



# Short-Term Road and Sidewalk Plan

## Methodology

Municipal roads and sidewalks best practices address two priorities:

- Front-end planning and decision making to identify and manage infrastructure
- A preventive approach to slow the deterioration of existing infrastructure

Sound decision making and preventive maintenance are essential to managing municipal road and sidewalk infrastructure cost effectively. The proposed Short-Term Road and Sidewalk Plan will act as a guiding document to make the best possible decisions regarding future road and sidewalk infrastructure projects.

The Town of Deep River contains approximately 36 kilometers of road, which includes two County roads (Ridge Road and Deep River Road) and 6 kilometers of sidewalk. Each year the Town allocates funding to both the capital and operating budgets to complete various methods, described below, of preservation, maintenance, rehabilitation and reconstruction projects. The operating budget contains projects that are related to preservation, maintenance and minor rehabilitation whereas the capital budget contains major rehabilitation and reconstruction.

### Preservation & Maintenance:

- Crack Seal: process of filling cracks in asphalt with hot rubberized crack sealer to repair the cracks and prolong the life of the asphalt pavement

### Minor Rehabilitation:

- Slurry Seal: coating roads with a thin layer of asphalt, water and aggregate to improve longevity and fill minor damage
- Chip Seal: spraying a coat of hot liquid asphalt mixed with 30 per cent water to the existing surface of a prepared base and then a chip spreader is used to distribute washed chip aggregate
- Patching: pot hole repair (cold and hot mix) and road segment repair/repaving
- Mill and Pave: remove the old asphalt, heat it, recycle with additives, then re-lay in one layer

### Major Rehabilitation:

- Full Depth Reclamation: pulverizing the surface layers of the pavement and a portion of underlying granular up to 300mm in depth

### Reconstruction:

- Rebuild entire pavement structure and base

The proposed Short-Term Road and Sidewalk Plan highlights potential infrastructure projects for 2023-2024. The determined sections of roads and sidewalks are based on the condition assessment that was completed in 2021 with appropriate identified treatment options as well as alignment with other necessary linear infrastructure projects (i.e. Water and Sewer Main Relining Plan). The selection of road and sidewalk projects is not simply fixing the worst segments first but also focusing on maintaining good segments through preservation, maintenance and minor rehabilitation methods and coordinating linear infrastructure replacement in a cost-effective manner.

The condition assessment utilizes a Pavement Condition Index (PCI) and a Sidewalk Condition Index (SCI), which are a numerical rating of the pavement and sidewalk condition based on the type and severity of distresses observed on the surface. The PCI or SCI value of the pavement and sidewalk condition is represented by a numerical index between 0 and 100, where 0 is the worst possible condition and 100 is the best possible condition. The Town's average PCI is 66 and the average SCI is 62.

Staff will be posting the 2023 Paving RFQ in early Q2 2023 to secure the pricing for the 2023 paving season. The following Road and Sidewalk Plan is based on the pricing of the 2022 Paving RFQ.

## **2023 Road Plan**

The 2023 budget contains \$270,897 for paved road preservation, maintenance and rehabilitation, funded through the Ontario Community Infrastructure Fund (OCIF). This budget has been allocated into the following:

- \$15,000 for preservation and maintenance (crack sealing), and
- \$255,897 for road rehabilitation

Completion of the following 2023 Road Plan will improve the current PCI from 66 to 67.

### **Road Preservation and Maintenance**

Crack Sealing: this preservation method will only be applied to streets within the 'good' to 'excellent' PCI range.

### **Road Rehabilitation**

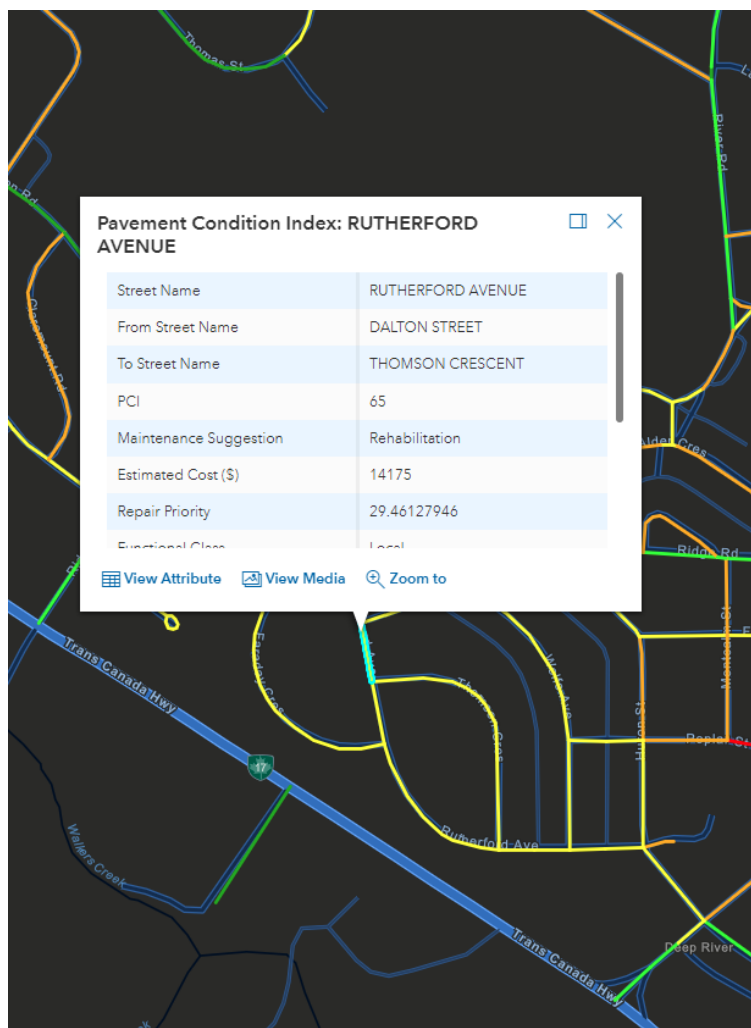
LeCaron Street: minor rehabilitation of asphalt due to necessary removal for watermain repairs.

Dalton Crescent: minor rehabilitation of asphalt due to necessary removal for watermain repairs

Rutherford Avenue: minor rehabilitation (mill and pave) of the entirety of Rutherford Ave (approx. 859m). The selection of Rutherford Avenue was selected based on cost, condition, and criticality.

Rutherford Avenue Rehabilitation Cost Breakdown	
*Pricing based on 2022 Paving RFQ results	
Proposed Project Cost	\$ 350,000
OCIF Allocation	\$ 255,897
Town Contribution	\$ 94,103

Rutherford Ave currently has an overall average PCI of 65 (PCI is determined in road segments and Rutherford consists of nine segments), and is considered a critical or priority route within the Town. Following the results of the 2023 Paving RFQ, staff will continue to provide Council with updates to determine the feasibility.

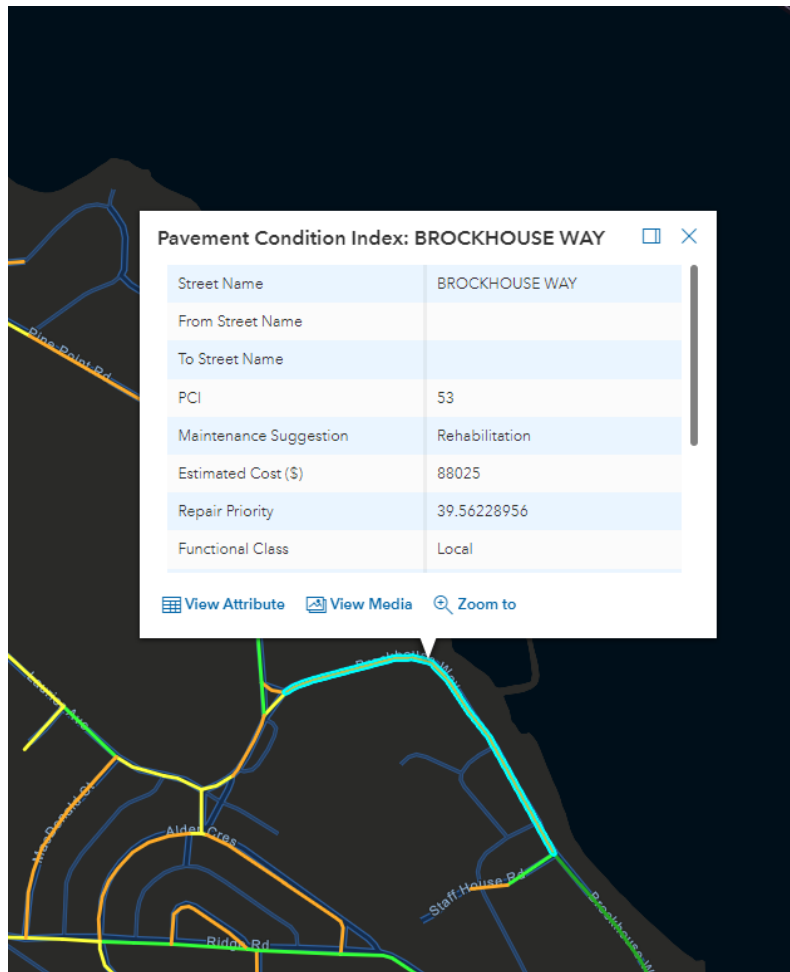


## 2024 Road Plan

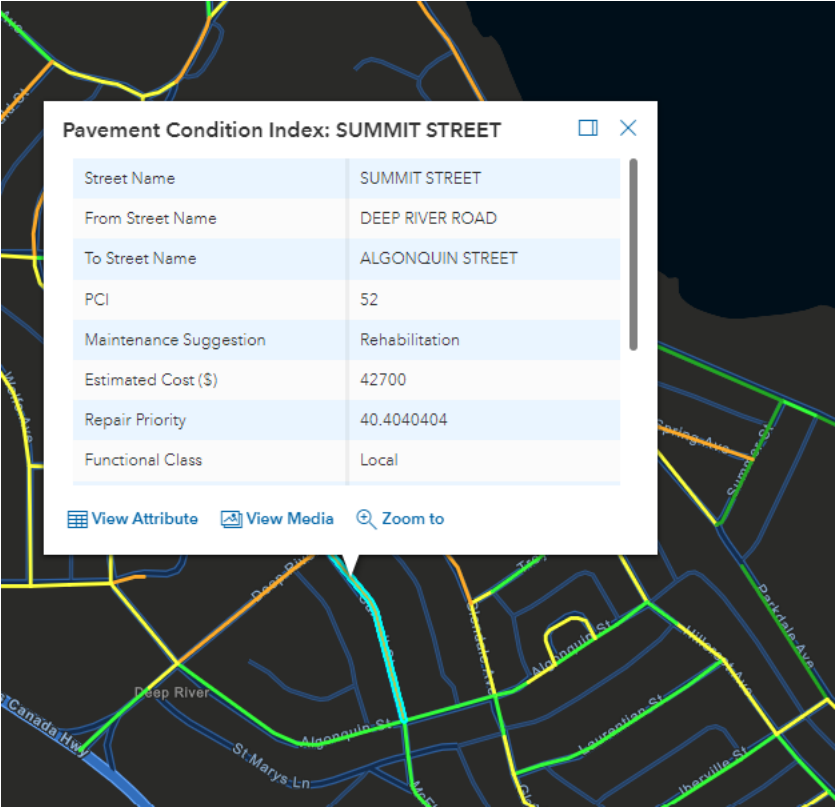
Staff will continue to explore the feasibility of the following road segments for 2024 and beyond;

Brockhouse Way: completion of the Brockhouse Way Reconstruction Project. In 2021, Jp2G Consultants Inc. completed the full design for Brockhouse Way Reconstruction, from the entrance of Cockcroft Residence to the intersection of Laurier Avenue and Alder Crescent. In 2022, Council approved the 2022 Brockhouse Way Rehabilitation Project, which consisted of a rehabilitation, through mill and pave of approximately 350 meters of Brockhouse Way, from the entrance of Cockcroft Residence to the Town's water access/boat launch.

The proposed Brockhouse Way Reconstruction Project will continue from the Town's water access/boat launch to the intersection of Laurier Avenue and Alder Crescent, as per the design. The current estimated cost for the completion of this project is \$2.4 million. Staff are working with Jp2g consultants to separate the project into segments spreading the project and costs throughout multiple years.



Summit Street: proposed as a full reconstruction

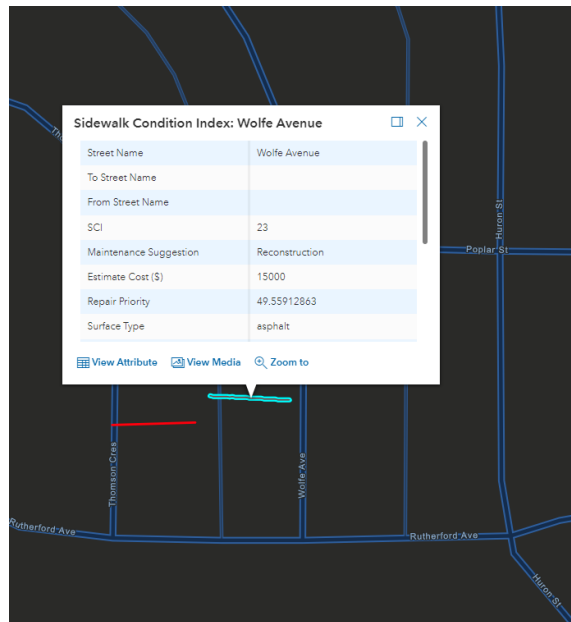


Balmer Bay: proposed rehabilitation through tar and chip.

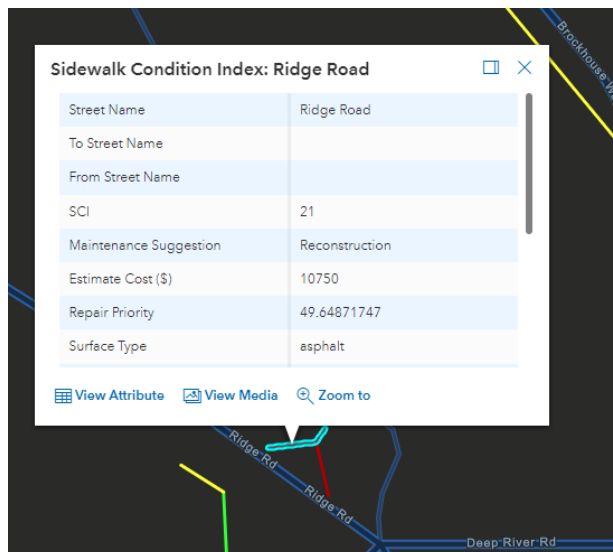
## 2023 Sidewalk Plan

The 2023 operating budget contains \$25,800.00 for the rehabilitation of sidewalks funded through OCIF. Completion of the following 2023 Sidewalk Plan will improve the current SCI from 62 to 66. The budget has been allocated to rehabilitate the following sidewalks:

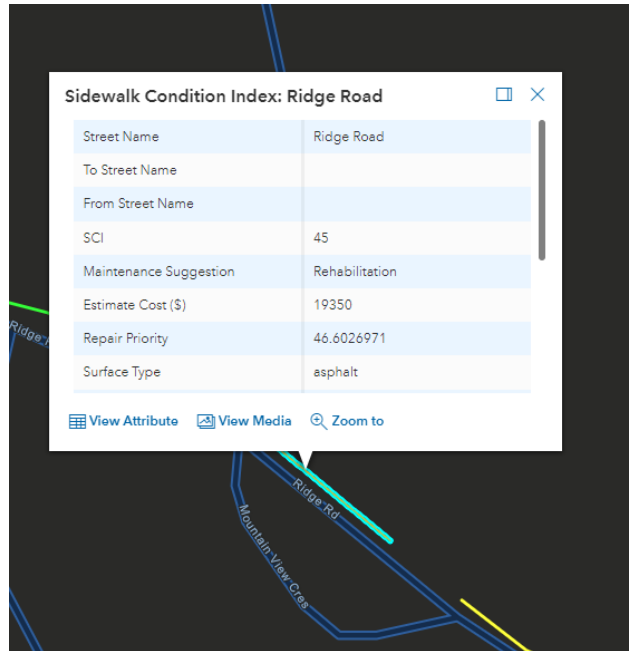
Wolfe & Thomson: removal of asphalt sidewalk (approx. 82 meters) to be replaced by crusher dust. These two sidewalks have a significantly low combined SCI of 25.5, and are considered to be low traffic routes. Staff have had previous success throughout the Town with this rehabilitation method.



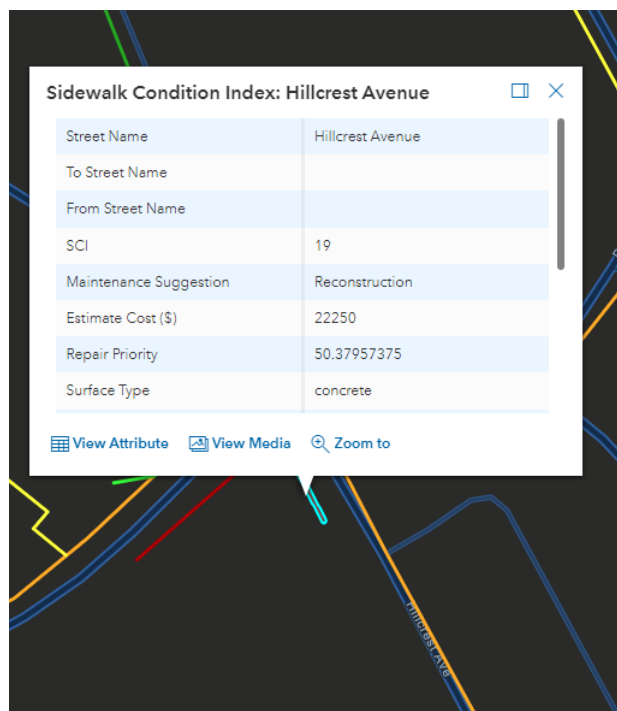
Community Centre: rehabilitation of asphalt sidewalk along Ridge Road, access to Community Centre parking lot, approx. 44 meters with a SCI of 19.



Ridge Road: rehabilitation of asphalt sidewalk along Ridge Road from Wood Working Club parking lot to Laurier Avenue, approx. 86 meters with a SCI of 45.

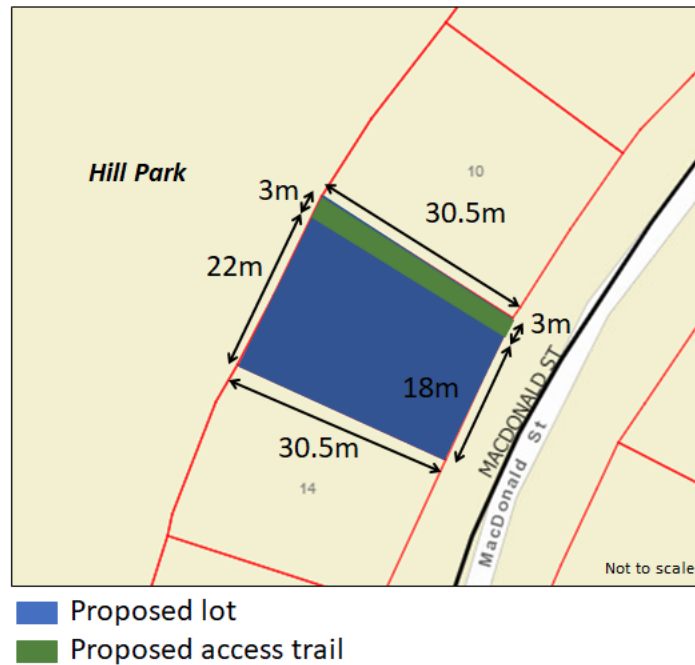


Post Office: removal of concrete sidewalk to be replaced with asphalt, approx. 91 meters with a SCI of 20. This rehabilitation method will significantly improve the condition of the sidewalk, resolving safety issues on a high traffic sidewalk, while being cost effective and allowing time for the Town implement the Community Improvement Plan and align with the County's 10 Year Capital Plan.





MacDonald Street/Hill Park: formalizing access to Hill Park off of MacDonald Street



**2024 Sidewalk Plan**

The 2024 Sidewalk Plan will be dependant on the 2024 OCIF allocation and success of the Post Office sidewalk rehabilitation method. The removal of the concrete sidewalk and replacement with asphalt is a short-term rehabilitation method that has the potential to be cost effective, while significantly improving the condition and therefore, reducing safety hazards. Staff plan to investigate the feasibility of utilizing this method on the following sidewalks:

- Champlain Street: both Town Hall and Business Sector. Approx. 245 meters with a SCI of 27.
- Glendale and Deep River Road: Approx 93 meters with a SCI of 22.

Completion of the above 2024 Sidewalk Plan will improve the SCI from 66 to 71.