



City of Richmond

Report to Committee

To: Public Works and Transportation Committee **Date:** March 29, 2017
From: John Irving, P.Eng. MPA **File:** 10-6060-05-01/2017-Vol 01
 Director, Engineering
Re: **Post Winter Roads and Paving Program Update**

Staff Recommendation

1. That \$202,300 be allocated from the MRN Provision for MRN road rehabilitation and included as an amendment to the 5 Year Consolidated Financial Plan (2017-2021).
2. That \$832,500 be allocated from the Gas Tax Provision for Non MRN road rehabilitation and included as an amendment to the 5 Year Consolidated Financial Plan (2017-2021).

John Irving, P.Eng. MPA
 Director, Engineering
 (604-276-4140)

Att. 1

REPORT CONCURRENCE		
ROUTED TO: Finance Department	CONCURRENCE <input checked="" type="checkbox"/>	CONCURRENCE OF GENERAL MANAGER
REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE	INITIALS: 	APPROVED BY CAO

Staff Report

Origin

The winter of 2016/2017 was the worst the City of Richmond has experienced in recent memory. Low temperatures and high snowfalls led to an extensive snow removal program and has accelerated deterioration of the City’s Roadways. This report identifies a number of roadways where repairs are required due to the unusually harsh winter and requests Council approval for funding to perform those repairs.

This report supports Council’s 2014-2018 Term Goal #3 A Well-Planned Community:

Adhere to effective planning and growth management practices to maintain and enhance the livability, sustainability and desirability of our City and its neighbourhoods, and to ensure the results match the intentions of our policies and bylaws.

3.3. *Effective transportation and mobility networks.*

This report supports Council’s 2014-2018 Term Goal #6 Quality Infrastructure Networks:

Continue diligence towards the development of infrastructure networks that are safe, sustainable, and address the challenges associated with aging systems, population growth, and environmental impact.

6.1. *Safe and sustainable infrastructure.*

Findings of Fact

The winter of 2016/2017 was one of the worst in recent history. Table 1 identifies average winter metrics and compares them to statistics compiled for 2016/2017 at the weather station at Richmond Nature Park.

Table 1 – Winter Weather Statistics December Through March

	Average (1981 -2010)	2016/2017	Difference
Snowfall	34.6 cm	55.4 cm	160% of average
Days With Snowfall	7.1 days	17 days	239% of average
Rain	541 mm	382.4 mm	71% of average
Days with Rainfall	73.7 days	55 days	75% of average
Days Below 0 Degrees Celcius	48.1	64	133% of average

A key issue was the amount of time that snow remained on the ground. In a typical Richmond winter, snow is typically washed away by rainfall within a few days of snowfall. The 2016/2017 winter was exceptional with snow remaining on the ground for long periods of time during the winter season.

Analysis

The extreme winter weather experienced in 2016/2017 accelerated deterioration of the City's road network. Beyond work identified in the 2017 Capital Plan, Public Works has identified \$1,034,800 in roadway remediation projects that require attention in 2017, as itemized in Attachment 1. Roadway rehabilitation is required for these roadways this year to prevent further deterioration that will lead to costly road replacement. Staff recommends that this work be completed prior to the fall of 2017.

The City of Richmond entered the Community Works Fund Agreement with the Union of British Columbia Municipalities through which the City receives annual Gas Tax Funds. These funds can be allocated to projects that fall into one of the following categories: public transit, local roads and bridges, community energy systems, water and wastewater, solid waste management, disaster mitigation, culture and tourism infrastructure, and sport and recreation infrastructure. This project is applicable under the local roads and bridges category.

Financial Impact

Major Road Network (MRN)


\$202,300 of the proposed roadway remediation work is on MRN roadways. Staff recommend funding this work from the MRN Provision and including this as an amendment to the City's 5 Year Consolidated Financial Plan (2017-2021). The MRN provision has an unencumbered balance of \$5.3M.

Non Major Road Network (Non-MRN)

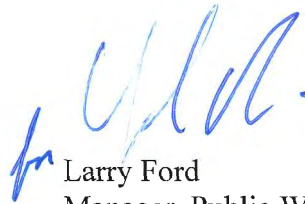
\$832,500 of the proposed roadway remediation work is on Non-MRN roadways. Staff recommend funding this work from the Gas Tax Provision and including this as an amendment to the 5 Year Consolidated Financial Plan (2017-2021). The Gas Tax Provision has an unencumbered balance of \$1.2M.

Conclusion

The winter of 2016/2017 was one of the worst in recent memory and has accelerated deterioration of the City's road network. Public Works has identified \$1,034,800 in roadway remediation projects over and above the 2017 Capital Program that are required to prevent further roadway deterioration which will lead to costly road replacement.



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LB:lb

Att. 1: Table of Roads Requiring Rehabilitation Due to 2016/2017 Winter Weather

Attachment 1 – Roads Requiring Rehabilitation Due to 2016/2017 Winter Weather

Road	Road Section	Rehabilitation Treatment	MRN / non-MRN	Area (sq. m)	Cost
Blundell Rd	No. 5 Rd to Shell Road Trail	Grind and Overlay	Non-MRN	5,805	\$145,100
Steveston Hwy	Palmberg to Entertainment Way	Grind and Overlay	Non-MRN	7,740	\$193,500
Minoru Rd	Lansdowne to Ackroyd	Grind and Overlay	Non-MRN	4,200	\$105,000
Westminster Hwy	Garden City to 100 m past Alderbridge	Grind and Overlay	MRN	8,092	\$202,300
No. 3 Rd	Westminster to Ackroyd	Grind and Overlay	Non-MRN	3,720	\$93,000
Granville Ave	Gilbert to Minoru	Grind and Overlay	Non-MRN	11,475	\$286,900
Westminster Hwy	W/PL of temple to Nelson	Crack Seal	Non-MRN	N/A	\$3,000
Westminster Hwy	Nelson to Railroad Overpass	Crack Seal	Non-MRN	N/A	\$3,000
Saba Rd	Buswell to No. 3 Rd	Crack Seal	Non-MRN	N/A	\$3,000
Total:					\$1,034,800