



**Public Works and Transportation Committee**

**Anderson Room, City Hall  
6911 No. 3 Road**

**Tuesday, January 21, 2020  
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 December 18, 2019.*



NEXT COMMITTEE MEETING DATE

February 19, 2020, (tentative date) at 4:00 p.m. in the Anderson Room

PLANNING AND DEVELOPMENT DIVISION

1. **RICHMOND ACTIVE TRANSPORTATION COMMITTEE – PROPOSED 2020 INITIATIVES**  
(File Ref. No. 01-0100-20-RCYC1) (REDMS No. 6350886 v.3)

**PWT-8**

**See Page PWT-8 for full report**

*Designated Speaker: Lloyd Bie*

STAFF RECOMMENDATION

- (1) *That the proposed 2020 initiatives of the Richmond Active Transportation Committee, as outlined in the staff report titled “Richmond Active Transportation Committee - Proposed 2020 Initiatives” dated December 10, 2019 from the Director, Transportation, be endorsed.*
- (2) *That a copy of the report titled “Richmond Active Transportation Committee – Proposed 2020 Initiatives” be forwarded to the Richmond Council-School Board Liaison Committee for information.*



2. **TRAFFIC SAFETY ADVISORY COMMITTEE - PROPOSED 2020 INITIATIVES**

(File Ref. No. 01-0100-30-TSAD1-01) (REDMS No. 6349593 v.2)

PWT-20

See Page PWT-20 for full report

*Designated Speaker: Lloyd Bie*

STAFF RECOMMENDATION

- (1) *That the proposed 2020 initiatives for the Traffic Safety Advisory Committee, as outlined in the staff report titled “Traffic Safety Advisory Committee - Proposed 2020 Initiatives” dated January 6, 2020 from the Director, Transportation, be endorsed.*
- (2) *That a copy of the above staff report be forwarded to the Richmond Council-School Board Liaison Committee for information.*



ENGINEERING AND PUBLIC WORKS DIVISION

3. **IONA ISLAND WASTEWATER TREATMENT PLANT UPGRADE PROJECT**

(File Ref. No. 10-6060-04-01) (REDMS No. 6357529 v.3)

PWT-26

See Page PWT-26 for full report

*Designated Speaker: Jason Ho*

STAFF RECOMMENDATION

*That the comments and recommendations on the Metro Vancouver Iona Island Wastewater Treatment Plant Upgrade project, as outlined in the staff report titled “Iona Island Wastewater Treatment Plant Upgrade Project,” dated December 11, 2019 from the Acting Director, Engineering be endorsed for submission to Metro Vancouver.*



4. **REGIONAL FLOOD PROTECTION MANAGEMENT AND GOVERNANCE**

(File Ref. No. 10-6060-04-01) (REDMS No. 6361339 v.9)

PWT-37

See Page PWT-37 for full report

*Designated Speaker: Jason Ho*

STAFF RECOMMENDATION

1. *That the following be endorsed as the City’s position on regional flood protection management:*
  - (a) *That flood protection continue to be evaluated and managed at the local government level, currently through the Diking Authority model, with additional support from senior levels of government;*

- (b) *That dedicated funding for flood protection be established at the Provincial and Federal level, to be used by Diking Authorities, which include local governments, for flood management projects; and*
  - (c) *That the Province require Diking Authorities, which include local governments, to develop and maintain flood risk management plans and strategies for their respective areas so that regional objectives are met.*
- 2. *That staff communicate the comments and recommendations in the report titled “Regional Flood Protection Management and Governance,” dated December 13, 2019, from the Acting Director, Engineering, to regional Diking Authorities, the Fraser Basin Council, and the Province.*

☐

5. **MANAGER’S REPORT**

**ADJOURNMENT**

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## Public Works and Transportation Committee

Date: Wednesday, December 18, 2019

Place: Anderson Room  
Richmond City Hall

Present: Councillor Chak Au, Chair  
Councillor Kelly Greene  
Councillor Alexa Loo  
Councillor Linda McPhail  
Councillor Michael Wolfe  
Mayor Malcolm Brodie

Also Present: Councillor Carol Day  
Councillor Bill McNulty  
Councillor Harold Steves

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 November 20, 2019, be adopted as circulated.*

**CARRIED**

### NEXT COMMITTEE MEETING DATE

January 22, 2020, (tentative date) at 4:00 p.m. in the Anderson Room

**PLANNING AND DEVELOPMENT DIVISION**

**1. RECOMMENDATION TO AWARD CONTRACT 6537Q - SUPPLY AND DELIVERY OF AUDIBLE ACCESSIBLE PEDESTRIAN SIGNALS**

(File Ref. No. 02-0775-50-6537) (REDMS No. 6339669 v.3)

It was moved and seconded

- (1) That Contract 6537Q - Supply and Delivery of Audible Accessible Pedestrian Signals be awarded to Astrographics Industries Ltd as described in the report titled "Recommendation to Award Contract 6537Q - Supply and Delivery of Audible Accessible Pedestrian Signals" dated November 7, 2019 from the Director, Transportation; and*
- (2) That the Chief Administrative Officer and General Manager, Planning and Development, be authorized to execute the contract between the City and Astrographics Industries Ltd.*

**CARRIED**

**ENGINEERING AND PUBLIC WORKS DIVISION**

**2. SANITARY SEWER REPLACEMENT – 6000 BLOCK BUSWELL STREET**

(File Ref. No. 10-6050-01) (REDMS No. 6351457 v.9)

It was moved and seconded

*That funding of \$1,500,000 from the Sewer Utility Reserve be approved to complete the sanitary sewer replacement in the 6000 Block of Buswell Street and be included in the Consolidated 5 Year Financial Plan (2020-2024).*

**CARRIED**

**3. AWARD OF CONTRACT 6153P - SUPPLY AND DELIVERY OF VEHICLE AND EQUIPMENT TIRES AND CERTIFIED TIRE SERVICES**

(File Ref. No. 02-0780-01) (REDMS No. 6198972 v.2)

**Public Works & Transportation Committee**  
**Wednesday, December 18, 2019**

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It was moved and seconded

*That Contract 6153P, Supply and Delivery of Vehicle and Equipment Tires and Certified Tire Services, be awarded at the rates quoted for up to a maximum four year term, as per the key terms outlined in the staff report titled "Award of Contract 6153P – Supply and Delivery of Vehicle and Equipment Tires and Certified Tire Services" dated December 3, 2019 and as follows:*

- (1) Kal Tire for the supply of tires and tire services for Richmond Fire Rescue up to a maximum of \$115,000; and*
- (2) Fountain Tire for the supply of tires and tire services for Fleet Operations up to a maximum of \$960,000.*

**CARRIED**

**4. MANAGER'S REPORT**

*Vehicle Idling*

In reply to queries from Committee, staff noted that regulations on vehicle can be examined in the future.

**ADJOURNMENT**

It was moved and seconded

*That the meeting adjourn (4:03 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, December 18, 2019.

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Councillor Chak Au  
Chair

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Evangel Biason  
Legislative Services Coordinator



# City of Richmond

## Report to Committee

**To:** Public Works and Transportation Committee

**Date:** December 10, 2019

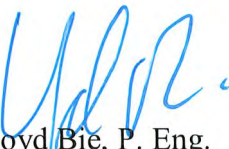
**From:** Lloyd Bie, P. Eng.  
Director, Transportation

**File:** 01-0100-20-  
RCYC1/2019-Vol 01

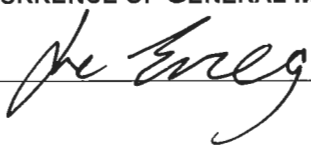

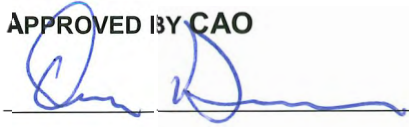
**Re:** **Richmond Active Transportation Committee – Proposed 2020 Initiatives**

### Staff Recommendation

1. That the proposed 2020 initiatives of the Richmond Active Transportation Committee, as outlined in the staff report titled “Richmond Active Transportation Committee - Proposed 2020 Initiatives” dated December 10, 2019 from the Director, Transportation, be endorsed.
2. That a copy of the report titled “Richmond Active Transportation Committee – Proposed 2020 Initiatives” be forwarded to the Richmond Council-School Board Liaison Committee for information.

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

Att. 1

REPORT CONCURRENCE		
<b>ROUTED TO:</b>	<b>CONCURRENCE</b>	<b>CONCURRENCE OF GENERAL MANAGER</b>
Parks Services	<input checked="" type="checkbox"/>	
Recreation Services	<input checked="" type="checkbox"/>	
Engineering	<input checked="" type="checkbox"/>	
<b>REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE</b>	<b>INITIALS:</b> 	<b>APPROVED BY CAO</b> 



## Staff Report

### Origin

The Richmond Community Cycling Committee was formed in 1993 to allow City staff to work in partnership with the community to promote commuter and recreational cycling in Richmond. In 2013, Council approved the evolution of the Committee into the Richmond Active Transportation Committee (RATC) to reflect a broader mandate that includes skateboarding, in-line skating and low-speed scooters. The Committee provides input and feedback to the City on infrastructure projects designed for these modes and undertakes various activities in co-operation with the City that encourage, educate and raise awareness of active transportation. Committee members are local residents and/or employees who reflect a diverse range of ages and cycling skills. Several members, including a co-Chair, are also members of HUB Cycling's local Richmond-YVR Committee, which enables direct and on-going communication with the agency.<sup>1</sup>

This report reviews the 2019 activities of the RATC and identifies a number of initiatives for 2020 that would support its mandate to provide input and advice to the City on issues in the planning, development, improvement, and promotion of an active transportation network that supports a greater number of trips by cycling, walking and rolling. The Committee's activities contribute towards the City's sustainability goals articulated in Richmond's *Official Community Plan* and *Community Energy and Emissions Plan* to reduce greenhouse gas emissions by prioritizing and funding walking, rolling and cycling infrastructure. The Committee's initiatives also support the goals and actions of the City's *Community Wellness Strategy* and, in turn, Richmond's long-term health, liveability and vibrancy.

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.*

4.1 *Robust, affordable, and accessible sport, recreation, wellness and social programs for people of all ages and abilities.*

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.*

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<sup>1</sup> HUB Cycling is a regional non-profit organization that works to improve cycling conditions in Metro Vancouver.

## Analysis

The RATC undertook and participated in a number of activities in 2019 that contributed to enhanced cycling and rolling opportunities, and increased education and awareness of active transportation in Richmond.

### Planning, Expansion and Improvement of Active Transportation Network in 2019

The City continued to improve Richmond's active transportation network in 2019, which now comprises 78 km of on- and off-street bike and rolling routes (excluding dyke trails). The Committee provided feedback on the planning, design, construction, and/or improvement of the following facilities.

#### *Construction of New Facilities*

- No. 2 Road (Steveston Highway-Dyke Road): Completion of a two-way off-street multi-use pathway (MUP) on the east and west sides including pedestrian lighting, raised crosswalks and upgraded accessible bus stops (Figure 1). The completed MUP connects to the Steveston Greenway (south of Andrews Road) and will connect to a future MUP on the south side of Steveston Highway between No. 2 Road and Shell Road.
- No. 6 Road (Bridgeport Road-Cambie Road): Substantial completion of an off-street MUP on the west side (Figure 2). The path provides safe walking and cycling access, particularly for employees of the adjacent industrial land uses, along a street that has a relatively higher proportion of truck traffic.



Figure 1: No. 2 Road MUP



Figure 2: No. 6 Road MUP

- Alderbridge Way (No. 4 Road-Fisher Gate): Substantial completion of an off-street MUP on the north side as Phase 1. Phase 2 will complete and extend the pathway east from Fisher Gate to Shell Road in Q3 2020. The pathway will connect to the Shell Road Trail at its eastern terminus and to the Garden City Lands at its western terminus.
- Local Street Bikeways: Progress was made on the following bike routes that use a combination of local streets with low traffic volumes and speeds and off-street connecting pathways.

- Parkside: This existing north-south bike route along Ash Street between Williams Road and Granville Avenue was extended to Westminster Highway with the upgrade of existing pathways through Garden City Park and Anderson School in 2018. Pavement markings and wayfinding signage were added in early 2019 to complete the extension.
- Saunders-Woodwards: Initiation of a new east-west bike route located primarily along Saunders Road and Woodward Road between No. 4 Road (with connection to McNair Secondary School) and Railway Avenue (with connection to the Railway Greenway). An existing pathway on the west side of No. 3 Road at Saunders Road was upgraded and bicycle detection added at the Woodward Road-No. 2 Road signalized intersection. Completion of the route is planned in 2020.
- Secure Bicycle Parking: An action item within the City's *Community Wellness Strategy* is the provision of secure bicycle parking for visitors to City facilities. As a first step, an automated secure bicycle parking facility has been installed at the Minoru Centre for Active Living through a partnership between the City and the operator. The facility is anticipated to become operational for the public in early 2020 as part of the opening of the Fitness Centre at the site.

#### *Improvement of Existing Facilities*

- Quick Fixes: The City participated in a regional initiative organized by HUB Cycling to address minor maintenance and improvement measures identified by the local Richmond-YVR HUB Committee. The quick fix items included the upgrade of painted pavement markings to thermoplastic markings for improved visibility and durability, and the addition of green paint at conflict points (Figure 3).
- Cycling Access to Minoru Centre for Active Living: Construction of an off-street bike path on eastbound Granville Ave to provide improved cycling access to the Minoru Centre for Active Living.



Figure 3: Enhanced Crosswalk on Saunders Road at Garden City Road

#### *Design of Planned Facilities*

The Committee provided feedback on the progress of design for the following planned active transportation improvement projects.

- Steveston Highway (Shell Road-No. 2 Road): Construction of a two-way off-street paved pathway on the south side in two phases with Phase 1 comprising Shell Road to Mortfield Gate, and Phase 2 comprising Mortfield Gate to No. 2 Road. Construction of Phase 1 is anticipated in Q3 2020. Future phases will extend the pathway westward to connect with the Railway Greenway.



- Charles Street (Sexsmith Road-Bridgeport Station): Extension of the existing off-street pedestrian and cycling paths on Sexsmith Road (Beckwith Road-Charles Street) with an off-street multi-use pathway along the north side of Charles Street to provide a seamless connection to the Bridgeport Canada Line Station and transit exchange for pedestrians and cyclists. Construction is anticipated in Q3 2020.
- Railway Avenue (Steveston Highway-Williams Road): Revision of the existing pavement markings for the northbound on-street bike lane to create both a wider bike lane and a wider adjacent parking lane to improve the safety of cyclists (i.e., provide a greater buffer between a cyclist and the adjacent door zone of the vehicle). Revision of the pavement markings is anticipated in Q2 2020.

### Promotion of Active Transportation Network in 2019

The Committee participated in the following activities in 2019 to promote cycling and other active transportation modes in Richmond.

- Bike to Work Week (May and October 2019): The Committee worked with the organizer (HUB Cycling) of this region-wide annual initiative to continue to successfully stage these events in Richmond. A total of 465 riders who reside in Richmond registered on-line for both events including 128 new bike commuters. While the number of participants was less than 2018 (likely due to wet weather), these riders collectively logged 2,680 trips for a total distance of 33,358 km (17% increase from 2018) thereby avoiding the emission of 7.2 tonnes of greenhouse gases (Figure 4).

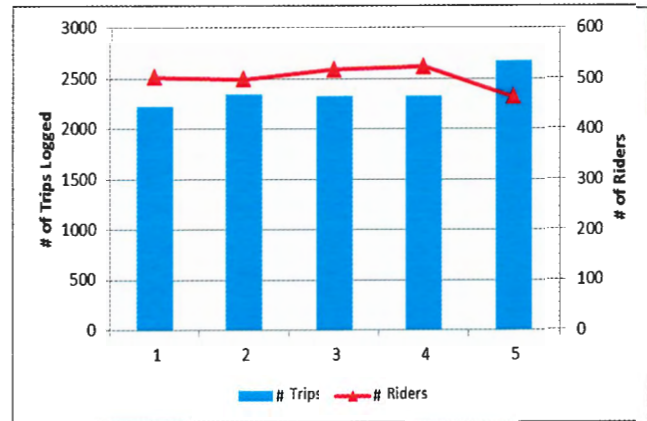


Figure 4: Participation of Cyclists who reside in Richmond in Bike to Work Week

A total of four celebration stations for cyclists were held in Richmond including two sponsored by the City at the Canada Line Bridge for both the Spring and Fall events. Collectively, these celebration stations logged 416 cyclists, which is comparable to past years.

- 19<sup>th</sup> Annual "Island City, by Bike" Tour (June 9, 2019): Each year in June, as part of regional Bike Month activities and the City's Environment Week events, the Committee and the City jointly stage guided tours for the community of some of the city's cycling routes (Figure 5).

The 19<sup>th</sup> annual "Island City, by Bike" tour was based at Britannia Heritage Shipyard and offered short (8.5 km) and



Figure 5: Safety Check at 2019 Bike Tour Event

long (23 km) rides with escorts provided by volunteer members of the Richmond RCMP bike squad. The short loop featured the Railway Greenway and the Crabapple Ridge Neighbourhood Bike Route while the long ride featured the Parkside Neighbourhood Bike Route. Activities included a bike and helmet safety check prior to the ride plus a barbecue lunch and raffle prize draw at the finish. Richmond RCMP also provided registration services for an anti-theft bike initiative. The event attracted 100 cyclists of all ages and ability, which is comparable to attendance at past recent events.

- *Participation in City Events:* Committee members provided information on how to get around Richmond in fun, safe and environmentally friendly ways at the following City events: Move for Health Week (May 12, 2019) where members led a guided bike ride for the public, Thompson Community Centre Picnic (June 21, 2019) and the Community Directions Fair (October 5, 2019) as part of the City's renewal of the Community Energy and Emissions Plan.
- *HUB Cycling Bike to Shop Day (June 2, 2019):* HUB Cycling staged this annual event to encourage people to ride to and shop at local businesses. The event aims to show people how easy, fun and convenient it can be to shop by bike. Due to popularity, HUB Cycling again hosted a guided ride from the Marine Gateway Canada Line station to Steveston that attracted 36 participants (Figure 6). The ride ended at a celebration station in Steveston at the Steveston Farmers and Artisans Market. The station provided local and regional cycling information, snacks, free bike tune-ups, and chances to win prizes. Local merchants offered discounts to participants.



Figure 6: Bike to Shop Day Guided Ride

- *Public Bike Share Pilot Program:* The Committee continued to provide feedback on user experience as well as potential station locations in support of the expansion of the station network in the peak cycling season of Spring-Summer 2019.

#### Active Transportation Education in 2019

The City provided funding to HUB Cycling to operate cycling education courses for local residents with input from the Committee. The City's support for cycling education generates multiple benefits including increased safety, encouragement of a life-long healthy activity and



sustainable mode of travel, and potential to reduce traffic congestion around schools as more students choose to ride a bike, all of which align with the City's Official Community Plan goals. The City also leveraged additional funding support from TransLink to expand the number of elementary school students who received on-bike training.

- ***Bike to School Education for Students:*** A total of 347 students from four elementary schools participated in either two or five day "Ride the Road" bike education courses held in co-operation with Richmond School District (Table 1). The courses include in-class lessons, on-bike playground cycling safety training for younger students and neighbourhood road ride education for older youth. HUB's fleet of bikes includes a range of specialized adaptive bikes that are available to children with physical and cognitive differences to help achieve a goal of 100% participation. The courses were well received and enjoyed the enthusiastic participation of all students and teachers (Figure 7).

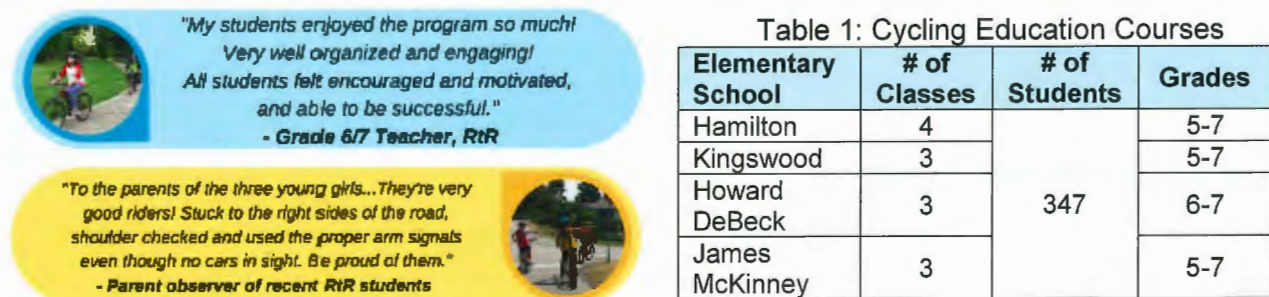


Figure 7: Feedback on Ride the Road Courses

- ***StreetWise Education for Adults:*** Two courses for adults were held in co-operation with Richmond Multicultural Community Services and Immigrant Services Society of BC. A total of 41 attendees took part in a five hour course to enable them to build their cycling skills and gain confidence riding on city streets. Immigrant service providers consistently report to HUB Cycling that the course is one of the most positive and helpful settlement supports that can be provided to newcomers and their families.
- ***Basic Bike Maintenance:*** Two courses, one targeted at seniors and one for the general public, were held in co-operation with Minoru Place Activity Centre and Steveston Community Centre respectively. A total of 31 attendees learned how to make sure their bike is safe and in good working order before riding as well as basic bike maintenance skills.

#### Proposed Active Transportation Network Initiatives in 2020

The Committee will provide input at the earliest conceptual stage on the prioritization, planning, design, and implementation of the following projects that expand and/or improve the network of infrastructure that can be used by active transportation modes.

- ***Update of Cycling Network Plan:*** Development of updated city-wide cycling master plan that supports long-term mobility objectives, reflects best practices in cycling infrastructure design and current community needs, and includes a prioritized implementation strategy. This work is anticipated to be completed by Q2 2020.

- *Planned Active Transportation Network Expansion*: Planned City capital projects include further progress on the Crosstown and Midtown Neighbourhood Links and completion of the Odlin Road bike route. The implementation of several off-street paved multi-use pathways includes Phase 1 of Steveston Highway (Shell Road-Mortfield Gate) and Charles Street (Sexsmith Road-Bridgeport Station). See Attachment 1 for project locations. In addition, the design of cycling facilities will be initiated along the following five corridors:
  - No. 2 Road (Steveston Highway-Williams Road);
  - Steveston Highway (No. 2 Road-Railway Avenue);
  - Shell Road (Highway 99 Overpass-River Road);
  - Gilbert Road (Granville Avenue-Elmbridge Way); and
  - River Road (McCallan Road-No. 2 Road).
- *Active Transportation Network Spot Improvements*: Potential projects include localized improvements to existing on-street cycling facilities such as improved pavement markings (e.g., green painted bike lanes at potential conflict areas), additional signage, new ramps to facilitate access to off-street pathways, and installation of delineators to prevent motorists from encroaching into bike lanes.
- *Planned Park, Road and Development Projects*: The Committee will review additional City and external agency projects that impact existing or would incorporate new active transportation infrastructure as part of the overall project such as the George Massey Tunnel Crossing Improvement and TransLink's bike parkade at the Bridgeport Canada Line Station.

Project costs associated with the expansion and improvement of the active transportation network for 2020 are accommodated in the City's annual capital budget and considered as part of the annual budget review process. Some of these projects are eligible for financial contribution from external agencies (e.g., ICBC and TransLink). If successful, staff will report back on the amount of financial contribution obtained from these external agencies through the annual staff reports on ICBC and TransLink cost-sharing programs respectively.

#### Proposed Education and Promotion of Active Transportation in 2020

The Committee will encourage and promote active transportation as sustainable travel modes that also have significant health benefits via the following activities.

- *Public Bike Share Pilot Program*: The Committee will provide input from a user perspective on the evaluation of the pilot program that will end in March 2020.
- *Potential Public E-Scooter Share Pilot Program*: Amendments to the Motor Vehicle Act approved in October 2019 give the Province the ability to establish a regulatory framework to allow for pilot projects in communities to test new personal motorized mobility technologies such as e-scooters. The Committee will provide input on the City's potential consideration of a pilot e-scooter share program once the provincial regulatory framework is finalized, which is anticipated in Q2 2020.
- *Bicycle Education for Students and Adults*: The Committee will support the contractor, the Richmond School District and a variety of community agencies in the expansion of cycling

education courses to all Grade 6 and 7 elementary school students over a two-year period plus similar courses for adults including seniors and new immigrants.

- 20<sup>th</sup> Annual “Island City, by Bike” Tour: Assist in the planning, promotion and staging of the twentieth annual bike tour of Richmond during Bike Month in June 2020, which is set for Sunday, June 14<sup>th</sup> at the Minoru Centre for Active Living. Both the long and short routes will seek to feature recent improvements to the active transportation network to raise community awareness of the neighbourhood facilities that support walking, cycling and rolling activities.
- Bike to Work and School: Assist in the planning, promotion and staging of this region-wide event during May and October 2020, which includes the provision of celebration stations in Richmond for cyclists.
- Promotion of Active Transportation Network: Continue to participate in City events related to health and transportation to raise the awareness of new active transportation facilities both locally and regionally. Both the Committee and HUB Cycling will be invited to attend the annual Public Works Open House event in May 2020. The Committee will also continue to update, revise and enhance active transportation information on the City’s website and Facebook site.

### Financial Impact

None.

### Conclusion

The Richmond Active Transportation Committee continues to build its diversity of users’ experience to support its broader mandate that includes other rolling transportation modes. The Committee’s proposed 2020 initiatives would continue efforts to further encourage greater and safer use of active transportation modes in Richmond, which in turn will support progress towards meeting the City’s target for the reduction of greenhouse gas emissions as well as the travel mode share targets of the City’s *Official Community Plan*. Active transportation also promotes and/or increases physical activity and overall health and wellness outcomes in line with the City’s *Community Wellness Strategy*.

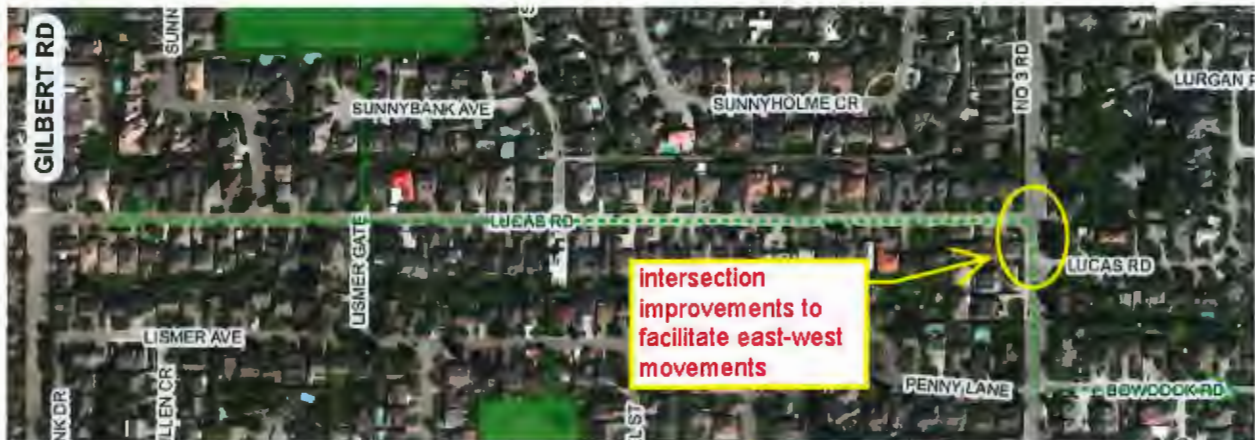


Joan Caravan  
Transportation Planner  
(Staff Liaison to Richmond Active Transportation Committee)  
(604-276-4035)

Att. 1: Location of Planned Active Transportation Network Projects for 2020



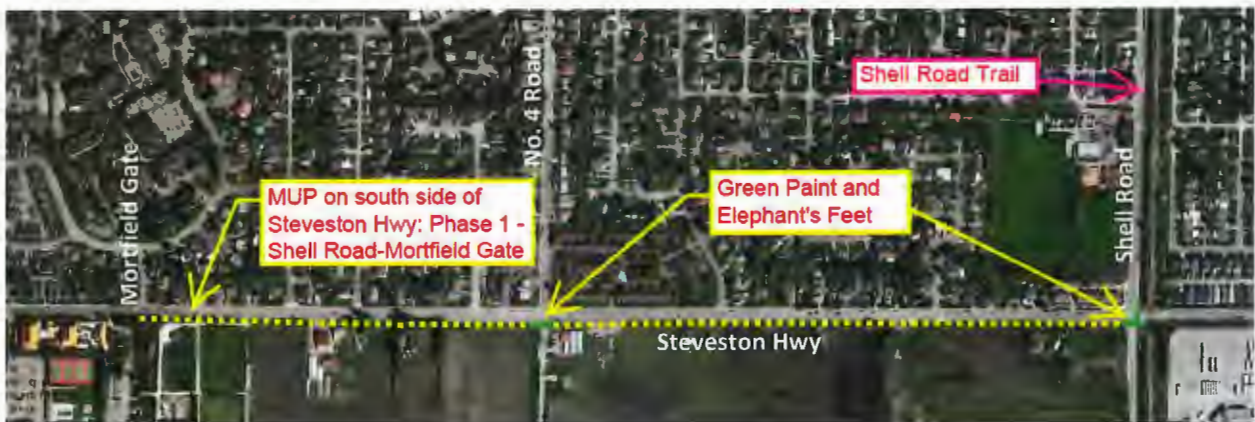
## Location of Planned Active Transportation Network Projects for 2020



Crosstown Neighbourhood Link: Phase 3



Odlin Road Bike Route



Steveston Highway (Mortfield Gate-Shell Road): Phase 1 - Multi-Use Pathway



Location of Planned Active Transportation Network Projects for 2020



Charles Street (Sexsmith Road-Bridgeport Stn): Multi-use Path on North Side



Location of Planned Active Transportation Network Projects for 2020



Blundell Road-Railway Ave      Francis Road-Railway Ave      Williams Road-Railway Ave  
Upgrade of Railway Greenway Intersections: Curb, Gutter, Sidewalk, Relocate Signal Pole, Signage, and Pavement Markings



Westminster Hwy (Smith Cr-Fraserside Gate): Multi-use Path on West Side



# City of Richmond

## Report to Committee

**To:** Public Works and Transportation Committee

**Date:** January 6, 2020

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

**File:** 01-0100-30-TSAD1-  
01/2019-Vol 01

**Re:** Traffic Safety Advisory Committee - Proposed 2020 Initiatives

### Staff Recommendation

1. That the proposed 2020 initiatives for the Traffic Safety Advisory Committee, as outlined in the staff report titled "Traffic Safety Advisory Committee - Proposed 2020 Initiatives" dated January 6, 2020 from the Director, Transportation, be endorsed.
2. That a copy of the staff report titled "Traffic Safety Advisory Committee - Proposed 2020 Initiatives" be forwarded to the Richmond Council-School Board Liaison Committee for information.

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

REPORT CONCURRENCE		
<b>ROUTED TO:</b>	<b>CONCURRENCE</b>	<b>CONCURRENCE OF GENERAL MANAGER</b>
Community Bylaws Fire Rescue RCMP	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	
<b>REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE</b>	<b>INITIALS:</b> 	<b>APPROVED BY CAO</b> 

## Staff Report

### Origin

Council endorsed the establishment of the Traffic Safety Advisory Committee (TSAC) in 1997 to create a co-operative partnership between City staff, community groups and other agencies that seek to enhance traffic and pedestrian safety in Richmond.<sup>1</sup> The Committee provides input and feedback on a wide range of traffic safety issues such as school zone concerns, neighbourhood traffic calming requests and traffic-related education initiatives. This report summarizes the Committee's activities in 2019 and identifies proposed initiatives for 2020.

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.*

*1.1 Enhance safety services and strategies to meet community needs.*

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

#### Road and School Zone Safety Initiatives in 2019

The Committee provided input on and/or participated in the following measures aimed at improving the safety of Richmond roads for all users, particularly in school zones.

- Speed Reader Boards: Installation of two solar-powered speed reader boards in the following school zones (Figure 1):
  1. Shell Road at Thomas Kidd Elementary School
  2. Westminster Highway (North) at Choice School

The devices use radar to measure motorists' speeds and provide feedback to drivers of the speed they are travelling relative to the 30 km/h speed limit during school hours, which encourages driver compliance. The devices also record traffic volumes and speeds that in turn help inform Richmond RCMP enforcement efforts.



Figure 1: Speed Reader Board on Shell Road

<sup>1</sup> TSAC has representation from the following groups: Insurance Corporation of BC (ICBC), Richmond School District, Richmond RCMP, Richmond Fire-Rescue, Richmond District Parents Association, and the City's Transportation and Community Bylaws Departments



- *In-Street Markers in School Zones:* Installation of in-street signs in the following three school zones to advise motorists of the reduced speed limit (Figure 2):

1. Fourth Avenue at Manoah Steves Elementary School
2. Kingfisher Drive at Westwind Elementary School
3. Blanshard Drive at Spul'u'kwuks Elementary School



Figure 2: In-Street Marker on Fourth Avenue

The in-street placement of the signage narrows the roadway, thereby modifying driver behaviour and encouraging drivers to slow down.

- *School Zone Traffic Safety:* The Committee reviewed and responded to a number of traffic safety concerns at various schools across the city. These concerns were typically related to motorist speeding and illegal parking/stopping in school zones, driver behaviour within school sites (e.g., prohibited turns when exiting parking lots) and pedestrian crossing facilities near schools.



Figure 3: Crosswalk on Gormond Road and pathway to Dixon Elementary School

The issues were addressed by a variety of measures, each tailored to the specific site conditions at the school. A new crosswalk on Gormond Road and connecting pathway protected by delineators to serve Dixon Elementary School was installed in Summer 2019 prior to the start of the school year (Figure 3). Community Bylaws and Richmond RCMP regularly provide coordinated enforcement in school zones; during the 2018-2019 school term, Community Bylaws conducted 360 school zone patrols. Other on-going measures include the deployment of Speed Watch volunteers and clearing of vegetation to improve sightlines at crosswalks.

- *Speed Limit Enforcement:* Richmond RCMP continue to provide targeted enforcement of speed limits along several corridors including No. 6 Road (Blundell Road-Steveston Highway), Steveston Highway and No. 5 Road (north of Steveston Highway). Vehicle speeding accounts for approximately one-third of all traffic violation tickets issued in Richmond. Richmond RCMP recently purchased upgraded radar equipment that will enhance enforcement capabilities.
- *Commercial Vehicle Enforcement:* Community Bylaws continued to provide enforcement of commercial vehicles including overweight vehicles travelling on weight restricted roads, failure to display a valid BC Commercial Vehicle Licence Decal, and on-street parking during restricted hours.

### Traffic and Pedestrian Safety Campaigns in 2019

The Committee participated in the following ICBC- and Richmond RCMP-led road and pedestrian safety campaigns in 2019.

- *Pedestrian Safety*: In February and October, 11 Richmond RCMP officers and 38 community police volunteers conducted a total of six pedestrian safety education and enforcement campaigns that involved the distribution of over 5,000 reflectors and proactive engagement with pedestrians. Locations focused on No. 3 Road around Richmond-Brighouse station, Steveston Village, Blundell and Grauer Elementary Schools (both of which are located on arterial roads), and Hamilton Elementary School.
- *“Project Swoop”*: During this annual event held in May, Speed Watch volunteers set up a speed reader board at a high incident crash location that displays the motorist’s speed (Figure 4). Those drivers who continue to speed even after being clocked by the Speed Watch volunteers receive a speeding ticket from an RCMP officer a few blocks down the road. Twelve officers and 27 volunteers were deployed at a total of six locations and checked nearly 7,000 motorists. Locations included No. 5 Road-Kingsbridge Drive, No. 1 Road-Francis Road, No. 2 Road-Woodwards Road, Steveston Highway-Southdale Road, Gilbert Road-Gilhurst Gate, and Russ Baker Way. A total of 54 violation tickets and five written warnings were issued.
- *Distracted Driving*: As part of this campaign that is conducted year-round, RCMP officers and community police volunteers conducted two “Cell Watch” blitz days in March and two in September that included a total of 18 deployments (comprising 25 RCMP officers and 61 volunteers) who collectively checked nearly 38,000 motorists. Targeted locations in March included Alderbridge Way-May Drive, Garden City Road-Westminster Highway, and No. 3 Road-Lansdowne Road. Locations in September featured No. 3 Road in the City Centre, Cambie Road-Sexsmith Road, and Bridgeport Road-Shell Road. A total of 112 violation tickets were issued.
- *Auto Crime Awareness*: As part of this annual campaign, seven RCMP officers and 22 community police volunteers conducted two “Lock Out Auto Crime” blitz days in February and April. Over 1,000 notices were issued. At the same time, over 2,600 licence plates were checked as part of the Stolen Auto Recovery program. If a plate number comes up as a match, the volunteers notify police. Locations focused on parking lots for shopping malls and supermarkets.



Figure 4: Speed Watch on Shell Road at Kidd Elementary School

### Proposed Traffic Safety Activities for 2020

In addition to developing and providing input on corrective measures to address identified traffic safety concerns, the Committee will undertake a number of proactive initiatives to enhance traffic safety in 2020.

- *School Zone Traffic Safety*: Review and provide comment on the development of a standard toolkit of engineering measures to address traffic safety-related issues within school zones and adjacent roadways while also improving consistency in the application of measures across the city. The Committee will also provide on-going review and improvement of traffic and pedestrian safety in school zones through improving vehicle parking and circulation layout at schools, supporting the enforcement of school zone traffic violations, and introducing new walkways and crosswalks as well as upgraded crosswalks to improve pedestrian safety.
- *Discouraging Vehicle Speeding*: Continue to jointly work on initiatives to curb vehicle speeding in the community. To support these efforts and complement Richmond RCMP enforcement activities on two corridors known for speeding, speed reader boards will be installed in Q1 2020 in each direction at the following locations: Steveston Highway near Mortfield Gate, and No. 5 Road near Kingsbridge Drive.
- *Network Screening Study*: Review and provide comment on the recommended short-, medium- and long-term improvement measures to enhance road safety at the top 20 collision prone intersections in Richmond.
- *Pedestrian and Traffic Safety Projects and Campaigns*: Continue to support and participate in on-going multi-agency efforts to increase the level of pedestrian and traffic safety, such as the annual campaigns held by ICBC and Richmond RCMP in various locations.
- *Traffic Calming*: The assessment, implementation and monitoring of road safety and traffic calming measures where warranted in local neighbourhoods, together with consultation with Richmond RCMP and Richmond Fire-Rescue prior to the implementation of any traffic calming measures.

Costs associated with the implementation of road and traffic safety improvements are normally accommodated in the City's annual capital budget and considered as part of the annual budget review process. Some of these projects are eligible for financial contribution from external agencies (e.g., ICBC and TransLink). If successful, staff will report back on the amount of financial contribution obtained from these external agencies through the annual staff reports on ICBC and TransLink cost-sharing programs respectively.

### **Financial Impact**

None.



## Conclusion

The Traffic Safety Advisory Committee is one of the few multi-agency forums in the region dedicated to enhancing pedestrian and traffic safety within its home municipality. Since its inception in 1997, the Committee has provided input on and support of various traffic safety improvements and programs and initiated a range of successful measures encompassing engineering, education and enforcement activities. Staff recommend that the proposed 2020 initiatives of the Committee be endorsed and this staff report forwarded to the Richmond Council-School Board Liaison Committee for information.



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



Joan Caravan  
Transportation Planner  
(604-276-4035)

JC:jc



# City of Richmond

## Report to Committee

**To:** Public Works and Transportation Committee  
**From:** Milton Chan, P.Eng.  
Acting Director, Engineering  
**Date:** December 11, 2019  
**File:** 10-6060-04-01/2019-  
Vol 01  
**Re:** Iona Island Wastewater Treatment Plant Upgrade Project

### Staff Recommendation

That the proposed comments on the Metro Vancouver Iona Island Wastewater Treatment Plant Upgrade project, as outlined in the staff report titled "Iona Island Wastewater Treatment Plant Upgrade Project," dated December 11, 2019 from the Acting Director, Engineering be endorsed for submission to Metro Vancouver.

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

Att. 1

REPORT CONCURRENCE		
<b>ROUTED TO:</b>	<b>CONCURRENCE</b>	<b>CONCURRENCE OF GENERAL MANAGER</b>
Development Applications	<input checked="" type="checkbox"/>	
Transportation	<input checked="" type="checkbox"/>	
Sustainability	<input checked="" type="checkbox"/>	
Parks Services	<input checked="" type="checkbox"/>	
<b>REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE</b>	<b>INITIALS:</b>  CS	<b>APPROVED BY CAO</b> 

## **Staff Report**

### **Origin**

At the November 20, 2019 Public Works and Transportation Committee, Metro Vancouver presented an update on the Iona Island Wastewater Treatment Plant (Iona Plant) Upgrade Project.

The treatment plant serves approximately 750,000 residents in the Vancouver Sewerage Area (VSA), which includes Vancouver, UBC Endowment Lands, and parts of Burnaby and Richmond. For Richmond, the Iona Plant only provides treatment for sewage originating from Mitchell Island and Richmond Island.

The Iona Plant Upgrade project involves construction of a new facility to replace the existing primary treatment plant located on Iona Island. This upgrade is required to comply with the updated Federal regulations of achieving a minimum of secondary level wastewater treatment by 2030. The new facility will provide a higher level of treatment and will be located on the site of the existing wastewater treatment plant on Iona Island, but with an expanded footprint.

The project is currently in the Project Definition phase and the Design and Construction phase is expected to begin in 2021. Project completion is anticipated by the end of 2030. Three preliminary concepts were provided to the Committee (Attachment 1). Metro Vancouver is currently presenting the three concepts to regional stakeholders and refining these into a preferred design. The preferred design may incorporate elements from any or all of the preliminary concepts and is scheduled to be presented to the Metro Vancouver Liquid Waste Committee in March, followed by another round of public engagement. Metro Vancouver is planning a public workshop in Richmond in early 2020; however, the date and location have not been finalized.

In December 2018, Council issued an Environmentally Sensitive Area (ESA) Development Permit (DP 18-820582) to Metro Vancouver to allow construction of temporary mechanical dewatering facilities on site in preparation for future upgrades to the treatment facility. A second associated ESA Development Permit (DP 19-850320) for a temporary concrete pad and gravel parking areas to further facilitate the dewatering activities has been endorsed by the Development Permit Panel and is anticipated to be brought forward to Council in early 2020.

In addition, at the November 20, 2019 Public Works and Transportation Committee, the Committee made the referral that “staff work with Metro Vancouver and YVR Airport Authority to improve the safety of the road out to Iona for cyclists and other users.” A joint meeting between the City, Metro Vancouver and Vancouver Airport Authority staff has been scheduled in January 2020 to initiate work on this matter.

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 #2, A Sustainable and Environmentally Conscious City:

*Environmentally conscious decision-making that demonstrates leadership in implementing innovative, sustainable practices and supports the City's unique biodiversity and island ecology.*

*2.1 Continued leadership in addressing climate change and promoting circular economic principles*

*2.2 Policies and practices support Richmond's sustainability goals.*

This report outlines proposed comments on the general treatment plant upgrade concept for Council consideration.

## **Analysis**

Staff have reviewed the general concept of the project and have proposed comments, as outlined below:

1. That the City supports a tertiary level of treatment for the new wastewater treatment plant;
2. That Metro Vancouver seek opportunities to contribute to the provincial and federal efforts to revitalize Sturgeon Bank through the Steveston and Iona restoration projects that are currently under way;
3. That Metro Vancouver include discussions supporting fish and wildlife habitat enhancement in their stakeholder engagement events and further consider all wildlife receptors specific to the provincially protected Sturgeon Banks Wildlife Management Area;
4. That the effluent standards be reviewed to further reduce any environmental impacts;
5. That potential odour issues related to increased operation and expansion of the Iona Plant be investigated;
6. That public access to Iona Beach Park be maintained and enhanced, and pedestrian trails be implemented to make the beaches to the south and west of the Iona Plant more accessible;


7. That Metro Vancouver implement educational programming and interpretation amenities to promote the ecological values of the marsh and foreshore areas;
8. That Metro Vancouver work with the City and YVR to provide protected cycling facilities along Ferguson Road and Iona Island Causeway to improve safety of the road for cyclists accessing Iona Beach Park;
9. That the impacts of additional loading on the road be evaluated to ensure that ditch bank stability for both sides of the road is not compromised;
10. That Metro Vancouver consider climate change-induced sea level rise and flood risk management in the planning and implementation of this project, and explore options to raise the land elevation and/or implement flood protection infrastructure to ensure operational capability of the treatment plant over its service life;
11. That Metro Vancouver anticipate that future development associated with the Iona Plant project will continue to follow the City's Environmentally Sensitive Area Development Permit Process to secure appropriate compensation;
12. That discussions regarding the facility's waste recovery initiative, which will produce resources of value to the City, such as water for irrigation, be included as a part of the project's stakeholder engagement events; and
13. That Metro Vancouver explore opportunities to maximize energy recovery from the wastewater treatment process.

### **Financial Impact**

None.

### **Conclusion**

The Metro Vancouver Iona Island Wastewater Treatment Plant Upgrade Project will replace the existing primary treatment plant located in Richmond with a new facility that provides a higher level of treatment. The project is currently in the Project Definition phase and the construction is anticipated to be completed by the end of 2030. Staff have reviewed the information presented and have proposed comments regarding the project. The proposed comments aim to enhance the City's environmental quality and public safety, as well as encourage Metro Vancouver to explore waste and energy recovery initiatives. Staff recommend that the proposed comments outlined in this report be endorsed for submission to Metro Vancouver.



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

JH:rd

Attachment 1: Metro Vancouver Iona Plant Project Definition Update Presentation

## Metro Vancouver Iona Plant Project Definition Update Presentation



5.1

### IONA ISLAND WASTEWATER TREATMENT PLANT

#### PROJECT DEFINITION UPDATE

**Fred Nenninger**  
DIRECTOR, POLICY, PLANNING AND ANALYSIS  
LIQUID WASTE SERVICES  
VSA Councils Update  
33390011



## PROJECT GOALS

Secondary  
Wastewater  
Treatment

Community and  
Park Integration

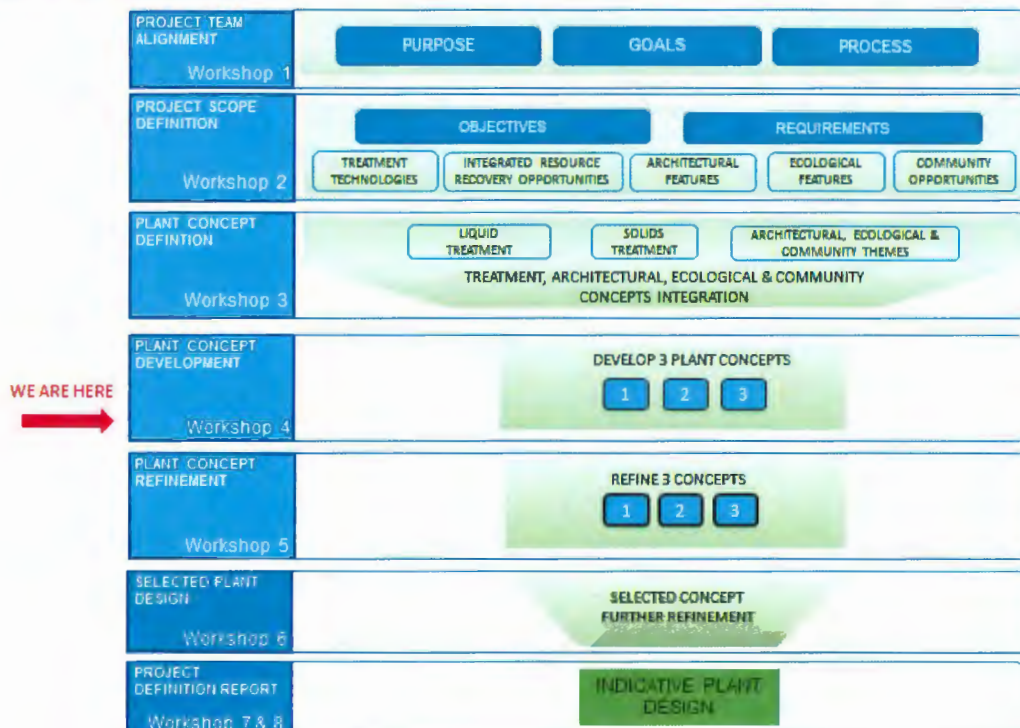
Resource Recovery














## PROJECT DEFINITION PHASE

- Plan for plant to 2100
- Compare liquid treatment options
- Compare solids treatment options
- Develop an indicative design for 2030 build
- Integrate new plant with park
- Business case resource recovery opportunities

## PROJECT DEFINITION PROCESS

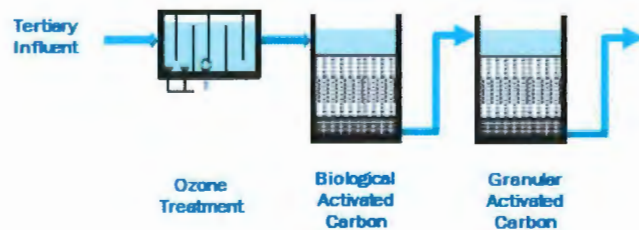


## WASTEWATER TREATMENT MATRIX

	Plant Build Scenarios		
	Secondary Plant	Tertiary Plant (Filtration)	Tertiary Plant (MBR)
Primary Treatment Options	INCLINED PLATE CLARIFIERS 	BIOLOGICALLY ENHANCED CLARIFICATION 	INCLINED PLATE CLARIFIERS + CHEMICALS 
Secondary Treatment Options	ACTIVATED SLUDGE 	ACTIVATED SLUDGE 	MEMBRANE BIOREACTOR 
Tertiary Treatment Options		TERTIARY FILTRATION 	MEMBRANE BIOREACTOR 
Solids Treatment Options	ANAEROBIC DIGESTION  → BIOSOLIDS MANAGEMENT PROGRAM	THERMAL HYDROLYSIS + ANAEROBIC DIGESTION + BIOSOLIDS DRYING 	SLUDGE WASTE-TO-ENERGY 

## ADVANCED TREATMENT PILOT PLANT

- Example process train for micropollutant removal





## IONA ISLAND



## SECONDARY PLANT



## TERTIARY PLANT (FILTRATION)



## TERTIARY PLANT (MBR)





## RESOURCE RECOVERY OPPORTUNITIES



## ENGAGEMENT ACTIVITIES (2019 / 2020)

Timeline	Activity
October 17 November 1	Present preliminary design concepts to Liquid Waste Committee and GVS&DD Board
November 2019 - February 2020	<p>Present preliminary design concepts to:</p> <ul style="list-style-type: none"> <li>• VSA municipal councils / committees</li> <li>• Musqueam Chief and Council</li> <li>• Regional Parks Committee</li> <li>• Public Workshop #2 (Richmond)</li> <li>• Community associations / environmental groups</li> <li>• Musqueam Community Meeting #2</li> </ul>
Ongoing	<p>Monthly meetings with VSA municipal staff</p> <p>Meetings with Musqueam staff</p> <p>Stakeholder meetings</p>

## ENGAGEMENT ACTIVITIES (2020)

Timeline	Activity
March	<b>Special Meeting of the Liquid Waste Committee to workshop design concepts and recommended design</b> <b>Present design concepts and recommended design to GVS&amp;DD Board</b>
April to September	Present recommended design to: <ul style="list-style-type: none"><li>• VSA municipal councils / committees</li><li>• Musqueam Chief and Council (TBC)</li><li>• Regional Parks Committee</li><li>• Public Workshop #3</li><li>• Community associations / environmental groups</li><li>• Musqueam Community Meeting #3 (TBC)</li></ul>
November	<b>Project Definition Report and Indicative Design to Liquid Waste Committee and GVS&amp;DD Board</b>

QUESTIONS?



# City of Richmond

## Report to Committee

**To:** Public Works and Transportation Committee  
**From:** Milton Chan, P.Eng.  
Acting Director, Engineering  
**Date:** December 13, 2019  
**File:** 10-6060-04-01/2019-  
Vol 01  
**Re:** **Regional Flood Protection Management and Governance**

### Staff Recommendation

1. That the following be endorsed as the City's position on regional flood protection management:
  - a. That flood protection continue to be evaluated and managed at the local government level, currently through the Diking Authority model, with additional support from senior levels of government;
  - b. That dedicated funding for flood protection be established at the Provincial and Federal level, to be used by Diking Authorities, which include local governments, for flood management projects; and
  - c. That the Province require Diking Authorities, which include local governments, to develop and maintain flood risk management plans and strategies for their respective areas so that regional objectives are met.
2. That staff communicate the comments and recommendations in the report titled "Regional Flood Protection Management and Governance," dated December 13, 2019, from the Acting Director, Engineering, to regional Diking Authorities, the Fraser Basin Council, and the Province.

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

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

## Staff Report

### Origin

In 2014, the Fraser Basin Council (FBC) started the development of a Lower Mainland Flood Management Strategy (LMFMS) with the purpose of reducing flood risk for communities along British Columbia's Lower Fraser River and south coast. The City of Richmond has been a funding partner supporting the LMFMS along with most local governments and agencies in the region. As part of developing a long-term regional strategy, FBC has proposed options for changing the current province-wide flood protection governance structure. These options were shared at a forum with a regional audience, including municipalities and senior government officials, held on October 8 and 9, 2019.

This report provides an overview of the governance options proposed by FBC and the related staff comments and recommendations.

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.*

*1.3 Ensure Richmond is prepared for emergencies, both human-made and natural disasters.*

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.*

*5.4 Work cooperatively and respectfully with all levels of government and stakeholders while advocating for the best interests of Richmond.*

### Analysis

#### Existing Flood Protection Governance

In 2004, the provincial role with regards to flood protection and management was significantly altered with legislative changes to a number of statutes including the *Land Title Act*, *Local Government Act*, and the *Flood Hazard Statutes Amendment Act*. Currently, under the *Dike Maintenance Act*, responsibility and general supervision for the construction and maintenance of dikes lies with the office of the Provincial Inspector of Dikes.

Local governments, acting as Diking Authorities, are responsible for local flood protection and management including the ongoing operations and maintenance of diking infrastructure. The office of the Inspector of Dikes provides technical recommendations and permitting related to dike construction. Additionally, the City has the authority, through the *Local Government Act*, to designate a floodplain and to set construction requirements for developments.



Funding sources for flood protection projects are currently established by local Diking Authorities with senior government assistance through competitive grant programs. Grant funding is generally awarded to projects that demonstrate priority due to risk, have detailed plans for execution, and are managed by authorities that are evaluated to be capable.

Under the existing governance structure, the City of Richmond has established one of the most advanced flood protection programs in the region. The City's Flood Protection Management Strategy has been in place since 2006 and was most recently updated this year. The City has also developed four phases of the Dike Master Plan, which is currently being implemented.

Richmond's dike network is extensive and, in some cases, located within private property or constructed as part of land development projects. Decisions for managing these dikes and implementing dike upgrades are highly integrated with land use issues and the City has been very successful in addressing and resolving these issues at the local level.

#### Governance Options Proposed by FBC

FBC has proposed four options that range from status quo to complete ownership and management of flood protection infrastructure by a regional entity. Adoption of any of these options by the Provincial government, other than the status quo, would impact flood protection funding, planning and implementation by local governments.

The governance options presented by FBC are listed from the least to most significantly different from the current structure:

1. Status Quo Option

Diking Authorities are responsible for flood risk management within their respective jurisdictions, with financial support from senior government.

2. Advisory Option

A provincially-mandated regional entity would focus on regional flood risk considerations and provide advice to Diking Authorities.

3. Management Option

A provincially-mandated regional entity would control funding, establish priorities, and provide resources for projects with the greatest regional-scale benefits. This entity could also have an advisory role.

4. Ownership Option

A provincially-mandated regional entity would have complete authority and responsibility for flood risk management in the Lower Mainland. This entity could potentially be established as a crown agency and its responsibilities would include implementation of the LMFMS, as well as ownership and operation of flood protection diking systems in the region. The entity could also have more significant

influence on regional planning and policy to implement non-structural solutions for flood risk reduction.

The FBC has completed valuable work and helped raise the profile of the flood protection challenge presented to the region by climate change and sea level rise. While this work highlights a collective regional risk, it does not present any compelling rationale for moving away from the existing governance structure. All of the elements within the FBC governance options are being delivered or can be delivered through existing local governments and Provincial entities.

With the existing governance structure, local governments are in the best position to implement flood protection improvements and make associated land use decisions, with Provincial support and co-ordination. Creation of a new entity or changing the existing structure would add bureaucracy without any discernible benefit.

#### Proposed Alternative Solution

Development of local flood protection management strategies and master plans, as well as the ownership, management and implementation of those strategies and plans, should be the responsibility of Diking Authorities, which include local governments. Staff recommend that the Province require Diking Authorities to develop and maintain flood risk management plans and strategies for their respective areas. Much of Richmond's success with having a well-managed flood protection system is the result of developing and maintaining these plans and strategies in partnership with the province.

A similar model is in place for Liquid Waste Management Plans, where the Provincial Environmental Management Act allows local governments to develop plans through the regional government that are approved by the Minister of Environment.

While climate change affects the entire region, impacts due to climate change need to be addressed with area-specific solutions. The City will continue to share our information, experience and knowledge to assist other communities in developing their flood protection framework.

#### Funding

As described in the "Ageing Utility and Road Infrastructure Planning – 2019 Update" report dated August 16, 2019, staff are pursuing a minimum of 50% in funding assistance from senior government grants and partnerships to deliver the dike upgrades needed to address climate change -induced sea level rise. Currently, funding from senior government is obtained through competitive grant funding programs. Staff recommend that the Provincial and Federal governments be asked to establish dedicated funding streams for flood protection to better enable all local municipalities to plan and implement measures to address sea level rise over the long term.



### **Financial Impact**

None.

Changes to the existing governance structure may impact the availability and allocation of future grants from senior government. Any reduction in grant funding for the City's flood protection works may result in an increase to utility fees or the requirement to borrow funds.

### **Conclusion**

The options to change the current governance structure, presented by the Fraser Basin Council, would create another entity or level of government with a mandate ranging from guidance to complete ownership of flood protection infrastructure that is currently managed by Diking Authorities. Staff recommend that flood risk continues to be evaluated and managed at the local level, with support from senior government.



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JH:cc