



City of  
**Peterborough**

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**To:** **Members of the Finance Committee**

**From:** **Cynthia Fletcher**  
**Commissioner of Infrastructure and Planning Services**

**Meeting Date:** **November 23, 2020**

**Subject:** **Report IPSENG20-042**  
**Road Re-Surfacing of Streets Most in Need**

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## **Purpose**

A report to outline the potential of continuing a Road Re-surfacing program as per the Pilot Re-surfacing Program funded through the allocation of a portion of one-time Federal Gas Tax Funding in 2020.

## **Recommendation**

That Council approve the recommendation outlined in Report IPSENG20-042, dated November 23, 2020 of the Commissioner of Infrastructure and Planning Services, as follows:

That Report IPSENG20-042 be received for information.

## **Budget and Financial Implications**

There are no budget implications in Council receiving this report. If a \$1 million capital project for Resurfacing Roads Most in Need were added to the 2021 Capital budget, it would add 0.57% to the 2.87% for a new total of 3.44%. If it were funded from additional debt, it would add .06% to the 2.87% for a total of 2.93%.

If the program were added into the budget, within the same 2.87% increase, another \$1 million project or portion of a project, would have to be removed from the budget.

## Background

The intention of this report is to provide a follow up to Report IPSENG20-029, dated July 20, 2020. That report responded to Council direction to outline options to accelerate Road Resurfacing of City streets in Most Need of Repair. The report indicated staff would include a potential extension of the Road Re-surfacing Program, piloted in 2020, as part of the 2021 budget review.

A project was included in the submission for the 2021 Capital Budget. However, through the staff budget review process, the program for 2021 was moved “below the line” of projects that could be accommodated within the established budget target and available funding.

The condition of the City’s roads continues to be a source of concern for Council, citizens and staff. This report illustrates the continued backlog of road related work and the effects of funding pressures. Historically, provincial funding via the Ontario Community Infrastructure Fund (**OCIF**) program was available and contributed to addressing this road work. This source of funding ended in 2019.

### Past Reports to Council

In presenting IPSENG19-042 in December of 2019, staff outlined some of the historical and distinct challenges the City has experienced with the overall road construction and preservation programs:

- 1) In 2014, the City enlisted consultant support to conduct a Road Needs Study and develop Pavement Condition Indexes (PCI) for the roads/road segments. Since the 2014 Study, some roads requiring reconstruction have been included in draft budget documents, however competing budget priorities have resulted in many road reconstructions being deferred. The ongoing deferral of these projects creates a backlog throughout the entire road asset management program and result in increased costs as time goes by.
- 2) In 2016, staff presented Report USEC16-015 which focused on the rehabilitation of roads with a Pavement Condition Index (PCI) under 25. Council requested that staff develop a program to further prioritize these roads in most need and to recommend a consistent funding level. In 2017, a new Capital Allocation of \$650,000 was established through the budget process, for the resurfacing/repair of roads with PCI under 25, or roads waiting in the cue for re-construction. Annual competing budget priorities has resulted in this funding being reduced in subsequent years for this program and any remaining funding for re-surfacing has been focused on arterial and collector roads. The backlog of local roads, arterial and collectors far exceeds the funding available.
- 3) Through the 2020 budget review, Council approved use of a portion of one-time Federal Gas Tax funding to implement a Pilot Program to re-surface one of the “roads in most need” for each Ward.

Ontario Regulation 239/02 of the **Municipal Act** sets out maintenance standards for Municipal highways and roads. The regulation outlines classification categories for roads, requirements and frequency of inspection, rehabilitation methods and seasonal maintenance standards. While there is some flexibility within the road rehabilitation programs, regulatory requirements must be met.

Industry standard for developing a roads rehabilitation program involves a thorough assessment of the condition of the road network. The condition assessment involves a complex matrix of criteria, such as classification, regulatory requirements, bus routes, traffic loads, urbanized/non-urbanized, sub-surface infrastructure, surface material, surface infrastructure etc.

A standard road rehabilitation and maintenance program uses the assessment criteria to develop a Pavement Condition Index (PCI):

- Roads with PCI under 25 are intended to be re-constructed
- Roads with PCI under 40 are intended for re-design and then re-construction
- Roads with PCI above 40 are intended to be captured in a regular maintenance program.

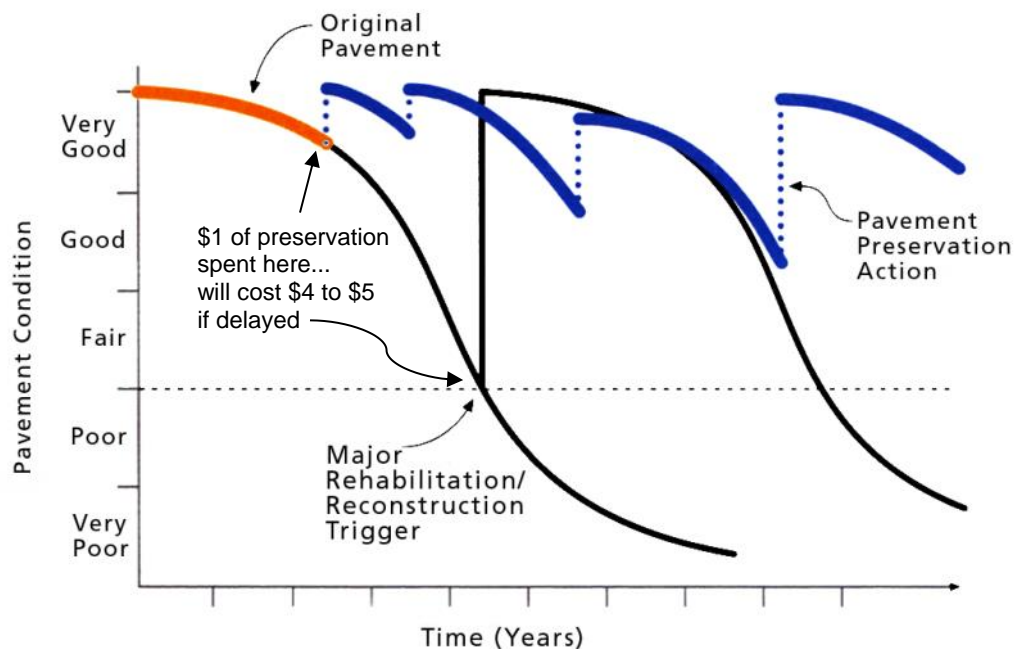
In 2019, the City completed an update to the Pavement Condition Index (PCI) inventory as established in the comprehensive Road Needs Study (Report USEC14-005). The original study produced a pavement condition index (PCI) ranking for each road or segment of road. This industry standard method helped the City establish a consistent framework for prioritizing roads and established the concept of pavement preservation. Typically, the PCI inventory is updated on approximately a five-year cycle.

### **Pavement Preservation**

The intention of pavement preservation is to address maintenance needs throughout the life of the road assembly (underground infrastructure, utilities, supporting material and road surface) to extend the lifespan, thereby saving money in the long term. The pavement is the protective layer for the full road assembly. The concept of the program is similar to the preventative maintenance one should perform on a new car (oil changes, tune ups, alignment, minor repairs, new tires etc). These are expected costs to preserve or extend the expected lifespan of the car, or in the case of the Pavement Preservation program, the full road assembly. If preventative and expected maintenance is not performed, the full lifespan potential is not optimized.

Newly reconstructed roads are, theoretically, to be captured in the pavement preservation program starting 5-10 years following the upgrades and conducted on a prescribed cycle throughout the road's lifespan. The preservation program could result in a 50-60 life expectancy rather than the original 25-30 year reconstruction lifecycle.

Inventory of Roads with PCI greater than 25 is ~ 850 lane kms (some single lane and some multi-lane)



### Re-Construction:

- Typically for roads with a PCI of below 25.
- Critical infrastructure (storm, sanitary, water components, buried utilities) and supporting material needs to be replaced.
- Road is to be urbanized (the new installation of critical infrastructure).

Ideally, planning/design work commences when the road PCI is between 26-40. The reconstruction work occurs when the PCI falls below 25. This planning cycle allows for full benefit of investment throughout the life of the road assembly. The surface pavement replacement is coordinated with the sub surface work. These roads are reflected as individual projects in the Capital Budget.

Inventory: ~125 lane-kms of roads with PCI under 25 (some single lane and some multi-lane)

### Potential Re-surfacing Program

The funding for the 2020 Pilot Road Re-surfacing Program was allocated from one-time influx of Federal Gas Tax funding. For 2021, the funding is “below the line” of projects that could be accommodated within the established budget target and available funding.

If the first year of a three-year program had been able to be accommodated in 2021, Appendix A includes the roads that were proposed. Appendix A also includes the proposed projects for year 2 and 3 of a three-year plan. The roads have been selected based on several criteria:

- PCI is less than 15
- Bundled, where feasible, to realize economies of scale and reduce the potential disruption to neighbourhoods (if roads were addressed individually)
- Not planned to be addressed via another infrastructure project within the next 5 years
- Applicability for one of the short-term applications.

Should Council wish to continue with the program to provide short-term (10-15 years) resurfacing repair to address the “roads in most need”, staff propose Council consider a motion to include the Road Surface Pavement Program (Project #19-074) in the 2021 Capital Budget. Council will then further need to decide to reduce expenditure(s) elsewhere in the budget or add the amount to the 2021 Net Tax Levy Requirement.

## Summary

The City of Peterborough uses an industry standard method to create a pavement condition index and prioritize roads for construction (new), re-construction, pavement preservation or re-surfacing and repairs. Current and historical funding levels do not support the movement of “roads in most need” through the re-construction program in a timely manner.

For 2020, the City received a one-time increase in Federal Gas Tax allocation. As part of the 2020 budget deliberations, Council approved allocation of \$1,000,000 of the one-time Federal Gas Tax increase to pilot short term repairs for 5 “roads in most need”.

As part of the 2021 budget review, Council could consider including the Road Surface Pavement Program 19-074 “above the line” to continue the program to address the “roads in most need”. Subsequent Road Surface Pavement programs would be reviewed by Council as part of annual budget processes.

Submitted by,

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Attachment  
Appendix A – Potential Three-year Road Re-surfacing Program

**Appendix A: Road Re-surfacing Program (2021 – 2023)**

The following represents the allocation of ~ \$1,000,000 annually. Council would approve funding for the re-surfacing of “Roads in Most Need” as part of the 2022 and 2023 annual budget review processes.

<b>Year</b>	<b>Ward</b>	<b>Street</b>	<b>From</b>	<b>To</b>
2021	Northcrest	Simons Ave	Chemong Rd	Hillside St
		Scollard Rd	All	
		Daniel St	All	
		Dewar Cres	All	
		Deana Blvd	All	
		O’Leary Ave	All	
2022	Town	Belmont Ave	All	
		Hunter St W	Walton St	Park St N
		Gilmour St	Monaghan Rd	St Joseph St
	Otonabee	Arthur Ave	All	
		Barret St	All	
		St Catherine St	Cameron St	McKellar St
	Ashburnham	St Lukes Ave	All	
		Sophia St	Rogers St	Armour Rd
		Beverly St	All	
		Sutherland Pl	All	
2023	Monaghan	Facendi Dr	All	
		Cindy St	All	
		Facendi Ct	All	
		Daleview Ave	All	
		Crestwood Ave	Dead End West	Kawartha Hts Blvd
	Town	Rubidge	Dublin St	Parkhill Rd W
	Otonabee	Whittington Dr	Spillsbury Dr	Dead End East
	Ashburnham	Collison Ave	All	
		Collison Cres	All	
		Southpark Dr	Collison Ave	Riverview Hts