



**To:** Public Works and Transportation Committee

**Date:** March 2, 2021

**From:** Lloyd Bie, P. Eng.  
Director, Transportation

**File:** 01-0150-20-ICBC1-  
01/2021-Vol 01

**Re:** ICBC-City of Richmond Road Improvement Program – 2021 Update

**Staff Recommendation**

1. That the list of proposed road safety improvement projects, as described in Attachment 2 of the staff report titled “ICBC-City of Richmond Road Improvement Program – 2021 Update,” dated March 2, 2021 from the Director, Transportation be endorsed for submission to the ICBC 2021 Road Improvement Program for consideration of cost-share funding; and
2. That should the above applications be successful, the Chief Administrative Officer and General Manager, Planning and Development be authorized to execute the cost-share agreements on behalf of the City, and that the Consolidated 5 Year Financial Plan (2021-2025) be amended accordingly.

Lloyd Bie, P. Eng.  
Director, Transportation  
(604-276-4131)

Att. 2

REPORT CONCURRENCE		
<b>ROUTED TO:</b>	<b>CONCURRENCE</b>	<b>CONCURRENCE OF GENERAL MANAGER</b>
Finance	<input checked="" type="checkbox"/>	
Engineering	<input checked="" type="checkbox"/>	
RCMP	<input checked="" type="checkbox"/>	
<b>SENIOR STAFF REPORT REVIEW</b>	<b>INITIALS:</b> 	<b>APPROVED BY CAO</b> 

## Staff Report

### Origin

At the March 23, 2020 Council meeting, Council endorsed a number of proposed joint ICBC-City of Richmond road safety improvement projects for 2020. This report summarizes the projects implemented in 2020 with funding from ICBC and presents a list of projects proposed to be implemented with funding contributions from ICBC as part of the 2021 ICBC-City of Richmond Road Improvement Program partnership.

This report supports Council's Strategic Plan 2018-2022 Strategy #1 A Safe and Resilient City:

*Enhance and protect the safety and well-being of Richmond.*

*1.2 Future-proof and maintain city infrastructure to keep the community safe.*

This report supports Council's Strategic Plan 2018-2022 Strategy #6 Strategic and Well-Planned Growth:

*Leadership in effective and sustainable growth that supports Richmond's physical and social needs.*

*6.3 Build on transportation and active mobility networks.*

### Analysis

#### ICBC Road Improvement Program

ICBC initiated the Road Improvement Program (the Program) in 1990 to help fund the implementation of road safety engineering measures to reduce the frequency and/or severity of crashes at high-risk locations, reduce claims costs and reduce the potential for crashes. Since 1990, the agency has invested approximately \$209 million in over 7,500 road improvement projects across the province. Periodically, ICBC conducts an evaluation of the safety performance of a sample of locations across BC that have been improved under the Program in order to quantify its overall effectiveness by:

- determining if the frequency and/or severity of collisions at the improvement sites was reduced after the implementation of the improvement; and by
- quantifying the program costs versus the economic safety benefits to determine the return on ICBC's road safety investment.

The most recent evaluation conducted in 2015 included five sample locations in Richmond and concluded that province-wide, the Program led to:

- A 24% average reduction in crashes that led to injuries and fatalities.
- A 15% average reduction in crashes that led to property damage.
- Every \$1 spent on road improvements across B.C. resulted in an average of \$4.70 returned to ICBC in savings as a result of a reduction in collisions costs.

The City has been in partnership with ICBC in the Program since 1994. This partnership is an important component of the City’s traffic safety program as it enables the City not only to undertake more traffic safety enhancements than it could alone, but also to expedite some of these road safety improvement projects. Each year, a list of potential eligible capital projects is developed for inclusion in the Program based on community requests and input from the Traffic Safety Advisory Committee and other stakeholders.

Completed 2020 ICBC-City of Richmond Road Improvement Projects

A total of 12 groups of City projects fully or substantially completed in 2020 (Attachment 1) will receive a total of \$309,500 from ICBC’s 2020 *Road Improvement Program* (example completed project in Figure 1).

Over the past five years, ICBC has contributed a total of \$1,227,390 towards the City’s transportation projects (Figure 2).



Figure 1: Upgrade of Pedestrian Signal at Blundell Road-Moffat Road to Full Signal

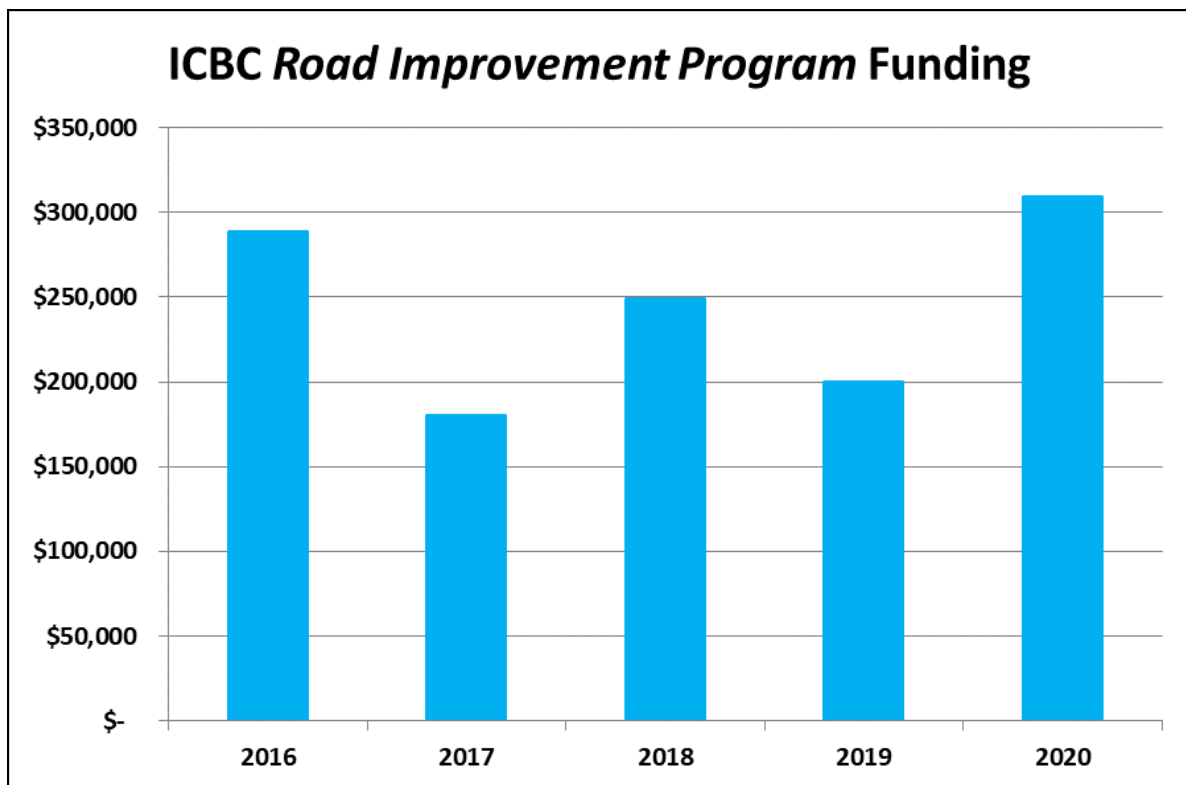


Figure 2: Annual ICBC Road Improvement Program Funding received by City

## Proposed 2021 ICBC-City of Richmond Road Improvement Projects

Attachment 2 lists 16 bundles of projects proposed for submission to the 2021 *Road Improvement Program* for funding contribution from ICBC, all of which are included in approved Capital Budgets. The projects align with the objectives of the City and ICBC to improve the safety of all road users by implementing new infrastructure improvements to reduce crashes and injuries. ICBC's potential funding contribution to these projects will be determined by historical traffic crash rates at these locations and the estimated reduction in ICBC claim costs resulting from the proposed traffic safety improvements, project eligibility vis-à-vis the funding guidelines, and the total funding available, which varies from year to year. The outcome of ICBC's review of the projects will be reported back as part of the 2022 update of the City-ICBC *Road Improvement Program*.

Upon approval of a project by ICBC, the City will be required to enter into a funding agreement with ICBC. The agreement is provided by ICBC and generally includes an indemnity in favour of ICBC. Staff recommend that the Chief Administrative Officer and General Manager, Planning and Development be authorized on behalf of the City to execute the funding agreements for the approved projects and that the consolidated 5 Year Financial Plan (2021-2025) be amended accordingly to reflect the receipt of external grants. Should any submitted projects receive funding from ICBC, the City's portion of the total capital cost would be reduced accordingly.

### **Financial Impact**

The total estimated cost of all the projects identified in Attachment 2 is \$12,903,400. As indicated in Attachment 2, the City's estimated portion of the costs of the projects (\$8,175,060) is fully funded with the funding sources having been previously approved by Council as part of past or current Capital Budgets.

### **Conclusion**

ICBC is a significant long-time partner working with the City to promote traffic safety in Richmond. The traffic safety initiatives jointly implemented by ICBC and the City, including various road and traffic management enhancements, educational efforts and enforcement measures, have resulted in safer streets for all road users in Richmond. Therefore, staff recommend that Council endorse the various local road safety improvement projects for submission to the 2021 joint ICBC-City of Richmond Road Improvement Program.



Fred Lin, P.Eng., PTOE  
Senior Transportation Engineer  
(604-247-4627)



Joan Caravan  
Transportation Planner  
(604-276-4035)

Att. 1: 2020 Road Improvement Projects receiving ICBC Funding

Att. 2: Proposed 2021 City-ICBC Road Improvement Projects

Project Description	Location	ICBC Contribution	Estimated Total Cost <sup>(1)</sup>
Installation of Special Crosswalk	<ul style="list-style-type: none"> <li>Shell Road-Maddocks Road</li> </ul>	\$3,000	\$60,000
Installation of Pedestrian Walkway	<ul style="list-style-type: none"> <li>Viking Way (Cambie Road-Bridgeport Road)</li> </ul>	\$5,000	\$655,000
Upgrade of Pedestrian Signal to Full Signal with LED Overhead Street Name Signs	<ul style="list-style-type: none"> <li>Blundell Road-Moffat Road</li> </ul>	\$15,500	\$350,000
Full Traffic Signal with LED Overhead Street Name Signs	<ul style="list-style-type: none"> <li>No. 5 Road-King Road</li> </ul>	\$43,500	\$325,000
Installation of Video Detection Cameras	<ul style="list-style-type: none"> <li>Oval Way-River Road</li> <li>No. 3 Road-Capstan Way</li> <li>No. 3 Road-Granville Avenue</li> <li>No. 3 Road-Williams Road</li> <li>Great Canadian Way-River Road</li> <li>No. 3 Road-Yaohan Entrance</li> <li>Great Canadian Way-Van Horne Way</li> <li>No. 3 Road-Cambie Road</li> <li>No. 3 Road-Saba Road</li> <li>No. 3 Road-Browngate Road</li> <li>No. 3 Road-Leslie Road</li> <li>No. 3 Road-Ackroyd Road</li> </ul>	\$94,000	\$360,000
Installation of UPS (Uninterruptible Power Supply) at Intersections	<ul style="list-style-type: none"> <li>No. 2 Road-Francis Road</li> <li>No. 2 Road-Williams Road</li> <li>Gilbert Road-Westminster Hwy</li> <li>Railway Avenue-Steveston Hwy</li> <li>No. 2 Road-Steveston Hwy</li> <li>Gilbert Road-Steveston Hwy</li> <li>No. 5 Road-Horseshoe Way</li> <li>No. 3 Road-Steveston Hwy</li> <li>No. 4 Road-Steveston Hwy</li> <li>No. 6 Road-Westminster Hwy</li> <li>Westminster Hwy-McLean Ave</li> </ul>	\$27,500	\$140,000
Top 20 Collision Prone Intersections: Short-Term Improvements (signage, pavement markings, signal head upgrades)	<ul style="list-style-type: none"> <li>19 intersections</li> </ul>	\$73,000	\$486,000
Top 20 Collision Prone Intersections: Design of Medium- and Long-Term Improvements	<ul style="list-style-type: none"> <li>20 intersections</li> </ul>	\$25,000	\$96,000
Road Safety Study and Conflict Analysis	<ul style="list-style-type: none"> <li>Westminster Highway-No. 3 Road</li> </ul>	\$7,000	\$13,500
Neighbourhood Stop Sign Infill (63 intersections in 4 areas)	<ul style="list-style-type: none"> <li>Pacemore Avenue area</li> <li>Seacote Road area</li> <li>Maddocks Road area</li> <li>Doulton Avenue area</li> </ul>	\$11,000	\$16,000
Installation of Pedestrian Zone Markers	<ul style="list-style-type: none"> <li>Lynas Lane (Blair Elementary School)</li> <li>General Currie Road (General Currie Elementary School)</li> </ul>	\$4,000	\$10,000
Traffic Calming (speed humps)	<ul style="list-style-type: none"> <li>McLean Avenue</li> </ul>	\$1,000	\$4,450
<b>Total</b>		<b>\$309,500</b>	<b>\$2,515,950</b>

(1) Actual cost to be determined after project completion.

Proposed 2021 ICBC-City of Richmond Road Improvement Program Project	Estimated Total Cost	Source & Amount of City Funds <sup>(1)</sup>		Confirmed Funding: TransLink <sup>(2)</sup>
Installation of special crosswalk: <ul style="list-style-type: none"> <li>• Van Horne Way-River Drive (side-mounted)</li> <li>• 4100-block Williams Road</li> <li>• Francis Road-Minler Road</li> <li>• No. 5 Road-Jacobson Way</li> <li>• Other locations to be determined<sup>(4)</sup></li> </ul>	\$60,000 \$100,000 \$100,000 \$100,000	2020 Special Crosswalk Program 2018 Special Crosswalk Program 2021 Special Crosswalk Program 2021 Special Crosswalk Program	\$60,000 \$100,000 \$100,000 \$100,000	-
Installation of full traffic signal: <ul style="list-style-type: none"> <li>• No. 6 Road-Vulcan Way</li> <li>• Other locations to be determined<sup>(4)</sup></li> </ul>	\$700,000	2021 Traffic Signal Program	\$700,000	-
Installation of pedestrian signal: <ul style="list-style-type: none"> <li>• Westminster Hwy-Westminster Hwy North (upgrade from existing fire signal)</li> <li>• Other locations to be determined<sup>(4)</sup></li> </ul>	\$100,000	2020 Traffic Signal Program	\$100,000	-
Installation of traffic video cameras: <ul style="list-style-type: none"> <li>• No. 5 Road and Williams Road</li> <li>• No. 5 Road and Blundell Road</li> <li>• Graybar Road and Westminster Hwy</li> <li>• Fraserwood Place and Westminster Hwy</li> <li>• No. 8 Road and Westminster Hwy</li> <li>• No. 5 Road and Westminster Hwy</li> <li>• Other locations to be determined<sup>(4)</sup></li> </ul>	\$30,000 \$30,000 \$25,000 \$25,000 \$30,000 \$30,000	2021 Traffic Video and Communication Program	\$170,000	-
Installation of overhead LED street name signs: <ul style="list-style-type: none"> <li>• No. 1 Road and Blundell Road</li> <li>• No. 1 Road and Granville Ave</li> <li>• No. 1 Road and Westminster Hwy</li> <li>• Railway Ave and Moncton St</li> <li>• Elmbridge Way and Westminster Hwy</li> <li>• Minoru Blvd and Alderbridge Way</li> <li>• Alderbridge Way and Westminster Hwy</li> <li>• Alderbridge Way and Elmbridge Way</li> <li>• St Albans Road and Blundell Road</li> <li>• Hazelbridge Way and Alexandra Road</li> <li>• Hazelbridge Way and Leslie Road</li> <li>• Hazelbridge Way and Browngate Road</li> <li>• Hazelbridge Way and Cambie Road</li> <li>• Sexsmith Road and Cambie Road</li> <li>• Great Canadian Way and River Road</li> <li>• Garden City Road and Blundell Road</li> <li>• Garden City Road and Francis Road</li> <li>• Garden City Road and Williams Road</li> <li>• Garden City Road and Cook Road</li> <li>• Garden City Road and Odlin Road</li> <li>• Other locations to be determined<sup>(4)</sup></li> </ul>	\$300,000 (\$15,000 per intersection)	2021 LED Street Name Sign Program	\$300,000	-
Installation of pedestrian zone markers in various locations pending results of traffic studies <sup>(3)</sup>	\$10,000	2021 Traffic Calming Program	\$10,000	-
Traffic calming measures in various locations pending results of traffic studies <sup>(3)</sup>	\$290,000	2021 Traffic Calming Program	\$290,000	-
Cambie Road-No. 5 Road intersection upgrade: <ul style="list-style-type: none"> <li>• left-turn lanes on all four legs</li> <li>• multi-use pathways on Cambie Road (at intersection) and No. 5 Road (Cambie Road-Thorpe Road)</li> </ul>	\$2,760,000	2020 Roads DCC Program	\$1,380,000	\$1,380,000

Proposed 2021 ICBC-City of Richmond Road Improvement Program Project	Estimated Total Cost	Source & Amount of City Funds <sup>(1)</sup>		Confirmed Funding: TransLink <sup>(2)</sup>
Installation of UPS (uninterruptible power supply): <ul style="list-style-type: none"> <li>Gilbert Road and Lansdowne Road</li> <li>No. 2 Road and Westminster Hwy</li> <li>No. 3 Road and Granville Avenue</li> <li>No. 4 Road and Cambie Road</li> <li>Garden City Road and Blundell Road</li> <li>No. 1 Road and Steveston Hwy</li> <li>Gilbert Road and Blundell Road</li> <li>No. 1 Road and Francis Road</li> <li>Other locations to be determined<sup>(4)</sup></li> </ul>	\$160,000 (\$20,000 per intersection)	2021 Traffic Signal Power Backup System (UPS)	\$160,000	-
Construction of pedestrian pathway: <ul style="list-style-type: none"> <li>River Road (No. 6 Road-Burdette Ave)</li> <li>St. Edwards Drive (350m east of Cambie Road-Bird Road)</li> <li>Westminster Hwy (Muir Road-150m east)</li> <li>Other locations to be determined<sup>(4)</sup></li> </ul>	\$350,000 \$420,000 \$190,000	2018 Arterial Roadway Improvement Program 2020 Arterial Roadway Improvement Program 2021 Arterial Roadway Improvement Program 2020 Neighbourhood Walkway Program	\$350,000 \$306,000 \$114,000 \$95,000	- - \$95,000 -
Construction of multi-use pathway/cycling facilities: <ul style="list-style-type: none"> <li>Westminster Hwy (Smith Cr-Fraserside Gate)</li> <li>Garden City Road (Lansdowne Road-Westminster Hwy)</li> <li>Alderbridge Way (Shell Road- No. 4 Road): Phase 2 (Shell Road-Fisher Drive)</li> <li>Steveston Hwy (Shell Road-Mortfield Gate)</li> <li>Charles Street (Sexsmith Road-Bridgeport Station Entrance)</li> <li>Other locations to be determined</li> </ul>	\$1,100,000 \$1,000,000 \$1,200,000 \$2,000,000 \$350,000	2019 Roads DCC Program 2019 Roads DCC Program 2018 Roads DCC Program 2019 Roads DCC Program 2019 Active Transportation Improvement Program	\$550,000 \$500,000 \$600,000 \$590,000 \$156,660	\$550,000 <sup>(5)</sup> \$500,000 \$600,000 \$1,410,000 \$193,340
Removal of Channelized Right-Turn Island: <ul style="list-style-type: none"> <li>Cooney Road-Westminster Hwy (northeast corner)</li> <li>Garden City Road-Lansdowne Road (northwest corner)</li> </ul>	\$208,000 \$483,000	2020 Arterial Roadway Improvement Program 2020 Arterial Roadway Improvement Program 2020 Active Transportation Improvement Program	\$208,000 \$286,000 \$197,000	- - -
Railway Avenue (Steveston Highway-Williams Road): Re-striping of Lane Lines	\$33,400	2019 Active Transportation Improvement Program	\$33,400	-
Granville Avenue (No. 3 Road-Gilbert Road): Bike Lane Protection Pilot Project	\$95,000	2020 Active Transportation Improvement Program	\$95,000	-
Top 20 Collision Prone Intersections: Preliminary Designs for Medium-/Long-term Improvements	\$504,000	2020 Roads DCC Program	\$504,000	-
Westminster Highway-No. 8 Road: Warning Sign for Left-Turn Motorists (pilot project)	\$20,000	2021 Active Transportation Improvement Program	\$20,000	-
Road Safety Studies: locations to be determined <sup>(4)</sup>	\$100,000	2021 Transportation Planning, Functional & Preliminary Design	\$100,000	-
<b>Total</b>	<b>\$12,903,400</b>		<b>\$8,175,060</b>	<b>\$4,728,340</b>

- (1) Should the submitted project receive funding from ICBC, the City's portion of the total cost would be reduced accordingly.  
(2) The amount shown represents the maximum funding contribution to be received based on the City's cost estimate for the project. The actual invoiced amount follows project completion and is based on incurred costs.  
(3) Implementation is subject to consultation with and support from affected residents.  
(4) Additional locations may be identified for submission to ICBC prior to its annual program deadline.  
(5) TransLink funding comprised of \$489,500 (confirmed) and \$60,500 (pending).