

Date: 2023-01-10

Subject: **State of Local Infrastructure Report - 2021**

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Report Number: Corporate Support Services-2022-197

Recommendations:

1. That the report entitled “***State of Local Infrastructure Report – 2021***” to the Committee of Council Meeting of February 1, 2023, be received; and
2. That Council approve the “***State of Local Infrastructure Report – 2021***” attached as Appendix A; and
3. That the “***State of Local Infrastructure Report – 2021***” be posted on the City’s website to comply with the City of Brampton Asset Management Policy.

Overview:

- The State of Local Infrastructure (SOLI) 2021 Report (Appendix A) details a comprehensive state of the City’s physical infrastructure assets, and where investments are needed to maintain the current levels of service across all its major service areas.
- The City’s total replacement cost of infrastructure assets is currently estimated at \$7.7 billion, distributed across 12 major service areas. About 80% of the assets currently owned and operated by the City are in “Good” to “Very Good” condition, while about 6% (\$429 million) of infrastructure assets are considered to be in “Poor” to “Very Poor” condition.
- The annual SOLI data collection and reporting is an important step on the City of Brampton’s journey towards developing and achieving sound Asset Management practices and instilling transparent evidence-based decision-making processes aligned with the City’s strategic priorities.

Background:

As the fourth largest City in the province and one of the fastest growing communities in Ontario, the City of Brampton owns and operates a substantial portfolio of assets across several service areas. These assets are essential to the well-being of the community and form an integral part of the City's long term financial and service delivery planning.

The City of Brampton has made significant progress on refining and improving its asset management program since the completion of its first Corporate AMP in 2016. The City annually prepares the State of Local Infrastructure Reports which have improved our understanding of asset inventories, replacement cost, useful life and condition.

This report summarizes the findings of the recently completed State of Local Infrastructure 2021 Report which reflects the progress made on the City's asset base data and key assumptions in all service areas. Overall, the confidence and reliability of the information in this report has increased compared to the previous years. A copy of the 2021 SOLI report is attached in Appendix A.

Similar to previous SOLI reports, the 2021 SOLI report covers all major infrastructure service areas under the direct control of the City, as well as the City's Public Library Board, but exclude indirect services administered by other boards and agencies. The report distributes City services into 12 major infrastructure service areas, namely: Transportation, Stormwater, Transit, Parks, Recreation, Cultural Services, Facilities, Information Technology (IT), Fire Services, Library, Animal Services and City Support Fleet.

A baseline snapshot of Brampton's assets through the SOLI reports helps decision-makers identify gaps and inform strategies to prioritize investments and allocate resources to deliver services in the most efficient way. Specifically, the SOLI Report answers the following key questions:

Details of the Asset Inventory – What do we own?

It is important to understand what assets we own, and where they belong on the asset hierarchy. City staff have been continuously improving on the identified information gaps and replacing best assumed inventory with the actual collected data.

Valuation of the Asset Base (Replacement Value) – What is it worth?

Replacement Value is defined as a current cost of replacing an asset. The City's area specific subject matter experts apply three basic methods to estimate replacement costs needed for infrastructure renewal planning: 1. Local price indices, 2. Published price indices, and 3. Historical purchasing estimates.

Condition/Performance of the Asset Base – What condition is it in?

The condition of each service area and asset groups within the service area are

evaluated to determine the current state of the City’s infrastructure. Consistent with the Canadian National Infrastructure Report Card as well as other major organizations and institutions reporting formats, a five-point rating scale, as per Figure 1, is used and is consistent across all 12 service areas. The condition of assets is determined using one of the three methods based on availability and accuracy of information:

1. Existing condition rating system based on actual inspections benchmarked against industry standard as required by legislative or regulatory requirements on service and condition where applicable;
2. Age and remaining useful life; and
3. Expert opinion.

Depending on situations, a combination of these three approaches are taken to determine the condition of the assets.

Rank	Condition	Definition
1	Very Good	The infrastructure in the system is in generally good condition, typically new or recently rehabilitated. A few elements show signs of deterioration that require attention.
2	Good	The infrastructure in the system is in good condition; some elements show signs of deterioration that require attention. A few elements show sign of significant deficiencies
3	Fair	The infrastructure in the system or network is in fair condition; it shows general signs of deterioration and requires attention. Some elements exhibit significant deficiencies.
4	Poor	The infrastructure in the system or network is in poor condition and mostly below standard, with many elements approaching the end of their service life. A large portion of the system exhibits significant deterioration.
5	Very Poor	The infrastructure in the system or network is in unacceptable condition with widespread signs of advanced deterioration. Many components in the system exhibit signs of imminent failure, which is affecting service.

Figure 1 Five Point Infrastructure Condition Rating Scale

Financing strategy – How much money do we need?

The 2021 SOLI presents a comprehensive Financing strategy based on a full life cycle approach and follows the methodologies developed in the Corporate AMP 2021.

The following lifecycle activities categories are considered to assess the infrastructure needs of the City:

- Non-infrastructure Solutions;
- Operation & Maintenance;
- Renewal/ Rehabilitation;
- Replacement;
- Disposal; and
- Expansion (Life cycle activities associated with the expanded assets)

Asset Management Maturity - How accurate and complete is our program?

An asset management maturity assessment measures and tracks the progress of the City's asset management practices and activities. The results of the assessment are intended to be used to further inform the Asset Management Roadmap and guide the City towards best practices in asset management.

The assessment considers a few key components:

- 1) The City's current position relative to the requirements of the legislation;
- 2) Existing data confidence and reliability; and
- 3) Overall asset management strategies and programs.

Current Situation:

State of Local Infrastructure (SOLI) 2021 Report is intended to expand upon the data identified in the previous iteration and documents the best and most recent available information. The complete 2021 SOLI Report is attached as **Appendix A** and the following sections provide highlights of the findings.

Replacement Value

The City's total asset replacement cost for 2021 is estimated at \$7.7 billion (in \$2022). This value is comprised of the City's 12 major infrastructure service areas: Transportation, Stormwater, Transit, Parks, Recreation, Cultural Services, Facilities, Information Technology, Fire Services, Library Services, Animal Services and City Support Fleet.

This 2021 SOLI Report represents an increase in value of about \$557.0 million, or 8%, over the \$7.1 billion (inflated to \$2022 from \$7.0 billion in \$2021) reported in 2020 SOLI as part of the Corporate AMP 2021. The increase can largely be attributed to the refined costing information, revised inventories and some inclusion of new assets groups that were not captured in the previous versions of this report, in addition to continuous growth of the City's physical asset base.

The total replacement value of all assets categorized by service areas is shown in the Figure 2 below.

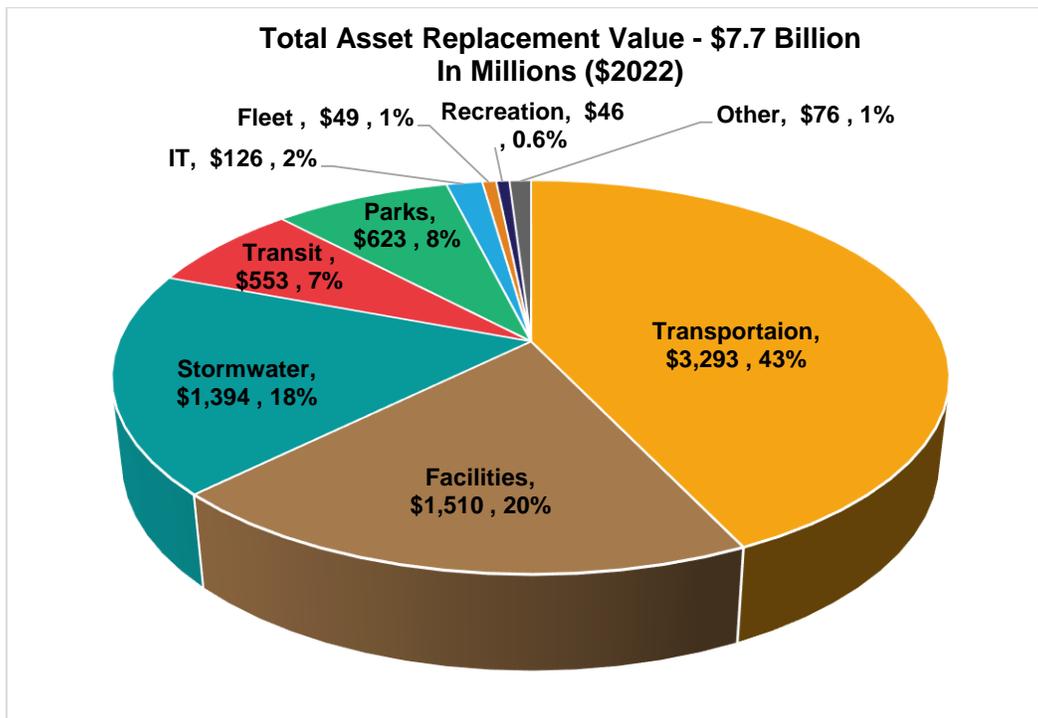


Figure 2 Total replacement value distributed across 12 major service areas

Asset Condition

In terms of asset condition of municipal infrastructure in the City of Brampton, Figure 3 provides a snapshot of the overall condition. About 80% of the \$7.7 billion in assets currently owned and operated by the City are in “Good” to “Very Good” condition, while 6% (\$429 million) of infrastructure assets are in “Poor” to “Very Poor” condition, indicating some assets in these categories may require more immediate renewal/replacement considerations. This is an improvement compared to 2020 SOLI where about 10% of assets were reported in “Poor” to “Very Poor” condition. The overall “Good” condition rating can largely be attributed to the City’s infrastructure being relatively new in age combined with the sound asset management practices the City has employed to date.

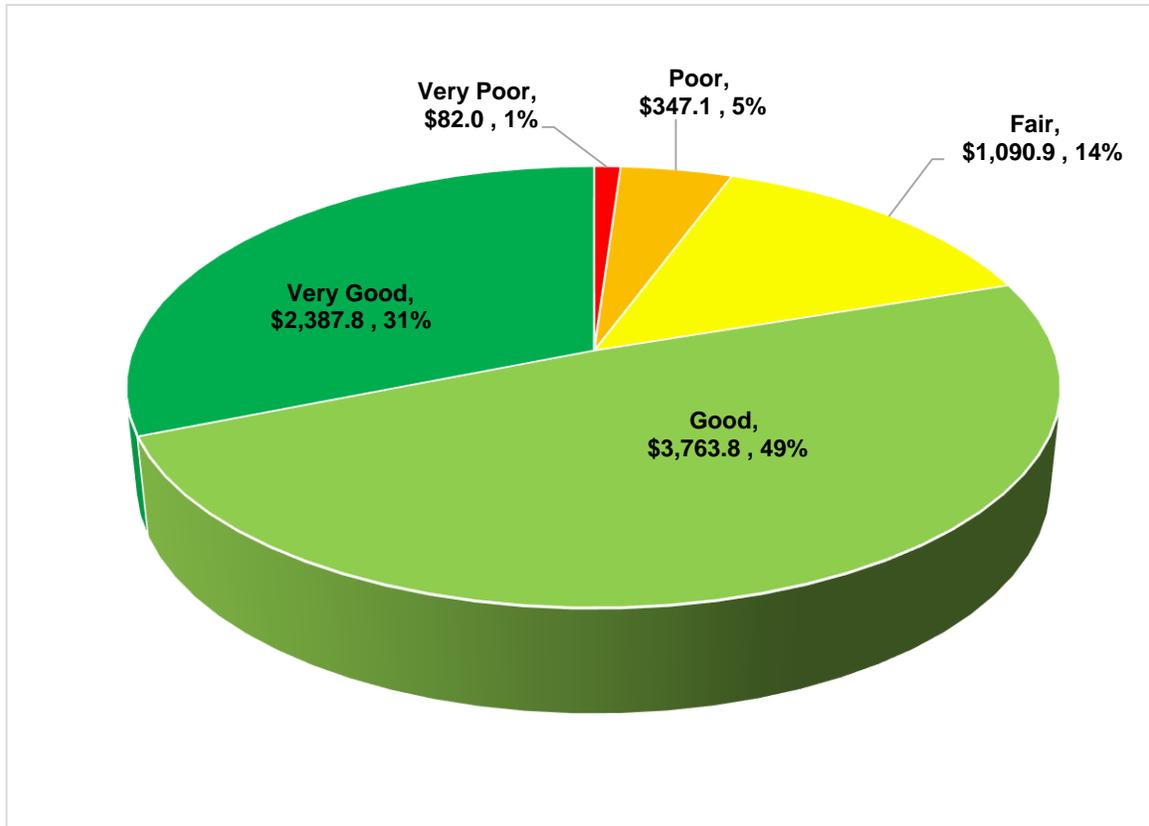


Figure 3 Summary of Brampton's Assets by Condition (\$ Millions)

Financing Strategy

Like many municipalities across Canada, the findings of the 2021 SOLI Report indicate that the current levels of financial contributions fall short of the optimal level of capital requirements identified over the next ten years. The concern over an infrastructure gap is not so much that it exists, but how this gap changes over the long-term and if the change affects asset conditions and the levels of services.

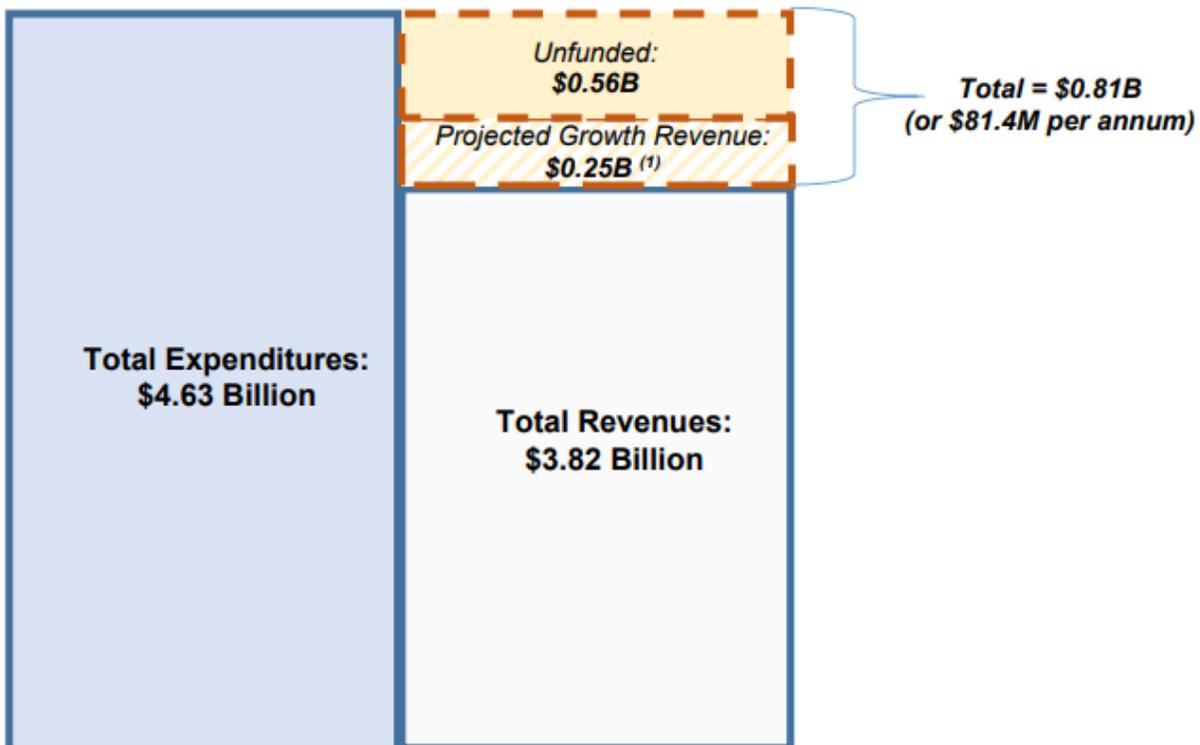
Based on the total 10-year full lifecycle cost and revenue analysis that is detailed in the Financing Strategy section of the 2021 SOLI report, a notional infrastructure gap of \$814 million is identified for existing assets. However, the gap is reduced to \$566 million (i.e. unfunded share) once revenues that would be generated from growth are considered into the calculation – those additional revenues¹ are assumed to be prioritized to existing assets, although, the specific allocations will be further determined through future budgets as growth occurs.

¹ Additional revenues from growth in this analysis include: revenue from assessment growth, increases in Federal Gas Tax allocation with population change, increase in special purpose levies and Stormwater fees. Excludes DC revenue to fund first round capital acquisitions

A similar infrastructure gap analysis has been prepared for expansion related activities that have been quantified in this report. Please refer to **Appendix A** for details on the infrastructure gap identified for expansion assets.

There are several ways the City can address the current funding gap. The various strategies that the City has available to them in order to close the gap are detailed in **Appendix A**. The strategies combine both financial and other non-budgetary solutions.

This infrastructure gap arises from the lifecycle needs over the next ten years plus the current backlog of assets overdue for renewal or rehabilitation, compared to the funding that is expected to be available over the same period. Stabilizing and narrowing this infrastructure gap is the reason why the City has taken a proactive approach of implementing an infrastructure levy increase of 2% annually. Note, during the 2021 and 2022 budget process, it was decided to mitigate this annual levy increase due to circumstances related to the COVID-19 pandemic. As a result, a marginal increase in the 2021 levy was passed (0.7%) and no increase in 2022 was implemented. However, this report assumes that 2% infrastructure levy increase will resume starting from 2023 budget. In addition, the dedicated Stormwater charges also helps reduce the infrastructure gap through investments in the Stormwater service area.



Note 1: Additional revenue from assessment growth, increases in Federal Gas Tax allocation with population change, increase in special purpose levies and Stormwater fees. Excludes DC revenue to fund first round capital.

Figure 4 City-wide: Summary of 10-Year Lifecycle Costs and Projected Revenues: Existing Assets

Asset Management Maturity Assessment

As shown below in Figure 5, the City's overall confidence level rating is approximately three (3), which correlates to a medium ("competent") State of Asset Management maturity. The scores are reflective of the quality and type of data available, current processes and management strategies.

Since the completion of the 2016 Corporate AMP, the City has made significant progress in further developing various components of their Asset Management program including the datasets and assumptions required to complete this report. Based on a weighted replacement value of all services and their condition assessments, approximately 78% of assets are assigned a condition rating based on actual condition knowledge. This represents a 2% improvement from the 2020 SOLI Report in which 76% of the asset ratings were based on condition. Based on the recently completed target data maturity analysis, the City acknowledges that a condition inspection program for all the City's assets may not be feasible and is targeting a maturity of 91% based on condition.

Despite the progress made, further work is currently underway and planned to be undertaken over the next few years that will move the City towards the targeted "level 5" assessment in all categories. Some of these activities include but are not limited to:

- a. Completion of Departmental Asset Management Plans;
- b. Update to the City's Long-term Financial Master Plan;
- c. Updated condition assessments and replacement valuations;
- d. Level of Service tracking and consultation regarding proposed/target levels of service; and
- e. Improved understanding of advanced asset management strategies including asset risk, full lifecycle activities etc.
- f. Integration of various AM strategies to inform investment needs

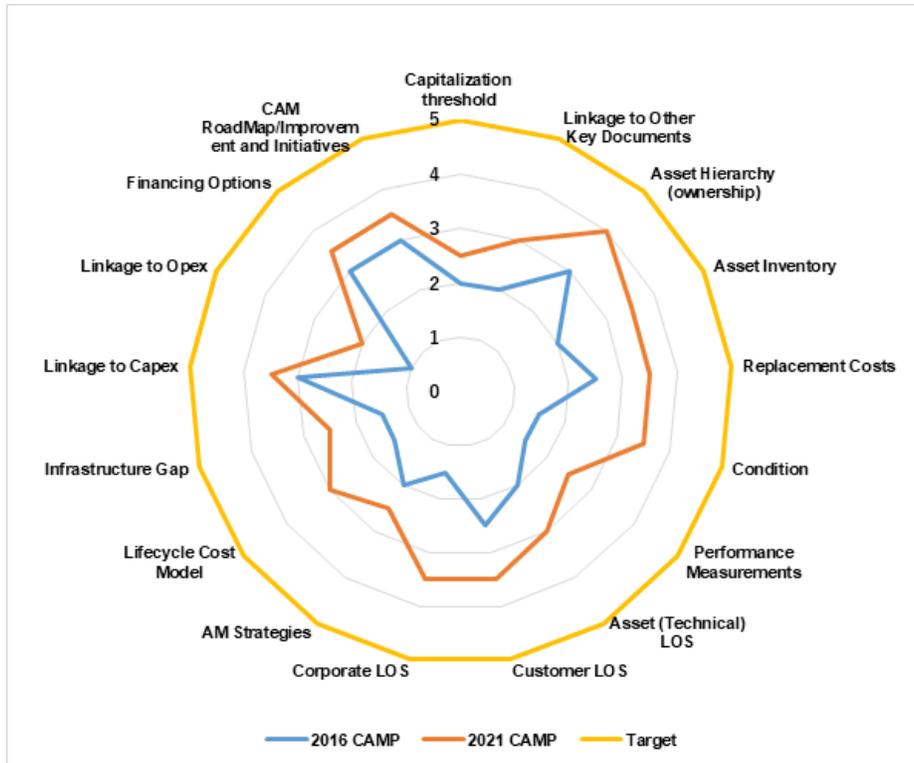


Figure 5 Asset Management Maturity Assessment 2016 vs. 2021

Please note, as the City recently adopted the Corporate AMP in June 2022, this maturity level is still relevant for the purposes of this 2021 SOLI Report. The target identified in the Figure 5 above is anticipated to be achieved after full implementation of the regulatory requirements in July 2025.

Future Improvements

As the City’s asset management program further advances, it can be expected that the cost analysis be improved to better reflect asset risks, levels of service and a more fulsome understanding of the condition of the City’s infrastructure.

The Report (Appendix A) identifies few key areas for improvement of Asset Management practices that will contribute to enhancement of the State of Local Infrastructure Reporting. This includes data confidence improvement while driving corporate change.

Corporate Implications:

Financial Implications:

The 2021 SOLI report identifies current infrastructure needs and how they are balanced with expected funding and identifies current backlog and investment gap for the next 10 years. The report will be used as a tool to inform current 2023 budget and long-term financial planning.

Other Implications:

The Municipal Asset Management Planning Regulation O.Reg. 588/17 came into effect in January 2018, under the Infrastructure for Jobs and Prosperity Act, 2015. The annual State of Local Infrastructure Report is one of the key input documents that helps in complying with the Regulation and supports the City’s budgeting process. Council approval of this 2021 SOLI report allows the City to meet strategic AM Policy requirements and supports in preparing the departmental asset management plans to meet the legislated requirements.

Term of Council Priorities:

This report fulfils the Council Priority of a Well-Run City through strict adherence to effective financial management policies and supports Brampton’s 2040 Vision by ensuring sustainable financial operations.

Conclusion:

This report provides an update of the state of infrastructure and identifies a current gap in infrastructure funding. This report is intended to act as a supporting document to the City’s 2023 budget deliberations and input to the asset management plans to meet the legislated requirements.

The City staff are seeking the approval of the 2021 SOLI report prepared in accordance with the City’s Strategic Asset Management Policy and post the report on the City’s website.

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Attachments:

Appendix A: 2021 State of Local Infrastructure Report