



Public Works and Transportation Committee

**Council Chambers, City Hall
6911 No. 3 Road**

**Tuesday, April 20, 2021
4:00 p.m.**

Pg. # ITEM

MINUTES

PWT-5

*Motion to adopt the **minutes** of the meeting of the Public Works and Transportation Committee held on March 16, 2021.*



NEXT COMMITTEE MEETING DATE

May 18, 2021, (tentative date) at 4:00 p.m. in Council Chambers

PLANNING AND DEVELOPMENT DIVISION

1. **ICBC-CITY OF RICHMOND ROAD IMPROVEMENT PROGRAM – 2021 UPDATE**
(File Ref. No. 01-0150-20-ICBC1-01) (REDMS No. 6602214)

PWT-10

See Page PWT-10 for full report

Designated Speaker: Fred Lin

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.*



2. **REVIEW OF ACCESSIBLE PARKING SPACES IN STEVESTON VILLAGE**

(File Ref. No. 10-6455-03) (REDMS No. 6603884)

PWT-17

See Page PWT-17 for full report

Designated Speaker: Joan Caravan

STAFF RECOMMENDATION

That the proposed improvements to provide van accessible parking spaces in Steveston Village, as described in the report titled “Review of Accessible Parking Spaces in Steveston Village,” dated March 2, 2021 from the Director, Transportation, be endorsed.



ENGINEERING AND PUBLIC WORKS DIVISION

3. **2020 WINTER RAINFALL AND 2021 FLOOD PROTECTION UPDATE**

(File Ref. No. 10-6000-01) (REDMS No. 6645504)

PWT-22

See Page PWT-22 for full report

Designated Speaker: Jason Ho

STAFF RECOMMENDATION

That the staff report titled “2020 Winter Rainfall and 2021 Flood Protection Update”, dated March 19, 2021 from the Director, Engineering be received for information.



4. **AWARD OF CONTRACT 7020Q – SUPPLY AND DELIVERY OF HVAC AIR FILTERS**

(File Ref. No. 02-0775-50-7020) (REDMS No. 6563158)

PWT-29

See Page PWT-29 for full report

Designated Speaker: Jeff Lee

STAFF RECOMMENDATION

- (1) *That Contract 7020Q – Supply and Delivery of HVAC Air Filters be awarded to Dafco Filtration Group Corp., in the amount of \$734,874 for a three-year term as described in the March 15, 2021 report titled “Award of Contract 7020Q – Supply and Delivery of HVAC Air Filters” from the Director, Facilities and Project Development;*
- (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 amount of \$1,254,576, as described in the March 15, 2021 report titled “Award of Contract 7020Q – Supply and Delivery of HVAC Air Filters” from the Director, Facilities and Project Development; and*
- (3) *That the Chief Administrative Officer and General Manager, Engineering and Public Works be authorized to execute the contract and all related documentation with Dafco Filtration Group Corp.*



5. **WORKS AND SERVICES COST RECOVERY BYLAW UPDATE 2021 AND INTEREST RATE OPTIONS**

(File Ref. No. 10-6060-01) (REDMS No. 6526540)

PWT-33

See Page PWT-33 for full report

Designated Speaker: Jason Ho

STAFF RECOMMENDATION

- (1) *That Option 2, as outlined on Page 4 of the staff report titled “Works and Services Cost Recovery Bylaw Update 2021 and Interest Rate Options,” dated March 9, 2021, from the Director, Engineering be adopted as the approach for incorporating interest rates into the Works and Service Cost Recovery Bylaw; and*
- (2) *That Works and Services Cost Recovery Bylaw No. 8752, Amendment Bylaw No. 10215, be introduced and given first, second, and third readings.*

☐

6. **MANAGER’S REPORT**

ADJOURNMENT

☐



Public Works and Transportation Committee

Date: Tuesday, March 16, 2021

Place: Council Chambers
Richmond City Hall

Present: Councillor Chak Au, Chair
Councillor Alexa Loo, (by teleconference)
Councillor Linda McPhail (by teleconference)
Councillor Michael Wolfe (by teleconference)

Call to Order: The Chair called the meeting to order at 4:01 p.m.

MINUTES

It was moved and seconded

That the minutes of the meeting of the Public Works and Transportation Committee held on February 17, 2021, be adopted as circulated.

CARRIED

NEXT COMMITTEE MEETING DATE

April 20, 2021, (tentative date) at 4:00 p.m. in the Council Chambers

AGENDA ADDITION

It was moved and seconded

That Invasive Species Removal be added to the agenda as Item No. 4A.

CARRIED

Public Works & Transportation Committee
Tuesday, March 16, 2021

DELEGATION

- 1A. Richard Schwartz, Richmond resident, discussed the need for a crosswalk along Springmont Drive to allow safe pedestrian access to the west side of Manoah Steves Park as it is a high-traffic area along a major bus route.

As a result of the discussion, the following **referral motion** was introduced:

It was moved and seconded

- (1) *That staff review the potential installation of a crosswalk on the west side of Manoah Steves Park along Springmont Drive; and*
- (2) *That the potential installation of a crosswalk on the west side of Manoah Steves Park along Springmont Drive be referred to the Council/School Board Liaison Committee for information.*

CARRIED

PLANNING AND DEVELOPMENT DIVISION

1. **TRANSLINK 2019 TRANSIT NETWORK REVIEW - CONSULTATION RESULTS**

(File Ref. No. 01-0154-04/2021-Vol 01) (REDMS No. 6598445)

Staff noted that the investment plan has been delayed until approximately 2022, which will affect the proposed changes identified in the report.

In reply to queries from Committee, staff noted that (i) the delay has been communicated via the TransLink website and can be posted on Richmond's social media channels, (ii) a memo will be provided to Council on the current status of the Chatham bus loop, and (iii) further discussion can take place with TransLink regarding bus route 408.

It was moved and seconded

That the report titled "TransLink 2019 Transit Network Review - Consultation Results" dated January 26, 2021, from the Director, Transportation be received for information.

CARRIED

ENGINEERING AND PUBLIC WORKS DIVISION

2. 2021 LIQUID WASTE MANAGEMENT PLAN BIENNIAL REPORT

(File Ref. No. 10-6000-01/2021-Vol 01) (REDMS No. 6606775)

In reply to queries from Committee, staff noted that (i) the map identifies City of Richmond facilities and odour control facilities would be owned and operated by Metro Vancouver, (ii) based on the Metro Vancouver classification there is no change to the riparian status itself and the City now has a Watercourse Crossing Bylaw to support Riparian Management Areas, (iii) greenhouse gas emissions have decreased due to improved efficiency of systems and operations, and (iv) the Integrated Rainwater Resource Management Strategy is an ongoing initiative.

Committee requested that staff provide a memo summarizing their responses.

It was moved and seconded

That the staff report titled “2021 Liquid Waste Management Plan Biennial Report,” dated February 12, 2021, from the Director, Engineering, be submitted to Metro Vancouver.

CARRIED

3. LOWER MAINLAND FLOOD MANAGEMENT STRATEGY UPDATE

(File Ref. No. 10-6060-01/2021-Vol 01) (REDMS No. 6620375)

In reply to queries from Committee, staff noted that (i) dike raising does not affect the salt wedge inland and salt levels are continually monitored, (ii) the City has inland pump stations along Steveston Highway, and (iii) Richmond’s flood protection management strategy is ahead of the curve and the issues are dealt with at the local level.

Discussion took place on opportunities to express concern with regard to the flood protection management strategy.

It was moved and seconded

(1) *That the staff report titled “Lower Mainland Flood Management Strategy Update”, dated February 19, 2021, from the Director, Engineering, be received for information; and*

(2) *That staff prepare options and recommendations for further communications to the various levels of government that highlight the City’s concerns, and report back.*

CARRIED

Public Works & Transportation Committee
Tuesday, March 16, 2021

4A. INVASIVE SPECIES REMOVAL

(File Ref. No.)

In reply to queries from Committee, staff noted that (i) they have established Council-approved budgets and service levels for response to invasive species, (ii) Scotch broom removal at Garry Point Park was an ongoing Parks initiative, (iii) the City has an Invasive Species Action Plan where priority species have been identified, and an update is expected from the Invasive Species Council of BC, (iv) there are challenges associated with finding volunteers for community activation and participation, and (v) the approved Capital program includes environmental remediation which involves addressing invasive species.

4. MANAGER'S REPORT

(i) River Parkway

Staff noted that (i) River Parkway between Gilbert Road and Cambie Road opened to the public on March 6, (ii) the Parkway includes a 2-lane road with bike lanes protected with delineators for enhanced safety, (iii) new traffic signals and crosswalks at Leslie Road and Cambie Road were installed, as well as paved pedestrian walkways and LED lights, (iv) access to River Road from Gilbert Road is now permanently closed, and (v) remaining works include the construction of a cul-de-sac at the southwest end of River Road, the addition of traffic control devices at Cedarbridge Way, and traffic signal optimization at No. 3 Road and Cambie Road.

(ii) Lulu Island Renewable Natural Gas Facility at Metro Vancouver's Lulu Island Wastewater Treatment Plant

Staff highlighted that Metro Vancouver announced their successful partnership with FortisBC to implement a Renewable Natural Gas (RNG) system at the Lulu Island Wastewater Treatment Plant and the anticipated completion date is April 2021. Also, staff advised that RNG is odor-free and fully contained so there are no expected impacts to the community and is a product of wastewater treatment, which supports many objectives of the region, the City, and FortisBC to reduce greenhouse gas emissions.

In response to queries from Committee, staff noted that (i) the metric of heating 600 homes is used to show residents the impact of the project, and that it will be integrated into the grid and used by multiple parties in the network, and (ii) some gas is recovered, otherwise the material would be flared.

Public Works & Transportation Committee
Tuesday, March 16, 2021

ADJOURNMENT

It was moved and seconded

That the meeting adjourn (5:02 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 Tuesday, March 16, 2021.

Councillor Chak Au
Chair

Shannon Unrau
Legislative Services Associate



City of Richmond

Report to Committee

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

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

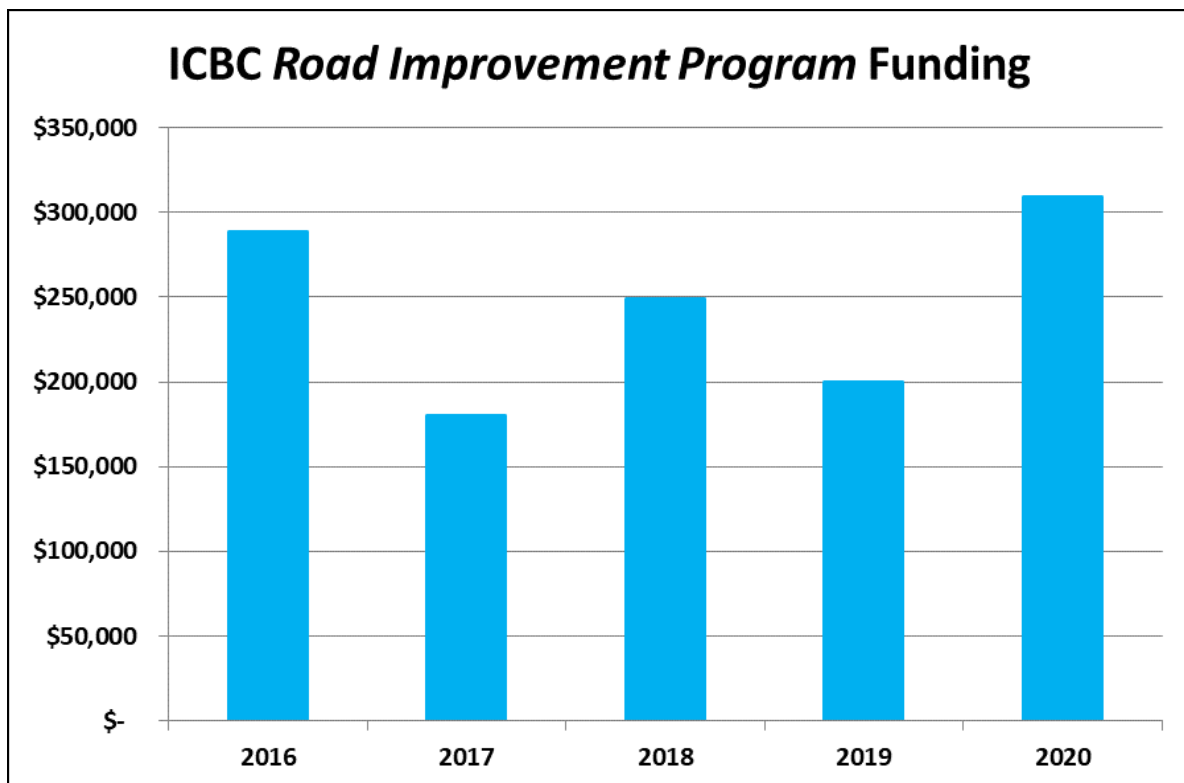


Figure 2: Annual ICBC Road Improvement Program Funding received by City

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

2020 Road Improvement Projects receiving ICBC Funding

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

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

Proposed 2021 City-ICBC Road Improvement Projects

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

Proposed 2021 City-ICBC Road Improvement Projects

Proposed 2021 ICBC-City of Richmond Road Improvement Program Project	Estimated Total Cost	Source & Amount of City Funds ⁽¹⁾		Confirmed Funding: TransLink ⁽²⁾
Installation of UPS (uninterruptible power supply): <ul style="list-style-type: none"> Gilbert Road and Lansdowne Road No. 2 Road and Westminster Hwy No. 3 Road and Granville Avenue No. 4 Road and Cambie Road Garden City Road and Blundell Road No. 1 Road and Steveston Hwy Gilbert Road and Blundell Road No. 1 Road and Francis Road Other locations to be determined⁽⁴⁾ 	\$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"> River Road (No. 6 Road-Burdette Ave) St. Edwards Drive (350m east of Cambie Road-Bird Road) Westminster Hwy (Muir Road-150m east) Other locations to be determined⁽⁴⁾ 	\$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"> Westminster Hwy (Smith Cr-Fraser Side Gate) Garden City Road (Lansdowne Road-Westminster Hwy) Alderbridge Way (Shell Road- No. 4 Road): Phase 2 (Shell Road-Fisher Drive) Steveston Hwy (Shell Road-Mortfield Gate) Charles Street (Sexsmith Road-Bridgeport Station Entrance) Other locations to be determined 	\$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 ⁽⁵⁾ \$500,000 \$600,000 \$1,410,000 \$193,340
Removal of Channelized Right-Turn Island: <ul style="list-style-type: none"> Cooney Road-Westminster Hwy (northeast corner) Garden City Road-Lansdowne Road (northwest corner) 	\$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 ⁽⁴⁾	\$100,000	2021 Transportation Planning, Functional & Preliminary Design	\$100,000	-
Total	\$12,903,400		\$8,175,060	\$4,728,340

(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).



City of Richmond

Report to Committee

To: Public Works and Transportation Committee
From: Lloyd Bie, P.Eng.
Director, Transportation
Date: March 2, 2021
File: 10-6455-03/2021-Vol
01
Re: **Review of Accessible Parking Spaces in Steveston Village**

Staff Recommendation

That the proposed improvements to provide van accessible parking spaces in Steveston Village, as described in the report titled "Review of Accessible Parking Spaces in Steveston Village," dated March 2, 2021 from the Director, Transportation, be endorsed.

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

Att. 1

REPORT CONCURRENCE		
ROUTED TO: Community Social Development	CONCURRENCE <input checked="" type="checkbox"/>	CONCURRENCE OF GENERAL MANAGER
SENIOR STAFF REPORT REVIEW	INITIALS: 	APPROVED BY CAO

Staff Report

Origin

At the June 22, 2020 Council meeting, the following resolution was carried:

That staff be directed to review accessible street and city-owned parking spaces in Steveston Village and provide recommendations for improvement.

This report responds to the referral.

This report supports Council's Strategic Plan 2018-2022 Strategy #4 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.

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

Current Inventory of Accessible Parking Spaces in Steveston Village

There are a total of 33 accessible parking spaces in the Steveston Village area roughly bounded by No. 1 Road, Chatham Street, Fourth Avenue, and the Fraser River (Table 1). The one off-street public space is within the City-owned parking lot at 12200 Second Avenue. The off-street spaces within private lots are either reserved for customers of the establishment (with no charge for parking) or located within pay parking lots for the general public. As shown in Attachment 1, the accessible parking spaces for the general public are geographically dispersed throughout the Steveston Village area.

Table 1: Accessible Parking Spaces in Steveston Village

Location	# Spaces
On-Street	8
Off-Street: Public	1
Off-Street: Private	24
Total	33

The provision of off-street accessible parking spaces is governed by the Zoning Bylaw and secured through the redevelopment process. Van accessible parking spaces, which provide additional width for side loading, were introduced in the Zoning Bylaw in 2018 and the number of these spaces will increase over time as development occurs in Steveston Village. The parking spaces can be used by any motorist displaying an accessible parking permit (i.e., use of the space

is not limited to vans only). Two of the existing 24 off-street accessible parking spaces in privately-owned lots are van accessible (i.e., at Save-On Foods site).

While there is no bylaw requirement for the provision of on-street accessible parking spaces, the current inventory of eight on-street accessible parking spaces represents approximately 3% of the total on-street parking spaces within the Steveston Village core, which exceeds the Zoning Bylaw requirement that 2% of off-street parking spaces must be accessible. The current inventory of eight on-street accessible parking spaces was established over time in response to stakeholder and public requests as well as consultation with adjacent businesses.

Consultation with Richmond Centre for Disability

Staff met with the Richmond Centre for Disability (RCD) in January 2021 to discuss and receive feedback on the current and proposed availability of accessible parking spaces in Steveston Village. Based on staff's review of the current inventory, staff presented a proposal to introduce one van accessible parking space in the City-owned parking lot on First Avenue, which currently does not have an accessible parking space (Figure 1). A reduction of one standard parking space is required to bring the City lot into compliance with current Zoning Bylaw requirements.



Figure 1: Proposed Location of Van Accessible Parking Space in City Lot on First Avenue

RCD expressed support for the proposed van accessible parking space in the City parking lot and identified a need for more van accessible parking spaces in the Steveston Village core. To this end, RCD suggested exploring the feasibility of converting an existing on-street parking space. RCD also identified concerns with the existing accessible parking spaces in privately owned lots (i.e., faded pavement markings and non-standard signage, and inability to access space due to adjacent storage of items).

Next Steps

Based on staff's review of accessible parking spaces in Steveston Village and feedback from RCD, staff will undertake the following actions.

- Off-Street Accessible Parking in City Lot: Establish one van accessible parking space in the City-owned parking lot at 12220-12240 First Avenue, with the aim of having the work completed prior to Summer 2021.

- On-Street Van Accessible Parking: Investigate modifying an existing accessible on-street parking space by repainting to provide increased width for van accessibility. Two feasible locations were identified (Figure 2): fronting 12171 and 12191 First Avenue. Staff will modify the two spaces with the aim of having the work completed prior to Summer 2021 and will continue to investigate other possible locations in coordination with stakeholders.

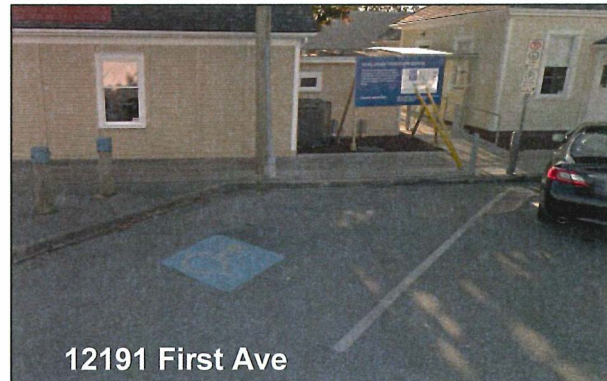
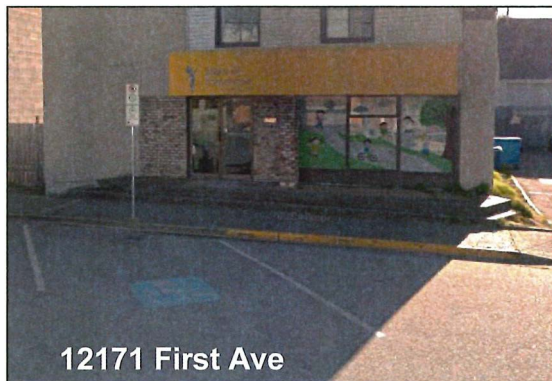


Figure 2: Proposed Locations for Conversion to On-Street Van Accessible Parking Space

- Off-Street Accessible Parking in Private Lots: Investigate the concerns noted by RCD in the privately owned parking lots to determine any compliance issues with Zoning Bylaw requirements and advise the property owners accordingly.

Staff will also consult with RCD prior to the implementation of any future temporary road changes in Steveston Village with a view to mitigate any potential negative impacts to on-street accessible parking spaces.

Financial Impact

The total estimated cost to revise the pavement markings and add signage to establish the two on-street and one off-street van accessible parking spaces is \$3,700 and can be funded from an existing approved capital budget.

Conclusion

The availability of accessible parking spaces in the Steveston Village core will be increased with the provision of a van accessible parking space in the City public parking lot on First Avenue plus two on-street van accessible parking spaces. Collectively, the measures will support the City's goals for an accessible and inclusive public realm.

Joan Caravan
Transportation Planner
(604-276-4035)
JC:jc

Sonali Hingorani, P.Eng.
Transportation Engineer
(604-276-4049)

Att. 1: Current Inventory of Accessible Parking Spaces in Steveston Village

Current Inventory of Accessible Parking Spaces in Steveston Village



Accessible Parking Space



City of Richmond

Report to Committee




To: Public Works and Transportation Committee
From: Milton Chan, P.Eng.
Director, Engineering
Date: March 19, 2021
File: 10-6000-01/2021-Vol
01
Re: 2020 Winter Rainfall and 2021 Flood Protection Update

Staff Recommendation

That the staff report titled "2020 Winter Rainfall and 2021 Flood Protection Update", dated March 19, 2021 from the Director, Engineering be received for information.

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

Att. 1

REPORT CONCURRENCE		
ROUTED TO: Sewerage and Drainage Roads and Construction	CONCURRENCE <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	CONCURRENCE OF GENERAL MANAGER 
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 m 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, 585 km of drainage pipes, 61 km of culverts, 165 km of watercourses and 39 drainage pump stations.

Demands on the City's flood protection infrastructure are most significant during storm season in the winter and freshet season in the spring. This report provides Council with an update on 2020/2021 winter rainfall and ongoing works regarding the City's flood protection program.

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.

Analysis

2020 Winter Rainfall and Flood Protection System

Significant Rainfall Events

The City's drainage system is designed to accommodate a 10-year return period rainfall event. Rainfall amounts and water levels in the City's drainage system and the Fraser River are monitored using 5 rain gauges, 12 drainage level sensors and 9 river level sensors. Attachment 1 shows the total annual rainfall over the past 10 years and identifies higher than average total rainfall in 2020.

Between September 2020 and January 2021, the following significant rainfall events occurred:

- Three 2-year return period rainfall events;
- One 5-year return period rainfall event; and
- One 10-year return period rainfall event.

The drainage system performed well during these events.

Total rainfall volume in November 2020 was 23% higher than the historical 10-year average, while total rainfall volume in December 2020 was 39% higher than the historical 10-year average. During this time, there was an increase in drainage-related service requests over the 10-year average of 124. Staff responded to a total of 195 drainage-related service requests, 35 of which were due to significant rainfall events. All drainage issues were alleviated through maintenance of the drainage system.

In recent years, there has been an increase in the occurrences and intensities of significant storms, with the potential for multiple storms exceeding a 10-year return period intensity in a given year. This is consistent with predicted climate change impacts on local weather patterns and reinforces the need for the City's continued flood protection upgrade program.

Storm Surge

On January 13, 2021, the City experienced a king tide event together with a wind storm and storm surge. The City's flood protection network performed well; however, the storm caused local damage to the rip-rap armouring along the south dike west of Gilbert Road, and a significant amount of large logs and woody debris accumulated in the area. No rip-rap damage was observed in the Gilbert Road to No. 3 Road area, where dike upgrades were recently completed.

As outlined in the staff report titled "South Dike Repairs – Gilbert Road Area", dated February 17, 2021 from the Director, Engineering, Council endorsed that funding from the Drainage Improvement Reserve Fund be approved to complete dike armouring repair and debris removal along the south dike at Gilbert Road. Coordination and environmental permitting are underway to complete the dike repair ahead of the upcoming spring freshet.

Minor seepage at the Britannia Shipyard floodwall was also observed during the elevated tide levels that took place on January 12, 2021 and January 13, 2021. Staff temporarily repaired the floodwall to prevent further seepage and are conducting an assessment of the area to develop a scope of work for the full repair.

Flood Protection Planning

Flood Protection Management Strategy

The City's flood protection efforts are guided by the recently updated Flood Protection Management Strategy. The strategy update was funded through the National Disaster Mitigation Program grant and provides a framework that outlines short-term and long-term strategies for policy planning, infrastructure upgrades, and other areas related to flood risk mitigation.

Key elements of the Flood Protection Management Strategy include raising dikes, updating policies with current flood protection science, updating the City's dike operations and maintenance manual, performing a seismic flood hazard assessment and establishing a world-class flood protection standard. These key elements will be advanced to improve the City's overall resilience to flooding. Staff will continue to engage key stakeholders and the public on climate change, flood protection, and area-specific considerations through the use of social media, open houses, presentations and other platforms.

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. As outlined in the staff report titled "Review of Land Raising Initiative in the City's Flood Protection Management Strategy", dated February 22, 2021 from the Director, Engineering, land raising over the long term (100-year horizon) would mitigate the impacts of climate change induced sea level rise and land subsidence. Staff will be presenting the content of that report to future Food Security and Agricultural Advisory Committee and Advisory Committee on the Environment meetings. A

subsequent memorandum will be provided to Council to advise on the meeting discussions and address additional questions on land raising from the March 15, 2021 General Purposes Meeting.

Dike Master Plans

A key action identified in the City's Flood Protection Management Strategy involves continuing to upgrade the City's perimeter dike to 4.7 m in the next 25 to 75 years to stay ahead of climate change induced sea level rise. The City's Dike Master Plan addresses this need by recommending dike upgrade options for each dike reach throughout the City.

Dike Master Plan Phases 1, 2, 3 and 5 have been adopted by Council. Dike Master Plan Phase 4, which includes the north dike of Lulu Island between No. 6 Road and Boundary Road, is anticipated to be presented for Council consideration in a separate report this year.

Staff are continuing to implement the work plan endorsed by Council as part of Dike Master Plan Phase 1 for the Steveston Island dike concept. At the January 19, 2021 Public Works and Transportation Committee Meeting, Council endorsed the grant submission for the Steveston Island Preliminary Dike Design to the National Disaster Mitigation Program. The project includes the preliminary design of the Steveston Island dike and related studies necessary to assess the impact of sedimentation patterns, tidal velocities and water quality. Should the grant application be unsuccessful, the Steveston Island Preliminary Dike Design will be brought forward for Council's consideration as part of the proposed 2022-2026 Capital Program.

At the April 6, 2021 General Purposes Committee Meeting, Committee endorsed the following recommendation as outlined in the staff report titled "Accelerated Flood Protection Program Concept and Flood Protection Rate Structure Review", dated February 26, 2021 from the Director, Engineering:

That a target annual revenue level of \$30 million by 2031, for the Drainage and Diking Utility, be endorsed for use in future utility budget planning in order to support Option 1 — 50 Year Implementation Period for an accelerated flood protection program.

Upon Council endorsement, staff will prepare the 2022 utility budget and rates accordingly, including budgeted expenditures for additional staffing, maintenance of the flood protection works, and operational resources for Council's consideration as part of the annual budget process.

Infrastructure Improvements

Funded by the Drainage and Diking Utility and grants, the City's flood protection infrastructure is continuously upgraded and improved to address infrastructure age, growth and climate change.

Capital Dike Upgrades

Design is complete for south dike upgrades between No. 3 Road to 400 m west of No. 4 Road, and between 200 m west of No. 9 Road and the Ewen Road Drainage Pump Station. Procurement is underway for both projects and construction is anticipated to begin in summer 2021.

Design of the south dike upgrade between No. 4 Road and No. 5 Road will begin in summer 2021.

Dike Rehabilitation

In addition to dike upgrades completed as part of the Capital Program, 460 m of dikes were re-armoured with 3,672 tonnes of rip-rap as part of the City's Dike Maintenance Program in 2020.

Pump Station Upgrades

Significant progress has been made in upgrading the City's drainage pump stations to accommodate growth and climate change. Over the last 20 years, since the City introduced the Drainage and Diking Utility, the City has rebuilt 14 of its 39 drainage pump stations and has performed significant upgrades on four. Re-construction of the Horseshoe Slough and Shell Road North Pump Stations is complete. Re-construction of the No. 7 Road South Pump Station is nearing completion. Designs are complete for the No. 2 Road South, Steveston Highway and No. 3 Road and Steveston Highway and Gilbert Road Pump Stations.

During extreme events, a number of the 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 programs or will be brought forward for Council consideration as part of future capital programs.

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 basic funding sources.

Drainage and Diking Utility

The Drainage and Diking Utility was established by Council in 2000 and currently generates \$13.4 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.

Options and recommendations for future utility rates are presented in a separate report titled "Accelerated Flood Protection Program Concept and Flood Protection Rate Structure Review".

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. Staff estimate that up to 20% of dike upgrades along Lulu Island's perimeter dikes will be completed through development. Superdikes constructed through development to date include sections near the Richmond Olympic Oval, Parc Riviera and at the Imperial Landing and Kawaki developments in Steveston. Superdike construction is underway at the Western-Citimark development, and is anticipated to begin later this year for the Vancouver Airport Fuel Facility Corporation (VAFFC) and ASPAC development.

Financial Impact

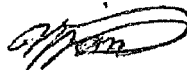
None.

Conclusion

The City received above average rainfall in 2020 and experienced two significant rainfall events that exceeded a 2-year return period in the 2020/2021 winter rainfall season. Through the capital improvements and investment in preventative maintenance programs, the City has developed the ability to proactively prepare and respond to flood related concerns. 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.



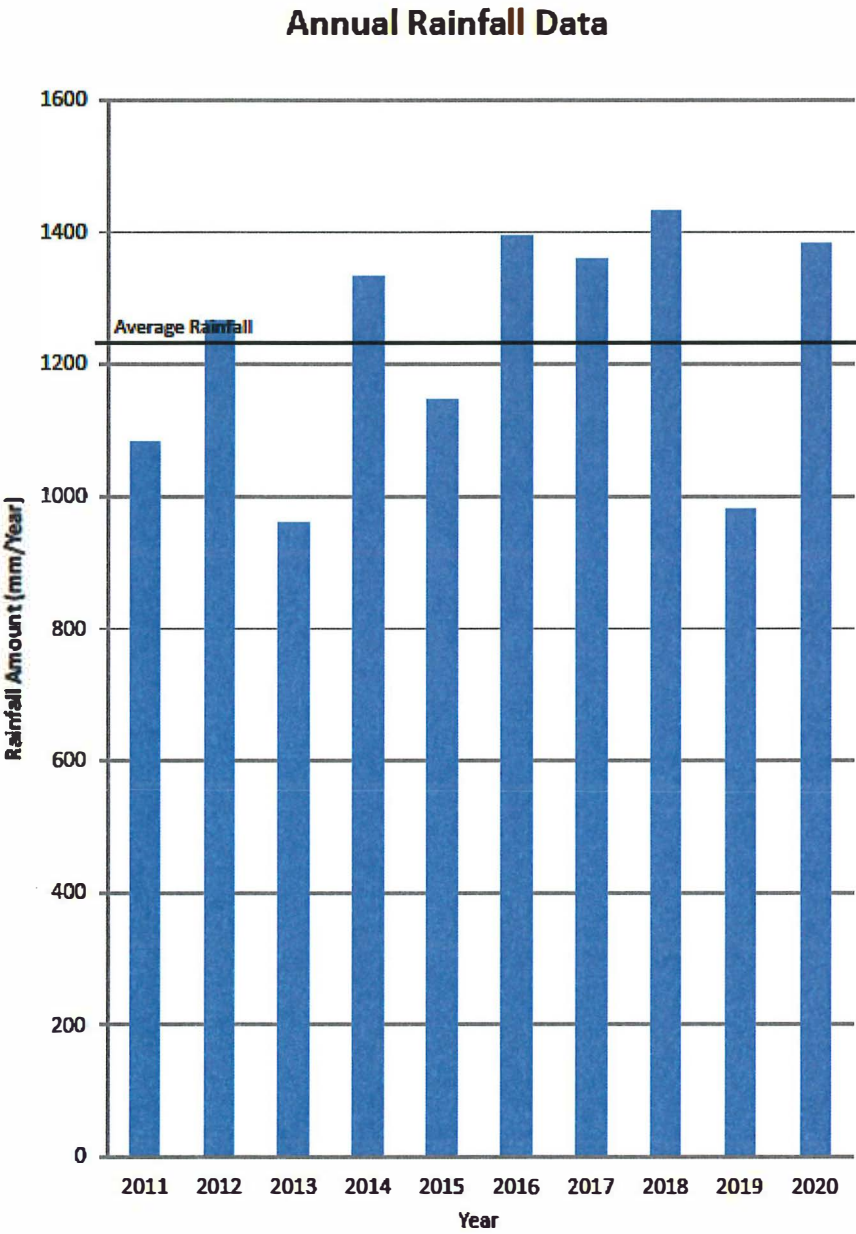
Jason Ho, P.Eng.
Manager, Engineering Planning
(604-244-1281)



Manraj Gill, EIT
Project Manager, Engineering Planning
(604-247-4460)

JH:mg
Att. 1: Annual Rainfall Data (2011-2020)

Attachment 1 – Annual Rainfall Data (2011-2020)






City of Richmond



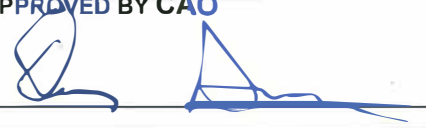
Report to Committee

To: Public Works and Transportation Committee **Date:** March 15, 2021
From: Jim V. Young, P. Eng.
Director, Facilities and Project Development **File:** 02-0775-50-7020/Vol 01
Re: **Award of Contract 7020Q – Supply and Delivery of HVAC Air Filters**

Staff Recommendation

1. That Contract 7020Q – Supply and Delivery of HVAC Air Filters be awarded to Dafco Filtration Group Corp., in the amount of \$734,874 for a three-year term as described in the March 15, 2021 report titled “Award of Contract 7020Q – Supply and Delivery of HVAC Air Filters” from the Director, Facilities and Project Development;
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 amount of \$1,254,576, as described in the March 15, 2021 report titled “Award of Contract 7020Q – Supply and Delivery of HVAC Air Filters” from the Director, Facilities and Project Development; and
3. That the Chief Administrative Officer and General Manager, Engineering and Public Works be authorized to execute the contract and all related documentation with Dafco Filtration Group Corp.


Jim V. Young, P. Eng.
Director, Facilities and Project Development
(604-247-4610)

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

Staff Report

Origin

The City has 173 facilities with HVAC (Heating, Ventilation and Air Conditioning) equipment that provides air filtration to protect and maximize equipment life expectancy. These systems require air filters in varying degrees of filtration standards and sizing based on manufacturers' recommendations and warranties.

The City's previous contract for air filter supply and delivery with Dafco Filtration Group Corp. (Dafco Filtration) expired on October 26, 2020. The original contract has been extended on a month to month basis to enable a procurement process to be undertaken.

This report summarizes the public tendering process and provides a recommendation for award of Contract 7020Q.

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.

1.4 Foster a safe, caring and resilient environment.

Analysis

Scope of Work

The scope of work for this contract includes supply and delivery of approximately 6,000 HVAC air filters annually, which are replaced by the City's selected contractor according to a quarterly preventative maintenance schedule.

Air filters trap and filter out dust, debris and contaminants from incoming air supply into facilities through the HVAC system. Filters also provide protection and extend the life of the HVAC equipment.

Public Tendering

A Request for Quotation (RFQ) 7020Q was posted to BC Bid on September 3, 2020, which resulted in two bids being received by the closing date of October 2, 2020.

The bid summary results of the RFQ are summarized in Table 1 below.

Table 1: Bid Summary Results

Company	Estimated Annual Contract Value based on historical usage (excluding GST)
Dafco Filtration Group Corp.	\$213,007.16
BGE Indoor Air Quality Solutions Ltd.	\$325,935.84

The City's designated representatives reviewed the submitted bids to confirm:

- Each bidder's understanding of objectives and outcomes;
- Capacity to complete the work;
- Inventory and availability of supplies;
- Ability to meet required deadlines;
- Previous experience;
- Quality of references; and
- Pricing.

Bidders were requested to provide unit pricing based on the City's historical annual usage of specific air filters currently in use at all City facilities. In addition, bidders were required to provide fixed pricing for optional MERV-13 and MERV-14 hospital-grade filters over the initial three-year term should a higher standard of filtration be required in response to the COVID-19 pandemic.

Dafco Filtration Group Corp., was the low bid and were found to be responsible and responsive to the City's requirements.

Award Recommendation

Through the RFQ review process, Dafco Filtration demonstrated the ability to provide the required level of supply and delivery as well as best value to the City. Dafco Filtration has significant experience supplying similar products to other organizations including the City and provided strong, relevant references.

Their main office is located in Richmond and they have demonstrated the ability to supply and deliver in a timely manner. In addition, Dafco Filtration will pick up and recycle all products supplied.

The award of this contract assures long term supply of air filters to the City. The proposed contract is for a three-year fixed term, with two additional one-year optional terms.

Financial Impact

Based on historical expenditures for the work under this contract, it is estimated that the total value of the proposed contract over a three-year term will be approximately \$639,021 plus contingency as summarized below. A 15 per cent contingency is required to accommodate potential changes in historical usage of filters at City facilities and in particular in response to the COVID-19 pandemic.

Continuation of the supply contract in 2022 and 2023 is subject to approval by Council of the annual Facility Services operating budget.

Year 2021	\$213,007
Year 2022	\$213,007
Year 2023	<u>\$213,007</u>
Subtotal	\$639,021
Contingency (15%)	<u>\$ 95,853</u>
Total (3 Years)	<u>\$734,874</u>


The City, with mutual agreement with Dafco Filtration, has the option to extend the proposed contract by an additional two years. The estimated cost associated with this extension is summarized below.

Year 2024	\$221,527
Year 2025	<u>\$230,388</u>
Subtotal	\$451,915
Contingency (15%)	<u>\$ 67,787</u>
Total (2 Years)	<u>\$519,702</u>

The total amount for a five-year term is \$1,254,576. The decision to extend the contract by an additional two years would be based on Dafco Filtration's performance over the period Year 2021 to Year 2023.

Conclusion

The City has 173 facilities with HVAC equipment that provides ventilation to its occupants and visitors. As part of the HVAC system, air filters protect and maximize equipment life expectancy, as well as filter and improve indoor air quality. The previous contract for supply and delivery of HVAC filters has expired and a new contract is required. Staff recommend that contract 7020Q be awarded to the lowest responsive and responsible bidder, Dafco Filtration Group Corp., for a three-year fixed term.



Jeff Lee, CEM, RPA, FMA
Manager, Facility Services
(604-276-4027)

JL:gj



City of Richmond

Report to Committee

To: Public Works & Transportation Committee
From: Milton Chan, P.Eng.
Director, Engineering
Date: March 9, 2021
File: 10-6060-01/2021-Vol 01
Re: **Works and Services Cost Recovery Bylaw Update 2021 and Interest Rate Options**

Staff Recommendation

1. That Option 2, as outlined on Page 4 of the staff report titled "Works and Services Cost Recovery Bylaw Update 2021 and Interest Rate Options," dated March 9, 2021, from the Director, Engineering be adopted as the approach for incorporating interest rates into the Works and Service Cost Recovery Bylaw; and
2. That Works and Services Cost Recovery Bylaw No. 8752, Amendment Bylaw No. 10215, be introduced and given first, second, and third readings.

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

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

Staff Report

Origin

Section 194 of the *Community Charter* (the “Charter”) permits the City to charge fees for City Services, which includes infrastructure works. The Works and Cost Recovery Bylaw No. 8752 (the “Bylaw”) facilitates the recovery of costs associated with projects constructed and financed by the City that would normally be secured through the development process. As cost recovery projects are implemented, the Bylaw is amended to include those projects to facilitate the City’s recovery of those costs through redevelopment.

At the May 23, 2019 Public Works and Transportation Committee meeting, staff presented proposed amendments to the Bylaw to include two new cost recovery projects that have been completed and to remove an old project that no longer qualifies for cost recovery. At the meeting, the following referral was made:

That the staff report titled “Works and Services Cost Recovery Bylaw Amendment” be referred back to staff for more information and options with regards to inflation.”

This report presents options for incorporating interest rates into the bylaw and recommends the addition of two projects to the Bylaw and the removal of one project for which the maximum recovery period has expired.

Analysis

Background

Through the development process and Subdivision and Development Bylaw No. 8751, the City requires developers to pay for and construct infrastructure upgrades required to service the proposed development. At times, the City identifies a need to install or upgrade infrastructure that benefits properties that have subdivision potential. This construction is financed by the City and any existing developer contributions. To maintain equity, the City has established the Bylaw to charge benefitting developers who would have otherwise had to provide the infrastructure upgrade fronting their property. Costs will only be incurred by those who benefit in the future should they subdivide; existing property owners will not incur any costs if they do not subdivide.

This cost recovery principle mirrors the collection of latecomer charges for Excess or Extended Services, as outlined in Section 508 of the Local Government Act, where developers who construct excess or extended services beyond their frontage at the benefit of other developments are eligible to establish an agreement to facilitate the recovery of costs from future benefitting developments as a latecomer charge for a period of 15 years.

The Bylaw currently contains seven schedules, each identifying an infrastructure upgrade project that has been completed in this manner with benefitting properties that are eligible for subdivision. Each property is apportioned a construction cost based on their proportion of frontage length and these costs will be recovered from the property owner upon subdivision.

Incorporating Interest Rates into the Bylaw

The existing Bylaw charges benefiting properties based on the cost incurred by the City at the time of construction and does not account for inflation. Incorporating interest rates into the Bylaw would allow the City to be compensated for the borrowing or opportunity cost of incurring the expenditure for providing new infrastructure in advance to benefit future developments. From the future developer's perspective, the interest rate charged to them is equivalent to paying the financing costs incurred by the City. Staff have assessed several options available for incorporating interest rates into the Bylaw:

Option 1: (Not Recommended) Establish a single fixed interest rate for all projects included in the Bylaw

Through this option, a fixed interest rate of 6% per year would be applied for all projects included within the Bylaw, regardless of when the project was completed. This fixed rate is selected by taking the average bank's prime rate over the past 10 years, defined as the interest rate that banks charge to the most credit-worthy customers, with a mark up of 3% to account for the cost of borrowing and other risk factors borne by the City.

This option is not recommended because the prime rate varies over time, and the Bylaw interest rate may not be reflective of market conditions for each specific project.

Option 2 (Recommended): Establish individual interest rates for each project based on the bank's prime rate at the time of project completion

Similar to Option 1, Staff recommend adopting an interest rate based on the bank's prime rate plus 3%. Through this option, the interest rate for each project included within the Bylaw is established individually for each project, and would be based on the bank's prime interest rate on the construction completion date for the project. The interest rate for each project will remain fixed for the 15 years over which it will be eligible for cost recovery through the Bylaw.

This is the method utilized within the City's Excess or Extended Services and Latecomer Payment Interest Rate Establishment Bylaw No. 6936 for incorporating interest to latecomer charges. As the cost recovery principle for this Bylaw mirrors that of Bylaw No. 6936, staff recommend incorporating interest rates using this approach for consistency between the two bylaws.

This option is recommended as it would make this Bylaw consistent with Latecomer Payment Interest Rate Establishment Bylaw No. 6936.

Option 3: (Not recommended) Adjusting costs in the Bylaw annually

Through this option, the interest (bank's prime rate with a 3% mark-up) would be assessed at the beginning of each year and be applied to all projects included in the bylaw through an annual amendment of the Bylaw. This approach would represent the highest equity, as the most appropriate interest rate would be applied each year and all active projects would be subjected to

the same interest rate for each calendar year. However, this approach would represent the most administrative effort as it would require the bylaw to be updated each year.

For projects currently in the bylaw, the difference in interest that would be collected today from a property through Options 2 and 3 are not significantly different. In addition, as there are only seven projects eligible for cost recovery within the bylaw currently, the additional administrative efforts associated with Option 3 outweighs the improved equity offered, and staff do not recommend utilizing Option 3 for incorporating interest.

Proposed Bylaw Amendments

Staff propose that the Bylaw be amended as follows:

1. Remove a project that was completed more than 15 years ago and no longer qualifies for cost recovery.
2. Add two schedules to include two new projects that have been completed and funded by the City with benefiting properties that are eligible for future subdivision.
3. Incorporate interest rates for all projects within the Bylaw using the approach outlined in Option 2 of this report. For all existing projects in the Bylaw, interest will be accrued beginning April 30, 2021 upon adoption of this bylaw amendment. For all new and future projects, interest will be accrued from the completion date of each project.

Financial Impact

None. Costs, including interest, recovered through the Bylaw will be returned to the original funding sources of the capital projects.

Conclusion

Works and Services Cost Recovery Bylaw No. 8752 facilitates the recovery of costs associated with projects constructed and financed by the City that would normally be secured through the development process. Staff propose that the Bylaw be amended to include new projects that are eligible for cost recovery and to include interest rates in the recovered costs.



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



Beata Ng, P.Eng.
Project Manager, Engineering Planning
(604-247-4658)

Att.1: Works and Services Cost Recovery Bylaw No. 8752, Amendment Bylaw No. 10215



**Works and Services Cost Recovery Bylaw No. 8752,
Amendment Bylaw No. 10215**

The Council of the City of Richmond enacts as follows:

1. The **Works and Services Cost Recovery Bylaw No. 8752**, as amended, is further amended by:
 - (a) Deleting Section 1 and replacing it with the following:

“1. There is imposed on every person obtaining approval of a subdivision of a parcel of land identified as benefiting land in Item 9 in any numbered Schedule to this bylaw, a charge in the amount specified in Item 7 of that Schedule, to be applied on the basis of the **frontage** of the parcel or area of the parcel indicated in Item 9 of the Schedule, plus interest as specified in Section 9 of this bylaw.”;
 - (b) Inserting the following as new Sections 9 and 10 and renumbering subsequent sections accordingly:

“9. Interest shall accrue and be paid on any and all charges payable pursuant to this bylaw at the applicable **interest rate**, calculated annually and on the basis of days elapsed in a three hundred and sixty five (365) day year, for the period beginning on the completion date of the **improvement project** specified in Item 3 of the Schedule pertaining to that project, and concluding on the date that the charge is imposed by the City, and such interest shall be paid in accordance with Section 6.”

10. Notwithstanding section 9 above, for **improvement projects** with a completion date, as specified in Item 3 of the Schedule pertaining to that project, prior to July 1, 2015, interest shall accrue and be paid on any and all charges payable pursuant to this bylaw at the applicable **interest rate**, calculated annually and on the basis of days elapsed in a three hundred and sixty five (365) day year, for the period beginning April 30, 2021, and concluding on the date that the charge is imposed by the City, and such interest shall be paid in accordance with Section 6.”;
 - (c) Adding the following definitions to Section 11 in alphabetical order:

“**INTEREST RATE** means, in respect of each Schedule hereto, the rate specified in Item 8 of each Schedule of this bylaw, calculated as the Prime Rate as of the completion date for the applicable **improvement project** (as specified in Item 3 of each Schedule), plus three percent (3%) per annum;

PRIME RATE means the rate of interest equal to the floating interest rate established from time to time by the Scotiabank, 6300 No. 3 Road, Richmond, British Columbia, as the base rate that will be used to determine rates of interest charged by it for Canadian dollar loans to customers in Canada and designated by the Scotiabank as its prime rate;”;

- (d) Deleting Schedule 3;
- (e) Deleting Schedules 1 through 2 and 4 through 7 and replacing them with Schedules 1 through 6 attached to and forming part of this Bylaw; and
- (b) Adding, as new Schedules 7 through 8, the Schedules 7 and 8 attached to and forming part of this Bylaw.

2. This Bylaw is cited as **“Works and Services Cost Recovery Bylaw No. 8752, Amendment Bylaw No. 10215”**.

FIRST READING

SECOND READING

THIRD READING

ADOPTED

CITY OF RICHMOND
APPROVED for content by originating dept.
<i>BN</i>
APPROVED for legality by Solicitor
<i>JA</i>

MAYOR

CORPORATE OFFICER

SCHEDULE TO BYLAW 10215

SCHEDULE 1 to BYLAW NO. 8752

1. NAME OF IMPROVEMENT PROJECT: No. 1 Rd lane (between Francis Rd. & Williams Rd) – CR40289
2. CERTIFIED COST OF PROJECT: \$ 1,068,005.96
3. COMPLETION DATE OF PROJECT: September 19th, 2007
4. COST PREPAID UNDER WORKS AND SERVICES BYLAW: \$ 393,929.66
5. NET COST FOR RECOVERY UNDER BYLAW No. 8752: \$ 201,126.70
6. TOTAL FRONTAGE OF BENEFITING LAND IN METRES: 726.91
7. COST FOR RECOVERY PER METRE OF FRONTAGE: \$ 838.00
8. INTEREST RATE: 9.25%
9. BENEFITING LAND AND FRONTAGE IN METRES:

LEGAL DESCRIPTION OF PARCEL	FRONTAGE OF BENEFITTING LAND ON PROJECT (m)	COST FOR RECOVERY
Lot: 27 SEC: 27-4-7 PL; 18367	20.126	\$16,865.59
Lot: 1 SEC: 27-4-7 PL: BCP3505	10.060	\$8,430.28
Lot: 1 SEC: 27-4-7 PL: BCP3505	10.060	\$8,430.28
Lot: 12 SEC: 27-4-7 PL: 19282	20.117	\$16,858.05
Lot: 11 SEC: 27-4-7 PL: 19282	20.117	\$16,858.05
Lot: 8 SEC: 27-4-7 PL: 19428	20.117	\$16,858.05
Lot: 3 SEC: 27-4-7 PL: 19428	20.117	\$16,858.05
Lot: 2 SEC: 27-4-7 PL: 19428	20.117	\$16,858.05
Lot: 1 SEC: 27-4-7 PL: 19428	20.117	\$16,858.05
Lot: 22 SEC: 27-4-7 PL: 19428	20.117	\$16,858.05
Lot: 1 SEC: 27-4-7 PL: LMP38234	16.725	\$14,015.55
Lot: 2 SEC: 27-4-7 PL: LMP38234	17.691	\$14,825.06
Lot: 3 SEC: 27-4-7 PL: LMP38234	24.527	\$20,553.63

SCHEDULE TO BYLAW 10215

SCHEDULE 2 to BYLAW NO. 8752

1. NAME OF IMPROVEMENT PROJECT: Williams Rd lane (between No. 4 Rd. & Shell Rd) – CR41284
2. CERTIFIED COST OF PROJECT: \$ 1,042,399.13
3. COMPLETION DATE OF PROJECT: October 20th, 2010
4. COST PREPAID UNDER WORKS AND SERVICES BYLAW: \$ 344,571.94
5. NET COST FOR RECOVERY UNDER BYLAW No. 8752: \$ 265,212.75
6. TOTAL FRONTAGE OF BENEFITING LAND IN METRES: 745.86
7. COST FOR RECOVERY PER METRE OF FRONTAGE: \$ 838.00
8. INTEREST RATE: 6.00%
9. BENEFITING LAND AND FRONTAGE IN METRES:

LEGAL DESCRIPTION OF PARCEL	FRONTAGE OF BENEFITTING LAND ON PROJECT (m)	COST FOR RECOVERY
Lot: 3 SEC: 26-4-6 PL: 15456	6.10	\$5,108.45
Lot: 4 SEC: 26-4-6 PL: 18549	31.22	\$26,158.17
Lot: 7 SEC: 26-4-6 PL: 18549	20.12	\$16,858.05
Lot: 10 SEC: 26-4-6 PL: 18549	20.12	\$16,858.05
Lot: 11 SEC: 26-4-6 PL: 18549	20.12	\$16,858.05
Lot: 13 SEC: 26-4-6 PL: 18549	20.12	\$16,858.05
Lot: 17 SEC: 26-4-6 PL: 18549	20.12	\$16,858.05
Lot: 1 BCP: 18548	22.25	\$18,645.50
Lot: 25 SEC: 26-4-6 PL: 18548	20.12	\$16,858.05
Lot: 24 SEC: 26-4-6 PL: 18548	20.12	\$16,858.05
Lot: 23 BCP3637	20.12	\$16,858.05
Lot: 22 SEC: 26-4-6 PL: 18548	20.12	\$16,858.05
Lot: 19 SEC: 26-4-6 PL: 18548	21.64	\$18,135.16
Lot: 1 BCP67429	6.07	\$5,085.82
Lot: 17 SEC: 26-4-6 PL: 18548	23.17	\$19,412.27
Lot: 16	24.99	\$20,944.97

SCHEDULE TO BYLAW 10215

SCHEDULE 3 to BYLAW NO. 8752

1. NAME OF IMPROVEMENT PROJECT: Laneway Upgrade South of Williams Road between Aragon Road and Shell Road – CR41271
2. CERTIFIED COST OF PROJECT: \$ 725,615.00
3. COMPLETION DATE OF PROJECT: November 5th, 2012
4. COST PREPAID UNDER WORKS AND SERVICES BYLAW: \$ 205,360.93
5. NET COST FOR RECOVERY UNDER BYLAW No. 8752: \$ 386,152.26
6. TOTAL FRONTAGE OF BENEFITING LAND IN METRES: 621.21
7. COST FOR RECOVERY PER METRE OF FRONTAGE: \$ 1,168.07
8. INTEREST RATE: 6.00%
9. BENEFITING LAND AND FRONTAGE IN METRES:

LEGAL DESCRIPTION OF PARCEL	FRONTAGE OF BENEFITTING LAND ON PROJECT (m)	COST FOR RECOVERY
Lot: 42 Sec:36-4-6 PL:28788	18.29	\$21,364.00
Lot: 47 Sec:36-4-6 PL:28788	20.12	\$23,501.57
Lot: 48 Sec:36-4-6 PL:28788	20.12	\$23,501.57
Lot: 49 Sec:36-4-6 PL:28788	18.29	\$21,364.00
Lot: 50 Sec:36-4-6 PL:28788	18.29	\$21,364.00
Lot: 51 Sec:36-4-6 PL:28788	18.29	\$21,364.00
Lot: 52 Sec:36-4-6 PL:28788	18.29	\$21,364.00
Lot: 54 Sec:36-4-6 PL:28788	18.29	\$21,364.00
Lot: 55 Sec:36-4-6 PL:28788	21.83	\$25,498.97
Lot: 295 Sec:36-4-6 PL:35779	19.52	\$22,800.73
Lot: 296 Sec:36-4-6 PL:35779	24.85	\$29,026.54
Lot: 17 Sec:35-4-6 PL:18551	24.08	\$28,127.13
Lot: 18 Sec:35-4-6 PL:18551	24.44	\$28,547.63
Lot: 19 Sec:35-4-6 PL:18551	24.44	\$28,547.63
Lot: 22 Sec:35-4-6 PL:18551	20.42	\$23,851.99
Lot: 27 Sec:35-4-6 PL:18551	21.03	\$24,564.51

SCHEDULE TO BYLAW 10215

SCHEDULE 4 to BYLAW NO. 8752

1. NAME OF IMPROVEMENT PROJECT: 10000 Block Williams Road Laneway (South of Williams Road) – CD40385
2. CERTIFIED COST OF PROJECT: \$ 424,470.00
3. COMPLETION DATE OF PROJECT: September 19th 2012
4. COST PREPAID UNDER WORKS AND SERVICES BYLAW: \$ 132,229.72
5. NET COST FOR RECOVERY UNDER BYLAW No. 8752: \$ 105,238.15
6. TOTAL FRONTAGE OF BENEFITING LAND IN METRES: 329.45
7. COST FOR RECOVERY PER METRE OF FRONTAGE: \$ 1,288.42
8. INTEREST RATE: 6.00%
9. BENEFITING LAND AND FRONTAGE IN METRES:

LEGAL DESCRIPTION OF PARCEL	FRONTAGE OF BENEFITTING LAND ON PROJECT (m)	COST FOR RECOVERY
Lot: 28 Sec:35-4-6 PL:18549	20.42	\$26,309.54
Lot: 26 Sec:35-4-6 PL:18549	20.42	\$26,309.54
Lot: 25 Sec:35-4-6 PL:18549	20.42	\$26,309.54
Lot: 19 Sec:35-4-6 PL:18549	20.42	\$26,309.54

SCHEDULE TO BYLAW 10215

SCHEDULE 5 to BYLAW NO. 8752

1. NAME OF IMPROVEMENT PROJECT: Seaton Road Laneway Upgrade (Laneway south of Seaton Road) – CD40396
2. CERTIFIED COST OF PROJECT: \$ 568,560.00
3. COMPLETION DATE OF PROJECT: October 15th, 2012
4. COST PREPAID UNDER WORKS AND SERVICES BYLAW: \$ 209,284.67
5. NET COST FOR RECOVERY UNDER BYLAW No. 8752: \$ 118,024.50
6. TOTAL FRONTAGE OF BENEFITING LAND IN METRES: 649.18
7. COST FOR RECOVERY PER METRE OF FRONTAGE: \$ 875.81
8. INTEREST RATE: 6.00%
9. BENEFITING LAND AND FRONTAGE IN METRES:

LEGAL DESCRIPTION OF PARCEL	FRONTAGE OF BENEFITTING LAND ON PROJECT (m)	COST FOR RECOVERY
Lot: 1 Sec: 25-4-6 PL:18935	38.64	\$33,841.30
Lot: 14 Sec: 25-4-6 PL:18935	20.15	\$17,647.57
Lot: 10 Sec: 25-4-6 PL:18935	20.15	\$17,647.57
Lot: 8 Sec: 25-4-6 PL:18935	20.15	\$17,647.57
Lot: 345 Sec: 25-4-6 PL:44475	35.67	\$31,240.14

SCHEDULE TO BYLAW 10215

SCHEDULE 6 to BYLAW NO. 8752

1. NAME OF IMPROVEMENT PROJECT: 11000 Block Williams Road (From 11020 to Seacote) – CD41318
2. CERTIFIED COST OF PROJECT: \$ 238,697.00
3. COMPLETION DATE OF PROJECT: April 15th, 2015
4. COST PREPAID UNDER WORKS AND SERVICES BYLAW: \$ 33,721.14
5. NET COST FOR RECOVERY UNDER BYLAW No. 8752: \$ 175,467.67
6. TOTAL FRONTAGE OF BENEFITING LAND IN METRES: 151.91
7. COST FOR RECOVERY PER METRE OF FRONTAGE: \$ 1,571.31
8. INTEREST RATE: 5.85%
9. BENEFITING LAND AND FRONTAGE IN METRES:

LEGAL DESCRIPTION OF PARCEL	FRONTAGE OF BENEFITTING LAND ON PROJECT (m)	COST FOR RECOVERY
Lot: 31 Sec: 36-4-6 PL:25887	24.69	\$38,795.53
Lot: 33 Sec: 36-4-6 PL:25887	20.12	\$31,614.66
Lot: 34 Sec: 36-4-6 PL:25887	20.12	\$31,614.66
Lot: 35 Sec: 36-4-6 PL:25887	20.12	\$31,614.66
Lot: 12 Sec: 36-4-6 PL:23314	26.62	\$41,828.15

SCHEDULE TO BYLAW 10215

SCHEDULE 7 to BYLAW NO. 8752

1. NAME OF IMPROVEMENT PROJECT: Laneway Drainage and Asphalt Upgrade - Seabrook Crescent (East) – CD00003
2. CERTIFIED COST OF PROJECT: \$335,210.48
3. COMPLETION DATE OF PROJECT: July 25, 2015
4. COST PREPAID UNDER WORKS AND SERVICES BYLAW: \$38,774.80
5. NET COST FOR RECOVERY UNDER BYLAW No. 8752: \$93,224.99
6. TOTAL FRONTAGE OF BENEFITING LAND IN METRES: 503.79
7. COST FOR RECOVERY PER METRE OF FRONTAGE: \$665.37
8. INTEREST RATE: 5.70%
9. BENEFITING LAND AND FRONTAGE IN METRES:

LEGAL DESCRIPTION OF PARCEL	FRONTAGE OF BENEFITTING LAND ON PROJECT (m)	COST FOR RECOVERY
LOT B SEC 36 BLK 4N RG 6W PL NWS424	31.78	\$21,145.46
LOT 5 SEC 36 BLK 4N RG 6W PL NWP10636 Except Plan 25649, 53892	22.58	\$15,024.05
LOT 17 SEC 36 BLK 4N RG 6W PL NWP25649 Except Plan 53892	20.09	\$13,367.28
LOT 6 SEC 36 BLK 4N RG 6W PL NWP10636 Except Plan 25649, 53872	20.81	\$13,846.35
LOT 222 SEC 36 BLK 4N RG 6W PL NWP32915	18.83	\$12,528.92
LOT 292 SEC 36 BLK 4N RG 6W PL NWP35777	26.02	\$17,312.93

SCHEDULE TO BYLAW 10215

SCHEDULE 8 to BYLAW NO. 8752

1. NAME OF IMPROVEMENT PROJECT: Marrington Area Water, Sanitary and Drainage Upgrade – CW41402
2. CERTIFIED COST OF PROJECT: \$1,666,361.54
3. COMPLETION DATE OF PROJECT: May 31, 2017
4. COST PREPAID UNDER WORKS AND SERVICES BYLAW: \$516,485.84
5. NET COST FOR RECOVERY UNDER BYLAW No. 8752: \$278,995.38
6. TOTAL FRONTAGE OF BENEFITING LAND IN METRES: 1,444.80 m
7. COST FOR RECOVERY PER METRE OF FRONTAGE: \$1,153.35
8. INTEREST RATE: 5.70%
9. BENEFITING LAND AND FRONTAGE IN METRES:

LEGAL DESCRIPTION OF PARCEL	FRONTAGE OF BENEFITTING LAND ON PROJECT (m)	COST FOR RECOVERY
LOT 58 SEC 15 BLK 4N RG 7W PL NWP15447	23.77	\$27,415.15
LOT 56 SEC 15 BLK 4N RG 7W PL NWP15447	23.77	\$27,415.15
LOT 55 SEC 15 BLK 4N RG 7W PL NWP15447	23.70	\$27,334.39
LOT 54 SEC 15 BLK 4N RG 7W PL NWP15447	24.38	\$28,118.67
(LOT 1 and LOT 2) SEC 15 BLK 4N RG 7W PL NWS937	24.38	\$28,118.67
(LOT 1 and LOT 2) SEC 15 BLK 4N RG 7W PL NWS721	24.38	\$28,118.67
(LOT 1 and LOT 2) SEC 15 BLK 4N RG 7W PL NWS1463	24.38	\$28,118.67
LOT 36 SEC 15 BLK 4N RG 7W PL NWP15447	24.38	\$28,118.67
LOT 46 SEC 15 BLK 4N RG 7W PL NWP15447	24.38	\$28,118.67
LOT 49 SEC 15 BLK 4N RG 7W PL NWP15447	24.38	\$28,118.67