Corporate Asset Management Summary

CITY OF VICTORIA

Contents

Introduction

The City of Victoria's 2024 Corporate Asset Management Summary offers a detailed look at the health of the infrastructure supporting essential services across Victoria. While much of the attention is on critical infrastructure such as facilities, roads, bridges, utilities, and recreation, the value of natural and cultural assets is also recognized. These diverse elements are key to Victoria's identity, and while efforts are underway to better assess the risks and financial health of these non-engineered assets, the City's commitment to their care remains unwavering.

As with many cities across North America, Victoria faces the challenge of managing aging infrastructure. Several important assets require upgrades or improvements due to years of underinvestment or deferred maintenance. Addressing these needs is crucial to ensuring continued service delivery and will require thoughtful consideration in financial decisions. The necessity of these upgrades must be weighed against future goals, prioritizing long-term sustainability for both infrastructure and the community.

Asset management is a continuous and dynamic process, relying on timely, accurate data to inform decisions. This report highlights current data gaps, providing transparency on what is known and where more information is needed. As a key reference for City Council and staff, this report will guide infrastructure planning and help align it with the City's financial and service objectives. Progress will be continually monitored, and updates to this report will be provided on an annual basis, establishing a barometer for asset management progress.

Recognition is extended to the dedicated and multidisciplinary efforts of the Asset Management Steering Committee Working Group and the Engineering section, whose expertise underpins this report. Their work provides a clear, high-level view of the infrastructure's health and the steps needed to maintain it. Acknowledgment is also given to the collaborative and committed efforts of staff, whose daily work ensures that the City's assets are managed in a way that enables quality service delivery to the community. Together, the City is working to care for its assets in a responsible, sustainable manner.

Asset Management Steering Committee

William Doyle, Acting Director | Engineering and Public Works
Jas Paul, Assistant Director | Engineering
Susanne Thompson | Deputy City Manager / CFO
Derrick Newman, Director | Parks, Recreation and Facilities
Thomas Soulliere | Deputy City Manager

The Asset Management Steering Committee brings together expertise from various departments to guide the development and implementation of asset management practices. Their role is to advise on the strategic planning required to maintain and improve these assets. They are instrumental in shaping the City's long-term approach to asset sustainability, working to bridge data gaps, and ensuring that City assets—whether engineered, natural or cultural—are managed in a way that maximizes their value and service to the community.

Through their efforts, the Steering Committee supports the preparation of the Corporate Asset Management Summary, providing City Council with the necessary insight to make informed decisions during Financial Plan deliberations. By continuously evaluating asset conditions and financial health, the Committee ensures that infrastructure planning aligns with both immediate needs and long-term goals, safeguarding the City's ability to deliver essential services in a sustainable and cost-effective manner.

Asset Management

The City of Victoria owns $3.6 Billion of infrastructure assets that allow for the delivery of reliable services that are critical to the wellbeing of Victoria residents, business and visitors. Every day, City staff monitor, maintain, renew and replace 36 unique types of infrastructure across eight asset categories that include structures, facilities, parks and open spaces, transportation, stormwater, wastewater, waterworks and fleet. Asset management is the continuous process of understanding the current physical condition of these assets and the financial requirements needed to sustain the services they provide to the community.

The City of Victoria is facing infrastructure pressures that are consistent with other local governments across North America where aging assets are deteriorating to a point of needing major maintenance investments and upcoming infrastructure capital renewals and replacements to sustain the service levels being received by the community today into the future. The recommended minimum financial needs to sustain service levels are brought forward annually for Council's consideration as part of the budgeting and financial planning process and are based on an identification of assets in critical need of attention. In addition, the City's most costly and high-risk assets have gone through master planning processes to forecast the funding needs over a longer time horizon to inform future capital spending levels in the City's *Financial Plan*.

In 2021, staff conducted a comprehensive review of corporate asset management practices with the objective of standardizing how asset information is captured and communicated for all 36 types of infrastructure owned and managed by the City. Outcomes from the review were incorporated into the City's corporate asset management program and led to the development of the City of Victoria's *Corporate Asset Management Summary*.

Asset management is a process of continuous improvement and staff are regularly updating information on asset condition, service levels and the financial requirements to provide reliable services to the community now and into the future.

How to Use this Document

Asset Overview	Familiarize yourself with our assets categories and the major asset groups under each.
Asset Age and Condition	Dive deep into the state of our infrastructure for each major asset group with data-driven metrics.
Condition-Based Risk	Use the condition-based risk matrix to understand the relationship between condition and risk.
Service Objectives and Sustainability	Walk through the Service Objectives for each major asset group and review Current Performance and Future Preparedness.
Mitigating Risks to Levels of Service	Note the risks associated with meeting current and future levels of service and consider mitigation.

Assets Overview

The Corporate Asset Management Summary addresses the asset groupings below and the infrastructure types under each. These assets were identified as high-cost and/or high-risk assets that require significant capital and operations budgets to ensure service delivery.

What about Natural Assets?

Assets can be divided into engineered assets (ex. roads) and natural assets (ex. trees). While we work on capturing our full natural asset inventory, we have opted to focus on our high value engineered assets for this report.

Structures

Johnson Street Bridge
3 Vehicular Bridges
21 Pedestrian Bridges
472 Retaining Walls
15 Marine Structures

Facilities

38 Admin and Operations Facilities
12 Community + Senior Centres
12 Entertainment + Events Facilities
2 Libraries
5 Parkades
5 Public Safety Facilities
21 Public Washrooms
8 Recreation Facilities

Parks and Open Spaces

1 Artificial Sports Field
36 Sport Courts
4 Skate and Bike Parks
41 Playgrounds

Transportation

106 km Major Roads
176 km Local Roads
226 Traffic Signals
467 km Sidewalks
12,775 Street Lights
17 km Fibre Optic Lines

Stormwater

256 km Stormwater Mains
11,140 Stormwater Laterals (94 km)
4 Stormwater Pump Stations
4 Stormwater Rehabilitation Units
81 Stormwater Outfalls

Wastewater

241 km Wastewater Mains
13,782 Wastewater Laterals (124 km)
11 Wastewater Pump Stations

Waterworks [1]

332 km Water Mains
20,920 Water Services (191 km)
1 Water Pump Station
11 Water PRV Stations
19,409 Residential Water Meters
1079 Bulk Water Meters
1809 Water Hydrants

Fleet

308 City Fleet
62 City Fleet Equipment
85 Police Fleet
43 Fire Fleet

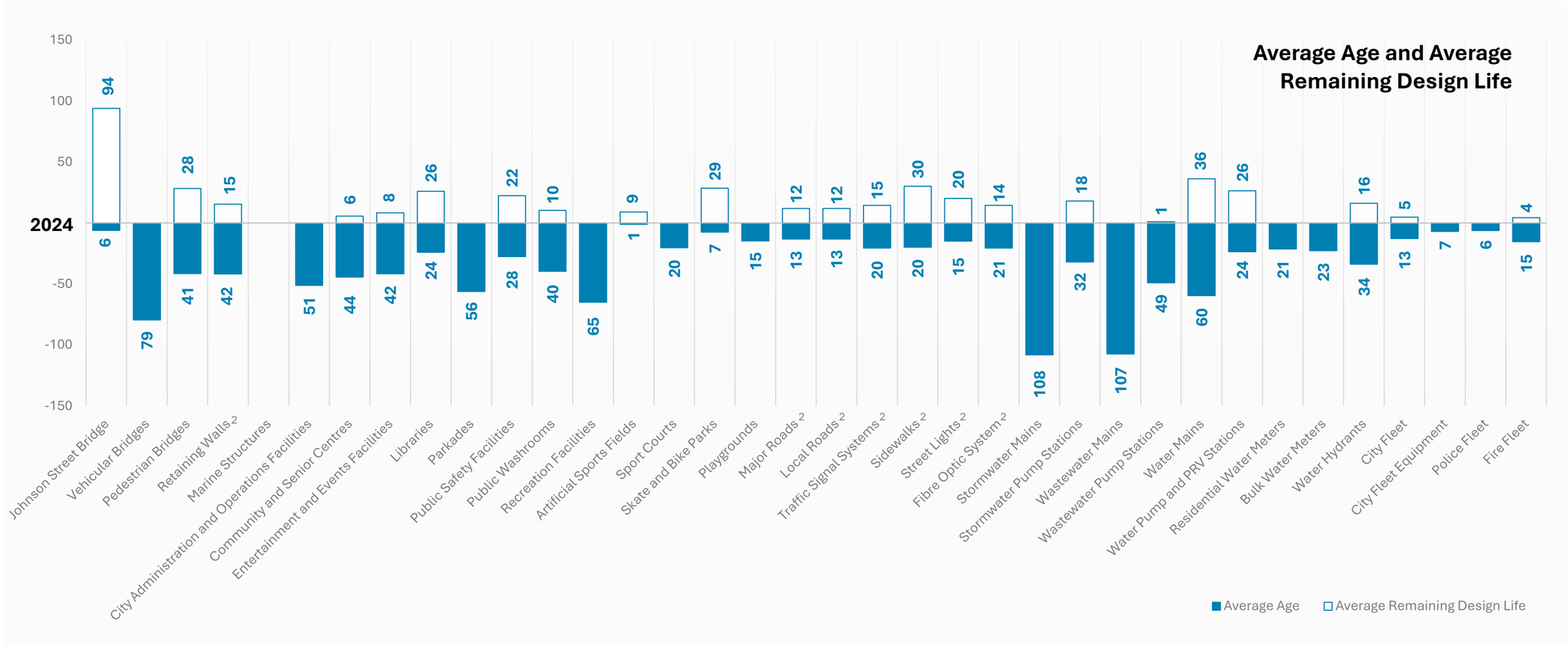
The City of Victoria owns $3.6 Billion of infrastructure

Asset Age

The average age is represented by the solid blue bars and the average remaining design life is represented by the white outlined bars.

What is Design Life?

Design life is the period over which an asset is expected to function with maintenance measures but without major repair work.

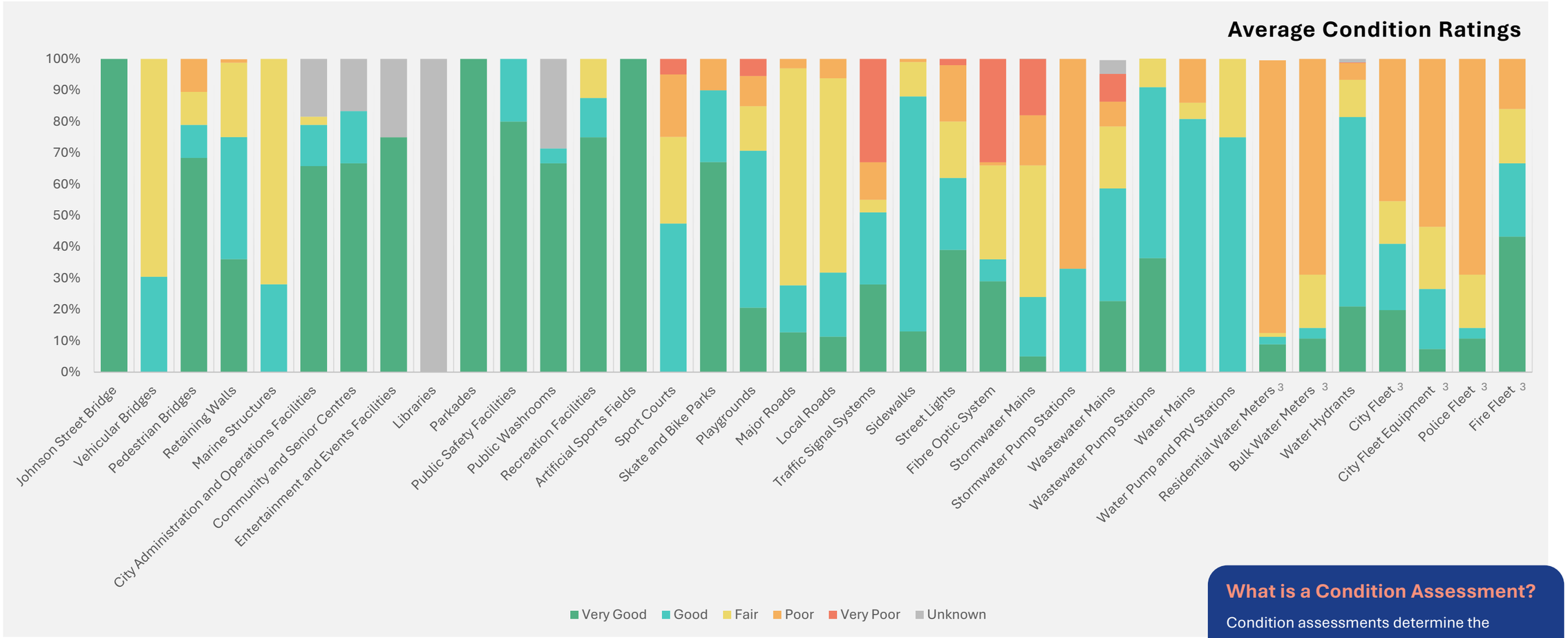


Interpretation of data:

Vehicular Bridges, City Administration and Operations Facilities, Parkades, Recreation Facilities, Sport Courts, Playgrounds, Stormwater Mains, Wastewater Mains, Residential Water Meters, Bulk Water Meters, City Fleet Equipment, and Police Fleet have reached or exceeded their design life. This does not necessarily mean that they are in poor condition as shown on the next page, but it does mean that more time is likely spent maintaining these assets to ensure they remain in operating condition.

Asset Condition

The average condition rating of each major asset group is represented with a 5-point scale from Very Good to Very Poor. The condition ratings are based on definitions from the City of Victoria *Condition Framework* (*Appendix C)* and sourced from respective condition assessments. Where the data is unknown, this indicates that the data is not available or not current.



What is a Condition Assessment?

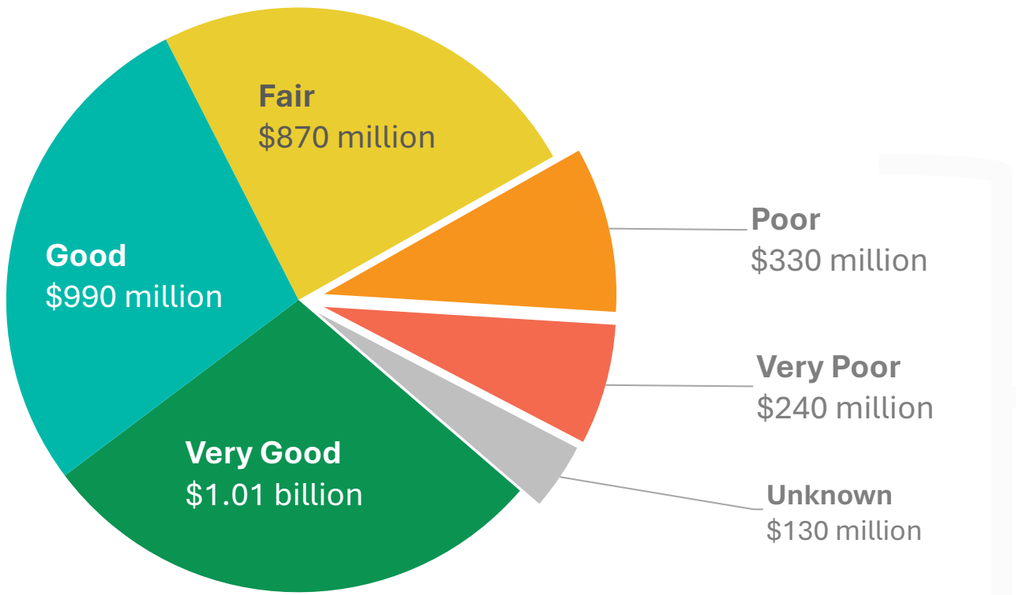
Condition assessments determine the physical deterioration of an asset.

Interpretation of data:

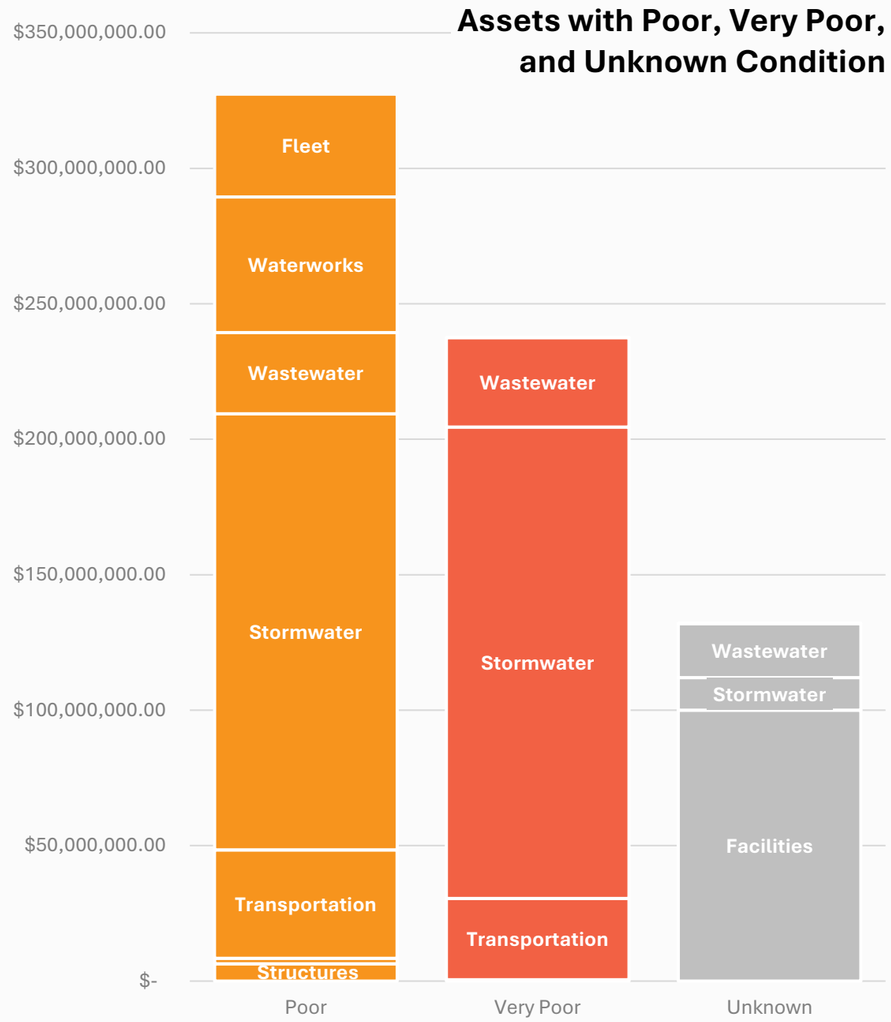
Asset groups represented by a partial or full grey bar do not have current condition data for a portion or the whole of the asset group.

Facilities data is based on condition assessments conducted over the past 10 years, and as a result may show some buildings in better condition than what exists at the time of this report. It also shows gaps in the data due to newly acquired properties and facilities that were not assessed at the time of the previous assessment.

Condition by Estimated Replacement Costs

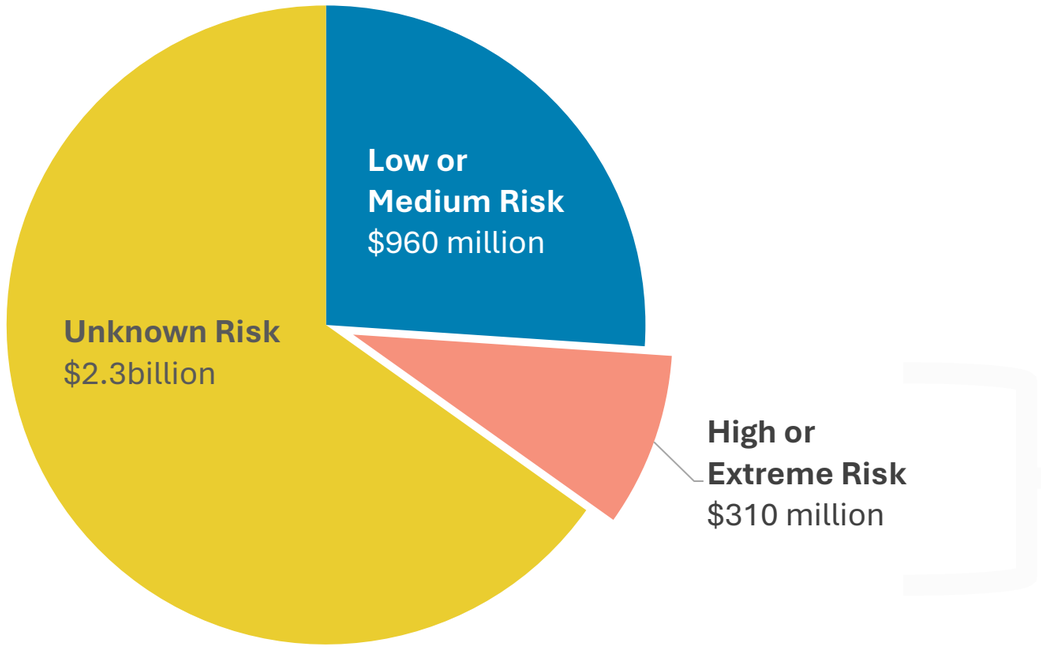


3.6 billion

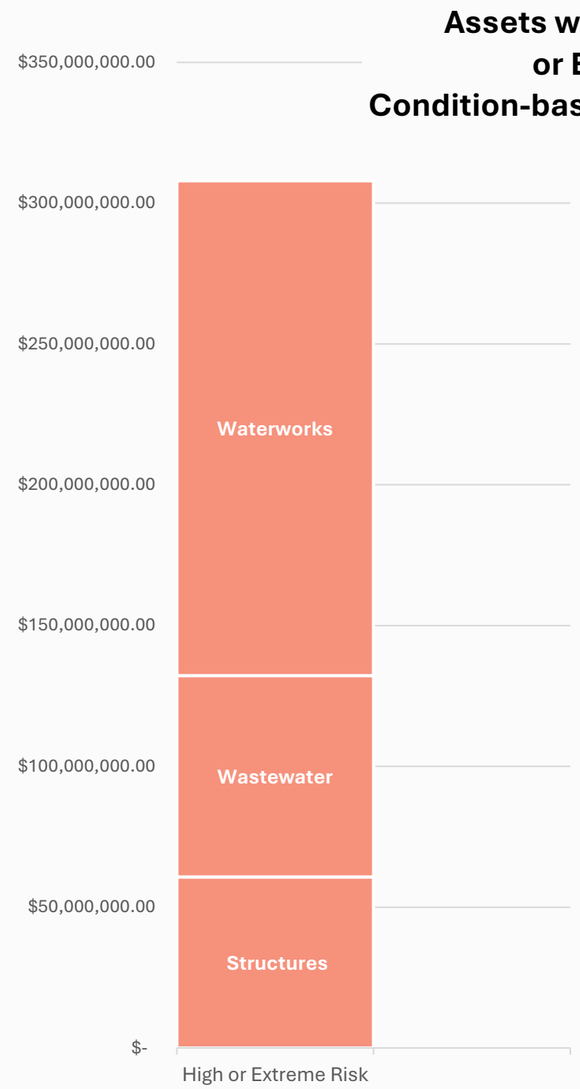


700 million

Condition-Based Risk
by Estimated Replacement Costs



3.6 billion



310 million

CITY OF VICTORIA

Service Objectives and Service Sustainability

Service objectives are high-level measurable statements that describe the primary service of each asset group based on guiding documents and legislation outlining the City's requirements for service delivery.

Service sustainability is determined through a review of three factors: 1) "service delivery" that determines the degree to which service levels are being met, 2) "condition and risk" that identifies the completeness and frequency of condition and risk assessments 3) "finances" that determines whether funding levels have been assessed and are adequate to sustain service levels. This review looks at both current performance and future preparedness.

Structures

Ensure Structures are safe and reliable.

Current Performance	%
Service Delivery	67
Condition and Risk	67
Finances	33
Average	**56**

Future Performance	%
Service Delivery	33
Condition and Risk	67
Finances	33
Average	**44**

Facilities

Ensure functionality, comfort, safety, sustainability, and efficiency in all our facilities.

Current Performance	%
Service Delivery	67
Condition and Risk	33
Finances	33
Average	**44**

Future Performance	%
Service Delivery	33
Condition and Risk	33
Finances	33
Average	**39**

Parks and Open Spaces

Ensure equitably distributed, safe and well maintained and well-connected offering a wide variety of experiences and activities.

Current Performance	%
Service Delivery	100
Condition and Risk	33
Finances	33
Average	**55**

Future Performance	%
Service Delivery	50
Condition and Risk	67
Finances	33
Average	**50**

Transportation

Ensure Transportation network provides safe, sustainable, and affordable access to businesses, services, and community resources.

Ensure Transportation network aids in the reduction of greenhouse gas emissions and is resilient to climate change.

Current Performance	%
Service Delivery	67
Condition and Risk	33
Finances	33
Average	**44**

Future Performance	%
Service Delivery	33
Condition and Risk	33
Finances	33
Average	**39**

Stormwater

Protect property and prevent localized flooding by collection and conveyance of stormwater from precipitation events.

Ensure the health of local waterways for ecosystems and downstream users.

Current Performance	%
Service Delivery	100
Condition and Risk	33
Finances	67
Average	**67**

Future Performance	%
Service Delivery	33
Condition and Risk	33
Finances	33
Average	**33**

Wastewater

Protect public health and the environment by collection and conveyance of wastewater.

Current Performance	%
Service Delivery	100
Condition and Risk	33
Finances	67
Average	**67**

Future Performance	%
Service Delivery	33
Condition and Risk	33
Finances	33
Average	**33**

Waterworks

Ensure the Waterworks network provides the reliable delivery of safe drinking water.

Ensure Waterworks network provides adequate water for firefighting purposes.

Current Performance	%
Service Delivery	100
Condition and Risk	33
Finances	67
Average	**67**

Future Performance	%
Service Delivery	33
Condition and Risk	33
Finances	33
Average	**33**

Fleet

Ensure provision of safe, right sized, and reliable fleet and power equipment.

Current Performance	%
Service Delivery	67
Condition and Risk	67
Finances	67
Average	**67**

Future Performance	%
Service Delivery	67
Condition and Risk	67
Finances	67
Average	**67**

Mitigating Risks to Level of Service

This section provides a summary of current issues that challenge the ability to meet service objectives and options to mitigate the risk to service levels.

	Risks to Levels of Service					
Mitigation	**Inflation**	**Market Condition**	**Deferred Maintenance and Replacement**	**Workforce Availability**	**Climate Change**	**Overlapping City Objectives**
Review levels of service; bring forward innovative approaches to maintaining or enhancing existing levels of service and review possible reductions to service levels where warranted.	X	X	X	X	X	
Increase access to revenue; increase existing revenues, explore new revenue streams, and leverage maximum dollars from federal and provincial funding sources.	X	X	X	X		
Apply an affordability lens; ensure guiding policies and strategic plans consider what the City can afford.	X	X	X			X
Carry out a full cost accounting exercise in the procurement of all major assets.	X	X	X			
Review assets in poor to very poor condition; ensure critical infrastructure continues to receive adequate funding to address Poor to Very Poor condition ratings and prevent assets deteriorating to this condition.	X	X	X			

Appendix A | **Data Integrity**

1. Waterworks assets include both City of Victoria and Township of Esquimalt water distribution systems.
2. Condition-based age is used to identify age where asset install date is not available.
3. Age-based condition is used to identify condition where asset condition assessments are not available.

Asset Category	Major Asset Groups	Condition Data Source	Replacement Cost Source	Replacement Cost Year	Provided By
Structures	Vehicular Bridge - Johnson Street Bridge	2021 Insurance Appraisal	Insurance Appraisal	2021	Westmar Advisors Inc. (consultant)
	Vehicular Bridge - Burnside Road Bridge	2022 Condition Assessment	Condition Assessment	2022	McElhanney Ltd. (consultant)
	Vehicular Bridge - Gorge Road Bridge	2022 Condition Assessment	Condition Assessment	2022	McElhanney Ltd. (consultant)
	Vehicular Bridge - Point Ellice Bridge	Manager estimate	Rehabilitation Cost Estimate + Manager Estimate	2014	Asset Manager
	Pedestrian Bridge - 0.2 Mile Bridge	Manager estimate	Manager Estimate	2024	Asset Manager
	Pedestrian Bridge - Hereward Bridge	Manager estimate	Manager Estimate	2024	Asset Manager
	Pedestrian Bridges (except 0.2 Mile Bridge and Hereward Bridge)	2022 Condition Assessment	Condition Assessment	2022	McElhanney Ltd.(consultant)
	Retaining Walls	2022 Condition Assessment	Condition Assessment	2022	McElhanney Ltd.(consultant)
	Marine Structures	2024 Condition Assessment	Condition Assessment	2024	McElhanney Ltd.(consultant)
Facilities	City Administration and Operations Facilities	2015 Facility Condition Index Assessment	Insurance Appaisal / Partially available	2023	Loss Control Consultants Ltd. (consultant)
	Community and Senior Centres	2015 Facility Condition Index Assessment	Insurance Appaisal / Partially available	2023	Loss Control Consultants Ltd. (consultant)
	Entertainment and Events Facilities	2015 Facility Condition Index Assessment	Insurance Appaisal / Partially available	2023	Loss Control Consultants Ltd. (consultant)
	Libraries	2015 Facility Condition Index Assessment	Not available	Not available	Not available
	Parkades	2015 Facility Condition Index Assessment	Insurance Appaisal / Partially available	2023	Loss Control Consultants Ltd. (consultant)
	Public Safety Facilities	2015 Facility Condition Index Assessment	Insurance Appaisal / Partially available	2023	Loss Control Consultants Ltd. (consultant)
	Public Washrooms	2015 Facility Condition Index Assessment	Insurance Appaisal / Partially available	2023	Loss Control Consultants Ltd. (consultant)
	Recreation Facilities	2015 Facility Condition Index Assessment	Insurance Appaisal / Partially available	2023	Loss Control Consultants Ltd. (consultant)
Parks and Open Spaces	Topaz Artificial Sports Field	Victoria Parks Consolidated Master Dataset	Topaz ATF - High Level Cost Estimate for Infrastructure Replacement	2024	Asset Manager
	Topaz Skate and Bike Parks	Victoria Parks Consolidated Master Dataset	Topaz Cost Breakdown Summary 04-12-22	2024	Asset Manager
	Cecilia Ravine Bike Park	Victoria Parks Consolidated Master Dataset	Victoria Concept Budget	2024	Asset Manager
	Vic West Skate Park	Victoria Parks Consolidated Master Dataset	NLS Budget Worksheet Sep 22, 2016	2024	Asset Manager
	Sport Courts	Victoria Parks Consolidated Master Dataset	Victoria Parks Consolidated Master Dataset	2024	Asset Manager
	Playgrounds	Victoria Parks Consolidated Master Dataset	Victoria Parks Consolidated Master Dataset	2024	Asset Manager
Transportation	Major and Local Roads	Tetratech webtool 2023 conditions	Pavement Management Analysis Report	2020	TetraTech Canada Inc. (consultant)
	Traffic Signal Systems	Preventative Maintenance Inspections	Manager Estimate based on unit rates/actual costs from comps	2024	Asset Manager
	Sidewalks	2020 Sidewalk Inventory and Condition Assessment	Sidewalk Inventory and Condition Assessment Program	2020	WSP Canada Inc. (consultant)
	Street Lights	Preventative Maintenance Inspections	Manager Estimate based on unit rates/actual costs from comps	2024	Asset Manager
	Fibre Optic System	Preventative Maintenance Inspections	Manager Estimate based on unit rates/actual costs from comps	2024	Asset Manager
Stormwater	Stormwater Mains	2024 Draft Rainwater Master Plan	2024 Draft Rainwater Master Plan	2024	Aplin & Martin Consultants Ltd. (consultant)
	Stormwater Pumpstations	2024 Draft Rainwater Master Plan	2024 Draft Rainwater Master Plan	2024	Aplin & Martin Consultants Ltd. (consultant)
Wastewater	Wastewater Mains	2018 Sanitary Sewer System Master Plan	National Benchmarking Data Portal	2021	Finance Department
	Wastewater Pumpstations	2018 Sanitary Sewer System Master Plan	National Benchmarking Data Portal	2021	Finance Department
Water	Water Main	Not available	2020 Water Distribution System Master Plan	2020	Finance Department
	Water Pumpstation and PRV	2020 Water Distribution System Master Plan	Not available	Not available	Not available
	Residential Water Meter	Age-based condition data	Current market value	2024	Asset Manager
	Bulk Water Meter	Age-based condition data	Current market value	2024	Asset Manager
	Water Hydrant	Preventative Maintenance Inspections	Not available	Not available	Not available
Fleet	City Fleet	Age-based condition data	Capital Replacement Plan	2024	Asset Manager
	City Fleet Equipment	Age-based condition data	Capital Replacement Plan	2024	Asset Manager
	Police Fleet	Age-based condition data	Capital Replacement Plan	2024	Asset Manager
	Fire Fleet	Age-based condition data	Capital Replacement Plan	2024	Asset Manager

Appendix B | Terminology and Definitions

Artistic Assets: Art-based elements used to enhance the living conditions in communities, examples include murals and sculptures.

Asset Group: A high-level grouping of assets with related attributes, examples include stormwater, parks, and fleet.

Condition: The physical state of an asset at this moment in time.

Condition Framework: A method to consider condition across all asset types on a scale from 1 – 5; 1 being Very Good and 5 being Very Poor.

Condition-Based Risk: The likelihood of a consequence occurring based on the condition or physical state of the asset at this moment in time.

Condition-Based Risk Framework: A method to consider condition-based risk across all asset types within a 5x5 matrix where condition equals likelihood.

Cultural Assets: Cultural-based elements used to enhance the living conditions in communities, examples include landmarks and commemorative plaques.

Design Life: The period for which an asset is expected to remain functional or useful.

Engineered Assets: Built or manufactured elements used to meet infrastructure requirements.

Infrastructure: The managed elements of interrelated systems that provide goods and services essential to enabling, sustaining or enhancing the living conditions in communities (source: NAI).

Levels of Service: Objectives and performance measures that define the expected performance of assets and related services.

Major Assets: High-cost and/or high-risk assets that require significant capital and operations budgets to ensure service delivery.

Natural Assets: The use of preserved, restored, or enhanced elements or combinations of vegetation and associated biology, land, water, and naturally occurring ecological processes to meet targeted infrastructure outcomes (source: NAI).

Preventative Maintenance: Regularly scheduled activities to maintain condition and avoid deterioration of an asset.

Protocol Assets: Gifts from other organizations or groups that enhance the living conditions in communities, examples include sculpture elements from sister cities.

Replacement Cost: The dollar value to acquire, construct or develop the asset at the location and in the condition necessary for its intended use.

Service Objective: The intent of the service and a means by which to measure performance.

Service Sustainability: Provision of a service in a socially, economically and environmentally responsible manner to ensure the ongoing provision of the service for future generations.

Appendix C | **Condition Framework**

1 **VERY GOOD**	**2** **GOOD**	**3** **FAIR**	**4** **POOR**	**5** **VERY POOR**
Sound physical condition.	Acceptable physical condition.	Deterioration is evident.	Advanced deterioration.	Deterioration to the point of failing.
No failures.	Minimal short-term failure but potential for deterioration in long-term.	Failure unlikely within short-term but further deterioration likely.	Failure likely within the short-term.	Failure imminent or failed.
Asset performs adequately.	Asset performs adequately.	Asset performs adequately and is still serviceable.	Asset does not perform adequately and is barely serviceable.	Asset does not perform adequately and is not serviceable.
Asset meets level of service requirements.	Asset meets level of service requirements.	Asset meets level of service requirements but monitoring recommended.	Asset meets level of service requirements, but frequent monitoring recommended.	Asset does not meet level of service requirements.

Appendix D | **Condition-Based Risk Framework**

PEOPLE	ENVIRONMENT	PROPERTY	SECURITY	SERVICE DELIVERY
Fatality	Prosecution/litigation probable Long term or significant remediation efforts required Long term impacts, >1 year Significant offsite impact	> 1M property damage or > 50K vehicle damage	Violent act or harassment that results in death Kidnapping Armed assault/blast attack Theft > 1K	Significant shut down of service Evacuation of >25 individuals Extended national or world-wide news coverage
Permanent or partial disability	Prosecution/litigation/financial repercussions possible Regulatory driven remediation Medium/long term impacts, up to 1 year Major off site impact	> 1M property damage or > 50K vehicle damage	Violent act or harassment that results in permanent or partial disability Theft > $500 and < 1K	Unacceptable service impairment Evacuation of 5-25 individuals Extended local new coverage or one national/international mention
Professional medical treatment resulting in more than one full day away from work	Regulatory notification required Fine/litigation possible Short term impacts, clean up response > 1 day Minor off site impact	> 50K and < 100K property damage or > 10K and < 30K vehicle damage	Violent act or harassment that requires professional medical treatment resulting in more than one full day away from work Theft > $300 and < $50	Serious service impairment Less than 5 individuals evacuated One time mention on local news
Professional medical treatment resulting in less than one full day away from work	Release contained within site boundary No Regulator notification required Short term impacts, clean up response <1 day	> 2K and < 50K property damage or > 2K and < 10K vehicle damage	Violent act or verbal harassment leading to professional medical treatment resulting in less than one full day away from work Theft > $100 and < 300	No evacuation Moderate public disruptions Moderate service disruption
Minor injury/illness Return to work immediately	Contained within secondary containment No/low impacts likely	< 2K property or vehicle damage	Violent act or verbal harassment with minor effects. Return to work immediately Theft < $100	No evacuation Minor public disruption Minor service disruption

CONSEQUENCE

RISK				
5 MEDIUM	10 MEDIUM	15 HIGH	20 EXTREME	25 EXTREME
4 LOW	8 MEDIUM	12 HIGH	16 HIGH	20 EXTREME
3 LOW	6 MEDIUM	9 MEDIUM	12 HIGH	15 HIGH
2 LOW	4 LOW	6 MEDIUM	8 MEDIUM	10 MEDIUM
1 LOW	2 LOW	3 LOW	4 LOW	5 SPECIAL
VERY GOOD	GOOD	FAIR	POOR	VERY POOR
CONDITION				

Appendix E | **Estimated Replacement Costs**

Asset Category	Estimated Replacement Cost
Structures	$560,000,000
Facilities	$630,000,000
Parks and Open Spaces	$20,000,000
Transportation	$560,000,000
Stormwater	$970,000,000
Wastewater	$390,000,000
Water	$340,000,000
Fleet	$100,000,000
Total	**$3,570,000,000**

Note: Estimated replacement costs are sourced from insurance appraisals, master plans, and replacement cost datasets and vary in age from 2020 to 2024. See Appendix A: Data Integrity for more details on replacement cost sources.