

2021

CORPORATE ASSET MANAGEMENT PLAN

Saskatoon Sidewalks

INTRODUCTION

This report outlines the state of City of Saskatoon (City) Sidewalk Network, including information on inventory, valuation, condition, growth and inflation funding requirements, asset preservation, operations, and maintenance. The City’s sidewalk networks consist of a combination of curb and sidewalk, separate sidewalks, walkways and pathways in the right of way. The City’s sidewalk network is managed through four programs, each filling an important role in maintaining the City’s sidewalk infrastructure.

The primary network consists of curb and sidewalks alongside roads classified as collector, arterial, and expressway roads.

CURRENT INVENTORY

The sidewalk network inventory consists of two networks, a neighbourhood network and a primary network. This neighbourhood network is comprised of curb and sidewalks alongside local roads that for the most part serve residents, or business within residential, commercial and industrial neighbourhoods. The primary network consists of curb and sidewalks alongside roads classified as collector, arterial, and expressway roads. These roadways serve a broader range of users. A summarization of the two networks current inventory and valuation can be seen in the following table. The source of information for this inventory is the City’s Geographic Information Systems (GIS), asset management database.

Table 1: Sidewalk and Curb Inventory & Replacement Value

Asset	Inventory	Replacement Value
Sidewalks	1,655 km	\$699M
Curbs	2,386 km	\$630M
Total		\$1,329 M

The method used to valuate assets is to calculate the replacement value. This is an estimated cost of replacing an asset by physical excavation and, replacing with new approved materials.



111th Street W: before



111th Street W: after

PERFORMANCE OF ASSET

The Sidewalk Condition Index (SCI) Rating Scale is a numerical rating from 0 being the worst possible condition to 100 being the best possible condition. The table below shows that overall, the average sidewalk condition index for the entire City sidewalk network is 87.4 out of 100, which is classed as a “Satisfactory” condition state.

Table 2: Sidewalk Condition Index (SCI)

Network	2020 Average SCI	Current Performance	Desired Performance
Neighbourhood	87.6	Satisfactory	Good
Primary	87.0	Satisfactory	Good
Total	87.4	Satisfactory	Good

LIFECYCLE PROGRAMS

The City’s sidewalk network is managed through four programs. Coordinated together, these programs manage safety, preservation, maintenance, repair, replacement, and installation of new sidewalks for the City’s entire sidewalk network. The goals of these programs are to focus on restoring and maintaining sidewalks to a safe and functional condition for users, as well as add sidewalks at the highest pedestrian potential locations. These programs are as follows:

The Sidewalk Maintenance and Safety Program is managed by the Roadways, Fleet and Support Department and is funded through annual operational budgets. The program performs sidewalk maintenance activities that remove safety hazards for pedestrians.

The Sidewalk Preservation Program is managed by the Technical Services Department and is funded through the Paved Roadways Infrastructure Reserve. This program focuses on repairing or replacing sidewalks adjacent to roadways when they receive a preservation treatment. The annually programmed work areas for the Sidewalk Preservation Program are aligned to the Roadway Preservation Program. The intention of these two programs is to provide funding for roadways and sidewalks to receive a complete repair and rehabilitation every 20 years on average.

The Pedestrian Accessible Curb Ramp Program is managed by the Transportation Department and is an element of the Active Transportation Plan. This program prioritizes installation of accessibility curb ramps at specific locations based on pedestrian potential, transit routes, and requests from people with accessibility needs.

The Sidewalk Infill Program is managed by the Transportation Department and is an element of the Active Transportation Plan. This program focuses on installing new sidewalks adjacent to existing arterial roadways, collector roads or local streets. The infill locations are prioritized according to scoring based on pedestrian potential and risk reduction potential.

SERVICE EXPENDITURE LEVELS

The Administration evaluates the condition (physical, functional, capacity) of the City's assets in order to develop annual programs to maintain the assets at a minimum life cycle cost. Condition assessments or evaluations are conducted and used to establish performance levels, as well as to develop annual capital improvement plans.

The Level of Service for each type of asset is defined; however, as the Level of Service increases for the asset, so does the cost of maintaining the asset. In order to be able to compare the level of investment for all assets corporate-wide, five levels of expenditures are identified in the following table.

It should be noted that expenditure levels are not condition assessments but lead to a change in the asset condition over time.

"A" represents the highest level of expenditure and "F" represents no expenditure.

Table 3: Expenditure Levels

Expenditure Level	Asset Performance	Description
A	Getting Better Quickly	Sufficient expenditures to keep asset in top condition and to increase asset condition/value quickly over time.
B	Getting Better	Sufficient expenditures to keep asset in top condition and to increase asset condition/value slowly over time.
C	Maintain Assets in Current Condition	Sufficient expenditures to keep asset in constant condition over time.
D	Getting Worse	Insufficient expenditures to maintain asset condition. Over time asset condition will deteriorate.
F	Getting Worse Quickly	No expenditures. Asset condition/value decreased rapidly.



Girgulis Crescent: before



Girgulis Crescent: after

Using the above criteria and the physical condition desired, Administration has identified the following desired expenditure levels for the sidewalk preservation program and the sidewalk maintenance and safety program.

Table 4: Sidewalk Performance & Expenditure Levels

Asset Program	Current Performance	Desired Performance	Desired Expenditure Level	Required Annual Funding to meet Expenditure Level	2021 Current Dollars	Difference
Sidewalk Preservation	Satisfactory	Good	Level B	\$6.1M*	\$5.95M**	\$0.15 M
Sidewalk Maintenance and Safety	Good	Good	Level C	\$1.14 M*	\$1.14 M	\$0
The Pedestrian Accessible Curb Ramp Program†	N/A	N/A	N/A	N/A	\$1.1M†	\$0
Sidewalk Infill Program	Unknown**	Unknown**	Unknown**	Unknown**	\$6.6M**	\$0

*Growth and inflation are not included in \$ amount.

**One-time funding of \$4M from the Municipal Economic Enhancement Program (MEEP) Reallocation Pool was added to sidewalk preservation in 2020.

†Supported through the Sidewalk Preservation program. \$100,000 of average base funding with one-time funding of \$1M from the Municipal Economic Enhancement Program (MEEP) Reallocation Pool added to the Pedestrian Accessible Curb Ramp Program in 2020.

**Feasibility study in progress. \$200,000 average base funding with \$6.4M from a combination of Investing in Canada Infrastructure Program (ICIP) and the Municipal Economic Enhancement Program (MEEP) Reallocation Pool.

FUNDING SUMMARY

The Sidewalk Maintenance and Safety Program is funded through the Transportation & Construction – Road and Maintenance Operating Budget. The 2021 budget of \$1.14 million is sufficient to continue the planned maintenance program.

The Sidewalk Preservation Program is funded through the Paved Roadways Infrastructure Reserve. Recent funding allocations in 2019 and 2020 by City Council, specifically the one-time \$5 million in Reallocation Pool funding from the Municipal Economic Enhancement Program (MEEP) to aid the sidewalk preservation program and the accessibility curb ramps program (\$4 million for sidewalk preservation and \$1 million for accessibility curb ramps), have put the program back on track to sustain a 1-in-20-year return cycle over the next four years (2021 to 2024), assuming no changes to the program and overall level of service. Should inflation and growth not be added annually the return cycle will be increased and the program will start to move away from a service expenditure level B (getting better) and more

towards a service level C (maintain asset in current condition).

The Pedestrian Accessible Curb Ramp program is funded through the Transportation Infrastructure Expansion Reserve (TIER). Currently this program receives on average \$100,000 annually and since 2019 has been supported through the Sidewalk Preservation Program. With this support the time frame to complete the backlog of pedestrian accessible curb ramps has been reduced from 47 years to 15 years.

The Sidewalk Infill Program is funded through the Transportation Infrastructure Expansion Reserve (TIER). Feasibility assessments are required to determine the desired expenditure level and to establish annual base funding for this program. Currently the program receives \$200,000 annually.

INFRASTRUCTURE RESILIENCE AND CLIMATE CHANGE ADAPTATION STRATEGY

Due to the nature of the construction materials used for our sidewalk assets (i.e. concrete and asphalt), they are resistant to many of the effects of climate change. In new construction, edge drains adjacent to the sidewalk within the road structure have been included that will assist in reducing damage due to high water tables caused by climate changes.

Crack-filling sidewalks has also been added as an additional maintenance practice to reduce water infiltration to the underlying soils, reducing damage caused by increased precipitation due to climate change.

With respect to construction, road and sidewalk repair work, it is weather dependent. During periods of extreme weather, such as a major rain event or early winter, some projects are unable to be completed or started until favorable conditions return.

In current year funding for roads or sidewalks is planned but cannot be completed or started due to unfavorable weather conditions or seasonal changes, planned roads or sidewalks work will be carried over to the next construction season.



Wollaston Crescent: before



Wollaston Crescent: after

THE WAY FORWARD

- Shift from reactive to preventative maintenance when planning programs.
- Undertake continuous learning in data analysis and data collection methods.
- Build deterioration curves for sidewalk network analysis and understanding cause of deterioration.
- Review and improve preservation and maintenance treatment strategies, specifications and standards,
- Coordinate and plan with other divisions to increase efficiencies across the corporation.
- Complete feasibility assessment for the Sidewalk Infill Program.

We are committed to maintaining and carefully investing in our sidewalks. We will use the financial resources and physical resources under our care to address the needs and expectations of Saskatoon citizens today and for the future.



Taylor Street E: before



Taylor Street E: after

*We strive to maintain and fund
our key infrastructure assets to
minimize total life cycle costs.*

