



**Public Works and Transportation Committee
Electronic Meeting**

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

**Wednesday, November 23, 2022
4:00 p.m.**

Pg. # ITEM

MINUTES

PWT-6 *Motion to adopt the **minutes** of the meeting of the Public Works and Transportation Committee held on October 19, 2022.*



NEXT COMMITTEE MEETING DATE

December 21, 2022, (tentative date) at 4:00 p.m. in Council Chambers

PLANNING AND DEVELOPMENT DIVISION

- 1. APPLICATION TO 2022/23 BC ACTIVE TRANSPORTATION INFRASTRUCTURE GRANT PROGRAM**
(File Ref. No. 10-6500-01/2022-Vol 01) (REDMS No. 7018776 v. 6)

PWT-10

See Page PWT-10 for full report

Designated Speaker: Sonali Hingorani

STAFF RECOMMENDATION

- (1) That the submission for cost-sharing to the 2022/23 BC Active Transportation Infrastructure Grant Program as described in the staff report titled “Application to 2022/23 BC Active Transportation Infrastructure Grant Program” dated October 31, 2022, from the Director, Transportation be endorsed;*
- (2) That, should the above application be successful, the Chief Administrative Officer and the General Manager, Planning and Development, be authorized on behalf of the City to execute the funding agreement; and*
- (3) That the Consolidated 5 Year Financial Plan (2023-2027) be amended accordingly.*



2. TRANSLINK 2023 COST-SHARE FUNDING APPLICATIONS – TRANSPORTATION CAPITAL PROJECTS

(File Ref. No. 10-6460-01/2022-Vol 01) (REDMS No. 6999951 v. 18)

PWT-15

See Page PWT-15 for full report

Designated Speaker: Sonali Hingorani

STAFF RECOMMENDATION

That as described in the report titled “TransLink 2023 Cost-Share Funding Applications” dated October 24, 2022 from the Director, Transportation:

- (a) the submission of road, pedestrian and bicycle improvement projects as part of the TransLink 2023 cost-share programs be endorsed and the information be considered in the 2023 Capital Budget process; and*
- (b) the Chief Administrative Officer and General Manager, Planning and Development be authorized to execute the successful funding agreements.*



ENGINEERING AND PUBLIC WORKS DIVISION

3. **AWARD OF CONTRACT 8074Q – ON-CALL ELEVATOR CONTRACTOR**

(File Ref. No. 02-0775-50-8074/Vol 01) (REDMS No. 6990176 v.3)

PWT-27

See Page PWT-27 for full report

Designated Speaker: Jeff Lee

STAFF RECOMMENDATION

- (1) *That Contract 8074Q – On-Call Elevator Contractor be awarded to West Coast Elevator Services Ltd., in the amount of \$408,000.00 for a three-year term as described in the report titled “Award of Contract 8074Q – On-Call Elevator Contractor”, dated October 19, 2022, 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 maximum total amount of \$701,000.00 as described in the report titled “Award of Contract 8074Q – On-Call Elevator Contractor”, dated October 19, 2022, 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 West Coast Elevator Services Ltd.*



4. **AWARD OF CONTRACT 8077P – ON-CALL HVAC SERVICE PROVIDER**

(File Ref. No. 10-6000-01/2022-Vol 01) (REDMS No. 6975490 v. 3A)

PWT-32

See Page PWT-32 for full report

Designated Speaker: Jeff Lee

STAFF RECOMMENDATION

- (1) *That Contract 8077P – On-Call HVAC Service Provider be awarded to three contractors, for an aggregate contract value of \$3,750,00.00 for a three-year term, to Entity Mechanical Ltd., Airon Heating and Air Conditioning Ltd. and Kern BSG Management Ltd. (formally Pacific Mechanical Ltd.) as described in the report titled “Award of Contract 8077P – On-Call HVAC Service Provider”, dated October 6, 2022, 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 maximum total amount of \$6,250,000.00, as described in the report titled “Award of Contract 8077P – On-Call HVAC Service Provider”, dated October 6, 2022, 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 contracts and all related documentation with Entity Mechanical Ltd., Airon Heating and Air Conditioning Ltd. and Kern BSG Management Ltd.*



5. **OPTIONS FOR SNOW REMOVAL FROM PRIORITY PEDESTRIAN CORRIDORS — REFERRAL RESPONSE**

(File Ref. No. 10-6060-01/2022-Vol 01) (REDMS No. 6905146 v. 12)

PWT-37

See Page PWT-37 for full report

Designated Speaker: Larry Ford

STAFF RECOMMENDATION

That, as outlined in the staff report titled “Options for Snow Removal from Priority Pedestrian Corridors — Referral Response”, dated October 20, 2022, from the Director, Public Works Operations:

- (a) *The operational response practices relating to bus stops, wheelchair let downs and City facilities be endorsed; and.*
- (b) *Staff conduct pilot initiatives during the 2022/2023 winter season to undertake snow clearing from non-delineated bike routes and five kilometres of multi-use pathways along Railway Avenue and Alderbridge Way within 72 hours after the snowfall has ended for each snow event.*



Public Works & Transportation Committee Agenda – Wednesday, November 23, 2022

Pg. # ITEM

6. **UPDATE ON 2022/2023 SNOW AND ICE RESPONSE
PREPARATIONS**

(File Ref. No. 10-6000-00/Vol 01) (REDMS No. 6994877 v. 2)

PWT-45

See Page PWT-45 for full report

Designated Speaker: Larry Ford

STAFF RECOMMENDATION

That the staff report titled “Update on 2022/2023 Snow and Ice Response Preparations”, dated October 20, 2022, from the Director, Public Works Operations, be received for information.

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7. **MANAGER’S REPORT**

ADJOURNMENT

☐



Public Works and Transportation Committee

Date: Wednesday, October 19, 2022

Place: Council Chambers
Richmond City Hall

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

Also Present: Councillor Carol Day (by teleconference)
Councillor Bill McNulty
Councillor Harold Steves (by teleconference)

Call to Order: The Chair called the meeting to order at 4:00 p.m.

MINUTES

It was moved and seconded

That the minutes of the meeting of the Public Works and Transportation Committee held on September 21, 2022, be adopted as circulated.

CARRIED

PLANNING AND DEVELOPMENT DIVISION

1. **REVIEW OF ACCESSIBLE PARKING AT CITY FACILITIES**

(File Ref. No. 10-6455-03) (REDMS No. 6927254)

Staff reported that additional parking spaces with van accessible pavement markings have been added at five City facilities in the past month.

Public Works & Transportation Committee
Wednesday, October 19, 2022

It was moved and seconded

That the improvements to provide van accessible parking spaces at City facilities, as described in the report titled "Review of Accessible Parking at City Facilities", dated September 20, 2022 from the Director, Transportation, be received for information.

CARRIED

ENGINEERING AND PUBLIC WORKS DIVISION

2. CONTRACT 6511Q – ON-CALL PLUMBING CONTRACTOR

(File Ref. No. 99-PDFM) (REDMS No. 6962838)

In response to queries from the Committee, staff advised (i) all on-call plumbing services are provided by external contractors, (ii) the three plumbing contractors are paying a living wage, (iii) savings were realized by the Project Development Department through the Building Improvement Program, and (iv) the recommendation covers approval of the contract award up to the maximum amount, conditional upon Council's approval of the Facilities and Project Development Departments' operating budgets.

It was moved and seconded

- (1) *That staff be authorized to increase the value of the current contract "6511Q – On-Call Plumbing Contractor" with PJB Mechanical Plumbing and Heating, Entity Mechanical Ltd. and Ashton Service Group, as detailed in the report titled "Contract for 6511Q – On-Call Plumbing Contractor" dated September 16, 2022 from the Director, Facilities and Project Development for the maximum total amount of \$2,182,000 over the maximum available term of five years; and*
- (2) *That the Chief Administrative Officer and General Manager, Engineering and Public Works be authorized to execute the contract amendment and all related documentation with PJB Mechanical Plumbing and Heating, Entity Mechanical Ltd. and Ashton Service Group, to reflect the increase in predicted usage of services over the five-year term.*

CARRIED

3. PROPOSED 2023 PAVING PROGRAM

(File Ref. No. 10-6340-20-P) (REDMS No. 6970409)

In response to queries from the Committee, staff advised (i) there are currently no priority projects on Sea Island and Mitchell Island, and (ii) the area of Hamilton Road, between Westminster Highway and Boundary Road, will be paved when the development projects in the area are completed.

Public Works & Transportation Committee
Wednesday, October 19, 2022

It was moved and seconded

That the staff report titled, "Proposed 2023 Paving Program," dated September 12, 2022, from the Director, Engineering be received for information.

CARRIED

4A. PUBLIC DELEGATION ON NON-AGENDA ITEM

Kevin Krygier, Richmond resident, expressed concern with user safety after dark along the Railway Avenue pathway between Francis and Blundell Roads, due to poor lighting and sight lines.

Written Submissions:

Railway Pathway Users Petition (Schedule 1)

In response to queries from the Committee, Mr. Krygier advised (i) the need to trim trees to eliminate areas of concealment along large sections of the pathway, (ii) motorized scooters are used on the pathway after dark, (iii) many people avoid the pathway after dark, if possible, and (iv) there are many pathways in the City where lights have been installed along the entire path.

Discussion ensued regarding (i) the use of electrified mobility devices poses a danger to pedestrians in the both the light and dark, and (ii) suggestion that lighting be installed along the West Dike, between Steveston Highway and Garry Point.

Following discussion, the following **referral motion** was made:

It was moved and seconded

That the presentation and petition on the Railway Greenway be referred to staff for review of Crime Prevention Through Environmental Design (CPTED) principles and other relevant City of Richmond strategies and report back to the Committee with an implementation plan.

CARRIED

4. MANAGER'S REPORT

(i) Transportation

An existing marked crosswalk has been upgraded with pedestrian activated overhead flashing yellow lights at the 4100 block of Williams Road.

3.

Public Works & Transportation Committee
Wednesday, October 19, 2022

ADJOURNMENT

It was moved and seconded

That the meeting adjourn (4:28 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, October 19, 2022.

Councillor Chak Au
Chair

Carol Lee
Legislative Services Associate



City of Richmond

Report to Committee

To: Public Works and Transportation Committee
From: Lloyd Bie, P.Eng.
Director, Transportation
Date: October 31, 2022
File: 10-6500-01/2022-Vol
01
Re: Application to 2022/23 BC Active Transportation Infrastructure Grant Program

Staff Recommendation

1. That the submission for cost-sharing to the 2022/23 BC Active Transportation Infrastructure Grant Program as described in the staff report titled "Application to 2022/23 BC Active Transportation Infrastructure Grant Program" dated October 31, 2022, from the Director, Transportation be endorsed;
2. That, should the above application be successful, the Chief Administrative Officer and the General Manager, Planning and Development, be authorized on behalf of the City to execute the funding agreement; and
3. That the Consolidated 5 Year Financial Plan (2023-2027) be amended accordingly.

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

Att. 1

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

Staff Report

Origin

The Province of BC's Active Transportation Infrastructure Grant Program (the Program) is a cost-share program between the Province and local governments to support the construction of new facilities to make it easier and safer for people to walk, ride or roll using active transportation modes. This report presents the proposed submission from the City for consideration of cost-share funding under the Program for the 2022/23 funding cycle. Council endorsement is a requirement of the submission.

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 #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.

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

BC Active Transportation Infrastructure Grant Program

The call for applications related to the above-noted program commenced on September 6, 2022 with a deadline of October 21, 2022. Staff prepared the application and submitted to the Province by the deadline.

The City is eligible for 50% cost-share funding up to a maximum of \$500,000 per project and is permitted to submit two applications. The application that staff are proposing for the Province's annual 2022/23 funding cycle meets the Province's eligibility requirements of:

- City portion of funding secured
- Design completed or in progress
- Can be constructed within the required timeline of March 2025

The proposed project for cost-sharing consideration is described below.

Steveston Highway Multi-Use Pathway Phase 2: Mortfield Gate-No. 2 Road

This project comprises the construction of a two-way, off-street, paved 3.0 m wide shared pathway for pedestrians and cyclists on the south side of Steveston Highway between Mortfield Gate and No. 2 Road (Attachment 1). Phase 1 to the east (Shell Road-Mortfield Gate) has been previously approved by Council and is slated to begin construction during Q1 of 2023. Phase 3 to the west (No. 2 Road to Railway Avenue) is currently under consideration as part of the 2023 capital budget process. The City has secured \$3.6 million in grant funding from TransLink for this project, with the City funding the balance of \$2.4 million. This application will seek a further \$500,000 in grant funding for the project.

Proposed Funding

Table 1 below summarizes the estimated project cost, the internal funding sources and the requested external funding sources.

Table 1: Funding for Application to
2022/2023 BC Active Transportation Infrastructure Grant Program

Project & Scope	City Portion & Funding Sources ⁽¹⁾	Secured TransLink Funding	Proposed Province of BC 2022/23 Funding ⁽²⁾	Est. Total Project Cost
Steveston Hwy (Mortfield Gate-No. 2 Road): multi-use path	2020 Roads DCC: \$2,400,000	\$3,600,000	\$500,000	\$6,000,000

(1) The City's actual portion (i.e., balance of remaining estimated cost after external grants) will be determined upon confirmation of the approved amounts to be received from external agencies.

(2) The amount shown represents the maximum funding contribution available in the grant process. The actual approved amount may be lower than requested. The actual invoiced amount follows project completion and is based on incurred costs.

Should the Program application be successful, the City's funding will be reduced from \$2.4 million to \$1.9 million for Phase 2 of the Steveston Highway MUP project. Any surplus funding would be returned to the Roads Development Cost Charge account and be available for use in future capital projects. The City would also enter into a funding agreement with the Province that includes indemnity and release in favour of the Province. Staff recommend that the Chief Administrative Officer and General Manager, Planning and Development be authorized to execute the agreement on behalf of the City.

Financial Impact

Should the Program application be successful, the City's cost for this project will be reduced from \$2.4 million to \$1.9 million.

Conclusion

The pedestrian and bicycle facility improvement project proposed for submission to the 2022/23 BC Active Transportation Infrastructure Grant Program supports numerous goals of the City to improve community mobility, reduce greenhouse gas emissions and increase physical activity by encouraging more walking, cycling and rolling trips rather than driving. The potential receipt of external funding will enable the City to enhance and expedite the provision of sustainable transportation infrastructure and improve healthy and active travel options for the community.



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

SH:sh

Att. 1: Steveston Highway Multi-Use Pathway Phase 2 (Mortfield Gate-No. 2 Road)

Steveston Highway Multi-Use Pathway Phase 2: Mortfield Gate-No. 2 Road



Steveston Highway Multi-Use Pathway Phase 2 (No. 2 Road-Mortfield Gate)



City of Richmond

Report to Committee

To: Public Works and Transportation Committee
From: Lloyd Bie, P. Eng.
Director, Transportation
Date: October 24, 2022
File: 10-6460-01/2022-Vol
01
Re: TransLink 2023 Cost-Share Funding Applications – Transportation Capital
Projects

Staff Recommendation

That as described in the report titled “TransLink 2023 Cost-Share Funding Applications” dated October 24, 2022 from the Director, Transportation:

- (a) the submission of road, pedestrian and bicycle improvement projects as part of the TransLink 2023 cost-share programs be endorsed and the information be considered in the 2023 Capital Budget process; and
- (b) the Chief Administrative Officer and General Manager, Planning and Development be authorized to execute the successful funding agreements.

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

Att. 2

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

Staff Report

Origin

Each year, municipalities are invited to submit road, pedestrian and bicycle related projects for funding consideration from TransLink's cost-share funding programs. This staff report presents the proposed applications from the City to TransLink's 2023 transportation related cost-share programs.

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.

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

TransLink Cost-Share Programs

TransLink provides cost-share funding to municipalities for multi-modal infrastructure projects via the following suite of programs on an allocated and competitive basis:

- Major Road Network and Bike (MRNB) Upgrade Program: allocated funding for capital improvements to roads that comprise the Major Road Network (MRN) and the construction of bicycle facilities both on and off the MRN.
- Bicycle Infrastructure Capital Cost-Sharing (BICCS) Program: allocated and competitive funding for the construction of bicycle facilities.
- Bicycle Infrastructure Capital Cost-Sharing (BICCS) Recovery Program: competitive funding for the construction of bicycle facilities that can be completed within one year.
- Walking Infrastructure to Transit (WITT) Program: allocated and competitive funding for pedestrian facility upgrades within walking distance of frequent stops, stations, and exchange to promote the seamless integration of walking and cycling with transit.
- Bus Speed and Reliability (BSR) Program: competitive funding for feasibility studies and capital projects that support improved bus speed reliability.

The call for applications related to the above-noted programs commenced on September 23, 2022 with a deadline of November 4, 2022. Staff prepared the applications and submitted to TransLink by the deadline. The proposed projects for cost-sharing considerations are described below.

Projects Proposed for 2023 TransLink Cost-Share Programs

The following projects have been submitted to TransLink for consideration in the 2023 infrastructure cost-share funding programs. Collectively, these projects will fully utilize TransLink's funding allocated for City of Richmond which is estimated at \$3.4 million. Staff have also proposed projects through the competitive funding stream, which could potentially see the contribution amount increase.

Major Road Network and Bike (MRNB) Upgrade Program

TransLink's estimated 2023 allocation for Richmond is \$2,059,000. The following projects have been submitted for consideration (Attachment 1):

- No. 5 Rd and Westminster Highway Intersection Upgrade: The City's network screening study of collision-prone intersections presented to Council in June 2019 ranked this intersection as #5 of the top 20. The scope includes modification of the channelized island, increased pedestrian refuge areas and improved cyclist protections. This project was approved by Council as part of the 2022 Capital Plan. It received partial funding in Translink's 2022 cost-share funding program, which also identified it for additional 2023 funding.
- No. 4 Rd and Alderbridge Way Intersection Upgrade: The City's network screening study of collision-prone intersections presented to Council in June 2019 ranked this intersection as #4 of the top 20. The scope includes modification of the channelized island, increased pedestrian refuge areas and improved cycling. This project was approved by Council as part of the 2022 Capital Plan.
- No. 4 Road and Westminster Highway Intersection Upgrade: This intersection is ranked #7 of the City's Top 20 collision prone intersections. Upgrades include increasing left-turn capacity along with pedestrian and cycling facility upgrades. This project is currently under consideration as part of the 2023 Capital Plan.
- No. 2 Road and Blundell Road Intersection Upgrade: This intersection is ranked #10 of the City's Top 20 collision prone intersections. Upgrades include increasing pedestrian refuge areas and modifications to centre median on south approach to increase safety at access points. This project is currently under consideration as part of the 2023 Capital Plan.
- Steveston Highway Multi-Use Pathway (No. 2 Road to Railway Avenue): This project will provide a 750 m expansion of the approved two-way off-street paved 3.0 m wide pathway for pedestrians and cyclists on the south side of Steveston Highway from Mortfield gate to No. 2 Road (2020 project approved by council). This project is proposed under the 2023 Capital Plan for Council consideration and will require a 2 year accrual of TransLink funds in the 2023 and 2024 program years to receive maximum available funding.

Bicycle Infrastructure Capital Cost-Sharing (BICCS) Allocated Program

TransLink's 2023 estimated allocation for Richmond is \$1,000,000. The following projects have been submitted for consideration for the allocated component (Attachment 1):

- Steveston Highway Multi-Use Pathway (MUP): As described above for the MRNB Program. This project will also be entered under the competitive stream for additional BICCS funding described below.
- No. 4 Road and Westminster Highway: As described above for the MRNB Program.

Bicycle Infrastructure Capital Cost-Sharing (BICCS) Competitive/Recovery Programs

- Steveston Highway Multi-Use Pathway (No. 2 Road to Railway Avenue): As described above for the MRNB Program. This project is an excellent candidate for competitive funding due to its location connecting over 10km of previously approved or constructed sections of TransLink's regional Major Bike Network (MBN).
- No. 4 Road and Westminster Highway Intersection Upgrade: As described above for the MRNB Program. This project is a good candidate for the BICCS Recovery competitive program as it has designed for robust cyclist protections and project to complete in less than 2 years.

Walking Infrastructure to Transit (WITT) Program

TransLink's 2023 estimated allocation for Richmond is \$365,000. The City proposes to submit the following projects for consideration for the allocated component (Attachment 1):

- No. 2 Road and Blundell Road Intersection Upgrade: As described above for the MRNB Program.

Bus Speed and Reliability (BSR) Program

For 2023, TransLink's BSR Program has \$8.04 million in total available funding for municipalities on a competitive basis. Staff have submitted the following project for consideration (Attachment 1):

- Great Canadian Way-Bridgeport Road Intersection Southbound Bus-Only Lane: As part of the 2021 BSR Program, the functional design for a southbound bus only lane on Great Canadian Way approaching Bridgeport Road to facilitate buses accessing Highway 99 southbound was completed. This application will progress the project to implementation. Construction will include improvements to accommodate the additional lane for buses, while also improving the surrounding cycling and pedestrian infrastructure. Should the project be approved, it would be solely funded by TransLink.

The project will also support the bus only on-ramp from Bridgeport Road to southbound Highway 99 to be completed by the end of 2022 by the Province as part of the Highway 99 Tunnel Program. The BSR project will be included in the 2023 Capital Plan for Council's consideration.

Requested Funding and Estimated Project Costs

The total requested funding for the above 2023 submissions to TransLink's cost-sharing programs is \$5,256,000, which will support projects with a total estimated cost of \$10,525,000 (Table 1). For all projects, the City can receive between 50% to 100% of the estimated project cost depending on the level of success for the competitive proposals and the components of the project that TransLink deems eligible for cost sharing purposes.

Table 1: Projects Submitted to 2023 TransLink Cost-Share Programs

Project	Funding Program	2023 ⁽¹⁾ Potential TransLink Funding	Estimated Eligible Project Costs
Steveston Hwy MUP Phase 3 – No 2 Rd to Railway Ave	BICCS (Competitive, Allocated) MRNB (Allocated)	\$2,850,000	\$5,700,000
No 4 Rd-Alderbridge Way – Intersection Improvements	MRNB (Allocated)	\$437,500	\$875,000
No 4 Rd-Westminster Hwy – Intersection Improvements	BICCS (Allocated, Competitive, Recovery) MRNB (Allocated)	\$600,000	\$1,200,000
No 5 Rd-Westminster Hwy – Intersection Improvements	MRNB (Allocated)	\$218,500 (\$381,500 received in 2022)	\$1,200,000
No 2 Rd-Blundell Rd – Intersection Improvements	WITT (Allocated) MRNB (Allocated)	\$400,000	\$800,000
Bus Only Left-Turn Lane – Great Canadian Way at Bridgeport Rd	BSR (Competitive)	\$750,000	\$750,000
Total		\$5,256,000 ⁽²⁾	\$10,525,000

⁽¹⁾ The amounts shown represent the anticipated funding contribution to be requested from TransLink based on the City's cost estimate for the project. The actual amount invoiced to TransLink follows project completion and is based on incurred costs.

⁽²⁾ Does not include previously approved TransLink funding

Should the submissions be successful, the City would enter into funding agreements with TransLink. Staff will report back should any applications not be successful or cost-share funding levels for 2023 differ from those identified in this report. The agreements are standard form agreements provided by TransLink and include an indemnity and release in favour of TransLink. Staff recommend that the Chief Administrative Officer and General Manager, Planning and Development be authorized to execute the agreements and the information be considered in the 2023 Capital Budget process.

Projects Receiving Funding from 2022 TransLink Cost-Share Programs

Eight pedestrian, cycling and road improvement projects in Richmond will collectively receive up to \$3.97 million from TransLink as part of its 2022 cost-share programs, which will support projects with a total estimated cost of \$10.25 million (Attachment 2).

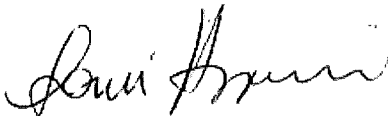
Financial Impact

The City's portion of the costs for two projects: No. 5 Rd and Westminster Highway intersection upgrade and the No. 4 Rd and Alderbridge Way intersection upgrade were approved as part of the 2022 Capital Budget. The remaining proposed project applications will be considered during the 2023 Capital Budget process. The operating budget impacts will also be considered through the annual budget process.

Conclusion

A number of road, pedestrian and bicycle route improvement projects are proposed for submission to TransLink's various cost-sharing programs for 2023 that will support Council's Strategic Plan for 2018-2022 with respect to "Strategic and Well-Planned Growth" as well as the goals of a number of City plans and strategies including the Official Community Plan, the Community Energy Emissions Plan and the Community Wellness Strategy.

In addition to maximizing external funding in implementing local transportation improvements, significant benefits for those using sustainable travel modes in terms of new infrastructure that provides safety and accessibility enhancements will also be achieved should these projects be approved by TransLink and Council.

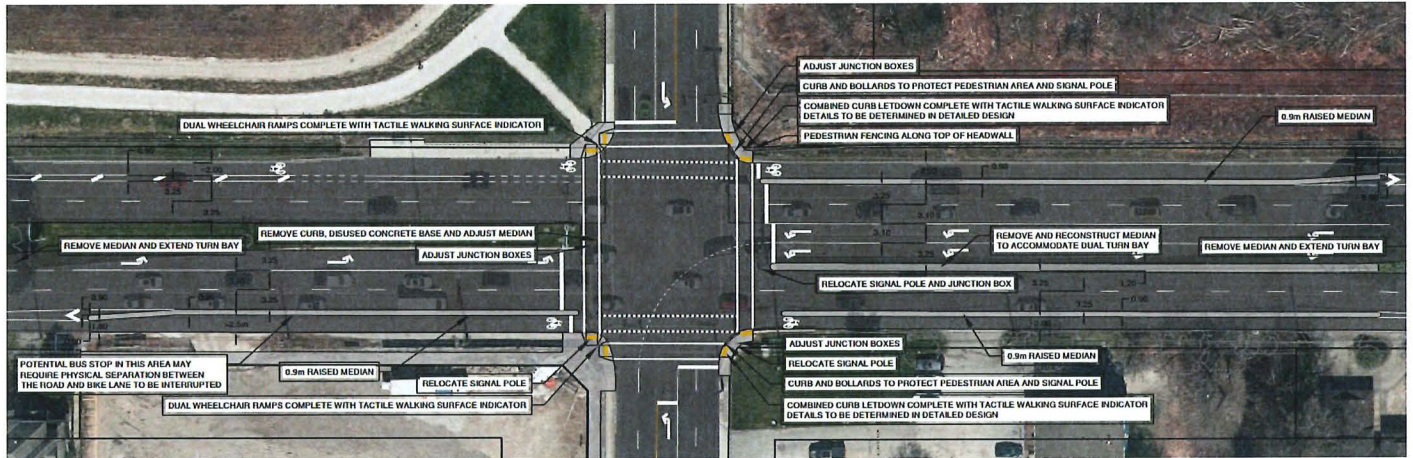


Sonali Hingorani, P.Eng.
Senior Transportation Engineer
(604-276-4049)

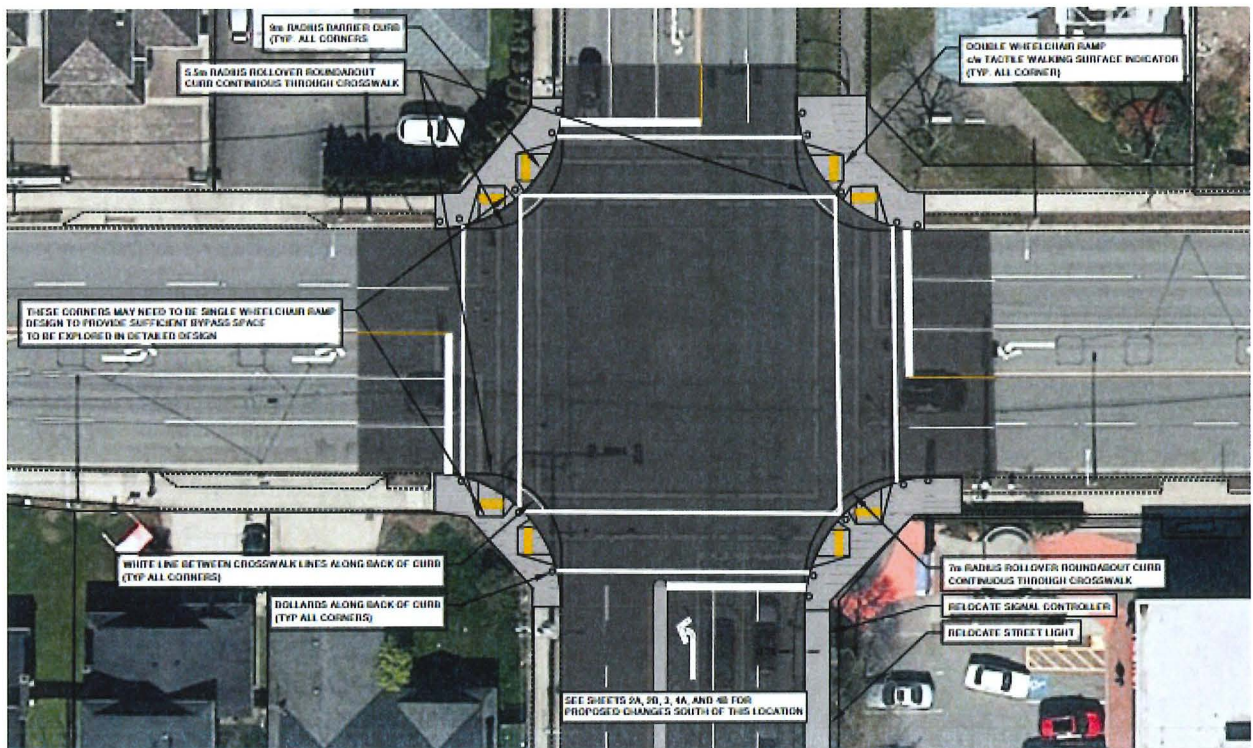
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- Att. 1: 2023 TransLink Cost-Share Funding Submission Images
2: 2022 TransLink Approved Cost-Share Funding

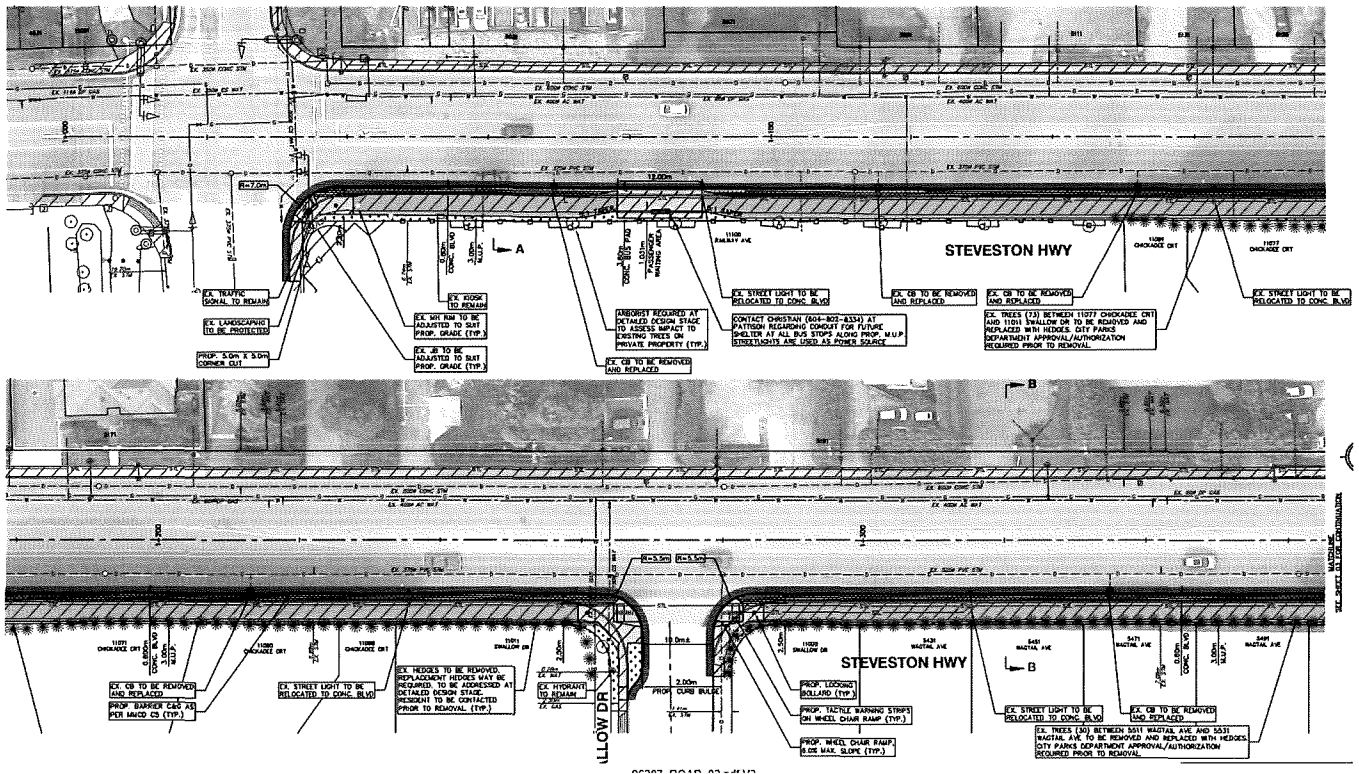
No. 4 Road and Westminster Highway Intersection Upgrade



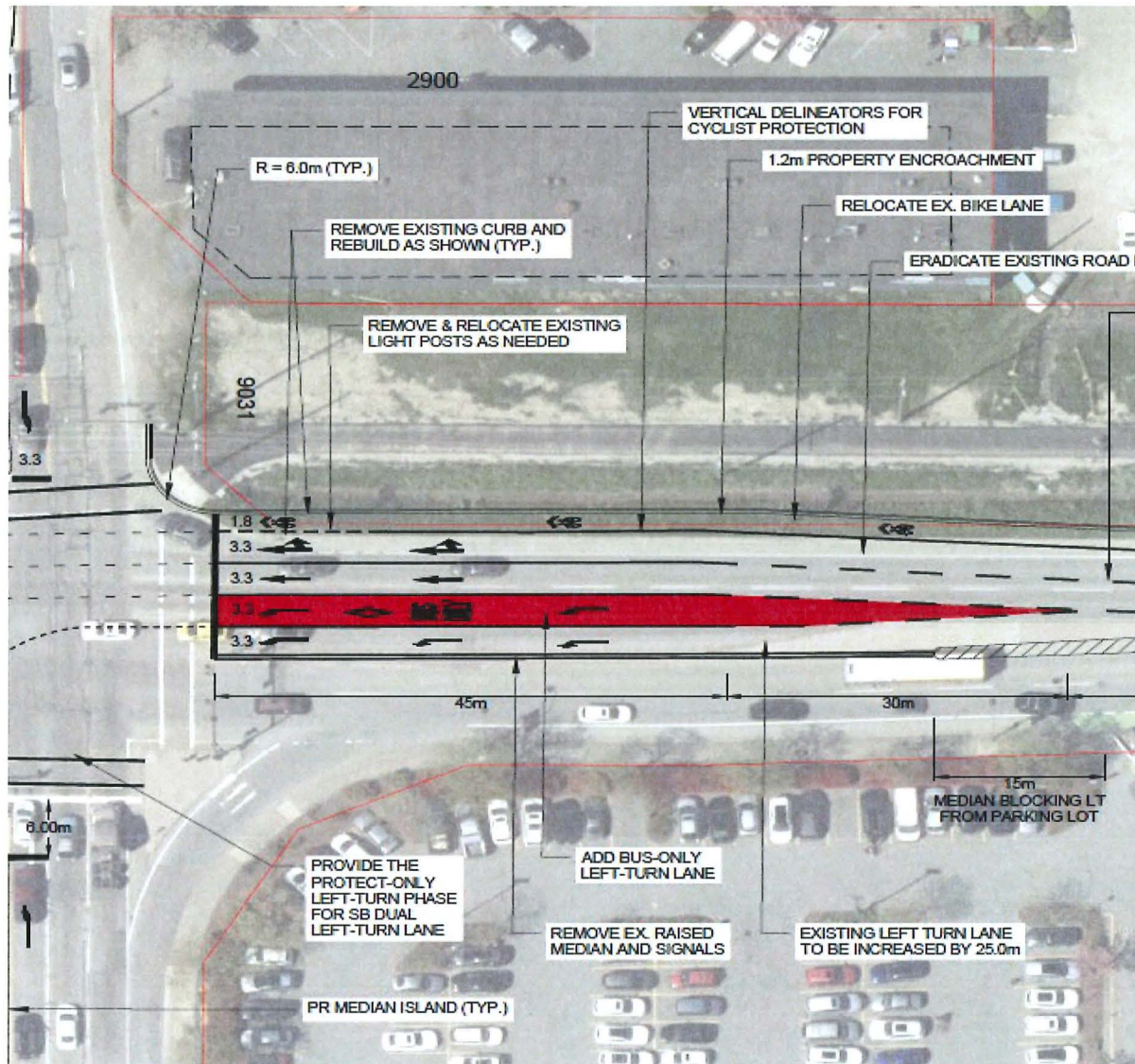
No. 2 Road and Blundell Road Intersection Upgrade



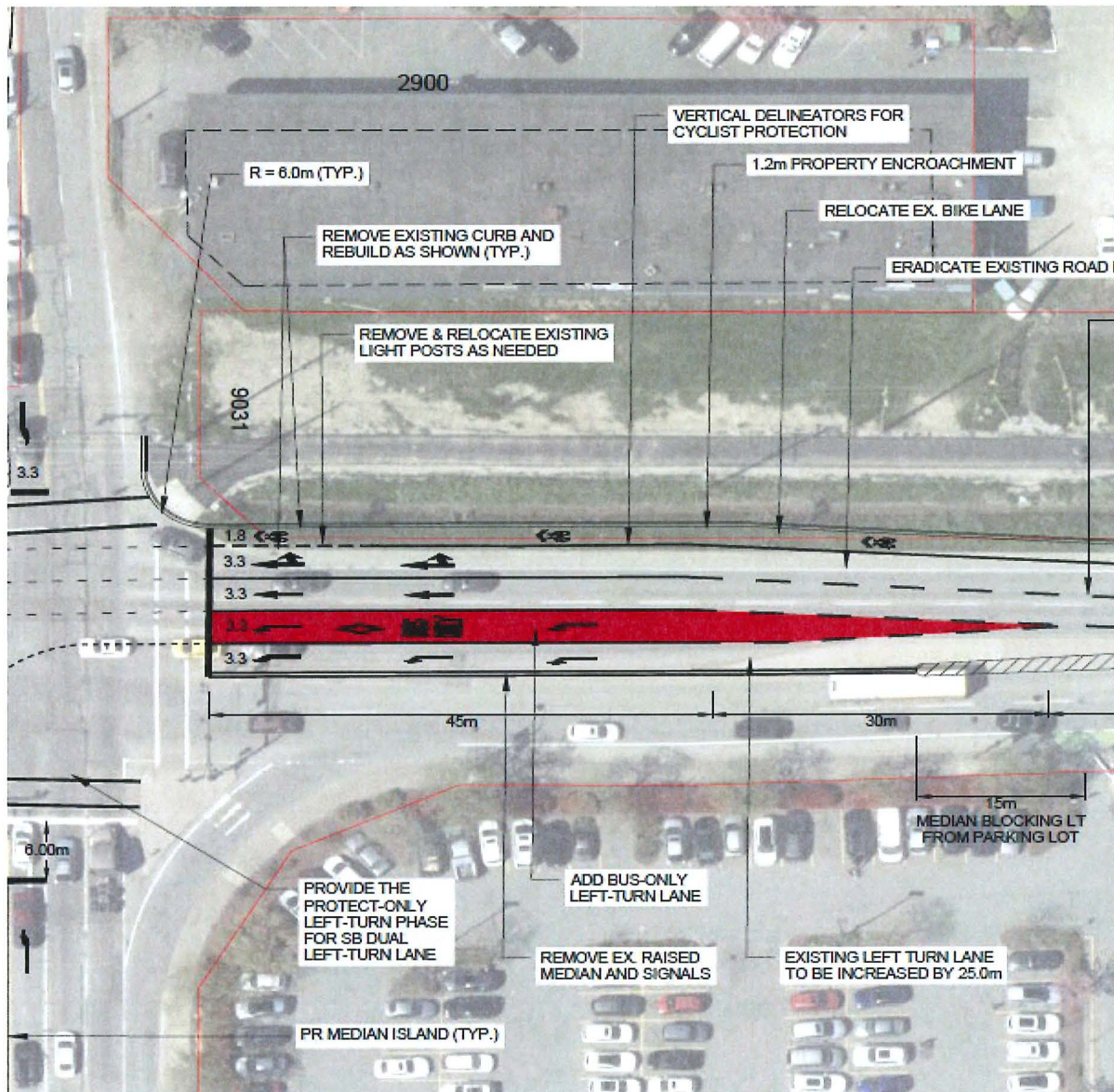
Steveston Highway Multi-Use Pathway (No. 2 Road to Railway Avenue)



Great Canadian Way-Bridgeport Road Intersection Southbound Bus-Only Lane



Great Canadian Way-Bridgeport Road Intersection Southbound Bus-Only Lane



Prior Year (2022) TransLink Approved Cost-Share Funding

Project	Total TransLink Funding for 2022	Additional Funding Approved	Estimated Project Cost
Cambie Rd - No 4 Rd Intersection Upgrade	\$425,000	\$425,000 (2021)	\$1,700,000
Garden City Rd Bike Route Upgrade: Addition of Protection	\$275,000		\$300,000
Garden City Rd MUP	\$500,000		\$1,000,000
No 2 Rd MUP	\$727,500	\$772,500 (2021)	\$2,400,000
River Rd MUP	\$800,000		\$1,600,000
Sexsmith Rd - Brown Rd Protected Bike Route	\$562,500		\$750,000
Westminster Hwy - No 2 Rd Intersection Upgrade	\$300,000	\$350,000 (2021)	\$1,300,000
Westminster Hwy - No 5 Rd Intersection Upgrade	\$381,500		\$1,200,000
Total	\$3,971,500	\$1,547,500	\$10,250,000



City of Richmond

Report to Committee

To: Public Works and Transportation Committee **Date:** October 19, 2022

From: Jim V. Young, P. Eng.
Director, Facilities and Project Development **File:** 02-0775-50-8074/Vol 01

Re: **Award of Contract 8074Q – On-Call Elevator Contractor**

Staff Recommendation

1. That Contract 8074Q – On-Call Elevator Contractor be awarded to West Coast Elevator Services Ltd., in the amount of \$408,000.00 for a three-year term as described in the report titled “Award of Contract 8074Q – On-Call Elevator Contractor,” dated October 19, 2022 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 maximum total amount of \$701,000.00 as described in the report titled “Award of Contract 8074Q – On-Call Elevator Contractor,” dated October 19, 2022 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 West Coast Elevator Services Ltd.

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

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

Staff Report

Origin

The City requires an on-call elevator contractor to complete monthly inspections, maintenance and repairs to all City buildings with elevators. The City maintains 26 elevators across 16 facilities. These services are critical to maximize the life expectancy of elevators and meet regulatory requirements.

The City's current contract for on-call elevator services is with West Coast Elevator Services Ltd., and is expiring, necessitating the need for a new contract to be in place.

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.

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

1.4 Foster a safe, caring and resilient environment.

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.

5.2 Clear accountability through transparent budgeting practices and effective public communication.

Analysis

Scope of Work

The scope of work for this contract includes, but is not limited to:

- repairs;
- monthly inspections and maintenance;
- emergency repairs;
- non-emergency repairs on a call-out basis;
- entrapments; and
- upgrades and modernizations.

Service to elevators is a regulated requirement by Technical Safety BC. The regulations are designed to prevent or reduce the risk of personal injury or damage to property. Compliance is mandatory and enforced by Technical Safety BC. It is a Technical Safety BC requirement to have an elevator maintenance service contract in place in order to operate an elevator.

Based on past experience, it is anticipated that approximately seventy per cent of the required work under this contract will be performed during normal business hours, with the remainder of work occurring outside of regular business hours to accommodate the facility user's operational needs.

Public Tendering

A Request for Quotation (RFQ) 8074Q was posted to BC Bid and the City of Richmond's Bids and Tenders platform on July 7, 2022. The RFQ required bidders to propose fixed rates for the initial three-year term of the contract, and propose rates for years four and five. The RFQ also advised bidders that the City would retain the right to extend the scope of work to other City facilities should there be a need in the future.

Two quotations were received by the closing date from the following bidders:

- West Coast Elevator Services Ltd
- Richmond Elevator Maintenance Ltd

The RFQ requested bidders provide hourly rates for the required services, including fees to perform monthly elevator inspections, and estimated costs to supply parts and materials as needed.

Review Process

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

- each bidder's understanding of the services required;
- capacity to complete the work;
- ability to meet required deadlines;
- previous experience;
- quality of references; and
- proposed pricing.

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

Table 1: Bid Summary Results

Company	Estimated Contract Value (excluding GST) Based on 3-Year Initial Term
West Coast Elevator Services Ltd.	\$326,154.00
Richmond Elevator Maintenance Ltd	\$331,785.00

Based on staff's review of the quotations received, the proposal received from West Coast Elevator Services Ltd. represents best value and favourable pricing for the City. West Coast Elevator Services Ltd., has provided elevator services to the City for the past four years and maintained sufficient capacity and the appropriate level of experience to perform the required services.

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 \$326,154.00, plus contingency as summarized below in Table 2. A contingency has been applied to account for continued cost escalation of materials and parts, unplanned emergency repairs related to the City's ageing infrastructure and to allow for future additional buildings that may fall under the City's responsibility.

Table 2: Total Three-Year Term Cost

Year 2023	\$108,718.00
Year 2024	\$108,718.00
Year 2025	<u>\$108,718.00</u>
Subtotal	\$326,154.00
Contingency	<u>\$81,846.00</u>
Total (3 Years)	<u>\$408,000.00</u>

The City has the option to extend the proposed contract for two additional one-year terms. The estimated cost associated with this extension are summarized below in Table 3.

Table 3: Contract Extension Cost

Year 2026	\$114,408.00
Year 2027	<u>\$119,573.00</u>
Subtotal	\$233,981.00
Contingency	<u>\$59,019.00</u>
Total (2 Years)	<u>\$293,000.00</u>

The total amount for the maximum five-year term is \$701,000.00. The decision to extend the contract by an additional two years would be based on the Company's individual performance over the initial term.

The contract will be executed upon mutual consent of all parties. The Facility Services annual operating budget account will fund the contract, which is subject to yearly approval by Council. The actual expenditures of the contract for On-Call Elevator Contractor will be according to Council approved budgets. Upon contract expiration, excess funding shall be returned to the originating budget source.

Conclusion

This report presents the results of a competitive procurement process for 8074Q – On-Call Elevator Contractor. It is recommended that a contract be awarded to West Coast Elevator Services Ltd. for the initial three-year term for the provision of on-call elevator services. Inspection and upkeep of elevators is a mandated requirement and an essential part of the preventative maintenance program, which will extend the service life of all elevators and buildings.

A handwritten signature in blue ink, appearing to read 'JL', is positioned above the typed name of Jeff Lee.

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

JL:mh



City of Richmond

Report to Committee

To: Public Works and Transportation Committee

Date: October 6, 2022

From: Jim V. Young, P. Eng.
Director, Facilities and Project Development

File: 10-6000-01/2022-Vol 01

Re: Award of Contract 8077P – On-Call HVAC Service Provider

Staff Recommendation

1. That Contract 8077P – On-Call HVAC Service Provider be awarded to three contractors, for an aggregate contract value of \$3,750,00.00 for a three-year term, to Entity Mechanical Ltd., Airon Heating and Air Conditioning Ltd. and Kern BSG Management Ltd. (formally Pacific Mechanical Ltd.) as described in the report titled “Award of Contract 8077P – On-Call HVAC Service Provider” dated October 6, 2022 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 maximum total amount of \$6,250,000.00, as described in the report titled “Award of Contract 8077P – On-Call HVAC Service Provider”, dated October 6, 2022 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 contracts and all related documentation with Entity Mechanical Ltd., Airon Heating and Air Conditioning Ltd. and Kern BSG Management Ltd.

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

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

Staff Report

Origin

The City's Current HVAC contract "5869P – On-call HVAC Contractor" will expire in October 2022. The City requires multiple on-call HVAC contractors to complete inspections, emergency repairs and non-emergency repairs at City owned or leased facilities. The City also requires this service to meet commitments established through agreements such as the Municipal Police Unit Agreement (and others) between the City and the Province whereby the City is responsible for building maintenance, including the HVAC system.

This report summarizes the public tendering process for the Contract and provides a recommendation for the provision of HVAC services for all City buildings.

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 work calls for the repair, service, maintenance and retrofitting of HVAC systems. This includes the supply and installation of parts, scheduled preventative maintenance inspections and unplanned demand repairs.

The scope of work consists of repair, service, maintenance and retrofitting of a variety of commercial and industrial HVAC systems and includes, but not limited to heat pumps, fan coils, chillers, cooling towers, boilers, hot water tanks, pumps, humidifiers and dehumidifiers.

Contractors are expected to put forth recommendations that will improve energy efficiencies, reduce and enhance overall GHG emissions performance of the HVAC plants,.

Public Tendering

Request for Proposals 8077P - On-Call HVAC Service Provider was posted to BC Bid and Bids&Tenders on April 13, 2022 and closed on May 17, 2022. The City advised interested bidders that it was seeking to award contracts to more than one contractor depending on the quality of proposals received.

The RFP requested proponents submit financial proposals for:-

- monthly, quarterly, semi-annual and annual inspections;
- emergency repairs; and
- non-emergency repairs on a call-out basis.

Eight proposals were received by the closing date from the following proponents:-

- Entity Mechanical Ltd.
- Airon Heating and Air Conditioning Ltd.
- Kern BSG Management Ltd. (formally Pacific Mechanical Ltd.)
- Cobing Building Solutions Ltd.
- Ainsworth Inc.
- BC Comfort Air Conditioning Ltd.
- Greenway Mechanical
- Custom Air

Review Process

The proposals received were scored and evaluated by staff against the following pre-determined criteria:

- each bidder's understanding of the work;
- capacity
- financial proposal;
- proposed work plan;
- previous experience; and
- quality of references.

Table 1 is a summary of the financial proposals that were received and the scores awarded by the evaluation team.

Table 1: Evaluation Results

Ranking	Company	RFP Score
1	Entity Mechanical Ltd.	71.93%
2	Airon Heating and Air Conditioning Ltd.	69.80%
3	Kern BSG Management Ltd. (formally Pacific Mechanical Ltd.)	62.80%
4	Cobing Building Solutions Ltd.	60.27%
5	Ainsworth Inc.	53.93%
6	BC Comfort Air Conditioning Ltd.	47.60%
7	Greenway Mechanical	46.73%
8	Custom Air	41.67%

Award Recommendation

Based on staff's evaluation of the proposals received, the proposals received from Entity Mechanical Ltd., Airon Heating and Air Conditioning Ltd., and Kern BSG Management Ltd. received the highest overall scores and offer best value to the City. The analysis is a rigorous comparative process intended to identify the best value bids, but does not reflect any inability of a given proponent to perform in specific areas of work.

Awarding contracts to three contractors will ensure sufficient capacity to service all facilities while providing operational flexibility, backup support and value to the City.

Based on the results of the evaluation process, the City intends to award a majority of the work to Entity Mechanical Ltd. as its primary service provider, with Airon Heating and Air Conditioning Ltd. and Kern BSG Management Ltd. as its secondary and tertiary service providers respectively.

Financial Impact

As summarized in Table 2, the total value of the proposed contract over a three-year term is \$3,750,000.00, including contingency.

Table 2: Total Three-Year Term Cost

	Entity Mechanical Ltd.	Airon Heating and Air Conditioning Ltd.	Kern BSG Management Ltd.	Total
Year 2023	\$500,000.00	\$350,000.00	\$150,000.00	\$1,000,000.00
Year 2024	\$500,000.00	\$350,000.00	\$150,000.00	\$1,000,000.00
Year 2025	\$500,000.00	\$350,000.00	\$150,000.00	\$1,000,000.00
Subtotal	\$1,500,000.00	\$1,050,000.00	\$450,000.00	\$3,000,000.00
Contingency	\$375,000.00	\$262,500.00	\$112,500.00	\$750,000.00
Total (3 years)	\$1,875,000.00	\$1,312,500.00	\$562,500.00	\$3,750,000.00

The City has the option to extend the initial three-year contract for two additional one-year terms. The estimated cost associated with this extension is summarized in Table 3.

Table 3: Contract Extension Cost

	Entity Mechanical Ltd.	Airon Heating and Air Conditioning Ltd.	Kern BSG Management Ltd.	Total
Year 2026	\$500,000.00	\$350,000.00	\$150,000.00	\$1,000,000.00
Year 2027	\$500,000.00	\$350,000.00	\$150,000.00	\$1,000,000.00
Subtotal	\$1,000,000.00	\$700,000.00	\$300,000.00	\$2,000,000.00
Contingency	\$250,000.00	\$175,000.00	\$75,000.00	\$500,000.00
Total (2 years)	\$1,250,000.00	\$875,000.00	\$375,000.00	\$2,500,000.00

The total amount for the maximum five-year term is \$6,250,000.00. The decision to extend each contract by an additional two years will be based on each individual contractor's service and performance over the initial term.

The Facility Services annual operating budget account will fund the contract, which is subject to yearly approval by Council. The actual expenditures of the contract for On-Call HVAC Service Provider will be according to Council approved budgets.

Conclusion

This report presents the results of a competitive procurement under 8-77P- On-Call HVAC Service Provider. HVAC services are essential for the health and safety of all patrons, tenants and staff at all City facilities. Staff recommend that contract 8077P be awarded to Entity Mechanical Ltd., Airon Heating and Air Conditioning Ltd. and Kern BSG Management Ltd. to ensure continuity and sufficient capacity in maintaining and servicing City assets.

A handwritten signature in blue ink, appearing to read 'Jeff Lee', is positioned above the printed name and title.

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

JL:am



City of Richmond

Report to Committee

To: Public Works and Transportation Committee
From: Suzanne Bycraft
Director, Public Works Operations
Date: October 20, 2022
File: 10-6060-01/2022-Vol
01
Re: **Options for Snow Removal from Priority Pedestrian Corridors — Referral Response**

Staff Recommendation

That, as outlined in the staff report titled “Options for Snow Removal from Priority Pedestrian Corridors — Referral Response”, dated October 20, 2022, from the Director, Public Works Operations:

- a) The operational response practices relating to bus stops, wheelchair let downs and City facilities be endorsed; and
- b) Staff conduct pilot initiatives during the 2022/2023 winter season to undertake snow clearing from non-delineated bike routes and five kilometres of multi-use pathways along Railway Avenue and Alderbridge Way within 72 hours after the snowfall has ended for each snow event.

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

Att. 1

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

Staff Report

Origin

The following referral was made at the November 16, 2021 Public Works and Transportation Committee Meeting:

That staff report back to Committee with options to prioritize walk friendly snow removal routes to provide foot traffic access to key services.

This report responds to the referral.

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.

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

Analysis

This Report outlines Richmond's current approach to winter snowfall events and makes a recommendation to build on and improve the approach as it relates to bike lanes. The City's approach to winter snowfall events has been formulated based on the frequency and nature of events over the years. Over the last 10 years, Richmond experienced an average seven days of snowfall annually totalling an annual average of approximately 30 centimetres of snow. The effects of climate change, however, appear to be periodically impacting the intensity and duration of events, as was experienced in late 2021/early 2022. During that event, Richmond received 49.4 centimetres of snow over 14 days, with an average overnight low temperature of -6.9 degrees Celsius.

Current Snow Removal Policy and Operational Practise

Arterial Roads: Council Policy 7013 "Roadways — Ice and Snow Removal" establishes the City's activation and response priorities for treatment of specified roadways to provide safe winter driving conditions during adverse weather. Clearing highly frequented roadways and providing the users a safe passage for their vehicles is paramount to mitigate risks of vehicular accidents due to hazardous conditions resulting from a snow event and to facilitate adequate operation of public transit as well as emergency vehicles providing fire, police and emergency medical services. The policy establishes the following response priorities:

- First priority is given to all major arterial, section line roads and bus routes (217 kilometres),
- Second priority includes all major collector roads (22 kilometres), and

- Third priority includes subdivision interior collector roads (77 kilometres), as resources allow.

Staff recommend that these priorities are suitable and appropriate to the weather conditions in the Lower Mainland and should be maintained as currently outlined in Policy 7013.

Bus Stops and Wheelchair Letdowns: As an operational practise during snow events, a total of 628 bus stops across the City, which are deemed priority locations to ensure adequate operation of public transit, are cleared along with wheelchair letdowns on arterial roads. The sidewalk immediately adjacent to these locations is cleared, but not the sidewalk leading to these areas since City resources are allocated to address the priorities under Policy 7013. Further, clearing these sidewalks of snow is the responsibility of the property owner under Bylaw 5870.

City Facilities: Additionally as an operational practise and as resources permit, the City also clears the entrances, wheelchair ramps, stairs, parking lots and walkways of all civic facilities, such as community centres, fire halls, etc., including the perimeter sidewalks, as part of snow clearing response. The City currently has the capability to outfit existing equipment for snow removal for this purpose as opposed to having an additional, dedicated inventory of purpose-built equipment.

Comparison to Other Cities: Other municipalities in the Lower Mainland including the Cities of Vancouver, Burnaby and Surrey have similar snow response priorities and practices to those of Richmond, with the first priority being high volume major arterial roads, emergency response routes and the major bus routes. The City of Vancouver includes priority bike routes and key pedestrian pathways that are designed to be travelled by multi-purpose vehicles including Robson Square, Coal Harbour Seawall, and False Creek Seawall among others, as a part of its second priority locations that are to be cleared within 72 hours after the snowfall has ended.

Removal of Snow from Sidewalks

As per Section 6.1 of the City's Traffic Bylaw (Bylaw 5870), the owner or occupier of any parcel of real property which is developed for, or used in whole or in part for, commercial, industrial, multi-family dwelling, or single-family dwelling use shall remove all snow and ice from any sidewalk adjacent to such parcel for a distance that coincides with the property line of the real property, not later than 10:00 a.m. of every day, including Sunday. As such, sidewalks fronting private property are currently not included in the scope of the City's snow response policy or operational practise.

Comparison to Other Cities: Similar to Richmond, the Cities of Vancouver, Burnaby and Surrey have bylaw provisions that require the owner or occupant of any parcel of property to clear the sidewalks adjacent to that parcel by 10:00 a.m. each day. Like Richmond, clearing the sidewalks adjacent to any City owned parcels are the responsibility of the municipality. Cities like Toronto and Calgary, which receive much greater amount of snows compared to Richmond, also have similar provisions in their bylaws. Staff note that the City of Burnaby also requires property owners to clear any multi-use pathways fronting their properties.

Snow Angels Program

The City recognizes that not all residents may be able to clear snow from the sidewalk and area around their homes. The “Snow Angels Program” connects volunteers with elderly citizens and residents with illnesses, disabilities, or mobility challenges. Snow Angels are community volunteers who are organized by the City to provide assistance with snow removal from driveways and pathways leading to front doors and sidewalks. The program is activated when three or more centimetres of snow has fallen. Residents can request the services of volunteer Snow Angels in several ways, including through the City’s website, by calling the Snow Angels Coordinator, or calling City’s 24-hour Dispatch Office.

Referral – Prioritized Walk Friendly Snow Removal Routes

In response to the Council referral motion, staff reviewed and identified approximately 40 kilometres of highly frequented pedestrian sidewalks across the City in order to establish an estimate of the required cost, effort and resources to facilitate this additional service level. These locations encompass the majority of the City Centre, Steveston Village area, Ironwood area, as well as the area around Cambie Mall. The identified routes provide access to some of the key services including the Richmond Hospital, Canada Line stations, community centres, libraries, shopping plazas, etc.

Staff assessed the resources required to prioritize snow removal from the identified pedestrian sidewalks, noting specialized equipment would be needed for sidewalks. A minimum of three new Kubota rough terrain vehicles (RTVs) with a full cab and climate control with accessory V-plow attachments and brine tanks would need to be acquired, stored and maintained to clear these sidewalks on three different route areas.

Additional staff would also be required to provide this level of service, inclusive of six staff resources per shift including two per route area. Completion of one pass for each section, including plowing and brining from beginning to end (a ‘pass’), is expected to take approximately eight hours. This time estimate does not take into consideration the potential wait time to accommodate for pedestrians using the sidewalks.

Based on an estimated three snow events per season and assuming fourteen passes per event, the capital cost for this added service level is estimated at \$165,000 plus the annual operating cost of \$337,800 for a total of \$502,800 as summarized in Attachment 1. Costs could range an order of magnitude higher or lower based on the number and duration of snow events per year, as well as whether the work is performed during regular or overtime hours.

Challenges

Snow removal from sidewalks is not currently identified under Council Policy 7013. With the exception of those adjacent to City-owned facilities, clearing of sidewalks is also not part of current operational practise during snow response. Available staff resources, which are at minimum levels during winter months associated with seasonal layoffs, are all fully allocated to established snow response priorities, inclusive of priority roadways and bus stops. Therefore, it would be impractical to rapidly increase staffing levels and conduct the required operational and

safety training required for these short term and sporadic events for pedestrian sidewalk clearing. The practise could also present a higher public safety risk as the water thaws and refreezes, creating the potential for black ice to form pending the next brining treatment or application. Additionally, and as per the City's Traffic Bylaw, the identified pedestrian sidewalks are the responsibility of the adjacent residents and business owners.

The V-plow attachments used on the equipment are effective in clearing a majority of the snow off the sidewalks, and brine is used to melt any of the remainder. The snow clearing process would create a windrow on either side of the walkway which may restrict access to private walkways, driveways and business access and could present a hazard for people accessing their cars parked adjacent to the sidewalks.

City-provided sidewalk snow clearing as an additional level of service would present concerns since it would provide direct benefit to only those property owners fronting the identified sidewalks and not others. This could create an equity issue and result in a cascading effect of service level expectations. The majority of the identified sidewalk locations are fronted by businesses which are responsible for snow removal independent of the City. Given the infrequent nature and typical short duration of these events, coupled with the additional cost and present sidewalk clearing requirements under Bylaw 5870, staff do not recommend expanding service to include snow removal from sidewalks adjacent to high use pedestrian sidewalks fronting residents and businesses. Staff are however considering recommending possible amendments to the Traffic Bylaw to further clarify the responsibilities of adjacent business and residents when it comes to clearing sidewalks.

Bike Lanes and Key Pedestrian Pathways

Bike lanes along major arterials typically become impassable not only during snow events, but also for a period of time after the event given snow ends up being pushed into these lanes as part of clearing the roads for vehicular travel. The accumulated quantities of snow take substantially longer to melt in order for the bike routes to be safely used again by cyclists.

Additionally, the City is continually expanding the construction of multi-use pathways (MUP) as part of encouraging environmentally-friendly travelling alternatives, including walking and cycling. To encourage and promote the safe return to these travelling modes at the earliest opportunity in key locations after snowfall events, staff have identified a suggested approach in the following section.

Proposed Approach

Bike Lanes: To clear bike lanes in a more expedient fashion, staff propose to conduct a pilot initiative in the 2022/2023 winter season to use existing equipment and resources to clear the snow from the bike lanes at suitable times after the conclusion of snowfall events. The process would involve the use of existing F-550 trucks with plow blades used in tandem with the larger snow response trucks. The snow would be moved back onto the roads by the F-550 trucks and subsequently crushed and dissipated by the larger snow response trucks. This process could only be done once conditions have warmed to the point where any safety concerns with moving the

snow back onto the arterial roads would be avoided and the practise is assured not to create hazards for either cyclists or vehicular travellers.

Delineated bike lanes would not be included at this time given they are too narrow for existing equipment to service. Staff are, however, evaluating opportunities to add plow capability as part of a new, narrower street sweeper being acquired for cleaning delineated bike lanes. Given acquisition process requirements and current supply chain challenges, the new mini sweeper is not expected to be in service for six to nine months.

Key Pedestrian Pathways: Pedestrian pathways are a City asset not captured by Bylaw 5870, nor do they generally abut residences or businesses. To facilitate clearing key pathway routes, staff propose to conduct a pilot initiative during the 2022/2023 winter season to clear snow and assess environmental impacts from the Railway Greenway MUP and the Alderbridge Way MUP. These pathways totalling five kilometres in length, see high pedestrian and cyclist traffic throughout the year and clearing them after a snow event will provide a safe passage for pedestrians and cyclists alike along this route.

A target timeline completion objective of 72 hours after the end of the snowfall event will be established for this pilot. A one-tonne (F-550) truck, which is already a part of the City's fleet inventory, outfitted with a plow and a brine unit will be used to provide this service. The results of this pilot can then be evaluated for functionality, accessibility, usage and environmental impacts as part of establishing any cost requirements for select application to additional pathways in the future.

Financial Impact

The pilot initiatives identified in this report are proposed to be funded from within existing funding levels. Any future funding requirements associated with formalizing or expanding this service level would be identified as part of standard budget approval processes.

Conclusion

This report provides an overview of the City's current priorities and operational response practices associated with winter snowfall events. The report addresses the November 16, 2021 referral from the Public Works and Transportation Committee meeting concerning priority pedestrian sidewalks to be considered for snow clearing by City forces. Staff do not recommend the City undertake clearing of pedestrian sidewalks where bylaw requirements currently already impose that responsibility onto residents and businesses, and to avoid service equity issues. There are also added costs and resource impacts to the City to provide this service.

To help cyclists and pedestrians return to these environmentally friendly travel modes in the most expedient fashion after snowfall events have ended, staff are proposing trial initiatives for clearing bike routes and the multi-use pathways along Railway Avenue and Alderbridge Way during the 2022/2023 winter season.

October 20, 2022

- 7 -

A handwritten signature in black ink, appearing to read 'LF', is positioned above the printed name of Larry Ford.

Larry Ford
Manager, Roads and Construction Services
(604-244-1209)

LF:rd

Att. 1: Pedestrian Sidewalks Snow Removal Costs Estimated for Three Snow Events

Pedestrian Sidewalks Snow Removal Costs Estimated for Three Snow Events

Table: High Use Pedestrian Sidewalks - Snow Removal Costs for Three Snow Events

Resource	Required Funding
One Time/Capital Cost:	
Equipment (3 Kubota RTVs and accessories at \$55,000 each)	\$165,000
Capital Total	\$165,000
Annual Operating Cost:	
Equipment Operation and Maintenance (\$12,500 each)	\$37,500
Staffing Resources (\$6,100 per snow event x estimated 14 passes per snow event x 3 events)	\$256,200
Truck and Trailer Rental (\$1,000 per event x 14 passes x 3 events)	\$42,000
Materials and Supplies (x 3 events)	\$2,100
Annual Operating Total	\$337,800
Total Funding Required	\$502,800



City of Richmond

Report to Committee

To: Public Works and Transportation Committee **Date:** October 20, 2022
From: Suzanne Bycraft
Director, Public Works Operations **File:** 10-6000-00/Vol 01
Re: Update on 2022/2023 Snow and Ice Response Preparations

Staff Recommendation

That the staff report titled "Update on 2022/2023 Snow and Ice Response Preparations", dated October 20, 2022, from the Director, Public Works Operations, be received for information.

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

Att. 2

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

Origin

The coastal environment of Richmond makes the City's roads more susceptible to frost conditions and weather can vary greatly and change quickly from Steveston to Hamilton. During the winter season, staff continually monitor conditions of the entire area to ensure a speedy and appropriate response to snow and ice events and provide safe roadways to the travelling public.

This report presents the City's standard approach to operational readiness in accordance with the service level requirements outlined in Council Policy 7013 "Roadways – Ice and Snow Removal". A report in response to a specific referral for snow removal from priority pedestrian corridors arising from the November 16, 2021 Public Works and Transportation Committee meeting is presented separately entitled, "Options for Snow Removal from Priority Pedestrian Corridors – Referral Response".

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

Operational Preparations

Operational preparations for the upcoming winter began in mid-September including equipment overhauls, equipment training for staff and meetings to coordinate response efforts amongst departments during an event.

The City of Richmond's salt supplies have been secured for the upcoming winter season. There are currently 1,050 metric tonnes available under contract and an additional 2,200 metric tonnes on reserve.

The City has 39 pieces of equipment available for snow response (Attachment 1). Four tandem axle vehicles outfitted with brine tanks perform the majority of road pre-treatment which, when done prior to an event, prevents snow or ice bonding to the pavement surface requiring four to five times the brine or salt to break that bond. The use of brine for pre-treatment effectively stretches the same amount of salt used on one lane kilometre with traditional salters to 4.3 lane kilometres of roadway coverage with brine. Brine making and storage capacity increased in 2021 from 69,000 litres to 115,000 litres which aids in our efforts to reduce overall salt usage on the roadways. Six one-tonne dump trucks, which are outfitted with brine and insert salters, focus on the City Centre and entrances to subdivision collector roads, allowing the tandem salters and plows to remain focussed on first and second priority routes.

Road temperature sensors at ten specific locations are monitored 24-hours a day by the City's Public Works Dispatcher and provide early indications of potential road frost or freezing conditions. Each sensor is strategically located throughout the City to provide real time information concerning road conditions across the City. Sensor locations are illustrated in Attachment 2 and public viewing of these road temperature sensors is available through the

City's website at www.richmond.ca/services/rdws/weather/roadtemps.htm. More detailed weather and road information from each sensor location is available to responding staff via the SCADA system to assist in appropriate and timely event response.

During a snow event, staff in a centralized control centre closely monitor the information coming from the weather sensors, monitor and record equipment locations, salt and brine distribution and route start and completion times. GPS monitoring of vehicles allows staff to ensure adequate treatment is placed on the roadway, to respond accurately to enquiries and to better track expenditures that can be used to forecast costs for future events.

Public Outreach

Public involvement within the community is vital during the winter season. The City works jointly with the public on the following two programs:

- *Snow Angels Program*: This program was introduced in 2010 and connects volunteers with elderly citizens and residents with mobility/health challenges during a snowfall event. Assistance involves shovelling snow from sidewalks and/or walkways. Information on enrolling in the Snow Angel Program is available on the City's website and can also be obtained by calling Parks, Public Works Dispatch or City Hall. The program is activated in the event of a significant snowfall (defined as an accumulation of 3+ centimetres of snow) and is dependent on the severity of the storm and volunteer resources. The City Parks Department manages volunteer recruitment, promotion, activation and participation in the program. In the 2021/2022 winter, the Snow Angels program was activated four times and provided snow removal services to 52 homes across Richmond.
- *Good Neighbour Program*: This program encourages everyone to clear the walkways around their property and help others who may face challenges. This neighbour-helping-neighbour campaign simply encourages residents to watch for people in their neighbourhood that could use help removing snow from their sidewalks and driveways and offer them a helping hand.

Communications Strategy

A comprehensive communication strategy has proven to be valuable in delivering accurate, timely and relevant information to the public. The City's various departments, with the guidance of Corporate Communications and Marketing, have established communications protocols and key messaging which reinforce the snow response communications program. Participating departments include Public Works, Parks, Corporate Communications and Marketing, Customer Service, Community Bylaws, Emergency Programs and Richmond Fire-Rescue.

This cross-functional approach ensures each division's important messages are delivered in a coordinated fashion over a variety of the City's communication channels. Pre-determined and circumstantial messaging is delivered before, during and after events, particularly when extreme weather occurs. The communications strategy includes, but is not limited to, using the following channels:

- Social media (the City's Twitter, Facebook and Instagram accounts: posting the City's own messaging as well as sharing information from credible sources, i.e., weather warnings and safety tips)
- Media relations (news releases, media interviews)
- City's website (dedicated web pages, news pages)
- City's intranet for employees

2022/2023 Weather Forecast

Long range forecasts grow more uncertain the farther into the future you look. Staff continuously monitor weather forecasts to ensure operational readiness. Meteorologists can predict the weather three and five days out with an accuracy, however forecasting any further increases the chances of the weather being affected by unpredictable variables. The speed, power, and placement of fronts, low-pressure centres, and even smaller features like individual thunderstorms can have a huge ripple effect that significantly changes the weather downstream in the days to come. With those variable factors in mind, one of the primary climate factors of winter patterns will be repeated for the third year in a row. The International Research Institute for Climate and Society forecasts the climatological phenomenon known as La Niña will be present. Three consecutive La Nina winters have occurred only twice since 1950. It will play a vital role in the overall weather pattern this coming winter. For British Columbia, a La Niña cycle typically correlates to above average amounts of precipitation in the winter, slightly below average to near average temperatures and an amplified polar jet stream. While La Nina is the primary driver of the winter pattern, a shift in the jet stream influenced by the polar vortex could enhance or counter its impacts.

2021/2022 Winter Season Summary

During the 2021/2022 winter season, Richmond experienced 37 frost/ice events and three snow events with a total accumulation of 54.1 centimetres of snow at YVR. This was one of the worst winters since 1999 with 49.6 of the 54.1 centimetres of snow falling between December 24, 2021 and January 6, 2022. Total accumulations exceeded every winter since 2000 other than 2016-2017 and 2008-2009. We also experienced an overnight temperature of -15.3 C which was the coldest recorded temperature in 54 years. The City pre-treated and/or de-iced 48,961 lane kilometres and salted/plowed 6,420 lane kilometres of first, second and third priority roads.

Financial Impact

None. Should there be a severe winter and additional funds required beyond established budgeted amounts, staff will report back to Council accordingly.

Conclusion

Preparations for the 2022/2023 snow and ice season by all required departments are well underway and will be completed in time for the upcoming winter.

October 20, 2022

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A handwritten signature in black ink, appearing to read 'L. Ford', is positioned above the printed name.

Larry Ford
Manager, Roads and Construction Services

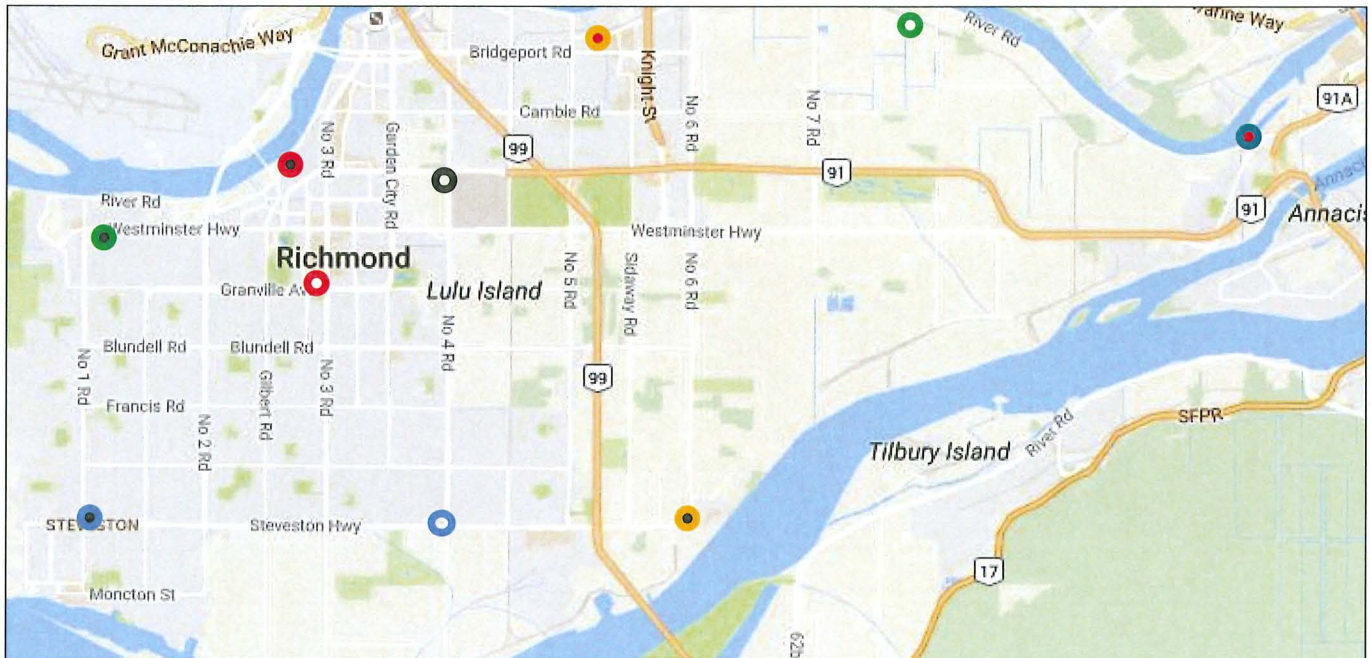
Att. 1: City of Richmond – Snow Response Equipment

Att. 2: City of Richmond – Road Temperature Sensor Locations

City of Richmond – Snow Response Equipment

Number of Units	Description
5	Tandem axle dump trucks with front plow attachments and salt spreader inserts
2	Tandem axle dump trucks with front plow attachments and 12,000 L brine tank inserts
1	Tandem axle dump truck with front and belly plows and option of 12,000 L brine tank or salt insert
1	Flusher truck (14,000 L brine capacity) with belly plow
3	Single-axle dump trucks with salt flinks and belly plows
4	One-tonne dump truck with plow and 1,875 L brine tank insert
1	One-tonne dump truck with plow and salt insert
1	One-tonne flat deck truck with 1,875 L brine tank insert
2	One-tonne dump truck with plow and 1,875 L brine tank insert (designated for city facility parking lots)
4	Backhoes
1	Road Grader with belly plow and front bucket
2	Front-end wheel loader
2	Bobcat skid steers with plow
4	John Deere Ride-on mowers with plows
2	Kabota ATVs with plow
4	Mobile snow blowers
1,050 tonnes	Salt

City of Richmond – Road Temperature Sensor Locations



Road Temperature Sensors:

- No. 4 Rd Armoury (Road temperature, rain gauge and road friction)
- Queens North (Road temperature, ambient air temperature, humidity, wind speed/direction and rain gauge)
- No.1 Rd & Steveston (Road temperature, ambient air temperature, humidity, wind speed/direction and rain gauge)
- No.1 Rd & Westminister (Road temperature, ambient air temperature, humidity, wind speed/direction, rain gauge and road friction)
- No. 8 Rd & River Rd ((Road temperature, road friction)
- No. 6 Road & Steveston (Road temperature, ambient air temperature, humidity, rain gauge)
- Oval (Road temperature)
- No. 3 Rd and Granville (Road temperature, road friction)
- Bridgeport and Olafson (Road temperature)
- Steveston Hwy and No 4 Rd (Road temperature)