Data and Information	Critical Infrastructure Identification / ISR	• Sufficient information to complete depreciated replacement cost valuation and to manage operational requirements for assets is available. • Asset hierarchy, identification and attribute standards documented and implemented. Metadata held as appropriate, and a formal information needs analysis has been undertaken and an Information Strategy and data improvement plan developed. • Knowledge of asset criticality and risk supports the regularity of data collection and updating.
Asset Management Information Systems (AMIS)	ISR / Critical Infrastructure Identification	• Industry-recognized AMIS or asset register system enables hierarchical asset capture and reporting to component level. • AMIS enables live tracking of customer requests linked to maintenance tasks. • AMIS provides basic AM reporting capability - condition / performance, renewal forecasts, valuations. • The AMIS meets most user requirements (functionality, reporting, usability).
AM Process Management	AM Policy & CAMP / Additional Observations	• Critical AM processes are identified, documented, monitored and subject to review. • There is evidence that these critical AM processes are followed in practice. • AM process interfaces with other teams and organizations, are defined and managed.
Outsourcing and Procurement	Additional Observations for Consideration	• A procurement strategy/policy is in place. • Internal service level agreements (SLA) with the primary internal service providers, and contracts for the primary external service providers, are in place. • Contract and SLA performance specifications are aligned to LoS. • Procurement and contract performance management processes are in place and regularly reviewed.
Continual Improvement	AM Policy & CAMP / Additional Observations	• Current and future AM maturity is assessed and used to identify improvement actions with appropriate maturity targets defined for each AM function. • Identified improvement actions collated from the maturity assessment and other relevant studies and have been prioritized with input from relevant staff and management. • Improvement plans identify timeframes, deliverables, resources and responsibilities and are monitored by the AM team.

3

"In 2023, The City launched a structured AM maturity assessment using the IPWEA NAMS+ framework, evaluating 16 practice areas across three categories: strategic planning, lifecycle strategies and enabling systems."

3 The Current Position

The City has undergone a step change in the scale and structure of its AM practices since the 2022 CAMP. With a 55% increase in the total CRV of assets and the updated AM organizational structure, The City has retained its asset class structure and refined its data-driven approach. These changes have enhanced the context of risks provided herein, investment planning and service delivery.

Building on this foundation, the following section provides a comprehensive overview of what has changed and how that has impacted The City's current asset landscape, summarizing infrastructure condition, LoS, risk and criticality, AM maturity and funding requirements to inform strategic decision-making and future priorities.

3.1 What Has Changed

A clear and shared understanding of which assets are included in this assessment helps ensure the results are interpreted consistently and accurately. Asset scope influences reported values, condition results, and capital maintenance needs, and understanding this context supports meaningful discussion of the findings. **Table 3-1** shows the breakdown of in-scope business units with the corresponding asset classes, illustrating how The City's assets are organized and managed across service areas.

Table 3-1: In-Scope Business Units and Their Asset Classes

Business Unit	Asset Class
Calgary Fire Department	Fire & Emergency Response
Calgary Transit	Transit Infrastructure
Capital Planning & Business Services	Plus 15
Chief Housing Office*	Affordable Housing
Facilities	Buildings
Fleet and Inventory	Vehicles and Equipment
Information Technology	IT Solutions and Support
Mobility	Bridges & Tunnels
	Roads, Sidewalks & Pathways
	Parking Infrastructure
Partnerships	Civic Partners
	Community Partners*
Parks & Open Spaces	Parks & Open Spaces
Recreation and Social Programs	Recreation
Waste & Recycling Services	Waste & Recycling Infrastructure
Water Services	Water Infrastructure for Potable Water
	Water Infrastructure for Stormwater
	Water Infrastructure for Wastewater

* Note: The 2022 CAMP included assets owned by both The City and the Calgary Housing. For the 2026 CAMP, only City-owned assets are considered within scope.

Compared to 2022, The City's total CRV has increased by $55 billion, or 55%. Newly in scope services include Civic Partners and Parking Infrastructure. Within Affordable Housing, assets owned by The City of Calgary under the Chief Housing Office are included in scope, while assets owned by Calgary Housing are excluded. Such changes in asset scope and classification affect the comparability between the 2022 and 2026 assessments. Therefore, changes in CRV should be interpreted as indicative rather than exact. Costs within the 2026 CAMP have been adjusted for inflation across all data sets to present an aligned CRV.

Table 3-2: CRV Change Summary

Replacement Value Change Summary	Amount
2022 Total Replacement Value	$100.4 B
Changes*	$55 B (55% ↑)
2026 Total Replacement Value	$155.4 B

1) Replacement values were reported as of end of year (EOY) 2020 in the 2022 CAMP. For the 2026 CAMP, values have been inflated to EOY 2025 dollars using an assumed annual inflation rate of 6%.
2) Newly in-scope assets include Civic Partners and Parking Infrastructure assets.
3) Assets owned by The City of Calgary under the Chief Housing Office are included in scope, while assets owned by Calgary Housing are excluded.

From a condition perspective, while 82% of assets remain in Fair or better condition, there is a noticeable portion in assets rated Poor or Very Poor, now totaling $20.8 billion. When interpreting condition analysis, it should also be noted that some asset classes without current or complete condition data are not included in the assessment. These asset classes fall into two groups. The first group includes asset classes with extremely low risk of failure. Examples include local roads and water or sanitary connections to individual homes. A business decision was made to intentionally not collect asset condition data. Asset performance and condition, however, is determined through more cost-effective means including customer/311 contact, asset performance modelling, "spot checks" and representative sampling of operational and physical observations and real-time operational experience. For example, road assets with low criticality are not in the Mobility Asset Condition Assessment (ACA) program. These assets are inspected and maintained as part of the summer maintenance programs in Mobility and 311 contact. The second group includes low risk assets which had not been inspected, or where they had been inspected but the data is too old to be of value. In this circumstance, The City is working to improve AM maturity over time, including methodologies to identify and assess these assets. Condition data for these assets is being collected and will be provided in future reports.

LoS reporting has seen steady progress across the organization as asset classes are aligned in the use of service objectives and these are aligned across City initiatives. Most classes have started work towards improved definition of both customer and technical LoS. Those asset classes within Operational Services plan to refine Customer LoS over the next 5-years. These developments show progress in service accountability but also the need to keep improving data completeness and consistency.

Risk assessment methodology has evolved significantly. A calibrated approach has been introduced to standardize the CoF across asset classes, enabling better cross-comparison and prioritization. It is noted that, Water Services and Mobility contain high-risk subclasses that may be masked by average scores and further breakdowns of risk should be reviewed in **Appendix B.** Strategic risk themes now emphasize infrastructure renewal, data governance, safety enhancements and long-term planning, reflecting a more proactive approach across The City.

In 2023, The City launched a structured AM maturity assessment using the IPWEA NAMS+ framework, evaluating 16 practice areas across three categories: strategic planning, lifecycle strategies and enabling systems. The goal is to achieve a "Core" maturity level with a score higher or equal to 41 across all areas. The average maturity score across assessed BUs was 45, indicating the target was met. However, performance varies widely. To address this, a maturity roadmap has been developed to guide future investments and capacity-building efforts).

In parallel with AM assessments, The City has been embedding organizational changes within its AM structure. Previously, a hybrid model was in place, with certain functions such as AM systems centralized, while AM specialists and engineers reported to individual BUs. Under the new model, these staff remain embedded within the BUs but now contribute their AM data and insights into a centralized reporting structure managed by the AM Planning division within the Capital Planning & Business Services business unit. This approach allows information from all BUs to flow into a single coordinated source, strengthening interaction with the Capital Investment Planning function, supporting consistent prioritization of capital funding, and improving the execution of AM practices across The City.

In summary, the changes since 2022 represent a substantial evolution in both the scale and structure of AM in The City. These updates provide a more accurate and actionable foundation for future planning, investment and service delivery.

3.2 Where We Are Now

Since the 2022 CAMP, The City has made substantial strides in evolving its AM practices as highlighted previously, expanding its asset base and restructuring its BUs to better align with service delivery goals. These changes have laid the groundwork for a more integrated and data-driven approach to managing infrastructure. This section looks to take stock of the current state of The City's assets and services, examining infrastructure condition, LoS, risk and criticality, AM maturity and funding requirements to provide a comprehensive snapshot of where The City stands today and what challenges lie ahead.

3.2.1 State of the Infrastructure

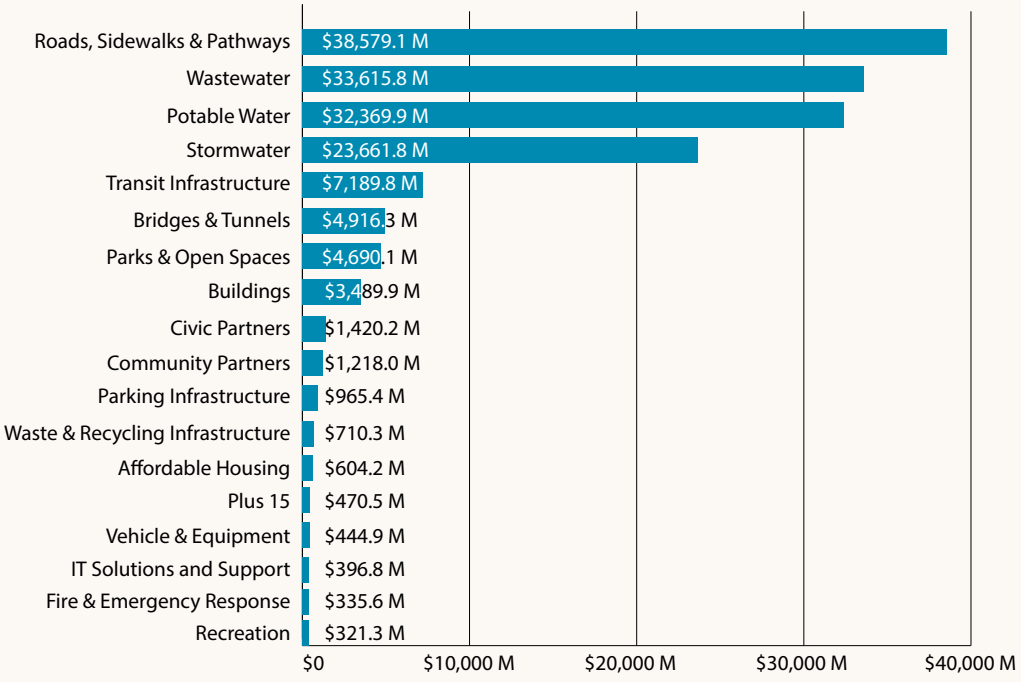
Understanding the current state of assets is essential for identifying the actions required to achieve service targets and objectives, as well as for effective budgeting and risk mitigation.

3.2.1.1 Current Replacement Value

The City's assets have a total CRV of $155.4 billion.

A substantial portion of this value is concentrated in Roads, Sidewalks & Pathways ($38.6 billion, 25%), Wastewater ($33.6 billion, 22%), Potable Water ($32.4 billion, 21%), and Stormwater ($23.7 billion, 15%), reflecting the scale of infrastructure required to deliver these essential services. Transit Infrastructure ($7.2 billion, 5%), Bridges & Tunnels ($4.9 billion, 3%), Parks & Open Spaces ($4.7 billion, 3%), and Buildings ($3.5 billion, 2%) also represent notable shares of the portfolio. The remaining asset classes collectively contribute to the balance of The City's asset base, ensuring a comprehensive service delivery network across the community **(Figure 3-1).**

Figure 3-1: Asset Value by Asset Class



Note: Community Partners are responsible for the strategic investment into Community Association Buildings they operate, including decisions on where and when to reinvest. The City supports this role through the Capital Conservation Grant program, providing guidance and investment support where needed to ensure assets remain safe and functional.

When interpreting the CRV figures, it should be noted they are influenced by external factors such as market conditions, supply chain dynamics and economic variability. In addition, certain assets, particularly natural assets, are more difficult to value, yet they require significant funding to maintain and sustain over time. As a result, the reported CRV values will not align precisely with The City's financial reports. Nonetheless, the CRV provides a valuable perspective on the scale and composition of The City's asset base, supporting long-term planning and investment prioritization.

In comparison to built infrastructure, some City assets (notably natural assets), are difficult to value using traditional financial methods and require specific analysis and estimation for the cost and benefit to The City and are not included in this CAMP. Calgary's citywide natural asset valuation (completed in 2021) found that The City's natural assets (e.g., Wetlands, Grasslands, Forests, Rivers, and other natural areas) provide approximately $2.5 billion per year in ecosystem service value to Calgarians. These assets require sustained investment to maintain performance and long-term resilience and assets such as Wetlands also have regulatory obligations that The City has to meet.

"Calgary's citywide natural asset valuation (completed in 2021) found that The City's natural assets (e.g., Wetlands, Grasslands, Forests, Rivers, and other natural areas) provide approximately $2.5 billion per year in ecosystem service value to Calgarians."

3.2.1.2 Current Condition

82% of The City's asset portfolio is in Fair or better condition **(Figure 3 2).** Within this group, $39.2 billion is assessed as Very Good, $60.7 billion as Good and $28 billion as Fair. Assets in Poor and Very Poor condition together represent $20.8 billion, or approximately 14% of the portfolio. $6.6 billion (4%) of assets has an unknown condition rating. As noted in **Section 3.1,** assets with unknown condition data primarily include low-risk assets for which condition is monitored through alternative, cost-effective approaches, as well as assets for which condition data is outdated or still being developed. Because an unknown condition rating introduces uncertainty and cannot be assumed to represent acceptable performance, it should be explicitly distinguished from known "good" condition. In practice, some sectors (e.g., Transit) classify assets with unknown condition as non-SOGR to reflect this uncertainty and avoid overstating the proportion of assets in a state of good repair. Condition data for these assets will be incorporated in future assessments as AM maturity continues to improve.

The definition of Fair or better condition does vary between asset classes, but the philosophy is that while an asset shows signs of deterioration due to use it is still functional, but with an increased risk of failure. Asset operation is still acceptable in this state but the asset may have decreased performance from new. This could exhibit itself in increased corrective maintenance or recorded deficiencies. Where an age-based condition curve is used Fair does not necessarily mean an asset is close to end of its serviceable life as timely intervention could extend its overall life.

"Overall, while many asset classes maintain a healthy asset base, the variation highlights the importance of both targeted reinvestment and improved data completeness."

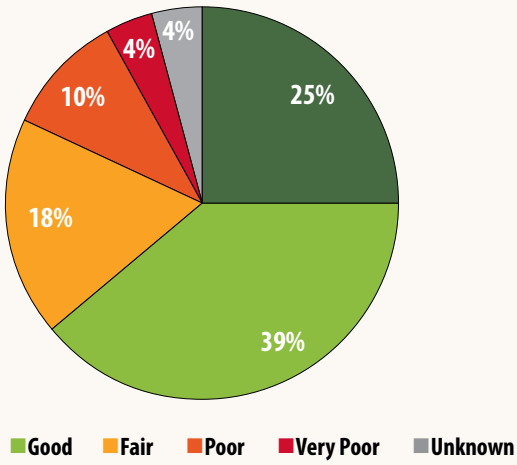
It should be noted that some low-risk assets may have a run-to-failure approach and therefore the average condition would be expected to be lower. The use of age as a proxy for condition here is limited in some asset sub-classes such as Heritage Buildings where the age is not a reliable indicator of condition. Assets with unknown condition are either unknown due to the preferred life cycle model (such as a Run-to-Failure philosophy) that is associated with low-risk assets, or assets with missing, outdated or developing data. Because an unknown rating introduces uncertainty, it is treated separately from known condition but could be further optimized by clarifying which assets are undesired unknowns and tolerated unknowns.

Key Recommendations:

$6,635 million of assets have their condition classified as Unknown. The City should refine its asset condition understanding to account for Unknown (tolerable due to method of management) and Unknown (intolerable due to missing, outdated and developing data).

Figure 3-2: Overall Condition Summary By CRV

Condition	Value of Assets
Very Good	$39.2 B
Good	$60.7 B
Fair	$28.0 B
Poor	$15.1 B
Very Poor	$5.7 B
Unknown	$6.6 B
Total	$155.4 B



At the asset class level, most have a large share of assets in Fair or better condition, as shown in **Figure 3-3**. The asset classes displayed in the figure are presented in the same order as **Figure 3-1**, ranked from highest to lowest total replacement value.

Certain asset classes such as Fire & Emergency Response, Plus 15, Buildings and Community Partners show a notable concentration of assets in the fair category (note that Buildings and Community Partners are on a per-asset basis and not per building basis). These assets may deteriorate further without timely reinvestment, underscoring the need for proactive planning. Recreation, Vehicles & Equipment, and Roads, Sidewalks & Pathways show higher proportions of assets rated Poor or Very Poor, signaling more immediate reinvestment requirements. It is worth noting that for Vehicles and Equipment (F&I), its percentage of asset base in Poor and Very Poor condition is a consequence of inheriting many of these assets in this condition as part of realignment within The City. This is recognized by F&I as a risk to The City and a plan is already in place and being executed to resolve this. All Water Infrastructure asset classes (Potable Water, Wastewater, and Stormwater) show relatively low percentages of assets in Poor or Very Poor condition. However, due to the large asset base, the CRV of assets in Poor or Very Poor condition may still be significant and warrants continued attention and reinvestment planning. Overall, while many asset classes maintain a healthy asset base, the variation highlights the importance of both targeted reinvestment and improved data completeness.

The condition trend from 2004 to 2026 is provided in **Figure 3-4.** The trend shows that the majority of assets have consistently remained in Fair or better condition over the past two decades, with proportions generally above 90%. However, there has been a gradual decline since the mid-2010s and projections to 2026 suggest this downward trajectory will continue until the impact of increased spending and strategies to resolve asset condition have had sufficient time to take effect At the same time, the share of assets in Poor or Very Poor condition has remained low but has started to increase in recent years, with a more noticeable rise expected in the near term. This shift signals that while the overall asset base is still healthy, but reinvestment pressures are beginning to build and timely intervention will be important to prevent further deterioration.

Figure 3-3: Condition Summary by Asset Class

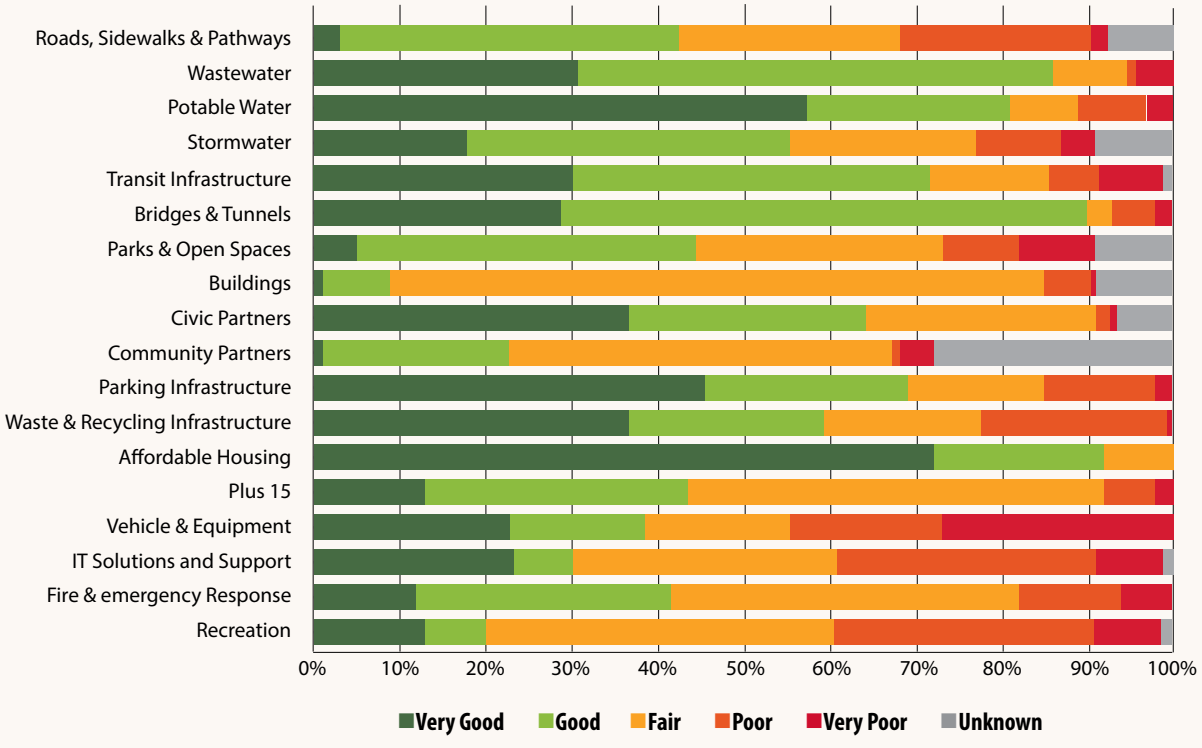
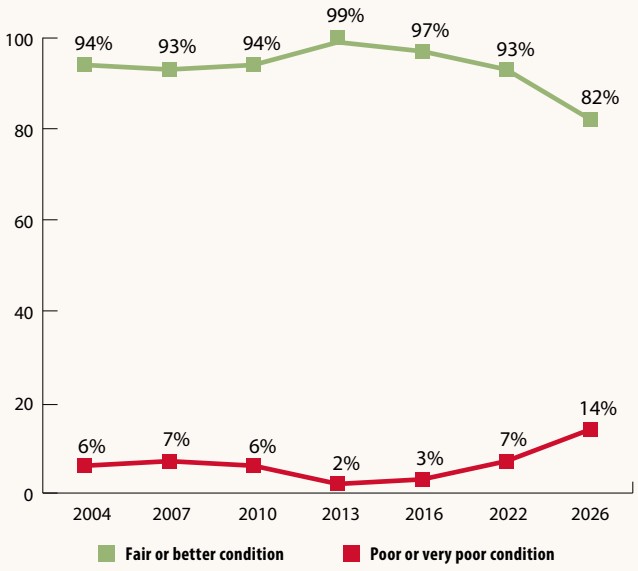


Figure 3-4: Assets in Fair or Better Condition Since 2007



Note: These changes should be interpreted as indicative rather than a direct performance trend. Condition data is limited as explained previously.

The top 10 asset sub-classes by value make up over ¾ of assets in Poor and Very Poor condition (Total CRV of all Poor and Very Poor $20.8 billion.)

3.2.1.3 Worst Condition Assets by Value

The total value of assets reported to be in Poor or Very Poor condition is approximately $20.8 billion, representing 14% of The City's asset base. These assets are predominantly concentrated within the Roads, Sidewalks & Pathways, and Water Infrastructure asset classes. This concentration reflects both the large share of asset value within these classes and the linear nature of the infrastructure.

The top 10 asset sub-classes by value make up over ¾ of assets in Poor and Very Poor condition (Total CRV of all Poor and Very Poor $20.8 billion). Of these only 1 is a non-linear asset, highlighting the challenges of maintaining linear asset in a state of good repair. The top 10 asset sub classes by value are:

1. **Local Roads -** $3,139 million.
   (Roads, Sidewalks & Pathways, Pavement)
2. **Arterial Roads -** $2,622 million.
   (Roads, Sidewalks & Pathways, Pavement)
3. **Collector /Industrial Roads -** $2,201 million.
   (Roads, Sidewalks & Pathways, Pavement)
4. **Storm Pipes (450 mm>= Diameter <1500 mm) -** $1,693 million.
   (Stormwater, Conventional System Conveyance)
5. **Services & Service Valves -** $1,593 million.
   (Potable Water, Linear Potable Water)
6. **Storm Pipes (Diameter<450 mm) -** $1,580 million.
   (Stormwater, Conventional System Conveyance)
7. **Water Treatment Facilities -** $1,402 million.
   (Potable Water, Non-linear Potable water)
8. **Sewer pipes (diameter < 500 mm) -** $1,123 million.
   (Wastewater, Wastewater Linear)
9. **Wires -** $625 million.
   (Roads, Sidewalks & Pathways, Street Lights)
10. **Service Connection -** $587 million.
    (Wastewater, Wastewater Linear)

3.2.2 Levels of Service

Levels of Service (LoS), according to The City's AM Policy means the defined performance standards that specify the desired output for a particular activity, specific service, or service area provided by City business units and associated infrastructure. LoS includes **Customer LoS,** representing the level of service provided to customers, and **Asset LoS,** denoting the performance standards that assets can provide to the organization. In other words, Customer LoS describe how a service is experienced by users using outcome-based, non-technical measures, while Asset (Technical) LoS define the specific, measurable performance standards that the infrastructure must achieve to deliver those outcomes.

For the development of this CAMP, service objectives, including service customer commitment, customer LoS, asset performance indicators, and asset condition targets from the Capital Investment Plans published in late 2025 were reviewed. **Table 3-3** below summarizes the current LoS status and further information is available in **Appendix B.**

Overall, most business units have established at least some performance measures for both Customer LoS and Asset LoS (detailed performance measures will be provided in Appendix B). For example, within the Affordable Housing, LoS are legislated through the Alberta Minimum Housing and Health Standards, and available LoS data support the definition of both Customer and Asset LoS. Several business units are still in the process of formalizing performance measures and setting appropriate targets. It should be mentioned that F&I is an enabling service that supports external-facing business units in achieving their Customer LoS by ensuring the availability, reliability, and compliance of vehicle and equipment fleets.

Furthermore, Operational Services is advancing its LoS development through the LoS Program, creating more complete, structured, and measurable service definitions that will strengthen future planning and budgeting. Continued effort across all services will help ensure LoS are fully integrated into service delivery and investment decision-making.

Key Recommendations:

Align future Customer LoS to a common framework across The City to allow consistent reporting and informed decision-making. A full terms of reference should accompany the LoS Framework to guide consistent discussion and accountable decision-making to address asset performance.

Table 3-3: LoS Status Overview

Performance measure(s) defined with targets | Performance measure(s) under development

Business Unit	Asset Class	Customer LoS Or Service Objectives	Asset LoS
Calgary Fire Department	Fire & Emergency Response		
Calgary Transit	Transit Infrastructure		
Capital Planning & Business Services	Plus 15		
Chief Housing Office	Affordable Housing		
Facilities	Buildings		
Fleet and Inventory	Vehicles and Equipment		
Information Technology	IT Solutions and Support		
Mobility	Bridges & Tunnels		
	Roads, Sidewalks & Pathways		
	Parking Infrastructure		
Partnerships	Civic Partners		
	Community Partners	NA	NA
Parks & Open Spaces	Parks & Open Spaces		
Recreation and Social Programs	Recreation		
Waste & Recycling Services	Waste & Recycling Infrastructure		
Water Services	Water Infrastructure for Potable Water		
	Water Infrastructure for Stormwater		
	Water Infrastructure for Wastewater		

* Community Partners are responsible for the strategic investment in the Community Partners buildings they operate, including decisions on where and when to reinvest. The City supports this role through the Capital Conservation Grant program under Facilities and provides guidance and investment support, where needed, to help keep assets safe and functional.

3.2.3 Risk and Criticality

The City's approach to risk is being continuously refined and has evolved since the previous CAMP. To further improve upon previous work, this revision has calibrated the supplied CoF values across The City to allow for an improved comparison between asset classes and to enhance information required to support decision-making as well as considering the asset replacement value, plotting risk directly onto the intermediate risk matrix presented in The City's Risk Management Framework[5]. This can be updated in the future when risk tolerance and the 5x5 matrix guidelines are completed per the most recent Enterprise Risk Management Update[6]. The differences in approach are highlighted in **Figure 3-5.** For further details regarding asset-class-specific risk please refer to **Appendix B** for additional risk and criticality information. The CAMP applies an interim risk tolerance based on practice, not a formally approved enterprise risk appetite.

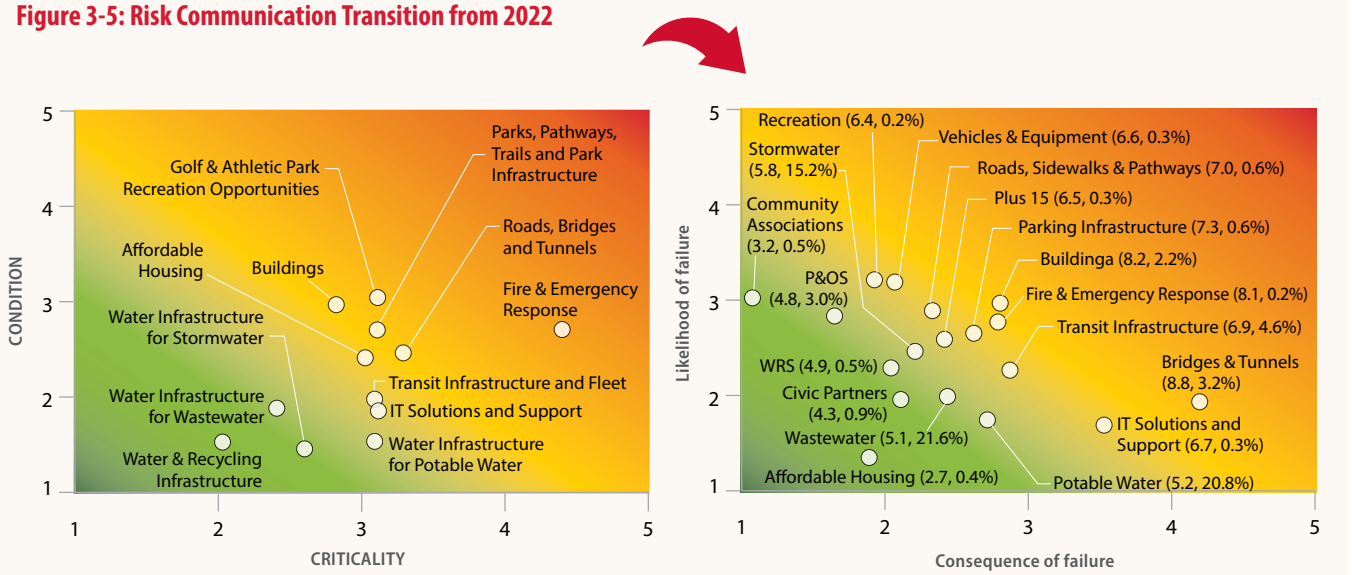
3.2.3.1 Tactical Risk (Assets)

For the purpose of this CAMP tactical risks are defined as risks that are addressed primarily at an asset class level. This includes age related deterioration, known failure mechanisms that accelerate failure or reduce estimated service life (ESL), and the impact of failure on level of service. These can often be determined quantitatively by use of asset data or properties.

As each asset class is acknowledged to have very different CoF for their assets, to allow a full understanding of each class, five consequence criteria were provided for which each was weighted according to the perceived importance by each asset class:

- Increased annual operating and maintenance (O&M) cost impacts.
- Reduced Reliability
- Reduced Safety Level
- Reduced Regulatory compliance.
- Reduced capacity for Climate Change Adaptation

Figure 3-5: Risk Communication Transition from 2022



5 City of Calgary (2015) Integrated Infrastructure Risk Management Frameworks
6 City of Calgary (2025) Enterprise Risk Management Program Update AC2025-0614

3.2.3.1.1 Likelihood of Failure

For the LoF the condition of an asset has been used as a proxy but this condition can be limited in its applicability. Where conditions based upon field inspections are used there are often limitations to technology and enactment (such as the connections in PCCP pipe) that should be accounted for and further use of the Unknown be used or additional grades such as Undeterminable be included.

Key Recommendations:

1. **Consider condition assessment limitations and use of additional grades to improve decision-making and communicate asset condition with greater clarity.**
2. **Severe and Critical assets need clear condition assessment strategies and monitoring for compliance with these strategies within their AMPs.**

At this stage of AM maturity at The City, no consistent definition of failure for assessment relating to likelihood has been used. Future revisions should seek to determine which mode is to be used or how each mode can be integrated into decision-making. The possible failure modes for The City are summarized below:

- **Catastrophic (Imminent) Failure:** A sudden and complete failure that occurs with little or no warning and results in immediate loss of service. Catastrophic failures typically have severe safety, environmental, financial, or service consequences and require urgent response. These failures are generally associated with very low risk tolerance due to their high impact and limited opportunity for intervention. They are the worst-case scenario and are typically addressed reactively and infrequently.
- **Degraded (Creeping) Failure:** A gradual deterioration of asset condition or performance over time, where service impacts increase incrementally rather than abruptly. Degraded failures often present early warning signs and allow for monitoring and planned intervention. While impacts may initially be manageable, failure to act can eventually result in significant service disruption or escalation to catastrophic failure. This is the most likely scenario and requires proactive, lifecycle management.
- **Intermittent Failure:** A recurring but non-continuous failure mode in which the asset alternates between functioning and failing. Intermittent failures can be difficult to diagnose and may result in unpredictable service disruptions, reduced reliability, and increased operational effort. Although impacts may be temporary, repeated occurrences can undermine service confidence and mask underlying asset condition issues. This is infrequent and mostly addressed by maintenance and operations teams prior to more capital-intensive approaches.

Key Recommendations:

Future Risk framework revisions should define the failure mode to be assessed and how to maintain consistency across The City. Use of all three modes would be the most comprehensive and mature approach but would entail considerable effort.

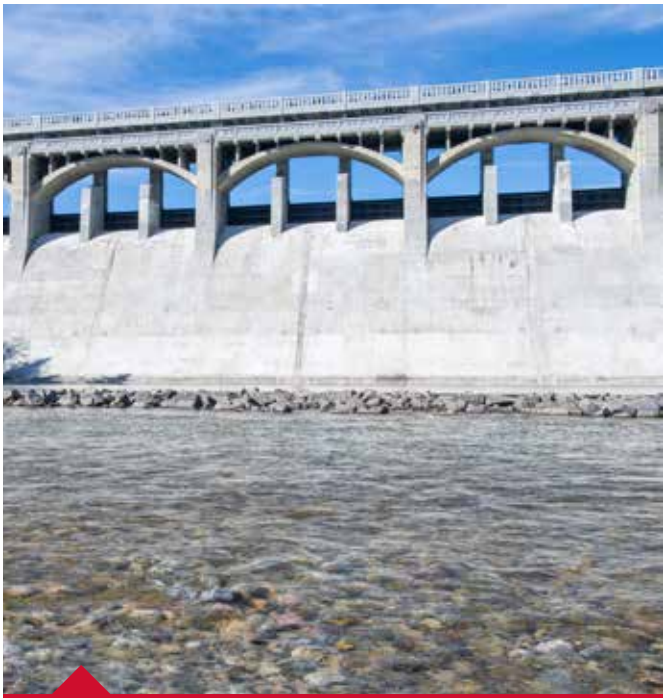
3.2.3.1.2 Consequence of Failure

Individual asset classes defined the criteria (for example reduced reliability may take the form of unplanned outages or a reduction in the LoS) based upon the framework described above and then defined the scale for their consequence criteria for the failure of their assets (for example the cost of an asset failing can vary from $0 – a very low consequence, to $5 million – a very high consequence). All results are given in a 5-point scale **(Figure 3-6).**

Figure 3-6: Consequence of Failure Scale

1	2	3	4	5
Very Low	Low	Medium	High	Severe

Once all the previous steps were completed all asset categories were rated to provide a final CoF for each grouping which could then be used in risk calculation.



Water and Mobility equate to almost 85% of The City's asset value.

3.2.3.1.3 City Consequence of Failure Calibration

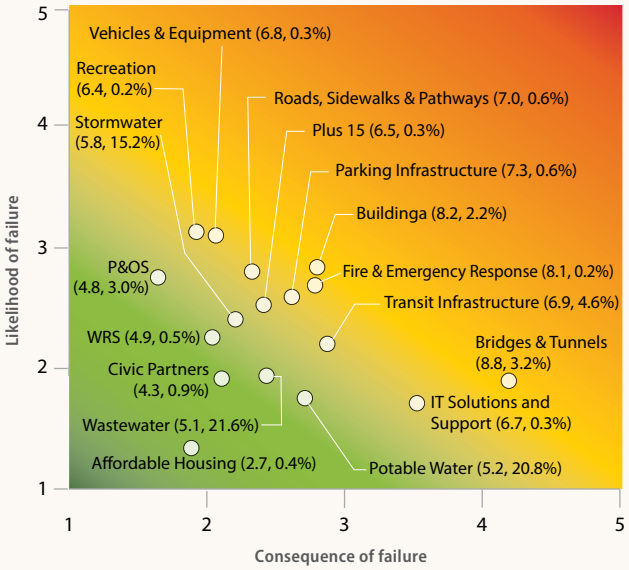
To allow these scores to be compared between asset classes a calibration scale for each was created using the following steps:

- A City CoF matrix **(Appendix A.1.4)** was created using the largest range of each CoF criteria seen across all classes. For example, the Severe level cost impact was noted to start at $1 million for Plus 15 but $5 million for WRS. In this case the larger value was used to create a scale on which all asset classes could be placed.
- A conversion matrix was created for each CoF matrix provided by asset classes. This included a multiplier which converted the supplied CoF to The City scale.
- The average weighting of all the provided criteria was calculated to arrive at a representative value across all asset classes.

The outcome of this approach is the picture of risk across The City shown in **Figure 3-7.** Several key takeaways are possible from this figure:

- On average, the total infrastructure risk for The City is 5.6 (within the medium range). The average figure is a combined value of all CoF weighted by CRV. The average CoF for The City is 2.8/5 and average LoF is 2.1.
- Two BUs have a CRV which vastly exceeds the others. Water and Mobility equate to almost 85% of The City's asset value. Even broken down into their respective asset classes the top 4 (all Water Services and Roads, Sidewalks and Pathways) are considerably larger than all the other asset classes by CRV. Having such a large CRV means that extreme risks within these asset classes can be hidden by an average value and still be considerably larger than other classes. For example, if non-linear treatment assets within the Water service were plotted, they would be the 4th largest asset group by value and have a high risk due to the Fair condition and maximum CoF.

Figure 3-7: Comparable City Risk Across Business Units



To support the values in **Figure 3-7** further, the change in raw asset class risk scores from the 2022 CAMP is summarized in **Table 3-5.** The average figure shows an increase in risk across The City using the individual asset class CoF and LoF submissions (note that this analysis is limited due to the differing breakdown in asset classes and analysis). This appears to be driven predominantly by a worsening in asset condition (note that an average condition weighted by value is not possible due to changes in asset groupings due to changes in reporting methodology) alongside a minor increase in determined criticality.

Several asset classes show a lower City risk than reported asset class risk. This is predominantly due to individual asset classes having a threshold defining maximum criticality which is lower than others. For example, one class may consider the worst impact being anything greater than $1 million whereas another may consider that threshold as anything over $5 million. Other impact areas such as health and safety can have an even greater impact as some classes may have the potential for widespread impact to health whereas others a localized impact.

A limitation of The City's risk framework combined with this necessary approach to compare risk, is that there is still the potential for assets to be graded higher than the actual CoF due to the limitation in data available. Where less than the 5 CoF criteria (or not in alignment with the framework) were provided the CoF had to be adjusted to only account for available fields resulting in some assets with a smoothed score to accommodate fewer value and a CRV only score based on the asset replacement value. The value of assets CoF calculated per method is shown in **Table 3-4** These methods decreases in resolution and become more qualitative as the available data decreases. 3% of assets have no CoF due to insufficient information.

Key Recommendations:

Future evolution and alignment behind a single risk framework at The City will reduce the limitations of the current philosophy. Single risk matrix with defined tolerances will also enable a consistent approach to risk mitigation.

Table 3-4: CoF calculation method by Asset Value

Risk Score Method	Total Value of Assets ($ million)	% of Assets by Value per CoF calculation method.
City Calibrated Score	$22,378	14.4%
Smoothed City Calibrated Score	$92,311	59.4%
CRV Based	$39,135	25.2%
Not Available (insufficient data)	$1,576	1.0%

Table 3-5: Risk and Condition Comparison with the 2022 CAMP

Asset Class	2022		2026		City Risk
	Condition (/5)	Asset Class Risk	Condition (/5)	Asset Class Risk	
Affordable Housing	2.4	4.6	1.4	3.9 ↓	2.7
Bridges & Tunnels	2.5	8	1.9	8.2 ↑	8.8
Buildings	3	8.4	2.8	11.1 ↑	8.7
Civic Partners	Unknown		1.9	2.9	4.3
Community Partners*	Unknown		2.8	Not provided	
Fire & Emergency Response	2.7	11.9	2.7	10.8 ↓	8.1
IT Solutions and Support	1.9	5.8	1.7	6.8 ↑	6.7
Park & Open Spaces	3	9.2	2.7	9.3 ↑	4.8
Parking Infrastructure	Unknown		2.6	7.6	7.3
Plus 15	2.8	8	2.5	7.1 ↓	6.5
Potable Water	1.5	5.1	1.8	4.7 ↓	5.2
Recreation	3	9.2	3.1	11.5 ↑	6.4
Roads, Sidewalks & Pathways	2.5	8	2.8	9.4 ↑	7.0
Stormwater	1.5	3.7	2.4	7.7 ↑	5.8
Transit Infrastructure	2	6.1	2.2	6.8 ↑	6.9
Vehicles & Equipment			3.1	10.7	6.8
Wastewater	1.9	4.6	1.9	4.6 ↓	5.1
Waste & Recycling Services	1.5	3	2.3	5.4 ↑	4.9

* Community Partners are responsible for the strategic investment in the Community Partners Buildings they operate, including decisions on where and when to reinvest. The City supports this role through the Capital Conservation Grant program under Facilities and provides guidance and investment support, where needed, to help keep assets safe and functional.

It is also important to highlight asset specific context when viewing risk, such as the difference between Water assets compared to the Bridges & Tunnels. The City's Bridge and Tunnel assets are generally in Good and Very Good condition. As assets are above ground, they are readily accessible for inspection, maintenance, and rehabilitation. In contrast, linear Water assets are buried underground, making condition assessment and intervention more complex, costly, and time consuming.

It should also be noted that the potential impact of Water asset failures extends beyond City limits. The City is a regional water service provider; and therefore, any service disruption resulting from Water asset failure can have broader impacts on regional partners.

3.2.3.1.4 City Critical Assets

In the CAMP any asset sub class with an average CoF higher than 4.00 has been defined as Critical. The CoFs used for this are The City Calibrated CoFs which allow comparison across different asset classes. This corresponds to:

- An asset replacement cost based on the CRV of greater than $5M.
- Failure of any asset that leads to no service provision or a Citywide impact requiring public response (e.g. water usage restrictions). For assets with no redundancy the failure is often critical. The impact of a failure results in major City-wide disruption with a response recovery of greater than 1 year or a prolonged impact to the organization.
- Multiple staff fatalities or serious injuries, any public fatalities or severe injuries, or failure presents an immediate danger to life or health (for example Storm Dams).
- Prosecution from failure to meet a mandatory obligation. Asset shutdown pending regulatory or external body investigation and a legal vulnerability with significant adverse outcome to The City.
- Irreversible environmental damage, damage to a protected site of high ecological value, or very high emissions leading to localized or regional pollution on a frequent basis.

The relatively low risk of Potable Water shown in **Table 3-5** may appear at odds with the recent experience of The City but this average figure shows that the volume of assets in Fair or better condition with a low CoF outweigh the higher consequence, poorer condition assets. A summary of the top 10 highest CoF asset subgroups (using the calibrated scoring) is shown in **Figure 3-8**.

Figure 3-9 shows the value of critical assets across The City using the calibrated CoF scores. It shows that The City has almost $20.3 billion worth of critical assets (13.1% of estimated CRV).

Figure 3-8: Highest CoF Assets across The City

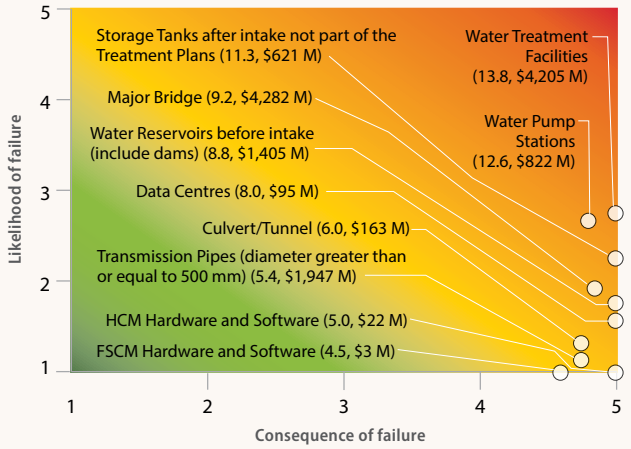
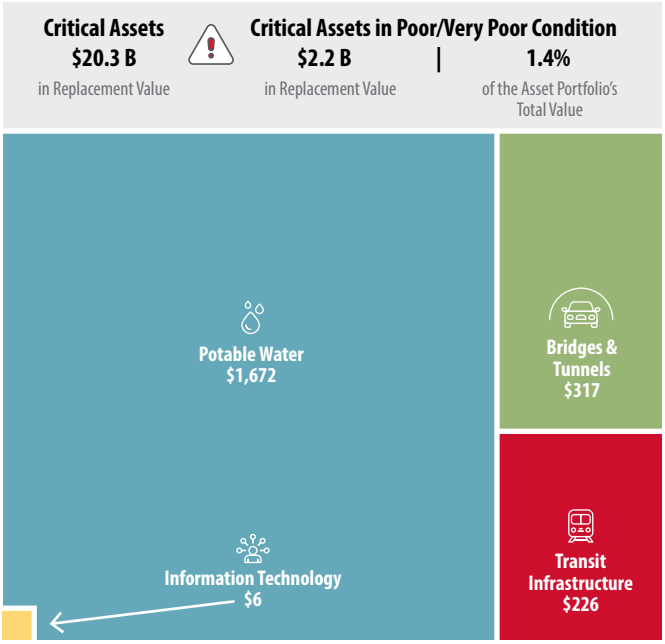


Figure 3-9: CoF at a City Level - Critical Assets CRV and Breakdown Per Class of Assets in Poor and Very Poor Condition



*Note: Cost in Millions.

Top 10 asset classes in Poor and Very Poor condition

1. **Water Treatment Facilities**
   (Potable Water, Non-linear Potable Water)
2. **Major Bridge**
   (Bridges & Tunnels, Bridges)
1. **Water Pump Stations**
   (Potable Water, Non-linear Potable Water)
4. **Ballast Track** (Transit Infrastructure, Track and Way)
5. **Buildings** (Transit Infrastructure, Buildings)
6. **Transmission Pipes** (diameter greater than or equal to 500 mm) (Potable Water, Linear Potable Water)
7. **Storage tanks after intake not part of a treatment plant** (Potable Water, Non-linear Potable Water)
8. **In-Street Track** (Transit Infrastructure, Track and Way)
9. **Crossings** (Transit Infrastructure, Track and Way)
10. **Storage Hardware/Software**
    (IT Solutions and Support, Storage Hardware/Software)

Several of the assets identified as Critical from a City perspective have the potential to cause massive system failure causing extensive damage, severe economic, environmental, health, safety and/or social consequences. Failure means that critical service to a large number of customers is compromised (e.g. City-wide). These assets and their current non-financial risk mitigations are summarized in **Table 3-6.**

Table 3-6: Severe Consequence of Failure Assets

Asset Class	Comments and Risk Mitigation	Current Risk Mitigation (Non-Financial)
Potable Water (Water Treatment Plants)	"Single point of failure" assets within the plants without recent condition data.	Emergency Response Plan being developed with various asset assessments planned for 2026-2027, and asset replacement as possible.
Potable Water (Water Transmission Mains)	Bearspaw South Feeder Main Approximately 120 km of other transmission mains without redundancy and recent condition data (approximately 25% of transmission main network).	Condition assessment and redundancy upgrades by end of 2029. Emergency response plans in development.
Wastewater (Wastewater River Crossings)	9 large crossings with unknown condition.	Implementation of additional redundancies to allow for condition inspection of existing pipes by end of 2030. Emergency response and bypass plans in development for most severe consequence assets.
Wastewater (Reclaimed Wastewater service to ENMAX Shepard Energy Centre)	There was an asset failure in summer 2024 due to corroded metal fittings.	Emergency response plan in place to mitigate future asset failure. The City is working with ENMAX to coordinate condition assessment with Shepard Energy Centre plant outage.
Stormwater (Dams)	Discovery Ridge Dam assessed with lower than required safety factor in 2024.	Emergency response plan in place for the Discovery Ridge Pond dam. Water level reduced, dam to be removed. Other dams are to be reviewed. Regulated dams are managed in accordance with the Alberta Dam and Canal Safety Directive (2018), including regular reporting and emergency preparedness.
	Glenmore Dam and SE Dyke are both Extreme consequence classification facilities.	These assets are integral to the Glenmore WWTP and raw water and as per Discovery Ridge are managed in accordance with the Alberta Dam and Canal Safety Directive.

Failure of High CoF assets result in a critical service to a significant number of customers being compromised (e.g. community or local level). These assets and their current non-financial risk mitigations are summarized in **Table 3-7.**

Table 3-7: High Consequence of Failure Assets

Asset Class	Comments and Risk Mitigation	Current Risk Mitigation(Non-Financial)
Roads, Sidewalks, and Pathways (Pavements)	Pavement quality level of service presented to Council October 2024 (IP2024-1043).	Reduced desired pavement quality level of service target for lower consequence local roads to maintain a moderate level of service for arterial roads. Overall pavement rehabilitation program is underfunded compared to other municipalities.
Roads, Sidewalks, and Pathways (Streetlights)	Critical Pole Program – Steel streetlights are rusting. Poles that are identified as being at risk of failure are removed immediately but not replaced.	Primarily Replacement – The pole replacement program has funding (within the latest Capital Infrastructure Needs Assessment) to replace 1,300 poles per year. The current remaining number of poles to be replaced is approximately 10,000, but this number increases as the assets age. In addition, aging wires associated with these assets present a risk of street light outages.
Bridges and Tunnels (Bridges)	Macleod Tr / 63 AV pedestrian bridge - has reached the end of its service life and has become a continuous maintenance burden due to encampments and biohazardous cleanups.	Demolition scheduled for May/June 2026.
	MacDonald Bridge (12 Ave SE/Elbow River). The bridge is 115 years old and has exceeded its estimated useful service life. It exhibits severe corrosion, significant deterioration, and cracking at several steel connections.	The structure is load restricted to 10 tonnes; however, some overloaded vehicles continue to use it illegally.
	Cushing Bridge (17 Ave SE/Bow River) is approaching the end of its service life.	It is currently being inspected and evaluated by a consultant. There is also functional study for this major route. Based on these evaluations, the intervention scope will be determined
	9 Ave SW/Greyhound Terminal pedestrian bridge. The bridge has severe deterioration of the underlying deck. The loose delaminated concrete is being continuously removed, but there is risk of concrete falling on underlying vehicles.	There is severe concrete deterioration of the overall structure, and the bridge has reached the end of its life, and the structure needs to be replaced.
Bridges and Tunnels (Stairs and Retaining Walls)	Under investigation.	Under investigation.
Transit	Transit vehicles are experiencing high breakdown rates.	Vehicles are undergoing mid-life refurbishments to keep older vehicles in service with higher operating costs and risk to service.
	Infrastructure and buildings are required to maintain public safety.	Infrastructure and buildings are undergoing condition assessments to prioritize lifecycle investment and repairs that are required to maintain public safety and critical asset failure.
	Original light rail track and way is at end of life and requires major rehabilitation.	some redundancy is in place for track, track switches and signals to mitigate deficiency risk with moderate service impacts
	Power systems are at high risk of LRT service disruption.	Under investigation.
Buildings	Current data indicates that 6% of buildings and 12% of components are in poor/very poor condition*. These buildings and components are more susceptible to unplanned failures, service disruptions, and facility closure.	Facilities investment has focused on addressing the most critical building needs, mostly related to safety, the electrical and mechanical systems and building code requirements. Low consequence, low risk assets are operated to the full extent of their useful life, with repairs or replacements performed only when a functional issue arises. This ensures that resources are directed toward assets with higher safety, operational, or customer impact risk. The methodology is not applied as a whole building strategy, nor is it used were safety, regulatory compliance, or business continuity could be compromised. It is selectively applied for components where criticality is low, redundancy exists, failure is predictable, and consequences of disruption are limited. Assets under this approach continue to receive inspections and basic care to ensure safe operation and compliance.

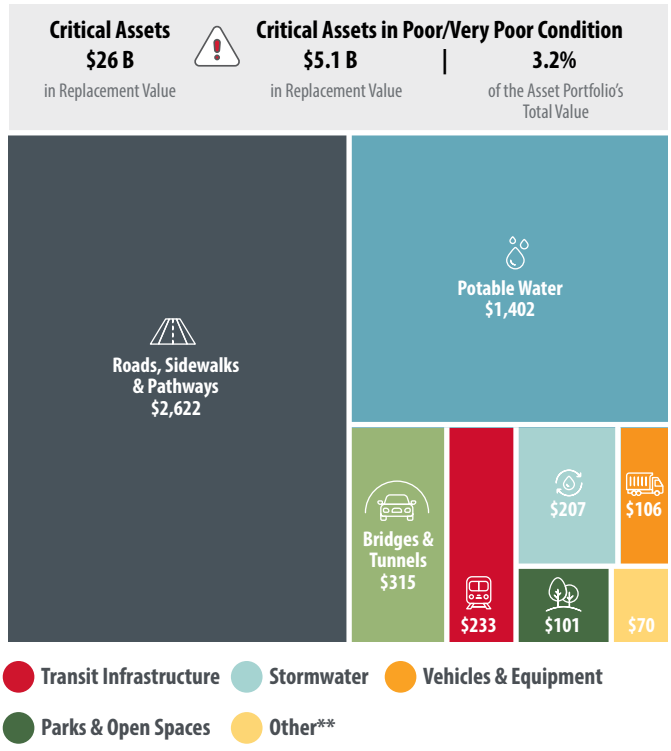
*These figures are directly from IP2026-0102 and differs from that provided here due to the time the data was analyzed.

3.2.3.1.5 Asset Class Rated Critical Assets

An additional metric that can be used to determine asset criticality is the raw CoF figures provided by each asset class. These are the unedited view of the BUs managing each asset class and can offer additional insight to assets that are deemed critical to levels of service as the CoF applied use criteria that have been provided by each asset class in their entirety. The same approach is used here to determine criticality (any asset sub class with an average CoF higher than 4.00).

Figure 3-10 shows the value of critical assets across The City using the asset class CoF scores. It shows that The City has almost $26 billion worth of critical assets (16.5% of estimated CRV) from the perspective of those working closely with the assets.

Figure 3-10: CoF at a Service Level - Critical Assets Cost and Breakdown Per Class of Assets in Poor and Very Poor Condition



Note: Cost in Millions.
**Other includes: Buildings, Fire & Emergency Response, and IT Solutions and Support

3.2.3.2 Strategic Risk

For the purpose of this CAMP strategic risks are defined as risks that are addressed at an organisational or cross asset class level. This includes processes and procedures, events that are managed at a City level, or trends that occur across multiple asset classes. These are often determined qualitatively by expert judgement. The City produces a City Risk Profile every 6 months that covers these strategic risks. The most recent update moved capital infrastructure into the "Extensive" risk category noting that 11% of assets were in Poor or Very Poor condition.

A meta review of asset class feedback during the data collection phase of the CAMP found five key themes of risk mitigation that BUs are planning to undertake in the next CAMP cycle:

- **Addressing Chronic Underfunding.** Several asset classes have been consistently funded below their identified needs, resulting in declining condition. The extent of underfunding varies by asset class. Closing the funding gap and prioritizing investment toward high-consequence-of-failure assets have been identified as the primary financial mitigation measures.
- **Infrastructure Renewal & Lifecycle Management.** This theme focuses on maintaining and upgrading physical assets to support service continuity, safety, and long-term sustainability. It also highlights the need to address the backlog of poor-condition assets and reinforce preventive maintenance practices, which are essential for effective lifecycle management and long-term cost control. Increased use and demand also lead to accelerated degradation of asset condition.
- **Data, SOPs & Governance Improvements.** This theme highlights the need for better data systems, formal procedures and governance structures to support informed decision-making and operational consistency. Initiatives aim to improve transparency, accountability and resilience across programs.
- **Safety & Reliability Enhancements.** This theme addresses operational risks and public safety that are deemed intolerable, through targeted interventions and system upgrades. Work within this theme is critical to maintaining safe, reliable services and minimizing disruptions beyond the standard renewal cycle.
- **Strategic Planning & Risk Frameworks.** This theme emphasizes the importance of long-term planning and structured risk management to guide investment and policy decisions. Efforts within this theme support a more integrated and forward-looking approach to managing The City's assets.

In addition to these overarching risk themes the Corporate Risk Profile Report breaks down The City's strategic overview of risk.

3.2.3.2.1 Use of CoF and Risk within The City

When the CoF and Risk are viewed in parallel The City can take a holistic view on the relative importance of assets. This assessment has resulted in two CoF groupings – Severe Consequence, and High Consequence.

These groupings are applied within The City's three pronged framework to support asset prioritization, which collectively reflects the organization's risk tolerance and can be applied directly to the outputs of risk analyses.

- The first pillar addresses Severe Consequence of Failure Assets, where asset failure would result in city wide or significant community impacts due to an inability to deliver essential services; these severe CoFs are summarized in **Table 3-6.** These assets have the potential to cause massive system failure causing extensive damage, severe economic, environmental, health, safety and/or social consequences. Failure means that critical service to a large number of customers is compromised (e.g. City-wide). These assets and their current non-financial risk mitigations are summarized in **Table 3-6.**
- The second pillar evaluates High Consequence of Failure Assets, where consequence to the service is assessed, enabling assets to be assessed and prioritized based on their relative importance and contribution to service delivery outcomes. Failure of these assets result in loss of system capacity, major consequences or cost to The City. Failure would result in a critical service to a significant number of customers being compromised (e.g. community or local level). These assets and their current non-financial risk mitigations are summarized in **Table 3-7.**
- The third pillar considers assets in poor or very poor condition that are expected to affect service delivery over time, recognizing that while these assets present elevated risk, their consequences are generally lower in scale or immediacy than those identified under the first two pillars.

Key Recommendations:

The use of the three guiding pillars for appreciation of risk should be formalized and integrated into any future strategic plan and consolidated risk framework.

3.2.3.3 Gaps in Risk Knowledge

From the analysis carried out, several gaps in risk knowledge and understanding were identified across The City:

- **Systematic Issue:** No consistent risk and consequence framework is employed across The City meaning analysis is complex and limited. The current City risk framework allows extensive flexibility to BUs and asset classes when creating their own risk framework to allow a greater understanding of risk but as a result this limits direct comparison across different classes and inhibits decision-making at a City strategic level. The calibration herein is an improved method but one that should be further matured.
- **Data Gap:**
  - The number of assets in several asset sub-classes (Roads, Sidewalks & Pathways, Transit Infrastructure, Stormwater, and Civic Partners) is unknown. The scale of this cannot be determined however of the 356 asset sub-systems collated for this CAMP, 33 had no inventory totals (or listed 0) available. This gap impacts the asset condition trend.
  - Of the 356 sub-asset systems 20 had no available CRV. Stormwater, Wastewater, and Transit Infrastructure asset classes and Railway Crossings within the Roads, Sidewalks & Pathways asset class. Noting specifically that Wastewater lift stations are ranked as critical but have no condition data or CRV assigned.
  - Data Gap - Condition assessment grades LoF was not available for 2% of The City's assets (by value). None of these assets were deemed Critical using the CAMP definition.
  - CoF was not provided for 4% of The City's assets of which 2 sub-classes (Plant and Traffic Management Centre within Roads, Sidewalks & Pathways) had a value that falls within the Critical scale.
- **Single Points of Failure:** The identification and management of assets with single points of failure is not centralized and therefore not addressed within the CAMP. The partner metric of redundancy can be used to start determining single points of failure. This information will instead be captured in the individual AMPs that are currently being updated or developed.

Key Recommendations:

Future evolution of the risk framework should specifically define and seek out single points of failure across The City's services. In parallel, services with redundancy should consider this in their risk calculation in a consistent manner across The City.

Alongside addressing systemic issues highlighted above The City should consider implementing Asset Categorization. Introduction of asset categorization either as core and non-core (consistent with the intent of Ontario Regulation 588/17) or similar will improve clarity in asset prioritization and decision-making. Project funding decisions can be consistently and transparently made by using these categories to guide investment.

Key Recommendations:

Consider implementation of a Core and Non-Core or similar definition to guide decision-making and to support investment prioritization.

In addition, the annual capital maintenance budget requirements are relatively even across the planning horizon, generally aligning with the average annual budget level.

3.2.4 Funding requirements

The 10-year capital plan **(Figure 3-11)** developed from The City's Capital Infrastructure Needs Assessment (CINA), identifies an average annual maintenance capital investment of $1,800 million. This corresponds to an annual reinvestment rate of 1.2%, calculated by dividing the average annual capital budget by The City's total CRV of $155.4 billion. This rate implies it would take about 83 years to replace the entire asset portfolio, which is generally considered a fair and reasonable level of investment for a large, mature municipal asset portfolio but may not be acceptable for short life assets. At this level, The City is able to address a portion of ongoing renewal needs while balancing affordability and fiscal constraints. While a 1.2% rate may not fully eliminate long-term renewal backlogs for all asset classes, it provides a practical benchmark for sustaining asset condition over time when combined with risk-based prioritization and targeted capital planning.

In addition, the annual capital maintenance budget requirements are relatively even across the planning horizon, generally aligning with the average annual budget level. This reflects a balanced and steady approach to reinvestment over time. The primary exceptions occur in 2026, which reflects a lower initial funding requirement, and 2035, where a higher funding need emerges due to the timing and bundling of larger renewal activities.

Several asset classes and BUs have requested use of modified Capital Infrastructure Needs Assessment values to adequately demonstrate their funding requirements. Future revisions should consider update to allow all BUs and asset classes to portray their needs. It is also recognized that there is overlap between the CAMP and the Capital Infrastructure Needs Assessment, future revisions of each document should be aligned in the information necessary in each and the source of that information. Notably an Asset management Plan per asset class (or at a more detailed level where asset value demands) should be the basis for the Capital Infrastructure Needs Assessment and the CAMP. Consideration should be given for enforcing a goal setting policy at The City that requires the relevant AM analysis that forms the basis of an AMP to be completed in order to support future budget requests. This would also allow the infrastructure needs to be consistently monitored in a transparent way.

Key Recommendations:

1. **Align the goals and data outputs of future CAMP and Capital Infrastructure Needs Assessment revisions to avoid duplication.**
2. **Consider enforcement of AM Plan creation or specific analysis to support budget requests. For example: Budget requests should align with an asset class's published AMP prior to prioritization at a City level. As a minimum, critical assets should all have an AMP.**
3. **Require clarity of full funding requirement in the AMPs to improve infrastructure gap monitoring.**

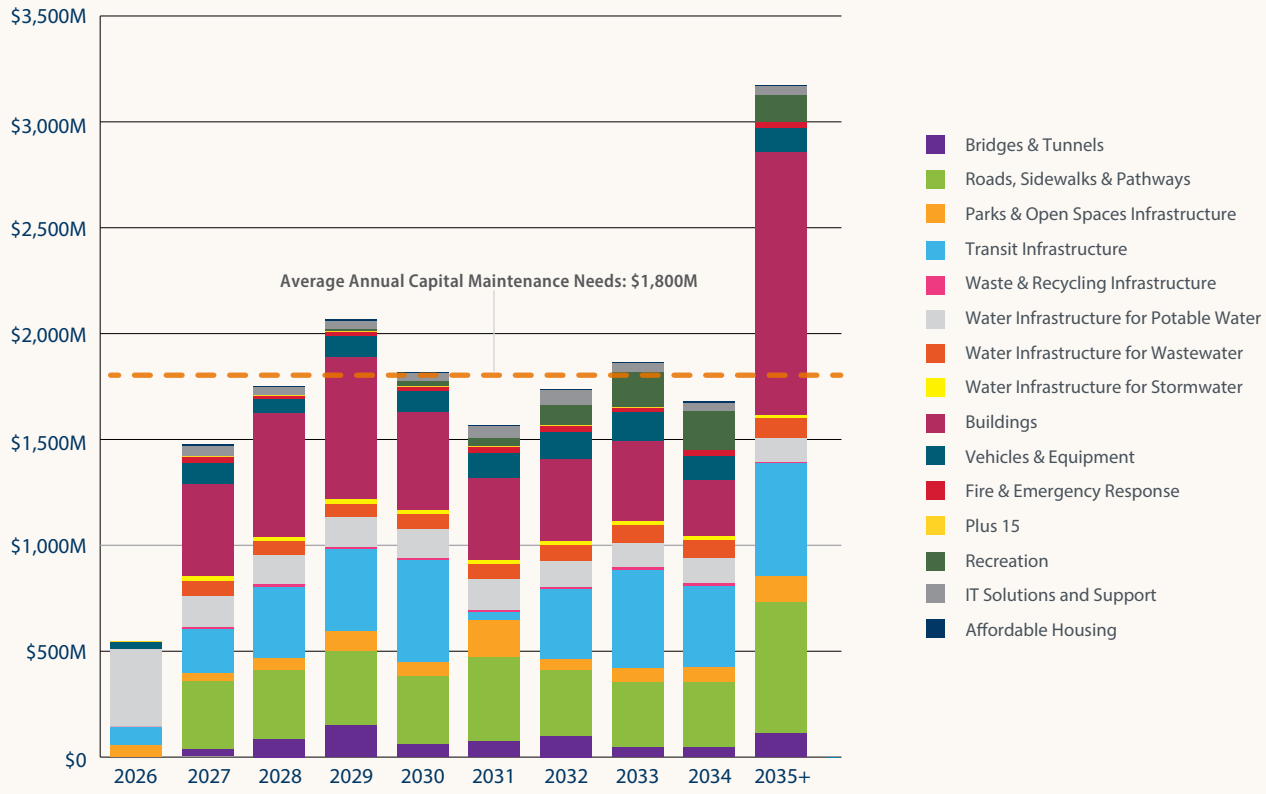
3.2.5 AM Maturity

The City is committed to continuously improving AM practices to maintain a cost-effective, high standard of service for the residents of Calgary. In support of this, The City initiated an AM maturity assessment program in 2023. The program initially took a service line approach (as per The City organizational structure at the time) with an emphasis on infrastructure intensive service lines such as those within the Water, Parks and Facilities BUs.

Each assessment took a holistic approach by identifying good practices along with where there were opportunities for improvement. The work undertaken includes a summary report by service line (summarized by BU in this report) produced in collaboration with City staff. To complement this a service-specific improvement plan was also produced to inform The City's priorities, indicating where investment was required to deliver the desired AM maturity to meet the needs of The City.

The City has a current goal of achieving a level of "Core" **(explained in Table 3-8)** across all practice areas.

***Figure 3-11: City of Calgary City of Calgary Proposed Maintenance Capital Investments**



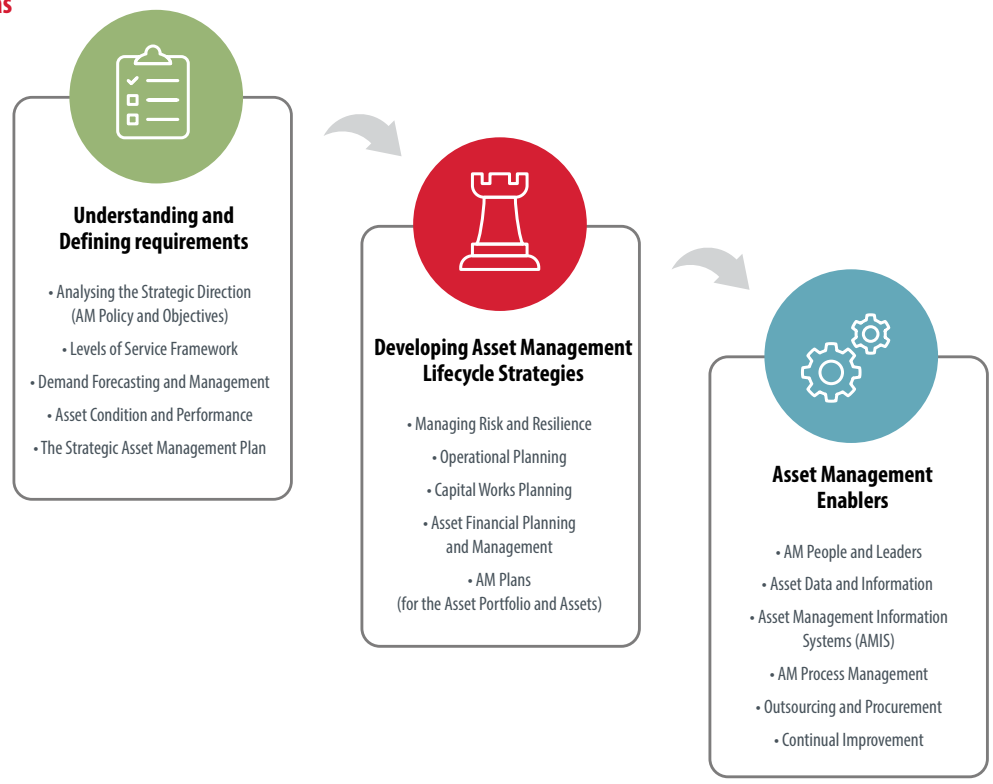
*Note - Financial Planning:
- 2026 CAMP financial figures were based on the Dec 2025/Jan 2026 Capital Infrastructure Needs Assessments.
- Capital Infrastructure Needs Assessments are evolving and continue to be updated through the development of the 2027–2030 Budget and the 10-Year Capital Infrastructure Plan.

3.2.5.1 Assessment Summary

The framework used to assess The City's maturity was the IPWEA NAMS+ Maturity Assessment which is a structured self-assessment tool developed by the Institute of Public Works Engineering Australasia (IPWEA) as part of its NAMS+ (National Asset Management Strategy) suite of resources. It is designed to help local governments and organizations measure the maturity of their AM practices against recognized best practice frameworks.

The version utilized has 16 AM practice areas which are grouped into 3 categories, these are shown in **Figure 3-12.**

Figure 3-12: The NAMS+ Practice Areas



Within each practice area a scoring scale of 0-100 was utilized. These scores were then mapped to the 3 practice categories to evaluate current maturity. The score of 0-100 was also split into 5 maturity scale definitions to assist in communication. **Table 3-8** below presents the maturity scale score and groups for NAMS+ alongside the corresponding definitions. The City's goal of achieving "Core" equates to having a score of at least 41.

Table 3-8: The NAMS+ Five-point AM Maturity Scale

Score Range	Scale	Definition
0-20	**Innocent / Aware**	Organizations at the Aware stage manage assets in a reactive and inconsistent way, with little documentation and heavy reliance on individual knowledge. As a result, there is limited alignment with organizational objectives.
21-40	**Basic**	Organizations at the Basic stage have some structured processes and emerging policies in place, although these may be limited in scope. Data and practices remain limited and incident around the organisation.
41-60	**Core**	Organizations at the Core level have processes that are documented and applied more consistently, with risk-based approaches and links to long-term planning introduced. Decision-making is increasingly linked to lifecycle planning and long-term financial forecasts.
61-80	**Intermediate**	Organizations at the Intermediate stage have proactive, integrated practices where reliable data supports evidence-based decisions. Strong connections exist between LoS, risk, lifecycle management and funding.
81-100	**Advanced**	Organizations at the Advanced stage demonstrate AM being fully embedded in governance and culture, driven by continuous improvement and innovation. This is also aligned with international best practice to demonstrate long-term sustainability and optimized value for stakeholders.

As highlighted previously, not all BUs have been assessed. Those that have been summarized are shown in **Table 3-9**.

Table 3-9: Completed Maturity Assessments

Business Unit	Areas Assessed
Facilities	• Buildings
Parks & Open Spaces	• Parks & Open Spaces
Capital Planning & Business Services	• Plus 15
Mobility	• Bridges
	• Sidewalks & Pathways
	• Streets
Waste & Recycling Services	• Waste & Recycling
Water Services	• Stormwater Management
	• Wastewater Collection & Treatment
	• Water Treatment & Supply

3.2.5.2 Survey Results

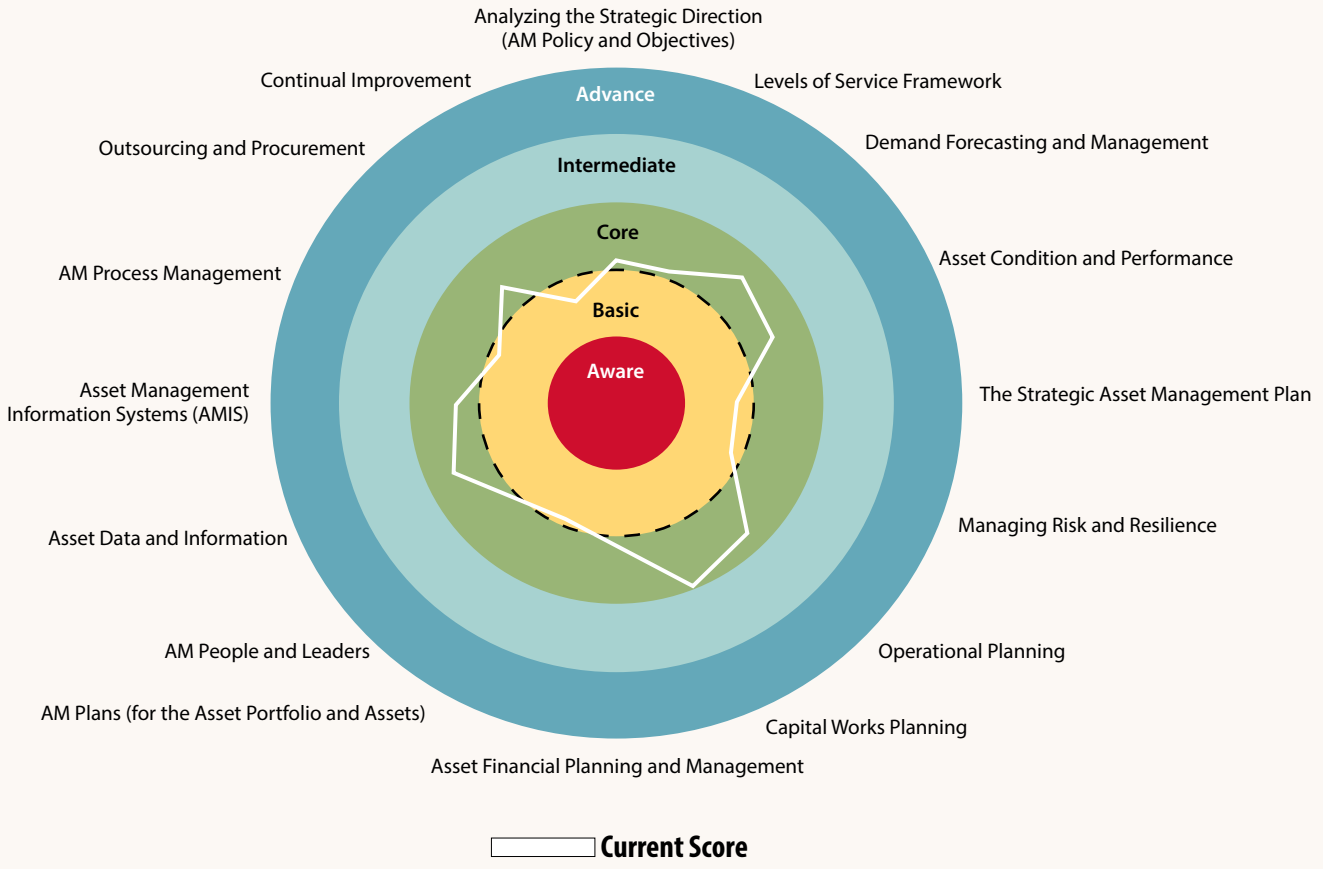
The average maturity score across the entire City based upon the available data was 45. This demonstrates that on average The City is achieving its goal of achieving a Core level of maturity. All three practice categories have been reported as achieving a Core maturity level too. At the AM practice level there was considerable variability in the reported levels. The average score for each practice area is shown in **Figure 3-13**.

The wide range of scores shows The City has existing siloes of higher performance but that this ability isn't reflected across The City. To address this a maturity roadmap has been produced (although this only represents BUs that have participated), a summary of which can be found in **Section 2**.

Key Recommendation:

Complete maturity surveys across all BUs and collate actions into any future strategic AMP.

Figure 3-13: City of Calgary – AM Maturity Performance



While the mean score per practice area showed only 5 of 16 being found to be performing below The City's target an analysis of the median showed that 9 were at a Basic level (score below 40) indicating that higher scoring BUs are skewing the data. Stronger performance across BUs was reported within the following practice areas which showed an average score of medium to high Core:

- Capital Works Planning
- Demand Forecasting
- Operational Planning
- Asset Data and Information

It should be noted that these areas also demonstrated higher standard deviations (up to 47% of mean) than other practice areas indicating stronger performance in a small group of BUs and a proportionate lower level of maturity in others. Weaker performance (a "Basic" or lower level) was reported in the following practice areas:

- Strategic AM Plan
- Managing Risk and Resilience
- AM Plans
- AM Process Management
- Continual Improvement

Once again, these areas demonstrated high standard deviations (up to 54% of mean) indicating stronger performance in a small group BUs and a proportionate lower level of maturity in others.

4

The Calgary Plan is The City's overarching strategic framework, setting out long-term goals for sustainable growth, resilience, inclusivity and economic vitality.

4 The Future Requirement

Looking forward, The City must prepare for the evolving demands on its asset base and the resources required to sustain it.

This section outlines the policies, strategies and external factors that shape how municipal assets will be managed into the future. It summarizes The City's corporate policies and identifies how these align with different asset groups and BUs, while also considering the influence of broader strategies such as climate adaptation, growth management and sustainability objectives. Overarching documents driving the future can be seen in **Table 4-1** with documents that support delivery or decision-making noted as supporting documents. The Calgary Plan and its supporting strategies are reviewed in more detail within this section.

This section presents a comparison of historic trends and forward-looking forecasts, highlighting the anticipated growth in the value of The City's capital assets and the corresponding expenditures necessary to maintain and renew them. This provides context for understanding how investment needs have developed over time and how they are expected to evolve.

Finally, the section describes the financial framework within which The City operates, including the constraints, commitments and funding sources that influence future investment decisions. Together, these elements provide a foundation for ensuring The City's AM practices remain responsive, sustainable and aligned with long-term community priorities.

Table 4-1: Future Defining Documents

Reference	Highlight	Why It Matters
The Calgary Plan	Drives the vision of the future and the target for BUs to meet.	Corporate Priorities are defined based on the desired future for The City.
Corporate Strategies	Cascades targets from the Calgary Plan into tangible activities.	Defined activities will require infrastructure and funding.
2020 Infrastructure Status Report (ISR) - supporting	~79% of assets in good/very good; ~11% fair; ~7% poor/very poor; up from 2.3% in poor/very poor since 2017.	Highlights accelerated infrastructure deterioration and rising risk to support funding decisions.
2021–2032 Long Range Financial Plan (LRFP)	Forecasts indicate increasing fiscal pressure on both capital and operating budgets. The calculated shortfall of defined expenditure vs the requirement is commonly referred to as the "Funding Gap".	Emphasizes the importance of long-term financial planning and sustainable funding strategies to maintain service levels, address infrastructure needs and ensure The City's financial resilience.
Council-endorsed rolling 10 year capital plan motion	City now committed to a sustained long term capital planning horizon.	Signals policy-level priority and legitimizes need for robust prioritization.

4.1 The Calgary Plan

The Calgary Plan is The City's overarching strategic framework, setting out long-term goals for sustainable growth, resilience, inclusivity and economic vitality. It establishes the vision for how The City will evolve and identifies the outcomes needed to deliver quality of life for residents and businesses.

From this high-level framework, The City defines a set of corporate priorities that translate the Calgary Plan's direction into focused areas of action. These priorities cascade down (**Figure 4-1**) by connecting community-wide objectives to practical, implementable commitments at the organizational level. Each corporate priority is tied to specific service areas and asset groups, ensuring that long-term strategy is embedded into daily operations, capital planning and AM practices.

In this way, the Calgary Plan provides the strategic "north star," while the corporate priorities operationalize that vision, guiding how resources are allocated, how infrastructure is managed and how future investments are aligned with community expectations.

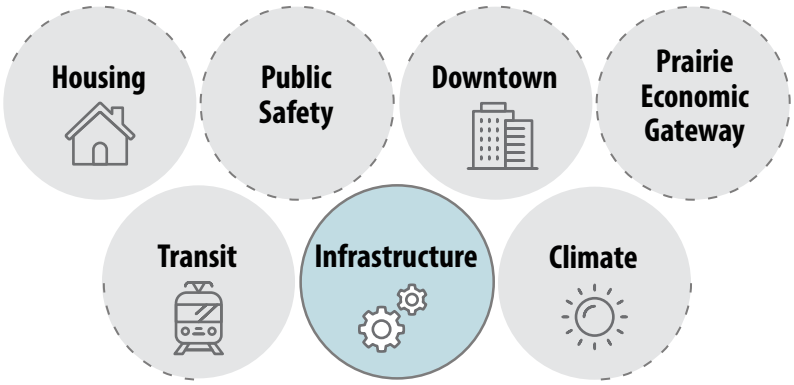
Figure 4-1: The Calgary Plan Line of Sight

This line of sight ensures that every level of planning, from citywide strategies to individual asset renewals, remains connected to the Calgary Plan. It also provides transparency for Council and residents by showing how high-level vision is translated into concrete actions and outcomes.

4.1.1 Corporate Priorities

The City's corporate priorities provide the strategic framework for asset-related decisions by defining desired service outcomes, acceptable risk levels, sustainability commitments and the balance between new growth and state-of-good-repair investment. Seven of the eight priorities relate directly to the stewardship and management of existing infrastructure, while the eighth reflects the development of the new Event Centre as a significant addition to The City's asset base. Under the agreement with the Calgary Sports and Entertainment Corporation (CSEC), The City has limited its ongoing operational obligations and established a predictable revenue stream to help support future works beyond the scope of the current contract. The remaining seven priorities are shown in **Figure 4-2**.

Figure 4-2: Relevant Corporate Priorities



Effective corporate asset policies typically require: an explicit link between corporate strategy (such as those listed) and asset decision-making, lifecycle planning across asset classes and governance structures that assign roles and accountabilities for asset stewards. The role of AMPs is to reflect the strategies in tangible and actionable steps.

4.1.2 Demand Management

Calgary's population is growing at a rapid pace, supported by strong economic conditions and relative housing affordability compared with other major centres. This growth increases overall demand on municipal systems, infrastructure, and programs. It also adds pressure to The City's operating and capital budgets as more assets, services, and community needs emerge across the urban area.

Through The City-wide Growth Strategy, The City identifies the actions and investments required to support this expansion in a manner that is market responsive, financially prudent, and aligned with long-term planning directions set out in the Municipal Development Plan, the Calgary Transportation Plan, and the Calgary Climate Strategy. Growth patterns and market conditions are monitored across industrial areas, established areas, and new communities. Forecasting tools help anticipate how people may respond to changes in land use and the built environment under various scenarios.

Coordinated planning processes involving service teams result in the identification, prioritization, and recommendation of the infrastructure investments needed to support growth across Calgary. Council makes investment decisions within the context of current growth rates, expected future growth, opportunities, and The City's overall financial capacity. As Calgary continues to expand, recognition of the pressure this growth places on municipal systems is essential for long-term planning, budgeting, and sustainable service delivery.

4.2 Historical Trends Comparison

To illustrate the scale of The City's infrastructure challenge and the progress achieved since the 2004 Infrastructure Status Report, **Figure 4-3** presents the trend in total asset value over time. The results show a substantial increase of approximately $55 billion during the most recent CAMP period from 2022 to 2026, driven primarily by asset growth, inflation, and periodic revaluations. Over the same timeframe, The City's funding gap decreased from more than 20% in 2004 to less than 10% in 2020, which represented approximately $7.73 billion, as identified in the 2020 Long Range Financial Plan and reflects sustained investment and improvements in AM practices. While the funding gap has declined as a percentage of total asset value, the absolute dollar value of the gap has increased over time as The City's infrastructure portfolio has grown. The latest gap can be obtained from the current LRFP.

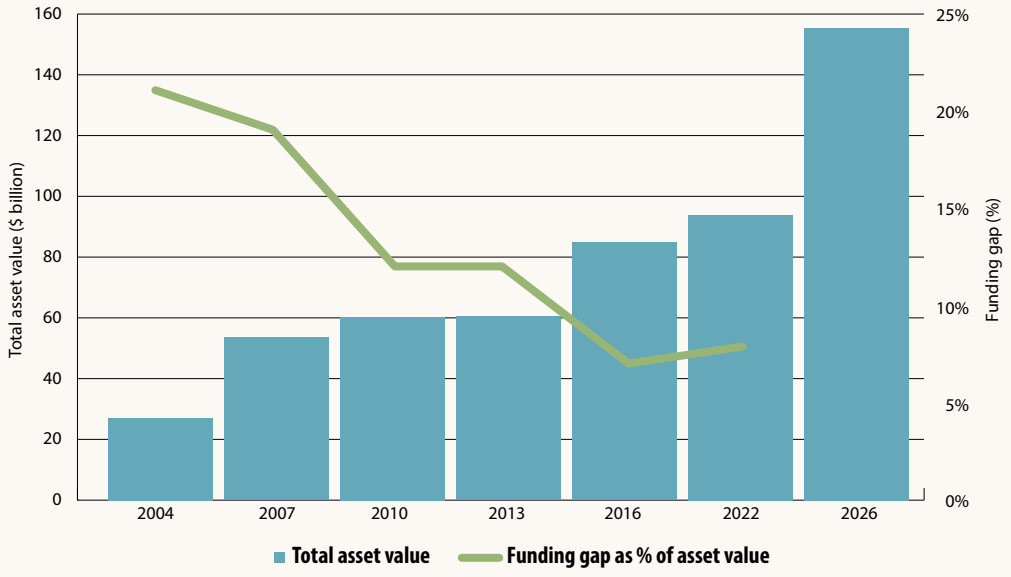
This marks a considerable improvement in financial sustainability and shows progress toward closing the long-term infrastructure funding gap - however, historical comparisons do not imply future performance. In past ISRs, some business units and some self-funded business units reported no funding gap, which affects trend interpretation. In addition, earlier cycles did not include all business units and asset classes, so past totals and averages are not fully comparable.

Inflationary pressures remain most pronounced for capital-intensive asset classes such as Water, Mobility, and Transit, which contributes to higher overall asset valuations.

This growth is expected to continue, with inflation projected to stay near the Bank of Canada's 2% target. However, from a municipal perspective, inflation may be less predictable due to uncertainties around U.S. tariffs. **Two key points for The City to consider are:**

1. Construction costs are a major driver of municipal inflation and will introduce variability into future asset valuations. It Is noted that this inflation value is approximate as in many areas The City is experiencing cost escalations much higher than this.
2. Certain asset types are particularly sensitive to factors outside Canada. Equipment such as fire trucks and IT infrastructure face production constraints or additional import tariffs, which can increase costs for The City.

Figure 4-3: Historical Performance – Asset Value and Funding Gap



The City provides a wide range of services across multiple BUs, each with unique operational responsibilities and funding models. While many services are primarily tax funded, certain areas operate with BU self-funded models, reflecting the ability to generate revenue through user fees or service charges. Understanding these funding sources is critical for evaluating financial sustainability and planning for both operational and capital needs. This section highlights the constraints The City has to work within for its financial planning. **Table 4-2** summarizes the BUs within the CAMP, their associated service lines and primary funding source.

- **Tax Funded -** Refers to services whose capital and operating budgets are primarily supported through municipal tax revenues. For some services, tax funding may also include other City revenue sources such as user fees, advertising revenue, grants, or contributions that flow through the tax-supported budget.
- **Self Funded -** Refers to services that generate the majority of their funding through their own revenue streams (e.g., utility rates, fees, or service charges), allowing them to operate with limited reliance on municipal tax revenue.

For Calgary Transit, funding is a combination of tax funding, user fees (fares), and non-fare revenues such as advertising, consistent with the 2023–2026 Budget Plan and the RouteAhead strategy. While the table presents Calgary Transit as tax funded – self-funded for consistency with corporate budget categories, its full funding model includes multiple revenue sources.

Table 4-2: Funding Sources for The City's Business Units

Business Unit	Asset Class	Funding
Mobility	Bridges & Tunnels	Tax Funded
	Roads, Sidewalks & Pathways	Tax-Funded
	Parking Infrastructure	Tax Funded & Self-Funded
Parks & Open Spaces	Parks & Open Spaces	Tax-Funded
Calgary Transit	Transit Infrastructure	Tax Funded & Self-Funded
Waste & Recycling Services	Waste & Recycling Infrastructure	Tax Funded & Self-Funded
Water Services	Potable Water	Self-Funded
	Stormwater	Self-Funded
	Wastewater	Self-Funded
Facilities	Buildings	Tax Funded
Fleet and Inventory	Vehicles & Equipment	Tax Funded (Cost Recovery, Tax Supported)
Calgary Fire Department	Fire & Emergency Response	Tax Funded
Capital Planning & Business Services	Plus 15	Tax Funded
Recreation and Social Programs	Recreation	Tax Funded & Self-Funded
Partnerships	Civic Partners	Tax Funded & Self-Funded
	Community Partners	Mixed
Information Technology	IT Solutions and Support	Tax Funded
Chief Housing Office	Affordable Housing	Tax Funded

"Inflationary pressures remain most pronounced for capital-intensive asset classes such as Water, Mobility, and Transit, which contributes to higher overall asset valuations."

4.3.1 Funding Constraints

The City continues to manage a range of financial and operational pressures that affect its capacity to sustain services, invest in infrastructure and respond effectively to emerging challenges. These include constraints on revenue growth, sensitivity around property tax levels, rising expenditure demands and increasing pressure to balance infrastructure investment with fiscal responsibility. Additional factors such as demographic changes, climate resilience requirements, shifts in the digital economy and regional service demands further complicate municipal planning. These constraints summarized from the 2021-2032 Long Range Financial Report[7] are shown in **Table 4-3**.

Table 4-3: Funding Constraints Within The City

Constraint	Description
Limited Revenue Tools	The City relies heavily on property taxes and user fees. It lacks access to growth-sensitive revenue sources like income or sales taxes, which are available to provincial and federal governments.
Property Tax Sensitivity	Property tax increases are politically sensitive and have limits based on public acceptability, even when needed to match inflation or service demand.
Revenue-Expenditure Imbalance	Operating expenditures are projected to grow faster than revenues, leading to an estimated $250 million annual operating shortfall by 2032.
Infrastructure Funding Gap	The City faces ongoing financial pressures in meeting its infrastructure investment needs, including funding for growth, maintenance and operations to support sustainable service delivery.
Dependence on Grants	Long-term capital funding from other levels of governments is unreliable and subject to change, creating uncertainty in planning.
Debt Limitations	While debt is used strategically, The City must stay within policy limits: debt ≤ 1.6× revenue and debt servicing ≤ 0.28× revenue.
Cost of Growth	New communities and redevelopment require upfront infrastructure investment before the tax base exists to support it, straining finances. The Off-site Levy Program helps recover a portion of these costs, but it does not fully cover the long-term operating, maintenance, and renewal needs created by growth.
Climate Resilience Costs	Increasing frequency of extreme weather events (e.g., floods, hailstorms) requires significant investment in climate adaptation and infrastructure resilience.
Transition to New Economy	Digital economy trends (e.g., remote work, e-commerce) are eroding the traditional property tax base, especially in downtown non-residential sectors.
Demographic Shifts	Aging population increases demand for age-sensitive services (e.g., transit, recreation, health), while shrinking the labour force.
COVID-19 Impacts	Prolonged economic recovery scenarios indicate widening operating pressures, driven by slower revenue growth and rising service delivery costs.
Regional Service Use	Non-Calgarians use City services without full compensation, creating cross-subsidization and pressure for regional cost-sharing mechanisms.
Changing Regulation and Legislation	Regulatory and legislative requirements continue to evolve, creating uncertainty for long-term planning and budgeting. New or updated provincial and federal regulations can require significant operational changes, additional compliance activities, or new capital investments. This is especially important for business units with large, regulated asset bases.
User Fee Rate Sensitivity	Services that rely on user fees are increasingly sensitive to changes in rates and customer behaviour. Adjusting rates to keep pace with costs can be challenging, and lower-than-expected revenue can create funding gaps for operations, maintenance, and renewal activities.
Asset Investment Programs (AIP)	AIP funding is required to support asset renewal and replacement. Currently, available capital AIP funding is below what is needed, creating a capital funding gap. This gap results in deferred renewal work and increases the risk of asset failure over time.

7 City of Calgary (2021) 2021-2032 Long Range Financial Report

These constraints have the following implications for funding projects across The City:

- Capital Projects must be prioritized based on lifecycle cost, service value and funding availability.
- Operating Budgets must be managed with efficiency improvements, service prioritization and cost containment.
- Debt Use must be strategic and within policy limits, with consideration for long-term repayment capacity.
- Revenue Diversification is essential, including exploring new sources (e.g., digital economy levies, regional cost-sharing, user fees).
- Contingency Planning and reserve management are critical to handle shocks and maintain service continuity.

To address these challenges, The City is exploring updated funding sources, including strategic use of user fees, development charges, public-private partnerships and targeted provincial or federal programs. These approaches aim to provide more stable and growth-sensitive revenue streams to support both operational and capital needs.

4.3.2 Additional Funding Sources

Since the last CAMP The City has created a centralized funding application team to streamline applications and increase potential success of each application. It is not possible to demonstrate the increased success rate as applications were not always recorded but between 2023 and 2026 the grant application team have reported that over $850 million dollars have been awarded to The City. This funding has been split across Federal, Provincial and Private grants on a 69%, 31%, <1% split respectively. The most successful BUs within The City are noted to be Calgary Transit (26% of funding received) and Recreation & Social Programs (15% of funding received).

The City of Calgary has achieved several significant successes in securing provincial and federal funding for key initiatives (note this is not a comprehensive list of grants received):

- **Canada Public Transit Fund (CPTF):** Based on the Government of Canada's approved baseline funding allocation data, Calgary Transit is expected to receive approximately $250M over the next decade, provided that CT continues to meet the baseline funding requirements for public transit.

- **Housing Accelerator Fund (HAF):** The City was awarded $228.5 million to support seven initiatives under the Council-approved Housing Accelerator Fund Action Plan. In addition, in March 2025, the Canada Mortgage and Housing Corporation (CMHC) granted Calgary an additional $22.8 million for exceeding housing targets ahead of schedule.

- **Green Line LRT Project:** The Green Line LRT project has secured $6.3 billion in funding commitments (separate from the grants total previously) from The City of Calgary, the Province of Alberta and the Government of Canada.

- **Public Building Renovation:** Funding for the renovation of the Calgary Public Building has been provided jointly by federal, provincial and municipal governments. The City successfully applied for over $3.8 million through the Canada-Alberta Municipal Rural Infrastructure Fund (CAMRIF) for Phase 1 of the base building envelope renovation.

Available funding should also be viewed in the context that that federal and provincial grant funding is decreasing, and the availability of additional future funding sources at a scale sufficient to address the funding gap is uncertain.

4.3.2.1 Considerations for Future Grant Applications

Based on these experiences, the grant application team has identified several key considerations for future funding efforts:

- **Decreasing Overall Funding:** Available provincial and federal funding for municipal projects is declining.
- **Provincial Oversight (Bill 18):** New provincial requirements introduce additional controls over how funds are spent, potentially delaying the receipt of funding. The City will need to carefully determine the optimal alignment of strategies between provincial and federal programs to maximize funding opportunities.
- Note that some municipal infrastructure grant applications require a Climate Risk and Resilience Assessment.

4.4 Strategies for Adressing the Gap

This section describes the strategies The City is using to respond to the gap between lifecycle needs and available funding and capacity. They focus on maintaining reliable service, prioritizing work based on risk and asset condition, and improving how investments and operating resources are allocated over time.

4.4.1 Philosophies

The City has adapted its strategy based upon 4 philosophies which are intended to guide The City in transparent and consistent decision-making. These philosophies should be embedded in all future AMPs. These philosophies are intended to guide trade-off decisions when funding constraints prevent all needs from being addressed.

Key Recommendation:

Embed the gap addressing philosophies: SOGR, Risk Management, Growth in a Balanced Fashion, and Lifecycle-Based Budget Optimization.

4.4.1.1 State of the Good Repair (SOGR)

The State of Good Repair (SOGR) philosophy focuses on keeping existing assets performing as intended by renewing, rehabilitating, or replacing them before condition and performance decline leads to service disruptions, safety concerns, or higher long-term costs. This philosophy directs investment toward sustaining the current service base rather than expanding it but is targeted at assets where the risk to service is intolerable should an asset fail or degrade.

SOGR establishes a clear baseline for "core" reinvestment needs and helps distinguish renewal requirements from discretionary enhancements. It also supports more stable planning by defining what it takes to maintain current service levels over time, even under funding constraints.

Under the SOGR philosophy, The City will define what "good repair" means per asset class and apply consistent measures such as condition, performance, and remaining service life to assess progress. Lifecycle forecasting will be used to estimate renewal needs over a defined planning horizon by applying consistent deterioration assumptions and intervention strategies (renew, rehabilitate, replace). These strategies will be tied to a small set of technical service measures to clarify the relationship between renewal investment and sustained performance (for example, the proportion of assets performing at or above a defined threshold).

The SOGR philosophy is used in parallel with a Run-to-Failure philosophy. Run-to-failure is a specific AM and maintenance strategy in which an asset is allowed to operate until it fails, with repair or replacement occurring only after failure. Assets are selected for this approach on the basis that the consequences of failure are acceptable when assessed against cost, risk, service impact, safety, and regulatory requirements. In practice this means that: failure does not endanger public safety or the environment; does not cause unacceptable service disruption; repair or replacement can be done quickly and predictably; the asset is inexpensive relative to monitoring or preventive work; and redundancy or workarounds are available upon failure.

4.4.1.2 Risk Management

The intention of risk management is to focus investment on the assets and locations where failures would have the greatest impact on service delivery and public outcomes. Instead of treating all assets the same, it prioritizes work based on both the LoF and the CoF. This approach is particularly important when funding is constrained because it helps direct available resources to the areas that most affect reliability, safety, environmental outcomes, and overall cost exposure, while making trade offs clearer when not all needs can be funded. Fundamentally it defines tolerance for acceptable risk and where risk levels need to be decreased or increased.

In practice, The City uses a consistent citywide risk approach that considers likelihood factors such as condition, age, and performance, alongside consequence/criticality factors such as service impact, safety, environmental effects, cost, and reputational considerations. Investments are prioritized to reduce high consequence risks for critical corridors, major trunk assets, and systems with regulatory sensitivity, and to reflect climate related drivers such as flooding, extreme rainfall, and heat impacts. Early interventions such as targeted rehabilitation and protective upgrades are emphasized where they can meaningfully reduce risk at lower cost than full replacement.

Risk management should consider the work that does not get enacted. To fully understand the risk to The City it is key to understand the impact of deferred work. There are often multiple reasons to defer work (budget, resources, longer term equipment strategy to dispose) and the risks associated with deferral should be clear to those making decisions so that the impact of deferral to cost and service can be understood. It is possible that in the process of risk analysis can propose mitigations that make deferral acceptable but The City should also set clear tolerances for when the risk of deferred work is intolerable and the original schedule should be retained. This is especially important for assets that have been identified to have severe consequences for The City in the event of failure.

"Lifecycle forecasting will be used to estimate renewal needs over a defined planning horizon by applying consistent deterioration assumptions and intervention strategies (renew, rehabilitate, replace)."

4.4.1.3 Growth in Balanced Fashion

The Growth in a Balanced Fashion philosophy aligns growth related investment with affordability, timing, and The City's ability to operate and maintain new assets. It supports meeting demand for growth while avoiding the creation of future operating and renewal pressures that exceed available funding. This approach is important because growth increases both capital and operating needs, and a balanced approach helps The City avoid adding assets faster than it can sustainably fund and manage them.

In practice, balanced growth relies on clear triggers for growth projects, such as capacity thresholds, service level impacts, and development timing, so expansion occurs when it is needed. It also applies growth funding principles where feasible, prioritizes enabling growth and solutions that utilize existing capacity over system expansion and adding new assets, and evaluates lifecycle and operating impacts upfront, including the long-term renewal obligations created by expansion. Coordinated planning across land use, transportation, utilities, and community partners supports better sequencing and reduces duplication. Progress can be tracked through measures such as asset growth relative to renewal capacity, operating cost impacts from expansion, utilization and capacity trends, and the future renewal obligations associated with new assets.

4.4.1.4 Lifecycle-Based Budget Optimization

The Lifecycle-Based Budget Optimization philosophy recognizes that reliable service depends on steady operating funding for preventive maintenance (including inspections, monitoring, and minor repairs), as well as the workforce capacity required to keep assets functioning day to day. But also, that ongoing intervention can be used as one of the tools that compliments the Capital budget to optimize overall lifecycle costs and to bridge the gap between lifecycle needs and the available budget. It is important to also support condition assessment, asset data management, and performance monitoring in order to plan work effectively and make informed investment decisions.

This philosophy addresses the gap by reinforcing that capital renewal alone cannot stabilize performance if operating programs are underfunded. Insufficient operating budgets can accelerate deterioration, increase failures, and shorten asset service life, which can increase long-term costs and make the funding gap more difficult to manage. In practice, The City prioritizes preventive maintenance and inspection programs, addresses workforce and delivery capacity constraints, and links capital plans to operating impacts so budgets reflect the full cost of ownership. Progress can be tracked using measures such as the ratio of planned to reactive maintenance, work order backlog, inspection coverage, trends in asset failures and emergency repairs, and operating cost impacts associated with new or renewed assets.

"Insufficient operating budgets can accelerate deterioration, increase failures, and shorten asset service life, which can increase long-term costs and make the funding gap more difficult to manage."

4.4.2 Existing and Planned Activities & Approaches

This section provides a high-level overview of current practices and areas of focus that support AM across The City. It is intended to identify existing activities and potential approaches that may be explored in future planning cycles, including 2027 to 2030 and beyond. This section is not presented as a detailed implementation plan.

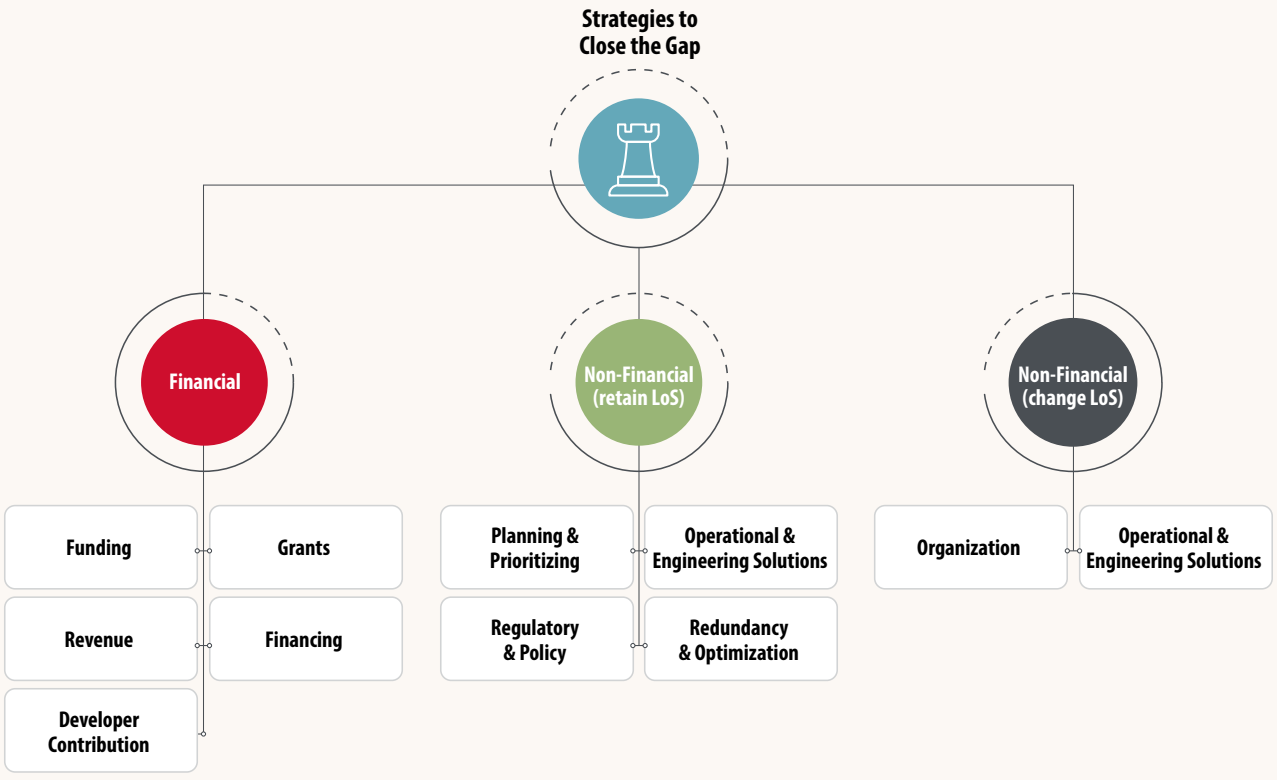
To close the gap between current and target levels of service, The City may pursue a combination of financial and non-financial pathways. These pathways reflect both how infrastructure work is paid for and how services are planned, delivered, and managed.

Figure 4-4 summarizes main pathways to close the gap: Financial strategies focus on securing the funding needed to care for existing infrastructure, including repairing, renewing, and replacing assets so they continue to serve residents safely and reliably. Funding sources may include property taxes, utility rates and user fees, provincial and federal grants, reserves set aside for maintenance, and developer contributions.

In some cases, infrastructure work is required before sufficient funding has accumulated. Financing strategies help manage the timing of these investments by bridging short-term gaps, such as through the use of debt or the temporary use of reserves. Financing is applied carefully to support timely renewal while maintaining responsible long-term debt levels.

Non-financial strategies focus on using existing resources more effectively. These include planning and prioritization practices, regulatory and policy tools, and operational and engineering solutions, including system optimization and efficiency opportunities. Collectively, these non-financial strategies focus on sustaining current levels of service and improving how services are delivered.

Figure 4-4: Strategies to Close the Gap



Each of these pathways is summarized below. **Table 4-4** illustrates the key strategies that have several areas of impact and are applied City-wide.

Table 4-4: City-Wide Strategies

Item #	Description	In use at The City?
1	Better value of City assets (BVCA)	Started
2	Energy Performance Contract	In Progress
3	Reserve Strategy – Optimize Funding	In Progress
4	Condition based maintenance (CBM) – Linear	Yes
5	Condition based maintenance (CBM) – Electrical / Rotating	No
6	Prioritize arterials strategy	Yes
7	Developer paid maintenance	Yes

Based on discussions with The City's team, the potential financial strategies identified are listed in **Table 4-5**.

Table 4-5: Financial Strategies

Item #	Description	In use at The City?
1	Funding – Investment income	Yes
2	Funding – Donations and partnerships	Yes
3	Funding – Reserves	Yes
4	Revenue – Taxation Increase (Capital Reserves)	Yes
5	Revenue – Levy (No Specific Levy)	N/A
6	Revenue – Metering/Rates (Charges for Use)	Yes
7	Revenue – Fines/Penalties	Not for funding capital work
8	Revenue – User Fees (Covers All)	Yes
9	Grants – Grant Focused Team	Yes
10	Financing – Infrastructure Bonds	Investigating
11	Developer Contribution (DCC) – Offsite capital taxation for growth related infrastructure (Community revitalization levy, Local improvement levy)	Yes
12	Special Tax	Yes

Non-financial strategies that retain current levels of service are summarized in **Table 4-6**, including approaches related to planning and prioritizing, regulatory and policy tools, operational and engineering solutions, and redundancy and optimization.

Table 4-6: Non-Financial Strategies (Retain LoS)

Item #	Description	In use at The City?
1	Planning and Prioritization – Master Planning	Yes
2	Regulatory and Policy – Reducing design margins, for example by revising water consumption assumptions and maximum day demand criteria	Yes
3	Operational & Engineering Solutions – Condition based maintenance	Yes
4	Redundancy and Optimization – Asset rationalization – reduce redundancy across the city through consolidation and partnerships (e.g., Olympic Plaza)	Yes
5	Conservation (L/capita/day) / water loss reduction	Yes
6	Rehabilitation optimization	Yes
7	Optimized capital investment (synergies) / build back better	Yes
8	LoS definition – focus on service delivery	Yes
9	Contracting – alternative finance/operate models	Yes

Non-financial strategies that change levels of service are summarized in **Table 4-7**.

Table 4-7: Non-Financial Strategies (Change LoS)

Item #	Description	In use at The City?
1	Operational & Engineering Solutions – reduce condition targets / extend asset life prior to renewal – risk-based approach	Yes
2	Alternative materials – meets the same function	Yes
3	Run-to-failure for selected asset classes	Yes
4	Optimize the condition assessment strategy (assets not on a run-to-failure basis)	Yes
5	Optimize design (materials and maintainability)	Yes
6	Develop and maintain design guidelines for asset classes	Yes
7	Conduct testing to increase the longevity assets	Yes

Appendix A

"The plan identifies required investments, prioritizes funding based on risk and criticality, and supports decision-making to optimize lifecycle costs and maintain service continuity for Calgarians."

Appendix A

2026 Corporate Asset Management Plan (CAMP) Development

The CAMP is The City of Calgary's long-term, strategic framework for managing its diverse infrastructure portfolio, currently valued at $155.4 billion. As outlined in **Section 1**, the CAMP consolidates information from all asset-owning BUs to provide a corporate-level view of asset inventory, condition, risk, and investment needs. Its primary purpose is to ensure that municipal services are delivered effectively and sustainably by aligning service levels, financial planning, and risk management with corporate priorities and international standards such as ISO 55000 and the International Infrastructure Management Manual (IIMM). The plan identifies required investments, prioritizes funding based on risk and criticality, and supports decision-making to optimize lifecycle costs and maintain service continuity for Calgarians. This section outlines the contents and methodology used for creating this iteration of the CAMP.

Building on the 2022 CAMP as the corporate baseline and guided by The City's AM Policy, the 2026 CAMP advances from primarily descriptive reporting to a decision-oriented, risk and service-based planning instrument. The forthcoming plan will present a consistent, citywide financial picture, aggregating needs and articulating the corporate funding shortfall rather than isolated gaps by BU, thereby strengthening the CAMP's role as a clear, executive-level messaging tool for strategic trade-offs. Complementing this unified financial view, the 2026 CAMP will deepen risk-based analysis to identify critical assets and priority investment needs and will more explicitly communicate lifecycle-based investment strategies that sustain LoS over the long-term. To enhance clarity, transparency, and accountability, the plan will compare prior financial forecasts to actuals, disclose data completeness and confidence levels, and apply consistent analytical scenarios across BUs, including where modelling maturity varies.

A.1 Data Sources and Methodology

Data for all BUs was supplied by individual BUs, compiled in Microsoft Excel format and used to develop the BU Summaries section. Information was provided at a summary level rather than as a full line-by-line inventory. While efforts were made to maintain a consistent format across BUs, some gaps remain in key details such as age ranges, criticality, and condition information.

The data provided included a standardized set of fields to enable consistent analysis across all BUs. These fields form a comprehensive view of the asset base, supporting assessment of value, condition, age, and risk while informing lifecycle planning and investment decisions. **The analysis drew on the following data fields:**

- **Asset Portfolio**
- **Asset Subsystem**
- **Asset Components and Descriptions**
- **Asset Counts (based on aggregated data)**
- **Units**
- **Current Replacement Value**
- **Age Range in Years (newest to oldest assets)**
- **Theoretical Useful Life**
- **Condition**
- **Weighted Average Condition**
- **Criticality and Risk**

A.1.1 Current Replacement Value (CRV)

Updating the CRVs is an ongoing effort aimed at improving the accuracy of asset data and enabling data-driven capital planning. In this CAMP, the CRVs reflect the best estimates available at the time of reporting provided by the BUs and will be updated in future versions as data quality improves, and market conditions change. It should be noted that CRVs generally exclude costs related to system growth, technological advancements, sustainable alternatives, or service improvements unless otherwise specified. They provide a consistent view of The City's asset portfolio and are a key input for long-term financial planning, risk analysis, and investment prioritization.

A.1.2 Asset Condition

Assessing asset condition is a key component of this CAMP, providing a clear view of infrastructure performance and guiding decisions on interventions. Asset condition has a direct impact on The City's core services, as deteriorating assets increase the likelihood of failures, service interruptions, higher maintenance workloads, and reduced reliability across services such as water distribution, transportation, transit, and buildings. Understanding condition helps identify where degrading assets could affect service delivery and where reinvestment will provide the most benefit to the community.

Standardized ratings, explained in **Table A 1**, classify assets from "Very Good" to "Very Poor," supporting consistent evaluation across all asset types. Where inspection data is unavailable, remaining service life and age-based deterioration models are used to estimate condition.

Each condition category includes the percentage of replacement value represented by the assets in that category. These percentages are used to calculate a weighted average condition score, providing a realistic picture of the overall portfolio's health and helping identify where investment will have the greatest impact.

Assets rated "Very Poor" are generally near or beyond their expected service life and may incur higher maintenance or repair costs, but condition alone does not determine prioritization. Many assets in very poor condition are still considered acceptable because they are non-critical in nature. In this CAMP, both condition and criticality, as outlined in the following section, are used together to guide renewal and replacement decisions to reduce risk and optimize costs.

This combined, value-weighted approach balances ongoing maintenance with capital investment to deliver the best value and maintain reliable services for the community.

Table A 1: Description of Condition Rating Categories

Condition Rating	Description
Very Good (1)	The asset is fit for the future. It is well maintained, in good condition, new or recently rehabilitated.
Good (2)	The asset is adequate. It is acceptable and generally within the mid-stage of its expected service life.
Fair (3)	The asset requires attention. It shows signs of deterioration, and some elements exhibit deficiencies. Asset operation is still acceptable in this state but the asset may have decreased performance from new.
Poor (4)	There is an increasing potential for the asset's condition to affect the service it provides. The asset is approaching the end of its service life, the condition is below standard, or a large portion of the system exhibits significant deterioration.
Very Poor (5)	The asset is unfit for sustained service. It is near or beyond its expected service life and shows widespread signs of advanced deterioration. Some assets may be unusable.
Unknown	Not enough data exists to respond.

A.1.3 Age and Estimated Service Life (ESL)

This CAMP uses the age range (newest and oldest assets) and theoretical useful life data provided by The City to establish a clear understanding of the asset portfolio. This information can be used to estimate remaining service life and support long-term planning.

Knowing an asset's age and theoretical useful life helps forecast future maintenance, renewal, and capital needs, identify trends across BUs, and guide proactive lifecycle management. Factors such as historical maintenance, operational practices, and environmental conditions can influence how actual service life compares to theoretical values. More information regarding age and ESL is provided in **Section 1** and **Appendix B.**

A.1.4 Risk

Effective risk assessment is essential for strategic decision-making, enabling The City to prioritize infrastructure investments based on operational and economic impact. Guided by the Integrated Risk Management Policy, Calgary embeds risk management into all levels of planning and service delivery, fostering transparency, accountability, and informed resource allocation.

Building on the previous CAMP, The City's approach to risk has been refined to improve consistency and comparability across Business Units. Risk is calculated as Likelihood of Failure (LoF) × Consequence of Failure (CoF), with CoF values calibrated through a citywide conversion matrix to align differing scales and criteria. This calibration enhances the ability to interpret risk results consistently across portfolios while recognizing that large-value asset groups may influence overall risk trends. By aligning asset-level risks with broader strategic objectives, The City ensures that infrastructure decisions support long-term sustainability, regulatory compliance, and community resilience. Key criteria and grading schemas are detailed in the following sections.

A.1.4.1 Tactical Risk (Asset Risk)

Risk assessment is a critical component of strategic decision-making, helping determine which projects or activities should be prioritized based on their economic and operational justification.

Based on The City's Integrated Risk Management Policy[8], risk management is embedded as a core element of decision-making and service delivery. The policy emphasizes a systematic and proactive approach, integrating risk considerations into strategic planning, daily operations, and the development of policies, programs, and projects.
It promotes a culture of openness and accountability where risks are identified, assessed, communicated, and managed transparently. This approach strengthens The City's ability to make informed decisions, allocate resources effectively, and ensure that significant risks are disclosed to management, Council, and Committees for appropriate oversight. The City has strived to develop a unified risk framework across its asset portfolio to ensure consistency in evaluating both condition and consequence of failure.

The condition is used in this CAMP in lieu of LoF. The use of asset condition works well at the asset or system level within a given asset class where physical condition is a well-accepted proxy for LoF. However, at the Business Unit or Service Level, the condition may become misleading since portfolios and services do not Fail in the same sense as individual assets/components do. In reality services underperform and therefore at a strategic level a failure is not technical and is instead more aligned to a failure to meet a particular service objective. Results herein should be viewed in this context.

While the grading scheme for condition is unified, the criteria to assess consequence of failure varies significantly across some asset classes. For this CAMP, unified criteria have been defined and are presented in **Table A 2,** while **Table A 3** shows the grading scheme based on the data provided for this CAMP.

CoF describes how severe the impact would be if a given asset were to fail. It is assessed across multiple dimensions, as defined in **Table A 2,** such as cost, reliability, safety level, regulatory compliance, and climate risk. Each asset class defines criticality based on these criteria in the context of the services they provide, and this information has been used to develop the CoF scores applied in the risk assessment. This approach ensures that the assessment of consequence of failure reflects all relevant impacts for different asset classes and supports consistent, evidence-based prioritization when combined with asset condition.

Table A 2: Consequence of Failure Criteria

Criteria	Definition
Climate Risk	Evaluates how well the asset contributes to, or is resilient against, climate change impacts and future environmental conditions. ** Recommendation for the future update:* ***Climate Risk*** *Evaluates how vulnerable the asset is to the impacts of climate change and future environmental conditions. This includes exposure and sensitivity to hazards such as extreme heat, hail, high winds, intense precipitation, flooding, drought, freeze-thaw cycles, and other climate-driven stressors, and the severity of consequences if the asset is affected or fails.*
Cost	Measures the potential financial impact of an asset's failure, including repair, replacement, and associated economic losses.
Regulatory	Evaluates how asset failure could lead to loss of public trust, damage to reputation, loss of accreditation, financial penalties, or legal action due to non-compliance.
Reliability	Considers the likelihood that asset failure would disrupt service delivery or operational performance.
Safety Level	Reflects the potential impact of asset failure on public and worker health, safety, and overall risk exposure.

8 City of Calgary (2020) Integrated Risk Management Policy

Table A 3: Consequence of Failure Grading

CoF Score	Definition
Very Low (1)	Negligible impact: no significant consequences or impact on the LoS.
Low (2)	Minor impact: some loss of system capacity, but minimal costs or impacts
Medium (3)	Moderate impact: loss of some system capacity, yet important LoS still achieved.
High (4)	Major impact: loss of system capacity, major consequences or costs, LoS compromised.
Severe (5)	Severe impact; massive system failure, severe economic, environmental, health, and/or social consequences, persistent and extensive damage, unable to meet LoS goals.

In this framework, asset condition represents the LoF, and asset criticality represents the CoF. Combined, these factors create a risk rating that provides an overall asset health index for each BU. The final risk score is calculated as the product of the CoF and the LoF, as shown below.

Risk = Likelihood of Failure (LoF)× Consequence of Failure (CoF)

The CoFs used to allow comparison across asset classes are referred to as The City Calibrated CoFs. To calibrate the provided scores to a single matrix all the provided CoF matrices were compared and the extreme impacts of each criteria selected as the maximum and minimum score. The grades between the extremes were also populated based upon the provided scales to create The City's overall CoF matrix **(Table A 4).**

The calibrated score aligns the provided scores to their relevant position on the matrix. Note that this method is limited by the data provided by BUs following the original request and where CoFs cannot be calibrated using all CoF criteria values have used a smoothed criticality function (basing the value on the criteria available, which most often results in a slightly higher CoF) or based on the CRV alone. Note that these criteria are also weighted according to the average value determined by the BU's (shown in **Table A 4** in the Weighting column).

Table A 4: City of Calgary Criticality Framework

Criteria	Weighting	Consequence of Failure				
		1	2	3	4	5
Financial (CRV of each asset)	**23%**	**<$10,000**	**$10,000- $500,000**	**$0.5M - $2M**	**$2M-$5M**	**> $5M**
Reliability	**26%**	Failure of 1 asset has no impact, or recovery/ repair can be conducted in less than 1 week. Asset has significant existing redundancy.	Failure of an individual asset has a minor impact to an individual or small number of stakeholders, or recovery/repair can be conducted in <3 months. Asset has existing redundancy greater than requirement for service.	Failure of an individual asset leads to a notable degradation of service. Significant localized disruption with a response/repair within 1 year. Asset has some redundancy.	Failure of an individual asset leads to severe degradation of service that could extend beyond the local area. Major localized disruption. Response recovery of greater than 1 year. Prolonged impact to City departments. Asset has minor redundancy.	Failure of any asset leads to no service provision or Citywide impact requiring public response. For assets with no redundancy the failure is critical. Major City-wide disruption with a response recovery of greater than 1 year or prolonged impact to the organization.
Safety	**19%**	No harm or potential for minor injury or illness/ discomfort - no first aid required.	Some harm. Minor staff injuries, illness, or disease requiring first aid but no medical treatment. Minor Employee LTI.	Minor to serious staff injuries resulting in medical treatment. Injury/illness to member of public.	1 Single staff fatality or multiple injuries. Permanent disabilities and/or chronic health effects to employee. Severe injury to member of public.	Multiple staff fatalities or serious injuries. Any public fatalities or severe injuries. Immediately danger to life or health.
Regulation	**19%**	No impact. Non-reportable. Limited to parties involved	Minor regulatory intervention. Permit Non-compliance and warning letter Minor legal impact. Local to event/asset.	Significant intervention and or fine. Legal vulnerability e.g., contract or criminal law breach, negligence and outcome uncertain.	Significant fine and legal action. Legal vulnerability with adverse outcome for The City.	Stop work. Prosecution from failure to meet mandatory obligation. Asset shutdown pending regulatory or external body investigation. Legal vulnerability with significant adverse outcome.
Climate Change	**13%**	**Climate hazards:** Highly localized damage reversible within 1 week with existing City procedures. **Emissions:** Alternate power source.	**Climate hazards:** Highly localized damage, reversible within 3 months with City procedures. **Emissions:** Asset has latest emission technology.	**Climate hazards:** Local damage reversible within 1 year. May require external assistance. **Emissions:** Asset has antiquated emission operation on an infrequent basis.	**Climate hazards:** significant Local, or Regional Damage. Reversible greater than 1 year. **Emissions:** Notably high emissions during operation impacting local air quality on an occasional basis.	**Climate hazards:** Irreversible environmental damage. Damage to protected site of high ecological value. **Emissions:** Very high emissions leading to localized or regional pollution on a frequent basis.

A.1.4.2 Strategic Risk

Organizational strategic risk addresses how infrastructure assets influence The City's broader priorities, including financial sustainability, regulatory compliance, reputation, and long-term service delivery. By considering these risks alongside tactical (asset) risk, The City can better align asset decisions with strategic goals, minimize undesirable outcomes, and pursue opportunities that enhance community resilience and value.

This CAMP integrates The City's corporate risk perspective with AM by recognizing Principal Corporate Risks (PCRs) collectively, tracking changes in risk ratings, and aligning the CoF and LoF assessments with broader organizational objectives. This combined view helps ensure infrastructure decisions support The City's strategic direction while maintaining reliable and sustainable services.

The City's Risk Profile at Mid-Year 2025[9] highlights key corporate risks, including capital infrastructure risk and service delivery risk, both of which are directly relevant to this CAMP. These risks influence financial planning by shaping priorities for maintaining and renewing The City's infrastructure, guiding investment decisions, and helping allocate resources to mitigate long-term operational and capital challenges. Further details on these risks and their implications for financial planning are provided in **Section 4** of this CAMP. In addition, the strategic risk profile for each BU, where available, is summarized in **Appendix B,** providing a comprehensive view of risk across The City's infrastructure portfolio.

A.1.5 Levels of Service (LoS)

LoS show how well The City's infrastructure supports service delivery. For this CAMP, each BU provided customer and technical LoS KPIs, where available, enabling a consistent and transparent assessment across the portfolio.

Clearly defined LoS help align stakeholder expectations with strategic goals, guide lifecycle planning and budgeting, and improve transparency about the costs and benefits of maintaining or changing service levels. LoS also support continuous improvement by clarifying performance, risks, and financial impacts of service changes.

This CAMP summarizes BU LoS results into three categories to provide a clear overview across The City's operations.

Table A 5: LoS Categories

Grade Colour	Condition Description
	Meeting LoS target
	Potential to Not Meeting the LoS Target
	Currently Not Meeting the LoS Target

This CAMP incorporates both customer and technical LoS to provide a balanced view of how infrastructure supports service delivery and guides investment decisions.

- **Customer LoS:** Measures how service is experienced by users or stakeholders, focusing on aspects such as responsiveness, and how well customer expectations are met.
- **Technical LoS:** Measures the physical and operational performance of assets, such as reliability and sustainability, to support the delivery of service.

Section 1 and Appendix B of this CAMP present the LoS KPIs in more detail for each BU.

9 City of Calgary (2025) The City's Risk Profile at Mid-Year 2025

A.1.6 Lifecycle Management and Financial Strategies

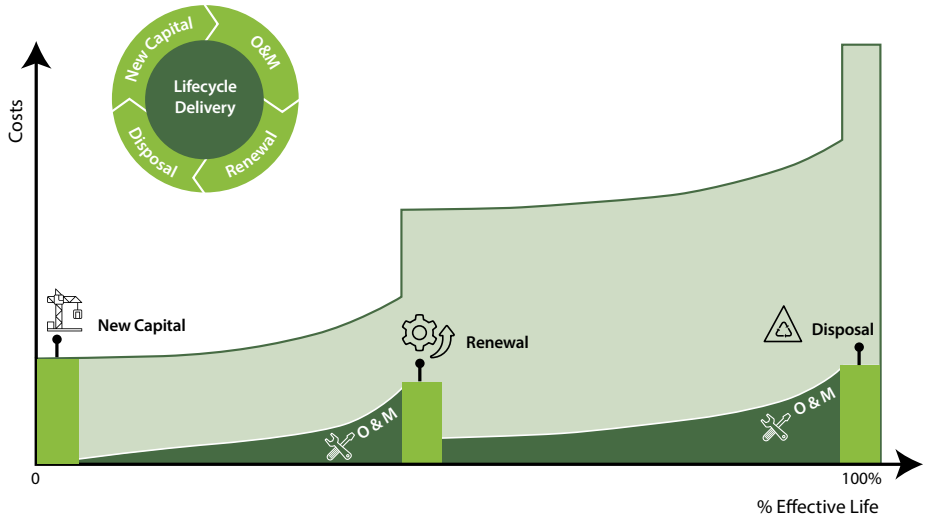
Asset lifecycle management encompasses a comprehensive set of activities that occur throughout an asset's entire lifespan. This holistic approach enables The City to make informed decisions that address both present and future service delivery requirements. The overarching objective of lifecycle management is to optimize the long-term value and functionality of The City's assets while minimizing associated costs and risks.

Each asset carries a total lifecycle cost, which includes all expenditures incurred from acquisition through operation, maintenance, renewal, replacement, and eventual disposal. This cost profile extends beyond traditional infrastructure to also include growth-related investments and non-infrastructure activities such as program delivery, regulatory compliance, and support services. An integral aspect of the AM planning process involves understanding and forecasting these combined financial requirements to facilitate proactive planning and resource allocation in the most cost-effective manner possible.

It is important to recognize that the cumulative costs linked to ongoing operations, maintenance, renewal, replacement, growth, and disposal typically far exceed the initial acquisition cost. Therefore, gaining a comprehensive understanding of the complete lifecycle costs, including both infrastructure and non-infrastructure components, before asset acquisition or program initiation is essential to ensure prudent investment and long-term sustainability.

Figure A.1 illustrates how costs accumulate over an asset's lifespan with notable spikes in cost as equipment nears renewal and disposal, highlighting the importance of considering all stages when evaluating lifecycle investments.

Figure A.1: Asset Lifecyle Stages



While this CAMP has strived to incorporate lifecycle activities across BUs, future iterations will expand on this by providing more detailed profiles for each BU, explicitly incorporating growth and non-infrastructure considerations into The City's AM planning framework.

A sound financial strategy built upon lifecycle costs is essential for the success of The City's CAMP. It ensures that the CAMP implementation is anchored in realistic budgeting, aligns capital and operating costs with service delivery goals, and enables access to funding tools that support long-term sustainability. Construction projects and community development also need to prioritize quality and build with operators' needs in mind so that maintenance activities remain practical and financially sustainable over the asset's lifecycle. By analyzing historical spending patterns and projecting future needs, the strategy helps The City understand which BUs require what levels of funding. It also ensures that funding sources are matched to priorities, and that provincial policies such as those embodied in the Provincial Priorities Act are factored into the capital funding process so The City remains eligible for grants and other external support. Under Alberta's Provincial Priorities Act (Bill 18, effective April 1, 2025), municipalities and other designated provincial entities must submit all new, amended, extended, or renewed federal-entity agreements to the province; agreements above $0.1 million require ministerial approval, while those $5 million or more require Cabinet approval. This means that timing, structure, and alignment with provincial policy are now important considerations in project planning and cash flow forecasting. **Section 4** delves deeper into these requirements by comparing past expenditure trends, identifying available funding for each BU, and mapping out how capital investment decisions will align with both internal service plans and external, provincial priorities.

A.2 The Asset Management Landscape of Calgary

Identifying corporate AM pressures helps highlight the broader factors that shape how The City plans, funds, and delivers infrastructure services. These pressures include growth, aging infrastructure, and emerging challenges such as chronic underfunding that accelerates deterioration, poor construction quality that reduces expected service life, and increased asset usage from population growth that leads to faster wear and performance decline. Understanding these pressures allows The City to anticipate risks, direct resources where they matter most, and align AM practices with corporate goals, ensuring the CAMP reflects both current asset conditions and the internal and external forces influencing future investment needs and service levels.

A.2.1 Aging infrastructure

A significant portion of Calgary's infrastructure was built decades ago and is now approaching or is beyond its estimated service life (ESL). As assets age, they generally require more maintenance, experience reduced reliability and carry higher risk of service interruptions. Recognizing these challenges within this CAMP provides the foundation for prioritizing renewal and replacement programs, planning long-term capital needs, and maintaining sustainable service levels for residents.

A.2.2 Rapid Population Growth and Demand

Calgary's rapid population growth continues to shape The City's long-term infrastructure needs. Although this CAMP does not focus on growth-related capital projects, growth still creates important operating and capital funding pressures. When new communities are built and new assets are added, Business Units become responsible for more infrastructure. These assets require staff, maintenance, materials, and operating dollars. Funding for these operating needs does not always keep up with the pace of growth, which creates an operating funding gap for many services.

Growth also increases the size of the overall asset base. This increases future renewal requirements and contributes to a long-term capital funding gap. Even when growth capital is provided, the ongoing lifecycle and renewal costs must still be managed.

Calgary has grown from just over one million residents in 2007 to about one and a half million today. The city has experienced some of the fastest population growth rates in Canada in recent years and is expected to reach two million residents in the coming decades. This continued growth places pressure on infrastructure, operating budgets, and long-term renewal needs. Including these pressures in the CAMP provides important context for lifecycle planning and investment decisions.

A.2.3 Inflation and Rising Costs

Calgary is facing rising costs for building and maintaining infrastructure due to high inflation, market volatility, and supply chain disruptions. Construction materials, fuel, equipment, and labor have all become more expensive, leading to budget overruns, higher tender prices, and delays in asset replacement. The City is also experiencing rising costs of deferred maintenance, as postponing required work increases future repair needs and accelerates asset deterioration. Contingency funds have been set aside to manage these pressures, but ongoing cost escalation and higher interest rates still require adjusting project scopes, seeking additional funding, or postponing projects. Careful cost management and planning are now essential to keep infrastructure programs on track in this high-inflation environment.

A.2.4 Financial, Budget, and Underfunding

Chronic underfunding remains a significant pressure as delayed or insufficient investment in maintenance and renewal leads to faster deterioration, higher lifecycle costs, and widening gaps between desired and achievable service levels. At the same time, The City continues to navigate increasing financial pressures in managing its growing infrastructure portfolio, with long-term forecasts showing that investment needs will exceed available funding over the next decade. Slower revenue growth, high inflation, rapid population increases, and fluctuating intergovernmental funding all contribute to this challenge, making it harder to keep pace with required reinvestment. Together, these financial realities call for careful prioritization of investments, innovative funding approaches, and strategic partnerships to support service levels and strengthen long-term financial sustainability within Calgary's AM strategy.

A.2.5 Regulatory, Policy & Environmental Requirements

Calgary's infrastructure operates within a regulatory environment that is not only changing but also includes services that are highly regulated and required to meet specific minimum standards. The City must comply with federal, provincial, and municipal requirements covering safety, environmental protection, and utilities, and for certain services, meeting mandated minimums is non-negotiable. New or stricter rules often require investments in upgrades or new infrastructure to stay compliant, adding cost and affecting project timelines. Calgary's AM approach aims to anticipate these pressures by reviewing regulations early and designing infrastructure that can meet both current and future requirements, reducing the risk of sudden compliance issues. Regulatory and legal obligations remain an ongoing pressure that must be integrated into infrastructure planning and risk management.

A.2.6 Service Delivery & Reliability Expectations

Calgarians increasingly expect reliable, safe, and high-quality services from City infrastructure, putting pressure on The City to maintain and improve its assets. These expectations extend beyond basic functionality to higher standards of performance, reliability, and accessibility. The City incorporates public expectations into asset planning by engaging residents, aligning service levels with available budgets, and adapting to evolving needs such as digital services or improved accessibility. Rising expectations require The City to be flexible and innovative in managing its infrastructure to deliver better outcomes without unsustainable costs.

A.2.7 Capacity, Workforce & Operational Challenges

Managing Calgary's $155.4 billion asset portfolio is both a financial and operational challenge. The City needs enough skilled staff, tools, and capacity to plan, monitor, and maintain its diverse infrastructure, yet many BUs face resource constraints. Shortages of dedicated staff can slow data collection, reduce consistency in practices, and delay maintenance or projects. Supply chain disruptions and limited labour availability also slow down asset replacements, which can push schedules back and contribute to cost or budget overruns. Rapid city growth adds further strain as crews must serve expanding networks without equivalent workforce increases. Strengthening workforce planning, training, data systems, and processes will help keep infrastructure programs on track and maintain reliable services.

A.2.8 Frequency and Severity of Climate Events

Calgary is experiencing more frequent and severe climate-related events, which are creating added pressure on operating budgets, maintenance planning, and asset longevity. Climate extremes such as hailstorms, localized flooding, drought periods, and prolonged heat waves are driving unplanned costs that were not built into existing operational budgets, requiring funds to be diverted from other planned work. For example, park restoration and tree-planting activities now require significantly more watering during drought periods, adding tens of thousands of dollars in additional cost per hectare.

These climate trends are also accelerating asset wear and shortening expected lifecycles. Facilities roofing systems, Calgary Transit track infrastructure, and other temperature-sensitive materials are showing earlier degradation than planned due to increased heat intensity and changing environmental conditions. As a result, maintenance and replacement cycles now need to be adjusted more frequently, increasing both workload and long-term funding needs.

A.3 2026 CAMP Updates

The 2026 CAMP represents a significant advancement in Calgary's AM maturity, transitioning from a descriptive inventory to a strategic, risk-informed planning tool. It builds on the 2022 foundation by integrating financial planning, lifecycle strategies, and governance reforms, while responding to emerging challenges such as climate change, funding constraints, and demographic shifts. The key differences are summarized as follows:

Narrative and Strategic Shift - The 2022 CAMP was largely descriptive and inventory-focused. It provided a snapshot of The City's infrastructure portfolio, emphasizing asset condition, infrastructure gaps, and basic risk assessments. The reporting leaned heavily on charts, and service line summaries, with a strong emphasis on quantifying the infrastructure gap and identifying areas of concern. It was structured to support internal budgeting and service planning, with a clear but siloed view of each service line.

In contrast, the 2026 CAMP marks a significant evolution in purpose. It adopts a strategic, decision-oriented style, aligning closely with ISO 55000 principles and The City's broader planning frameworks, such as The Calgary Plan. The document is designed not just to report on assets, but to guide executive-level decision-making, support lifecycle-based investment strategies, and communicate risk and service trade-offs in a more integrated and comparative way.

Structure and Organization - The 2022 CAMP is organized by asset classes and includes detailed summaries for each, with a focus on asset condition, risk, and investment needs. It uses a traditional format with sections like "Current Asset Status," "Investment Needs," and "Service Line Summaries." Sections were often presented in isolation from broader strategic goals.

The 2026 CAMP builds upon previous versions by reporting by asset class and including more assets within scope.

Risk and Service Level Reporting - In 2022, risk was assessed primarily through condition and criticality scores, but these were not standardized across service lines, making comparisons difficult. LoS reporting was emerging but inconsistent, with many service lines lacking defined targets or performance metrics.

By 2025, the CAMP introduces a calibrated citywide risk framework, enabling consistent comparisons across BUs. LoS reporting is more mature, with Water Services achieving full Council approval and other BUs progressing toward defined customer and technical LoS. The plan emphasizes the importance of LoS in budgeting and investment prioritization, and it introduces the concept of "willingness to pay" as part of service trade-off discussions.

Tone and Language - The 2022 CAMP adopts a predominantly technical and operational tone, emphasizing data, performance metrics, and infrastructure needs, with limited discussion of broader strategic implications.

The 2026 CAMP adopts a more human-centered and strategic tone, using accessible language to explain complex concepts like lifecycle planning, risk calibration, and AM maturity. It is written with a broader audience in mind, including Council, executive leadership, and external partners, and it emphasizes transparency, accountability, and alignment with community values.

While both documents use charts and tables, the 2026 CAMP introduces comparative visuals that allow readers to see trends over time, differences between BUs, and risk profiles across asset groups. These visuals are used not just to present data, but to support strategic insights and decision-making.