

## Our Commitment

### Mission

The City's physical assets are managed in a way that meets approved customer service outcomes at a level that is safe and affordable.

### **Value Statement**

Our value-for-money service proposition must be underpinned by assets that maintain the ability to support the delivery of services. It must comply with all legal obligations and meet future challenges of demand, quality, efficiency, and environmental change.

Our assets may be of variable condition, but they must be safe to the users and affordable to the community.

Our asset management practices have both an outward focus on the community and an inward focus on efficiency.









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### Highlights

- This is the City's first comprehensive report on the state of the City's physical assets. It will continue to be refined over time in terms of details and to include all City assets.
- Assets only exist for the purpose of supporting the delivery of a service. Having well-defined customer levels of service is an essential element.
- The City's assets are safe, but their condition is deteriorating. It is important to understand what levels of service can be delivered based on the funding that is available. Given this pressure, there is a need to continue to apply a risk-based approach to investment decisions.

- In the past, infrastructure investments focused on addressing the funding needs required to support growth. The infrastructure built as a result of the significant growth that has taken place since the 1950's is reaching a stage were significant investments are needed to renew existing assets.
- There needs to be a continued focus on only assuming the infrastructure needed to support smart growth given the challenges in looking after what has already been built.
- The objective of asset management is to apply "the right intervention, on the right asset, at the right time", in a manner that considers affordability and risk.
- Current challenges are creating funding pressures in having to balance capital investments across different service areas; thus the need for a comprehensive asset management approach.









Comprehensive Asset Management is an integrated business approach involving planning, finance, human resources, information technology, engineering, maintenance, and operations. The objective is to effectively manage existing and new infrastructure to maximize benefits, reduce risk, and provide safe and reliable levels of service to community users. This is done in a socially, culturally, environmentally, and economically conscious manner.

A Comprehensive Asset Management approach allows the City to define the:

- Inventory and value of the assets needed to support the delivery of services;
- Asset condition and expected remaining service life;
- Level of service expectations, costs, and what needs to be done to achieve those levels;
- Interventions required on assets and when these are most appropriate to sustain the service;
- Cost to acquire, operate, maintain and renew while maintaining an acceptable level of risk; and
- Appropriate investment levels to ensure long-term affordability.

This Figure represents how all the elements of an asset management system come together to support the link between corporate goals and day-to-day decisions.

# Comprehensive Asset Management Framework Community and Stakeholder Expectations (Level of service expectations from customers and regulators) Corporate Strategic and Business Plans (Long Term Sustainability Goals, City Strategic Plan, Official Plan, Long Range Financial Plan, Fiscal Framework, Master Plans, Business Continuity Plans and HR Plan) Comprehensive Asset Management Policy (Council adopted asset management practices and principles) Comprehensive Asset Management Strategy (Senior Management approved long-term approach to management of assets) Comprehensive Asset Management of assets) Lifecycle Management Regulations, Level of Service Enhancements Asset Management Enablers (Knowledge Management, Resource Planning, Competency Development, Technology) Asset Management Plans Operate Plan Design Create Maintain Design Create Maintain Design Des







# Comprehensive Asset Management Principles

The objectives of the Comprehensive Asset Management Program are to:

- Improve customer service and strive to deliver services at an agreed upon level of service;
- Enhance decision-making accountability and transparency;
- Demonstrate the long-term impact of short-term decisions;
- Reduce life cycle costs while maintaining assets in safe condition; and
- Enhance justification of infrastructure investment decisions and link these decisions to service outcomes.

These objectives are achieved through the application of a number of policy statements, including:

- **Customer Focused** Having clearly defined customer service levels;
- Service Focused Considering all the assets needed to deliver a service to customers;
- **Value-Based/Affordability** Decisions based on balancing service levels, risks, and costs;
- Forward Looking Making decisions and provisions to better enable assets to meet future challenges;
- Risk-Based Safeguarding public health and safety, protecting the environment, and preserving the assets;
- Holistic A comprehensive approach that considers the combined impact of managing all aspects of the asset life cycle;
- **Systematic** Adopting a formal, consistent and repeatable approach; and
- **Innovative** Continually improving how assets are managed by taking advantage of new technology.



### **Aligning with Corporate Priorities**

Developing a Comprehensive Asset Management Program was identified as a 2011–2014 Council priority. How the City's assets are managed plays a key role in achieving the City's strategic goals and objectives. This needs to be done in a manner that...











...is affordable and fosters economic viability where service expectations are aligned with the community's ability to pay now and into the future.

...is environmentally responsible with the ability to adapt to changing conditions.

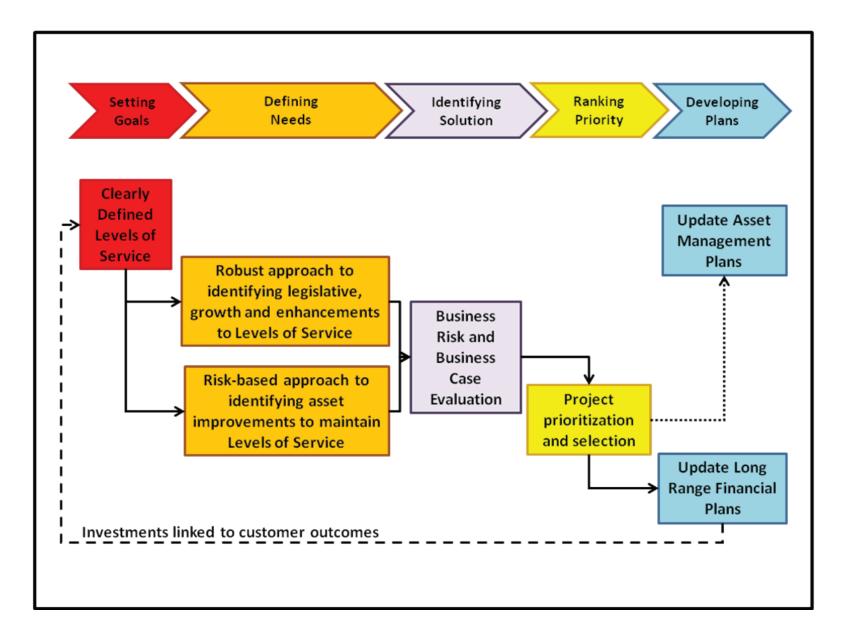
is socially equitable, recognizing the need to protect the public and adapt to changing demographics.

...protects cultural vitality, recognizing art and culture plays an important role in a diverse society.

integrates needs. to leverage opportunities to implement corporate objectives in an effective manner.



Assets exist for the purpose of supporting the delivery of a service to residents and businesses of the City. It is therefore important to define the levels of service as this becomes the driver for how needs are defined and solutions prioritized. Ultimately, investment levels are linked to service outcomes.







### **Asset Management Strategies and Actions**

The City's Comprehensive Asset Management Strategy (available under separate cover), as adopted by Senior Management, outlines the key actions needed to continue to improve how assets are managed. These actions are focused around 12-key themes:

- Developing a **Systematic Approach** to achieve consistency in the application of asset management practices across the organization so everyone is aware of their role and is working towards a common purpose: the delivery of services;
- Establishing **Customer and Asset Levels of Service** so there are reasonable expectations between the service that can be provided, the level that can be afforded and the risk that can be tolerated;
- Using Criticality and Risk Management to identify the importance
  of different assets in supporting the delivery of services, thus providing
  the ability to take into account the likelihood of asset failure and the
  associated consequences in terms of impacts on customers and the City's
  reputation;
- Applying Asset Life Cycle Planning and Optimization, notably to longlived assets having service lives lasting several decades, as operating and capital decisions need to be made looking at the lifecycle or whole life of the assets and not simply the initial cost of acquisition;
- Considering Asset Resiliency in how assets are planned and built providing an ability to adapt to changing demographics, changing climate, globalization, or evolving technology;
- Seeking **Service Delivery and Funding Opportunities** since how construction services are delivered and the available funding sources have an impact on the quantity and quality of assets being built and acquired;

- Promoting Resource Management and Development as many staff have a role to play in the management of the City's assets, be it through planning, finance, engineering, operations and maintenance. The ability to recruit, train and retain staff is an important factor in the management of the City's assets;
- Providing Asset Reporting so that asset condition information can be communicated in a meaningful manner reflecting the intended target audience in order to facilitate the ability to make sound investment decisions;
- Having complete and accurate Asset Data that provides the ability to support investment decisions and improve monitoring of performance against established levels of service;
- Leveraging and integrating **Technology** by enabling people to perform their tasks in an efficient manner;
- Fostering Continual Improvement and Innovation in the management of the City's assets to continue to support the delivery of services to customers; and
- Reporting on **Asset Management Performance Measurement** to confirm that the organization is delivering on its commitments.

### **State of City's Physical Assets**

The City of Ottawa is a complex service delivery organization with responsibility for managing more than \$32 billion in physical public assets. On average, this represents approximately \$35,000 per person or almost \$90,000 per dwelling (using 2011 Statistics Canada Census and based on asset replacement values).

All of these assets exist for one purpose, to support either directly or indirectly, the delivery of services to the community.

The following is a summary of the of the condition rating for the assets supporting the different City services.

This first State of the Asset Report focuses on the physical condition of the City's assets, as this is deemed to be the most critical element of safe service provision. Future reports will also focus on the performance of the assets in terms of their ability to meet demand/capacity and functional requirements.

While the overall physical condition of the City's assets is in fair to good condition, it is important to recognize that continued reinvestment is essential to renew components that are in poor or very poor condition. This needs to rely on a risk management approach looking at likelihood and consequence of failure when assessing the condition of the City's infrastructure to direct investments to those that pose the highest risk to service. There is also a need to invest in the large amount of assets that are in fair condition as this ensures optimum extension of life at the best value for the community. These assets, if left unmanaged, will result in a situation that could become unsustainable.

The following are key messages related to the physical assets supporting the different services.

			2012 Status		
Service	Asset Replacement Value	Overall Average Asset Condition Rating	% of Assets in Poor to Very Poor Condition	% of Assets in Fair Condition	% of Assets in Good to Very Good Condition
Water	\$ 6,638 M	Good	13 %	28 %	59 %
Wastewater	\$ 5,678 M	Good-Fair	13 %	28 %	60 %
Stormwater	\$ 4,653 M	Good-Fair	6 %	21 %	74 %
Transit	\$ 1,406 M	Good-Fair	7 %	15 %	79 %
Transportation	\$ 11,179 M	Fair	25 %	54 %	21 %
Recreation and Culture	\$ 1,970 M	Fair	17 %	43 %	40 %
Libraries	\$ 94 M	Good	12 %	41 %	47 %
Community Services	\$ 176 M	Good-Fair	0 %	57 %	43 %
Fire, Paramedic and By-Law	\$ 313 M	Good-Fair	9 %	46 %	45 %
Civic Facilities and Realty	\$ 257 M	Fair	1 %	94 %	5 %
Overall Summary	\$ 32 364 M	Fair-Good	16 % (\$5 2B)	37 % (\$12 0B)	47 % (\$15 2B)

Very Good - Fit for the future.

Well maintained, good condition, new or recently rehabilitated

Good - Adequate for now.

Acceptable, generally approaching mid stage of expected service life

Fair - Requires attention.

Signs of deterioration, some elements exhibit deficiencies

**Poor** - At risk of affecting service.

Approaching end of service life, condition below standard, large portion of system exhibits significant deterioration.

Very Poor - Unfit for sustained service.

Bevond expected service life, widespread signs of advanced deterioration, some assets may be unusable



# 2012 State of Asset Report by Service - Physical Condition



### **DRINKING WATER**

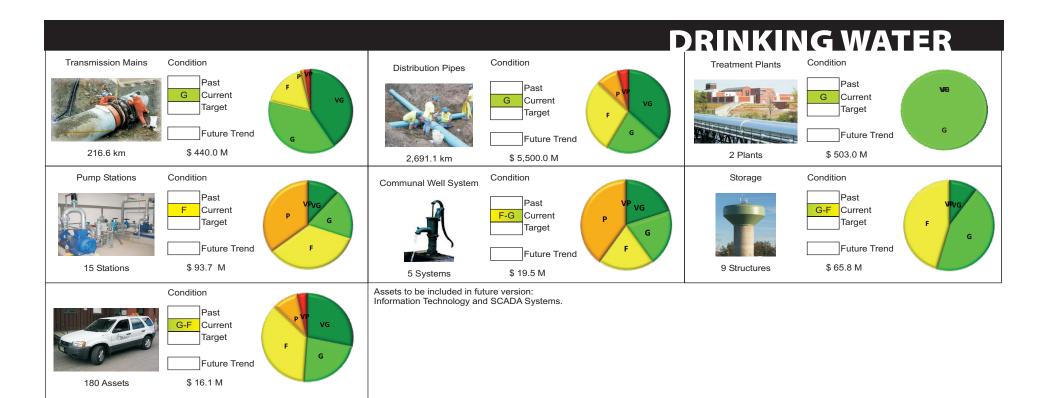
Transmission and distribution systems are buried and difficult to access and, as a result, difficult to effectively determine their overall condition. The City is employing the newest technologies to enhance condition assessments of large diameter, highest risk transmission infrastructure. The average age of watermains is 30 years with pipes expected to have service lives in the range of 80 to 100 years. The assets are generally in good condition. The current focus is on improving the reliability of the system through secondary mains. There is also focus on improving the management of the purification plant assets to ensure the continued production of high quality, safe, drinking water.

Value		Condition VG Very Good G Good		Performance VG	VG
Replacement Per Capita	_		_	-	F
\$ 6,638 M \$ 6,705	<b> </b>	F Fair	_		
	_	P Poor VP Very Poor		P	G
	Past Grade Cu	urrent Grade	Targ	et Future Trend	















### WASTEWATER

Collection systems are buried and as a result, difficult to determine their condition. On average pipes are inspected using inspection cameras on a 17-year cycle and cleaned on a 5-year cycle. The average age of the wastewater pipes is 29 years with pipes expected to have service lives in the range of 70 to 100 years. The assets are generally in good to fair condition. The current focus is on improving the quality of the Ottawa River through the reduction of combined sewer overflows, reducing the risk of sewer backups for residents and creating redundancy for large sewers. The ROPEC treatment plant is now 20 years old and there is a focus on renewal of major equipments.

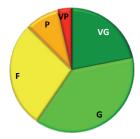
				Condition
\/a	lue	1	VG	Very God
Replacement	Per Capita		G	Good
· ·			F	Fair
\$ 5,678 M	\$ 5,735		Р	Poor
			\/P	Very Poo



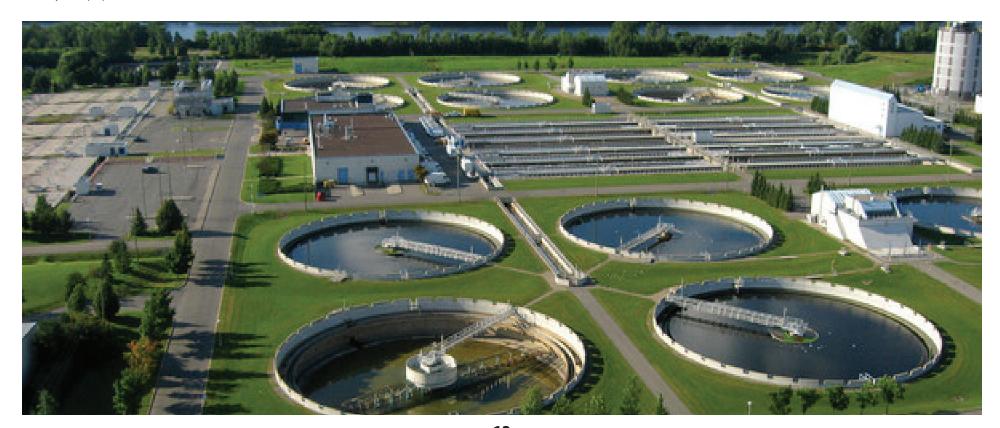
Past Grade Current Grade



**Future Trend** 

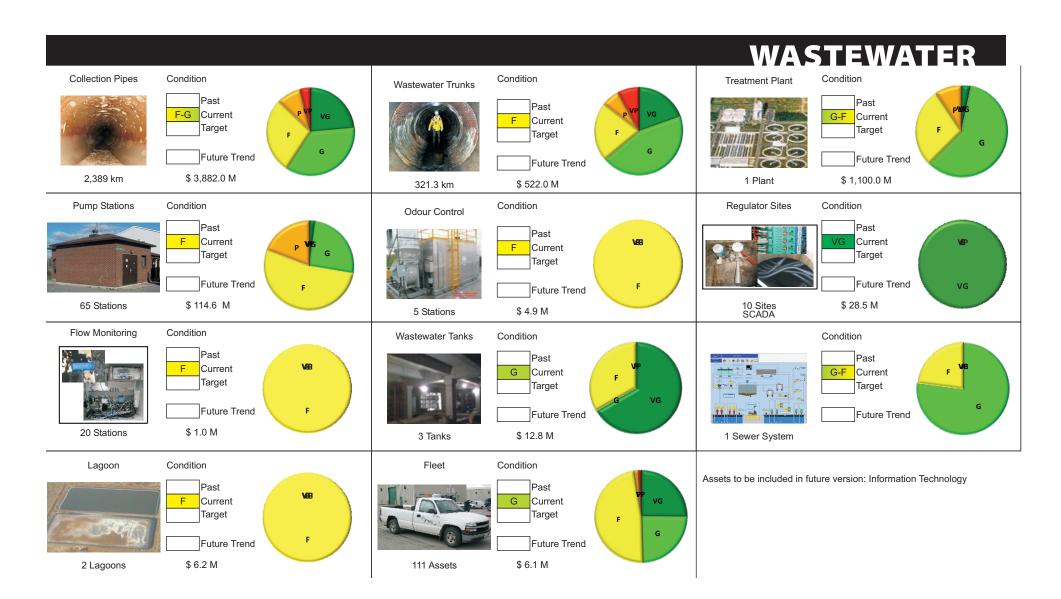


Trending analysis to be completed following funding plan approval















### **STORMWATER**

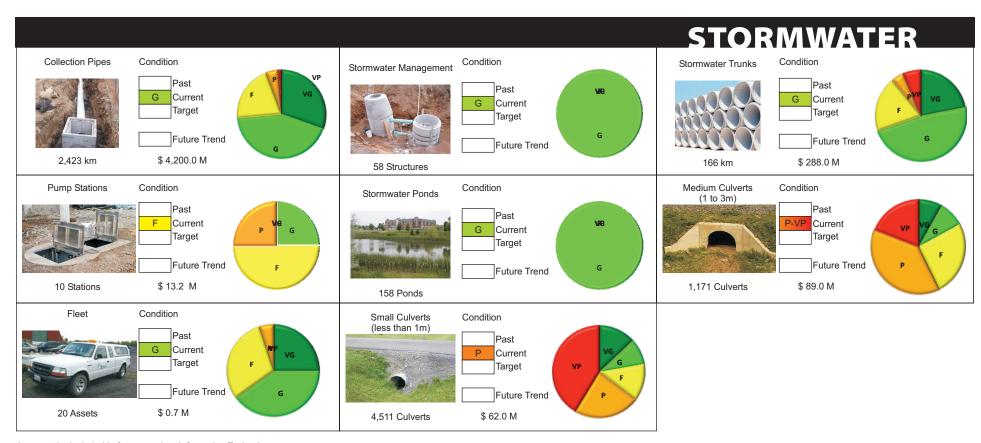
Collection systems are buried and as a result, difficult to determine their condition. The assets are generally in good to fair condition. The current focus is on improving the quality of water discharged to the Ottawa River and significant investments continue to be made to reduce the risk of property flooding. Since 2008 there has been an increased focus on improving the overall condition of smaller drainage culverts (less than 3 m) so these remain in safe condition and do not pose a risk to service.

				Condition		Performa		F VG
Val	ue		VG	Very Good	_	-	VG	
Replacement	Per Capita		G	Good	_	-	G	
\$ 4,653 M	\$ 4,700		F	Fair	_	-	F	
¥ 1,555	7 .,		Р	Poor	_	-	P	
			VP	Very Poor		-	VP	
		Past Grade	Curre	ent Grade	Targ	et Futu	ıre Trend	G
				G-F				Trending analysis to be completed following funding plan approval









Assets to be included in future version: Information Technology







### **TRANSIT**

Transit assets are amongst the most visible assets the city owns. The assets are generally in good to fair condition. The buses, which account for a significant component of the transit assets, have gone through a significant replacement program (or are slated for replacement in the near future). The focus is directed towards investments that support service delivery. The Transitway was built a little over 25 years ago and the new Ottawa Light Rail Transit will renew 12 km of the current Transitway significantly enhancing the level of service. In the coming years, increased investments will be required to maintain aging transit roads, bridges, sewers and stations to reduce the risk of unscheduled service interruptions.

Va	lue
Replacement	Per Capita
\$ 1,406 M	\$ 1,421

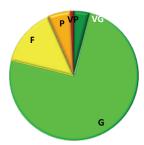


Current Grade

G-F

Performance	Э
	G
	F
	Р

**Future Trend** 

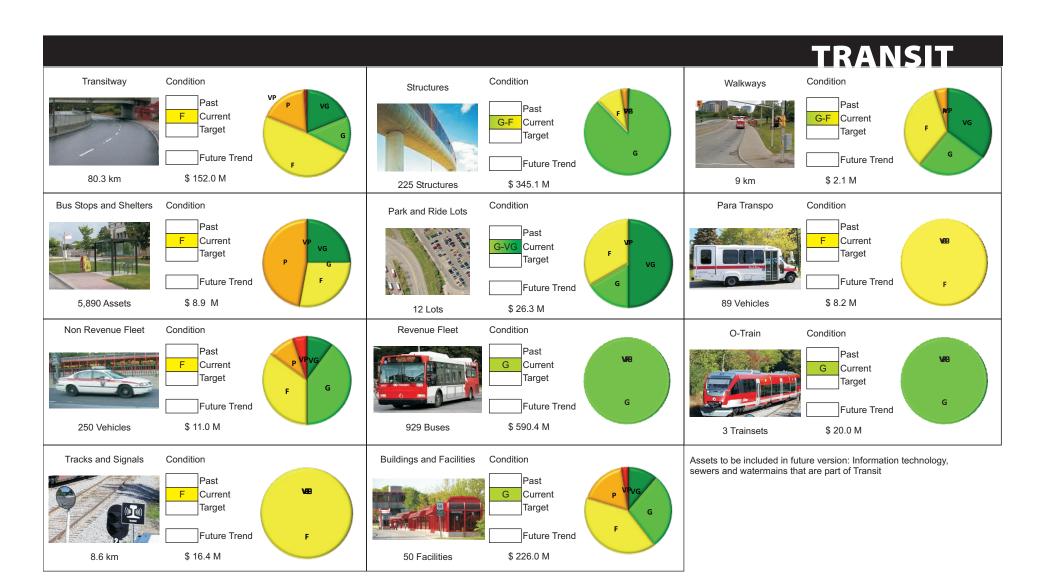


Trending analysis to be completed following funding plan approval









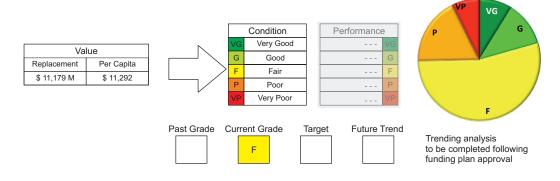






### TRANSPORTATION

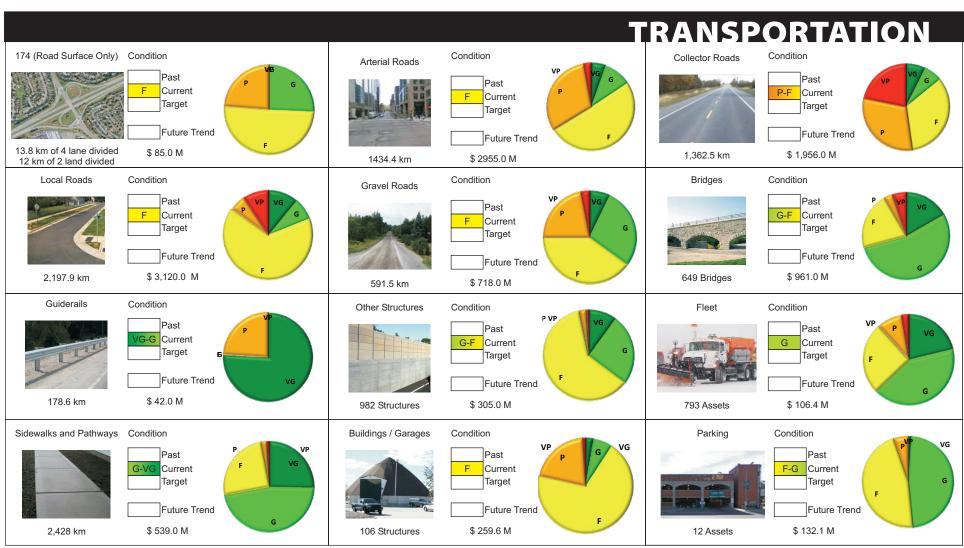
The assets allowing movement of goods and people within and around the city of Ottawa are among the most visible to the general public. These assets are safe and generally in fair to good condition. It is estimated that approximately 25 per cent of the City's roads are in need of resurfacing or reconstruction. Renewal investments will continue to be directed towards assets posing the higher risk to service. This means more funding towards arterial roads and less to local roads or limiting enhancements on reconstruction projects. Continued funding pressures are occurring in a period of demographic and social awareness changes that are calling for more pedestrian and cycling related investments.











Assets to be included in future version: Information Technology, Street Lighting, Traffic Signs, Traffic Controls







### **RECREATION AND CULTURE**

Over sixty per cent of city-owned buildings exist for the purpose of delivering recreational and cultural services. These range in extent from small community buildings, community centres, museums, heritage buildings, arenas, and pools to large multipurpose recreation complexes. Constrained funding has increased pressure on maintaining the condition of existing facilities and some unscheduled service interruptions can be expected. Renewal investments will continue to be directed towards assets that pose a higher risk to service, and to meet legislated accessibility requirements. In general, the condition of park related assets, such as sports fields, wading pools and play structures are deteriorating. There is a continued focus on removing barriers to make buildings and parks accessible.

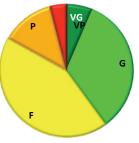
\/a	lue
Replacement	Per Capita
\$ 1,970 M	\$ 1,989.5

	Condition
VG	Very Good
G	Good
F	Fair
Р	Poor
VP	Very Poor

Past Grade Current Grade

Performance	е
	G
	F
	Р

**Future Trend** 



Trending analysis to be completed following funding plan approval







### RECREATION AND CULTURE Community Centres and Buildings **Cultural Facilities** Condition Condition Arenas Condition Past Past Past G-F Current F Current Current Target Target Target Future Trend Future Trend Future Trend \$ 147.6 M \$ 331.8 M 73 Assets 102 Buildings 26 Arenas \$ 284.1 M Recreation Complexes Condition Indoor, Outdoor Pools Condition Boating, Golfing, Camping Condition Past Past Past Current -Current Current Target Target Target Future Trend Future Trend Future Trend \$ 434.1 M \$ 73.5 M \$ 10.8 M 17 Facilities 29 Facilities 19 Assets Condition Wading Pools Condition Fleet Condition Playgrounds Splash Pads Past Past Past G-F Current F Current Current Target Target Target Future Trend Future Trend Future Trend \$ 39.5 M 624 Assets \$ 36.7 M \$ 52.1 M 155 Assets 613 Playgrounds Condition Condition Admin, Storage Condition Sports Fields & Other Site Servicing **Outdoor Facilities** & Utility Buildings Past Past Past P-F Current Current F-P Current Target Target Target Future Trend Future Trend Future Trend \$ 8.1 M 1,557 Assets \$ 184.8 M 863 Assets \$ 366.5 M 83 Structures

Assets to be included in future version: Information Technology



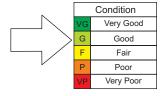




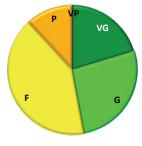
### **LIBRARIES**

These assets are very visible to the community and this extends beyond the bricks and mortar of the library buildings. While assets are generally in good condition, constrained funding levels are putting pressure on maintaining older library buildings at a level where service is not adversely impacted. Keeping pace with changing demands (i.e., technology, demographics, creating a sense of place) is creating funding pressures that go beyond the physical condition of the buildings.

Va	lue
Replacement	Per Capita
\$ 94.0 M	\$ 94.9



Performance	Э
	G
	F
	Р



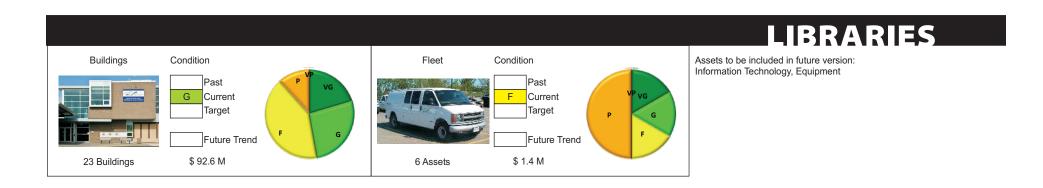
Past Grade Current Grade

Target Future Trend

Trending analysis
to be completed following
funding plan approval













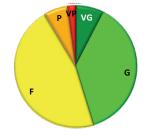
### FIRE, PARAMEDIC AND BY-LAW

These assets support two of the City's most essential services (Fire and Paramedics). Vehicles and equipment (equipment maintained under fleet's inventory) are generally in good to fair condition. Buildings and facilities are generally in fair to good condition. The majority of assets supporting the enforcement of the City's by-laws are vehicles. Equipment will be assessed as part of future reports.

				Condition
1/2	lue	1	VG	Very Goo
	Per Capita		G	Good
Replacement			F	Fair
\$ 313 M	\$ 316.4		Р	Poor
			VP	Very Poo

Past

	Condition			Performand
$\wedge$	VG	Very Good		
	G	Good		
/	F	Fair		
	Р	Poor		
	VP	Very Poor		



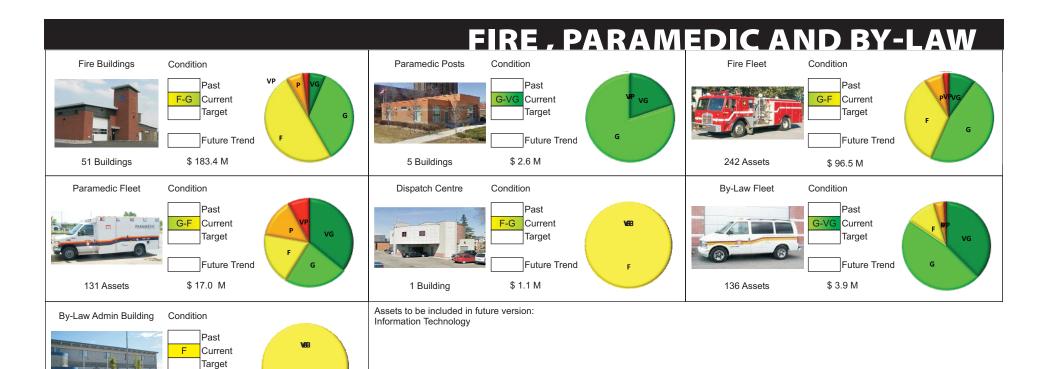
Grade	Current Grad	e Target
	G-F	

Target Future Trend

Trending analysis to be completed following funding plan approval









Future Trend

\$ 8.7 M

1 Building





### **COMMUNITY SERVICES**

Buildings comprise the key assets supporting community services such as childcare, healthcare, and long-term care. These facilities serve some of the more vulnerable individuals of our society and service interruptions due to deteriorating assets can have important repercussions. Buildings supporting community services are generally in good to fair condition. Constrained funding levels are increasing pressures to maintain existing facilities in good working condition to reduce the risk of service interruptions. Future report will include the condition of community housing assets.

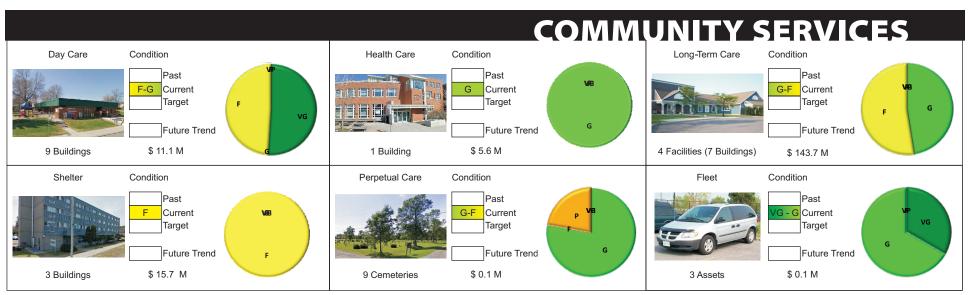
						P VP VG
			Condition		Performance	
Val		1	VG Very God	od	VG	
Replacement	Per Capita		G Good		G	
<u> </u>			F Fair		F	
\$ 176 M	\$ 178.0		P Poor		P	F
			VP Very Poo	or	VP	
		Past Grade C	current Grade	Targe	t Future Trend	
		l ast olade	G-F	large		Trending analysis to be completed following funding plan approval











Assets to be included in future version: Information Technology and Community Housing







### CIVIC FACILITIES AND CORPORATE REALTY

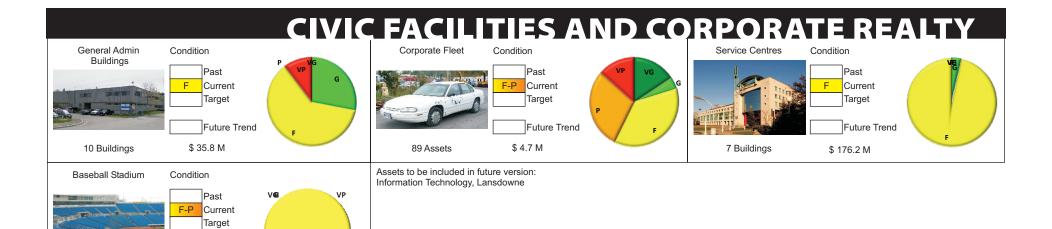
These buildings typically serve administrative functions typically not assigned to specific services or that support multiple services (e.g., City Hall, Client service centres, stadium). There are significant financial pressures to maintain these assets at their current condition as investments are directed to components with higher associated risks (i.e., roof, electrical system, mechanical system).

							VP VP
			Condition		Performanc	е	
\ \/-I			Very Good			VG	
Val			G Good			G	V
Replacement	Per Capita		F Fair			F	
\$ 257 M	\$ 259.4		P Poor			Р	
			VP Very Poor			VP	
		_					
		Past Grade Cu	urrent Grade	Target	Future 1	Trend	
			F				Trending analysis to be completed following funding plan approval



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Future Trend

\$40.1 M

1 Assets



