



# Public Works and Transportation Committee Electronic Meeting

Council Chambers, City Hall 6911 No. 3 Road

# Wednesday, September 21, 2022 Immediately following the Community Safety Committee meeting

Pg. # ITEM

# MINUTES

**PWT-5** Motion to adopt the minutes of the meeting of the Public Works and Transportation Committee held on July 20, 2022.

# NEXT COMMITTEE MEETING DATE

October 19, 2022, (tentative date) at 4:00 p.m. in Council Chambers

PLANNING AND DEVELOPMENT DIVISION

1. **KITTIWAKE DRIVE – TRAFFIC CALMING UPDATE** (File Ref. No. 10-6450-09-01) (REDMS No. 6925519)

PWT-9

See Page **PWT-9** for full report

Designated Speaker: Sonali Hingorani

## STAFF RECOMMENDATION

That Option 3 to implement a pilot project for the temporary installation of two speed cushions on Kittiwake Drive for a trial period of six months, as described in the staff report titled "Kittiwake Drive – Traffic Calming Update" dated September 6, 2022 from the Director, Transportation, be endorsed.

2. REMOVAL OF CHANNELIZED RIGHT-TURN ISLANDS TO IMPROVE ROAD SAFETY (File Ref. No. 10-6460-01) (REDMS No. 6942248)

**PWT-15** 

See Page **PWT-15** for full report

Designated Speaker: Sonali Hingorani

STAFF RECOMMENDATION

That the City request the Ministry of Transportation and Infrastructure and Vancouver Airport Authority review channelized right-turn island locations in Richmond that are within their jurisdictions to improve road safety at these intersections.

# ENGINEERING AND PUBLIC WORKS DIVISION

3. AWARD OF CONTRACT: 8058P – GARBAGE AND CARDBOARD CONTAINERS AND COLLECTION SERVICES AT CITY FACILITIES (File Ref. No. 10-6370-01) (REDMS No. 6936833)

**PWT-24** 

See Page PWT-24 for full report

Designated Speaker: Suzanne Bycraft

STAFF RECOMMENDATION

- (1) That Contract 8058P Garbage and Cardboard Containers and Collection Services at City Facilities be awarded for a three-year term, commencing November 1, 2022 to Super Save Group of Companies at an estimated total contract value of \$383,672.74, as described in the report titled "Award of Contract: 8058P – Garbage and Cardboard Containers and Collection Services at City Facilities", dated August 11, 2022, from the Director, Public Works Operations; and
- (2) That the Chief Administrative Officer and General Manager, Engineering and Public Works be authorized to extend the initial three-year term, up to the maximum total term of five years, for the maximum total amount of \$665,714.80, as described in the report titled "Award of Contract: 8058P – Garbage and Cardboard Containers and Collection Services at City Facilities", dated August 11, 2022, from the Director, Public Works Operations.
- 4. FRASER RIVER FRESHET AND FLOOD PROTECTION UPDATE 2022

(File Ref. No. 10-6060-01) (REDMS No. 6916829)

**PWT-29** 

See Page PWT-29 for full report

Designated Speaker: Manraj Gill

STAFF RECOMMENDATION

That the staff report titled "Fraser River Freshet and Flood Protection Update 2022", dated August 10, 2022, from the Director, Engineering be received for information.

## 5. MANAGER'S REPORT

# Public Works & Transportation Committee Agenda – Wednesday, September 21, 2022 Pa. # ITEM

# COUNCILLOR MICHAEL WOLFE

6. SAFETY MEASURES FOR HEAVY TRUCKS (File Ref. No.)

#### **PWT-40**

See Page **PWT-40** for background material

### RECOMMENDATION

- (1) That the City of Richmond owned and contracted heavy trucks are mandated to have side guards;
- (2) That we encourage the installation of additional blind spot side mirrors and the use of back up cameras;
- (3) That we review bike lanes in terms of turning conflicts and mitigate to reduce risk to vulnerable road users;
- (4) That we advocate with regional, provincial and federal authorities to create consistent framework for truck operators; and
- (5) That we advocate to ICBC and truck-driving associations to deliver increased driver education to better inform of the responsibilities regarding vulnerable road users.

# ADJOURNMENT





# **Public Works and Transportation Committee**

Date:	Wednesday, July 20, 2022
Place:	Council Chambers Richmond City Hall
Present:	Councillor Chak Au, Chair Councillor Alexa Loo (by teleconference) Councillor Andy Hobbs Councillor Linda McPhail (by teleconference) Councillor Michael Wolfe (by teleconference)
Also Present:	Councillor Carol Day (by teleconference) Councillor Bill McNulty Councillor Harold Steves (by teleconference)
Call to Order:	The Chair called the meeting to order at 4:00 p.m.

# MINUTES

It was moved and seconded That the minutes of the meeting of the Public Works and Transportation Committee held on June 22, 2022, be adopted as circulated.

# CARRIED

# PLANNING AND DEVELOPMENT DIVISION

#### 1. CYCLING NETWORK PLAN UPDATE - FINAL PLAN (File Ref. No. 02-0775-50-6708) (REDMS No. 6889117)

In reply to queries from the Committee, staff advised (i) a connection to Burkeville may be implemented in future projects, (ii) staff will present the Vancouver Airport Authority (YVR) cycling network plan at a future meeting, (iii) access to all properties will be considered prior to implementation of individual projects, (iv) individual stakeholders impacted by the cycling network plan will be consulted during the implementation phase, (v) paving the west side trail is not part of the cycling network plan,

1.

(vi) throughout the consultation process, staff has reviewed each suggestion received and included the suggestions in the cycling network plan, (vii) maintenance items will be considered outside of the cycling network plan, and (viii) there will be an opportunity to make additional changes after Council approval.

John Roston, Richmond resident, commented on the need to immediately designate one major north-south cycling route and one major east-west cycling route.

It was moved and seconded

That the update of the Cycling Network Plan, as described in the report titled "Cycling Network Plan Update - Final Plan", dated June 21, 2022, from the Director, Transportation, be endorsed for implementation.

CARRIED

# 2. PROVINCIAL E-SCOOTER PILOT PROJECT – ANNUAL REPORT FOR PARTICIPATING MUNICIPALITIES

(File Ref. No. 10-6460-03) (REDMS No. 6894298)

In reply to queries from the Committee, staff advised (i) helmet usage is regulated provincially, (ii) bike and scooter rental companies will be contacted and educated on helmet and speed regulations, (iii) scooter speed limits have been set and are subject to enforcement, (iv) enforcement activity reports from jurisdictions outside of Richmond will be provided at a future meeting, (v) the City has the authority to approve the use of e-scooters on roads in its jurisdiction, (vi) approval to use e-scooters on YVR and federal lands require separate approval, (vii) statistics from Lime regarding customer infractions will be provided in a memo, and (viii) additional speed limit signs may be posted on bike paths upon direction from Council.

It was moved and seconded

That the report titled "Provincial E-Scooter Pilot Project – Annual Report for Participating Municipalities", dated June 20, 2022, from the Director, Transportation, be received for information.

CARRIED

# ENGINEERING AND PUBLIC WORKS DIVISION

# 3. EXTENSION TO CONTRACT 6917Q - PUBLIC WORKS LEASE VEHICLES

(File Ref. No. 02-0780-03) (REDMS No. 6892985)

In reply to a query from the Committee, staff advised that the contingency fund is in place in the event that one or two vehicles are required to be leased for a longer period than anticipated. It was moved and seconded

That staff be authorized to issue a change order to Purchase Order 96440 to increase the value of the current contract between the City of Richmond and Zeemac Vehicle Lease Ltd. by \$244,794, bringing the new contract value to \$700,000, and extending the contract end date to July 1, 2023.

CARRIED

# 4. AGEING UTILITY AND ROAD INFRASTRUCTURE PLANNING – 2022 UPDATE

(File Ref. No. 10-6060-01) (REDMS No. 6894627)

In reply to queries from the Committee, staff advised (i) a memo regarding the inventory and projected life expectancy of road infrastructure that connect to City roads, but are not owned by the City, will be provided prior to the Council meeting, (ii) despite expense escalation over the past few years, service levels have not been impacted and are projected to perform well for the short to medium term, and (iii) the files will be sent to the City of Richmond Members of Parliament (MPs) and Members of the Legislative Assembly (MLAs).

It was moved and seconded

That the staff report titled, "Ageing Utility and Road Infrastructure Planning – 2022 Update", dated June 8, 2022, from the Director, Engineering, be received for information.

## CARRIED

## 5. MANAGER'S REPORT

#### (i) Digital Driver Feedback Sign

A digital driver feedback sign was installed on Ferguson Road in an effort to reinforce the 30 kilometer per hour speed limit.

#### (ii) Upgrade of the Cycling Facilities on Granville Avenue

The Granville Avenue upgrade has been completed with the installation of delineators between the existing bike lane and the adjacent vehicle lane.

# ADJOURNMENT

It was moved and seconded *That the meeting adjourn (5:10 p.m.).* 

### CARRIED

Certified a true and correct copy of the Minutes of the meeting of the Public Works and Transportation Committee of the Council of the City of Richmond held on Wednesday, July 20, 2022.

Councillor Chak Au Chair Haely Lindau Recording Secretary



# **Report to Committee**

То:	Public Works and Transportation Committee	Date:	September 6, 2022
From:	Lloyd Bie, P.Eng. Director, Transportation	File:	10-6450-09-01/2022- Vol 01
Re:	Kittiwake Drive – Traffic Calming Update		

#### Staff Recommendation

That Option 3 to implement a pilot project for the temporary installation of two speed cushions on Kittiwake Drive for a trial period of six months, as described in the staff report titled "Kittiwake Drive – Traffic Calming Update" dated September 6, 2022 from the Director, Transportation, be endorsed.

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

Att.1

REPORT CONCURRENCE					
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER			
RCMP Engineering Fire-Rescue	2 2 2	be Erceg			
SENIOR STAFF REPORT REVIEW	INITIALS:	APPROVED BY CAO			

#### Staff Report

#### Origin

In October 2002, Council adopted Policy 7018 titled "Traffic Calming Related Measures-Approval Process for the Implementation of." The Policy indicated that the Director of Transportation may implement traffic calming measures, without reference to Council, if the measures have the support of the majority of affected residents and the measures are on a local street or laneway. If any of the conditions are not met, Council approval for the implementation of traffic calming measures must be obtained.

In June 2021, staff received a petition from residents of Kittiwake Drive requesting traffic calming measures to address perceived concerns of speeding motorists. This report provides the outcome of staff's review of the request and engagement with the neighbourhood.

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.

1.4 Foster a safe, caring and resilient environment.

#### Analysis

#### Review of Traffic Calming Request

Kittiwake Drive is a local street within a neighbourhood subdivision located south of Steveston Highway that connects No. 2 Road to Kingfisher Drive (Figure 1). There is a 50 km/h speed limit and parking is permitted on both sides of the street.



Figure 1: Kittiwake Drive

In June 2021, the City received a signed petition from 12 residents on Kittiwake Drive requesting the implementation of speed humps as a traffic calming measure to address residents' concerns regarding speeding motorists and pedestrian safety.

Staff responded to the request by collecting current traffic data, and reviewing other trafficrelated and road geometry information to assess the actual conditions and quantify any concerns including:

- <u>Traffic Speed Study</u>: A traffic speed survey was conducted over a seven-day period, from September 15<sup>th</sup> to September 22<sup>nd</sup>, 2021, and the results indicated there is a speeding issue on Kittiwake Drive. Specifically, the 85<sup>th</sup> percentile speed for westbound motorists was 67 km/h while that of eastbound motorists was 55 km/h. The 85<sup>th</sup> percentile speed indicates the highest speed that 85% of the vehicles are travelling at or below. This measurement is an industry standard for determining speed limits and assessing the level of action required to address speeding issues.
- <u>Crash History</u>: Within the last five years (2016-2020), a total of 11 crashes were recorded on Kittiwake Drive with seven of these located at the intersection with No. 2 Road. The remaining four crashes that occurred on Kittiwake Drive were not speed related and there were no pedestrian or cyclists crashes.

### Engagement with Neighbourhood

### Online Stakeholder Meetings

Staff held two online meetings in November 2021 and March 2022 with the neighbourhood to present staff's technical assessment and then achieve consensus on options for a neighbourhood survey (Table 1).

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Date	Purpose	Feedback/Outcome		
November 25, 2021	<ul> <li>Present staff's technical assessment</li> <li>Discuss need for traffic calming measures</li> </ul>	<ul> <li>Advise that speed humps are not supported due to negative impact on response times for emergency services</li> <li>Consensus to investigate traffic circles as an alternative traffic calming measure</li> </ul>		
March 1, 2022	<ul> <li>Present revised traffic calming measures based on feedback from first meeting</li> </ul>	<ul> <li>Consensus achieved on content of neighbourhood survey comprising the following options:         <ol> <li>Do nothing option</li> <li>Traffic calming option with traffic circles to be installed at Kittiwake Drive-Pintail Drive and Kittiwake Drive-Pelican Court</li> </ol> </li> </ul>		

# Table 1: Summary of Online Stakeholder Meetings

#### Neighbourhood Survey

During March-April 2022, residents were surveyed to determine the level of support for and obtain comments on the proposed traffic circles determined through the engagement phase. A total of 21 surveys were mailed out to each discrete address abutting Kittiwake Drive; 13 responses were received for a 62% response rate.

The results did not find a majority support for the proposed traffic circles (33% in favour). During this period, residents of 19 addresses on adjacent roadways outside the survey area also provided their feedback: 18 were not in favour of the traffic circles and one was in favour. As the proposed traffic circles did not have the majority support, the Director, Transportation does not have the authority to implement traffic circles as per Policy 7018.

### Traffic Calming Options

While there is no majority support of the proposed traffic circles, there is a demonstrated desire from the majority (12 of 21 registered addresses, or 57%) of the residents on Kittiwake Drive for traffic calming measures. Additionally, the results of the traffic speed study confirmed speeding issues along Kittiwake Drive. Based on these combined factors, staff have identified three possible traffic calming options for consideration.

## Option 1: Status Quo (Not Recommended)

With the majority of the residents on Kittiwake Drive requesting traffic calming measures, as well as the high vehicle speed recorded on Kittiwake Drive, staff do not recommend a do nothing option.

### Option 2: Traffic Circles (Not Recommended)

This option would install traffic circles on Kittiwake Drive, one at Pintail Drive and the other at Pelican Court/Plover Drive. While this option is supported by the majority of those that attended the online stakeholder meetings and is anticipated to be effective in reducing vehicle speeds, it was not supported by the majority of the residents along Kittiwake Drive. Therefore, staff do not recommend this option at this time.

## Option 3: Trial Installation of Speed Cushions (Recommended)

This option would install speed cushions (Figure 2) at two locations on Kittiwake Drive, one at Pintail Drive and the other at Pelican Court/Plover Drive (Attachment 1). Speed cushions are similar to speed humps that are effective in slowing down vehicles, but with cut-outs designed to not impede nor slow down emergency response vehicles (ERV's). Specifically, ERV's have a wider wheel track which permits them to cross the centre line and straddle the cushion. The gaps in speed cushions also permits the unimpeded passages of cyclists without impacting existing street drainage.



Figure 2. Speed Cushion Example

As these speed cushions would be the first to be introduced on

a local roadway in Richmond, staff recommend that the cushions be installed on a trial basis for six months. Upon completion of the trial period, staff will conduct an additional traffic speed study to assess the effectiveness of the measure and report back to Council prior to the permanent installation of the speed cushions.

### **Financial Impact**

The cost to implement the trial speed cushions is \$16,000, which can be funded by the approved 2022 Traffic Calming Program.

#### Conclusion

A speeding issue has been identified on Kittiwake Drive. The City engaged with residents of Kittiwake Drive to develop a traffic calming plan, however it did not receive majority support based on the survey results. Staff instead propose a pilot project to install two speed cushions on Kittiwake Drive at Pintail Drive and Pelican Court/Plover Drive, for a period six months. Afterwards, staff will assess their effectiveness in reducing vehicle speeds and report back to Council.

Judt -

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

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Bill Dhaliwal Supervisor, Traffic Operations (604-276-4210)

FL:fl

Att. 1: Proposed Temporary Speed Cushions on Kittiwake Drive

Attachment 1



Proposed Temporary Speed Cushions on Kittiwake Drive



# **Report to Committee**

То:	Public Works and Transportation Committee	Date:	September 6, 2022
From:	Lloyd Bie, P.Eng. Director, Transportation	File:	10-6460-01/2022-Vol 01
Re:	Removal of Channelized Right-Turn Islands to In	nprove F	Road Safety

#### Staff Recommendation

That the City request the Ministry of Transportation and Infrastructure and Vancouver Airport Authority review channelized right-turn island locations in Richmond that are within their jurisdictions to improve road safety at these intersections.

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

Att. 2

REPORT CONCURRENCE				
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER		
Intergovernmental Relations RCMP		pe Erceg		
SENIOR STAFF REPORT REVIEW		APPROVED BY CAO		

## Staff Report

#### Origin

In 2019, Council endorsed the report titled "Review of Collision Prone Intersections," which identified and recommended improvements to address the top 20 most collision-prone intersections in the City. The study identified that a high percentage of the right-turn collisions and conflicts at these locations were a result of channelized right-turn lanes that allow motorists to maintain high rates of speed and create both vehicle and pedestrian safety issues during right turn movements. Improvements to mitigate these collisions involving right-turn vehicles and pedestrians were identified and are being implemented at intersections within the City's jurisdiction as part of the annual Capital Program.

To further improve safety outside of the top 20 locations, all intersections in the City with channelized right-turn islands were identified for analysis to determine which locations can and should be modified to improve intersection safety. As some intersections are within the jurisdiction of the Ministry of Transportation and Infrastructure (the Ministry) or the Vancouver Airport Authority (YVR), this report recommends that the City request the Ministry and YVR to review those intersections to improve road safety.

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.

#### Overview

#### Channelized Right-Turn Islands

A channelized right turn is an intersection configuration that provides a dedicated, separated lane for right turn movements that typically has a gentle, long-radius curve (Figure 1). At the end of the curve, the turn lane either enters its own dedicated free-flow lane, or meets a merge point with the adjacent through lane. This allows motorists to maintain a relatively high speed when making this movement as long as the receiving lane is clear. To accommodate this geometry while still allowing pedestrian crossing, an island is typically placed in between the right turn lane and the crosswalk to provide pedestrian refuge and reinforce the geometry of the lane.

#### Safety Concerns

The channelized right turn intersection geometry creates a number of safety concerns arising out of the following conflicts:

- <u>High rates of speed</u> The channelized rightturn does not encourage motorists to slow down to the same degree as a typical 90degree intersection. This limits the amount of time available to examine whether there is adequate spacing for the motorist to enter the adjacent lane, as well as scan for other conflicts.
- <u>Sightlines at entry angle</u> The wide angle at which motorists performing a right-turn approach the adjacent lane makes an effective shoulder-check difficult. The motorist must look nearly completely behind themselves, diverting attention from their



Figure 1: Existing Channelized Right-Turn Island – Eastbound Westminster Hwy @, Cooney Rd

direction of travel and creating further hazards to themselves and others.

- <u>Pedestrian conflicts</u> Channelized right-turns create a range of concerns for pedestrians. The crossing point is typically at or near the apex of the curve, where motorists typically still hold a high rate of speed. The focus of motorists is generally on the traffic in the upcoming adjacent lane which holds attention to their left and behind them, away from any pedestrians joining from the shoulder. Right-turn islands are often small and some pedestrians will feel there is not enough refuge area (Figure 1). This creates a hostile environment for pedestrians and a challenge for those with mobility issues. The configuration creates an additional crossing for the pedestrian and therefore an additional potential conflict.
- <u>Cyclist conflicts</u> Cyclists travelling in on-street bike lanes are also put in additional danger. Motorists must cross these lanes twice, with the same speed and sightline concerns as listed above putting cyclists at risk.

#### **Proposed Mitigation**

Removing and replacing channelized right-turns is feasible in most locations. This is particularly desirable in an urban setting with high pedestrian crossing activities and high right-turn volumes. The large footprint typically affords ample room for a "Standard Intersection" as described below, which can be accommodated within the existing road dedication.

<u>Standard Intersection</u> – A standard intersection without a separated right-turn channel (Figure 2) is the preferred intersection geometry and has a number of advantages in urban settings including:

- Reduced vehicle speeds Drivers must come to a complete stop and are naturally slowed down on approach;
- Increased pedestrian/cyclist safety Only one crossing point is required and drivers focus remains on the crossing in front of them; and
- Large refuge area The footprint of the turn is greatly reduced and allows for additional sidewalk, bike facilities and landscaping.



Figure 2: Southbound Garden City Rd @ Lansdowne Rd Before: Channelized Right-Turn Island / After: Standard Intersection with Separated Cycling Facilities

#### Analysis

#### Review of City Channelized Right-Turn Inventory

A total of 45 intersections with channelized right-turns within the city were identified through staff review. Locations were reviewed on the following criteria:

- Right-turn vehicle volumes
- Pedestrian and cyclists volumes
- Collision data / observed conflicts
- Size of the channelized island for pedestrian refuge
- Intersection geometry
- Public feedback
- Jurisdictional Authority (City of Richmond, the Ministry, Vancouver Airport Authority)

#### Locations within City of Richmond Jurisdiction

Of the 45 total locations (Attachment 1), 20 are within the City's jurisdictional authority. These locations were reviewed to determine if they are good candidates for upgrade. The locations fell into the following categories (Attachment 2):

- <u>Upgrade to Standard Intersections</u>- 11 of the 20 locations are good candidates for upgrades. Upgrades have already been completed at three locations, with the remaining eight locations to be improved via capital projects, with future projects to be presented to Council for consideration as part of the annual capital program process.
- <u>Not Warranted for Upgrade (status quo)</u>- Six of the 20 locations have been identified to remain, i.e., no upgrade, due to several factors. These included low pedestrian and cycling traffic, limited collisions per number of traffic movements and a lack of immediate merge points.
- <u>Future Study</u>- Existing channelized islands at three locations are to be further assessed in the future, including the Garden City Road/Granville Avenue intersections and Coppersmith Place and No. 5 Road intersections along Steveston Highway.

### Locations within External Jurisdictions

The remaining 25 of the channelized right-turn island locations in the City are either partially or fully inside the jurisdictional authority of another governmental organization (Attachment 3). The majority of these intersections (19) are within the Ministry's jurisdiction, with remaining (6) falling within YVR's.

Staff recognize that these organizations have qualified technical staff who assess road safety, including right-turn channelized islands; notwithstanding, they may benefit from staffs observations from the rest of the City. Accordingly, staff recommend that the City send a letter to the Ministry and YVR requesting their reviews of these right-turn channelized islands to improve road safety as necessary.

## **Financial Impact**

None at this time. Financial impacts will be identified through future capital programs.

The removal of a channelized right-turn island and replacement with a standard intersection typically cost in the range of \$200,000 to \$400,000. The improvement is expected to reduce approximately 47% right-turn and rear-end collisions attributed to channelized islands, and is equivalent to an average annual collision savings of approximately \$110,000 per location. Upgrading to standard intersections will contribute to improving road safety in the City. As the collision savings are largely realized by the insurance company, the City will continue to pursue road safety funding from the insurance company to help offset costs incurred by the City.

## Conclusion

The City's review revealed a total of 45 intersections with channelized right-turn island locations in Richmond. Of these locations, 19 fall within the Ministry of Transportation and Infrastructure's jurisdiction, and 6 are in the Vancouver Airport Authority's.

Over the years, the growth and urbanization of the city and the associated increase in traffic, pedestrian and cyclist volumes have lead to public safety concerns at many of these locations. While the City continues to proactively pursue improvements at these locations, 25 of the locations are not within the City's jurisdiction. Therefore, staff recommend that a letter be sent

to the Ministry requesting their review of channelized right turn island locations within Richmond that are within its jurisdiction to improve road safety at these cross-jurisdictional locations.

Judg -

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

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Kevin Whitmarsh Transportation Project Lead (604-204-8703)

FL:kw

Att. 1: Location of Channelized Right-Turn Islands

Att. 2: Channelized Right-Turn Islands Within City Jurisdiction

Att. 3: Channelized Right-Turn Islands Outside or Partially Outside City Jurisdiction

Attachment 1



# Location of Channelized Right-Turn Islands

6942248

# Attachment 2

N-S ROAD	E-W ROAD	Type of Improvement	Status	
GARDEN CITY ROAD	LANSDOWNE ROAD	Standard Intersection	Completed	
NO 3 ROAD	CAPSTAN WAY	Standard Intersection	Completed	
WESTMINSTER HWY	GILLEY ROAD	Standard Intersection	Completed	
COONEY ROAD	WESTMINSTER HWY	Standard Intersection	Committed Capital Project	
ST ALBANS ROAD/ COONEY ROAD	GRANVILLE AVE	Standard Intersection	Committed Capital Project	
NO 4 ROAD	ALDERBRIDGE WAY	Standard Intersection	Committed Capital Project	
NO 2 ROAD	WESTMINSTER HWY	Standard Intersection	<b>Committed Capital Project</b>	
RAILWAY AVE	GRANVILLE AVE	Standard Intersection	Future Capital Project	
ST EDWARDS DRIVE	CAMBIE ROAD	Standard Intersection	Future Capital Project	
		West side- Standard	West side- Committed	
GARDEN CITY ROAD	ALDERBRIDGE WAY	Intersection	Capital Project	
		East side- TBD	East side- TBD	
		West side- Standard	West side- committed	
NO 5 ROAD	WESTMINSTER HWY	Intersection	East side- N/A	
		East side- Status Quo		
KNIGHT STREET	WESTMINSTER HWY	Status Quo	N/A	
NO 5 ROAD	HORSESHOE/RIVERSIDE WAY	Status Quo	N/A	
NO 6 ROAD	VULCAN WAY	Status Quo	N/A	
SHELL ROAD	CAMBIE ROAD	Status Quo	N/A	
SHELL ROAD	WESTMINSTER HWY	Status Quo	N/A	
BOUNDARY ROAD	WESTMINSTER HWY	Status Quo	N/A	
COPPERSMITH PLACE	STEVESTON HWY	Future Study	N/A	
NO 5 RD	STEVESTON HWY	Future Study	N/A	
GARDEN CITY ROAD	GRANVILLE AVENUE	Future Study	N/A	

# Channelized Right-Turn Islands Within City Jurisdiction

Channelized Right-Turn Islands Outside or Partially Outside City Jurisdiction

N-S ROAD	E-W ROAD	Jurisdictional Authority
GREAT CANADIAN WAY	BRIDGEPORT ROAD	ΜοΤΙ
NO 3 ROAD	SEA ISLAND WAY	MoTI
SEXMSITH ROAD	SEA ISLAND WAY	MoTI
SEXSMITH ROAD	BRIDGEPORT ROAD	ΜοΤΙ
CORVETTE RD	SEA ISLAND WAY	ΜοΤΙ
NO 3 ROAD	BRIDGEPORT ROAD	ΜοΤΙ
HWY 99 OFF-RAMP	BRIDGEPORT ROAD	ΜοΤΙ
SHELL ROAD	HWY 99 ON-RAMP	MoTI
SHELL ROAD	HWY 99 OFF-RAMP	ΜοΤΙ
HWY 99 OFF-RAMP	WESTMINSTER HWY	MoTI
HWY 99 ON-RAMP	WESTMINSTER HWY	MoTI
HWY 99 (multiple)	STEVESTON HWY	MoTI
HWY 91 OFF-RAMP	NO 6 RD	MoTI
HWY 91 ON-RAMP	NO 6 RD	MoTI
HWY 91 OFF-RAMP	WESTMINSTER HWY (WB)	MoTI
WESTMINSTER HWY (EB)	HWY 91 OFF/ON-RAMPS	MoTI
NELSON ROAD	WESTMINSTER HWY	MoTI
GARDEN CITY ROAD	SEA ISLAND WAY	MoTI
SHELL ROAD	ALDERBRIDGE WAY	MoTI
RUSS BAKER WAY	HUDSON AVE	YVR
RUSS BAKER WAY	MILLER RD	YVR
RUSS BAKER WAY	AIRPORT RD	YVR
RUSS BAKER WAY	GILBERT RD	YVR
RUSS BAKER WAY	INGLES RD	YVR
RUSS BAKER WAY	BCIT EXIT	YVR



# **Report to Committee**

То:	Public Works and Transportation Committee	Date:	August 11, 2022
From:	Suzanne Bycraft Director, Public Works Operations	File:	10-6370-01/2022-Vol 01
Re:	Award of Contract: 8058P – Garbage and Cardbo Collection Services at City Facilities	ard Cor	tainers and

#### Staff Recommendation

- That Contract 8058P Garbage and Cardboard Containers and Collection Services at City Facilities be awarded for a three-year term, commencing November 1, 2022 to Super Save Group of Companies at an estimated total contract value of \$383,672.74, as described in the report titled "Award of Contract: 8058P – Garbage and Cardboard Containers and Collection Services at City Facilities", dated August 11, 2022, from the Director, Public Works Operations; and
- 2. That the Chief Administrative Officer and General Manager, Engineering and Public Works be authorized to extend the initial three-year term, up to the maximum total term of five years, for the maximum total amount of \$665,714.80, as described in the report titled "Award of Contract: 8058P Garbage and Cardboard Containers and Collection Services at City Facilities", dated August 11, 2022, from the Director, Public Works Operations.

Suzanne Bycraft Director, Public Works Operations (604-233-3338)

REPORT CONCURRENCE				
<b>ROUTED TO:</b> Finance Department Purchasing	Concurrence ⑦ ⑦	CONCURRENCE OF GENERAL MANAGER		
SENIOR STAFF REPORT REVIEW	INITIALS:	APPROVED BY CAO		

Version: 1

### Staff Report

#### Origin

The City contracts services for front-end garbage and cardboard containers and collection for various City Facilities throughout Richmond. This service includes the provisioning of containers, transportation, disposal of waste materials and collection and recycling of cardboard. The previous five-year contract (three-year term, plus two one-year renewals) was awarded on September 1, 2017 to Maple Leaf Disposal Ltd. and will continue pending award of the new contract.

To engage a qualified service provider, a procurement process was undertaken via a Request for Proposals (RFP) 8058P Garbage and Cardboard Containers and Collection Services at City Facilities.

This report presents the results of this RFP and recommends the award of a contract to Super Save Group of Companies ("Super Save").

This report supports Council's Strategic Plan 2018-2022 Strategy #5 Sound Financial Management:

Accountable, transparent, and responsible financial management that supports the needs of the community into the future.

5.3 Decision-making focuses on sustainability and considers circular economic principles.

#### Analysis

### Request for Proposals 8058P – Garbage and Cardboard Containers and Collection Services at City Facilities

The above referenced RFP was posted on Bids & Tenders on April 28, 2022 and closed on May 26, 2022.

The RFP requested proponents submit financial proposals for the supply, hauling and servicing of containers, and the disposal and processing of materials collected.

Costs include container rental fees, labour, transportation, processing or disposal, and all equipment and materials required for completion of the work.

Seven proposals were received by the closing date from the following proponents:

- Super Save Group of Companies
- Waste Connections
- Maple Leaf Disposal Ltd.
- GFL Environmental
- Waste Management of Canada
- Hankins Environmental Consulting
- Waste Control Services

#### **Review Process**

Staff undertook independent reviews of the proposal responses. Proposals were scored and evaluated against pre-determined criteria that included:

- Corporate profile and capacity
- Demonstrated experience and references
- Project understanding, approach, methodology and work plan
- · Circular economy and sustainability opportunities
- Financial performance

The evaluation results of the RFP are summarized in Table 1.

Ranking	Proponent	Evaluation Score	Proponent's Pricing based on 5-Year
1	Super Save Group of Companies	98.00%	\$532,571.84
2	Maple Leaf Disposal Ltd.	87.76%	\$672,515.52
3	GFL Environmental	72.83%	\$898,375.36
4	Waste Management of Canada	68.34%	\$769,397.65
5	Waste Control Services	65.68%	\$881,695.30
6	Hankins Environmental Consulting	61.29%	\$728,745.47
7	Waste Connections	52.25%	\$1,370,300.17

Table 1: Evaluation Results

Based on staff's evaluation of the proposals received, the proposal submitted by Super Save received the highest overall score and therefore was ranked first (shown in Table 1). Staff determined Super Save to have the greatest ability to meet the scope and nature of the work and provide best value to the City due to favourable pricing, experience and capacity in addition to the value-add services. The value-add services include an optional annual "Shred-a-thon" for residents at a time and location agreed between the City and Super Save. Additionally, they have offered preferred pricing on fence and toilet rentals as opposed to the standard rates normally offered. A quote would be provided based on requirements.

#### Contract Terms

The key terms of the service contract will include:

- 1. *Collection Services:* The provision of front-end containers, collection, transportation and delivery of collected materials to disposal or processing facilities.
- 2. *Disposal or Processing Services:* The proponent will ensure proper disposal, processing, sale or trade at fair market value, with recyclable materials being sold or traded with the purpose of being recycled into new products.
- 3. *Term:* The contract will have an initial term of three (3) years commencing on November 1, 2022. The agreement may be renewed under the same terms and conditions for a maximum of two (2) additional one (1) year terms.

- 4. *Escalation:* Annual CPI increase based on the Transportation Index for British Columbia for the previous 12 months, applicable on the anniversary date of the contract.
- 5. *Processing and Disposal Cost Variation:* Processing and/or disposal costs are determined by the market rate (posted tipping fees and processing rates provided by the recycling facility). These costs will be adjusted annually based on posted rates provided by the facility. A contingency amount is included for any potential market pricing variations.
- 6. *Invoicing:* Contractor to provide monthly invoices detailing charges separated by type and facility.

#### **Financial Impact**

The total value of this contract over the recommended three-year term is estimated at \$383,672.74 as summarized in Table 2.

 Table 2: Total 3-Year Term Contract

Contract Year	Super Save Group of Companies
2022/2023	\$98,327.20
2023/2024	\$102,260.29
2024/2025	\$106,350.70
Processing and Disposal Cost Variation	\$30,693.82
Contingency	\$46,040.73
Total (3 years)	\$383,672.74

The City has the option to extend the initial three-year contract for two additional one-year terms, for a total added value of \$282,042.06. The estimated costs associated with this extension are summarized in Table 3.

Table 3: Total 5-Year Term Contract

Contract Year	Super Save Group of Companies
2025/2026	\$110,604.73
2026/2027	\$115,028.92
Processing and Disposal Cost Variation	\$22,563.36
Contingency	\$33,845.05
Total (2 years)	\$282,042.06
Total (3 years)	\$383,672.74
Maximum 5-year term	\$665,714.80

The total amount for the maximum five-year term is \$665,714.80. The decision to extend the contract by an additional two years would be based on the company's individual performance over the initial term. A contingency has been added to cover the costs of additional service requests, temporary bins for City events or the addition of bins not specified in this contract. Required funding amounts for the services under this contract are included in the operating budget for each City Facility.

### Conclusion

This report presents the results of a competitive procurement under 8058P – Garbage and Cardboard Containers and Collection Services at City Facilities. It is recommended that the contract be awarded to Super Save for the initial three-year term, at the total amount of \$383,672.74, and that the Chief Administrative Officer and General Manager, Engineering and Public Works be authorized to extend the initial three-year term, up to a maximum total term of five years for the total amount of \$665,714.80, with anticipated commencement on November 1, 2022 based on the key terms as outlined.

Dickerman

Laurie Ackerman Waste Reduction and Recycling Coordinator (604-233-3356)

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# **Report to Committee**

То:	Public Works and Transportation Committee	Date:	August 10, 2022
From:	Milton Chan, P.Eng. Director, Engineering	File:	10-6060-01/2022-Vol 01
Re:	Fraser River Freshet and Flood Protection Update 2022		

#### Staff Recommendation

That the staff report titled "Fraser River Freshet and Flood Protection Update 2022", dated August 10, 2022, from the Director, Engineering be received for information.

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for Milton Chan, P.Eng. Director, Engineering (604-276-4377)

REPORT CONCURRENCE				
ROUTED TO:	CONCURRENCE			
Public Works		- Jh hing		
SENIOR STAFF REPORT REVIEW	INITIALS:	APPROVED BY CAO		

## Staff Report

### Origin

As detailed in the Flood Protection Management Strategy 2019, the City of Richmond is situated approximately 1.0 metre above sea level and flood protection is integral to protecting the health, safety, and economic viability of the City. Richmond is protected from flooding by infrastructure that includes 49 km of dikes, 595 km of drainage pipes, 61 km of culverts, 155 km of watercourses and 39 drainage pump stations.

This report provides Council with a summary of the 2022 Fraser River freshet, along with an update on 2021 rainfall statistics and ongoing works regarding the City's Flood Protection Program.

This report supports the following strategies within 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.

Strategy #5 An Active and Thriving Richmond:

An active and thriving community characterized by diverse social and wellness programs, services and spaces that foster health and well-being for all.

4.2 Ensure infrastructure meets changing community needs, current trends and best practices.

#### Analysis

#### 2022 Fraser River Freshet

Below-average temperatures were experienced across the province in the months of April, May, and June, which resulted in delayed snowmelt. As such, the snowpack observed in the Fraser Basin region was well above average at 129% of normal in May. The peak Fraser River flow measured at Hope was 10,400 m<sup>3</sup>/s, which is a 5-year return period event (peaks in 2018, 2019, 2020, and 2021 were 11,050 m<sup>3</sup>/s, 7,200 m<sup>3</sup>/s, 10,800 m<sup>3</sup>/s, and 9,800 m<sup>3</sup>/s respectively). Fraser River water levels began receding on July 3, 2022 and have attenuated since.

The City's diking system is built to withstand a 500-year return period freshet event and there was no danger of flooding in Richmond during the 2022 freshet. The City continues to be a leader in flood protection planning and mitigation through Council-endorsed capital projects and the annual dike maintenance program. Predicted climate change impacts, which include more extreme weather events, could result in an increased variability in freshet flows in the future, reinforcing the need for the City's continued flood protection upgrade program.

#### 2021 Rainfall

#### Significant Rainfall Events

Attachment 1 identifies the total annual rainfall over the last 10 years. Rainfall highlights for 2021 include the following:

- The City received approximately 1,336 mm of rainfall in 2021, which is 6% higher than the average annual rainfall (over the last 10 years);
- November was the wettest month of the year, with 429 mm of rainfall at Hamilton Community Centre. This accounts for over 28% of the total annual rainfall at this location;
- A total of 8 significant events with statistical return periods of two years or more were recorded in 2021.

#### November 2021 'Atmospheric River' events

In November 2021, the City experienced significant rainfall events, termed 'atmospheric river' events, as described in the "November 2021 Atmospheric River Events – Summary and Outcomes" report dated March 11, 2022 from the Director, Public Works Operations and Director, Engineering. Since the event, staff have undertaken a number of initiatives to assess and improve the City's drainage system based on observations from the event, including:

- Large scale maintenance activities have been completed at the Horseshoe Slough canal and for drainage pipes within the Horseshoe Slough catchment in response to flooding issues observed in the area during the 'atmospheric river' events, which have resulted in significant flow improvements in this area;
- Staff are assessing the need for a new drainage pump station at Steveston Highway and Shell Road to further improve drainage in the Horseshoe Slough catchment. A temporary pump station will be installed in 2022 prior to the rain season, and a capital project for the construction of permanent drainage improvements will be brought forward for Council's consideration as part of the 2023 capital budget process;
- Construction of the Steveston Highway and No. 3 Road and Steveston Highway and Gilbert Road inland drainage pump stations are complete. Both stations are in operation and will improve flows within the Gilbert Road and No. 3 Road catchments;
- Staff continue to work with the Ministry of Highways and Infrastructure (MoTI) on preventative maintenance of the interconnected City-MoTI drainage infrastructure and identifying opportunities for drainage upgrades as part of the Fraser River Tunnel Project;
- Staff have reviewed street sweeping procedures and resources, and have identified that additional resources are required to keep the drainage system clear and unobstructed.

These will be brought forward for Council's consideration as part of the 2023 budget process;

- Access to independent portable fuel supplies was identified as a requirement to ensure backup generators could be fueled to support pump stations and generators at various City facilities. Staff are currently scoping specifications for acquiring fueling trucks along with required resources and will bring forward a capital project for Council's consideration as part of the 2023 capital budget process;
- Staff are developing communications material to provide residents with information on how to better protect their property during extreme rain events and how to properly maintain private drainage infrastructure. Any associated costs identified as part of this process will be brought forward for consideration as part of the 2023 budget process; and
- Staff are developing a program for sandbag distribution in the case of emergencies to help protect private property. Equipment needs are being reviewed and any associated funding requirements identified will be brought forward as part of the 2023 budget process.

Staff will continue to update Council with the progress of the initiatives identified.

#### Drainage System Performance

947 service requests related to drainage issues were recorded by Public Works in 2021, 624 of which were recorded in the month of November including those related to the 'atmospheric river' events. The remaining 323 requests are consistent with the average annual number of service requests received over the past 10 years, as identified in Attachment 2.

#### 2021/2022 Winter Storm Events

Seasonal high tides and king tides were not significant this winter, and the City's diking system performed well. Erosion and debris run up continue to be addressed as part of the dike maintenance program.

#### Infrastructure Improvements

The City's flood protection system has a replacement value (2022 dollars) of \$2.2B, comprised of an extensive drainage network and 49 kilometers of perimeter dike. Staff are continuously upgrading and improving the system to address the impacts of infrastructure age, growth, and climate change.

#### Capital Dike Upgrades

Current climate change science estimates that sea level will rise approximately 1.0 m by the year 2100 and 0.2 m of land subsidence is forecasted over the same time period. The City's Flood Protection Management Strategy is the guiding framework for continual upgrades and improvement to the City's flood protection system. A key action identified in the City's Flood

Protection Management Strategy involves continuing to raise the City's perimeter dike to 4.7 m in order to stay ahead of climate change induced sea level rise.

Currently approved dike improvement projects include the following:

- South dike upgrade between No. 3 Road to 400 m west of No. 4 Road. Construction is substantially complete;
- South dike upgrade between 200 m west of No. 9 Road and the Ewen Road Drainage Pump Station. Construction is ongoing;
- South dike upgrade between No. 4 Road and No. 5 Road. Design is underway;
- North dike upgrades between Lynas Lane and No. 2 Road. Design is underway;

#### Dike Rehabilitation

Staff maintain annual inspection and maintenance programs to ensure that the City's dikes are well-protected against issues such as erosion and seepage. Notable maintenance work completed this year include:

- Large logs and woody debris were removed from the dike and beach areas at the south dike near Gilbert Road after a king tide and wind storm event on January 13, 2021.
- Additional rip-rap was added along the top of bank to protect against debris at the north dike in a 300 metres section at 22760 River Road, a 125 metres section at 21920 River Road and a 90 metres section at 12151 River Road; and
- Dike inspections identified ponding issues along the dike near 15911 River Road. This was addressed through clearing of a plugged drain and reinstating the dike armouring as part of the dike maintenance program.

#### Pump Station Upgrades

Significant progress has been made in upgrading the City's drainage pump stations to accommodate growth and climate change. The total capacity of the City's drainage pump stations has increased by 30% since 2005. Attachment 3 summarizes the pump station capacity increase over the last 10 years.

Over the last 20 years, since the City introduced the Drainage and Diking Utility, the City has rebuilt 15 of its 39 drainage pump stations and has performed significant upgrades on four. Reconstruction of the No. 7 Road South Pump Station, Steveston Highway and No. 3 Road Pump Station and Steveston Highway and Gilbert Road Pump Station is substantially complete.

During extreme events, a number of older pump stations operate near full capacity. These stations have been identified to require upgrades through capacity analysis. Projects to upgrade

or replace these stations are either included in current capital program or will be brought forward for Council consideration as part of future capital program.

#### Box Culvert Repair and Preventative Maintenance

The City has approximately 61 km of box culverts, the majority of which are 40 to 50 years in age. Although the box culverts have a design life of 100 years, premature failure of some joints has been observed in recent years.

The City has a box culvert preventative maintenance program to inspect the condition of box culverts and identify sections that require repair or replacement executed in a 7-year cycle. Staff are proactively managing the condition of box culverts by identifying and repairing deteriorating joints before they cause significant damage. Repair of significant defects identified through the program are presented to Council for consideration as part of the capital program.

Staff inspected 2.5 km of box culvert within 6 drainage catchments in 2021. Results of each inspection are documented through written reports as well as image and video records, allowing staff to monitor changes to the condition of the culverts, better informing long-term decision making. Minor defects have been identified and remediated. In 2021, significant defects were encountered within the Woodwards Slough drainage catchment. Repair of this culvert has been included in the 2022 capital program. Other recent capital projects include repair of the box culvert under No. 2 Road south of Steveston Highway (completed) and the repair of the box culvert under No. 4 Road between Blundell Road and Alderbridge Way (ongoing), with repairs between Blundell Road and Granville Avenue complete.

The Shell Road North, Woodwards Slough, and No. 3 Road South drainage catchment areas are scheduled next for inspection.

#### Flood Protection Public Engagement

In 2022, staff successfully participated in 14 community events and hosted five online engagement sessions to present the public with information on Richmond's flood protection initiatives, including ongoing diking efforts, Dike Master Plan Phase 4, and the City's Accelerated Flood Protection Program. Additionally, an online public engagement platform for Flood Protection was set up through Let's Talk Richmond. The flood protection page has had over 900 visits since it was first launched in June 2022.

The public engagement efforts are valuable as they help make the community aware of the upcoming projects and initiatives and allow them to provide their feedback to the City.

#### Flood Protection Improvement Financing

Improvements to the City's flood protection system to address the needs of ageing infrastructure and climate change are funded through three main funding sources.

### Drainage and Diking Utility

The Drainage and Diking Utility was established by Council in 2000 and currently generates \$14.6 million annually to maintain and upgrade Richmond's flood protection infrastructure. Staff are continuously monitoring regional and global climate change science to inform the City's Flood Protection Program.

At the April 12, 2021 Regular Council meeting, Council endorsed a target annual revenue level of \$30 million by 2031 for the Drainage and Diking Utility in order to support a 50 year implementation period to improve the City's flood protection infrastructure well in advance of anticipated climate change impacts.

To support this target, implementation of the new utility rates will be included in the 2023 Utility Budgets and Rates report for Council's consideration as part of the annual budget process.

#### Senior Government Grant Funding

The City's Flood Protection Management Strategy aims to acquire senior government funding for a wide range of flood prevention and protection research, monitoring, studies, planning and improvements. As a result of proactive flood protection planning efforts, the City has been successful in securing approximately \$40 million in senior government grants since 2010 that helped fund over \$70 million of dike upgrades, pump station improvements and master planning updates.

#### Development

The City has successfully partnered with developers to secure dike upgrades through development. In particular, the City is actively pursuing opportunities to construct superdikes, where land supporting development behind the dike is filled to the same elevation as the dike crest. This eliminates visual impacts of a raised dike structure on waterfront views while providing an enhanced flood protection structure for the City.

Superdikes constructed through development to date include sections near the Richmond Olympic Oval, along the north dike near No. 4 Road, along the south dike at Riverport Way, and in Steveston. Superdike construction is underway by Western-Citimark, Vancouver Airport Fuel Facility Corporation and ASPAC Developments.

#### **Financial Impact**

None.

#### Conclusion

The City observed the fifth highest annual rainfall over the last 10 years in 2021 and aboveaverage freshet flows in the spring of 2022. The drainage and flood protection system performed well, with negligible freshet flood risk and an above average number of drainage-related service requests, resulting from the 'atmospheric river' events. Demands on the drainage and flood protection system will continue to increase as a result of climate change and development. The Flood Protection Management Strategy guides the City to proactively forecast, plan, and improve the City's flood protection system to meet long-term requirements. Through the capital improvements and investment in preventative maintenance programs, the City is able to manage flooding risks and maintain a high level of service to Richmond's residents. Significant progress continues to be made in advancing the City's dike planning efforts and implementing infrastructure improvements to the City's flood protection system.

for Jason Ho, P.Eng. Manager, Engineering Planning (604-244-1281)

Righti Dalla

Ridhi Dalla, E.I.T. Project Manager (604-204-8521)

Beata Ng, P.Eng. Project Manager (604-204-8674)

Att. 1: Annual Rainfall Data 2012-2021

- 2: Annual Drainage Service Requests 2012-2021
- 3: Total Drainage Pump Station Pumping Capacity 2012-2021



# Annual Rainfall Data 2012-2021



# **Annual Drainage Service Requests 2012-2021**

Service Requests (Year) November 2021 Service Requests (including 'atmospheric river' events)



**Total Drainage Pump Station Pumping Capacity 2012-2021** 



Your Cycling Connection



July 28, 2022 Mayor and Councillors, City of Richmond

Dear Mayor and Councillors:

# Re: Motion Requiring Side Guards on Heavy Trucks in Urban Areas

We write today to express our strong support for additional measures to protect vulnerable road users.

On June 29<sup>th</sup>, August Beltran, a first-year economics UBC Ph.D. candidate, was struck by a semi-trailer dump truck at a protected bike crossing at Hornby Street in Vancouver. He was pulled under the vehicle in the crash and died from his injuries. In a similar crash in Victoria on July 4<sup>th</sup>, the cyclist survived partly because he did not go under the truck.

In response to this tragic incident, the City of Vancouver passed a motion on July 20th mandating side guards and recommending side mirrors to be installed on all City of Vancouver owned and contracted trucks, to review intersections where similar accidents could occur, and to advocate provincial and federal governments for similar legislation<sup>1</sup>. We urge the City of Richmond to take similar actions.

We support the City of Richmond's requirement for truck side guards on all City owned heavy trucks as well as those used by contractors doing work for the City.

We support the requirement for the installation of additional blind spot mirrors and strongly encourage the use of back up cameras.

We support a review of all City bike lanes in terms of turning conflicts, and mitigations to reduce the risk to vulnerable road users.

We support the City advocating with provincial and federal authorities to expand these actions beyond Metro Vancouver, thus creating a consistent framework for truck operators.

We support the City advocating to ICBC and truck driving associations to deliver increased driver education to better inform drivers of their responsibilities regarding vulnerable road users.

Thank you in advance for your support of these actions.

Sincerely, Jesse Li, Member at Large Anna Chow and Donna Kwan, Co-Chairs, Richmond/YVR Local Committee <u>richmond@bikehub.ca</u>

#### About HUB

Cycling HUB Cycling is a charitable not-for-profit organization that has spent over 22 years removing barriers to cycling in Metro Vancouver while cultivating the health, environmental, and economic benefits that active transportation can bring. HUB has educated thousands of people, motivated thousands more, and championed improvements that #UnGapTheMap to create a connected cycling network. HUB Cycling's mission is to get more people cycling more often. HUB Cycling has close to 3,000 members and more than 45,000 direct supporters. HUB Cycling has 10 volunteer committees across Metro Vancouver that encourage cycling for all ages and abilities (AAA) in municipalities across Metro Vancouver. For more information, visit bikehub.ca.

<sup>&</sup>lt;sup>1</sup> City of Vancouver Motion: <u>Advocating for the Requirement of Side Guards on Heavy Trucks in Urban Areas</u>

