



City of Richmond

Report to Committee




To: Finance Committee
From: Ivy Wong, CPA, CMA
Acting Director, Finance
Re: 2022 Proposed Capital Budget

Date: November 8, 2021
File: 99 - FILE
LATER/2021-Vol 01

Staff Recommendation

1. That the 2022 Proposed Capital Budget as presented in Appendix 3 totaling \$107,762,191 be approved; and
2. That the 2022 Proposed Capital Budget as approved be included in the Consolidated 5 Year Financial Plan (2022-2026).

Ivy Wong, CPA, CMA
Acting Director, Finance
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REPORT CONCURRENCE	
CONCURRENCE OF GENERAL MANAGER  Acting GM, F&CS	
REVIEWED BY SMT	INITIALS: 
APPROVED BY CAO 	

Executive Summary

The City of Richmond is responsible for providing and maintaining capital asset and infrastructure to serve its residents and businesses. The City is focused on making investment decisions that align with Council's strategic plans, policies and priorities.

During the 2022 capital budget process, 101 capital projects totaling \$112.32 million were submitted by various departments. The Review Team (RT), which is comprised of directors from each division, reviewed and ranked each project submission based on established criteria and Council's strategic plans, policies, priorities and endorsements. The CAO and the Senior Management Team (SMT) further reviewed the project recommendations. The final recommendation is consolidated to form the 2022 Proposed Capital Budget presented to the Finance Committee for review, approval and inclusion in the 5 Year Financial Plan (2022-2026).

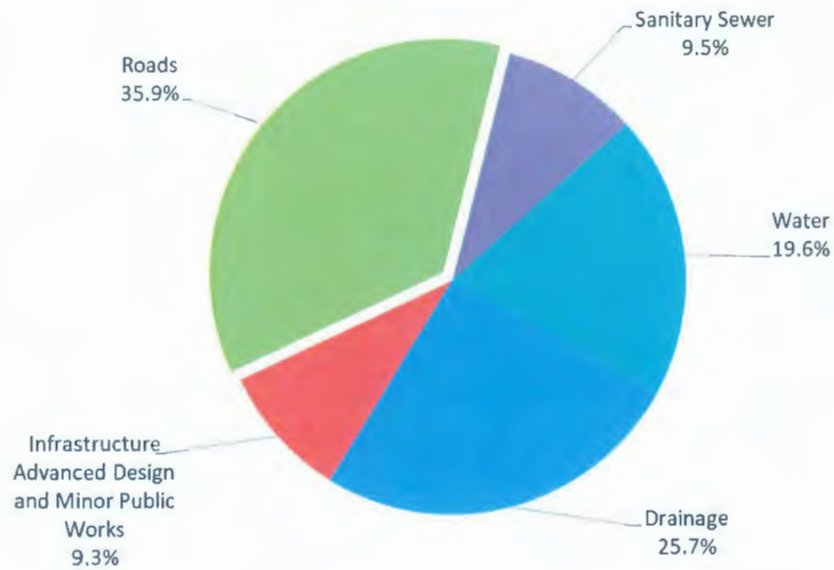
On July 26, 2021, Council approved the \$90 million (plus \$5 million contingency) replacement project for Steveston Community Centre and Branch Library. The City mainly utilized the Capital Reserve (Revolving Fund) and the Capital Building and Infrastructure (CBI) Reserve to fund the project. The CBI Reserve was created to fund the capital costs with respect to City facilities. Council's Long Term Financial Management Strategy Policy 3707 states that annually an additional 1% tax increase will be for infrastructure replacement needs. The funding of the Steveston project has resulted in a significant drawdown of the CBI Reserve, which will result in future building infrastructure projects not being funded. A staff referral to review alternative funding options for Steveston Community Centre and Branch Library is presented separately for Council's consideration.

The 2022 Proposed Capital Budget includes 93 projects totaling \$107.8M in making significant investment in infrastructure renewal and maintaining community viability. The projects are summarized in Table 1 with the complete list of recommended projects included in Appendix 3.

Table 1 – 2022 Proposed Capital Budget

Program Description	Amount \$ (in millions)	% Budget	Operating Budget Impact
Infrastructure program includes dikes, roads, drainage and sanitary pump stations, drainage, water, and sanitary mains.	\$47.6M	44.2%	(\$8,680)
Building program includes major building renovation projects as well as minor facility upgrades.	\$21.4M	19.8%	\$101,500
Parks program includes development of parks and parkland acquisition.	\$7.5M	7.0%	-
Public Art program supports the initiatives expressed in the Richmond Art Strategy 2019 - 2024, which was approved by Council in July 2019.	\$0.2M	0.2%	-
Land program includes funding for land acquisition. This amount is to ensure funding is in place to act on opportunities as they arise with Council approval required for each specific acquisition.	\$5.0M	4.6%	-
Affordable Housing program is to address housing affordability concerns in partnership with senior governments, the private sector, and non-profit organizations.	\$0.4M	0.4%	-
Equipment program includes information technology hardware and software, fleet and equipment, as well as fire vehicle and equipment replacement.	\$10.7M	9.9%	\$205,380
Child Care program provides funding for grants and other childcare initiatives funded by statutory reserves and do not necessarily result in City-owned capital infrastructure.	\$0.3M	0.3%	-
Contingent External Contributions is an estimate of external grants that may be received throughout the year for various projects.	\$10.0M	9.3%	-
Internal Transfers and Debt Repayment program relates to the use of capital funding for repayment of capital funds borrowed from other internal sources of funding.	\$4.7M	4.3%	-
2022 Recommended Projects Total	\$107.8M	100.0%	\$298,200

Out of the \$47.6M budget for infrastructure, \$12.2M will be for the Drainage and Dike program. The breakdown of the infrastructure program is provided in Figure 1.

Figure 1: Infrastructure Capital Plan

The 2022 Proposed Capital Budget totaling \$107,762,191 aims to maximize external grant opportunities and external funding to enable the City to maintain and advance the asset inventory that continues to provide necessities and benefits to the community. The preliminary Operating Budget Impact (OBI) associated with these projects is \$298,200 and the amount was recommended to be included in the 5 Year Financial Plan (2022-2026).

Staff Report

Origin

Subsection 165(1) of the *Community Charter* requires the City to adopt a 5 Year Financial Plan (5YFP) Bylaw. The Capital Budget is one of the main components of the 5 Year Financial Plan Bylaw. The budget includes all expenditures that improve, replace and extend the useful life of the City's asset inventory. The Capital Budget also includes items that are non-capital in nature (i.e. childcare, affordable housing) and are required to be included in the 5YFP since the programs are funded from the reserves. The Capital Budget allows the City to sustain existing civic infrastructure, while also adding new assets to service the growing community.

The Long Term Financial Management Strategy (LTFMS - Policy 3707) is a set of principles created by Council to guide the financial planning process. A key component of the LTFMS is to *"ensure that long term capital funding for infrastructure (e.g. parks, trails, facilities, roads, etc.) is in place in order to maintain community liveability and generate economic development."*

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.

- 5.1. Maintain a strong and robust financial position.*
- 5.2. Clear accountability through transparent budgeting practices and effective public communication.*
- 5.3. Decision-making focuses on sustainability and considers circular economic principles.*
- 5.4. Work cooperatively and respectfully with all levels of government and stakeholders while advocating for the best interests of Richmond.*

Analysis

This report presents the 2022 Proposed Capital Budget which seeks Council's approval with respect to the 2022 recommended projects and the associated Operating Budget Impacts (OBI). This report also presents the projects currently planned for years 2023-2026 as required; however, the projects will be subject to final approval in each subsequent year.

Capital requirements are driven by many factors including growth, existing asset condition, Council's priorities, industry standard and legislated, regulatory and safety requirements. The City continues to see sustained population and economic growth. Significant additional growth is projected through 2041 under the Official Community Plan. This new growth requires expansion of City infrastructure in order to maintain the same level of civic services expected by new and current residents and businesses.

Certain existing infrastructures are nearing the end of their lifespan and/or capacity as the City continues to mature. As at December 31, 2020, the City's asset inventory had a net book value of \$2.5 billion. The Net Book Value of Capital Assets (original cost less depreciation) as at December 31, 2020 is 67.3% (54.1% excluding land) which indicates that the City's assets are aging and future replacement or increased repairs and maintenance will be required. Continuous investment in the replacement and maintenance of ageing infrastructure is required to maintain service levels and protect civic assets. Capital investment allows the City to take advantage of new technology and building practices to improve operational efficiency and accrue environmental benefits from the use of more sustainable building practices and equipment.

2022 Capital Process

Each division sets priorities specific to their area of expertise. A project submission is completed detailing the scope of work, review of alternatives, financial impact, and proposed funding sources. In addition, the submission is self-ranked using established criteria summarized in Appendix 1. The process behind the 2022-2026 Capital Budget is illustrated in Appendix 2.

The Review Team (RT), which is comprised of directors from each division, reviewed and ranked each project submission. To ensure consistent application of the established ranking criteria, the RT determines the final ranking for each submission giving consideration to Council's strategic plans, policies, priorities and endorsements.

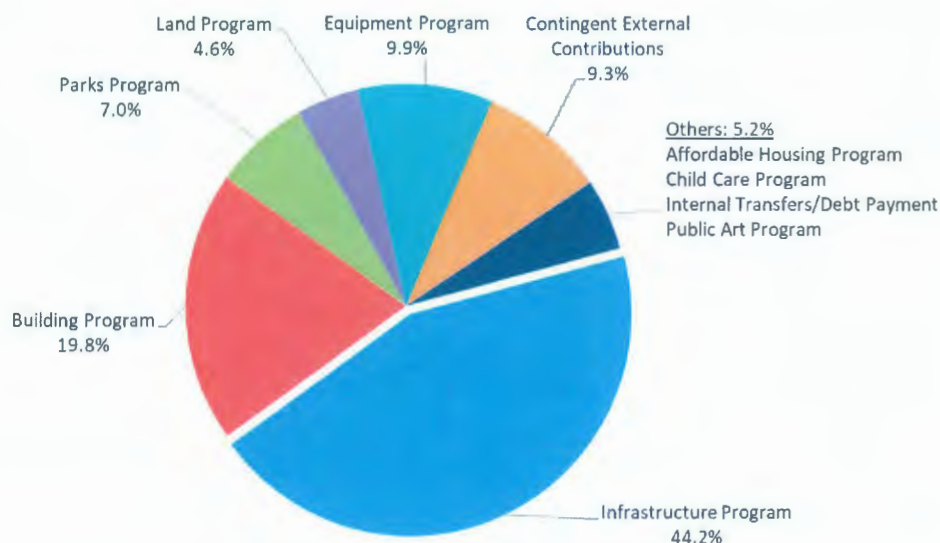
The ranked projects are consolidated and recommended based on funding availability. The CAO and the Senior Management Team (SMT) then reviewed project funding recommendations. The final recommendation is consolidated to form the 2022 Proposed Capital Budget presented to the Finance Committee for review, approval and inclusion in the 5YFP (2022-2026).

2022 Proposed Capital Budget

The 2022 Proposed Capital Budget is \$107.8M with \$298,200 OBI. The priorities are:

- Investing in infrastructure utilizing external funding and grants
- Accelerating the water metering system project
- Enhancing the safety of the community
- Major building repairs that are due to safety or regulatory requirements
- New initiatives that utilizes new technology to improve operational efficiency

The following is an overview of the recommended capital projects by program.

Figure 2 – 2022 Recommended Projects by Program

The following is a highlight of the recommended capital projects from the 2022 capital program:

Table 2 – 2022 Capital Projects Highlights

Program	Capital Projects
Building	Richmond Curling Club - Priority 1 Repairs for HVAC replacement, envelope and site work
Drainage	Disaster Mitigation and Adaptation Fund Infrastructure Upgrades to improve the flood protection for the City
Fire Vehicle	Fire Vehicle purchases including upgrade to High Flow Industrial Pumper
Roads	River Road Multi-Use Pathway (MUP), McCallan Road to No. 2 Road to connect existing Railway Greenway MUP and Middle Arm Greenway MUP
Roads	Top 20 Collision Prone Intersections- Implementation of Medium/Long-term Improvements
Roads	Transit-Related Roadway Improvement Program to increase accessibility at bus stops
Vehicle	Automatic Vehicle Location/Global Positioning System Expansion to refine system specifications, resources and vehicle units requirements

44.2 per cent of the budget will be invested in the City's infrastructure program for roads, drainage and sanitary pump stations, storm drainage, water, and sanitary sewer. The next largest program, which represents 19.8 per cent of the budget, is the building program for building construction, improvements, renewals and repairs. 16.5 per cent of the 2022 Proposed Capital Budget is funded by external funding including Development Cost Charges (DCCs) to substantiate growth and grant.

In 2022, Parks will start the preliminary planning and site study for the multi-year phase project for the Lulu Island Park. Another notable project will be the London Heritage Farm Master Plan Phase 1. Other park programs include annual park development, identity signage and renewal of ageing infrastructure and playground.

The 2022 Proposed Capital Budget includes other items which are non-capital in nature (i.e. Affordable Housing and Child Care programs). The City is committed to child care through establishing and maintaining comprehensive child care systems to help children and families thrive and to address the need for quality, affordable, and accessible child care spaces in Richmond. The City supports the creation of child care spaces by accepting voluntary contributions from developers in the form of built child care facilities or cash-in-lieu contributions to the Child Care Statutory Reserve. It is anticipated that the City will be receiving the Hummingbird Child Care facility in 2022. The Hummingbird Child Care facility is developer contributed; therefore, it is not included in the 2022 Proposed Capital Budget.

The 2022 Proposed Capital Budget also includes contingent external contributions which are estimates of external grants that may be received throughout the year for various projects and internal transfer and debt repayments.

The 2022 recommended capital projects are listed in Appendix 3. At the discretion of the Finance Committee, any capital project recommended by staff for funding may be removed from the recommended list. In addition, any capital project that is not recommended by staff may be reconsidered for recommendation, subject to funding availability.

Capital projects that are not recommended are summarized in Appendix 4 with project details in Appendix 9.

2022 Proposed Capital Budget Funding Sources

The 2022 Proposed Capital Budget uses a variety of funding sources, which include:

- Development Cost Charges (DCCs) – These fees are collected through development and are used for growth related projects.
- External Sources – These include grants awarded from Provincial and Federal Governments, developer contributions (other than DCCs) and other non-City related sources.
- Reserves – These are funds established by bylaws for specific purposes and are funded primarily by budgeted contributions from the Operating and Utility Budgets and developer contributions plus interest earned on fund balances.
- Appropriated Surplus – These are funds set aside for future commitments.

Table 3 – 2022 Capital Program by Funding Source

Program	Reserves	DCCs	Appropriated Surplus	External Sources
Infrastructure	60%	17%	15%	8%
Building	86%	0%	14%	0%
Parks	25%	75%	0%	0%
Public Art	100%	0%	0%	0%
Land	100%	0%	0%	0%
Affordable Housing	100%	0%	0%	0%
Equipment	61%	0%	39%	0%
Child Care	100%	0%	0%	0%
Contingent External Contributions	0%	0%	0%	100%
Internal Transfers/Debt Payment	14%	86%	0%	0%

For information purposes, Appendix 5 summarizes the projects recommended for funding from the Capital Reserve (Revolving Fund). The Revolving Fund is intended to be used to fund a variety of general projects, which do not have dedicated sources of funding, and funds the assist factor for Roads DCC and Parks DCC projects.

Appendix 6 summarizes all the 2022 recommended projects funded by DCCs. Under the *Local Government Act*, the City is required to fund the municipal assist factor portion for growth related projects; therefore, a project cannot be fully funded by DCCs.

Appendix 7 summarizes all the 2022 recommended projects funded by the Capital Building and Infrastructure (CBI) Reserve. The CBI Reserve is comprised of two funds: the Capital Building and Infrastructure General Fund and the Special Sports Fund. CBI General Fund is used for building infrastructure projects and is funded from taxes and gaming revenue. The Special Sports Fund is for construction costs relating to artificial turf fields and is funded from sports field fees and other recoveries.

Funding details of each individual submission are included in Appendix 8.

Funding for Capital Projects - Building

Council's Long Term Financial Management Strategy (LTFMS) policy includes an annual increase of 1% transfer to reserves to fund community infrastructure replacement needs. The 1% transfer to reserves (\$2.3M) was cancelled in 2020 and was reduced by 0.50% in 2019 (\$1.1M). Gaming revenue of \$1.96M was also budgeted to fund the Capital Building and Infrastructure reserve. The River Rock Casino was closed due to the pandemic and has just recently re-opened in July 2021; therefore, the budgeted gaming revenue is expected to be limited in 2021.

In the past 5 years, per Council's direction, the City has completed major facility projects including but not limited to Fire Hall No. 1, Fire Hall No. 3 and Minoru Centre for Active Living. Other major facility replacements that are in progress include the Animal Shelter and Bowling Green Community Activity Centre.

In 2021, Council approved the replacement of the Steveston Community Centre and Branch Library and acquired the Richmond Curling Club facility. Other major building acquisitions in recent years include the Richmond Ice Centre. These are all major facilities that increase the building inventory, which increases the requirement for future repairs and maintenance expenditures.

The following projects are Council endorsed projects as part of the Major Facilities Phase 2 Replacement Plan that will be part of the 5 Year Capital Plan (2022-2026):

- Hugh Boyd Field House
- Britannia Shipyards National Historic Site
- Phoenix Net Loft

There are seven building capital projects in 2022 totalling \$18.1M recommended by the RT and endorsed by the CAO and SMT to be funded from CBI. However, the required funding exceeds current CBI funding availability. There is currently an outstanding staff referral to evaluate the funding option for Steveston Community Centre and Branch Library and a separate report will be brought forward to Council for consideration.

From 2023 to 2026, there are 23 projects totalling \$66.7M building projects that are recommended but with insufficient funding, including \$14.0M for the Works Yard. The Works Yard facility supports services, equipment, fuel, and storage of materials that are fundamental for the operations and maintenance of the City's infrastructure. It is the only remaining City facility critical to operations, emergency response and disaster recovery that has not been replaced nor upgraded to modern standards.

2022 Operating Budget Impact ("OBI")

Capital projects will include new and replacement assets. Upon completion of these capital projects, assets are added to the City's inventory. Costs associated with maintaining these new assets include:

- A new building: staffing, janitorial services, gas and hydro utility costs;
- A new park: annual maintenance and labour costs.

Replacement projects may also have costs associated due to the requirement to maintain existing level of service. Ongoing costs are the Operating Budget Impact associated with the new asset and replacement projects.

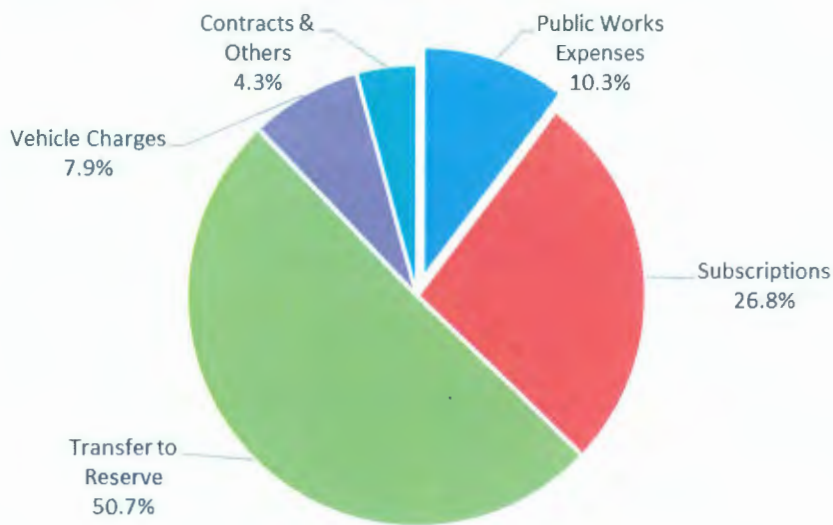
OBI submissions for this year's capital budget do not include associated costs for staffing. The CAO and SMT has requested that any staffing requirement due to new assets be submitted separately as an additional level request in order to allow for further review and assessment.

OBIs resulting from approved capital projects and developer contributed asset will be added to the Operating Budget in the same year that the capital projects are approved by Council. Funding will be distributed to the respective divisions based on the completion of the capital projects in order to reduce any surplus.

The total OBI relating to the 2022 recommended projects, excluding staffing requirement, is \$298,200. Of this amount, \$17,418 is related to utility projects and is included within the infrastructure program. If the respective projects are approved, this amount will be incorporated into the 2023 utility rate budget since the 2022 Utility Budgets were approved on November 8, 2021. Table 4 and Figure 3 provides the breakdown of the Operating Budget Impact by expense type.

Table 4: OBI by project

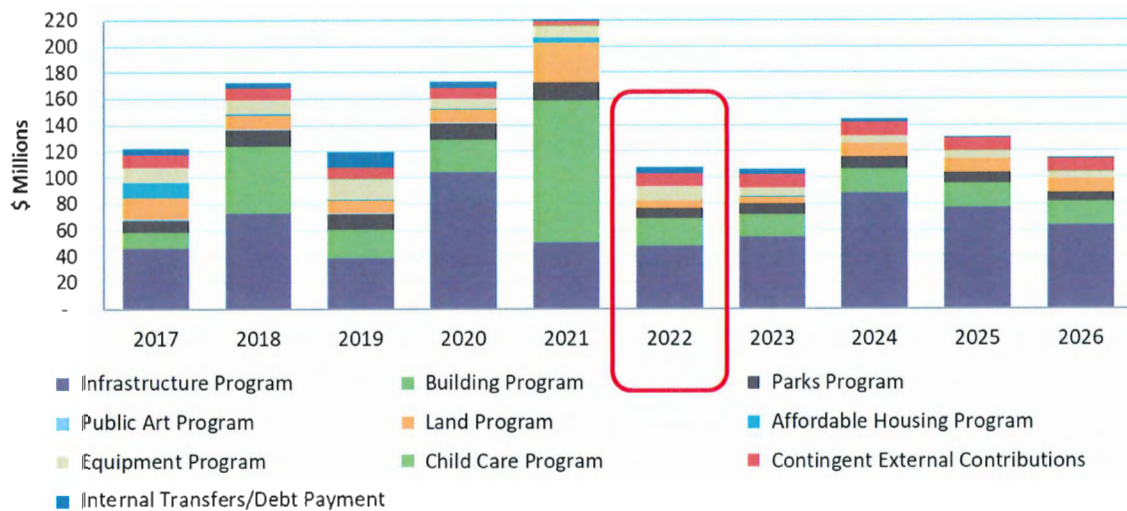
Project Name	Estimated cost	OBI
Automatic Vehicle Location (AVL)/Global Positioning System (GPS) Expansion	\$ 139,653	\$ 100,040
Richmond Curling Club - Priority 1 Repairs	\$ 650,000	\$ 89,200
Fire Vehicle Replacement Reserve Purchases	\$ 2,021,081	\$ 60,000
Street Sweeping Machine for Bike Lanes	\$ 150,000	\$ 32,264
Vehicle and Equipment Reserve Purchases (Public Works and Corporate Fleet)	\$ 4,368,600	\$ 23,000
Water Metering Program	\$ 3,000,000	\$ 17,418
Network Refresh for City Facilities (Phase 3 of 3)	\$ 391,100	\$ 13,326
Steveston Museum - Post Office, Program Space and Exhibit Upgrades	\$ 354,000	\$ 12,300
Snow and Ice Response Tracking	\$ 100,000	\$ 9,600
Traffic Signal Program	\$ 500,000	\$ 2,352
Special Crosswalk Program	\$ 100,000	\$ 1,550
Street Light LED Upgrade Program	\$ 490,000	\$ (30,000)
Energy Management Projects	\$ 600,000	\$ (32,850)
Total	\$ 12,864,434	\$ 298,200

Figure 3: Breakdown of the Operating Budget Impact

As construction of 2022 capital projects progress and more information is obtained, the Operating Budget Impacts will be reviewed, reassessed and adjusted for future years.

Proposed 2022 to 2026 Capital Budget and Historical (2017 - 2021) Capital Budget

Figure 4 shows the Proposed 2022 to 2026 Capital Budget and historical capital budgets for comparative purposes. From 2017 to 2021, the average capital budget is \$162.5M. The 2022 Proposed Capital Budget is \$107.8M, which is lower than the average from the last five years. This is mainly due to the timing of the Major Facilities Phase 2 projects and the limited CBI funding availability.

Figure 4: Capital Budget by Program (2017 – 2026)

A summary of the 5 Year Capital Plan (2022-2026) is presented in Appendix 10 and the funding sources are presented in Appendix 11. A detailed listing of the 2022-2026 capital projects by program is presented in Appendix 12 with highlights of the 2023-2026 projects summarized in Appendix 14.

Financial Impact

The 2022 Proposed Capital Budget with a total value of \$107,762,191 will enable the City to maintain and advance the asset inventory that continues to provide necessities and benefits to the community.

The preliminary Operating Budget Impact associated with these projects is \$298,200 and will be included in the 2022 Proposed Operating Budget. The OBI will be reviewed, reassessed and adjusted as projects near completion.

Conclusion

The recommended Capital budget for 2022 is \$107,762,191. The RT worked closely with the CAO and SMT to represent the interests of all stakeholders to ensure that the 2022 capital program addresses Council's strategic plans, policies and priorities and meets the needs of the community while effectively utilizing available funding.

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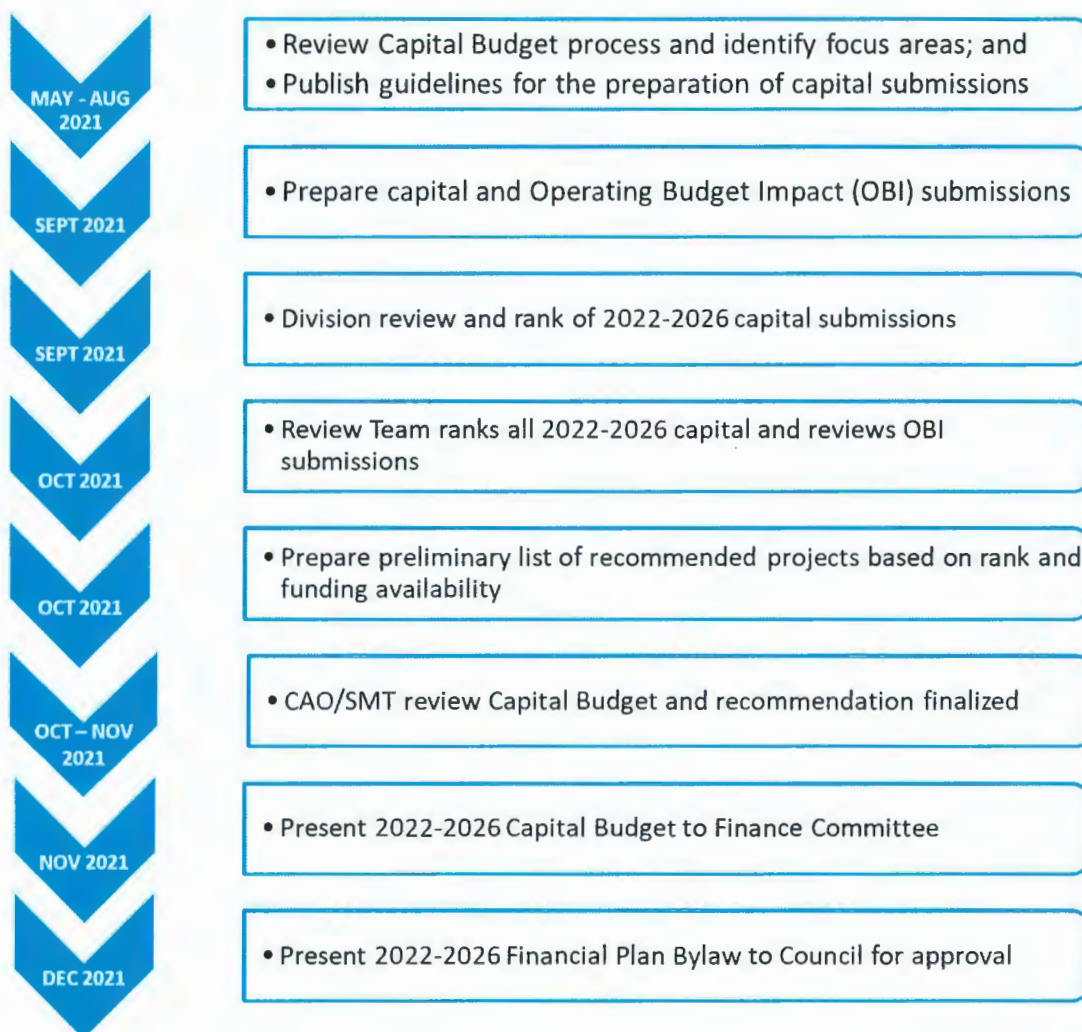
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- Appendix 1: Capital Ranking Criteria
- Appendix 2: 2022 Capital Budget Process
- Appendix 3: Summary of Capital Projects – Recommended for funding in 2022
- Appendix 4: Summary of Capital Projects – Not Recommended for funding in 2022
- Appendix 5: 2022 Summary of Projects Funded by Revolving Fund
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- Appendix 8: Details of Projects Recommended for funding in 2022 by Program
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- Appendix 10: 5 Year Capital Plan Summary (2022 - 2026)
- Appendix 11: 5 Year Capital Plan by Funding Sources (2022 - 2026)
- Appendix 12: 5 Year Capital Plan by Program (2022 - 2026)
- Appendix 13: 5 Year Capital Plan by Program (2022 - 2026) – Recommended but insufficient funding
- Appendix 14: 2023 - 2026 Capital Plan Highlights
- Appendix 15: Glossary of Terms

Capital Ranking Criteria

Alignment with City Vision	<ul style="list-style-type: none">• Does this support Council's Strategic Plan or an approved City strategy?
Risk Management	<ul style="list-style-type: none">• Is there a legal or regulatory compliance requirement and/or a risk that needs to be managed?
Social	<ul style="list-style-type: none">• Will this enhance social equity, vibrancy and/or health and wellness of the community?
Environmental	<ul style="list-style-type: none">• Will this improve environmental conditions or reduce waste?
Economic	<ul style="list-style-type: none">• Is there Operating Budget Impact (OBI) and external funding for the project?
Innovation & Efficiency	<ul style="list-style-type: none">• Is this innovative and does it increase productivity? (applicable only to IT related submissions)

2022 Capital Budget Process



Project Name	External Funding	City Funding	Total Investment	Total OBI	Ref
INFRASTRUCTURE PROGRAM					
Roads					
Active Transportation Improvement Program	-	750,000	750,000	-	26
Annual Asphalt Re-Paving Program - MRN	-	1,620,995	1,620,995	-	27
Annual Asphalt Re-Paving Program - Non-MRN	-	3,411,043	3,411,043	-	28
Arterial Roadway Improvement Program	-	1,000,000	1,000,000	-	29
Bridge Rehabilitation Program	-	500,000	500,000	-	30
Citywide Connector Walkways Rehabilitation Program	-	250,000	250,000	-	31
Citywide Sidewalk and Street Light Replacement Program	-	250,000	250,000	-	32
LED Street Name Sign Program	-	300,000	300,000	-	33
Neighbourhood Walkway Program	-	600,000	600,000	-	34
River Road Multi-Use Pathway, McCallan Road to No 2 Road	800,000	800,000	1,600,000	-	35
Sexsmith Road/Brown Road Bike Route	375,000	375,000	750,000	-	36
Special Crosswalk Program	-	100,000	100,000	1,550	37
Street Light LED Upgrade Program	-	490,000	490,000	(30,000)	38
Top 20 Collision Prone Intersections- Implementation of Medium/Long-term Improvements	1,125,000	1,875,000	3,000,000	-	39
Traffic Calming Program	-	600,000	600,000	-	40
Traffic Signal Power Backup System (UPS)	-	200,000	200,000	-	41
Traffic Signal Program	-	500,000	500,000	2,352	42
Traffic Video and Communication Program	-	400,000	400,000	-	43
Transit-Related Amenity Improvement Program	-	25,000	25,000	-	44
Transit-Related Roadway Improvement Program	100,000	300,000	400,000	-	45
Transportation Planning, Functional and Preliminary Design	-	400,000	400,000	-	46
Total Roads	\$2,400,000	\$14,747,038	\$17,147,038	\$(26,098)	
Drainage					
Boundary Road Drainage Pump Station Upgrade Fronting Costs	-	840,000	840,000	-	48
Box Culvert Repair	-	1,000,000	1,000,000	-	49
Burkeville Utility Improvements	-	1,240,000	1,240,000	-	50
Canal Stabilization and Drainage & Irrigation Upgrades	-	1,700,000	1,700,000	-	51
Development Coordinated Works - Drainage	-	250,000	250,000	-	52
Disaster Mitigation and Adaptation Fund Infrastructure Upgrades	1,080,000	1,620,000	2,700,000	-	53
Drainage Pump Station Rehabilitation and Generator Upgrade	-	250,000	250,000	-	54
Flood Protection & Dike Improvements	-	1,800,000	1,800,000	-	55
Invasive Species Management	-	300,000	300,000	-	56
Laneway Drainage Upgrade	-	1,183,000	1,183,000	-	57
SCADA System Improvements	-	350,000	350,000	-	58
Storm Main Drainage Upgrade	-	250,000	250,000	-	59
Watercourse Crossing Rehabilitation & Replacement	-	350,000	350,000	-	60
Total Drainage	\$1,080,000	\$11,133,000	\$12,213,000	-	
Water					
Development Coordinated Works - Water	-	250,000	250,000	-	62
Fire Hydrant Upgrades	-	200,000	200,000	-	63
Water Metering Program	-	3,000,000	3,000,000	17,418	64
Watermain Replacement Upgrades Program	-	5,566,000	5,566,000	-	65
Watermain Tie-in and Restoration	-	300,000	300,000	-	66
Total Water	-	\$9,316,000	\$9,316,000	\$17,418	

Project Name	External Funding	City Funding	Total Investment	Total OBI	Ref
INFRASTRUCTURE PROGRAM					
<i>Sanitary Sewer</i>					
Development Coordinated Works - Sanitary	-	250,000	250,000	-	68
Sanitary Sewer Tie-in and Restoration	-	150,000	150,000	-	69
Steveston Sanitary Sewer and Hammersmith Forcemain Rehabilitation	-	3,800,000	3,800,000	-	70
Valve and Hatch Program	-	300,000	300,000	-	71
<i>Total Sanitary Sewer</i>	-	\$4,500,000	\$4,500,000	-	
<i>Infrastructure Advanced Design and Minor Public Works</i>					
Public Works Infrastructure Advanced Design	-	3,280,000	3,280,000	-	73
Public Works Minor Capital - Drainage	-	400,000	400,000	-	74
Public Works Minor Capital - Sanitary	-	300,000	300,000	-	75
Public Works Minor Capital - Sanitation & Recycling	-	450,000	450,000	-	76
<i>Total Infrastructure Advanced Design and Minor Public Works</i>	-	\$4,430,000	\$4,430,000	-	
TOTAL INFRASTRUCTURE PROGRAM	\$3,480,000	\$44,126,038	\$47,606,038	\$(8,680)	
BUILDING PROGRAM					
<i>Building</i>					
Annual Infrastructure Replacements and Building Improvements	-	3,000,000	3,000,000	-	78
Britannia Shipyards Envelope & Mechanical System Renewals	-	2,125,000	2,125,000	-	79
Richmond Curling Club – Priority 1 Repairs	-	650,000	650,000	89,200	80
Richmond Ice Centre Renewals - Phase 2 Construction and associated works	-	6,000,000	6,000,000	-	81
Richmond Nature Park Infrastructure Renewals	-	4,775,000	4,775,000	-	82
South Arm Community Centre Infrastructure Renewals	-	1,900,000	1,900,000	-	83
Watermania Mechanical and Pool Equipment Renewals	-	2,200,000	2,200,000	-	84
Works Yard Infrastructure Renewals – Phase 1 (Design)	-	420,000	420,000	-	85
<i>Total Building</i>	-	\$21,070,000	\$21,070,000	\$89,200	
<i>Heritage</i>					
Steveston Museum - Post Office, Program Space and Exhibit Upgrades	-	354,000	354,000	12,300	87
<i>Total Heritage</i>	-	\$354,000	\$354,000	\$12,300	
TOTAL BUILDING PROGRAM	-	\$21,424,000	\$21,424,000	\$101,500	
PARKS PROGRAM					
<i>Parks</i>					
London Heritage Farm Master Plan Phase 1	-	612,000	612,000	-	89
Lulu Island Park – Preliminary Planning and Site Study Phase	-	250,000	250,000	-	90
McDonald Beach Boat Basin Restoration Phase 1	-	500,000	500,000	-	91
Parks Advance Planning and Design	-	300,000	300,000	-	92
Parks Ageing Infrastructure Replacement Program	-	530,000	530,000	-	93
Parks General Development	-	400,000	400,000	-	94
Parks Identity Signage Program	-	100,000	100,000	-	95
Playground Replacement Program	-	550,000	550,000	-	96
Terra Nova Washroom Septic System	-	250,000	250,000	-	97
<i>Total Parks</i>	-	\$3,492,000	\$3,492,000	-	

Project Name	External Funding	City Funding	Total Investment	Total OBI	Ref
PARKS PROGRAM					
<i>Parkland</i>					
Parkland Acquisition	-	4,000,000	4,000,000	-	99
Total Parkland	-	\$4,000,000	\$4,000,000	-	
TOTAL PARKS PROGRAM	-	\$7,492,000	\$7,492,000	-	
PUBLIC ART PROGRAM					
<i>Public Art</i>					
Public Art Program	-	200,000	200,000	-	101
TOTAL PUBLIC ART PROGRAM	-	\$200,000	\$200,000	-	
LAND PROGRAM					
<i>Land</i>					
Strategic Real Estate Acquisition	-	5,000,000	5,000,000	-	103
TOTAL LAND PROGRAM	-	\$5,000,000	\$5,000,000	-	
AFFORDABLE HOUSING PROGRAM					
<i>Affordable Housing</i>					
Affordable Housing Operating Initiatives	-	400,000	400,000	-	105
TOTAL AFFORDABLE HOUSING PROGRAM	-	\$400,000	\$400,000	-	
EQUIPMENT PROGRAM					
<i>Vehicle</i>					
Automatic Vehicle Location/Global Positioning System Expansion	-	139,653	139,653	100,040	107
Vehicle and Equipment Reserve Purchases (Public Works and Corporate Fleet)	-	4,368,600	4,368,600	23,000	108
Total Vehicle	-	\$4,508,253	\$4,508,253	\$123,040	
<i>Fire Dept Vehicles and Equipment</i>					
Fire Vehicle Replacement Reserve Purchases	-	2,021,081	2,021,081	60,000	110
Total Fire Dept Vehicles and Equipment	-	\$2,021,081	\$2,021,081	\$60,000	
<i>Information Technology</i>					
Annual Hardware Refresh	-	531,385	531,385	-	112
Corporate Website Increased Functionalities	-	300,000	300,000	-	113
Data Analytics 2022	-	300,000	300,000	-	114
Data Centre Server Refresh / Update (Phase 2 of 2)	-	360,000	360,000	-	115
Digital Communication Enhancement / Public Participation at City Hall	-	350,129	350,129	-	116
MS SQL Server Refresh	-	324,836	324,836	-	117
Network Refresh for City Facilities (Phase 3 of 3)	-	391,100	391,100	13,326	118
PeopleSoft Financial 9.2 Upgrade	-	477,745	477,745	-	119
Snow and Ice Response Tracking	-	100,000	100,000	9,600	120
Tempest Oracle to SQL Server Migration	-	147,000	147,000	-	121
Total Information Technology	-	\$3,282,195	\$3,282,195	\$22,926	

Summary of Capital Projects – Recommended for funding in 2022

Appendix 3

Project Name	External Funding	City Funding	Total Investment	Total OBI	Ref
EQUIPMENT PROGRAM					
Energy Management Projects	-	600,000	600,000	(32,850)	123
Fire Equipment Replacement - Fire Hose	-	124,389	124,389	-	124
Street Sweeping Machine for Bike Lanes	-	150,000	150,000	32,264	125
<i>Total Equipment</i>	-	\$874,389	\$874,389	\$(586)	
TOTAL EQUIPMENT PROGRAM	-	\$10,685,918	\$10,685,918	\$205,380	
CHILD CARE PROGRAM					
<i>Child Care</i>					
Child Care - Administration	-	200,000	200,000	-	127
Child Care Projects - City-wide (Capital Grants)	-	50,000	50,000	-	128
Child Care Projects - City-wide (Non-Capital Grants)	-	10,000	10,000	-	129
TOTAL CHILD CARE PROGRAM	-	\$260,000	\$260,000	-	
CONTINGENT EXTERNAL CONTRIBUTION					
Contingent External Contribution	10,000,000	-	10,000,000	-	131
TOTAL CONTINGENT EXTERNAL CONTRIBUTION	\$10,000,000	-	\$10,000,000	-	
INTERNAL TRANSFERS/DEBT PAYMENT					
<i>Internal Transfers/Debt Payment</i>					
12040 Horseshoe Way Repayment	-	525,000	525,000	-	133
7080 River Road Repayment	-	2,341,384	2,341,384	-	134
River Road/North Loop (2005) Repayment	-	1,334,953	1,334,953	-	135
West Cambie Parkland Acquisition Repayment	-	492,898	492,898	-	136
TOTAL INTERNAL TRANSFERS/DEBT PAYMENT	-	\$4,694,235	\$4,694,235	-	
Total 2022 Capital Program	\$13,480,000	\$94,282,191	\$107,762,191	\$298,200	

OBI Type	
Operating OBI	\$280,782
Utility OBI	17,418
Total OBI	\$298,200

Project Name	External Funding	City Funding	Total OBI	Ref
INFRASTRUCTURE PROGRAM				
<i>Roads</i>				
Geographic Information System Roads Database - Phase 1	-	200,000	-	138
Williams Road Reconstruction - No 4 Road to No 5 Road - Design	-	850,000	-	139
Total Roads	-	\$1,050,000	-	
<i>Infrastructure Advanced Design and Minor Public Works</i>				
Public Works Minor Capital - Roads	-	600,000	-	141
Public Works Minor Capital - Traffic	-	250,000	-	142
Total Infrastructure Advanced Design and Minor Public Works	-	\$850,000	-	
TOTAL INFRASTRUCTURE PROGRAM	-	\$1,900,000	-	
BUILDING PROGRAM				
<i>Building</i>				
Capital Buildings Project Development Advanced Design	-	750,000	-	144
Total Building	-	\$750,000	-	
TOTAL BUILDING PROGRAM	-	\$750,000	-	
PARKS PROGRAM				
<i>Parks</i>				
Burkeville Park Redevelopment	-	450,000	-	146
Total Parks Program	-	\$450,000	-	
TOTAL PARKS PROGRAM	-	\$450,000	-	
EQUIPMENT PROGRAM				
<i>Equipment</i>				
RCMP Command Vehicle Replacement	-	1,225,095	35,399	148
Total Equipment	-	\$1,225,095	\$35,399	
<i>Information Technology</i>				
Enhanced Online Customer Experience: Community Services Program Registration	-	235,000	-	150
Total Information Technology	-	\$235,000	-	
TOTAL EQUIPMENT PROGRAM	-	\$1,460,095	\$35,399	
Total 2022 Capital Program – Not Recommended for funding	-	\$4,560,095	\$35,399	

2022 Summary of Projects Funded by Revolving Fund

Appendix 5

Each year, the Revolving Fund is utilized to fund various capital projects. This summary shows the 2022 capital projects and the corresponding amounts funded by the Revolving Fund.

Project Name	Revolving Fund	Total Investment	Total OBI	Ref
Roads				
Bridge Rehabilitation Program	500,000	500,000	-	30
Citywide Connector Walkways Rehabilitation Program	250,000	250,000	-	31
Citywide Sidewalk and Street Light Replacement Program	250,000	250,000	-	32
Total Roads	\$1,000,000	\$1,000,000	-	
Heritage				
Steveston Museum - Post Office, Program Space and Exhibit Upgrades	354,000	354,000	12,300	87
Total Building	\$354,000	\$354,000	\$12,300	
Parks				
McDonald Beach Boat Basin Restoration Phase 1	350,000	500,000	-	91
Parks Ageing Infrastructure Replacement Program	530,000	530,000	-	93
Playground Replacement Program	500,000	550,000	-	96
Total Parks	\$1,380,000	\$1,580,000	-	
Equipment				
Street Sweeping Machine for Bike Lanes	150,000	150,000	32,264	125
Total Equipment	150,000	150,000	32,264	
Information Technology				
Corporate Website Increased Functionalities	300,000	300,000	-	113
Data Analytics 2022	300,000	300,000	-	114
Digital Communication Enhancement / Public Participation at City Hall	350,129	350,129	-	116
Total Information Technology	950,129	950,129	-	
Total Equipment Program	\$1,100,129	\$1,100,129	\$32,264	
Total Projects Funded by Revolving Fund	\$3,834,129	\$4,034,129	\$44,564	
The City Assist Factor on Roads DCC and Parks DCC projects are also funded by the Revolving Fund.				
City Assist Factor on Parks Acquisition	377,312			
City Assist Factor on Parks Development	116,739			
City Assist Factor on Roads DCC	513,588			
Total City Assist Factor	\$1,007,639			
Total Funding from Revolving Fund	\$4,841,768			

Project Name	DCC Funding	City Assist Factor	Total Investment ¹	Total OBI	Ref
Roads					
Active Transportation Improvement Program	705,375	44,625	750,000	-	26
Arterial Roadway Improvement Program	940,500	59,500	1,000,000	-	29
LED Street Name Sign Program	282,150	17,850	300,000	-	33
Neighbourhood Walkway Program	564,300	35,700	600,000	-	34
River Road Multi-Use Pathway, McCallan Road to No 2 Road	752,000	48,000	1,600,000	-	35
Sexsmith Road/Brown Road Bike Route	352,688	22,312	750,000	-	36
Special Crosswalk Program	94,050	5,950	100,000	1,550	37
Top 20 Collision Prone Intersections- Implementation of Medium/Long-term Improvements	1,763,437	111,563	3,000,000	-	39
Traffic Calming Program	564,300	35,700	600,000	-	40
Traffic Signal Power Backup System (UPS)	188,100	11,900	200,000	-	41
Traffic Signal Program	470,250	29,750	500,000	2,352	42
Traffic Video and Communication Program	376,200	23,800	400,000	-	43
Transit-Related Amenity Improvement Program	23,512	1,488	25,000	-	44
Transit-Related Roadway Improvement Program	282,150	17,850	400,000	-	45
Transportation Planning, Functional and Preliminary Design	376,200	23,800	400,000	-	46
Total Roads	\$7,735,212	\$489,788	\$10,625,000	\$3,902	
Infrastructure Advanced Design and Minor Public Works					
Public Works Infrastructure Advanced Design	376,200	23,800	3,280,000	-	73
Total Infrastructure Advanced Design and Minor Public Works	\$376,200	\$23,800	\$3,280,000	-	
Parks					
London Heritage Farm Master Plan Phase 1	575,586	36,414	612,000	-	89
Lulu Island Park - Preliminary Planning and Site Study Phase	235,125	14,875	250,000	-	90
Parks Advance Planning and Design	282,150	17,850	300,000	-	92
Parks General Development	376,200	23,800	400,000	-	94
Parks Identity Signage Program	94,050	5,950	100,000	-	95
Playground Replacement Program	47,025	2,975	550,000	-	96
Terra Nova Washroom Septic System	235,125	14,875	250,000	-	97
Total Parks	\$1,845,261	\$116,739	\$2,462,000	-	
Parkland					
Parkland Acquisition	3,762,000	238,000	4,000,000	-	99
Total Parkland	\$3,762,000	\$238,000	\$4,000,000	-	
Internal Transfers/Debt Payment					
7080 River Road Repayment	2,202,072	139,312	2,341,384	-	134
River Road/North Loop (2005) Repayment	1,334,953	-	1,334,953	-	135
West Cambie Parkland Acquisition Repayment	492,898	-	492,898	-	136
Total Internal Transfers/Debt Payment	\$4,029,923	\$139,312	\$4,169,235	-	
Grand Total	\$17,748,596	\$1,007,639	\$24,536,235	\$ 3,902	

¹The Total Investment includes all funding sources: External and City Funding, refer to Appendix 3.

The Capital Building and Infrastructure General Fund is used for facility construction and is funded from taxes and gaming revenue.

Capital Building and Infrastructure Reserve				
Project Name	Capital Building and Infrastructure Fund	Total Investment	Total OBI	Ref
<i>Building</i>				
Britannia Shipyards Envelope & Mechanical System Renewals	2,125,000	2,125,000	-	79
Richmond Curling Club - Priority 1 Repairs	650,000	650,000	89,200	80
Richmond Ice Centre Renewals - Phase 2 Construction and associated works	6,000,000	6,000,000	-	81
Richmond Nature Park Infrastructure Renewals	4,775,000	4,775,000	-	82
South Arm Community Centre Infrastructure Renewals	1,900,000	1,900,000	-	83
Watermania Mechanical and Pool Equipment Renewals	2,200,000	2,200,000	-	84
Works Yard Infrastructure Renewals - Phase 1 (Design)	420,000	420,000	-	85
Total Building	\$18,070,000	\$18,070,000	\$89,200	
Grand Total	\$18,070,000	\$18,070,000	\$89,200	

Infrastructure Program 2022


The City's Infrastructure Program assets include: Road, Drainage and Sanitary Pump Stations, Drainage, Water, and Sanitary Mains.

2022 Recommended Infrastructure – Roads Program

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Program:	Infrastructure Program		Sub-program:	Roads
Project Name:	Active Transportation Improvement Program		Submission ID:	6121
Location:	Various Locations			
Cost:	\$750,000		OBI:	\$ -
Funding Sources:	Roads DCC:	\$705,375		
	Roads City Assist:	\$44,625		
Scope:	<p>Implement cycling and rolling (e.g., wheelchairs and scooters) improvements to support: 1) the expansion of on-street cycling routes and off-street multi-use pathways; and 2) cycling and rolling initiatives and on-going enhancements to existing infrastructure.</p> <p>Major Cost Components: New on-street cycling facilities, off-street multi-use pathways for transportation purposes, bike racks, pavement markings and signage, and associated road geometric improvements.</p> <p>The list of improvements currently planned for 2022 is:</p> <ol style="list-style-type: none">1. Garden City Road Multi-Use Pathway, Francis Road-Williams Road: replace and widen existing 2.5m multi-use pathway (MUP), which has deteriorated over time due to tree root ingress, asphalt cracking, etc., to 3m complete with lighting. This project relies on external funding for implementation. If external funding is not available, a revised proposal will be presented to Council for consideration and approval or the project will be deferred (i.e. with no change in scope).2. Midtown Neighbourhood Bike Route: widening of sidewalk on north side of Francis Road between McCutcheon Pl and Schaefer Gate to accommodate two-way cycling connection3. Upgrade of existing painted on-street bike lanes with physical protection from adjacent vehicle lane4. Implementation of minor improvements as requested by public. <p>Funding: Roads DCC program; potential from TransLink, ICBC and development.</p>			



Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Annual Asphalt Re-Paving Program - MRN	Submission ID:	6087

Location: City Wide

Cost: \$1,620,995

OBI: \$ -


Funding Sources: MRN Rehabilitation: \$1,620,995

Scope: The purpose of this project is to re-pave MRN roads in alignment with the City's Ageing Infrastructure Report and Pavement Management Plan.

The project costs include any associated ancillary work, including but not limited to, curb and gutter repairs, road base repair, asphalt parking re-paving, manhole and valve box adjustments, line painting and staff inspection time.

The project includes the pavement component of other water, sanitary and drainage upgrades in the Capital Program that are co-ordinated by the Engineering department as well as consultant and contractor fees related to bridge upgrades and the Pavement Management Plan.



Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Annual Asphalt Re-Paving Program - Non-MRN	Submission ID:	6088
Location:	City Wide		
Cost:	\$3,411,043	OBI:	\$ -
Funding Sources:	Asphalt Capping: \$3,411,043		
Scope:	<p>The purpose of this project is to re-pave City-owned non-MRN roads (major roads, minor roads and lanes) in alignment with the City's Ageing Infrastructure Report and Pavement Management Plan.</p> <p>The project could also include the costs associated with ancillary work, including but not limited to, curb and gutter repairs, road base repair, asphalt parking re-paving, manhole and valve box adjustments, line painting, staff inspection time and similar.</p> <p>The project includes the pavement component of other water, sanitary and drainage upgrades in the Capital Program that are co-ordinated by the Engineering department as well as consultant and contractor fees related to bridge upgrades and the Pavement Management Plan.</p>		
			

Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Arterial Roadway Improvement Program	Submission ID:	6123

Location: Various Locations

Cost: \$1,000,000

OBI: \$ -

Funding Sources: Roads DCC: \$940,500
Roads City Assist: \$59,500

Scope: Implement pedestrian and traffic safety improvements along arterial roads and at arterial road intersections to address issues including those identified through requests from the public and/or Council.

Major Cost Components: New and/or enhancement of turn lanes, channelization, traffic signage, pedestrian safety measures enhancements and new/upgrade sidewalks/walkways.

Locations for improvements are prioritized based on traffic safety / collision risks and level of pedestrian activities (i.e., schools, neighbourhood service centres, bus stops, recreational service centres, shopping/retail centres, etc.).

The list of improvements currently planned for 2022 is removal of 2 channelized right-turn islands, northwest and southwest corners and reconstruct curb returns at Garden City Road-Alderbridge Way Avenue intersection.

Funding: Roads DCC program; potential from TransLink, ICBC and development.



Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Bridge Rehabilitation Program	Submission ID:	6209


Location:	City Wide		
Cost:	\$500,000	OBI:	\$ -
Funding Sources:	Capital Revolving: \$500,000		
Scope:	<p>The City completed inspections on a number of road and pedestrian bridges and watercourse crossings, and identified select structures that are in need of repair or replacement. The scope of work for this project includes further structural inspections, engineering design, and repair or replacement of bridge structures and watercourse crossings.</p> <p>Repair or replacement work may include, but not be limited to, culvert installation, utility relocation, restoration, railing improvements, barrier installation, sidewalk repair, signage installation, crack sealing, erosion repair, expansion joint sealing and ancillary works associated with bridge and watercourse crossing repair or replacement.</p> <p>This project will improve road user and pedestrian safety, improve the City's ability to manage emergency response and reduce the potential for unplanned maintenance that is disruptive and costly through proactive management of ageing infrastructure.</p>		









Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Citywide Connector Walkways Rehabilitation Program	Submission ID:	6766
Location:	Various Locations		
Cost:	\$250,000	OBI:	\$ -
Funding Sources:	Capital Revolving: \$250,000		
Scope:	<p>This project involves the replacement or rehabilitation of connector walkways located in various neighbourhoods around Richmond. The assessments conducted confirm that the walkway surface conditions have deteriorated over time due to tree root ingress, asphalt cracking, etc. The project cost could include, but is not limited to, costs associated with tree root pruning, asphalt re-paving and other ancillary work.</p> <p>Connector walkways are heavily used by pedestrians and their current condition in certain areas may pose a tripping hazard for the users. This project would allow the City to mitigate potential risks to public safety and promote eco-friendly modes of transportation, such as walking and biking.</p>		
			

Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Citywide Sidewalk and Street Light Replacement Program	Submission ID:	6206

Location: Various Locations

Cost: \$250,000

OBI: \$ -


Funding Sources: Capital Revolving: \$250,000

Scope: Over time, street lighting infrastructure deteriorates and can become a hazard to residents and traffic without proper maintenance and replacement programs. Per the City's ageing infrastructure assessment program, several street lights and street light service panels are at the end of their life and need to be replaced. Sidewalks that have subsided, are damaged from tree roots, or have become misaligned pose tripping hazards to pedestrians. Replacing these sidewalks will improve pedestrian safety and encourage non-vehicular forms of transportation.

This project includes removal and replacement of street light poles, service panels, and luminaires that have reached the end of their service life, retrofit of deteriorated concrete bases and the associated ancillary works, inspection of street lights that are nearing the end of their service life, installation of new street lights to eliminate gaps in the street lighting network and repairing deteriorated sidewalks.




Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	LED Street Name Sign Program	Submission ID:	6156
Location:	Various Locations		
Cost:	\$300,000	OBI:	\$ -
Funding Sources:	Roads DCC: \$282,150 Roads City Assist: \$17,850		
Scope:	Installation of overhead LED street name signs at key signalized intersections to enhance visibility and legibility for drivers. It is anticipated that the remaining signalized intersections (60 out of 183) can be upgraded over the next 4-6 years (i.e. 10-15 per year).		
Major Cost Components: LED street name sign, mounting hardware and electrical wiring.			
Locations are prioritized based on major, gateway and high-volume intersections and in tourist areas.			
For 2022, locations are to be determined.			
Funding: Roads DCC program; potential from TransLink, ICBC and development.			




Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Neighbourhood Walkway Program	Submission ID:	6128

Location:	Various Locations		
Cost:	\$600,000	OBI:	\$ -
Funding Sources:	Roads DCC:	\$564,300	
	Roads City Assist:	\$35,700	
Scope:	Construction of new and/or enhancement of existing neighbourhood walkways/sidewalks.		
	Major Cost Components: Construction of new or upgrade of existing sidewalks, pathways, wheelchair ramps, minor curb cuts, and boulevard modifications.		
	Locations are prioritized based on level of pedestrian activities (i.e., proximity to schools, bus stops, recreational centres, parks, shopping/retail centres, etc.), traffic safety/collision risks, and requests from Council and the public.		
	For 2022, locations are to be determined in the year of the program. In previous years, the following were completed:		
	1. Asphalt walkway along the west side of No 6 Road from Bridgeport Road to Cambie Road		
	2. Sidewalk along west side of Viking Way from Cambie Road to Bridgeport Road		
	Funding: Roads DCC program; potential from TransLink, ICBC and development.		



Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	River Road Multi-Use Pathway, McCallan Road to No 2 Road	Submission ID:	6920
Location:	South side of River Road from McCallan Road to No 2 Road		
Cost:	\$1,600,000	OBI:	\$ -
Funding Sources:	Roads DCC: \$752,000 Roads City Assist: \$48,000 Grant: \$800,000		
Scope:	<p>Provision of a 3.0m (minimum) to 4.0m (preferred) wide paved multi-use pathway (MUP) along the south side of River Road from McCallan Road to No. 2 Road. The detailed design (2020 project approved by Council) will commence in Q3/Q4 2021. This project relies on external funding for implementation. If external funding is not available, a revised proposal will be presented to Council for consideration and approval.</p> <p>Upon completion, this project will connect to the existing Railway Greenway MUP (east side of McCallan Road) and the existing Middle Arm Greenway MUP along the dike at No. 2 Road.</p> <p>Major Cost Components: Removal of existing asphalt walkway, multi-use pathways, wooden bollards, pavement markings and signage, pedestrian crossing enhancements, lighting, removal & relocation of trees, modifications to existing parking lots, landscaping, etc.</p> <p>Funding: Roads DCC program; potential fromTransLink and ICBC</p>		



Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Sexsmith Road/Brown Road Bike Route	Submission ID:	7114

Location: Sexsmith Road from Beckwith Road to Patterson Road and Brown Road from Sexsmith Road to Browngate Road

Cost: \$750,000

OBI: \$ -

Funding Sources:

Roads DCC:	\$352,688
Roads City Assist:	\$22,312
Grant:	\$375,000

Scope: Provision of 1.8m (minimum) wide unidirectional protected cycling facilities along Sexsmith Road from Beckwith Road to Patterson Road & Brown Road from Sexsmith Road to Cambie Road and 1.8m (minimum) wide unidirectional cycling facilities along Brown Road from Cambie Road to Browngate Road. This project relies on external funding for implementation. If external funding is not available, a revised proposal will be presented to Council for consideration and approval.

Upon completion, this project a continuous bike connection from Bridgeport Station to Aberdeen Station via Sexsmith Road (north of Cambie Road) and Brown Road (south of Cambie Road) to Odlin Road (neighbourhood bike route, substantially completed).

Major Cost Components: Lane narrowing, road widening, physical barriers, pavement markings and signage, pedestrian crossing enhancements, relocation of above ground infrastructure (i.e., streetlight poles, hydrants, power poles, traffic signals, etc.), and modifications to private property (i.e., re-grade driveways, retaining walls, landscaping, etc.).

Funding: Roads DCC program; potential from TransLink and ICBC



Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Special Crosswalk Program	Submission ID:	6120

Location: Various Locations

Cost: \$100,000

OBI: \$1,550

Funding Sources: Roads DCC: \$94,050
Roads City Assist: \$5,950


Scope: Upgrade of existing crosswalks on arterial roads (typically four-lane) to new traffic control standards that have been endorsed by Council.

Major Cost Components: Illuminated overhead crosswalk signs with amber flashers, strobe lights, poles, pole bases, underground conduit, junction boxes, pole-mount cabinet, controller, hydro service panel, Accessible Pedestrian Signal (APS) push buttons, pavement markings, and site restoration.

The preliminary list for 2022 includes Granville Avenue and Mayflower Drive.

Funding: Roads DCC program; potential from TransLink, ICBC and development.



Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Street Light LED Upgrade Program	Submission ID:	6759
Location:	City Wide		
Cost:	\$490,000	OBI:	\$(30,000)
Funding Sources:	Enterprise:		\$490,000
Scope:	<p>To date, the City has replaced 5,000 ageing high-pressure sodium (HPS) light fixtures with light-emitting diode (LED) light fixtures. Replacing HPS fixtures with LED fixtures significantly reduces annual energy consumption.</p> <p>This project is phase 1 of 5 to replace the remaining 5,800 ageing HPS light fixtures with LED light fixtures. Approximately 1,200 light fixtures will be replaced during each phase of the replacement program. It is estimated that this project will reduce electricity use by 350,000 kWh, which translates to approximately \$30,000 in cost savings annually.</p>		
			

Program:	Infrastructure Program		Sub-program:	Roads
Project Name:	Top 20 Collision Prone Intersections- Implementation of Medium/Long-term Improvements		Submission ID:	6634
Location:	Various Locations			
Cost:	\$3,000,000		OBI:	\$ -
Funding Sources:	Roads DCC: \$1,763,437 Roads City Assist: \$111,563 Grant: \$1,125,000			
Scope:	<p>Implement safety improvements determined through the preliminary design for the top 20 collision prone intersections as approved by Council. The exact scope and timing of the safety improvements will be determined through the study in progress and the implementation strategy, once developed, will be presented to Council for consideration. It is anticipated that 2 to 3 locations will be completed per year subject to TransLink funding and scope of works; otherwise 1 to 2 locations will be completed per year.</p> <p>Major Cost Components: Road geometry changes such as road widening, addition or lengthening of left-turn lanes, addition or realigning of right-turn lanes, redesign of existing channelized right-turn lanes, widening sidewalks and wheelchair ramps, completion of pedestrian and cycling connections, upgrade streetlighting, traffic signal modifications (i.e., added left-turn phase), relocation of driveways and land acquisition.</p> <p>Subject to availability of external funding, the list of improvements planned for 2022 are as follows:</p> <ol style="list-style-type: none"> 1. No. 4 Road and Alderbridge Way intersection (#4) - Modification/removal of the existing islands, reduce curb return radius, capacity improvements in the westbound and northbound directions (e.g., additional turning lanes or signal modifications) 2. No. 5 Road and Westminster Hwy intersection (#5) - Modification/removal of the existing island, reduce curb return radius, advance warning flashers, eliminate the merge lane the west side of No 5 Road. <p>In addition to safety considerations, the locations were selected based on past public complaints, extent of determined scope of works, as well as those that are readily implementable, i.e., within City jurisdiction, minimal property acquisition, etc.</p> <p>Funding: Roads DCC program; potential from TransLink, ICBC and development.</p>			



Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Traffic Calming Program	Submission ID:	6127

Location: Various Locations

Cost: \$600,000

OBI: \$ -

Funding Sources: Roads DCC: \$564,300
Roads City Assist: \$35,700

Scope: Retrofitting existing local roads with traffic calming measures to enhance safety for road users and livability for residents by reducing speed and deterring short-cutting traffic within neighbourhoods.

Major Cost Components: Road works to construct traffic calming measures such as curb bulges, curb ramps, traffic circles, speed humps, delineated walkways, traffic signage, pavement marking, and streetscape features (i.e., trees and/or other landscaping improvements).

Locations will be prioritized based on Council and/or public request. In previous years, locations were typically identified in the year of the program. Examples of 2021 projects include:

1. Speed humps on Monteith Road and Shell Road
2. Traffic calming measures on Fundy Drive

Funding: Roads DCC program; potential from TransLink, ICBC and development.



Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Traffic Signal Power Backup System (UPS)	Submission ID:	6446

Location: Various Locations

Cost: \$200,000

OBI: \$ -

Funding Sources: Roads DCC: \$188,100
Roads City Assist: \$11,900

Scope: Installation of Uninterruptible Power Supply (UPS) system at signalized intersections to provide continual power during disruption. UPS protects electronic hardware from power surges. It is anticipated that the remaining signalized intersections (98 out of 183) can be upgraded over the next 10-15 years (i.e., 7-10 per year).

Major Cost Components: UPS cabinet and base, controller, batteries, underground conduit, and site restoration

For 2022, locations are to be determined.

Funding: Roads DCC program; potential from TransLink, ICBC and development.



Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Traffic Signal Program	Submission ID:	6129

Location:	Various Locations		
Cost:	\$500,000	OBI:	\$2,352
Funding Sources:	Roads DCC:	\$470,250	
	Roads City Assist:	\$29,750	
Scope:	Installation of new/upgrade of existing traffic signals to accommodate traffic growth, respond to public requests, improve traffic management & movement of all road users, and address traffic safety concerns.		


Major Cost Components: Traffic controller, cabinet, poles, bases, junction boxes, underground conduit, in ground and camera video detection, enhanced accessible pedestrian signals, traffic signal heads, electrical wiring, traffic signal communications, LED street name signs, pavement markings, minor corner property acquisition, minor curb cuts, boulevard modifications, and site restoration.

Locations to potentially be upgraded to a full traffic signal is contingent on a traffic signal warrant study.

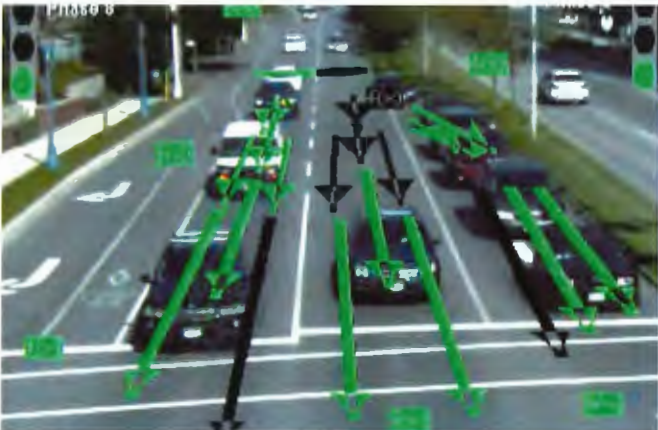
The preliminary list for 2022 includes the following locations:

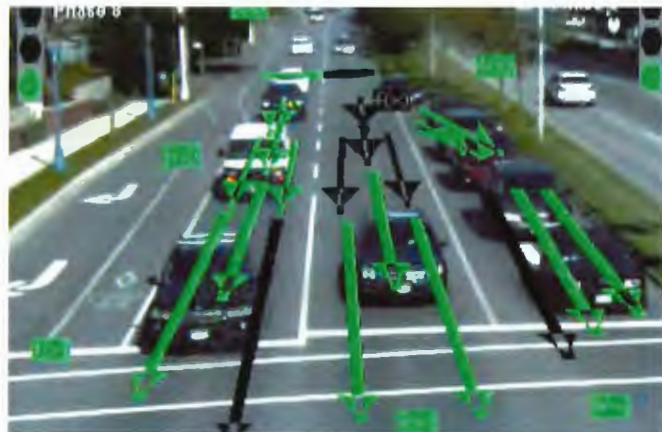
1. No 3 Road and Bus Mall (installation of pre-signals north & south)
2. To be determined based on outcome of traffic signal warrant study being conducted

Funding: Roads DCC program; potential from TransLink, ICBC and development.



Program:	Infrastructure Program		Sub-program:	Roads
Project Name:	Traffic Video and Communication Program		Submission ID:	6130
Location:	Various Locations			
Cost:	\$400,000		OBI:	\$ -
Funding Sources:	Roads DCC: \$376,200 Roads City Assist: \$23,800			
Scope:	<p>1. Install video detection cameras at signalized intersections to enhance cyclist and vehicle detection, optimize traffic operations, measure traffic speed, provide real time video of traffic conditions to the Traffic Management Centre (TMC) for observing and enhancing operations and provide photos (in one minute intervals) of approach traffic conditions for public access on the City website. This program is separate from the Richmond RCMP security camera program. By the end of 2021, there will be 60 out 183 signalized intersections remaining, which require build out of the fibre communications network prior to camera installation.</p> <p>2. Upgrade conduit and cable infrastructure to install higher capacity fibre optic cable and electronics to communicate with multiple remote programmable devices at traffic signals. It is anticipated that the entire city can be upgraded over the next 8-12 years based on the current level of funding.</p> <p>Major Cost Components: Video detection camera hardware and installation, fibre optic cable, fibre splicing and underground enclosures and fibre network switches required to communicate to the TMC.</p> <p>Traffic Video Camera</p> <ol style="list-style-type: none">1. Garden City Road and Cook Road2. Garden City Road and Westminster Highway3. No. 1 Road and Osmond Avenue4. No. 5 Road and Cambie Road <p>Fibre communications cable and conduit installation/cleaning/upgrades</p> <ol style="list-style-type: none">1. Granville Avenue (No. 3 Road-Garden City Road)2. Garden City Road (Granville Avenue-Westminster Highway)3. No. 1 Road (Youngmore Road-Osmond Avenue)4. East Richmond Pedestrian signal to No. 5 Road and Cambie Road <p>Funding: Roads DCC program; potential from TransLink, ICBC and development.</p>			





Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Transit-Related Amenity Improvement Program	Submission ID:	6126

Location: Various Locations

Cost: \$25,000

OBI: \$ -

Funding Sources: Roads DCC: \$23,512
Roads City Assist: \$1,488

Scope: Transit-related amenity improvements within the road right-of-way to support transit service and infrastructure.


Major Cost Components: Non-advertising transit shelters and benches and other supplementary amenity improvements to facilitate transit passengers.

Locations for bus stop shelters are prioritized based on boarding activity, customer requests and availability of right-of-way.

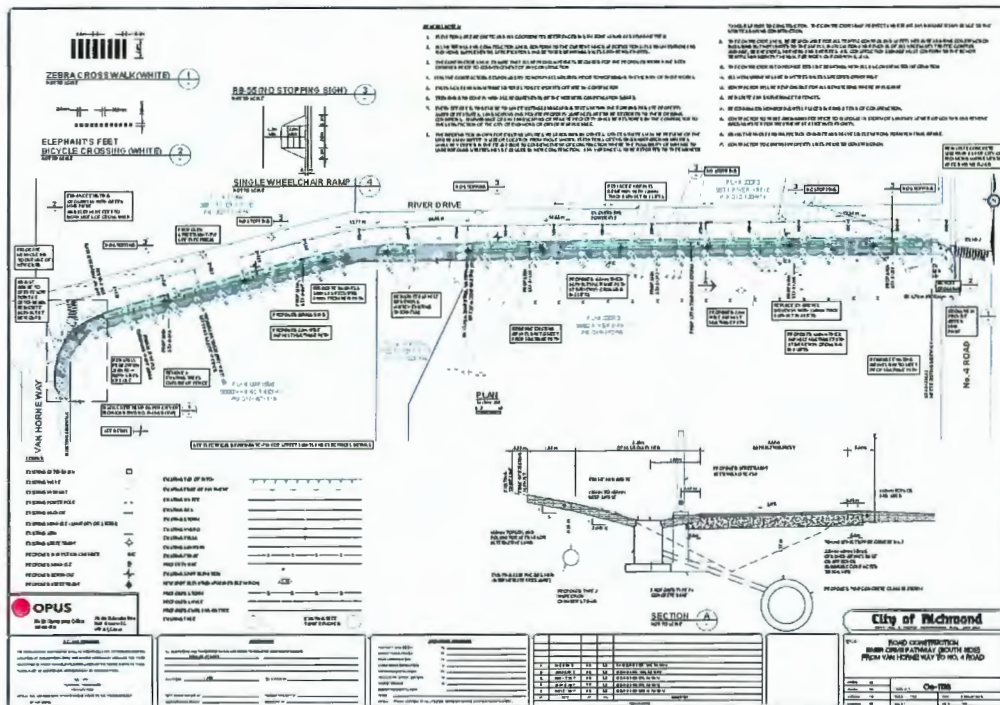
For 2022, approximately 10-15 locations are proposed for upgrade. The actual locations will be determined in early 2022 in consultation with Pattison Outdoor, the City's street furniture contractor.

Funding: Roads DCC program; potential from TransLink, ICBC and development.



Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Transit-Related Roadway Improvement Program	Submission ID:	6125
Location:	Various Locations		
Cost:	\$400,000	OBI:	\$ -
Funding Sources:	Roads DCC: \$282,150 Roads City Assist: \$17,850 Grant: \$100,000		
Scope:	<p>Road and traffic improvements to increase accessibility at bus stops, support transit service improvements and existing transit infrastructure. Currently, approximately 85 % of 722 existing bus stops are accessible.</p> <p>Major Cost Components: Bus stop landing pads and ramps for wheelchair accessibility, intersection geometric/corner improvements, sidewalk/walkway construction connecting to bus stops, etc. to facilitate transit passengers.</p> <p>Locations for bus stop accessibility improvements are prioritized based on boarding/alighting activity, customer requests and availability of right-of-way.</p> <p>For 2022, approximately 15-20 locations are proposed for upgrade, subject to TransLink funding. The actual locations will be determined in early 2022 in consultation with Coast Mountain Bus Company (CMBC) and through public feedback.</p> <p>Funding: Roads DCC program; potential from TransLink, ICBC and development.</p>		
			

Program:	Infrastructure Program		Sub-program:	Roads
Project Name:	Transportation Planning, Functional and Preliminary Design		Submission ID:	6119
Location:	Various Locations			
Cost:	\$400,000		OBI:	\$ -
Funding Sources:	Roads DCC:	\$376,200		
	Roads City Assist:	\$23,800		
Scope:	<p>1. Project design - prepare functional/preliminary designs and cost estimates required for transportation capital projects identified within the Capital Program. Design to identify road elements, horizontal alignment, cross-section, property impacts, etc. and high level cost estimates to carry out further detailed engineering design.</p> <p>2. Project planning and coordination - Assist in the development, leading, coordinating and administering the planning, engineering, and design work on transportation capital projects approved as part of the Capital Program and off-site improvements for new developments.</p> <p>Cost based on 5% of the cost estimate of capital projects included within annual capital programs that require functional designs; design funds for projects with more significant scope are included separately within those projects.</p> <p>Major Cost Components: Consultant and/or staff costs for Project design and staff costs for Project planning and coordination</p>			




Drainage Program 2022

The City's Drainage and Diking Program supports critical improvements for drainage and flood protection infrastructure. In addition to replacing ageing infrastructure, these projects include drainage and diking upgrades to proactively address climate change - induced impacts such as higher intensity storms and sea level rise. Consistent with Council's Strategic Plan, completion of these projects will help the City become safer and more resilient to climate change.


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Program:	Infrastructure Program	Sub-program:	Drainage
Project Name:	Boundary Road Drainage Pump Station Upgrade Fronting Costs	Submission ID:	7196
Location:	Boundary Road		
Cost:	\$840,000	OBI:	\$ -
Funding Sources:	Drainage Utility: \$840,000		
Scope:	<p>The Boundary Road Drainage Pump Station is owned and operated by the City of New Westminster. However, the City of Richmond and City of New Westminster drainage systems are interconnected at the Boundary Road canal, which is located directly upstream of the Boundary Road Drainage Pump Station. The existing pump station has reached the end of its service life and has inadequate pumping capacity to service the area. Given that the pump station conveys a portion of Richmond's drainage, Richmond entered into a cost sharing agreement with New Westminster to partially fund the upgrade of the Boundary Road Drainage Pump Station, including annual maintenance of the pump station and canal.</p> <p>This project will fulfill the requirements of the contribution agreement and support upgrade of the Boundary Road Drainage Pump Station, which includes replacement of the existing ageing pump station with a new pump station with increased pumping capacity.</p> <p>Cost for this project may be recovered through City's Works and Services Cost Recovery Bylaw No. 8752 as development occurs.</p>		
			

Program:	Infrastructure Program		Sub-program:	Drainage
Project Name:	Box Culvert Repair		Submission ID:	6503
Location:	City Wide			
Cost:	\$1,000,000		OBI:	\$ -
Funding Sources:	Drainage Utility: \$1,000,000			
Scope:	<p>The City of Richmond's Box Culvert Inspection Program identifies locations where settlement, cracking and infiltration occur due to failing box culverts.</p> <p>The scope of work for this project includes the repair and rehabilitation of concrete storm box culverts throughout Richmond. Repair work will include, but is not limited to, patching, grouting, and structural lining. Additionally, this funding will be used to perform point repairs as identified by the City's Box Culvert Inspection Program throughout the year.</p>			




Program:	Infrastructure Program	Sub-program:	Drainage
Project Name:	Burkeville Utility Improvements	Submission ID:	6186
Location:	Burkeville Area		
Cost:	\$1,240,000	OBI:	\$ -
Funding Sources:	Drainage Utility: \$510,000 Water Utility: \$730,000		
Scope:	<p>Burkeville's drainage system was designed using shallow ditches and small diameter road cross culverts. As the area is redeveloped, ditch infills are becoming common. Ditch infills change the nature of the drainage system in a way that may cause storm water flooding. A new and larger drainage system is therefore needed to accommodate these changes.</p> <p>In addition, existing ageing water infrastructure will be upgraded where the scope overlaps with the upgrade of the drainage infrastructure.</p> <p>Engineering and construction efficiencies will be achieved, and public disruptions will be minimized by coordinating the utility improvements.</p>		
			

Program:	Infrastructure Program	Sub-program:	Drainage
Project Name:	Canal Stabilization and Drainage & Irrigation Upgrades	Submission ID:	6238
Location:	City Wide		
Cost:	\$1,700,000	OBI:	\$ -
Funding Sources:	Drainage Utility: \$1,700,000		
Scope:	This project will accommodate canal stabilization and drainage and irrigation upgrades throughout Richmond. Upgrades include, but are not limited to, culvert upsizing, culvert lowering, headwall replacement, canal re-grading, flap gate and sensor installations and canal bank stabilization works. This project will also allow staff to conduct required assessments and investigations that will further enhance the City's drainage and irrigation network.		




Program:	Infrastructure Program	Sub-program:	Drainage
Project Name:	Development Coordinated Works - Drainage	Submission ID:	6187


Location:	City Wide		
Cost:	\$250,000	OBI:	\$ -
Funding Sources:	Drainage Utility:	\$250,000	
Scope:	<p>This project will enable the City to leverage development over the next year to design and construct drainage infrastructure outside of what would be required as part of their development.</p> <p>These are upgrades and replacement of ageing infrastructure that the City would complete separately, but economic and engineering efficiencies can be achieved by having the developer complete this work at the same time the development takes place.</p>		



Program:	Infrastructure Program	Sub-program:	Drainage
Project Name:	Disaster Mitigation and Adaptation Fund Infrastructure Upgrades	Submission ID:	6702
Location:	Various locations		
Cost:	\$2,700,000	OBI:	\$ -
Funding Sources:	Drainage Utility:	\$1,620,000	
	Grant:	\$1,080,000	
Scope:	<p>The City was awarded the Infrastructure Canada Disaster Mitigation and Adaptation Fund in 2019, with grant funding in the amount of \$13,780,000. This project will improve flood protection for the City, support the Flood Protection Management Strategy, and is required to be completed to receive the grant funding.</p> <p>This project includes the design and construction of drainage pump station upgrades and perimeter dike raising included in the Disaster Mitigation and Adaptation Fund grant. The project will be completed in phases over the next four years. The initial phases of the project will primarily include dike upgrades.</p>		



Program:	Infrastructure Program	Sub-program:	Drainage
Project Name:	Drainage Pump Station Rehabilitation and Generator Upgrade	Submission ID:	6709
Location:	Various Locations		
Cost:	\$250,000	OBI:	\$ -
Funding Sources:	Drainage Utility: \$250,000		
Scope:	<p>The hardware of some drainage pump stations is at the end of its life expectancy and continually has numerous breakdowns. This project will improve the reliability and efficiency of the City's drainage pump stations.</p> <p>The scope of work for this project includes rehabilitation upgrades at the No. 6 Road North and No. 7 Road North Drainage Pump Stations.</p> <p>Rehabilitation at the No. 6 Road North Drainage Pump Station will include, but is not limited to, the purchase and installation of two drainage pumps and associated electrical and mechanical components to increase the pumping capacity of the pump station.</p> <p>Rehabilitation at the No. 7 Road North Drainage Pump Station will include, but is not limited to, the purchase and installation of two fully automated actuators. The new actuators will control the existing irrigation gates at the No. 7 Road North Drainage Pump Station, replacing the existing actuators that have reached the end of their service life.</p>		



Program:	Infrastructure Program	Sub-program:	Drainage
Project Name:	Flood Protection & Dike Improvements	Submission ID:	6185

Location: City Wide

Cost: \$1,800,000

OBI: \$ -


Funding Sources: Drainage Utility: \$1,800,000

Scope: The City has 49km of perimeter dike and 39 drainage pump stations that provide the City with flood protection from ocean storm surges and freshets. This project will include drainage and dike improvements at priority locations that maintain or increase current flood protection service levels.

Dike improvements are required to meet medium to long-term flood protection requirements and to accommodate local area needs such as the provision of basic recreation trails. Dike construction work includes, but is not limited to, dike raising, structural rehabilitation, re-grading, vegetation/critter management, tree removal and replacement, habitat and environmental compensation and dike re-armouring at priority locations.



Program:	Infrastructure Program	Sub-program:	Drainage
Project Name:	Invasive Species Management	Submission ID:	6184
Location:	City Wide		
Cost:	\$300,000	OBI:	\$ -
Funding Sources:	Drainage Utility: \$300,000		
Scope:	<p>The scope of work for this project includes the identification, mapping, research, removal and/or control of priority invasive species from the City drainage system and City lands, with the intention of maintaining the required performance of the drainage system. Typical activities will include control techniques to eliminate or minimize the spread of aggressive invasive species, such as Parrot's feather and purple loosestrife, mapping and control treatments for knotweed species which pose a threat to City infrastructure (i.e. pump stations) and biodiversity, and removal of wild chervil from roadside right-of-ways and City drainage infrastructure. The purpose of this project is to reduce the spread of invasive species to reduce the impacts on the City drainage system.</p>		
			

Program:	Infrastructure Program	Sub-program:	Drainage
Project Name:	Laneway Drainage Upgrade	Submission ID:	6657
Location:	Various Locations		
Cost:	\$1,183,000	OBI:	\$ -
Funding Sources:	Drainage Utility: \$1,120,000 Sanitary Utility: \$63,000		
Scope:	<p>The scope of work for this project includes installation of drainage infrastructure in the following areas:</p> <ul style="list-style-type: none">- 520m of laneway drainage between 8960 Ash Street and 8711 No 4 Road; and- 95m of laneway drainage between 9880 Seagrave Road and 9895 Seaton Place. <p>In addition, ageing sanitary infrastructure that has reached the end of its service life will be upgraded where the scope overlaps with the laneway drainage upgrade. Engineering and construction efficiencies will be achieved, and public disruptions will be minimized by coordinating the drainage and sanitary upgrades.</p> <p>This project does not include the addition of street lighting, curbs or gutters.</p>		
			

Program:	Infrastructure Program	Sub-program:	Drainage
Project Name:	SCADA System Improvements	Submission ID:	6976

Location: Various Locations

Cost: \$350,000


OBI: \$ -

Funding Sources: Drainage Utility: \$200,000
Sanitary Utility: \$150,000

Scope: Through its supervisory control and data acquisition (SCADA) system, the City monitors and controls various equipment over the sanitary sewer, drainage, and water network. This project involves rehabilitating, upgrading, and installing computers, instruments, and electrical systems throughout the SCADA system. This project will maintain and improve the sanitary sewer, drainage, and water network operation, as well as maintain system security and technological viability.

Failure to complete the work will result in increased risk of sanitary, drainage and water system failure, thereby reducing service levels and increasing cost and disruption of unplanned maintenance and emergency repairs.



Program:	Infrastructure Program	Sub-program:	Drainage
Project Name:	Storm Main Drainage Upgrade	Submission ID:	6711
Location:	Various locations		
Cost:	\$250,000	OBI:	\$ -
Funding Sources:	Drainage Utility: \$250,000		
Scope:	<p>This project will upgrade storm sewers throughout the City to improve drainage system capacity and performance during higher intensity storm events. Upgrades include, but are not limited to, upsizing existing storm sewers and culverts and installing new drainage pipes.</p> <p>Specific areas include, but are not limited to, the Aztec Street, Woodhead Road and Montego Street neighbourhoods.</p>		
			

Program:	Infrastructure Program	Sub-program:	Drainage
Project Name:	Watercourse Crossing Rehabilitation & Replacement	Submission ID:	6979
Location:	Various Locations		
Cost:	\$350,000	OBI:	\$ -
Funding Sources:	Drainage Utility: \$350,000		
Scope:	<p>This project will repair and replace watercourse crossings throughout Richmond that pose safety risks to vehicles and pedestrians. Rehabilitation and replacement work includes, but is not limited to, replacing failed headwalls and culvert crossings.</p> <p>Additionally, this project includes infilling of non-Riparian Management Area watercourses, extending lengths of existing ditch infills that pose safety risks to the public and assessing and replacing ageing wood stave and corrugated steel drainage pipes.</p>		
			

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Program:	Infrastructure Program	Sub-program:	Water
Project Name:	Development Coordinated Works - Water	Submission ID:	6101

Location: City Wide

Cost: \$250,000

OBI: \$ -

Funding Sources: Water Utility: \$250,000

Scope: This project will enable the City to leverage development over the next year to design and construct water infrastructure outside of what would be required as part of their development.

These are upgrades and replacement of ageing infrastructure that the City would complete separately but economic and engineering efficiencies can be achieved by having the developer complete this work at the same time the development takes place.



Program:	Infrastructure Program	Sub-program:	Water
Project Name:	Fire Hydrant Upgrades	Submission ID:	7214

Location: Various Locations

Cost: \$200,000

OBI: \$ -


Funding Sources: Water Utility: \$200,000

Scope: This project involves replacing old slide gate style fire hydrants to compression style fire hydrants. Compression style hydrants have a break away flange that prevents them from leaking. This will mitigate damage to nearby properties due to hydrant damage caused by impacts such as vehicle strikes.



Program:	Infrastructure Program	Sub-program:	Water
Project Name:	Water Metering Program	Submission ID:	6099

Location:	City Wide		
Cost:	\$3,000,000	OBI:	\$17,418
Funding Sources:	Water Utility: \$1,714,000 Water Levy: \$1,286,000		
Scope:	<p>Water metering enhances user equity by allowing customers to pay for the water and sewer that they use. All single-family and industrial, commercial and institutional (ICI) properties in Richmond are now metered. This project involves the implementation of an advanced volunteer multi-family water meter program.</p> <p>The advanced volunteer multi-family water meter program will target the last sector that is not metered for water. As part of the program, the City offers a subsidy for the actual installation cost of water meters up to the greater of \$1,200 per unit or \$100,000 per complex, as well as a five-year guarantee for water charges for existing multi-family complexes. The program will also involve active outreach by the City to complexes that will benefit from the water meter program.</p>		



Program:	Infrastructure Program	Sub-program:	Water
Project Name:	Watermain Replacement Upgrades Program	Submission ID:	6097

Location: City Wide

Cost: \$5,566,000

OBI: \$ -

Funding Sources: Water Utility: \$5,566,000


Scope: This project replaces ageing watermain that are at the end of their service life and is in alignment with the City's Ageing Infrastructure Replacement Strategy. Watermain replacement minimizes unplanned maintenance and improves fire protection.

This project includes installation of 5,156 metres of 200mm diameter watermain to replace existing ageing infrastructure.

The watermain replacement program is informed by watermain age, material and break history.



Program:	Infrastructure Program		Sub-program:	Water
Project Name:	Watermain Tie-in and Restoration		Submission ID:	6098
Location:	Various Locations			
Cost:	\$300,000	OBI:	\$ -	
Funding Sources:	Water Utility: \$300,000			
Scope:	This project involves tie-in and restoration work for watermain and water service installations, including restoration for watermain replacements completed as part of prior years' capital programs and restoration of water utility cuts.			



2022 Recommended Infrastructure – Sanitary Sewer Program

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Program:	Infrastructure Program	Sub-program:	Sanitary Sewer
Project Name:	Development Coordinated Works - Sanitary	Submission ID:	6078

Location: Various Locations

Cost: \$250,000

OBI: \$ -

Funding Sources: Sanitary Utility: \$250,000

Scope: This project will enable the City to leverage development over the next year to design and construct sanitary infrastructure outside of what would be required as part of their development.

These are upgrades and replacement of ageing infrastructure that the City would complete separately but economic and engineering efficiencies can be achieved by having the developer complete this work at the same time the development takes place.



Program:	Infrastructure Program	Sub-program:	Sanitary Sewer
Project Name:	Sanitary Sewer Tie-in and Restoration	Submission ID:	6108

Location:	Various Locations		
Cost:	\$150,000	OBI:	\$ -
Funding Sources:	Sanitary Utility: \$150,000		
Scope:	This project involves tie-in and restoration work for sanitary sewer projects completed as part of prior years' capital programs.		



Program:	Infrastructure Program	Sub-program:	Sanitary Sewer
Project Name:	Steveston Sanitary Sewer and Hammersmith Forcemain Rehabilitation	Submission ID:	6076

Location: Various Locations

Cost: \$3,800,000

OBI: \$ -

Funding Sources: Sanitary Utility: \$3,800,000

Scope: This project will assess and rehabilitate or replace aging gravity sewers in the City, including infrastructure in the Steveston area and a section of the Hammersmith forcemain that were found to be in poor condition. This will address risk of infrastructure failure, thereby maintaining a high level of service to sanitary customers. This project includes the purchase of bypass equipment, installation of access and valves, dewatering, and other activities required to facilitate sanitary system rehabilitation and replacement.



Program:	Infrastructure Program	Sub-program:	Sanitary Sewer
Project Name:	Valve and Hatch Program	Submission ID:	7220

Location:	Various Locations		
Cost:	\$300,000	OBI:	\$ -
Funding Sources:	Sanitary Utility: \$300,000		
Scope:	This project consists of the installation of valves and hatches along various City forcemains to improve access to the City's sanitary forcemain system, and replace sections of sewer or forcemain found to be in poor condition. Installation of valves on sanitary forcemains will allow for better isolation and control of forcemains in the event of breaks or tie-ins. Valve installation will also allow for regular inspections of this critical infrastructure to inform the City's maintenance program and capital upgrade planning.		



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Program:	Infrastructure Program	Sub-program:	Infrastructure Advanced Design and Minor Public Works										
Project Name:	Public Works Infrastructure Advanced Design	Submission ID:	6077										
Location:	Various Locations												
Cost:	\$3,280,000	OBI:	\$ -										
Funding Sources:	<table><tr><td>Drainage Utility:</td><td>\$2,000,000</td></tr><tr><td>Water Utility:</td><td>\$430,000</td></tr><tr><td>Sanitary Utility:</td><td>\$450,000</td></tr><tr><td>Roads DCC:</td><td>\$376,200</td></tr><tr><td>Roads City Assist:</td><td>\$23,800</td></tr></table>			Drainage Utility:	\$2,000,000	Water Utility:	\$430,000	Sanitary Utility:	\$450,000	Roads DCC:	\$376,200	Roads City Assist:	\$23,800
Drainage Utility:	\$2,000,000												
Water Utility:	\$430,000												
Sanitary Utility:	\$450,000												
Roads DCC:	\$376,200												
Roads City Assist:	\$23,800												
Scope:	<p>The scope of work includes hiring consultants and contractors to plan and design future capital projects and deliver reports that define long-term infrastructure upgrades, including habitat and environmental compensation assessments.</p> <table><tr><td>Sanitary Project Design, Planning and System Modelling</td><td>\$450,000</td></tr><tr><td>Water Project Design, Planning and System Modelling</td><td>\$430,000</td></tr><tr><td>Drainage Project Design, Planning and System Modelling</td><td>\$2,000,000</td></tr><tr><td>Roads</td><td>\$400,000</td></tr><tr><td>Total</td><td>\$3,280,000</td></tr></table>			Sanitary Project Design, Planning and System Modelling	\$450,000	Water Project Design, Planning and System Modelling	\$430,000	Drainage Project Design, Planning and System Modelling	\$2,000,000	Roads	\$400,000	Total	\$3,280,000
Sanitary Project Design, Planning and System Modelling	\$450,000												
Water Project Design, Planning and System Modelling	\$430,000												
Drainage Project Design, Planning and System Modelling	\$2,000,000												
Roads	\$400,000												
Total	\$3,280,000												
													

Program:	Infrastructure Program	Sub-program:	Infrastructure Advanced Design and Minor Public Works
Project Name:	Public Works Minor Capital - Drainage	Submission ID:	6188
Location:	City Wide		
Cost:	\$400,000	OBI:	\$ -
Funding Sources:	Drainage Utility: \$400,000		
Scope:	<p>This project involves minor work related to drainage infrastructure, including installation of inspection chambers, rehabilitation of sewer pipes and manholes, minor repair of pump stations, installation of monitoring equipment, safety upgrades, testing of new technologies to improve efficiencies and responding to resident complaints that require site specific repairs.</p> <p>Every year, Engineering and Public Works receives a number of requests for minor projects. The minor capital program allows the department to respond to these requests in a timely and cost effective manner.</p>		



Program:	Infrastructure Program	Sub-program:	Infrastructure Advanced Design and Minor Public Works
Project Name:	Public Works Minor Capital - Sanitary	Submission ID:	6079

Location: Various Locations

Cost: \$300,000

OBI: \$ -

Funding Sources: Sanitary Utility: \$300,000

Scope: This project involves minor work related to the sanitary infrastructure, including pump station upgrades, sanitary pump replacements, modifications to improve operational efficiency and functionality, testing of new technologies, forcemain repairs, site-specific repairs in response to resident complaints, and manhole and valve box repairs.

Every year, Engineering and Public Works receives a number of requests for minor projects. The minor capital program allows the department to respond to these requests in a timely and cost effective manner.



Program:	Infrastructure Program	Sub-program:	Infrastructure Advanced Design and Minor Public Works
Project Name:	Public Works Minor Capital - Sanitation & Recycling	Submission ID:	6231

Location: City Wide

Cost: \$450,000

OBI: \$ -

Funding Sources: Solid Waste and Recycling: \$450,000

Scope: To provide for Recycling Depot general site maintenance or repairs, expansion projects, funding for streetscape recycling containers in public spaces and garbage and recycling cart replacements.

To provide equipment/vehicle as required to support these program expansions as well as collection of overweight/heavy illegally dumped items.

This project is used to:

1. Replace our City streetscape recycling containers that lose functionality, become damaged and worn due to exposure to weather conditions. Our goal is to replace on a 3-year cycle.
2. Undertake repairs or minor upgrades at the Recycling Depot. This could include building or acquiring small sheds, cages, or structures to add material streams. Acquire new containers types, etc. to enable addition of new materials for collection. Undertake improvements to comply with safety — prepare and post signs, install barricades, replace concrete blocks that become damaged from equipment used to move large items as part of regular operations, etc.
3. Acquire equipment items that may be needed to support operations, including stairs to assist safe drop off of items into taller recycling bins. May also include items to support illegal dumping clean ups and clean up of homeless camps, including carrying aids (dolly's, cutting tools, etc.).
4. Acquire garbage and recycling carts to replace receptacles used by residents which are coming to the end of their expected life.



Building Program 2022

The Building Program includes major building construction and renovation projects as well as minor facility upgrades and repairs. The City's building assets include: arenas, pools, community centres, libraries, heritage buildings, police stations, fire halls and other government facilities.

2022 Recommended Building – Building Program

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Program:	Building Program	Sub-program:	Building
Project Name:	Annual Infrastructure Replacements and Building Improvements	Submission ID:	7192

Location: City Wide

Cost: \$3,000,000

OBI: \$ -

Funding Sources: Others: \$3,000,000

Scope: Annual Infrastructure Replacement and Building Improvement projects servicing the City's 165+ facilities. These projects include equipment replacements of HVAC and Mechanical components, interior renovations and refurbishments, building upgrades and operator requested improvements and installations.



Program:	Building Program	Sub-program:	Building
Project Name:	Britannia Shipyards Envelope & Mechanical System Renewals	Submission ID:	6256

Location: 5180 Westwater Drive

Cost: \$2,125,000 **OBI:** \$ -

Funding Sources: Building and Infrastructure \$2,125,000

Scope: Life / Safety (\$26,000)
 The fire alarm system and associated equipment at the Richmond Boat Builders Facility can no longer be reliably repaired due to outdated equipment (lack of part supply). It will be replaced with a new, energy efficient system to ensure the health and safety of all occupants and visitors.

Envelope (\$1,700,000)
 The roofing of several buildings at Britannia Shipyards are deteriorated and failing. The Visitors Centre which already failed and had an emergency replacement in 2020 / 2021. The roofs of the following buildings will be replaced: Chinese Bunk House, Managers House, Men's Bunk House, Murakami boat works and house, Point House, Boat Builders, and Winch Shed.

Additionally, exterior siding, windows and doors in multiple facilities have deteriorated beyond repair. These elements will be replaced as needed, keeping with the existing aesthetic and heritage considerations as much as possible.

HVAC & Operator Requests (\$399,000)
 The Richmond Boat Builders facility has radiant and baseboard unit heaters that can no longer be repaired due to outdated equipment (lack of part supply). These units will be replaced with new, energy efficient units to ensure the health and safety of all occupants and visitors.

Additionally, the facility operator has requested a new dust extraction system (\$75,000) to be installed to better facilitate boat building. This work is planned to be accomodated through this project.



Program:	Building Program	Sub-program:	Building
Project Name:	Richmond Curling Club - Priority 1 Repairs	Submission ID:	7147

Location: 5540 Hollybridge Way

Cost: \$650,000

OBI: \$ 89,200

Funding Sources: Buildings and Infrastructure: \$650,000


Scope: Envelope & Site Work (\$450,000)

Significant repairs to the facilities various envelope systems are required to stop the current water ingress and prevent future water damage from occurring. Specifically these are: roofing & drains, wood sills, sealants and weather stripping, glazing, doors and cracking stucco. These systems will be repaired or replaced as needed, as well as repainted where applicable.


HVAC (\$200,000)

The existing rooftop units no longer function as intended and can not be repaired due to outdated equipment (lack of part supply). These units will be replaced with new, energy efficient units to ensure the health and safety of all occupants and visitors.




Program:	Building Program		Sub-program:	Building
Project Name:	Richmond Ice Centre Renewals - Phase 2 Construction and associated works		Submission ID:	6866
Location:	14140 Triangle Road			
Cost:	\$6,000,000		OBI:	\$ -
Funding Sources:	Building and Infrastructure: \$6,000,000			
Scope:	<p>Multiple building components in this facility constructed in 1994 have reached the end of their life expectancy and will be replaced with modern energy efficient systems (where possible). These system renewals will also include associated miscellaneous items that will service to prolong the life of the building and ensure the health and safety of its users / inhabitants.</p> <p>This project is estimated at a total of \$13.7M, comprising of \$6.85M expenditure in 2020, \$0.85M expenditure in 2021, and \$6.0M expenditure in 2022. All of these works are planned to be completed at the same time to maximize savings in schedule and costs for mobilization and demobilization.</p> <p>Rinks (\$3,625,222) The board systems in multiple rinks have exceeded their serviceable life span and will be renewed / replaced as needed which includes floor and slab repairs as required. These systems are original to the building, dating back to 1994 with anticipated life spans of 25 years. They were assessed in 2018 and recommended for replacement as soon as possible due to significant wear and tear damage.</p> <p>Mechanical (\$1,274,778) Air conditioning system, roof top units, and hot water storage tanks have all reached the end of their serviceable life span and will be replaced / renewed. These units are original to the building dating back to 1994 with anticipated life spans ranging from 15 - 25 years. They were assessed in 2018 and recommended for replacement by 2020 to ensure reliable continuity of service.</p> <p>Envelope (\$1,100,000) This is the continuation of the roof replacement originally submitted and approved in phase 1. The roof was assessed to be at the end of its life span and needs replacement.</p>			
				


Program:	Building Program	Sub-program:	Building
Project Name:	Richmond Nature Park Infrastructure Renewals	Submission ID:	7149
Location:	11851 Westminster Hwy		
Cost:	\$4,775,000	OBI:	\$ -
Funding Sources:	Building and Infrastructure : \$4,775,000		
Scope:	<p>Life / Safety (\$55,000) The Fire Protection system at the Park House, inclusive of panel and detection devices are over 10 years old, and while still functional they can no longer be relied on, due to outdated software and equipment, to serve their life saving purpose. They will be replaced with new, energy efficient units to ensure the health and safety of all occupants.</p> <p>Site Works (\$2,600,000) The septic system serving the Nature Park site has failed numerous times and is no longer able to function properly due to the high water table it is located in. This system along with the remaining two septic systems will be replaced.</p> <p>Additionally, there is deteriorating concrete accessible ramps and will be repaired or replaced as needed throughout the site.</p> <p>Envelope (\$1,950,000) The envelope systems of the Nature Park Pavilion, House & Garage - all original to the facilities built in 1971 / 76 have failed and will be replaced with modern, energy efficient units. These include: Roof replacements & gutters, doors, windows, soffits, wood siding, decking and stair systems.</p> <p>HVAC, Mechanical & Electrical (\$45,000) Furnace 1 & 2, unit heaters, sump pumps and lighting throughout the Pavilion, Park House and Garage can no longer be reliably repaired due to outdated equipment (lack of part supply). These units will be replaced with new, energy efficient units where applicable.</p> <p>Interior Finishes & Operator Requests (\$125,000) Flooring, wall tiling, interior doors and washroom fixtures are all well worn and repeatedly failing causing increased maintenance and service disruptions to the facility. These systems will be replaced as needed throughout the Nature Park Pavilion and House buildings.</p>		




Program:	Building Program	Sub-program:	Building
Project Name:	South Arm Community Centre Infrastructure Renewals	Submission ID:	6266
Location:	8880 Williams Road		
Cost:	\$1,900,000	OBI:	\$ -
Funding Sources:	Building and Infrastructure: \$1,900,000		
Scope:	<p>Life / Safety (\$150,000)</p> <p>The fire alarm system and associated equipment can no longer be reliably repaired due to outdated equipment (lack of part supply). They will be replaced with new, energy efficient units to ensure the health and safety of all occupants.</p> <p>Interior & Operator Requests (\$950,000)</p> <p>Flooring and tiling systems throughout the Community Centre can no longer be reliably repaired due to outdated finishes (lack of similar / matching part supply) as well as compounded wear and tear due to constant usage for over 20 years. They will be replaced with new finishes to meet the needs of the facility.</p> <p>Sink replacements and millwork installations and replacements are planned to be accommodated through this project.</p> <p>HVAC & Mechanical (\$800,000)</p> <p>Multiple HVAC and Mechanical systems have had components fail that can no longer be reliably repaired due to outdated equipment (lack of part supply). These include: heating and exhaust systems, unit heaters and pumps throughout the Community Centre. These systems will all be replaced with modern, energy efficient units to ensure continued, reliable service to the facility.</p>		



Program:	Building Program	Sub-program:	Building
Project Name:	Watermania Mechanical and Pool Equipment Renewals	Submission ID:	6267
Location:	14300 Entertainment Blvd.		
Cost:	\$2,200,000	OBI:	\$ -
Funding Sources:	Building and Infrastructure: \$2,200,000		
Scope:	<p>Pool / Mechanical (\$1,550,000)</p> <p>The diatomaceous earth filters pumps and wave generator systems can no longer be reliably repaired due to outdated equipment (lack of part supply). These units will be replaced with new, energy efficient units to ensure continued reliable service.</p> <p>Interior & Operator Requests (\$500,000)</p> <p>The facility operator has requested renovations and upgrades throughout the facility including: washroom & change room upgrades, automated toilets as well as accessible counter and sink installation. These systems are all original to the facility and can no longer be reliably repaired (lack of part supply).</p> <p>HVAC (\$150,000)</p> <p>The plate and frame heat exchanger serving the main pool can no longer be reliably replaced (lack of part supply). This unit will be replaced with a new, energy efficient unit.</p>		




Program:	Building Program	Sub-program:	Building
Project Name:	Works Yard Infrastructure Renewals - Phase 1 (Design)	Submission ID:	6808
Location:	5599 Lynas Lane		
Cost:	\$420,000	OBI:	\$ -
Funding Sources:	Buildings and Infrastructure: \$420,000		
Scope:	<p>The total renewal cost for the Works Yard Infrastructure Renewals – Phase 1 is \$4,200,000. This project covers the design component of the Phase 1 renewal work.</p> <p>The Phase 1 renewal work includes the following components:</p> <p>Life / Safety (\$40,000) Fire alarm system equipment of the Administration, Garage Workshop and Stores buildings can no longer be reliably repaired due to outdated equipment (lack of part supply). Will be replaced with new, energy efficient systems ensuring health and safety of all occupants.</p> <p>Envelope (\$210,000) Roofing and metal siding of the Survey Inspector building, and exterior doors of the Dispersal building are failing, allowing water ingress to these facilities. Systems will be repaired and replaced as needed to ensure continued reliability of the facilities.</p> <p>Mechanical & HVAC (\$150,000) Rooftop units, heaters, and controls systems in the Administration Annex, Dispersal, Garage Workshops, Stores and Survey Inspector buildings can no longer be repaired due to outdated equipment (lack of part supply). Units will be replaced with new, energy efficient units to ensure the health and safety of all occupants.</p> <p>Additionally, water distribution systems of the Garage Workshop and Survey Inspector buildings, along with the utility sinks of the Administration building and wet sprinkler system of the Garage Workshop will be repaired and replaced as needed.</p> <p>Interior (\$20,000) Tile and resilient flooring systems throughout the Dispersal building can no longer be reliably repaired due to outdated products (lack of part supply). These will be replaced with new finishes to ensure continued service of the facility.</p>		
			

2022 Recommended Heritage – Building Program

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Steveston Museum - Post Office, Program Space and Exhibit Upgrades87

Program:	Building Program	Sub-program:	Heritage
Project Name:	Steveston Museum - Post Office, Program Space and Exhibit Upgrades	Submission ID:	7150
Location:	3811 Moncton St.		
Cost:	\$354,000	OBI:	\$12,300
Funding Sources:	Capital Revolving:	\$354,000	
Scope:	The purpose of this project is to revitalize the Steveston Museum to better serve the community. Facility upgrades will support operations of the post office, increase programming opportunities and enhance heritage interpretation.		



Parks Program 2022

Richmond is renowned for its high quality parks, trails, natural areas and its vibrant urban realm. The City's park system consists of 133 parks that total approximately 1,966 acres serving the wellness and recreation needs of a diverse and growing community. More than 135 kilometres of trails support walking, rolling and cycling, bringing people to the City's many iconic parks and waterfront destinations. The development of new parks and trails along with new amenities will ensure that Richmond residents continue to receive excellent service and that Richmond continues to be a regional and tourism destination.

2022 Recommended Parks – Parks Program

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Program:	Parks Program	Sub-program:	Parks
Project Name:	London Heritage Farm Master Plan Phase 1	Submission ID:	7134

Location:

Cost:

Funding Sources:

Scope:

London Heritage Farm

\$612,000

Parks Development DCC:

Parks Development City Assist:

\$575,586

\$36,414

The purpose of this project is to implement site improvements (Phase 1) at London Heritage Farm. London Heritage Farm is a significant heritage asset for the City of Richmond. In February 2021, Council approved the London Heritage Farm Master Plan which recommended site improvements in response to key issues and concerns for the site. The master plan was developed in consultation with the local community and London Heritage Farm Society. The works proposed for 2022 aim to improve the park experience for visitors, improve accessibility to and throughout the site, add new heritage interpretive elements, and enhance visibility and sightlines. Works proposed include new pathways and pathway widening and upgrades for accessibility, new site furnishings, new garden areas, heritage interpretive displays, unique site signage, and renovations to the chicken run and bee apiary.



LEGEND

01 NEW TRAIL (SEE ITEM 12) AND NEW HERITAGE INTERPRETIVE DISPLAY

02 NEW TRAIL (SEE ITEM 12) AND NEW HERITAGE INTERPRETIVE DISPLAY

03 NEW TRAIL (SEE ITEM 12) AND NEW HERITAGE INTERPRETIVE DISPLAY

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LONDON HERITAGE FARM

UPDATED MASTER PLAN

SCALE 1:500

DATE: DECEMBER 1, 2021



Program:	Parks Program	Sub-program:	Parks
Project Name:	Lulu Island Park - Preliminary Planning and Site Study Phase	Submission ID:	5241

Location: Middle Arm Waterfront

Cost: \$250,000

OBI: \$ -


Funding Sources: Parks Development DCC: \$235,125
Parks Development City Assist: \$14,875


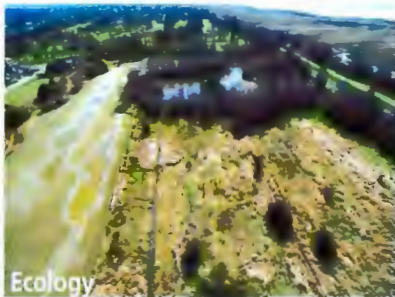

Scope: This capital request will allow the commencement of the preliminary planning and site study phase for Lulu Island Park. A Request for Proposals (RFP) to seek qualified teams to lead the initial planning process. This scope of work will assist the City with determining required next steps related to pre-planning works, including but not limited to diking, site servicing, demolition, site preparation, and costing and permitting processes. Public consultation and preliminary concept development are also anticipated to commence in 2022. The leases for the City-owned industrial properties will expire in 2024, at which point demolition is tentatively scheduled to begin.


The concept for Lulu Island Park was approved by Council in 2007 and incorporated in the City Centre Area Plan in 2009. Lulu Island Park is envisioned as the City's premier downtown park and a crucial part of its waterfront will support formal and informal recreation, cultural events, enhanced ecological values, and heritage interpretation. Sustained population growth in the City Centre demonstrates the need for this park, which is expected to serve as a catalyst for development in the adjacent commercial zone. The City has been acquiring the properties that will make up the park since 2005 and to date has completed acquisition of 23.29 acres with just one five acre property remaining.



Program:	Parks Program	Sub-program:	Parks
Project Name:	McDonald Beach Boat Basin Restoration Phase 1	Submission ID:	7020
Location:	McDonald Beach at Sea Island YVR		
Cost:	\$500,000	OBI:	\$ -
Funding Sources:	Waterfront Improvement: \$150,000 Capital Revolving: \$350,000		
Scope:	<p>A structural conditional assessment was completed in 2021 to investigate the condition of the assets at the boat launch. The report recommended the replacement of timber structures on the pier, floats, and ramps. The north float is currently closed to the public due to its degraded and unsafe condition.</p> <p>McDonald Beach Boat Basin and Park has been providing boat launching services to the general public for over 50 years. The park also provides scenic picnic areas, ample parking and a rare wide open space for a dogs-off-leash area.</p> <p>The scope of work for Phase 1 of the restoration would include the replacement of all the timber structures identified in the conditional assessment report as being at the end or within a year of its serviceable life. As a part of the City’s few boat launching infrastructure, this project would enable the City to continue providing the recreational services and to immediately replace the end-of-life park assets.</p> <p>Future phases would consider the dredging requirements of the basin to maintain the site as a viable boat launch facility.</p>		





Program:	Parks Program	Sub-program:	Parks
Project Name:	Parks Advance Planning and Design	Submission ID:	6066
Location:	Various Locations		
Cost:	\$300,000	OBI:	\$ -
Funding Sources:	Parks Development DCC: \$282,150 Parks Development City Assist: \$17,850		
Scope:	<p>This annual project submission for Parks Advance Planning and Design will provide resources for planning, research, public and stakeholder consultation, design and project management for a range of purposes, strategic planning projects, reports to City Council, meeting regulatory agency requirements (e.g., Vancouver Coastal Health, Provincial ministries), conceptual park design and technical reports for projects that require particular areas of expertise (e.g., environmental assessments).</p> <p>2022 projects include:</p> <ul style="list-style-type: none">- conceptual park and open space planning for various sites;- topographical surveys (engineering site survey pick-up);- park resource management planning;- park characterization projects;- best practices research; and- review and update the Trails Strategy. <p>The scope of work includes: researching best practices; collecting data, topographical surveys and geographical information; and securing consultation for landscape architectural and engineering services as part of a planning and design process. The design process includes preparing and producing concept designs, reports, presentations and detailed construction drawings for upcoming Major Capital projects. Projects may be community initiated or support a redeveloping area of the City.</p>		
<div><div><p>Agriculture</p></div><div><p>Heritage</p></div></div> <div><div><p>Ecology</p></div><div><p>Recreation</p></div></div>			

Program:	Parks Program	Sub-program:	Parks
Project Name:	Parks Ageing Infrastructure Replacement Program	Submission ID:	6117
Location:	Various Locations		
Cost:	\$530,000	OBI:	\$ -
Funding Sources:	Capital Revolving:	\$530,000	
Scope:	<p>This program targets the replacement of ageing parks and open space infrastructure. The types of infrastructure include waterparks, waterfront assets (e.g., piers, docks, moorage and boat launch facilities), trails and pathways, drainage systems, outdoor sport courts, sports field fencing and equipment (e.g., lighting, bleachers) as well as the replacement of other assets which cannot be funded through the Parks Development Cost Charges program. Assets have been identified that have surpassed their respective life cycles resulting in the loss of structural and/or functional integrity due to wear and age and may present public safety issues. If not addressed these issues may lead to closure of some parks or park amenities, and an increase in service requests to address safety concerns from the public and sports groups.</p> <p>At the July 24, 2017, Council Meeting, the Parks Ageing Infrastructure Plan 2017 Update Report was presented. The report outlined the high priority assets that require immediate attention and proposed the development of an Infrastructure Replacement Strategy and Financial Plan, which is underway. The recommendations of the report were endorsed by Council.</p> <p>2022 Projects include:</p> <ul style="list-style-type: none">- Minoru Richmond Tennis Club Lighting Replacement;- sport court surfacing repairs at Hamilton and McLean Parks (tennis, basketball, etc.);- repair to trails at McDonald Beach; and- timber structures repairs at No. 3 Road Pier.		
			

Program:	Parks Program	Sub-program:	Parks
Project Name:	Parks General Development	Submission ID:	6065

Location:	Various Locations		
Cost:	\$400,000	OBI:	\$ -
Funding Sources:	Parks Development DCC: \$376,200 Parks Development City Assist: \$23,800		
Scope:	<p>Upgrades to existing parks are required to respond to emergency requests and ongoing growth in the community. This program funds improvements of existing park amenities and facilities which are not part of other park capital programs, yet are required to support the increased use as a result of an increasing resident population. This funding allows the City the ability to be responsive to Council direction and appropriate public requests which align with existing strategic plans. These discrete, site-specific park enhancements will address our community's needs for ongoing park improvements to infrastructure, equipment and landscape amenities.</p> <p>Examples of projects that have been funded by the General Development program include new walkways and pathways, new community gardens, community gathering spaces, new dogs off-leash areas, benches and other park furnishing, new drainage systems, drinking fountains and sport amenities.</p> <p>For 2022, projects will include:</p> <ul style="list-style-type: none">- the installation of a new drainage system at King George Park to address the flooding of the east side of the park during heavy rain;- landscape upgrades at London Heritage Farm (new sprinkler system, etc.);- new sensors and timers for tennis court lighting at Hugh Boyd, South Arm, and Thompson;- and fencing replacement around sportsfields at Minoru, Hugh Boyd, King George.		



Program:	Parks Program	Sub-program:	Parks
Project Name:	Parks Identity Signage Program	Submission ID:	7129
Location:	Various Locations		
Cost:	\$100,000	OBI:	\$ -
Funding Sources:	Parks Development DCC: \$94,050 Parks Development City Assist: \$5,950		
Scope:	<p>This project is a continuation of the initiative to inform the public of the name of the park that they are visiting, amenities within the park and wayfinding in parks.</p> <p>In order to adequately provide park identity, regulatory information and wayfinding for the public and community, Phase 4 of the signage fabrication and installation program needs to be completed to ensure an ongoing, coordinated approach to site identity. Phase 4 of the fabrication and installation plan includes up to 20 neighbourhood parks and wayfinding routes as needed. The request for funding for this program is from the Parks DCC program.</p> <p>A cost estimate on the material costs for fabrication and labour has been completed based on the design for identity and wayfinding signage. The estimate for this next phase is \$100,000.</p> <p>The scope of work includes:</p> <ul style="list-style-type: none">- Designing and completing an analysis as per park identification and wayfinding location;- Developing site plans for park ID deployment;- Coordinating with a signage vendor and/or in-house services for the fabrications of the signs; and- Coordinating the installation deployment of Phase 4 with in-house services.		
			

Program:	Parks Program	Sub-program:	Parks
Project Name:	Playground Replacement Program	Submission ID:	5946

Location: Various Locations

Cost: \$550,000

OBI: \$ -


Funding Sources:

Parks Development DCC:	\$47,025
Parks Development City Assist:	\$2,975
Capital Revolving:	\$500,000

Scope: This capital program addresses playgrounds that are at the end of their useful life and do not meet the current safety guidelines (according to the industry standard, the Canadian Standards Association's "Children's Playspaces and Equipment"), or can no longer be maintained to meet the guidelines due to obsolescence or vandalism. The program is directed towards replacing all or part of a playground and includes replacement of playground equipment, playground infrastructure (e.g., resilient surfacing, borders, drainage) and landscape features.

This program focuses on the replacement of the playgrounds at Hugh Boyd Park and Great West Cannery Park.



Program:	Parks Program	Sub-program:	Parks
Project Name:	Terra Nova Washroom Septic System	Submission ID:	7143
Location:	Terra Nova Rural Park		
Cost:	\$250,000	OBI:	\$ -
Funding Sources:	Parks Development DCC: \$235,125 Parks Development City Assist: \$14,875		
Scope:	<p>This project proposes to construct a new septic field at Terra Nova Rural Park to replace the existing septic holding tank that is currently servicing the Adventure Play Area washroom. The washroom was installed in 2018 in response to incredible popularity of the adjacent playground. The washroom discharges into a septic holding tank with capacity for 1,400 gallons of sewage. The septic tank must be emptied out with a pump servicing truck when it approaches capacity, at which point sensors in the washroom signals crews to empty the holding tanks and/or close the facility to prevent surcharging.</p> <p>The demand placed on the washroom has far exceeded the expected use. During peak demand in the summer, the septic tank is pumped daily. This frequency was not anticipated and has a significant operational budget cost and creates a service delivery gap.</p>		
			

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Program:	Parks Program	Sub-program:	Parkland
Project Name:	Parkland Acquisition	Submission ID:	6067

Location: As per Parks DCC Land Acquisition Plan

Cost: \$4,000,000

OBI: \$ -

Funding Sources: Parks Acquisition DCC: \$3,762,000
Parks Acquisition City Assist: \$238,000

Scope: The purpose of the Parkland Acquisition program is to acquire land for park requirements to address development and population growth. The program is based on the City's population projections as per the OCP with the objective of maintaining the parks provision standard of 7.66 acres per 1,000 population. The program is funded through Parkland Acquisition Developer Cost Charges (DCCs) and is guided by the Council approved 2009 Parkland Acquisition Strategy which provides the criteria for evaluating proposed acquisitions. Funding is required each year to allow the City to be strategic and responsive as properties become available, thus avoiding the need to borrow the funding from other City sources or pass bylaws to release the funds for each acquisition.

Base Level Parks & Open Space Map (2031)



Public Art Program 2022


The Public Art Program is a self-sustaining project funded by private development contributions to the Public Art Reserve. Council approved the updated policy (Policy 8703, adopted July 27, 2010). The Program is supported by a Council appointed Public Art Advisory Committee. The Public Art Program also supports the initiatives expressed in the Richmond Art Strategy 2019 - 2024, which was approved by Council in July 2019. The above proposal assists in its annual implementation, which is necessary to its success. Private sector, private donations and community contributions are successfully sought and received.

The Public Art Program contributes to Council's Strategic Plan 2018 – 2022. It supports One Community Together: Vibrant and diverse arts and cultural activities and opportunities for community engagement and connection. It also supports 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.

2022 Recommended Public Art Program

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Public Art Program101

Program:	Public Art Program	Sub-program:	Public Art
Project Name:	Public Art Program	Submission ID:	6197
Location:	Various locations		
Cost:	\$200,000	OBI:	\$ -
Funding Sources:	Public Art Program: \$200,000		
Scope:	<p>The scope of work consists of a variety of developer funded public art projects. The following are proposed projects (with estimated costs), which may change during the project's duration based on the Public Art Program's consideration of public art opportunities, priorities, and private development funding.</p> <p>Contributions by private developers, totalling \$200,000, have been deposited to the Public Art Reserve and allocated as follows:</p> <p>Community public art projects: \$40,000</p> <ul style="list-style-type: none">- No. 3 Road art columns- Art wraps- Capture Photography Festival- Children's Art Festival <p>Community education and promotion of the public art program: \$10,000</p> <ul style="list-style-type: none">- Culture Days- Virtual Art Program- Public Art Bus Tours- Art at Work Workshop Series <p>Collaboration on educational opportunities with other City cultural facilities and programs, such as the Richmond Art Gallery, Media Lab, Cultural Centre and Richmond Museum: \$20,000</p> <p>Art Plinth at Brighthouse Station: \$50,000</p> <p>Engaging Artists in Community Program: \$30,000</p> <p>Community Mural Program: \$30,000</p> <p>Youth Mentorship Public Art Program: \$20,000</p>		
			

Land Program 2022

The land acquisition program relates to the acquisition and disposition of real property for the City, as approved by Council.


2022 Recommended Land – Land Acquisition Program

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Strategic Real Estate Acquisition 103

Program:	Land Program	Sub-program:	Land
Project Name:	Strategic Real Estate Acquisition	Submission ID:	6205

Location:	Various Locations		
Cost:	\$5,000,000	OBI:	\$ -
Funding Sources:	Capital Industrial: \$5,000,000		
Scope:	<p>Funds for land acquisition to meet the Council Approved Strategic Real Estate Investment Plan, other than DCC and other special reserve funded projects, are set aside in the Capital Reserve under the Industrial Use Fund. This capital budget submission is to use land acquisition monies from this fund as well as additional general funds approved by Council.</p> <p>\$5 million to be invested in investment class real estate.</p>		



Affordable Housing Program 2022


The City recognizes that a diverse range of housing choices for individuals and families of varying incomes is essential in creating a liveable community. The purpose of the City's Affordable Housing program is to support the creation of affordable housing in partnership with senior levels of government, non-profit organizations and the private sector. Through various programs and policies, the City has successfully secured over 1,500 affordable housing units since the City's first Affordable Housing Strategy was adopted in 2007, including the following highlighted developments:

- The Kiwanis Towers, which provides 296 affordable rental units for low income seniors;
- The Storeys development, which provides 129 affordable rental units for low income households;
- The Alderbridge Supportive Housing project, which provides 40 supportive housing units for residents experiencing homelessness;
- The upcoming Bridgeport Supportive Housing project, which will provide 40 supportive housing units for residents experiencing homelessness; and
- The upcoming Pathways development, which will provide 80 affordable rental units for low and moderate income single people, families and seniors.

2022 Recommended Affordable Housing Program

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Affordable Housing Operating Initiatives 105

Program:	Affordable Housing Project		Sub-program:	Affordable Housing
Project Name:	Affordable Housing Operating Initiatives		Submission ID:	6872
Location:	City Wide			
Cost:	\$400,000	OBI:	\$ -	
Funding Sources:	Affordable Housing - Operating: \$400,000			
Scope:	<p>The City's Affordable Housing Strategy 2017-2027 and Homelessness Strategy 2019-2029 guide the City's actions regarding affordable housing and homelessness service provision. Six operating areas have been identified to provide staff with the necessary resources to advance the implementation of these strategies. Examples include administration costs, and consulting services related to research, public engagement, and economic analysis.</p> <p>1. Homelessness Support (\$25,000) - Continue supporting homelessness initiatives in the community.</p> <p>2. Strategy Administration (\$300,000) - Support the implementation of short-term actions identified in the Council-adopted Affordable Housing Strategy and Homelessness Strategy.</p> <p>3. Legal Fees (\$30,000) - Offset costs associated with legal services required with respect to affordable housing developments. All external legal services will be at the direction of the City's Law Department.</p> <p>4. Printing, Publication, Media and Advertising (\$5,000) - Offset costs associated with education regarding affordable housing and homelessness, including meeting traditional and social media needs as they arise.</p> <p>5. Economic Analysis (\$20,000) - To supplement staff expertise to provide economic analysis regarding affordable housing policies and development project.</p> <p>6. Communications and Public Engagement (\$20,000) - Support communications and community engagement (i.e., translation, professional facilitation, engagement consultants) for projects that require extensive and complex engagement and education.</p>			
				

Equipment Program 2022

The equipment program includes machinery and vehicles for Public Works (PW), Fire Rescue Services, City Hall computer hardware, software, and other miscellaneous equipment.

2022 Recommended Equipment – Vehicle Program

Automatic Vehicle Location/Global Positioning System Expansion..... 107

Vehicle and Equipment Reserve Purchases (Public Works and Corporate Fleet) 108

Program:	Equipment Program	Sub-program:	Vehicle
Project Name:	Automatic Vehicle Location/Global Positioning System Expansion	Submission ID:	7152
Location:	Public Works - Fleet Operations		
Cost:	\$139,653	OBI:	\$100,040
Funding Sources:	Public Works Equipment: \$139,653		
Scope	Working with business units and Fleet staff to: a. establish required Vehicles/Units for expansion b. refine system specifications requirements for Power To Off (PTO) and additional sensor capabilities c. establish resource requirements for implementation and administration d. Work with business units to implement		

The diagram illustrates the GPS Tracking System architecture. It shows a GPS Satellite in the top left corner, which communicates with a GPS Vehicle Tracker mounted on a blue truck. The truck is labeled "Truck with GPS Tracking System" and "Location Delivered by GPS Network". The tracker sends data through a central "GSM Cellular Network" (represented by a red tower icon) to two endpoints: a "GPS Server" and a "Mobile Phone".


The GPS Server is shown with a computer monitor and keyboard, with text indicating "Location received by GPS Server via GPS" and a list of features:

- View actual location through Google Earth
- Follow or track vehicle
- Location information made available via PC
- View travel history
- Alarms and Reports

The Mobile Phone is shown with a person icon, with text indicating "Get vehicle status via SMS" and a list of features:

- Send vehicle status inquiry and command
- Get coordinates

Program:	Equipment Program	Sub-program:	Vehicle
Project Name:	Vehicle and Equipment Reserve Purchases (Public Worsk and Corporate Fleet)	Submission ID:	7213
Location:	Works Yard and Various City Departments		
Cost:	\$4,368,600	OBI:	\$23,000
Funding Sources:	Public Works Equipment: \$3,813,600 Sewer Levy: \$260,000 Water Levy: \$195,000 Others: \$100,000		
Scope:	Annual replacement of vehicles eligible due to age and condition in accordance with Sustainable Green Fleet Policy 2020. Process for replacement of aging fleet is to establish needs and develop specifications for vehicle/equipment replacements. Send bid information out to the marketplace, evaluate submissions and award accordingly. The project involves replacement of the following: Vehicles/Equipment 13 trailers, 3 cars, 7 tractors, 4 vans, 4 small equipment, 1 chipper truck, 2 excavators, 1 utility units, 5 trucks, 2 Tandems Unallocated amount to support vehicle/equipment estimate adjustments and charging infrastructure expansion, Weld shop equipment replacements/upgrades Additional Level Requests: <ul style="list-style-type: none">- Watercourse and Dike maintenance equipment funded through Public Works Equipment Reserve- Purchase of 2 staff vehicles and associated maintenance OBI costs included to facilitate an increased level of service by Facility Services funded by appropriated surplus		



2022 Recommended Equipment – Fire Vehicle Program

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Fire Vehicle Replacement Reserve Purchases.....110


Program:	Equipment Program		Sub-program:	Fire vehicle
Project Name:	Fire Vehicle Replacement Reserve Purchases		Submission ID:	6198
Location:	Fire-Rescue			
Cost:	\$2,021,081		OBI:	\$60,000
Funding Sources:	Fire Equipment: \$1,221,081 Others: \$800,000			
Scope:	<p>Front line Fire apparatus replacement follows a life cycle replacement schedule based on best practises and industry standards. In addition, a condition inspection is conducted annually to evaluate the mechanical status of the vehicles to determine replacement need. To ensure we are able to provide fire services to the community. Richmond Fire Rescue (RFR) has a designated "Vehicle & Equipment Reserve". The replacement plan for all apparatus is funded through the reserve.</p> <p>The replacement plan for 2022 includes a front line pumper budgeted at \$1,221,081 CDN.</p> <p>The Council meeting on July 12, 2021 reviewed options related to the Vancouver Airport Fuel Facility and related hazards related to this facility. The option that was passed by council in order to mitigate risk was to upgrade the replacement of this pumper to a High Flow Industrial Pumper funded by the Municipal Access Agreement from the Emergency Response Fuel Facility Provision. The additonal cost is \$800,000 and an associated OBI of \$60,000.</p>			




2022 Recommended Information Technology Program

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Tempest Oracle to SQL Server Migration	121

Program:	Equipment Program	Sub-program:	Information Technology
Project Name:	Annual Hardware Refresh	Submission ID:	6236
Location:	City Hall		
Cost:	\$531,385	OBI:	\$ -
Funding Sources:	Hardware Upgrade: \$531,385		
Scope:	<p>This project scope is to perform the scheduled replacement of end-of-lifecycle City computer hardware, which includes 300 computer desktops, 70 laptops, 210 monitors (desktop and video conferencing enabled), 180 cellular phones and 61 iPads.</p> <p>The City maintains the best practice of replacing aging infrastructure on a defined schedule to mitigate the effects of equipment failure. For our desktop and laptop environment, this schedule is based on a five year refresh cycle. Approximately 1/5th of the total desktop / laptop fleet is replaced each year. These assets are depreciated and written down after disposal approvals have been received. The City either trades in older assets or disposes of them in a certified, environmentally sound manner.</p>		
			

Program:	Equipment Program	Sub-program:	Information Technology
Project Name:	Corporate Website Increased Functionalities	Submission ID:	7153
Location:	City Hall		
Cost:	\$300,000	OBI:	\$ -
Funding Sources:	Capital Revolving:	\$300,000	
Scope:	<p>A governance and operations planning committee will oversee the current-state content inventory and development of the findings and foundation report. This committee will review public consultation, staff engagement, and other input processes to develop the future state vision for the City's website content and guiding principles.</p> <p>An information architecture based on future state content flow and customer journey's that ensures a user-focussed design. Metadata, taxonomy category definitions and content type list and models will be developed to define the structure and blueprint for consistent authoring and template development. A content governance plan will encapsulate the future state recommendations, process diagrams and support framework necessary to deliver the information architecture.</p> <p>A design specifications plan will be delivered that will include template design/requirements, Code Development (Stylesheets/Scripting/Templates), Wire framing (Site Templates/Page Layouts), Branding/Visualizations, Technical and design brand standards.</p> <p>The technical implementation of the design specifications plan will include template and .NET master page conversions, usability testing of navigation and information architecture, validation testing, style guide and CMS features training, and implementation.</p>		
			

Program:	Equipment Program	Sub-program:	Information Technology
Project Name:	Data Analytics 2022	Submission ID:	7162

Location:	City Hall		
Cost:	\$300,000	OBI:	\$ -
Funding Sources:	Capital Revolving:	\$300,000	
Scope:	<p>Data Analytics 2022 allows the City to increase the benefits from the existing Data Analytics platform and enable more staff to focus on higher value activities such as analysis. The resulting data dashboards as a deliverable of the project assist in business decisions. The ability to trace data used to support decisions also increases transparency around decision making processes at the City.</p> <p>Creation of data dashboards include:</p> <ul style="list-style-type: none">- ingestion of City data sources, freely available external data sources such as Statistics Canada and TransLink- transformation and aggregation of data- visualization- projection, analysis, drill-down, etc of visualizations <p>Training is included as part of the project scope for newcomers to the Data Analytics tool.</p>		



Program:	Equipment Program	Sub-program:	Information Technology
Project Name:	Data Centre Server Refresh / Update (Phase 2 of 2)	Submission ID:	6688

Location: City Hall and Works Yard Data Centres

Cost: \$360,000

OBI: \$ -

Funding Sources: Hardware Upgrade: \$360,000

Scope: Data Centre equipment is replaced on a seven year schedule to ensure that users do not experience system downtime and reduced productivity due to unplanned outages and impacts. Keeping equipment maintained and up to date reduces cybersecurity risks and operating costs.



Program:	Equipment Program	Sub-program:	Information Technology
Project Name:	Digital Communication Enhancement / Public Participation at City Hall	Submission ID:	7173

Location: City Hall

Cost: \$350,129

OBI: \$ -

Funding Sources: Capital Revolving: \$350,129

Scope: To replace the existing Council Chamber equipment to enable optimal remote participation by video conferencing based participants for Council and Committee meetings. The scope of this project is to do a complete technology refresh of all equipment for Council Chambers. The last time this technology was upgraded was in 2013. This includes all audio and video equipment in the room and will also provide a tight integration to Zoom enabling this room to also conduct Zoom / YouTube streaming committee meetings.

Additionally, City meeting room facilities will be equipped with video conferencing and remote meeting equipment enabling meetings to have both in-person and remote participants.



Program:	Equipment Program	Sub-program:	Information Technology
Project Name:	MS SQL Server Refresh	Submission ID:	7163

Location:	City Hall	OBI:	\$ -
Cost:	\$324,836		

Funding Sources:	Hardware Upgrade:	\$240,000
	Software:	\$84,836

Scope: To refresh the SQL Server Database platform to accommodate the migration of Tax and Utility system Tempest to Microsoft SQL Server. Tempest will be ceasing support of the current database (Oracle) in 2022. The resulting platform will also be upgraded from the end-of-life SQL Server software and be designed to be highly available, fault tolerable, highly performant.

The scope of work is to buy 4 new hardware servers and MSSQL Server Standard software licenses. This will replace the dated and end-of-life hardware and software. We will move all of the City databases from the existing environment to a new environment. Aside from Tempest, other applications such as the Record Management System REDMS and the Mobile Device Management system AirWatch will benefit from the new SQL Server environment.



Program:	Equipment Program	Sub-program:	Information Technology
Project Name:	Network Refresh for City Facilities (Phase 3 of 3)	Submission ID:	6672

Location: All City Buildings and Facilities


Cost: \$391,100

OBI: \$13,326

Funding Sources: Hardware Upgrade: \$391,100

Scope: The network refresh project will replace the legacy / end of life system with a new, reliable wired and wireless infrastructure based on the selection of a new City network vendor standard, Cisco Systems. This will enable the City to provide employees and the public with dependable access to network services, including public access to the Internet.



Program:	Equipment Program	Sub-program:	Information Technology
Project Name:	PeopleSoft Financial 9.2 Upgrade	Submission ID:	7171
Location:	City Hall		
Cost:	\$477,745	OBI:	\$ -
Funding Sources:	Software:		\$477,745
Scope:	<p>1. To upgrade to the news application version and software tools version - PeopleSoft Financials was upgraded in 2018 to PeopleSoft Update Manager (PUM) 24 PeopleTools 8.55. PeopleTools 8.55 is no longer supported by Oracle since June 9, 2019. In addition, the application would be 4 years behind on in 2022. Without the newest version, new technologies, bug fixes and feature enhancements cannot be utilized.</p> <p>2. To convert customizations to configuration - 150+ customizations and City enhancements have been applied to PeopleSoft Financials since its implementation. Significant amount of time and effort is required to re-apply these customizations and enhancements during upgrades. With PeopleTools 8.56 onwards, Configuration Framework is available to turn customizations into configuration that can reduce implementation effort. Approximately 20% of the City's customizations that can be eliminated.</p> <p>4. To move archived data - the Archived Financial data (FHST) is stored in separate database instance. This archive data needs to be moved to the PeopleSoft scheme to avoid cross database access.</p> <p>5. To uptake Fluid pages on desupported Classic Pages - A number of Classic pages have been desupported by Oracle. No support or new features would be available for those pages. The City has to take on these new Fluid pages.</p>		
			

Program:	Equipment Program	Sub-program:	Information Technology
Project Name:	Snow and Ice Response Tracking	Submission ID:	7251

Location: City Wide

Cost: \$100,000

OBI: \$9,600

Funding Sources: Public Works Equipment: \$100,000

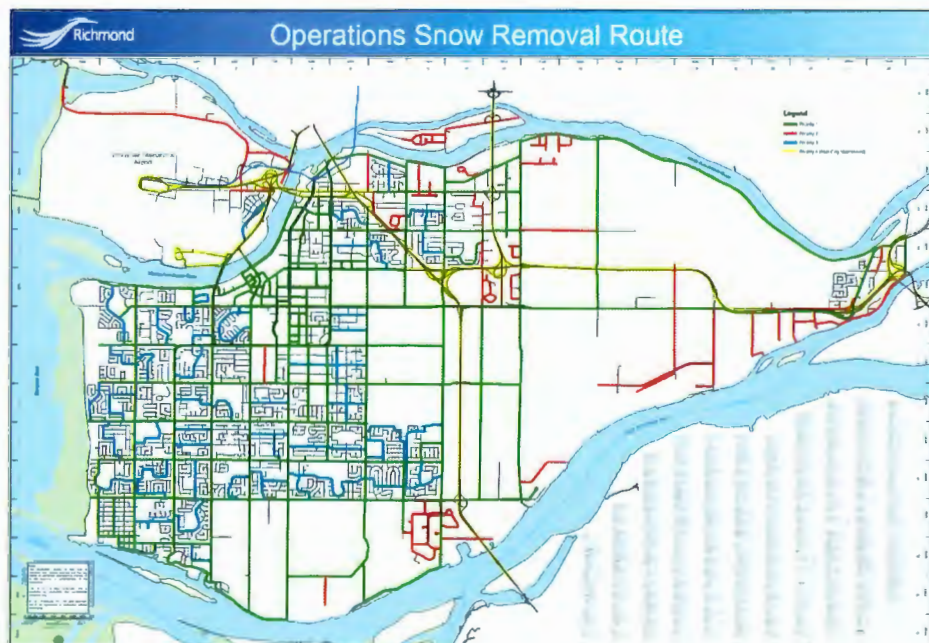
Scope: In January 2020, Richmond City Council referred staff to examine the feasibility of showing the real-time location of snow plows on the Richmond mobile app. This solution will provide an opportunity for Fleet services to achieve strategy #8.2 in Council's Strategic Plan 2018-2022, specifically, Ensure citizens are well-informed with timely, accurate and easily accessible communication using a variety of methods and tools. Making snow and ice response information readily available to Richmond residents will bring awareness to roads that are serviced by the City and their frequency.

The purchase of an ESRI GeoEvents server and consulting services to identify development, implementation, and integration of this product through a discovery session with Roads and Fleet Operations teams.

- Primary outcome of discovery session is an understanding of the integration options for other systems and a build out of the ESRI/RIM option. The secondary outcome would be an understanding of costing for future-scope of building out MyRichmond mobile app and integration with Data Analytics platform for future analytics needs.

- The implementation services would include ingestion of event data, which is available from a data feed, calculations and transformation necessary for RIM, and present a snow plow layer on the City's public RIM portal for public view.

- Fleet operations would verify that Automatic Vehicle Location (AVL) sensor data and the relevant asset information is plotting correctly. Roads would finalize acceptance of the solution.



Program:	Equipment Program	Sub-program:	Information Technology
Project Name:	Tempest Oracle to SQL Server Migration	Submission ID:	7172

Location: City Hall

Cost: \$147,000

OBI: \$ -

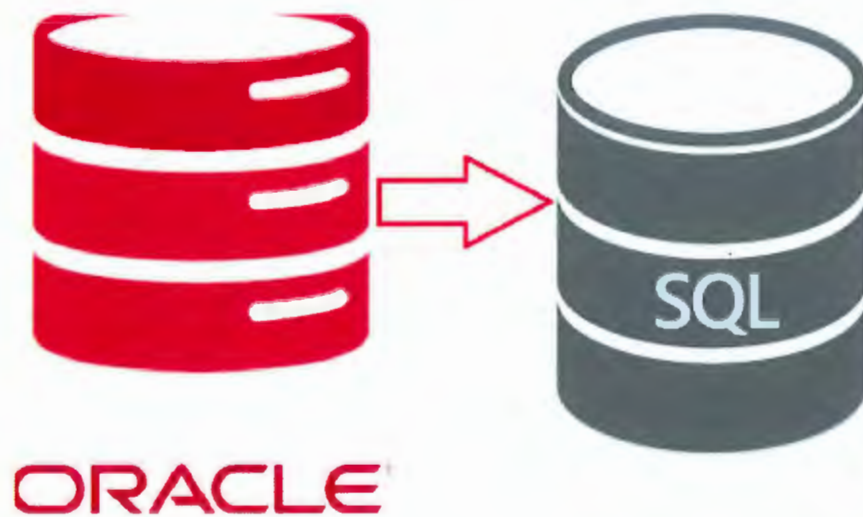
Funding Sources: Software: \$147,000

Scope: CentralSquare will end the support of Oracle for Tempest application at the end of Apr 2023. Unless the database is migrated to SQL server, the City will no longer be able to provide property tax, utility, dog licencing, and ticketing services to our customers.

In addition, Richmond has been using a custom version of the Tempest Dogs eApply web application which deviates from the standard product version and makes maintenance and upgrade difficult and costly. Moving to the standard version of Dogs eApply enables any enhancements or modifications to be available as part of the core product in a more timely fashion without any additional cost.

The scope of the project is to:

1. Migrate Tempest to a supported database platform.
2. To port the custom Dogs eApply web application to the standard version for ease of maintenance and upgrade, without sacrificing any of the Richmond business rules (eg. allow the applicant to complete the journey without a MyCity login).




2022 Recommended Equipment Program

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Street Sweeping Machine for Bike Lanes 125

Program:	Equipment Program	Sub-program:	Equipment
Project Name:	Energy Management Projects	Submission ID:	6134
Location:	Library Cultral Centre- Minoru Arenas- Steveston Tennis Shed		
Cost:	\$600,000	OBI:	(\$32,850)
Funding Sources:	Enterprise: \$230,000 Gas Tax: \$370,000		
Scope:	<p>To reduce the energy consumption at the City of Richmond’s corporate buildings, through conversion of the older fluorescent lighting to the new LED technology at the Library Cultural Centre, Minoru Arenas and Steveston Tennis Shed building. The upgrade will reduce the lighting electricity load substantially. In addition, the new lighting sensors will allow for both occupancy sensing and daylight harvesting to dim the lighting when either there is natural daylight available or if the area is vacant. Any additional funding will be used for the future energy and lighting studies.</p> <p>In addition to the electricity savings, the maintenance cost will be reduced, due to the longer lifespan of the LED lighting.</p>		
			

Program:	Equipment Program		Sub-program:	Equipment
Project Name:	Fire Equipment Replacement - Fire Hose		Submission ID:	6196

Location: Fire-Rescue

Cost: \$124,389 **OBI:** \$ -

Funding Sources: Fire Equipment: \$124,389


Scope: To ensure we are able to provide fire services to the community Richmond Fire Rescue (RFR) maintains an inventory of hose.

Hose Replacement planned and funded by the Fire Equipment Reserve for 2022 to 2025.

Richmond Fire maintains an inventory of fire hose. This hose is inspected and tested annually and failing hose is replaced.

The objective is to maintain an adequate inventory of fire hose to effectively maintain the services.

Richmond Fire expects to continue with replacing 30 lengths of hose per year to maintain the hose inventory.



Program:	Equipment Program	Sub-program:	Equipment
Project Name:	Street Sweeping Machine for Bike Lanes	Submission ID:	7262
Location:	City Wide		
Cost:	\$150,000	OBI:	\$32,264
Funding Sources:	Capital Revolving:	\$150,000	
Scope:	<p>Encouraging more bike trips by providing a safe and cohesive cycling network is a key objective identified in Section 8.0 Mobility and Access of the City's 2041 Official Community Plan (OCP). Per the OCP policies, the City's bike lanes are being upgraded by providing a physical separation between cyclists and motorists to enhance cyclist safety.</p> <p>The majority of the City's designated cycling routes are maintained using a street sweeping machine. However, separated bike lanes, bike paths and multi-use pathways account for approximately 30% of the City's designated cycling routes and cannot be maintained using standard street sweeping equipment as the equipment is too large to access these cycling facilities. As such, separated bike lanes, bike paths and multi-use pathways must be maintained through manual labour. As the number of separated City bike lanes, bike paths and multi-use pathways continues to increase, the efficiency of maintaining these cycling facilities will significantly decrease.</p> <p>This project will permit the City to maintain separated bike lanes, bike paths and multi-use pathways using a street sweeping machine that is sized to access these cycling facilities, thereby improving service levels and avoiding increasing costs to undertake the work using manual labour. The machine will be owned and operated by the City. Maintenance of separated bike lanes, bike paths and multi-use pathways cannot be contracted out to private companies as they do not have street sweeping equipment that can access and maintain these cycling facilities.</p> <p>The machine will be purchased and utilized in accordance with the City's Sustainable Green Fleet Policy 2020.</p>		
			

Child Care Program 2022

Child care is an important service for Richmond residents and an essential need for many parents. The 2017-2022 Richmond Child Care Needs Assessment and Strategy, adopted by City Council on July 24, 2017, and the 2021-2031 Richmond Child Care Action Plan, adopted by City Council on April 12, 2021, outlines the City's commitment to child care. The identified priorities include the establishment and maintenance of a comprehensive child care system to help children and families thrive and addressing the need for quality, affordable, accessible child care spaces in Richmond.

The City supports the creation of child care spaces by accepting voluntary contributions from developers in the form of built child care facilities or cash-in-lieu contributions to the Child Care Statutory Reserves. The City manages and maintains ten existing City-owned child care facilities and one Early Childhood Development Hub. The City is in the process of developing one additional City-owned child care facility and one Early Childhood Development Hub. The new developer-contributed facilities include:

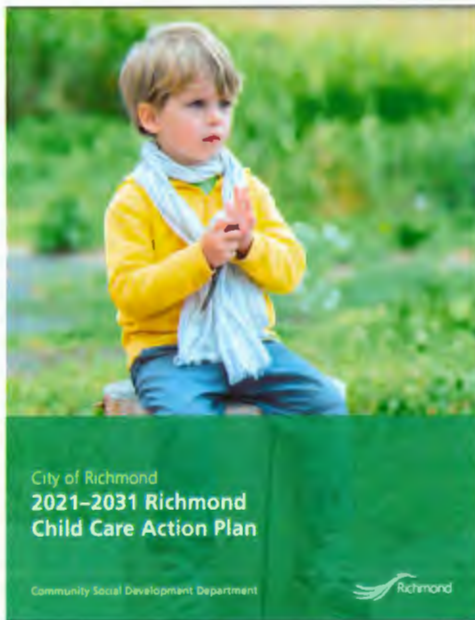
- The Sprouts ECD Hub is located in the Capstan Village neighbourhood and was transferred to the City earlier this year. It will offer 77 spaces of licensed child care operated by the YMCA of Greater Vancouver. This facility is approximately 15,375 square feet indoors and 9,200 square feet outdoors.
- The Seedlings ECD Hub, located in the Brighthouse Village area, will offer 87 spaces of licensed child care operated by the Richmond Society for Community Living (RSCL). This facility will be approximately 19,000 square feet indoors and 11,300 square feet outdoors. It is also under construction and scheduled for completion in 2021.
- The child care facility, which was secured as a community amenity contribution in the River Green development, has been named Hummingbird Child Care Facility. Construction of this 37 space facility, to be operated by the YMCA of Greater Vancouver, is underway and will be completed in 2022. This facility will be approximately 5,000 square feet indoors and 5,000 square feet outdoors.


Dedicated City staff resources help to develop maintain and support the child care system in Richmond. Child Care grants support the work of non-profit child care providers seeking to improve the quality or capacity of care in their facility, or non-profit societies supporting quality programming and/or providing professional development opportunities for the broader child care community in Richmond.

2022 Recommended Child Care Program

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Program:	Child Care Program	Sub-program:	Child Care
Project Name:	Child Care - Administration	Submission ID:	6868
Location:	City Hall		
Cost:	\$200,000	OBI:	\$ -
Funding Sources:	Child Care - Operating:	\$200,000	
Scope:	<p>A source of funding is required to support the City's Child Care section and to assist in the implementation of specific actions adopted by Council in the 2017-2022 Richmond Child Care Needs Assessment and Strategy and the 2021-2031 Richmond Child Care Action Plan.</p> <p>The Child Care Planner 1 position, which has existed as an auxillary position since 2017 and as a regular position since 2020, is funded through the Child Care Operating Reserve and plays an important role in supporting the ongoing work to plan, design and build new child care facilities secured as community amenity contributions. Specific job duties include working with developers, and assisting with regular review of these City facilities to ensure they meet health and safety standards. Further work includes assisting with the planning and development of new child cares (including two Early Childhood Development Hubs), research, developing and updating City publications and working documents, and responding to requests for information from the community, parents and child care providers.</p> <p>In addition, these funds will be used to pay for costs related to: expenses to support the child care work program; research, production of reports, creation of developer resources, and to support the ongoing development of new child care amenities under development including two Early Childhood Development (ECD) Hubs and one child care facility as necessary.</p> <p>The Child Care Operating Reserve is an appropriate source of funding for such expenses. It was established to support grants, conduct research and fund expenses to support the development of quality child care within the City.</p>		
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Program:	Child Care Program	Sub-program:	Child Care
Project Name:	Child Care Projects - City-wide (Capital Grants)	Submission ID:	6139
Location:	Various Locations		
Cost:	\$50,000	OBI:	\$ -
Funding Sources:	Child Care Development Reserve: \$50,000		
Scope:	To provide sufficient funding to administer the City's 2022 Child Care Capital Grants Program. These grants support non-profit child care operators with capital improvements to enhance their child care programs (e.g., minor renovations, outdoor playground upgrades and the purchase of equipment and furnishings).		
			

Program:	Child Care Program	Sub-program:	Child Care
Project Name:	Child Care Projects - City-wide (Non-Capital Grants)	Submission ID:	6145

Location: Various Locations

Cost: \$10,000

OBI: \$ -

Funding Sources: Child Care - Operating: \$10,000

Scope: To ensure there is sufficient funding to support the 2022 Child Care Professional and Program Development Grants (non-capital). Grants are advertised in September 2021 and then, with Council approval, awarded in February or March 2022.



Contingent External Contributions 2022

Contingent external contributions is an estimate of external grants that may be received throughout the year for a variety of approved capital projects.

2022 Recommended Contingent External Contributions

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Contingent External Contribution131

Program:	Contingent External Contributions	Sub-program:	Contingent External Contributions
Project Name:	Contingent External Contribution	Submission ID:	6271
Location:	City Wide		
Cost:	\$10,000,000	OBI:	\$ -
Funding Sources:	Grant: \$10,000,000		
Scope:	The Financial Plan includes an estimate for external grants that may be received throughout the year for various projects. Spending will only incur if the funds are confirmed. Including an estimate in the Financial Plan will allow staff to request scope changes to existing projects without having to wait until the Bylaw Amendment, which is typically adopted in the fall.		

Internal Transfers/Debt Payment Program 2022

The internal transfers/debt program relates to the use of capital funding for repayment of capital funds borrowed from other internal sources of funding.

2022 Recommended Internal Transfers/Debt Payment Program

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12040 Horseshoe Way Repayment 133

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West Cambie Parkland Acquisition Repayment..... 136

Program:	Internal Transfers/Debt Payment		Sub-program:	Internal Transfers/Debt Payment
Project Name:	12040 Horseshoe Way Repayment		Submission ID:	6325
Location:	12040 Horseshoe Way			
Cost:	\$525,000	OBI:	\$ -	
Funding Sources:	Affordable Housing: \$525,000			
Scope:	<p>The purpose of this submission is to repay the Capital Reserve - Industrial Use Fund for the previous Affordable Housing acquisition of 12040 Horseshoe Way from the Affordable Housing Reserve. In order to comply with the Community Charter and as previously approved by Council.</p> <p>The 2022 payment of \$525,000 is fifth of fifteen payments.</p>			

Program:	Internal Transfers/Debt Payment		Sub-program:	Internal Transfers/Debt Payment
Project Name:	7080 River Road Repayment		Submission ID:	6019
Location:	7080 River Road			
Cost:	\$2,341,384		OBI:	\$ -
Funding Sources:	Parks Acquisition DCC: \$2,202,072 Parks Acquisition City Assist: \$139,312			
Scope:	<p>The purpose of this submission is to repay the Capital Reserve - Industrial Use Fund for previous Parkland Acquisitions from Parkland Acquisition Developer Cost Charges (DCC's). In order to comply with the Community Charter and as previously approved by Council.</p> <p>The 2022 payment of \$2,341,384 is the 6th of 8 payments.</p>			

Program:	Internal Transfers/Debt Payment	Sub-program:	Internal Transfers/Debt Payment
Project Name:	River Road/North Loop (2005) Repayment	Submission ID:	6011
Location:	River Road/North Loop		
Cost:	\$1,334,953	OBI:	\$ -
Funding Sources:	Roads DCC: \$1,334,953		
Scope:	<p>In 2005, Council approved \$18.2M borrowing from surplus for the acquisition of the CP rail land between No. 2 and No. 3 Road and for the re-alignment of River Road.</p> <p>This \$18.2M was separated as \$17.1M borrowed in 2005 with repayments commencing in 2006 and a second amount of \$950,000 beginning repayment in 2008. The \$18.2M is to be repaid from Roads DCCs to Surplus over 18 years. The 2022 payment of \$1,334,953 is the 17th payments.</p>		

Program:	Internal Transfers/Debt Payment	Sub-program:	Internal Transfers/Debt Payment
Project Name:	West Cambie Parkland Acquisition Repayment	Submission ID:	7252
Location:	West Cambie		
Cost:	\$492,898	OBI:	\$ -
Funding Sources:	Parks Acquisition DCC: \$492,898		
Scope	<p>West Cambie Parkland Acquisition DCC is repaying General Parkland Acquisition DCC for previous parkland acquisitions.</p> <p>The Parkland Acquisition program is to acquire land for park requirements to address development and population growth. The program is based on the City's population projections as per the OCP with the objective of maintaining the parks provision standard of 7.66 acres/1000 population. The program is funded through Parkland Acquisition Developer Cost Charges (DCC's) and is guided by the Council approved 2009 Park Land Acquisition Strategy which provides the criteria for evaluating proposed acquisitions. Funding is required each year to allow the City to be strategic and responsive as properties become available thus avoiding the need to borrow the funding from other City sources or pass bylaws to release the funds for each acquisition.</p> <p>Acquisition of land as prioritized in the Council approved 2009 Park Land Acquisition strategy for the purposes of creating or completing parks and open spaces to meet the needs of the City's growing population. The funding is typically allocated to an acquisition or acquisitions by year end.</p>		

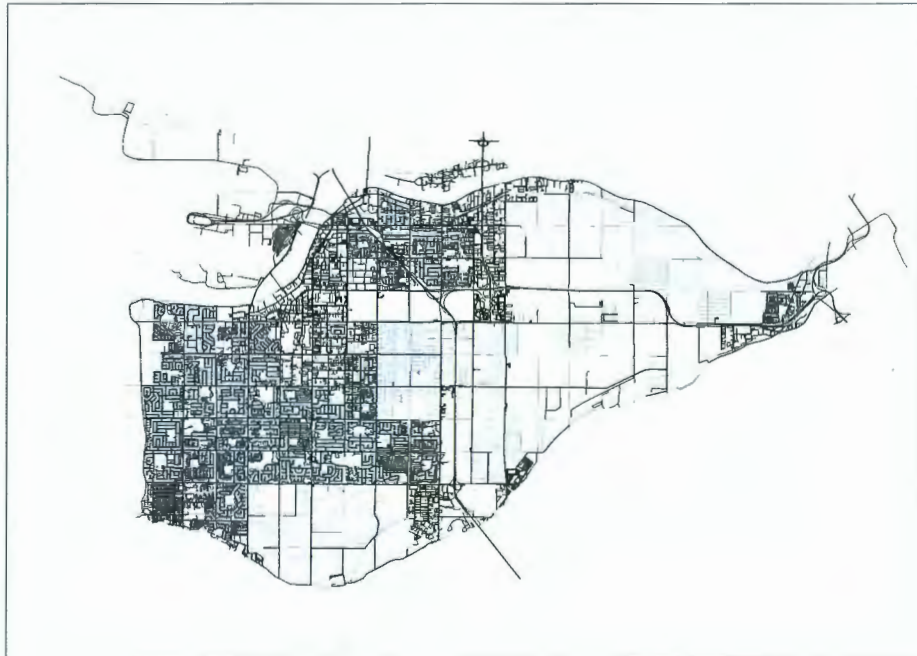
Infrastructure Program 2022 – Not Recommended

Due to funding constraints and higher priority projects, the following infrastructure projects are not recommended for funding.


2022 Not Recommended Roads – Infrastructure Program

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Geographic Information System Roads Database - Phase 1	138
Williams Road Reconstruction - No 4 Road to No 5 Road - Design	139

Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Geographic Information System Roads Database - Phase 1	Submission ID:	7193
Location:	City Wide		
Cost:	\$200,000	OBI:	\$ -
Funding Sources:	Capital Revolving: \$200,000		
Scope:	<p>Through its Geographic Information System (GIS) and Infor Public Sector (IPS) systems, the City manages and tracks City-owned assets, such as the drainage, water and sanitary sewer networks. This project will facilitate development of a GIS and IPS database for the City's road network. The project is proposed to be completed in phases over the next two years. The first phase of the project will include, but not be limited to, development and implementation of a methodology to obtain road attributes that will be input into GIS and IPS.</p> <p>Development of a roads database will support corporate initiatives, such as leveraging artificial intelligence to improve work place efficiencies. This project will also improve the City's asset management processes, support ageing infrastructure and capital planning, and improve efficiency for road maintenance.</p>		
			

Program:	Infrastructure Program		Sub-program:	Roads
Project Name:	Williams Road Reconstruction - No 4 Road to No 5 Road - Design		Submission ID:	7194
Location:	City Wide			
Cost:	\$850,000		OBI:	\$ -
Funding Sources:	Capital Revolving: \$850,000			
Scope:	<p>The existing road structure on Williams Road from No 4 Road to No 5 Road has significantly deteriorated and is providing sub-standard service to commuters and neighbouring homes. The roadway was constructed using roller compacted concrete (RCC), which has been found to have sub-standard performance when compared against asphalt roadways.</p> <p>Over many years of use, significant settlement and road surface cracking has occurred along the roadway. This has lead to increased vibrations for road users and poor ride quality that has negatively impacted vehicle and cyclist traffic and neighbouring homes. Given the significant road deterioration, it has been determined that the most cost effective solution is to complete full road reconstruction before further road deterioration occurs.</p> <p>This project will include design services to facilitate reconstruction of Williams Road from No 4 Road to No 5 Road with an asphalt roadway, thereby reducing City maintenance requirements and improving service to commuters and neighbouring homes. The project scope will also include a review of sustainable practices to recycle the removed roadway RCC per the City's circular economy initiatives.</p>			



2022 Not Recommended Infrastructure Advanced Design and Minor Public Works – Infrastructure Program

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Public Works Minor Capital - Roads141


Public Works Minor Capital - Traffic.....142

Program:	Infrastructure Program	Sub-program:	Infrastructure Advanced Design and Minor Public Works
Project Name:	Public Works Minor Capital - Roads	Submission ID:	6089

Location:	City Wide		
Cost:	\$600,000	OBI:	\$ -
Funding Sources:	Capital Revolving: \$400,000 Others: \$200,000		
Scope:	<p>This project involves minor work related to road infrastructure, including installation of wheelchair ramps, replacement of uneven sidewalks, curbs and small road sections that may have been damaged through ingress or settlement, repair of street lights, and response to resident complaints that require site specific repairs.</p> <p>Every year, Engineering and Public Works receives a number of requests for minor projects. The minor capital program allows the department to respond to these requests in a timely and cost effective manner.</p>		



Program:	Infrastructure Program	Sub-program:	Infrastructure Advanced Design and Minor Public Works
Project Name:	Public Works Minor Capital - Traffic	Submission ID:	6131
Location:	Various Locations		
Cost:	\$250,000	OBI:	\$ -
Funding Sources:	Capital Revolving: \$250,000		
Scope:	<p>Minor work related to traffic operations and traffic signals infrastructure including installation, repairs, or replacement of traffic/parking signage, pavement marking, traffic measure and signal device, upgrades to meet changes in safety requirements, testing of new technologies to improve efficiencies, and response to unforeseen public requests for minor upgrades. These are separate from DCC programs which fund specific projects/locations.</p> <p>Note: Transportation receives public requests throughout the year for minor transportation projects. The minor capital program allows the department to respond to these requests in a timely and cost effective manner.</p> <p>Funding: Revolving fund; potential from TransLink and ICBC</p>		




Building Program 2022 – Not Recommended

Due to funding constraints and higher priority projects, the following building projects are not recommended for funding.

2022 Not Recommended Building – Buliding Program

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Capital Buildings Project Development Advanced Design.....	144
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Program:	Building Program	Sub-program:	Building
Project Name:	Capital Buildings Project Development Advanced Design	Submission ID:	7131
Location:	City Wide		
Cost:	\$750,000	OBI:	\$ -
Funding Sources:	Building and Infrastructure: \$750,000		
Scope:	<p>This funding will be used to provide feasibility and concept level consulting service required to complete the following:</p> <p>Building and feasibility assessments required to develop the 2022 Capital Plan. Staff receive on average approximately 150 projects from User Groups on an annual basis by May of each year that require feasibility level review and costing in time for the Capital project process. Examples for the 2021 program include feasibility and costing for Britannia Shipyards Envelope System Renewals, Nature Park Infrastructure Renewals and the South Arm Community Centre and Hall Infrastructure Renewals.</p> <p>Additionally, performing decarbonisation assessments of existing buildings to establish a masterplan for electrification and net zero carbon / energy ready facilities consistent with the City's High Performance Building Policy. \$250,000 to develop a preliminary design concept for at least 10 buildings that are the highest consumers of natural gas.</p> <p>To respond to requests for feasibility and concept level design and costing services added to the 2022 work plan. Throughout the course of 2020 and 2021 there were approximately 29 such requests, examples of which include the Richmond Curling Club assessment and maintenance plan; Olympic Oval Exterior improvements, locker room renovations and 25 year capital plan generation as well as multiple house demolitions requested from Real Estate. The same level of requests are anticipated for 2022.</p> <p>Without this funding, building improvement and infrastructure replacement projects have to be cancelled and funding reallocated to allow the feasibility and concept level design work to proceed.</p>		
			

Parks Program 2022 – Not Recommended

Due to funding constraints and higher priority projects, the following park projects are not recommended for funding.

2022 Not Recommended Parks – Parks Program

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Burkeville Park Redevelopment 146

Program:	Parks Program	Sub-program:	Parks
Project Name:	Burkeville Park Redevelopment	Submission ID:	7142

Location: 1060 Catalina Crescent

Cost: \$450,000

OBI: \$ -

Funding Sources:

Parks Development DCC:	\$235,125
Parks Development City Assist:	\$14,875
Capital Revolving:	\$200,000

Scope: Burkeville Park was originally constructed in the 1970s and is rapidly approaching end of useful service life. This project aims to replace the existing sport courts and asphalt pathways, and to implement improvements to the playground, site furnishings, and perimeter trail conditions. Redevelopment of the site will ensure continued service delivery and will update the character and aesthetic of the park consistent with the local community. Preliminary consultation with the Sea Island Community Association has resulted in positive feedback for the project and further community engagement is proposed.



Equipment Program 2022 – Not Recommended

Due to funding constraints and higher priority projects, the following equipment projects are not recommended for funding.

2022 Not Recommended Equipment – Equipment Program

Table of Contents

RCMP Command Vehicle Replacement 148


Program:	Equipment Program	Sub-program:	Equipment
Project Name:	RCMP Command Vehicle Replacement	Submission ID:	7174

Location:	Various Locations		
Cost:	\$1,225,095	OBI:	\$35,399
Funding Sources:	Capital Revolving: \$1,225,095		
Scope:	An RCMP Command Vehicle is a mobile Incident Command Post for emergency response and support operations.		

The vehicle operates as both a dispatch centre and a command centre to provide incident commanders with access to multiple communication systems in a fully integrated command centre. This is part of the critical infrastructure required Emergency Response under certain significant events.

The City of Richmond utilized a 1997 Command Vehicle that was years beyond the end of its expected life cycle. The vehicle had cracks in the exterior façade due to the age of the vehicle and exposure to the elements. These cracks were identified in 2014 as the source for the black mould that appeared in the main cabin and since the vehicle was no longer serviceable was ultimately taken out of service.

Replacement of this vehicle is urgent as the loss of the RCMP Command Vehicle has impaired the City's ability to respond to emergencies or disasters in a coordinated manner resulting in potentially higher response costs, a poorer response, a loss of reputation and the trust of the community in providing community safety and protection of residents, businesses and stakeholders.



2022 Not Recommended Information Technology – Equipment Program

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Enhanced Online Customer Experience: Community Services Program Registration..... 150

Program:	Equipment Program	Sub-program:	Information Technology
Project Name:	Enhanced Online Customer Experience: Community Services Program Registration	Submission ID:	7164

Location: City Wide

Cost: \$235,000

OBI: \$ -

Funding Sources: Capital Revolving: \$235,000

Scope: The City's recreation and sport, arts, culture and heritage, and parks registered programs are traditionally catalogued in a printed guide, an online flipping guide, and on the PerfectMind web registration portal. The primary challenge with the first two catalogued mediums are that they are static and reflect point in time information; therefore, any changes in program details and information can lead to this information becoming outdated before they are available for the public to utilize. While these tools have been practice of choice over the years, there is a need to look at more sustainable options to support reaching a larger market and provide accurate up-to-date information. There is a need for a modernized, customer-centric alternative that aggregates and aligns relevant program offerings to customers' demographics, such as general interest, age, current registered events. The solution should offer a personalized online shopping experience that is able to identify customer's needs efficiently while promoting sales. The My Community portal in MyRichmond, if enhanced could provide an alternative to the existing options that will better meet the customer needs.

The scope of work consists of the implementation of a digital program search experience on the MyRichmond portal. This new enhanced online customer experience would allow customers to set criteria for Community Services programs to produce a list of interested events and add to a personalized wish-list. This enhanced online customer experience would not only promote registration and participation, but also encourage the decommissioning of existing tools (e.g. printed copies) and allow for the reallocation of ongoing costs and staff-time to more innovative marketing strategies.



CITY OF RICHMOND
5 YEAR CAPITAL PLAN SUMMARY (2022 - 2026)
(in \$000s)

	2022	2023	2024	2025	2026
Infrastructure Program					
Roads	17,147	17,652	22,807	18,512	14,717
Drainage	12,213	18,095	45,043	36,098	27,939
Water	9,316	9,193	10,445	9,855	9,026
Sanitary Sewer	4,500	4,377	6,150	7,720	5,050
Infrastructure Advanced Design and Minor Public Works	4,430	5,280	4,130	5,130	7,060
Total Infrastructure Program	\$ 47,606	\$ 54,597	\$ 88,575	\$ 77,315	\$ 63,792
Building Program					
Building	21,070	16,715	7,200	2,000	17,500
Heritage	354	-	10,800	16,000	-
Total Building Program	\$ 21,424	\$ 16,715	\$ 18,000	\$ 18,000	\$ 17,500
Parks					
Parks	3,492	4,260	4,850	4,280	2,900
Parkland	4,000	4,000	4,000	4,000	4,000
Total Parks Program	\$ 7,492	\$ 8,260	\$ 8,850	\$ 8,280	\$ 6,900
Public Art Program					
	\$ 200	\$ 150	\$ 150	\$ 150	\$ 150
Land Program					
	\$ 5,000	\$ 5,000	\$ 10,000	\$ 10,000	\$ 10,000
Affordable Housing					
	\$ 400	\$ 400	\$ 400	\$ 400	\$ 400
Equipment Program					
Vehicle	4,508	4,071	4,307	4,109	2,043
Fire Vehicle	2,021	1,258	-	52	1,682
Information Technology	3,282	539	554	570	619
Equipment	875	581	582	802	582
Total Equipment Program	\$ 10,686	\$ 6,449	\$ 5,443	\$ 5,533	\$ 4,926
Child Care Program					
	\$ 260	\$ 260	\$ 260	\$ 260	\$ 260
Internal Transfers/Debt Payment					
	\$ 4,694	\$ 4,201	\$ 2,866	\$ 525	\$ 525
Contingent External Contributions					
	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000
Total Capital Program	\$ 107,762	\$ 106,032	\$ 144,544	\$ 130,463	\$ 114,453

CITY OF RICHMOND
5 YEAR CAPITAL PLAN BY FUNDING SOURCES (2022 - 2026)
(in \$000s)

DCC Reserves	2022	2023	2024	2025	2026
Drainage DCC	-	990	990	-	-
Park Development DCC	1,845	2,727	1,599	1,693	1,872
Park Land Acquisition DCC	6,457	5,964	5,964	3,762	3,762
Roads DCC	9,446	9,710	11,060	8,910	7,457
Sanitary DCC	-	-	1,436	103	-
Water DCC	-	-	1,210	616	-
Total DCC	\$ 17,748	\$ 19,391	\$ 22,259	\$ 15,084	\$ 13,091
Statutory Reserves					
Affordable Housing	925	925	925	925	925
Capital Building and Infrastructure	18,070	16,715	18,080	18,160	17,500
Capital Reserve	9,842	9,140	14,998	14,670	13,179
Child Care	260	260	260	260	260
Drainage Improvement	13,340	15,281	41,905	33,374	30,650
Equipment Replacement	4,649	4,718	3,467	3,510	3,095
Leisure Facilities	-	-	-	-	-
Neighbourhood Improvement	-	-	-	-	-
Public Art Program	200	150	150	150	150
Sanitary Sewer	5,463	5,910	5,650	9,307	5,790
Waterfront Improvement	150	-	-	-	-
Watermain Replacement	9,190	9,024	9,301	9,217	9,649
Total Statutory Reserves	\$ 62,089	\$ 62,123	\$ 94,736	\$ 89,573	\$ 81,198
Other Sources					
Enterprise Fund	720	550	550	550	205
Grant and Developer Contribution	13,480	14,879	18,465	16,675	11,225
Other Sources	11,534	6,061	6,076	6,091	6,487
Rate Stabilization	-	800	-	-	-
Sewer Levy	260	207	272	375	33
Solid Waste and Recycling	450	300	300	300	300
Water Levy	1,481	1,721	1,886	1,815	1,914
Total Other Sources	\$ 27,925	\$ 24,518	\$ 27,549	\$ 25,806	\$ 20,164
Total Capital Program	\$ 107,762	\$ 106,032	\$ 144,544	\$ 130,463	\$ 114,453

CITY OF RICHMOND
5 YEAR CAPITAL PLAN BY PROGRAM (2022 - 2026)
(in \$000s)

	2022	2023	2024	2025	2026
Infrastructure Program					
Roads					
Active Transportation Improvement Program	750	750	750	750	750
Annual Asphalt Re-Paving Program - MRN	1,621	1,621	1,621	1,621	1,621
Annual Asphalt Re-Paving Program - Non-MRN	3,411	3,411	3,411	3,411	3,411
Arterial Roadway Improvement Program	1,000	1,000	1,000	1,000	1,000
Bridge Rehabilitation Program	500	300	-	300	300
Citywide Connector Walkways Rehabilitation Program	250	250	-	-	-
Citywide Sidewalk and Street Light Replacement Program	250	500	500	500	500
Gilbert Road Off-road Cycling Facility, Granville Avenue to Elmbridge Way	-	-	-	3,800	-
LED Street Name Sign Program	300	300	300	300	300
Neighbourhood Walkway Program	600	600	600	600	600
River Road Multi-Use Pathway, McCallan Road to No 2 Road	1,600	-	-	-	-
Sexsmith Road/Brown Road Bike Route	750	-	-	-	-
Shell Road Multi-Use Pathway, Highway 99 to River Road	-	-	8,400	-	-
Special Crosswalk Program	100	100	100	100	100
Steveston Highway Multi-Use Pathway, No 2 Road to Railway Avenue	-	2,700	-	-	-
Street Light LED Upgrade Program	490	490	490	490	490
Top 20 Collision Prone Intersections-Implementation of Medium-/Long-term Improvements	3,000	3,000	3,000	3,000	3,000
Traffic Calming Program	600	600	600	600	600
Traffic Signal Power Backup System (UPS)	200	200	200	200	200
Traffic Signal Program	500	700	700	700	700
Traffic Video and Communication Program	400	400	400	400	400
Transit-Related Amenity Improvement Program	25	25	25	25	25
Transit-Related Roadway Improvement Program	400	400	400	400	400
Transportation Planning, Functional and Preliminary Design	400	305	310	315	320
Total Roads	\$ 17,147	\$ 17,652	\$ 22,807	\$ 18,512	\$ 14,717
Drainage					
Boundary Road Drainage Pump Station Upgrade Fronting Costs	840	-	-	-	-
Box Culvert Repair	1,000	1,000	1,000	1,000	1,000
Burkeville Utility Improvements	1,240	2,457	2,397	2,244	-
Burkeville Utility Improvements Drainage	-	-	-	-	2,189

	2022	2023	2024	2025	2026
Canal Stabilization and Drainage & Irrigation Upgrades	1,700	1,500	1,500	1,500	1,500
Development Coordinated Works - Drainage	250	250	250	250	250
Disaster Mitigation and Adaptation Fund Infrastructure Upgrades	2,700	5,760	7,600	8,874	-
Drainage Network Ecological Enhancement	-	150	150	150	150
Drainage Pump Station Rehabilitation and Generator Upgrade	250	250	250	250	250
Flood Protection & Dike Improvements	1,800	2,000	18,000	10,500	12,100
Habitat Offsetting Requirements	-	300	1,400	1,500	-
Habitat Offsetting Requirements: Monitoring and Reporting	-	-	-	-	1,500
Invasive Species Management	300	200	200	200	200
Laneway Drainage Upgrade	1,183	1,578	1,096	2,430	1,900
Nelson Road South Drainage Pump Station Upgrade	-	-	-	-	6,000
No. 3 Road South Pump Station Upgrade	-	-	10,000	-	-
No. 3 Road South Pump Station Upgrade - Design	-	1,000	-	-	-
Queens North Drainage Pump Station Upgrade	-	-	-	6,000	-
SCADA System Improvements	350	300	300	300	-
Storm Main Drainage Upgrade	250	1,000	500	500	500
Watercourse Crossing Rehabilitation & Replacement	350	350	400	400	400
Total Drainage	\$ 12,213	\$ 18,095	\$ 45,043	\$ 36,098	\$ 27,939
Water					
Development Coordinated Works - Water	250	250	350	250	250
Fire Hydrant Upgrades	200	-	-	-	-
Pressure Reducing Valve Upgrades	-	2,549	-	-	-
Water Metering Program	3,000	3,000	3,000	3,000	3,000
Watermain Replacement Upgrades Program	5,566	3,094	6,595	6,205	5,376
Watermain Tie-in and Restoration	300	300	500	400	400
Total Water	\$ 9,316	\$ 9,193	\$ 10,445	\$ 9,855	\$ 9,026
Sanitary Sewer					
Bennett West Pump Station Replacement	-	-	-	5,400	-
Development Coordinated Works - Sanitary	250	250	250	250	250
Manhole and Inspection Chamber Replacement Program	-	250	-	-	-
Sanitary Pump Station Rehabilitation	-	300	300	300	300
Sanitary Sewer and Forcemain Rehabilitation	-	3,127	-	1,470	3,900
Sanitary Sewer Tie-in and Restoration	150	150	150	150	150
Sanitary System Assessment and Upgrades	-	-	150	150	150
Sanitary System Upgrades	-	150	-	-	-
SCADA System Improvements	-	-	-	-	300

	2022	2023	2024	2025	2026
Steveston Sanitary Sewer and Hammersmith Forcemain Rehabilitation	3,800	-	-	-	-
Valve and Hatch Program	300	150	-	-	-
Van Horne Pump Station Replacement	-	-	5,300	-	-
Total Sanitary Sewer	\$ 4,500	\$ 4,377	\$ 6,150	\$ 7,720	\$ 5,050
Infrastructure Advanced Design and Minor Public Works					
City Centre Community Centre North - Furniture, Fixtures and Equipment (FF&E) and OBI	-	800	-	-	-
Public Works Infrastructure Advanced Design	3,280	2,330	2,380	2,980	4,910
Public Works Minor Capital - Drainage	400	400	400	400	400
Public Works Minor Capital - Roads	-	400	-	400	400
Public Works Minor Capital - Sanitary	300	400	400	400	400
Public Works Minor Capital - Sanitation & Recycling	450	300	300	300	300
Public Works Minor Capital - Traffic	-	250	250	250	250
Public Works Minor Capital - Water	-	400	400	400	400
Total Infrastructure Advanced Design and Minor Public Works	\$ 4,430	\$ 5,280	\$ 4,130	\$ 5,130	\$ 7,060
Total Infrastructure Program	\$ 47,606	\$ 54,597	\$ 88,575	\$ 77,315	\$ 63,792
Building Program					
Building					
Annual Infrastructure Replacements and Building Improvements	3,000	-	-	-	-
Britannia Heritage Shipyards Overwater Building Renewals	-	12,000	-	-	-
Britannia Shipyards Envelope & Mechanical System Renewals	2,125	-	-	-	-
Curling Club Priority 2 Repairs - Phase 1	-	935	-	-	-
Fire Hall Renewals	-	-	3,200	-	-
Hugh Boyd Field House	-	-	-	-	14,000
Richmond Curling Club - Priority 1 Repairs	650	-	-	-	-
Richmond Ice Centre Life / Safety and Interior Renewals	-	-	-	-	1,700
Richmond Ice Centre Renewals - Phase 2	6,000	-	-	-	-
Construction and associated works	-	-	-	-	-
Richmond Nature Park Infrastructure Renewals	4,775	-	-	-	-
South Arm Community Centre Infrastructure Renewals	1,900	-	-	-	-
South Arm Hall Infrastructure Renewal	-	-	-	-	1,800
Thompson Community Centre - Interior Finish Renewals	-	-	-	2,000	-
Watermania Mechanical and Pool Equipment Renewals	2,200	-	-	-	-
Works Yard Infrastructure Renewals - Phase 1 (Design)	420	-	-	-	-
Works Yard Infrastructure Renewals - Phase 1 (Implementation)	-	3,780	-	-	-

	2022	2023	2024	2025	2026
Works Yard Infrastructure Renewals - Phase 2	-	-	4,000	-	-
Total Building	\$ 21,070	\$ 16,715	\$ 7,200	\$ 2,000	\$ 17,500
Heritage					
Japanese Duplex and First Nations Bunkhouse Reconstruction and Exhibit Development	-	-	10,800	-	-
Phoenix Net Loft Interpretive Centre Implementation	-	-	-	16,000	-
Steveston Museum - Post Office, Program Space and Exhibit Upgrades	354	-	-	-	-
Total Heritage	\$ 354	\$-	\$ 10,800	\$ 16,000	\$-
Total Building Program	\$ 21,424	\$ 16,715	\$ 18,000	\$ 18,000	\$ 17,500
Parks Program					
Parkland					
Parkland Acquisition	4,000	4,000	4,000	4,000	4,000
Total Parkland	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000
Parks					
City-Wide Community Gardens	-	200	-	-	-
Garden City Lands - Phase 4	-	-	500	-	-
Garden City Lands - Phase 5	-	-	-	350	-
Garden City Lands - Phase 6	-	-	-	-	350
London Heritage Farm Master Plan Phase 1	612	-	-	-	-
Lulu Island Park - Design and Construction Phase	-	-	-	750	-
Lulu Island Park - Master Planning Phase	-	500	-	-	-
Lulu Island Park - Phase 1 Construction	-	-	-	-	500
Lulu Island Park - Preliminary Planning and Site Study Phase	250	-	-	-	-
Lulu Island Park Design and Site Remediation 2024	-	-	2,000	-	-
McDonald Beach Boat Basin Restoration Phase 1	500	-	-	-	-
Minoru Park Central Amenity Space - Playground Expansion	-	650	-	-	-
Minoru Park Central Amenity Space Detailed Design	-	-	200	-	-
Minoru Park Field 2 Artificial Turf Replacement	-	-	750	-	-
Minoru Park Latrace Field Artificial Turf Replacement	-	-	-	1,580	-
Parks Advance Planning and Design	300	300	300	300	300
Parks Ageing Infrastructure Replacement Program	530	560	-	500	500
Parks General Development	400	400	400	400	400
Parks Interpretive Signage Program	100	-	-	-	-
Parks Interpretive Signage Program - Phase 2	-	-	100	-	100
Playground Improvement Program	-	350	400	400	400
Playground Replacement Program	550	-	-	-	-
Steveston Community Park Playground Expansion	-	600	-	-	-

	2022	2023	2024	2025	2026
Terra Nova Slough Upgrade Park Improvement	-	500	-	-	-
Terra Nova Washroom Septic System	250	-	-	-	-
The Gardens Agricultural Park - Phase 4	-	-	-	-	350
Trails Network Enhancements	-	200	200	-	-
Total Parks	\$ 3,492	\$ 4,260	\$ 4,850	\$ 4,280	\$ 2,900
Total Parks Program	\$ 7,492	\$ 8,260	\$ 8,850	\$ 8,280	\$ 6,900
Public Art Program					
Public Art					
Public Art Program	200	150	150	150	150
Total Public Art Program	\$ 200	\$ 150	\$ 150	\$ 150	\$ 150
Land Program					
Land					
Strategic Real Estate Acquisition	5,000	5,000	10,000	10,000	10,000
Total Land Program	\$ 5,000	\$ 5,000	\$ 10,000	\$ 10,000	\$ 10,000
Affordable Housing					
Affordable Housing Operating Initiatives	400	400	400	400	400
Total Affordable Housing	\$ 400	\$ 400	\$ 400	\$ 400	\$ 400
Equipment Program					
Vehicle Replacement					
Automatic Vehicle Location (AVL)/Global Positioning System (GPS) Expansion	139	-	-	-	-
Automatic Vehicle Location/Global Positioning System Expansion	-	118	146	-	-
Vehicle and Equipment Reserve Purchases (Public Works and Corporate Fleet)	4,369	3,953	4,161	4,109	2,043
Total Vehicle Replacement	\$ 4,508	\$ 4,071	\$ 4,307	\$ 4,109	\$ 2,043
Fire Vehicle					
Fire Vehicle Replacement Reserve Purchases	2,021	1,258	-	52	1,682
Total Fire Vehicle	\$ 2,021	\$ 1,258	\$ -	\$ 52	\$ 1,682
Information Technology					
Annual Hardware Refresh	531	539	554	570	619
Corporate Website Increased Functionalities	300	-	-	-	-
Data Analytics 2022	300	-	-	-	-
Data Centre Server Refresh / Update (Phase 2 of 2)	360	-	-	-	-
Digital Communication Enhancement / Public Participation at City Hall	350	-	-	-	-
MS SQL Server Refresh	325	-	-	-	-
Network Refresh for City Facilities (Phase 3 of 3)	391	-	-	-	-
PeopleSoft Financial 9.2 Upgrade	478	-	-	-	-
Snow and Ice Response Tracking	100	-	-	-	-

	2022	2023	2024	2025	2026
Tempest Oracle to SQL Server Migration	147	-	-	-	-
Total Information Technology	\$ 3,282	\$ 539	\$ 554	\$ 570	\$ 619
Equipment					
Energy Management Capital Projects	-	-	-	-	550
Energy Management Projects	600	550	550	550	-
Fire Equipment Replacement - Fire Hose	125	31	32	-	32
Fire Equipment Replacement from Reserve	-	-	-	252	-
Street Sweeping Machine for Bike Lanes	150	-	-	-	-
Total Equipment	\$ 875	\$ 581	\$ 582	\$ 802	\$ 582
Total Equipment Program	\$ 10,686	\$ 6,449	\$ 5,443	\$ 5,533	\$ 4,926
Child Care Program					
Child Care					
Child Care - Administration	200	200	200	200	200
Child Care Projects - City-wide (Capital Grants)	50	50	50	50	50
Child Care Projects - City-wide (Non-Capital Grants)	10	10	10	10	10
Total Child Care Program	\$ 260	\$ 260	\$ 260	\$ 260	\$ 260
Internal Transfers/Debt Payment					
Internal Transfers/Debt Payment					
12040 Horseshoe Way Repayment	525	525	525	525	525
7080 River Road Repayment	2,341	2,341	2,341	-	-
River Road/North Loop (2005) Repayment	1,335	1,335	-	-	-
West Cambie Parkland Acquisition Repayment	493	-	-	-	-
Total Internal Transfers/Debt Payment	\$ 4,694	\$ 4,201	\$ 2,866	\$ 525	\$ 525
Contingent External Contribution					
Contingent External Contribution					
Contingent External Contribution	10,000	10,000	10,000	10,000	10,000
Total Contingent External Contribution	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
Grand Total	\$ 107,762	\$ 106,032	\$ 144,544	\$ 130,463	\$ 114,453

CITY OF RICHMOND
5 YEAR CAPITAL PLAN BY PROGRAM (2022 - 2026) RECOMMENDED BUT INSUFFICIENT FUNDING
(in \$000s)

	2022	2023	2024	2025	2026
Infrastructure Program					
Roads					
Bridge Rehabilitation Program	-	-	300	-	-
Geographic Information System Roads Database - Phase 2	-	1,500	-	-	-
Williams Road Reconstruction - No 4 Road to No 5 Road - Design	-	5,500	-	-	-
Total Roads	\$ -	\$ 7,000	\$ 300	\$ -	\$ -
Infrastructure Advanced Design and Minor Public Works					
Public Works Minor Capital - Roads	-	-	400	-	-
Total Infrastructure Advanced Design and Minor Public Works	\$ -	\$ -	\$ 400	\$ -	\$ -
Total Infrastructure Program	\$ -	\$ 7,000	\$ 700	\$ -	\$ -
Building Program					
City Hall Annex Infrastructure Replacements	-	-	2,400	-	-
City Hall Mechanical and Interior Finish Renewals	-	-	-	6,800	-
Citywide Caretaker Suite Renewals	-	3,100	-	-	-
Community Safety Building Mechanical System Renewals	-	-	-	1,400	-
Curling Club Priority 2 - Phase 3	-	-	-	4,885	-
Curling Club Priority 2 Repairs - Phase 2	-	-	680	-	-
Curling Club Priority 3 Repairs	-	-	-	-	900
Debeck House Life Safety and Envelope Renewals	-	-	-	-	500
East Richmond Hall Envelope and HVAC Renewals	-	-	-	-	250
Gateway Theatre Mechanical and HVAC Renewals	-	-	-	5,500	-
Library Cultural Centre Envelope System Renewals	-	-	-	2,400	-
Outdoor Pool Renewals	-	-	3,000	-	-
Richmond Courthouse HVAC and Interior Renewals	-	-	1,300	-	-
Richmond Ice Centre Mechanical and Electrical Renewals	-	-	3,700	-	-
South Arm Community Centre Envelope and Infrastructure Renewals	-	-	-	-	9,000
Steveston Martial Arts Envelope and Interior Renewals	-	-	-	-	550
Steveston Post Office and Museum Infrastructure Renewals	-	-	-	-	450
Watermania Infrastructure Renewals	-	5,300	-	-	-
West Richmond Pitch & Putt Mechanical and Interior Renewals	-	-	-	-	600
Works Yard Building System Renewals	-	-	-	4,000	-
Works Yard Infrastructure Renewals	-	-	-	-	4,000
Works Yard Infrastructure Renewals - Phase 3	-	-	4,000	-	-
Works Yard Replacement - Concept Design	-	2,000	-	-	-
Total Building Program	\$ -	\$ 10,400	\$ 15,080	\$ 24,985	\$ 16,250

	2022	2023	2024	2025	2026
Parks Program					
Parks					
Parks Ageing Infrastructure Replacement Program	-	-	500	-	-
Total Parks	\$ -	\$ -	\$ 500	\$ -	\$ -
Total Parks Program	\$ -	\$ -	\$ 500	\$ -	\$ -
Grand Total	\$ -	\$ 17,400	\$ 16,280	\$ 24,985	\$ 16,250

The following is an overview of the major Capital programs proposed for the years 2023 to 2026.

INFRASTRUCTURE PROGRAM

- **Disaster Mitigation and Adaptation Fund Infrastructure Upgrades (2023-2025: \$22,234,000)**

The City of Richmond invests in major disaster mitigation infrastructure to contribute to the Province of British Columbia and Canada's economic growth, public safety and ability to build a community more resilient to climate change.

This project includes the design and construction of drainage pump station upgrades and perimeter dike raising included in the Disaster Mitigation and Adaptation Fund grant. The project will be completed in multiple phases. The initial phases of the project will primarily include dike upgrades.

- **No. 3 Road South Pump Station Upgrade and Design (2023-2024: \$11,000,000)**

This project includes design services to facilitate the demolishing of the existing pump station at (No. 3 Road South) and rebuilding it to a modern standard. The project will increase pumping capacity, increase station resilience, make local dike upgrades and landscape the construction area. This project is part of a larger strategy to increase the City's drainage capacity, increase pump station reliability and reduce flooding in order to accommodate climate change and growth as outlined in the City's Official Community Plan.

- **Van Horne Pump Station Replacement (2024: \$5,300,000)**

This project involves replacement of the Van Horne sanitary sewer pump station and upgrades to the surrounding sanitary system. The existing pump station will not have adequate capacity to service the growing population within the catchment area. The new pump station will be designed to service the projected 2041 OCP population in the catchment area, which is currently undergoing high-density redevelopment. The requirement for the Van Horne pump station upgrade was identified by the 2041 OCP Sanitary Modelling project.

This project involves construction of a new pump station to replace the existing, including construction of a new wet well, variable frequency drive (VFD) pumps, electrical kiosk, 50 meters of 650 mm diameter gravity pipe and 320 meters of 400 mm diameter forcemain. This project will require land acquisition.

- **Bennett West Pump Station Replacement (2025: \$5,400,000)**

The Bennett West sanitary pump station is at the end of its service life and requires replacement. This project involves the construction of a new sanitary pump station complete with wet well, variable frequency drive (VFD) pumps, kiosk, back-up generator, antenna, valve chamber, and BC Hydro transformer to replace the existing station. Construction of the pump station will be coordinated with adjacent developments.

- **Flood Protection & Dike Improvements (2023-2026: \$42,600,000)**

The City has 49km of perimeter dike and 39 drainage pump stations that provide the City with flood protection from ocean storm surges and freshets. This project will include drainage and dike improvements at priority locations that maintain or increase current flood protection service levels.

In particular, this project includes dike improvements adjacent to pump stations that is required to meet medium to long-term flood protection requirements and to accommodate local area needs such as the provision of basic recreation trails. Dike construction works include, but is not limited to, dike raising, structural rehabilitation, brush cutting, and dike re-armouring at priority locations.

Drainage pump station improvements will provide the City with greater capacity to manage higher intensity rainfall events, as well as provide secondary protection for flood events. This project will include condition and capacity upgrades to priority drainage pump stations.

BUILDING PROGRAM

- **Britannia Heritage Shipyards Overwater Building Renewals (2023: \$12,000,000)**

Structural:

The pile foundations of both the Shipyard and Seine Net Loft Buildings, are deteriorating due to environmental conditions such as increased water levels, powder post beetle infestations and age. While there are multiple repair and remediation programs already in use to prolong the life of these piles, many of them are beyond repair and require replacement. The deteriorating piles will be replaced with new, treated ones to prolong the life of these facilities.

Envelope and Operator Requests:

The roofing of both the Shipyard and Seine Net Loft Buildings, as well as the siding of the Shipyard building are in poor condition and can no longer be sufficiently repaired. These systems will be replaced with new, aesthetically similar systems to prolong the life of these facilities.

Additionally, improvement and upgrades requests made by the facility operator are planned as part of this project.

Not proceeding with this work will lead to continued deterioration and increased risk of system failure causing service disruption and emergency replacements.

- **Fire Hall Renewals (2024: \$3,200,000)**

Multiple systems in these emergency response facilities have reached the end of their life expectancy and will be replaced with modern energy efficient systems (where possible). These system renewals will also include associated miscellaneous items that will service to prolong the life of the building and ensure the health and safety of its users / inhabitants.

- **Works Yard Infrastructure Renewals (2023 - 2024: \$7,780,000)**

Multiple systems in multiple buildings at the Works Yard complex constructed in 1980 have reached the end of their life expectancy and will be replaced with modern energy efficient systems (where possible). These system renewals will also include associated miscellaneous items that will serve to prolong the life of the building and ensure the health and safety of its users. All of these works are planned to be completed at the same time to maximize savings in schedule and costs for mobilization and demobilization.

Interior:

Flooring, lighting, wall and restroom systems throughout the administration, garage workshop, stores, sanitation office, survey and dispersal buildings have all reached the end of their serviceable life span and will be renewed or replaced as needed.

Envelope:

Roofing systems inclusive of hatches, skylights and access ladders; as well as aluminum framed glass wall/window systems at the administration, garage workshop, stores, sanitation office, survey and dispersal building have all reached the end of their serviceable life span and will be replaced.

Mechanical:

Heating/cooling, water distribution, exhaust ventilation, gas supply systems throughout the administration, garage workshop, stores, sanitation office, and survey and dispersal buildings have all reached the end of their serviceable life span and will be renewed or replaced as needed.

PARKS PROGRAM

- **Garden City Lands Phase 4 to 6 (2023 - 2025: \$1,200,000)**

The continuation of the development of the Garden City Lands will increase public access to the site and add a greater diversity of activities and experiences. Boardwalks and interpretive signage are planned to provide greater access and opportunities for interaction with the bog ecosystem while a network of trails, community gardens and gathering areas are planned to allow more people to access the western side of the site along with expansion of farm related uses and programs. All planned works will be subject to Council and Agricultural Land Commission approval and are consistent with the Council approved Legacy Landscape Plan.

- Phase 4 will focus on the construction of a washroom facility and parking lots, associated site and landscape improvements, and the further development of park-wide infrastructure.
- Phase 5 is the continuation of the construction of community facilities including amenities such as boardwalks through the bog conservation area and directional and interpretive signage.
- Phase 6 is the continuation of the construction of community facilities including amenities such as a site observation tower and interpretive signage.

- **Lulu Island Park Design and Site Remediation (2024: \$2,000,000)**

This capital request follows the master planning phase in 2023, and will allow the City to begin to secure funding for the design and construction phase for Lulu Island Park. 2024 will see the commencement of design, detailed design, and preparation of a five-year budget. The leases for the City-owned industrial properties will expire in 2024, at which point demolition is tentatively scheduled to begin.

The concept for Lulu Island Park was approved by Council in 2007 and incorporated in the City Centre Area Plan in 2009. Lulu Island Park is envisioned as the City's premier downtown park and a crucial part of its waterfront, supporting formal and informal recreation, cultural events, enhanced ecological values, and heritage interpretation. Sustained population growth in the City Centre demonstrates the need for this park, which is expected to serve as a catalyst for development in the adjacent commercial zone.

- **Playground Improvement Program (2023 - 2026: \$1,550,000)**

This capital program addresses playgrounds that are at the end of their useful life and do not meet the current safety guidelines (according to the industry standard, the Canadian Standards Association's "Children's Playspaces and Equipment"), or can no longer be maintained to meet the guidelines due to obsolescence or vandalism. The program is directed towards replacing all or part of a playground and includes replacement of playground equipment, playground infrastructure (e.g., resilient surfacing, borders, drainage) and landscape features.

LAND PROGRAM

- **Strategic Real Estate Acquisition (2023 - 2026: \$35,000,000)**

Funds for land acquisition to meet the Council Approved Strategic Real Estate Investment Plan. Availability of funds in the capital budget provides the ability to act quickly when necessary and avoid costs incurred to repay the Revolving Fund.

EQUIPMENT PROGRAM

- **Vehicle and Equipment Reserve Purchases (Public Works and Corporate Fleet) (2023 - 2026: \$14,265,543)**

Annual replacement of vehicles eligible due to age and condition in accordance with Sustainable Green Fleet Policy 2020.

Process for replacement of ageing fleet is to establish needs and develop specifications for vehicle/equipment replacements. Send bid information out to the marketplace, evaluate submissions and award accordingly.

2MVA	2 Mega-Volt Ampere
5YFP	5 Year Financial Plan
AC	Air Conditioning
APS	Accessible Pedestrian Signal
AVL	Automatic Vehicle Location
CCTV	Closed Circuit Television
CLCM	Contract Life-Cycle Management
CMBC	Coast Mountain Bus Company
CPI	Consumer Price Index
DCC	Development Cost Charges
EV	Electrical Vehicle
GCL	Garden City Lands
GHG	Greenhouse Gas
GPS	Global Positioning System
HPS	High Pressure Sodium
HVAC	Heating, Ventilation, and Air Conditioning
ICBC	Insurance Corporation of British Columbia
IPS	Infor Public Sector
KPI	Key Performance Indicator
LED	Light-Emitting Diodes
MPI	Municipal Price Index
MRN	Major Road Network
MUP	Multi-Use Pathway
NIC	Neighbourhood Improvement Charges
OBI	Operating Budget Impact
OCP	Official Community Plan
PDF	Portable Document Format
PRV	Pressure Reducing Valve
PW	Public Works
RCMP	Royal Canadian Mounted Police
RFP	Request for Proposal
RFR	Richmond Fire-Rescue
RPL	Richmond Public Library
RSA	Rate Stabilization Account
RWIS	Road Weather Information System
SCADA	Supervisory Control and Data Acquisition
TMC	Traffic Management Centre
UPS	Uninterruptable Power Supply