



City of Richmond

Report to Committee

To: Finance Committee
From: Jerry Chong, CPA, CA
 Director, Finance
Re: 2017 Capital Budget

Date: November 17, 2016
File: 03-0985-01/2016-Vol
 01

Staff Recommendation

1. That the 2017 Capital Budget totalling \$102,925,549 be approved and staff authorized to commence the 2017 Capital Projects; and
2. That the 2017 Capital Budget totalling \$102,925,549 and the 2018-2021 Capital Projects be included in the 5 Year Financial Plan (2017-2021).

Jerry Chong, CPA, CA
 Director, Finance
 (604-276-4064)

App. 10

REPORT CONCURRENCE		
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER
Information Technology	<input checked="" type="checkbox"/>	
Real Estate Services	<input checked="" type="checkbox"/>	
Arts, Culture & Heritage	<input checked="" type="checkbox"/>	
Parks Services	<input checked="" type="checkbox"/>	
Recreation Services	<input checked="" type="checkbox"/>	
Engineering	<input checked="" type="checkbox"/>	
Project Development	<input checked="" type="checkbox"/>	
Law & Community Safety	<input checked="" type="checkbox"/>	
Fire Rescue	<input checked="" type="checkbox"/>	
Transportation	<input checked="" type="checkbox"/>	
CONCURRENCE OF SMT	INITIALS: 	APPROVED BY CAO

Executive Summary

Capital funds are directed towards infrastructure and asset management programs ranked based on the highest priority projects to respond to Council direction and provide services to the citizens of Richmond. The 2017 Capital Budget of \$102.9M includes significant investment in infrastructure renewal to maintain community viability. A more detailed breakdown of each program is included in the appendices to this report.

The following is an overview of the major program areas funded through the capital budget with selected highlights of proposed 2017 initiatives being recommended to Council.

Infrastructure – \$41.0M:



The City's Infrastructure Program funds assets that include: dykes, roads, drainage and sanitary pump stations, drainage, water, and sanitary mains.

The 2017 program includes City Centre Infrastructure Upgrades (\$3.2M), Dike Upgrades (\$3.0M), Watermain Replacement – Lulu Island North Area (\$2.9M), Land Acquisition for a Grease Management Sanitary Facility (\$2.5M), River Drive Multi-Use Pathway, No. 4 Road to Van Horne Way (\$1.3M), Hamilton Sanitary Sewer and Pump Station Upgrade (\$1.7M), water metering program, and pavement upgrades.

Building – \$6.3M:



The building program funds major building construction and renovation projects as well as minor facility upgrades.

The 2017 building program includes Advanced Planning and Design for Major Facilities Phase 2 (\$2.0M), and South Arm Community Centre Fitness Renovation (\$1.5M).

Parks – \$9.1M:



Richmond is renowned for its high quality parks and recreation facilities, with over 145 parks totaling approximately 1,950 acres. In addition to the City’s parks, Richmond also has 73 kilometers of recreational trails.

The 2017 program includes strategic Parkland Acquisition (\$4.0M) to satisfy the OCP objective of maintaining the parks provision standard of 7.66 acres/1000 population, Garden City Lands Phase 2 (\$1.2M), Cambie City Centre Park (\$1.0M), and London Steveston Park Phase 1 (0.25M).

Land – \$16.0M:



The 2017 land acquisition program relates to the City’s Real Estate Section’s acquisition of real property for the City. 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. Council approval is required for each acquisition; funding is in place to act on opportunities as they arise.

Equipment – \$11.1M:



The 2017 equipment program, which includes hardware and software, consists of Program Registration & Facility Booking Solution, Digital Strategy Implementation, Server Refresh and WiFi Network Expansion. It also includes fleet and equipment purchases, as well as fire vehicle replacement purchases.

Staff Report

Origin

Subsection 165(1) of the Community Charter requires the City to adopt a Five-Year Financial Plan (5YFP) Bylaw. The 5YFP Bylaw includes operating, utility and capital budgets for the current year (2017) and provides estimates for the remaining years of the five-year program. The 5YFP (2017-2021) Bylaw provides the City with the authority to proceed with spending as outlined in the Bylaw. The 5YFP must be balanced and therefore includes proposed funding sources.

The 5YFP provides authorization for the use of certain funding sources such as Development Cost Charges (DCCs) and Statutory Reserves. The 5YFP will be prepared once Council has approved each of the 2017 components.

The Capital Budget (the “budget”) is one of the main components in preparing the 5YFP. The budget includes all expenditures that improve, replace and extend the useful life of the City’s asset inventory, which has a net book value greater than \$2.0 billion. The Capital budget allows the City to sustain existing civic infrastructure, while also adding new assets and services to serve the growing community.

The Long Term Financial Management Strategy (LTFMS) is a set of principles created by Council to guide the financial planning process. It is Council policy and a key component of the LTFMS to ensure that sufficient long term capital funding for infrastructure replacement and renewal is in place in order to maintain community viability and generate economic development.

Analysis

This report presents the proposed 2017 Capital Budget and seeks Council review and approval on 2017 recommended projects and the operating expenditures associated with each respective project. The proposed Capital Budget for 2017 is \$102.9 million. This report also presents the projects currently planned for years 2018-2021 as required; however the projects will be subject to final approval in each subsequent year.

The City’s capital budget ensures appropriate planning for required projects and their related funding to demonstrate the complete impact of major multi-year projects. Capital requirements are driven by many factors including growth, maintenance of current ageing infrastructure and ensuring that the City is consistently meeting industry standards as well as legislated and regulatory 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 high level of civic services expected by new and current residents. As the City continues to mature, existing infrastructure is nearing the end of its lifespan and/or capacity. Continuous, ongoing investment in 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 use of more

sustainable building practices and equipment. Finally, the Capital budget also includes internal transfers and debt repayment to replenish reserve accounts used to provide interim funding for various projects.

2017 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 source. In addition, the submission is self-ranked using established criteria summarized in Appendix 1. The process behind the 2017-2021 Capital Budget is illustrated in Appendix 2.

The Capital Review Committee which is comprised of Directors/Senior Managers from each City division reviewed and ranked each project submission. To ensure consistent application of the established ranking criteria, the Capital Review Committee determines the final ranking for each submission giving consideration to strategic and master plans, policies and Council priorities.

The ranked projects are consolidated and the projects are recommended based on funding availability. Project funding recommendations are then reviewed by the Senior Management Team (SMT) and the CAO and the final recommendation is consolidated to form the 2017 Capital Budget presented to Finance Committee for review and approval.

Public Input

In October 2016, a budget planning consultation was held providing an opportunity for the public to submit comments. All comments were reviewed by staff and were considered in the budget process.

Finance Committee Input

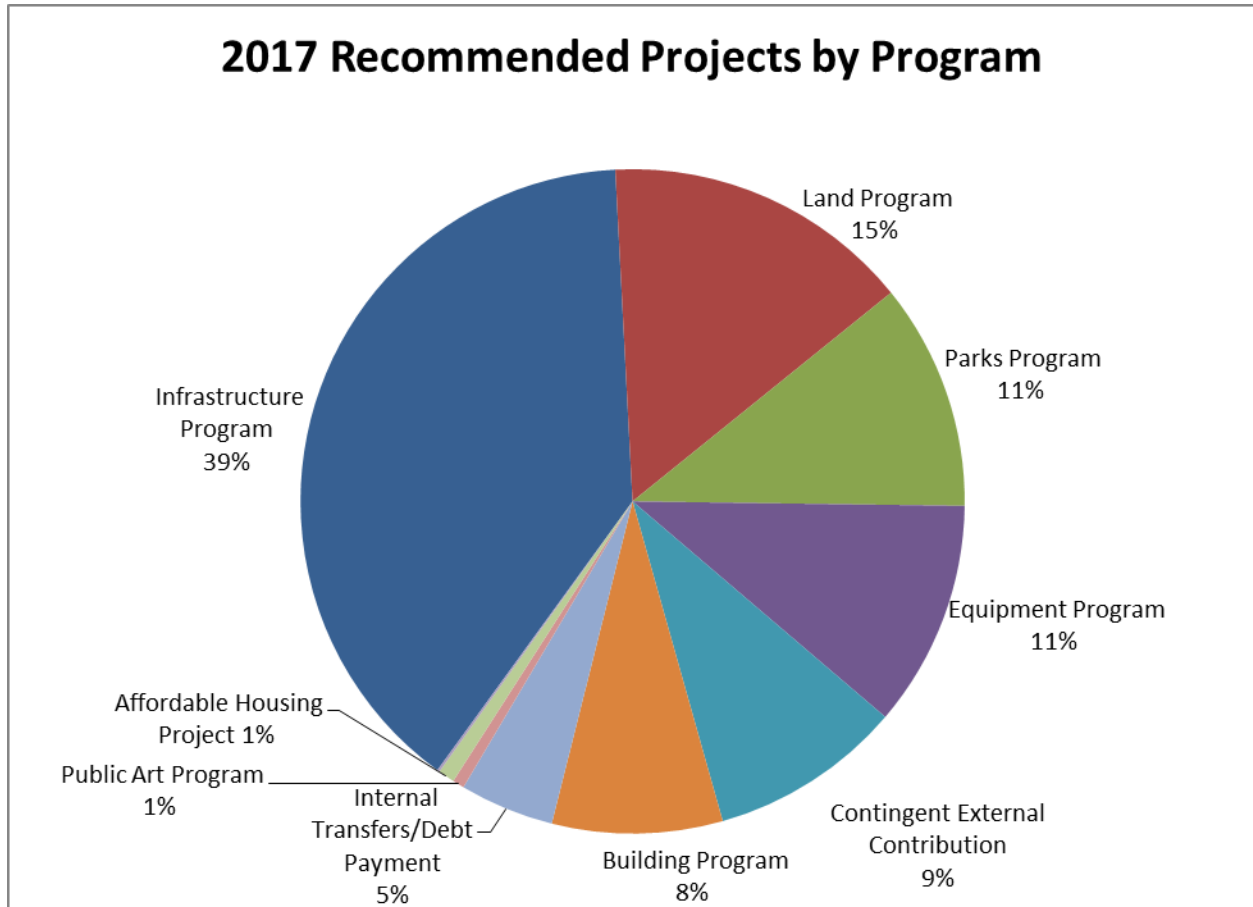
At the Committee's discretion, any Capital project recommended for funding may be removed from the recommended list. Appendix 3 provides a list of the recommended projects. In addition, any Capital project that is not recommended for funding may be reconsidered. Appendix 4 provides a list of those projects not recommended for funding. The details of projects not recommended for funding are included in Appendix 7.

For information purposes, Appendix 5 summarizes the projects recommended for funding from the Revolving Fund. The Revolving Fund is used to fund a variety of general projects which do not have dedicated sources of funding such as Development Cost Charges, Watermain Replacement Reserve and Sanitary Sewer Reserve.

The 2017 Building Program includes Advanced Planning and Design for Major Facilities Phase 2. Significant investment is expected and the Capital Plan will be included in subsequent years once the Advanced Planning and Design is complete.

The 2017 recommended capital projects by program are summarized in Figure 1.

Figure 1 – 2017 Recommended Projects – by Program



The following is an overview of the recommended Capital program that supports new infrastructure needs compared to the replacement of existing infrastructure.

New 2017 Capital Costs

The new Capital costs total \$53.9M (52%) of the 2017 Capital Budget including highlights such as:

- Garden City Lands Phase 2 – \$1.2M (*page 89*)
- Cambie City Centre Park – \$1.0M (*page 87*)
- Strategic Land Acquisition – Acquisitions require Council approval – \$16.0M (*page 101*)
- Advanced Planning and Design for Major Facilities Phase 2 – \$2.0M (*page 74*)
- Parkland Acquisitions – Acquisitions require Council approval – \$4.0M (*page 97*)
- Dike Upgrades – \$3.0M (*page 43*)
- Sanitary Facility Land Acquisition for Grease Management – \$2.5M (*page 61*)
- Water – Water Metering Program – \$2.1M (*page 54*)

- Public Works Infrastructure Advance Design – \$2.0M (*page 67*)
- Hamilton Area Sanitary Sewer and Pump Station – \$1.7M (*page 60*)
- Program Registration & Facility Booking Solutions – \$1.8M (*page 118*)
- Digital Strategy Implementation – \$1.4M (*page 115*)
- River Drive, No. 4 Road to Van Horne Way – \$1.3M (*page 29*)

Replacement 2017 Capital Costs

The Replacement costs total \$34.6M (34%) of the 2016 Capital Budget, which includes:

- City Centre Infrastructure Upgrades – \$3.2M (*page 41*)
- Box Culvert Repair – \$1.5M (*page 39*)
- Water Main Replacement – Lulu Island West – \$0.8M (*page 56*)
- Annual repaving program – \$4.3M (*page 23-24*)
- Equipment Program – Annual Fleet Replacement and Fire Vehicle Replacement Reserve Purchases – \$4.8M (*page 108 and 112*)
- Building Program – South Arm Community Centre Fitness Renovation – \$1.5M (*page 83*)

Contingent External Contributions

Contingent External Contributions of \$10.0M (*page 131*) is an estimate of external grants that may be received throughout the year for various projects. Spending will only incur if funds are confirmed. Including an estimate in the Capital Budget will allow staff to request scope changes to existing projects without having to wait until the Bylaw Amendment, which is typically in the fall of the budget year.

Internal Transfers and Debt Repayment

Internal Transfer and Debt Repayment total \$4.5M (5%) of the 2017 Capital Budget includes:

- 7080 River Road Repayment – \$2.3M (*page 133*)
- River Road/North Loop (2005) Repayment – \$1.7M (*page 137*)

The details of each recommended project is attached in Appendix 6.

2017 Capital Budget Funding Sources

The 2017 capital budget uses a variety of funding sources which include:

- Development Cost Charges (DCCs) – These contributions are made 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.
- Surplus – These refer to appropriated surplus (provisions).

The funding of the recommended projects has been allocated while maintaining the long-term strategy of building reserve balances to fund future infrastructure replacement and improvements. Generally, projects are funded up to the annual amount transferred into each available reserve.

The funding sources of the 2017 recommended projects are summarized in Table 1.

Table 1 – 2017 Funding Sources

Funding Sources	Amount
Reserves	\$59.0
Provisions	11.6
<i>Subtotal - Internal</i>	<i>\$70.6</i>
DCCs	18.9
External Sources	13.4
<i>Subtotal - External</i>	<i>\$32.3</i>
Total 2016 Funding	\$102.9

Approximately \$59 million of this year’s capital plan is funded by the Reserves and \$32 million through external sources and DCCs, which are contributed by developers, significantly reducing the potential impact of these projects upon taxpayers.

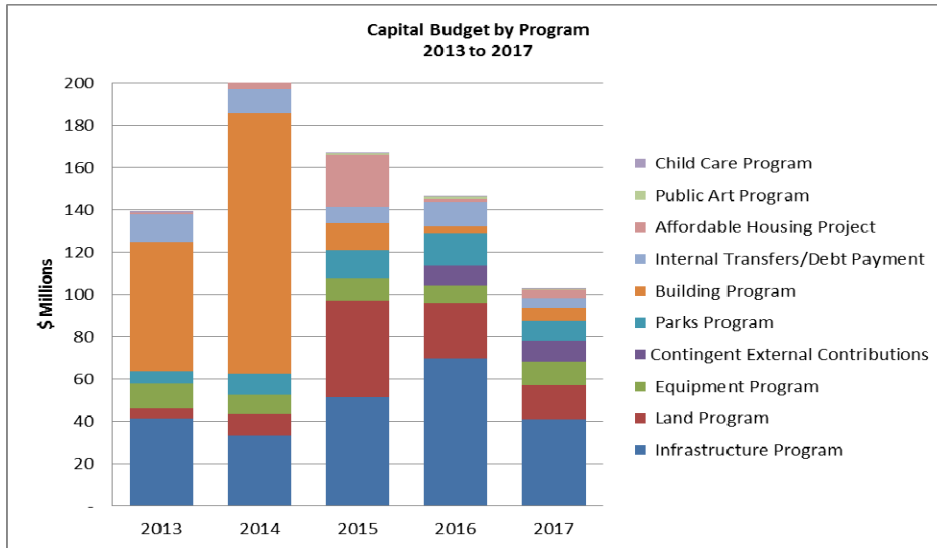
Appendix 3 includes a legend of the funding sources for each project. Funding details of each individual submission are included in Appendix 6.

Recommended 2017 versus Historical (2013-2016) Capital Budget Analysis

Figure 2 provides analysis of the program types of the capital budget as amended for the past four years compared to the 2017 recommended capital plan. For the years 2013-2016, Capital Budgets as amended average \$133.4 million annually after adjusting for the major facilities approved in the 2014 capital plan.

In 2014, Council approved \$124.1 million for major facilities, of which \$50M was financed through Municipal Finance Authority (MFA). This included funding for the Minoru Complex, new No.1 Brighthouse Fire Hall and City Centre Community Centre.

Figure 2 – Capital Budget by Program 2017 vs Historical



Draft 2017-2021 Capital Budget

Figure 3 shows the estimates for the remaining years of the 5 Year Capital Plan, which proposes to continue to invest an average of \$99.6M each year in the City’s assets. The estimates do not include the next phase of the Major Facilities Replacement Plan, except for the \$2.0M of Advanced Planning and Design.

Figure 3 – Draft 5 Year Capital Plan 2017 to 2021

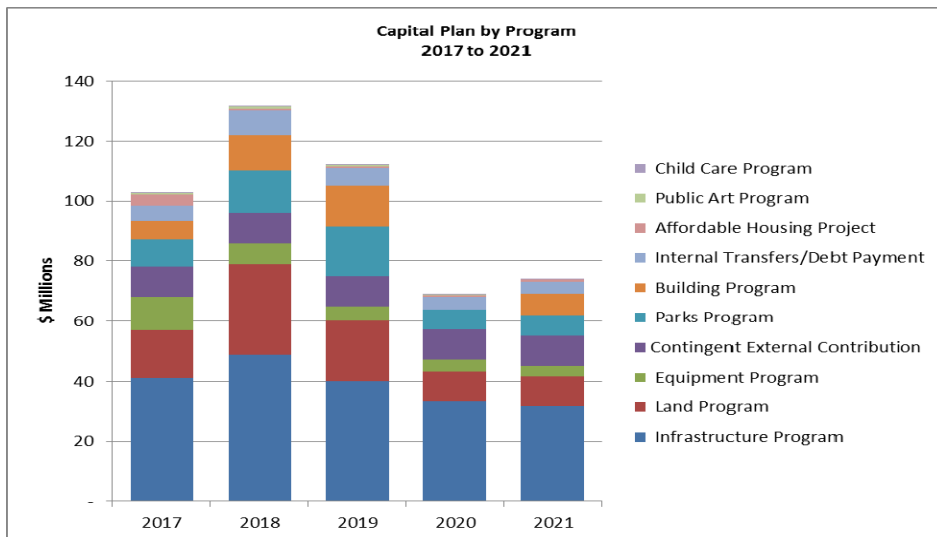


Table 2 presents a summary of the amount of proposed investment for Capital Projects for 2018-2021. A listing of the 2018-2021 Capital Projects is presented in Appendix 8. A summary of the 5 Year Capital Program and Funding Sources is presented in Appendix 9. Highlights of the 2018-2021 projects are summarized in Appendix 10.

Table 2: Draft 2018 to 2021 Capital Projects (in millions)

Year	Amount	OBI
2018	\$131.4	\$1.5
2019	\$107.5	\$0.7
2020	\$68.8	\$0.4
2021	\$74.0	\$0.7

2017 Operating Budget Impact

Upon completion of capital projects, new assets are added to the City’s inventory. There are costs associated with maintaining these new assets, for example a new building will require staffing, janitorial services, gas and hydro utility costs. A new park will include annual maintenance and labour costs. This ongoing maintenance cost is the Operating Budget Impact (OBI) associated with the new asset which is added to the operating budget.

OBI's were reviewed by the Capital Review Committee as part of the Capital submission review process. The total OBI relating to the 2017 recommended projects is \$1.13M. \$582K of the OBI is associated with water and sewer utility projects and if the respective projects are approved, these will be incorporated into the 2017 utility budget. The remaining \$549K will be added to the operating budget if the associated projects are approved. To minimize the budget impact, an OBI phase in plan is adopted each year. For the recommended 2017 Capital Program, the OBI is proposed to be phased in over two years.

Table 3 presents a summary of the recommended Capital Budget and associated OBI by program.

Table 3: Recommended 2017 Funding and OBI by Program (in millions)

Program (in millions)	Amount	OBI
Infrastructure Program	\$41.1	\$0.91
Land Program	16.0	0.00
Equipment Program	11.1	0.11
Contingent External Grants	10.0	0.00
Parks Program	9.1	0.10
Building Program	6.3	(0.02)
Internal Transfer/Debt Payment	4.9	0.00
Affordable Housing Program	3.7	0.00
Public Art Program	0.6	0.03
Child Care Program	0.1	0.00
Total 2017 Funding & OBI	\$102.9	\$1.13

Financial Impact

The 2017 Capital Budget with a total value of \$102.9 million will enable the City to maintain and advance the asset inventory that continues to provide necessities and benefits to the community. The OBI associated with these projects is \$1.13M and once approved will be incorporated into the 2017-2021 5YFP.

Conclusion

The recommended Capital budget for 2017 is \$102.9 million. The Capital Review Committee worked closely with SMT and the CAO to represent the interests of all stakeholders to ensure that the 2017 capital program addresses City priorities and meets the needs of the community while effectively utilizing available funding.



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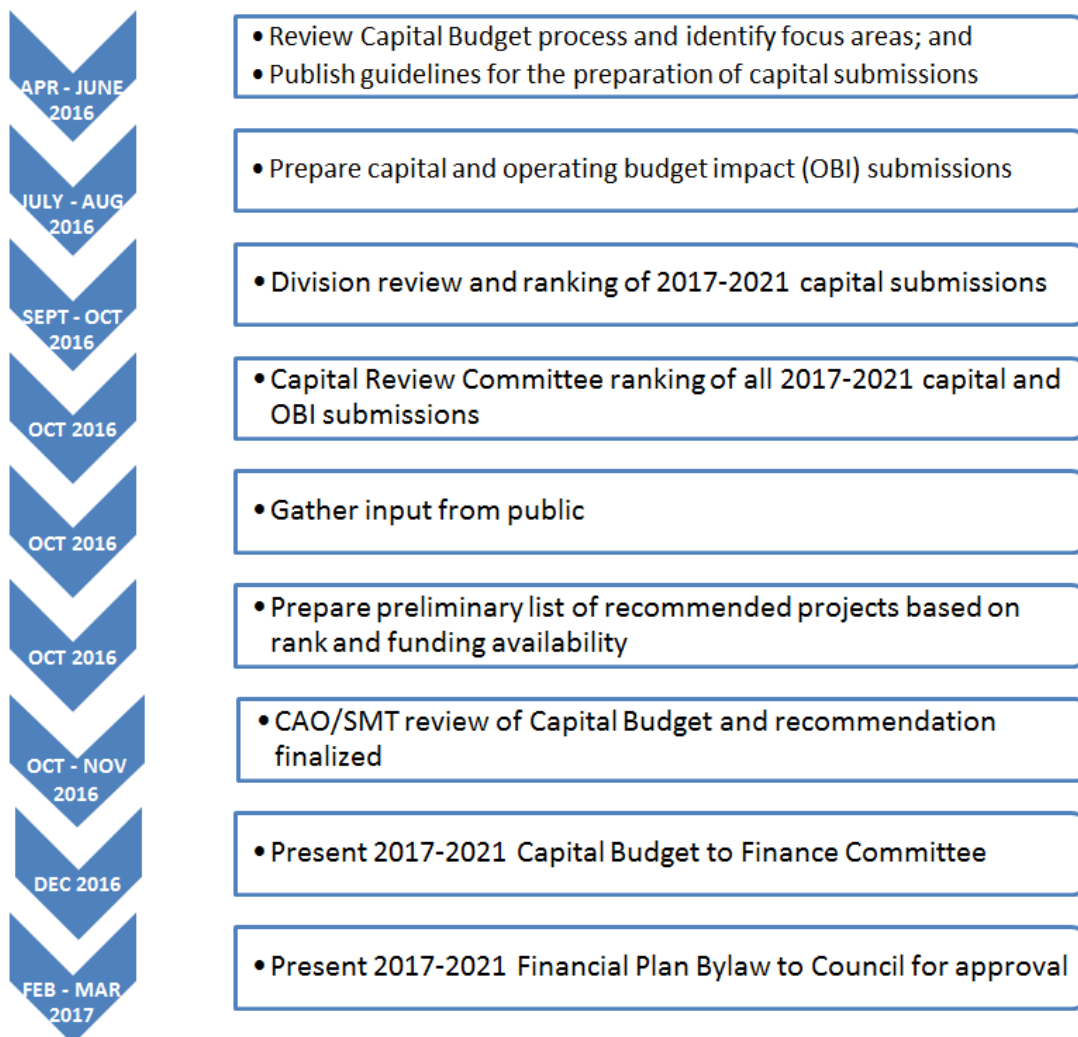
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- Appendix 1: Capital Ranking Criteria
- Appendix 2: 2017 Capital Budget Process
- Appendix 3: 2017 Summary of Capital Projects - RECOMMENDED
- Appendix 4: 2017 Summary of Capital Projects - NOT RECOMMENDED
- Appendix 5: 2017 Summary of Projects Funded by Revolving Fund
- Appendix 6: 2017 Details of Recommended Projects by Program
- Appendix 7: 2017 Details of Unfunded Projects by Program
- Appendix 8: 5 Year Capital Program (2017-2021)
- Appendix 9: 5 Year Capital Plan (2017-2021)
- Appendix 10: 2018-2021 Capital Plan Highlights

Capital Ranking Criteria



2017 Capital Budget Process



2017 Summary of Capital Projects - RECOMMENDED

Project Name	Funding Source	Total Investment	Total OBI	Ref
INFRASTRUCTURE PROGRAMS				
Roads				
Accessible Pedestrian Signal Program	D/R	250,000	18,418	21
Active Transportation Improvement Program	D/R	320,000	10,196	22
Annual Asphalt Re-Paving Program - MRN	A	1,081,000	-	23
Annual Asphalt Re-Paving Program - Non-MRN	A	3,200,000	-	24
Arterial Roadway Improvement Program	D/R	343,300	17,526	25
Functional and Preliminary Design (Transportation)	D/R	25,000	-	26
LED Street Light Replacement Plan	A	380,000	(21,000)	27
Neighbourhood Walkway Program	D/R	250,000	12,530	28
River Drive Multi-Use Pathway, No. 4 Road to Van Horne Way	E/D/R	1,344,000	5,661	29
River Parkway - Gilbert Road to Cambie Road (Phase 1) - Design	D/R	800,000	-	30
Sexsmith Road Multi-use Pathway, Beckwith Road to River Road	E	495,000	1,704	31
Special Crosswalk Program	D/R	350,000	18,388	32
Traffic Calming Program	D/R	100,000	11,333	33
Traffic Signal Program	D/R	1,600,000	57,500	34
Traffic Video and Communication Program	D/R	200,000	13,750	35
Transit-Related Amenity Improvement Program	E/D/R	250,000	14,240	36
Transit-Related Roadway Improvement Program	E/D/R	250,000	16,796	37
Total Roads		\$11,238,300	\$177,042	
Drainage				
Box Culvert Repair	R	1,500,000	-	39
Canal Stabilization	R	300,000	-	40
City Centre Infrastructure Upgrades	R	3,240,000	100,000	41
Development Coordinated Works - Drainage	R	250,000	25,000	42
Dike Upgrades	R	3,000,000	18,750	43
Drainage Pump Station Generator Upgrade	R	130,000	12,500	44
Drainage Pump Station Rehabilitation	R	225,000	3,750	45
East Richmond Drainage & Irrigation Upgrades	R	1,285,000	15,000	46
Knotweed Control & Removal	R	300,000	-	47
Laneway Drainage Upgrade - Belair Drive (South)	R	1,344,000	16,250	48
McBurney Drive Drainage Upgrades	R	350,000	1,250	49
Park Road Drainage Upgrade	R	650,000	8,750	50
Total Drainage		\$12,574,000	\$201,250	
Watermain Replacement				
Development Coordinated Works - Water	R	250,000	25,000	52
Thompson Gate Pressure Reducing Valve Station	R	600,000	17,500	53
Water Metering Program	A/R	2,120,000	258,750	54
Watermain Replacement - Lulu Island North Area	R/D	2,865,000	-	55
Watermain Replacement - Lulu Island West Area	R	800,000	-	56
Watermain Tie-in and Restoration	R	650,000	-	57
Total Watermain Replacement		\$7,285,000	\$301,250	

Legend: A=Appropriated Surplus; D=Development Cost Charges; E=External Sources; R=Reserves;

Project Name	Funding Source	Total Investment	Total OBI	Ref
INFRASTRUCTURE PROGRAMS				
<i>Sanitary Sewer</i>				
Development Coordinated Works - Sanitary	R	400,000	25,000	59
Hamilton Area Sanitary Sewer and Pump Station	D/R	1,700,000	37,500	60
Sanitary Facility Land Acquisition for Grease Management	R	2,500,000	-	61
Sanitary Forcemain Valve Installations	R	100,000	25,000	62
Sanitary Pump Station and Forcemain Assessment, Upgrade and Grease Management	R	1,000,000	62,500	63
Sanitary Pump Station Rehabilitation	R	350,000	21,875	64
Sanitary Sewer Tie-in and Restoration	R	150,000	-	65
Total Sanitary Sewer		\$6,200,000	\$171,875	
<i>Minor Public Works</i>				
Public Works Infrastructure Advanced Design	R/D	1,962,000	-	67
Public Works Minor Capital - Drainage	R	300,000	18,750	68
Public Works Minor Capital - Sanitary	R	450,000	31,250	69
Public Works Minor Capital - Sanitation & Recycling	A	300,000	-	70
Public Works Minor Capital - Traffic	R	250,000	8,581	71
Public Works Minor Capital - Water	R	500,000	-	72
Total Minor Public Works		\$3,762,000	\$58,581	
TOTAL INFRASTRUCTURE PROGRAM		\$41,059,300	\$909,998	
BUILDING PROGRAMS				
<i>Building</i>				
Advanced Planning and Design for Major Facilities Phase 2	R	2,000,000	-	74
City Hall Boiler Replacement Upgrade	R/A	230,000	(5,000)	75
City Hall Domestic Water Piping Upgrade	R	350,000	-	76
City Hall Server Room A/C Unit Installation	R	325,000	-	77
Developer Funded Advanced Design and Coordination	E	600,000	-	78
Direct Digital Control Upgrade & Consolidation Phase 3	A	180,000	(19,863)	79
Library and Cultural Centre Chiller Replacement	R	300,000	-	80
Minoru Chapel Restoration	R	280,875	-	81
Phoenix Net Loft Design	R	500,000	-	82
South Arm Community Centre Fitness Renovation	E/A	1,500,000	-	83
TOTAL BUILDING PROGRAM		\$6,265,875	(\$24,863)	

Legend: *A*=Appropriated Surplus; *D*=Development Cost Charges; *E*=External Sources; *R*=Reserves;

2017 Summary of Capital Projects - RECOMMENDED

Project Name	Funding Source	Total Investment	Total OBI	Ref
PARKS PROGRAM				
<i>Parks/Streetscapes</i>				
Britannia Landscaping Improvements and Wayfinding	D/R	150,000	-	85
Britannia Seine Net Loft Washroom Facilities	R	393,014	8,892	86
Cambie City Centre Park	D/R	1,000,000	21,824	87
City Tree Planting Program	E	150,000	8,438	88
Garden City Lands Phase 2	D/E/R	1,200,000	41,251	89
London Steveston Phase 1 of 3	D/R	250,000	2,874	90
Minoru Latrace Backstop Upgrades	D/R	300,000	-	91
Parks Advance Planning & Design	D/R	700,000	11,431	92
Parks General Development	D/R	500,000	6,651	93
Playground Improvement Program	D/R	300,000	-	94
Rideau Neighbourhood Park Playground	D/R	200,000	-	95
Total Parks		5,143,014	\$101,361	
<i>Parkland Acquisition</i>				
Parkland Acquisition	D/R	4,000,000	-	97
Total Parkland Acquisition		\$4,000,000	\$0	
TOTAL PARKS PROGRAM		\$9,143,014	\$101,361	
PUBLIC ART PROGRAM				
Public Art Program	R	610,838	31,250	99
TOTAL PUBLIC ART PROGRAM		\$610,838	\$31,250	
LAND PROGRAM				
<i>Land Acquisition</i>				
Strategic Land Acquisition	R	16,000,000	-	101
TOTAL LAND PROGRAM		\$16,000,000	\$0	
AFFORDABLE HOUSING PROJECT				
Affordable Housing 2017 Operating Initiatives	R	160,000	-	103
Affordable Housing Homelessness Strategy	R	75,000	-	104
Affordable Housing Projects - City Wide	R	1,300,000	-	105
Affordable Housing Projects - West Cambie	R	2,200,000	-	106
TOTAL AFFORDABLE HOUSING PROJECT		\$3,735,000	\$0	
EQUIPMENT PROGRAM				
<i>Annual Fleet Replacement</i>				
Vehicle and Equipment Reserve Purchases (PW and Corporate Fleet)	R/A	3,152,000	-	108
Total Annual Fleet Replacement		\$3,152,000	\$0	
<i>Fire Dept Vehicles and Equipment</i>				
Fire Equipment Replacement	R	226,010	-	110
Fire Support Vehicle Replacement Reserve Purchases	R	59,300	-	111
Fire Vehicle Replacement Reserve Purchases	R	1,617,929	-	112
Total Fire Dept Vehicles and Equipment		\$1,903,239	\$0	

Legend: A=Appropriated Surplus; D=Development Cost Charges; E=External Sources; R=Reserves;

2017 Summary of Capital Projects - RECOMMENDED

Project Name	Funding Source	Total Investment	Total OBI	Ref
EQUIPMENT PROGRAM				
<i>Information Technology</i>				
Annual Hardware Refresh	A	530,522	-	114
Digital Strategy Implementation	R/A	1,400,000	84,000	115
Microsoft Exchange 2016 Upgrade	A	296,310	-	116
OpenText eDocs DM/RM (REDMS) Upgrade	R	178,400	10,000	117
Program Registration & Facility Booking Solution	R	1,788,250	65,680	118
Server Refresh	A	589,000	-	119
Tempest v8.0 Upgrade and Web Services Integration	A	120,000	-	120
Wifi Network Expansion	A	255,000	-	121
Total Information Technology		\$5,157,482	\$159,680	
<i>Technology Equipment</i>				
Corporate Parking Lot Lighting Efficiency Upgrades	A	350,000	(18,000)	123
Electric Vehicle Direct Current Fast Charging Network Development	A	300,000	16,000	124
Energy Management Projects	A	240,000	(45,000)	125
Total Technology Equipment		\$890,000	(\$47,000)	
TOTAL EQUIPMENT PROGRAM		\$11,102,721	\$112,680	
CHILD CARE PROGRAM				
Child Care Projects - City Wide	R	50,000	-	127
Child Care Projects - City Wide Non Capital Grants	R	10,000	-	128
Child Care Support	R	60,000	-	129
TOTAL CHILD CARE PROGRAM		\$120,000	\$0	
CONTINGENT EXTERNAL CONTRIBUTION				
Contingent External Contribution	E	10,000,000	-	131
TOTAL CONTINGENT EXTERNAL CONTRIBUTION		\$10,000,000	\$0	
INTERNAL TRANSFERS/DEBT PAYMENT				
7080 River Rd Repayment	D/R	2,341,384	-	133
City Centre District Energy Utility Advanced Design	A	400,000	-	134
Lansdowne Road Extension	D	77,263	-	135
Nelson Road Interchange Repayment	D	385,098	-	136
River Rd/North Loop Repayment	D	1,685,056	-	137
Total Internal Transfers/Debt Payment		\$4,888,801	\$0	
TOTAL INTERNAL TRANSFERS/DEBT PAYMENT		\$4,888,801	\$0	
Total 2017 Capital Program		\$102,925,549	\$1,130,426	

OBI Type	
Operating OBI	\$548,923
Utility OBI	581,503
Total OBI	\$1,130,426

Legend: A=Appropriated Surplus; D=Development Cost Charges; E=External Sources; R=Reserves;

2017 Summary of Capital Projects - NOT RECOMMENDED

Project Name	Funding Source	Total Investment	Revolving Fund	Total OBI	Ref
INFRASTRUCTURE PROGRAM					
Public Works Minor Capital - Roads	R	250,000	250,000	-	139
Root Damaged Surface Repairs	R	460,000	460,000	-	140
TOTAL INFRASTRUCTURE PROGRAM		710,000	710,000		
BUILDING PROGRAM					
East Richmond Community Hall Renewals	R	347,000	347,000	-	142
City Hall Lobby Plaza Tile Replacements	R	120,000	120,000	-	143
Project Development Advanced Planning and Design 2017	R	300,000	300,000	-	144
Works Yard Washroom Renovations	R	535,000	535,000	-	145
TOTAL BUILDING PROGRAM		\$1,302,000	\$1,302,000	\$0	
PARKS PROGRAM					
Hollybridge Pier Phase 2	R	2,000,000	2,000,000	15,229	147
Parks Ageing Infrastructure Replacement Program	R	350,000	350,000	-	148
Waterfront Improvement Program	R	250,000	250,000	-	149
TOTAL PARKS PROGRAM		2,600,000	2,600,000	15,229	
EQUIPMENT PROGRAM					
Emergency Supplies Container Project	R	515,400	515,400	-	151
Emergency Supply Cabinets Project	R	125,000	125,000	-	152
TOTAL EQUIPMENT PROGRAM		\$640,400	\$640,400	\$0	
Total 2017 Capital Program - Unfunded		\$5,252,400	\$5,252,400	\$15,229	

*7 items originally included on this unfunded list totalling \$3,700,360 were moved to the One-Time Expenditure Report for further consideration.

2017 Summary of Projects Funded by Revolving Fund

Appendix 5

PURPOSE: Each year, the Revolving Fund is utilized to fund various capital projects. This summary shows the 2017 capital projects and the corresponding amounts funded by the Revolving Fund.

Project Name	Total Investment	Revolving Fund	Total OBI	Ref
Minor Public Works				
PW Minor Capital - Traffic	250,000	250,000	8,581	71
Total Minor Public Works	\$250,000	\$250,000	\$8,581	
Building				
City Hall Boiler Replacement Upgrade	230,000	195,000	(5,000)	75
City Hall Domestic Water Piping Upgrade	350,000	350,000		76
City Hall Server Room A/C Unit Installation	325,000	325,000		77
Library and Cultural Centre Chiller Replacement	300,000	300,000	-	80
Minoru Chapel Restoration	280,875	280,875	-	81
Total Building	\$1,485,875	\$1,450,875	(\$5,000)	
Information Technology				
Digital Strategy Implementation	1,400,000	816,300	84,000	115
OpenText eDocs DM/RM (REDMS) Upgrade	178,400	178,400	10,000	117
Program Registration & Facility Booking Solution	1,788,250	1,788,250	65,680	118
Total Minor Parks	\$3,366,650	\$2,782,950	\$159,680	
Total 2017 Projects Funded by Revolving Fund	\$5,102,525	\$4,483,825	\$163,261	

The City Assist Factor on Roads DCC and Parks DCC projects are also funded by the Revolving Fund.

City Assist Factor on Parks Acquisition	\$377,000
City Assist Factor on Parks Development	\$267,000
City Assist Factor on Roads DCC	\$310,000
Total Funding from Revolving Fund	\$5,437,825

Infrastructure Program 2017

The City’s Infrastructure Program assets include: road, drainage and sanitary pump stations, drainage, water, and sanitary mains.

2017 Recommended Infrastructure – Roads Program

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Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Accessible Pedestrian Signal Program	Submission ID:	5443

Location: Various

Cost: \$250,000 **OBI:** \$18,418

Funding Sources: Roads DCC: \$235,000
Roads City Assist: \$15,000

Scope: The general scope of work includes the installation of accessible devices at existing signalized intersections that exceed the minimum criteria for prioritized locations as per the 2008 guidelines published by the Transportation Association of Canada, by providing audible messaging, Braille signage, and other accessible friendly features. The proposed funding level and project locations are to allow the City to meet its target to outfit all existing City-owned traffic signals with Accessible Pedestrian Signal devices by year 2020. To date, all special crosswalks (86) and pedestrian signals (40) as well as 99 of 154 signalized intersections have been upgraded. The standard is for all new traffic signals to include APS.

The program is proposed to be funded by the DCC program funding and may be eligible for external funding contributions from ICBC. Some locations may also be funded through development requirements of any relevant applications per Council direction.

For 2017, approximately 15 to 20 existing signalized intersections are proposed for upgrade to Accessible Signal systems. The actual locations will be determined in early 2017. The exact scope of improvement may be refined due to factors such as priority review, availability of external funding and/or opportunity to pursue these improvements as part of development frontage improvements.



Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Active Transportation Improvement Program	Submission ID:	5078

Location: Various Locations

Cost: \$320,000

OBI: \$10,196

Funding Sources: Roads DCC: \$300,800
Roads City Assist: \$19,200

Scope: The general scope involves implementing cycling and rolling improvements included as part of the Council-approved Cycling Network Plan by supporting: 1) the expansion of various on-street cycling routes and off-street multi-use pathways; and 2) cycling and rolling initiatives and on-going enhancements to existing cycling and rolling infrastructure.

Typical elements of the program include the construction of new on-street cycling facilities, off-street multi-use pathways primarily for transportation purposes, installation of bike racks, new signage, pavement markings, associated minor road geometric improvements, and other supplementary cycling and rolling amenity improvements required to facilitate the safe and efficient movement of cyclists and users of other wheeled devices.

This project is proposed to be funded by the DCC program funding and may be eligible for funding from external agencies such as the provincial government, TransLink and/or ICBC.

The following list of improvements is currently being planned for 2017 (subject to factors such as the completion of the detailed design, confirmation of external funding, etc):

- Continuation of Crosstown Neighbourhood Bikeway: upgrade of Lucas Road-No. 3 Road intersection to facilitate the crossing of cyclists and users of other wheeled devices; and
- Westminster Highway (No. 8 Road-Nelson Road): conversion of on-street directional bike lanes to off-street two-way multi-use pathway on south side.



Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Annual Asphalt Re-Paving Program - MRN	Submission ID:	4996

Location: City Wide

Cost: \$1,081,000 **OBI:** \$ -

Funding Sources: MRN Rehabilitation: \$1,081,000

Scope: To re-pave MRN roads in alignment with the City's Ageing Infrastructure Strategy. Project list to be determined by the end of 2016.

The project includes the costs associated with ancillary work such as curb and gutter repairs, road base repair, 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:	4994

Location: City Wide

Cost: \$3,200,000 **OBI:** \$ -

Funding Sources: Asphalt Capping: \$3,060,000
 Pavement Degradation: \$140,000

Scope: To re-pave City owned Non-MRN roads (major & minor roads and lanes) in alignment with the City's Ageing Infrastructure Strategy. Project list to be determined by the end of 2016.

The project includes the costs associated with ancillary work such as curb and gutter repairs, road base repair, asphalt parking re-paving, manhole and valve box adjustments, line painting, staff inspection time and similar.

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/contractor fees related to bridge upgrades and the Pavement Management Plan.



Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Arterial Roadway Improvement Program	Submission ID:	5079

Location: Various Locations

Cost: \$343,300 **OBI:** \$17,526

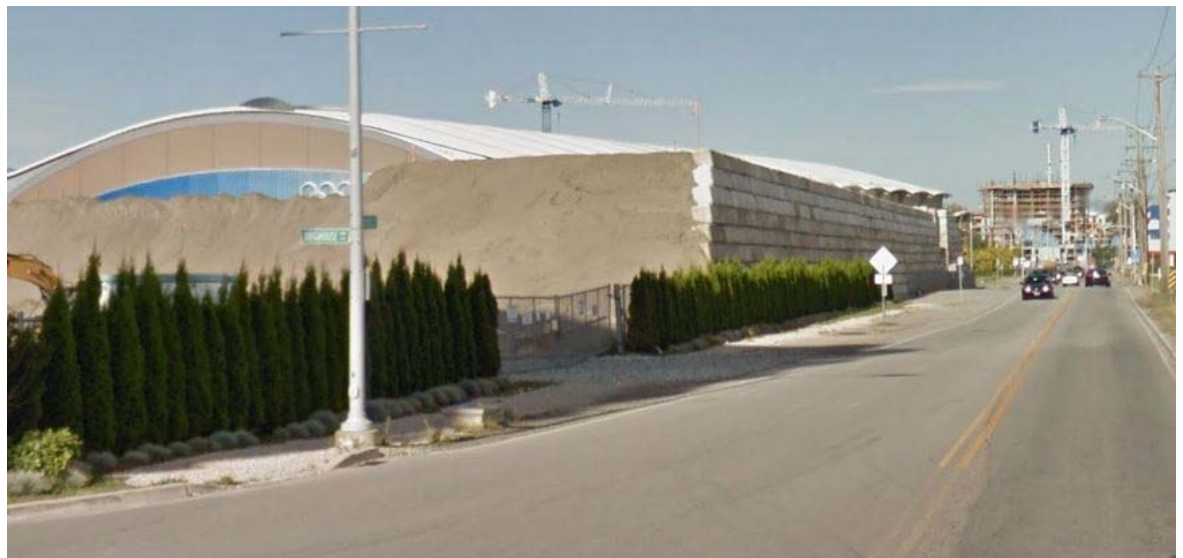
Funding Sources: Roads DCC: \$282,000
 Roads City Assist: \$18,000
 Developer Contribution \$43,300

Scope: The general scope includes implementing pedestrian and traffic safety improvements along arterial roads and at arterial road intersections in order to respond in a timely basis to requests from the public and/or Council on issues related to pedestrian and traffic safety. Typical improvements include the construction of new and/or enhancement of existing walkways/sidewalks, new turn lanes, improved channelization, intersection signage enhancement, installation of pedestrian safety enhancements at intersections, and illuminated street name signs. For sidewalks/walkways along arterial roads, priority would be given to those connecting locations with high pedestrian activities, such as schools, neighbourhood service centres, bus stops, recreational service centres, shopping/retail centres, etc., that are along arterial roads with high traffic volumes.

This project is proposed to be funded by the DCC program funding and may be eligible for funding from external agencies such as the provincial government, TransLink and/or ICBC.

The following list of improvements is currently being planned for 2017/2018 (subject to factors such as the completion of the detailed design, confirmation of external funding, etc):

- 1) A new walkway along the north side of River Road, from Oval Way to Brighthouse Way.
- 2) Upgrade south leg of Alderbridge Way/Westminster Hwy., which would improve intersection capacity and enhance access for the area by relocating existing conflicting utility (Hydro) infrastructure thereby providing a direct connection for pedestrians from Westminster Highway to Minoru Park. A contribution of approximately \$43,300 from a nearby development has been secured through rezoning for a portion of this work.



Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Functional and Preliminary Design (Transportation)	Submission ID:	5076

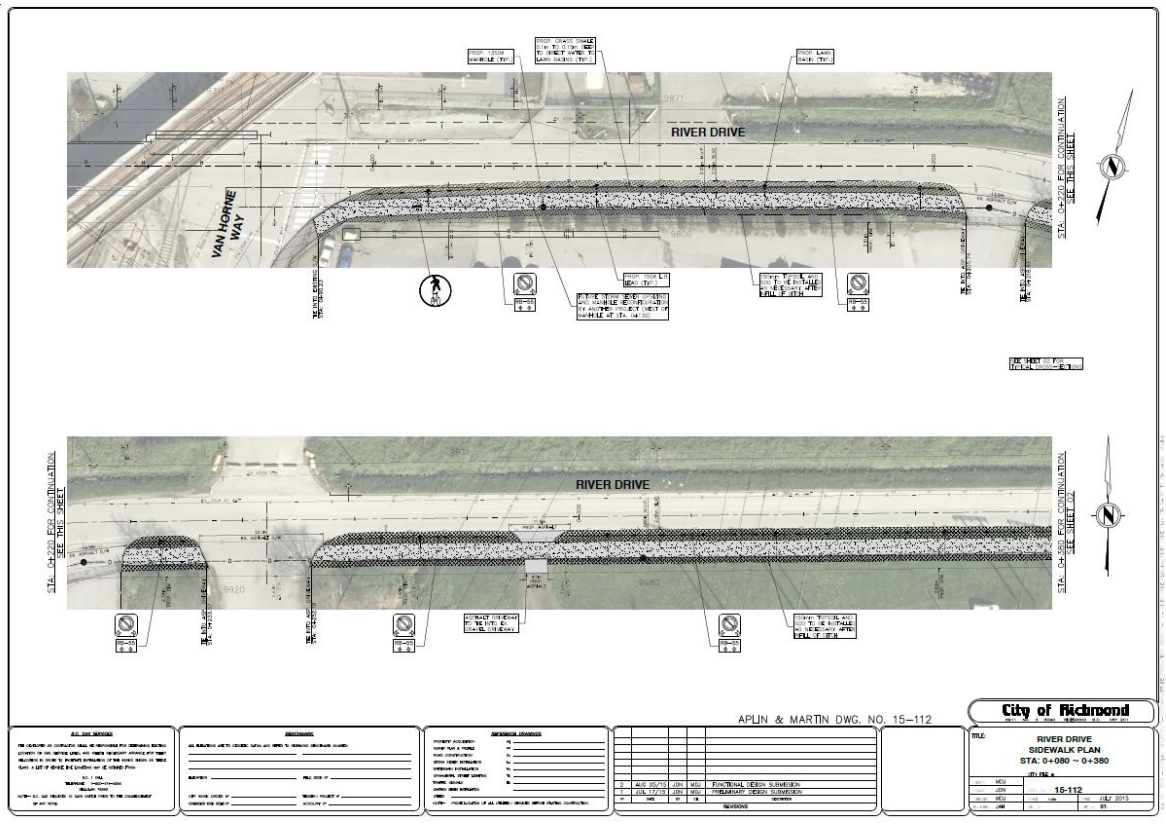
Location: Various

Cost: \$25,000 **OBI:** \$ -

Funding Sources: Roads DCC: \$23,500
Roads City Assist: \$1,500

Scope: Project scope includes preparing the functional and preliminary designs and cost estimates required for various transportation capital projects identified within the Five-Year Capital Program. Specifically, with this project, the necessary functional road elements in horizontal alignment, cross-section, property impacts, etc. as well as high level cost estimates would be determined in order to carry out further detailed engineering design.

The project would be funded entirely by the DCC program funding. A major component of the project is for consultant and/or auxiliary staff costs for design. Note: The cost estimate is based on 2% 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.



Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	LED Street Light Replacement Plan	Submission ID:	5661

Location: City Wide

Cost: \$380,000

OBI: \$ -21,000

Funding Sources: Other

Scope: The City has 3,780 aged HPS (high pressure sodium) light fixtures that are past the end of their useful life. Replacing HPS with LEDs (Light-emitting diodes) would reduce annual energy consumption by ~800,000 kWh and improve energy efficiency. This would lead to an expected cost avoidance savings of over \$120,000.

This project is phase 2 of 4 and will replace approximately 950 fixtures (25% of the original total) and additional capital projects will be requested in subsequent years to replace the remaining fixtures. It is esimated that this Phase of the project will reduce electricity use from the existing infrastructure by 200,000 kWh, which will equal approximately \$21,000 in cost avoidance savings.

This project is recommended to be funded from the Gas Tax Account and falls under the eligible project category "Community Energy Systems" as it is infrastructure that generates or increases the efficcient usage of energy.



Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Neighbourhood Walkway Program	Submission ID:	5446

Location: Various Locations

Cost: \$250,000

OBI: \$12,530

Funding Sources: Roads DCC: \$235,000
Roads City Assist: \$15,000

Scope: The general scope of this project includes the construction of new and/or enhancement of existing neighbourhood walkways/sidewalks, in response to requests from the public and/or Council. Consistent with OCP goals to encourage the use of sustainable transportation modes, priority would be given to walkways/sidewalks connecting locations with high pedestrian activities, such as schools, neighbourhood service centres, bus stops, recreational services centres, shopping/retail centres, etc., particularly roads with high traffic volumes/traffic conflicts. The major cost component of the program is the construction/upgrade of new/existing sidewalks, pathways, wheelchair ramps, minor curb cuts, boulevard modifications, and/or other supplementary improvements. Projects will be subject to residents' consultation, if applicable.

The program is proposed to be funded by the DCC program and may be eligible for external funding contributions from ICBC.

The exact scope will be determined pending on the request and feedback expected to be received by members of public and Council, as well as subject to factors such as outcome of public consultation, availability of external funding, and/or opportunity to pursue these improvements as part of development frontage improvements.



Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	River Drive Multi-Use Pathway, No. 4 Road to Van Horne Way	Submission ID:	5687

Location: River Drive, No. 4 Road to Van Horne Way

Cost: \$1,344,000

OBI: \$5,661

Funding Sources: Roads DCC: \$647,190
 Roads City Assist: \$41,310
 Grant: \$655,500

Scope: The general scope includes the provision of a 3m wide multi-use pathway (paved) along the south side of River Drive, between No. 4 Road and Van Horne Way, including pedestrian lighting. The proposed facility would tie-in to existing cycling/pedestrian facilities at both ends. The trail connection is identified in the City Centre Area Plan.

The project is proposed to be funded by DCC (up to \$688,500) and external funding from Translink and/or the province. TransLink has already committed \$171,500 towards this project (as part of 2016 BICCS program). Staff will be applying to TransLink again in 2017 to secure additional funding up to maximum of \$250,000 as well as the province under the BikeBC program. This project would only commence if the City secures the required external funding from TransLink, with any additional available funding from BikeBC used to offset City’s funding (i.e., Roads DCC). Note that staff are also in discussion with BC Hydro, who owns the property along the south side of River Drive, to determine if the overall project cost would be reduced with an option to construct the pathway within the BC Hydro right-of-way.



Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	River Parkway - Gilbert Road to Cambie Road (Phase 1) - Design	Submission ID:	5887

Location: River Parkway- Gilbert Road to Cambie Road

Cost: \$800,000

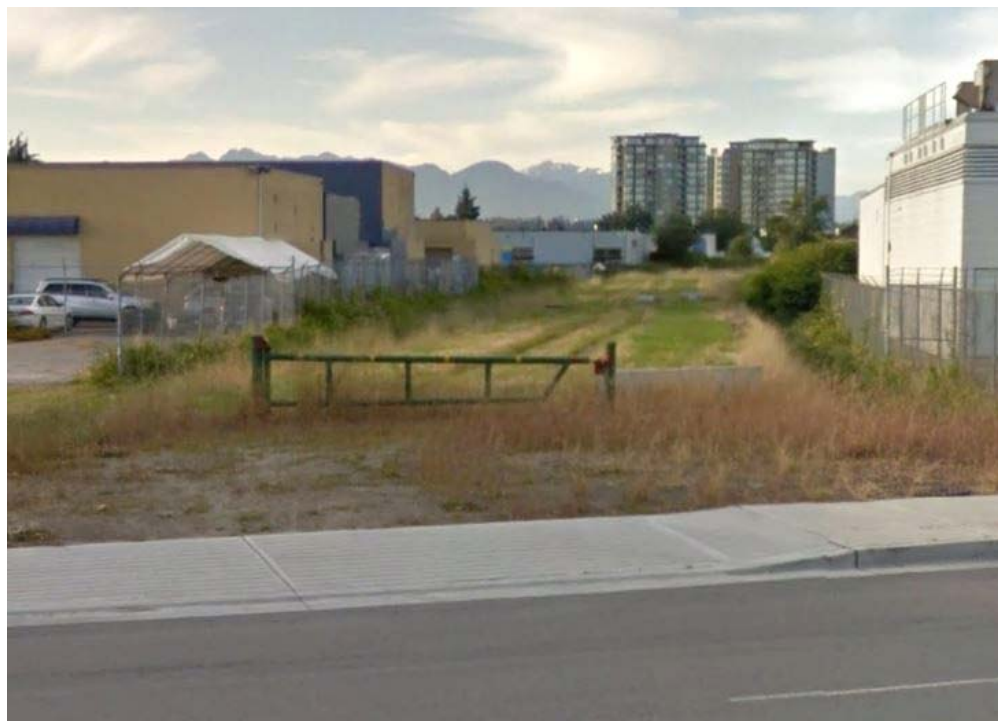
OBI: \$ -

Funding Sources: Roads DCC: \$752,000
Roads City Assist: \$48,000

Scope: The general scope of this project includes the construction of a two-lane road along the former CP Railway corridor, from 200 m northeast of Gilbert Road to Cambie Road. The new road is proposed to be built to the initial two-lane standard with paved shoulders for cyclists and pedestrians, street lights, and traffic control devices at intersections. When abutting properties redevelop, a full 4-lane road including sidewalk and boulevard will be constructed as part of the development requirements. The new road would connect to existing Leslie Road and Cambie Road, with the details of the intersection configurations to be determined through the design process. When completed, this new road would replace the existing River Road between Cambie Road and Gilbert Road and provide a continuous alternate route to No. 3 Road and existing River Road.

The first phase of the project is proposed to start in 2017 to carry out functional and detailed design tasks, as well as any property negotiation, consultation with affected property owners/business operators, and soil remediation as necessary. A more accurate cost estimate will then be carried out and updated in project submissions for subsequent years as necessary. The second phase of the project involves the actual site preparation and construction, which is proposed to start in 2018.

This project is proposed to be funded by the DCC program funding and may be eligible for funding from external agencies such as the federal and/or provincial government, TransLink and/or ICBC.



Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Sexsmith Road Multi-use Pathway, Beckwith Road to River Road	Submission ID:	5879

Location: Sexsmith Road, Beckwith Road to River Road

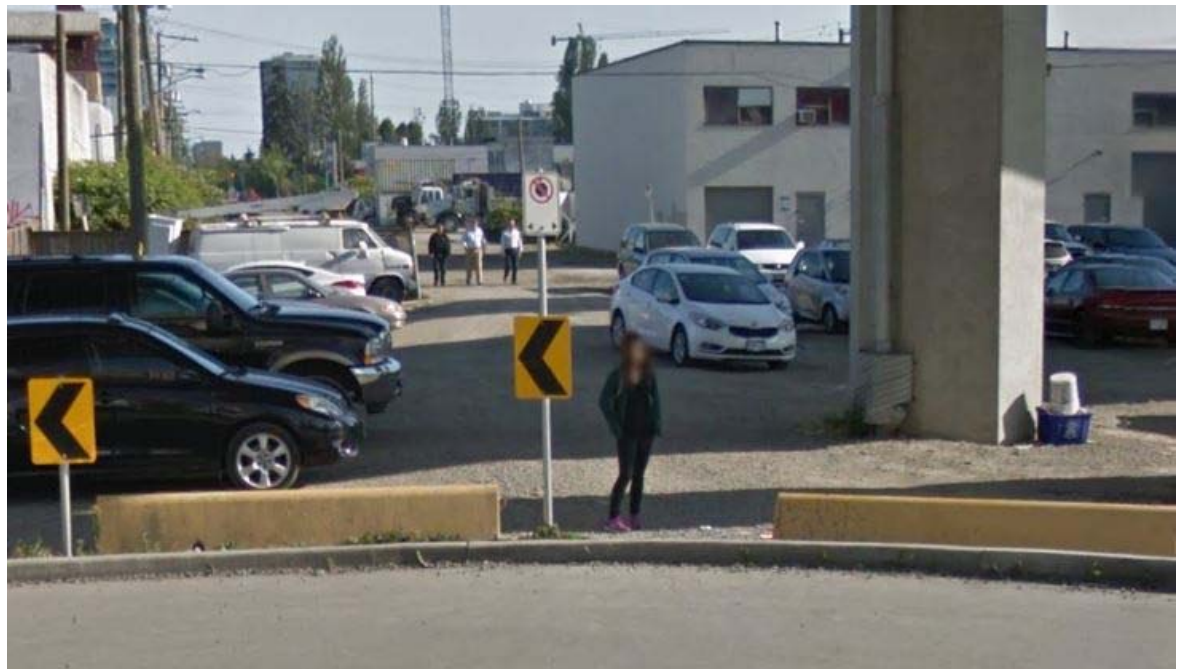
Cost: \$495,000

OBI: \$1,704

Funding Sources: Developer Contribution: \$495,000

Scope: The general scope of this project includes the construction of a multi-use pathway at a minimum total width of 3.0m wide along existing road right-of-way, between Beckwith Road and River Road, with pedestrian lighting, decorative bollards to separate the pathway from the portion of the road right-of-way that is currently and informally being used for parking. A marked crosswalk will also be installed at the north end of Sexsmith Road to connect the walkway to the Bridgeport Road Canada Line Station. When abutting properties redevelop, a full 4-lane road including sidewalk and boulevard will be constructed as part of the development requirements

This project is proposed to be funded by developer contributions collected through the Transit Oriented Development Fund during the Canada Line planning stage collected towards transportation improvements in support of transit-oriented development within the Canada Line rapid transit corridor. The project may be eligible for funding from external agencies such as the TransLink and/or ICBC.



Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Special Crosswalk Program	Submission ID:	5077

Location:	Various Locations		
Cost:	\$350,000	OBI:	\$18,388
Funding Sources:	Roads DCC:	\$329,000	
	Roads City Assist:	\$21,000	

Scope: The general scope involves implementing new traffic control standards that have been adopted by Council, at existing crosswalks on arterial roads. Typical elements of the program include the upgrade of existing crosswalks on arterial roads (typically four-lane arterials) to include overhead illuminated signs with amber flashers, pedestrian-controlled push buttons, as well as enhanced accessible devices. The upgrade would include hardware such as poles, bases, junction boxes, underground/ communication conduits, controller, enhanced accessible devices, related wiring, pavement markings, illuminated crosswalk signs, amber flashers, push buttons, etc.

The program is proposed to be funded by the DCC program funding and may be eligible for external funding contributions from ICBC. Some locations may also include funding contribution from nearby developments.

The following is the preliminary list of potential locations identified for 2017/2018. The exact scope of improvement may be refined due to factors such as priority review, availability of external funding, etc.:

- No 4 Rd. & Dayton Rd.
- Garden City Rd. & Jones Rd.
- Westminster Hwy & Tiffany Blvd.
- Williams Rd. & Deagle Rd.
- Williams Rd. & Lassam Rd.
- Granville Ave. & Bridge St.
- St. Albans Rd. & Jones Rd.



Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Traffic Calming Program	Submission ID:	5080

Location: Various Locations

Cost: \$100,000

OBI: \$11,333

Funding Sources: Roads DCC: \$94,000
Roads City Assist: \$6,000

Scope: The general scope involves the implementation of traffic measures to address concerns regarding through (short-cutting) traffic and excessive speed on the City’s public roads. Specifically, these measures are intended to address concerns related to speed violations, neighbourhood through traffic intrusions and other traffic safety issues.

Typical elements of the program include retrofitting existing streets with traffic calming measures to address traffic safety concerns and enhancing neighbourhood livability. The major cost component of the program is the installation of traffic calming related improvements that includes the construction of curb extensions, centre medians, extruded curbs, traffic circles, speed humps, delineated walkways, traffic signage and other traffic reducing measures. In addition, projects contained in this program may also include supplementary streetscape improvements, i.e. planting of trees and other landscaping improvements to enhance the local pedestrian environment and overall street appearance.

The exact scope will be determined pending on the request and feedback expected to be received by members of public and Council, as well as subject to factors such as the availability of external funding, and/or opportunity to pursue these improvements as part of development frontage improvements.

The program is proposed to be funded by the DCC program funding and may be eligible for external funding contributions from TransLink and ICBC.



Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Traffic Signal Program	Submission ID:	574

Location: Various Locations

Cost: \$1,600,000

OBI: \$58,000

Funding Sources: Roads DCC: \$1,504,000
Roads City Assist: \$96,000

Scope: The general scope of work includes installation of new or upgrade of existing traffic signals to respond to growth in traffic and public requests, to better manage pedestrian and vehicular movements and to address safety concerns.

The major cost component of the program is the installation of traffic controllers/cabinets, poles, bases, junction boxes, underground conduits, in ground and video detection systems, enhanced accessible devices, wiring and pavement markings, traffic signal communications, minor corner property acquisitions, and minor curb cuts and boulevard modifications as necessary.

The program is proposed to be funded by the DCC program funding and may be eligible for external funding from TransLink and ICBC.

The exact scope will be determined pending requests from Council and public, as well as subject to factors such as the availability of external funding, and/or opportunity to pursue these improvements as part of development frontage improvements.

Currently, three potential sites have been identified for 2017 including:

- 1) Granville Ave. / Minoru Gate - upgrade of existing pedestrian traffic signal to a full traffic signal (\$350K)
- 2) Granville Avenue in front of the proposed Minoru Aquatic Centre entrance - installation of a new pedestrian signal (\$150K)
- 3) Williams Road / Shell Road - installation of a new traffic signal (\$700K)



Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Traffic Video and Communication Program	Submission ID:	5899

Location: Various Locations

Cost: \$200,000

OBI: \$13,750

Funding Sources: Roads DCC: \$188,000
Roads City Assist: \$12,000

Scope: The project includes the following two key components:

1) Install video detection cameras at select signalized intersections to enhance the detection of vehicles and bicycles, optimize traffic operations, provide real time video of traffic conditions to the Traffic Management Centre (TMC) for observing and enhancing operations, and providing photos (in one minute intervals) of approach traffic conditions for public information access on the City web site; and

2) Upgrade conduit and cable infrastructure to install higher capacity fibre optic cable and electronics for Ethernet (computer networking technology) to communicate with multiple remote programmable devices at traffic signals. Includes conduit, junction boxes, fibre optic cable and electronic communications switching equipment as required to link multiple traffic signal electronic components to the TMC such as controllers, electronic switches, video cameras, accessible pedestrian devices, intersection power back-up systems (UPS systems) etc.

The program is proposed to be funded by the DCC program funding and may be eligible for external funding contribution from TransLink and ICBC.

The exact scope will be determined by staff assessment of priority, requests from Council and public, as well as subject to factors such as the availability of external funding, and/or opportunity to pursue these improvements as part of development frontage improvements.

The following is the preliminary list of potential locations identified for 2017:

- Traffic video locations: Viking Way/Bridgeport Road, No 3 Road/Alderbridge Way, and No. 3 Road/Cambie Road.
- Communication (via. the installation of fibre cable): No. 1 Road from Chatham St. to Westminster Hwy, Westminster Hwy. from No. 1 Road to City's Works Yard at Lynas Lane, and several other traffic signals in the area around this trunk line.



Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Transit-Related Amenity Improvement Program	Submission ID:	5445

Location: Various Locations

Cost: \$250,000

OBI: \$14,192

Funding Sources: Roads DCC: \$94,000
 Roads City Assist: \$6,000
 Developer Contribution: \$150,000

Scope: The general scope includes transit-related amenity improvements within municipal road right-of-way that are required to support the introduction of various transit service improvements as well as on-going enhancements to existing transit infrastructure. The major cost components are expected to include the installation of new non-advertising bus stop shelters, new benches along transit routes and other pedestrian generators, and other supplementary pedestrian amenity improvements required to facilitate pedestrian traffic generated by transit passengers.

The program is proposed to be funded by the DCC program funding and may be eligible for external funding contributions from TransLink and ICBC. Some locations may also include funding contribution from nearby developments.

Locations for bus stop shelters will be prioritized based on boarding activity and customer requests subject to sufficient availability of right-of-way. The exact scope of improvements may be refined subject to factors such as the completion of detailed design, availability of external funding, and/or opportunity to pursue these improvements as part of development frontage improvements.

Potential locations identified for 2017 and 2018 include:

- HandyDART stop at the Lansdowne Canada Line Station
- Westbound Steveston Hwy far-side Seaward Gte
- Northbound and southbound Westminster Hwy at Hwy 91
- Westbound Cambie Rd far-side Shell Rd
- Eastbound Cambie Rd far-side Viking Way
- Eastbound Cambie Rd far-side St Edwards Dr
- Westbound Williams Road far-side Seacote Rd
- Northbound No. 2 Rd far-side Danube Rd
- Northbound Cooney Rd far-side Westminster Hwy
- Northbound Garden City Rd far-side Ferndale Rd
- Eastbound Blundell Rd far-side Moffatt Rd
- Westbound River Rd far-side Hollybridge Way
- Southbound Blundell Rd far-side Minler Rd
- Northbound Garden City Rd far-side Odlin Rd



Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Transit-Related Roadway Improvement Program	Submission ID:	5444

Location: Various Locations

Cost: \$250,000

OBI: \$15,117

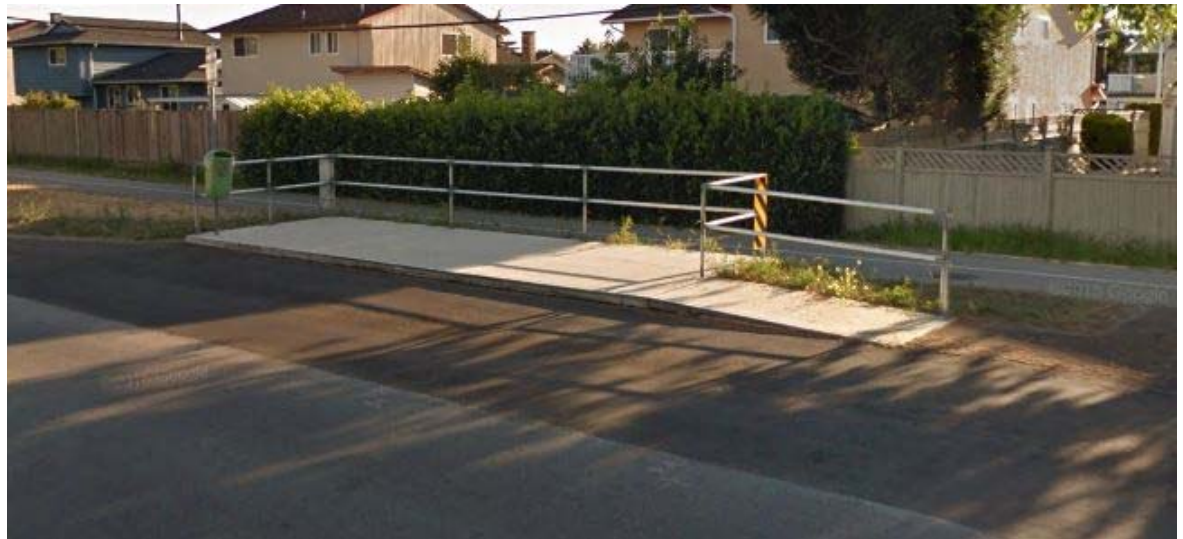
Funding Sources: Roads DCC: \$117,500
 Roads City Assist: \$7,500
 Grant: \$125,000

Scope: The general scope includes municipal road and traffic improvements that are required to support the introduction of various transit service improvements as well as on-going enhancements to existing transit infrastructure. The major cost components are expected to include the installation of new bus stop pads for wheelchair accessibility, minor road geometric improvements (e.g. intersection corner improvements), minor sidewalk/walkway construction, wheelchair ramps, upgrade of existing bus stops to accessible (wheelchair) standards, etc., required to facilitate pedestrian traffic generated by transit passengers.

The program is proposed to be funded by the DCC program funding and may be eligible for external funding contributions from TransLink and ICBC. Some locations may also include funding contribution from nearby developments.

Locations for bus stop wheelchair accessible improvements will be prioritized based on boarding/alighting activity and customer requests subject to sufficient availability of right-of-way. The exact scope of improvement may be refined subject to factors such as the completion of detailed design, availability of external funding, and/or opportunity to pursue these improvements as part of development frontage improvements.

Potential locations for 2017 include: Westminster Hwy/No. 4 Rd, Railway Ave/Francis Rd, Westminster Hwy/Riverdale Dr, No. 4 Rd/Williams Rd, No. 4 Rd/Dayton Ave, No. 4 Rd (7500 Blk), Westminster Hwy farside No. 5 Rd, and approximately 20 additional locations based on priority locations to be identified in consultation with Coast Mountain Bus Company (CMBC) and through public feedback.



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Program:	Infrastructure Program	Sub-program:	Drainage
Project Name:	Box Culvert Repair	Submission ID:	5853

Location: No. 2 Road South

Cost: \$1,500,000

OBI: \$ -

Funding Sources: Drainage Utility: \$1,500,000

Scope: The scope of work includes, but not limited to, the rehabilitation of the 3050 x 1500 concrete storm box culvert along No. 2 Road between Steveston Highway and London Road in conjunction with roadworks and watermain works that will be on-going in the area. Additionally, there are other box culverts throughout Richmond that are experiencing similar failures, this funding will also be used to do point repairs elsewhere throughout the drainage system.

Completion of this work will upgrade the overall condition and performance of the City's drainage system.



Program:	Infrastructure Program	Sub-program:	Drainage
Project Name:	Canal Stabilization	Submission ID:	5872

Location: City Wide

Cost: \$300,000 **OBI:** \$ -

Funding Sources: Drainage Utility: \$300,000

Scope: This project will stabilize the canal walls to improve drainage, mitigate damage to the roadway, prevent damage to local infrastructure running parallel to the canals and maintain riparian management area conditions.

Implement one or more canal bank stabilization solutions at various locations throughout Richmond. This will include partial re-profiling of the canal plus construction of a retaining wall or similar stabilization structure.



Program:	Infrastructure Program	Sub-program:	Drainage
Project Name:	City Centre Infrastructure Upgrades	Submission ID:	5822

Location: See Scope

Cost: \$3,240,000 **OBI:** \$100,000

Funding Sources: Drainage Utility: \$1,695,000
 Water Utility: \$700,000
 Sanitary Utility: \$845,000

Scope: This project includes water, sanitary and drainage upgrades to the City Centre area along Granville Avenue, Gilbert Road and Minoru Gate, as follows:

- Sanitary: \$845,000
- Drainage: \$1,695,000
- Water: \$700,000



Program:	Infrastructure Program	Sub-program:	Drainage
Project Name:	Development Coordinated Works - Drainage	Submission ID:	5307

Location: City Wide

Cost: \$250,000 **OBI:** \$25,000

Funding Sources: Drainage Utility: \$250,000

Scope: This project will set aside funding to have City and private development complete infrastructure works that are currently not identified in the Capital Program but do benefit the City. Infrastructure works are more cost effective when completed in conjunction with development.

This 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.

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:	Drainage
Project Name:	Dike Upgrades	Submission ID:	5852

Location: South Dike

Cost: \$3,000,000 **OBI:** \$18,750

Funding Sources: Drainage Utility: \$3,000,000

Scope: The City has 49km of perimeter dikes that provide the City with flood protection from ocean storm surge and freshets.

This project will include dike improvements along the Fraser River's South Arm that will maintain or increase current flood protection service levels. This project will also include Dike Investigation work at Shady Island, Geotechnical investigation, survey, environmental site assessment, and environmental/archaeological permitting and monitoring.

Raise the existing dike and other dike upgrades necessary to continue to improve existing dike and drainage infrastructure, meet medium to long-term needs and accommodate local areas needs such as the provision of basic recreation trails, etc.



Program:	Infrastructure Program	Sub-program:	Drainage
Project Name:	Drainage Pump Station Generator Upgrade	Submission ID:	5851

Location: No. 3 Road South

Cost: \$130,000 **OBI:** \$12,500

Funding Sources: Drainage Utility: \$130,000

Scope: Construct a concrete pad with a fenced surrounding. Purchase and install a 200 kW generator and connect via a new transfer switch.

The project is estimated to take one month and be completed before the 2017 year-end.

Cost breakdown:

Civil	\$15,000
Equipment	\$95,000
Installation	\$20,000



Program:	Infrastructure Program	Sub-program:	Drainage
Project Name:	Drainage Pump Station Rehabilitation	Submission ID:	5848

Location: City Wide

Cost: \$225,000 **OBI:** \$3,750

Funding Sources: Drainage Utility: \$225,000

Scope: The hardware of these drainage pump stations is at the end of its life expectancy and is now having numerous breakdowns. This project will improve the reliability and efficiency of our drainage pump stations. Scope of work includes:
 Full rehabilitation upgrade at Gilbert and Lucas pump stations which includes the upgrade and installation of 2 pumps, pump risers, check valves, pump lids, motor control center, transfer switch, sonar level controls and cement pad.



Program:	Infrastructure Program	Sub-program:	Drainage
Project Name:	East Richmond Drainage & Irrigation Upgrades	Submission ID:	5166

Location: East Richmond

Cost: \$1,285,000

OBI: \$15,000

Funding Sources: Drainage Utility: \$1,285,000

Scope: Scope of work includes, but is not limited to the following projects:

1. Lower culvert watercourse crossings and reprofile watercourses along Steveston Highway between Sidaway Road and Palmberg Road and on Sidaway Road between Steveston Highway and the Francis Road Right-of-Way.
2. Install two automated irrigation control structures on Steveston Highway and Palmberg Road.
3. Resolve drainage ditch issue on Westminster Hwy between Nelson Road and east of No. 9 Road.
4. Install irrigation gate at No. 6 Road and Triangle Road - regrade and reprofile existing ditch from entry point into box culvert near Triangle Road to Blundell Road to reduce flooding in the area.
5. Environmental compensation for Gilley and Westminster storm project
6. Drainage and irrigation upgrades throughout East Richmond



Program:	Infrastructure Program	Sub-program:	Drainage
Project Name:	Knotweed Control & Removal	Submission ID:	5991

Location: City Wide

Cost: \$300,000

OBI: \$ -

Funding Sources: Drainage Utility: \$300,000

Scope: The general scope includes ongoing identification, mapping, research, control and removal of knotweed from City dike infrastructure. Typical activities will include control techniques to eliminate both the above and below ground plant and root materials to minimize the spread of this aggressive invasive plant species. Ongoing identification, research, mapping and control treatments will also be undertaken in order to effectively manage the risk that this aggressive species presents to infrastructure and biodiversity. The intent of this program is to reduce the risk posed by knotweed to our dike infrastructure.



Program:	Infrastructure Program	Sub-program:	Drainage
Project Name:	Laneway Drainage Upgrade - Belair Drive (South)	Submission ID:	5612

Location: 7928 Belair Drive to 7180 Belair Drive (960m)

Cost: \$1,344,000

OBI: \$16,250

Funding Sources: Drainage Utility: \$1,336,475
 Neighborhood Improvement \$7,525

Scope: Install drainage in 960m of laneway south of Belair Drive between 7928 Belair Drive and 7180 Belair Drive. Does not include the addition of street lighting, curbs or gutters. The project is estimated to take 2-3 months and be complete by October 2017.

Costs will be recovered through City Bylaw 8752 as development occurs.



Program:	Infrastructure Program	Sub-program:	Drainage
Project Name:	McBurney Drive Drainage Upgrades	Submission ID:	5850

Location: McBurney Drive

Cost: \$350,000 **OBI:** \$1,250

Funding Sources: Drainage Utility: \$350,000

Scope: This project will mitigate drainage and road/sidewalk surface issues in the McBurney Drive area. Issues are primarily settlement related that include heaving, curb and gutter separation and surface water ponding.

Scope includes the installation of new catch basins and roads and sidewalks will be regraded to reduce ponding and tripping hazards.



Program:	Infrastructure Program	Sub-program:	Drainage
Project Name:	Park Road Drainage Upgrade	Submission ID:	5849

Location: Park Road

Cost: \$650,000 **OBI:** \$8,750

Funding Sources: Drainage Utility: \$650,000

Scope: This project will prevent the continued occurrence of sink holes along the west end of Park Road at No. 3 Road. Additional funding is necessary in order to complete the 2013 Capital Project in this area. From No. 3 Road heading east, approximately 80m of 600mm drainage pipe made from material that does not conform with City Engineering standards will be upgraded. There are a number of private utility conflicts that were unexpected at the time of the 2013 Capital submission as a result of increasing the size of the new pipe to account for increased capacity requirements.

Sink holes occur when pipes become damaged or fatigues such that ground water is able to flow into them. This flow contains soil particles from the surrounding ground. The movement of soil particles into the pipes creates a void in the ground that becomes noticeable at the ground surface, known as a sink hole. Sink holes can be dangerous to the general public and are a persistent and costly maintenance item. Sink holes can also lead to increased flooding risks due to pipe collapse/blockage.



2017 Recommended Infrastructure – Water Main Replacement Program

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Program:	Infrastructure Program	Sub-program:	Water
Project Name:	Thompson Gate Pressure Reducing Valve Station	Submission ID:	5821

Location: See Scope

Cost: \$600,000

OBI: \$17,500

Funding Sources: Water Utility: \$600,000

Scope: This project involves the installation of a new Pressure Reducing Valve (PRV) station at Thompson Gate and Boundary Road and the associated tie-ins to connect the neighbourhood's watermain system to Metro Vancouver's Annacis No. 4 transmission main. Completion of the project is required to provide adequate flows to support upcoming development.

Costs will be recovered through rezoning cash-in-lieu contributions or the Works and Services Cost Recovery Bylaw No. 8752. Costs collected for this purpose shall be returned to the Watermain Replacement Reserve.

Land required for the station shall be acquired through development rezoning.

Project cost includes allowance for potential groundwater contamination.



Program:	Infrastructure Program	Sub-program:	Water
Project Name:	Water Metering Program	Submission ID:	5164

Location: City Wide

Cost: \$2,120,000 **OBI:** \$258,750

Funding Sources: Water Utility: \$600,000
Water Metering Provision: \$1,520,000

Scope: This project is year 4 of the five-year universal metering program for single-family dwellings, a volunteer metering program for multi-family dwellings, and a fixed base network implementation program.

The residential meter programs allow owners of single-family and multi-family dwellings in Richmond to take control of their water and sewer utility costs through water metering.

The fixed base network program involves the installation of approximately 36 gateways required for the universal implementation of a fixed based network within the urban areas of the City, which allows for automated water meter data collection, enabling users to access real time consumption information and leak notifications in the future.



Program:	Infrastructure Program	Sub-program:	Water
Project Name:	Watermain Replacement - Lulu Island North Area	Submission ID:	5148

Location: See scope

Cost: \$2,865,000 **OBI:** \$ -

Funding Sources: Water Utility: \$2,042,504
 Water DCC: \$402,697
 Water City Assist: \$419,799

Scope: This project includes installation of 2900 meters of 200 mm diameter watermain to replace the existing ageing infrastructure.
 The Waterworks Capital Program is based on watermain age, material, break history and the proposed road-paving program.



Program:	Infrastructure Program	Sub-program:	Water
Project Name:	Watermain Replacement - Lulu Island West Area	Submission ID:	5149

Location: See scope

Cost: \$800,000

OBI: \$ -

Funding Sources: Water Utility: \$800,000

Scope: This project includes installation of 800 meters of 300 mm diameter watermain to replace the existing ageing infrastructure and support local area improvements.



Program:	Infrastructure Program	Sub-program:	Water
Project Name:	Watermain Tie-in and Restoration	Submission ID:	5820

Location: Various

Cost: \$650,000 **OBI:** \$ -

Funding Sources: Water Utility: \$650,000

Scope: This project involves tie-in and restoration work for watermain replacements completed as part of prior years' capital programs.



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Program:	Infrastructure Program	Sub-program:	Sanitary Sewer
Project Name:	Development Coordinated Works - Sanitary	Submission ID:	5317

Location: City Wide

Cost: \$400,000 **OBI:** \$25,000

Funding Sources: Sanitary Utility: \$400,000

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:	Hamilton Area Sanitary Sewer and Pump Station	Submission ID:	5870

Location: See Scope

Cost: \$1,700,000 **OBI:** \$37,500

Funding Sources: Sanitary Utility: \$184,746
 Sewer DCC: \$1,425,096
 Sewer City Assist: \$90,158

Scope: This project includes the construction of a new pump station including wet well, Variable Frequency Drive (VFD) pumps, electrical kiosk, 200 metres of 200 mm forcemain and 25 metres of 300 mm gravity main. This project does not require land acquisition, as it will be constructed on City-owned land.

The purpose of the project is to provide sanitary service for the Willet sanitary catchment in order to support population densities projected by the Hamilton Official Community Plan Update. This area does not have an existing City sanitary system and is currently serviced by septic systems.

Where possible, costs will be recovered through rezoning cash-in-lieu contributions or the Works and Services Cost Recovery Bylaw No. 8752. Costs collected for this purpose shall be returned to the Sanitary Sewer Reserve.



Program:	Infrastructure Program	Sub-program:	Sanitary Sewer
Project Name:	Sanitary Facility Land Acquisition for Grease Management	Submission ID:	5871

Location: Various

Cost: \$2,500,000

OBI: \$ -

Funding Sources: Sanitary Utility: \$2,500,000

Scope: This project involves land acquisition required for new sanitary facilities, including sanitary pump stations and grease extraction facilities.

A sanitary pump station replacement and upgrade is required due to aging infrastructure. Additionally, grease management has become a major contributing factor to the need for proactive preventative maintenance. While a number of programs have been implemented to mitigate the impact of grease blockages, including inspection of commercial grease traps, there is growing need for grease management in residential areas in City Centre. This capital request is to support land acquisition in City Centre for the replacement of a sanitary pump station and a grease management chamber. The exact location is to be determined, however it will be in City Centre in close proximity to an existing sanitary pump station and trunk sewer main.



Program:	Infrastructure Program	Sub-program:	Sanitary Sewer
Project Name:	Sanitary Forcemain Valve Installations	Submission ID:	5642

Location: Various Locations

Cost: \$100,000 **OBI:** \$25,000

Funding Sources: Sanitary Utility: \$100,000

Scope: This project involves the installation of line valves on sanitary forcemains, allowing for isolation and control of forcemains in the event of breaks or tie-ins. It would also allow for a smaller section of the sanitary sewer system to be shut down when such work is required, thereby impacting fewer residential and commercial customers.



Program:	Infrastructure Program	Sub-program:	Sanitary Sewer
Project Name:	Sanitary Pump Station Rehabilitation	Submission ID:	5631

Location: Various Locations

Cost: \$350,000

OBI: \$21,875

Funding Sources: Sanitary Utility: \$350,000

Scope: This project involves the rehabilitation of existing sanitary pump stations. The scope of work includes electrical kiosk replacement, power supply upgrade, new motor control centre (MCC) installation, pump rewinding, and concrete slab and aluminum hatch installation.



Program:	Infrastructure Program	Sub-program:	Sanitary Sewer
Project Name:	Sanitary Sewer Tie-in and Restoration	Submission ID:	5395

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.



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Program:	Infrastructure Program	Sub-program:	Minor Capital
Project Name:	Public Works Infrastructure Advanced Design	Submission ID:	5042

Location: City Wide

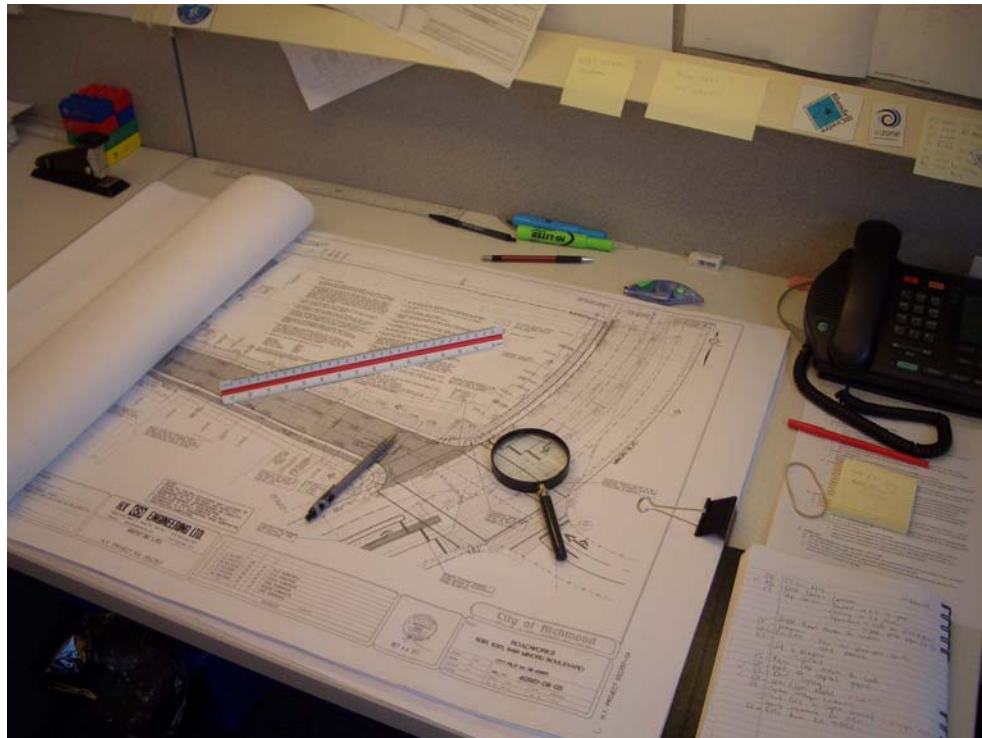
Cost: \$1,962,000 **OBI:** \$ -

Funding Sources:

Drainage Utility:	\$1,000,000
Water Utility:	\$430,000
Sanitary Utility:	\$470,000
Roads DCC:	\$58,280
Roads City Assist:	\$3,720

Scope: The scope of work includes hiring consultants and contractors to assist staff with the plan and design of the 2018 capital plan and deliver reports that define long-term infrastructure upgrades.

Sanitary Project Design and Planning	\$420,000
Sanitary System Modelling	\$50,000
Water Project Design and Planning	\$380,000
Water System Modelling	\$50,000
Drainage & Diking Project Design + Planning	\$950,000
Drainage System Modelling	\$50,000
Roads	\$62,000
Total	\$1,962,000



Program:	Infrastructure Program	Sub-program:	Minor Capital
Project Name:	Public Works Minor Capital - Sanitary	Submission ID:	5053

Location: Various Locations

Cost: \$450,000

OBI: \$31,250

Funding Sources: Sanitary Utility: \$450,000

Scope: This project involves minor work related to 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:	Minor Capital
Project Name:	Public Works Minor Capital - Sanitation & Recycling	Submission ID:	5964

Location: City Wide

Cost: \$300,000

OBI: \$ -

Funding Sources: General Solid Waste and Recycling: \$300,000

Scope: The project involves minor work relating to the Recycling Depot site, including site improvements, minor expansion projects and safety upgrades. The project also includes acquisition of litter and recycling containers for streetscape and event recycling programs. Crane truck equipment for the collection of hard to handle illegally dumped materials (such as mattresses, large appliances, etc.) is also included in the scope of this project with the goal of helping to reduce worker injury claims. This will allow the City to ensure it has the proper tools and equipment to maintain quality solid waste and recycling services for residents.



Program:	Infrastructure Program	Sub-program:	Minor Capital
Project Name:	Public Works Minor Capital - Traffic	Submission ID:	5083

Location: Various Locations

Cost: \$250,000

OBI: \$8,581

Funding Sources: Capital Revolving: \$250,000

Scope: The general scope of this program includes various improvements to traffic systems as required. The program includes the following major components:

A. Traffic Improvements: for unforeseen capital improvements of a minor nature including wheelchair ramps, traffic signage, pavement markings and traffic safety improvements. These are separate from the programs which fund specific projects / locations.

B. Traffic Signal/Communications Network: infrastructure renewal, physical plant upgrading, ongoing infrastructure development testing and communications network conduit/cable, installation of L/T arrows and related detection, controller upgrades, etc (whereas Roads DCC would fund new traffic signals).

This program is an annual recurring program funded by the revenues from non-DCC sources such as general revenue. Funding assistance from ICBC and TransLink's MRN sources for some of these projects may be available and applications would be submitted to the appropriate agency.



Program:	Infrastructure Program	Sub-program:	Minor Capital
Project Name:	Public Works Minor Capital - Water	Submission ID:	791

Location: Various Locations

Cost: \$500,000

OBI: \$ 0

Funding Sources: Water Utility: \$500,000

Scope: This project involves minor work related to the water infrastructure, including minor watermain repairs and replacements, operational efficiencies, changes to safety requirements, testing of new technologies, and response to resident complaints that require minor upgrades.

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.



Building Program 2017

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.

2017 Recommended Building Program

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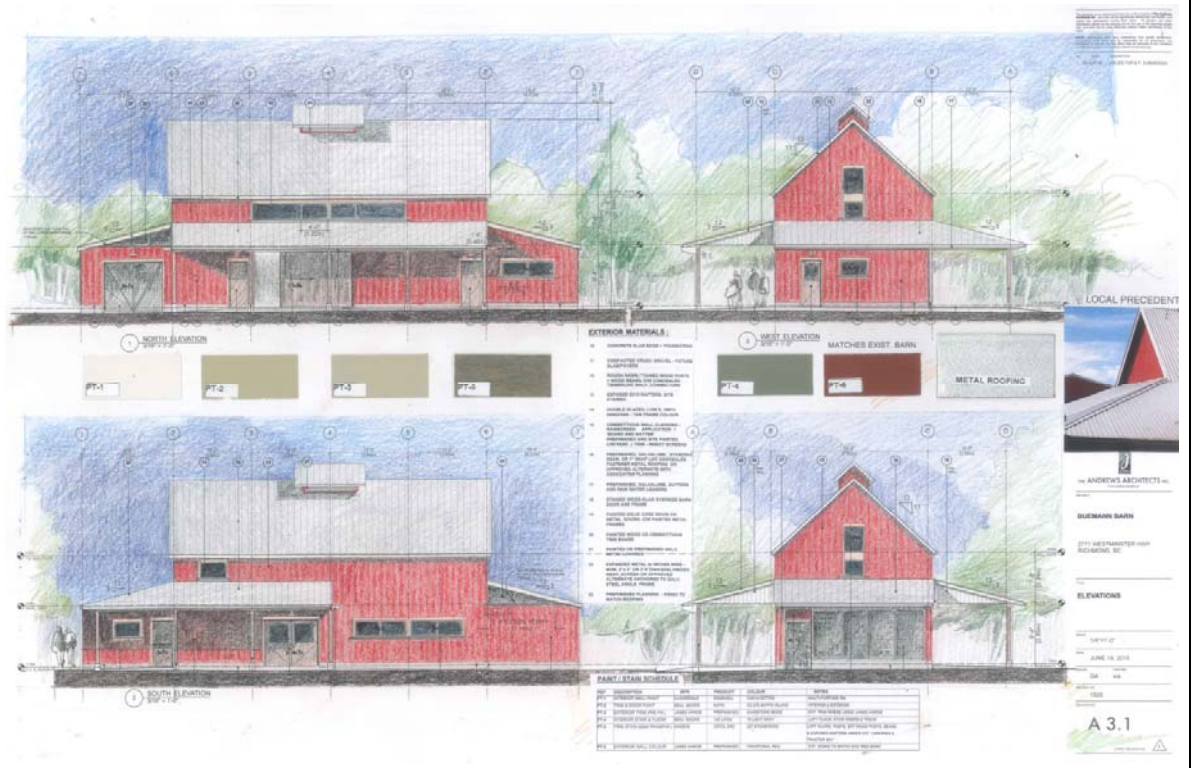
Program:	Building Program	Sub-program:	Building
Project Name:	Advanced Planning and Design for Major Facilities Phase 2	Submission ID:	5973

Location: City Wide

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

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

Scope: Engage the appropriate consultants (i.e. Architects, engineers, cost consultants etc.) for the Major Facilities Phase 2 (2016 - 2026) priority progress to provide a range of professional services necessary to advance to the concept development stage.



Program:	Building Program	Sub-program:	Building
Project Name:	City Hall Boiler Replacement Upgrade	Submission ID:	5968

Location: City Hall

Cost: \$230,000 **OBI:** \$-5,000

Funding Sources: Capital Revolving: \$195,000
Enterprise: \$35,000

Scope: Replace and upgrade the low rise and high rise heating system boiler plants at City Hall.

The boilers at City Hall have reached the end of their useful life and are no longer able to be operated in an efficient manner. Replacing the two low rise and two high rise boilers, with new upgraded and inter-connected equipment will reduce plant operation, improve the gas use efficiency at City Hall, and reduce maintenance activities associated with the boilers.

It is estimated that approximately 600 GJ of natural gas use annually will be avoided by replacing the boilers, which will equal over \$5,000 in cost avoidance savings, and will reduce greenhouse gas emissions at City Hall by 30 tonnes.



Program:	Building Program	Sub-program:	Building
Project Name:	City Hall Domestic Water Piping Upgrade	Submission ID:	5856

Location: 6911 No 3 Road

Cost: \$350,000

OBI: \$ -

Funding Sources: Capital Revolving: \$350,000

Scope: The domestic piping system servicing City Hall has extensive pinholes and has reached the end of its serviceable life cycle and will be replaced with an Aquatherm corrosion resistant piping system. This system renewal 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.



Program:	Building Program	Sub-program:	Building
Project Name:	City Hall Server Room A/C Unit Installation	Submission ID:	5958

Location: City Hall

Cost: \$325,000 **OBI:** \$ -

Funding Sources: Capital Revolving: \$325,000

Scope: Remove the existing four (4) air conditioning units and install four (4) air conditioning units into the main server room for City Hall.



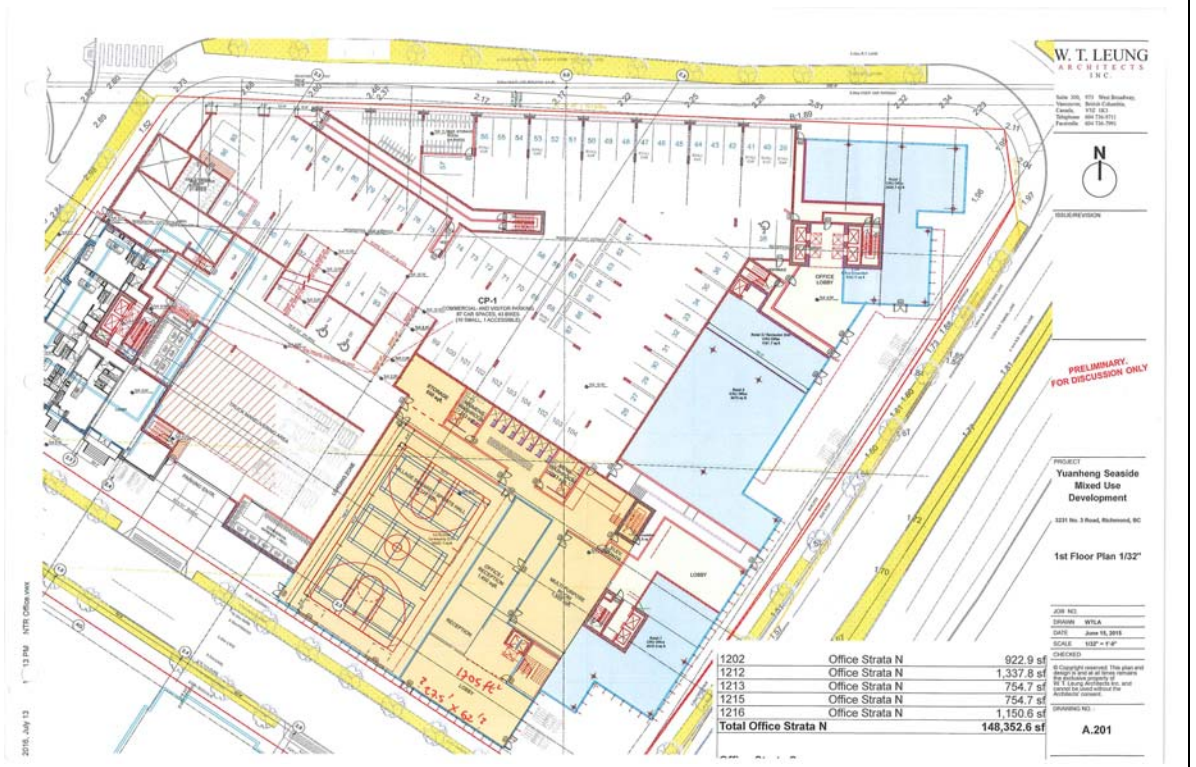
Program:	Building Program	Sub-program:	Building
Project Name:	Developer Funded Advanced Design and Coordination	Submission ID:	6022


Location: 3211 No. 3 Road

Cost: \$600,000 **OBI:** \$ -

Funding Sources: Developer Contribution: \$600,000

Scope: Project management and construction manager services associated with the construction of a new community facility along No. 3 road. This will also include the design and construction costs for fibre optics to the facility.



Program:	Building Program	Sub-program:	Building
Project Name:	Direct Digital Control Upgrade & Consolidation Phase 3	Submission ID:	5750
Location:	Various City Facilities		
Cost:	\$180,000	OBI:	\$-19,863
Funding Sources:	Enterprise: \$180,000		
Scope:	<p>The general scope of work for this Phase 3 project is to replace and upgrade direct digital control systems associated with HVAC and lighting controls at select City facilities, as per the DDC Upgrade and Management Plan.</p> <p>There are approximately 25 City buildings that have direct digital control (DDC) systems that control mechanical and lighting functions. These systems are used to monitor and adjust comfort parameters, equipment performance, and building scheduling, as well as remotely diagnose problems. Prior to starting the initiative, the City had seven different types of control applications, with some of the systems having reached their end of life. The number of different systems and the fact that some systems are now obsolete, makes it challenging to effectively and efficiently manage, program, monitor, and operate the comfort systems in those City buildings.</p> <p>The replacement and upgrading of these systems will allow for more efficient building operation, increased ability for effective and timely in-house programming, reduced training requirements for multiple legacy systems, and increased ability for energy use monitoring and system anomaly notification.</p> <p>The DDC upgrade plan will be phased over 3 years with a funding breakdown of:</p> <ul style="list-style-type: none"> - 2015: \$290,000 (2015 capital submission - implemented) - 2016: \$241,500 (2016 capital submission - implemented) - 2017: \$180,000 (submitted for consideration) <p>Similar to Phase 1 and 2 of this project, it is proposed for Phase 3 to be funded from the Enterprise Fund, with the anticipated energy utility cost savings (\$19,863/year) from increased energy efficient operation of these buildings will be used to re-pay the fund.</p> <p>In addition to internal funding, external incentive opportunities will be explored to potentially offset the capital cost of the project or repay the Enterprise Fund sooner.</p>		
			

Program:	Building Program	Sub-program:	Building
Project Name:	Library and Cultural Centre Chiller Replacement	Submission ID:	5971

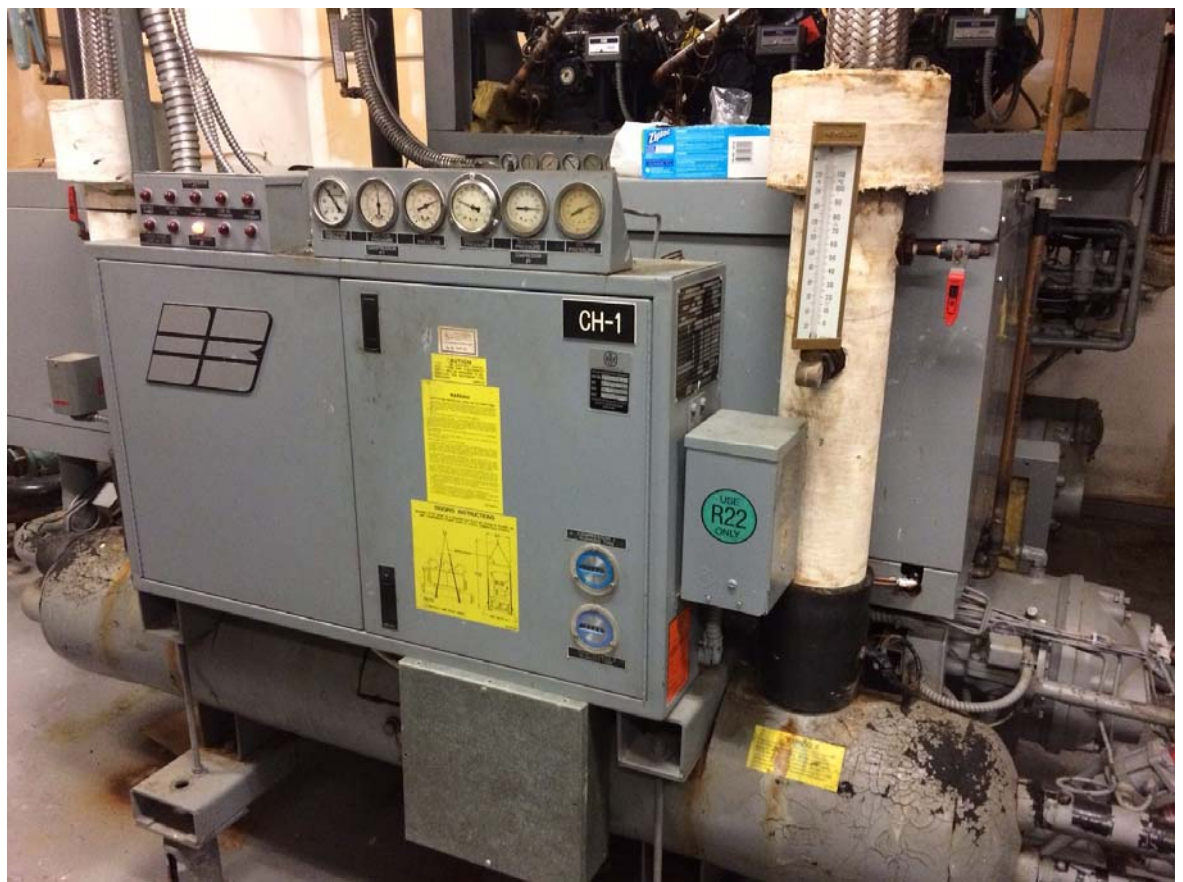
Location: Library and Cultural Centre

Cost: \$300,000 **OBI:** \$ -

Funding Sources: Capital Revolving: \$300,000

Scope: Library and Cultural Centre main building air conditioning system is 25+ years old and has reached its recommended age to plan for replacement.

It utilizes 4 large compressors to provide air conditioning to the Library and Cultural Centre and uses a refrigerant called R-22 which will no longer be available after 2020.



Program:	Building Program	Sub-program:	Building
Project Name:	Minoru Chapel Restoration	Submission ID:	5934

Location: Minoru Park

Cost: \$280,875

OBI: \$ -

Funding Sources: Capital Revolving: \$280,875

Scope: Built in 1888, Minoru Chapel is an iconic and popular heritage site for weddings, film rentals and special programs like The Opera Series and Doors Open Richmond. The Chapel has gone through 2 previous phases of restoration work that included, creating opportunities for accessibility, replacement of the roof and repair to interior finishes. Over the course of the work additional issues were discovered, creating an immediate need for a third and final phase of restoration work. This final phase will include repair of exterior siding and doors impacted by dry rot and the installation of a sub floor to provide support to preserve the 1880s fir interior flooring. The work is essential in order to preserve the heritage integrity of the site and character defining elements that make it an important part of the City's built and social heritage.

Design and procurement to commence in 2017.

Restoration work is scheduled to commence in 2018. The Chapel is only available in January and February due to advance bookings for weddings and other rentals. Work will include rot repair, doors repair and the installation of a sub floor to support the late 1800s fir flooring.



Program:	Building Program	Sub-program:	Building
Project Name:	Phoenix Net Loft Design	Submission ID:	6005

Location: Phoenix Net Loft, Steveston

Cost: \$500,000 **OBI:** \$ -

Funding Sources: Arts, Culture and Heritage: \$500,000

Scope: The scope of work is to complete design for preservation and conservation of the Phoenix Net Loft to bring to a condition similar to the recently upgraded Seine Net Loft.

The Phoenix Net Loft and attached decking is in a state of considerable disrepair. Building assessment work completed has shown the following areas need to be addressed.

- Approximately 90% of existing timber piles are rotting
- Internal posts, beams and stairs require structural support
- Windows, doors and louvers need to be refurbished
- The exterior deck attached to the Phoenix Net Loft is collapsed in some sections and near a point of collapse in other sections
- Existing mechanical and electrical systems need replacement and upgrade be similar to the Seine Net Loft
- New site services are required; water, sanitary, storm, gas and 3 phase power
- Flood protection requirements related to the Phoenix Net Loft elevation
- Structural deficiencies to be addressed on Level 2 to permit public occupancy
- Miscellaneous associated works.



Program:	Building Program	Sub-program:	Building
Project Name:	South Arm Community Centre Fitness Renovation	Submission ID:	5699

Location: 8880 Williams Road

Cost: \$1,500,000

OBI: \$ -

Funding Sources: Council Community Initiative: \$500,000
 Community Contribution: \$500,000
 Grant: \$500,000

Scope: This South Arm Community Centre renovation will expand the second floor fitness area, increasing the usable fitness space from 3070 square feet to 7835 square feet. This project is estimated to take ten months to complete, commencing in February 2017 and completing in December 2017. The South Arm Community Association is a partner in this project, contributing \$500,000 to the building costs.

Major Cost Components:

Direct Construction \$ 990,000
 Indirect Costs \$ 310,000
 Contingency \$ 200,000



Parks Program 2017

Richmond is renowned for its high quality parks and recreation facilities. The City's park system has over 120 parks that total approximately 1,700 acres. Parks are unique places designed and developed for the enjoyment of all city residents as well as visitors to Richmond. These sites usually contain a wide variety of recreational and sports facilities, play equipment and other specialized facilities. In addition to parks, Richmond has 50 kilometers of recreational trails.

2017 Recommended Parks – Major Parks/Steetscapes Program

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Program:	Parks Program	Sub-program:	Parks
Project Name:	Britannia Landscaping Improvements and Wayfinding	Submission ID:	5832

Location: Britannia Shipyard Site

Cost: \$150,000

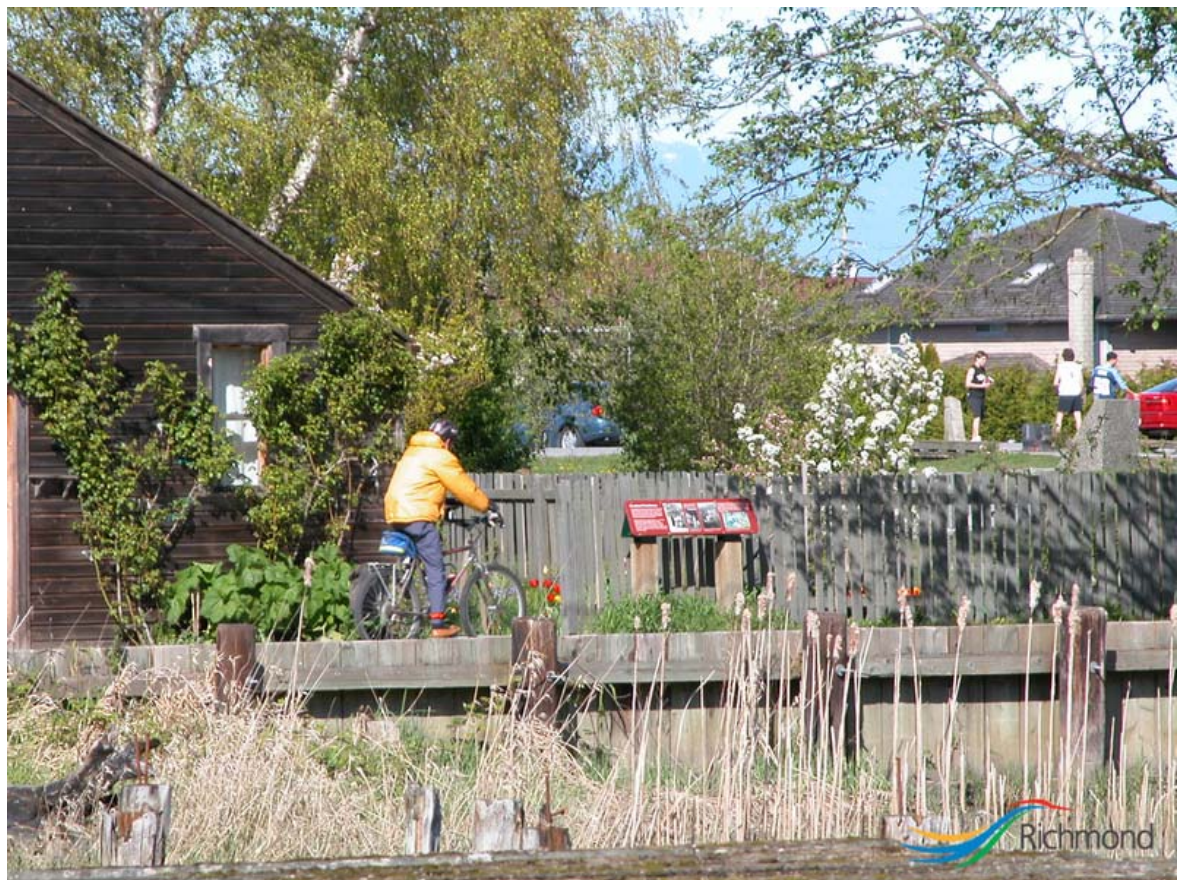
OBI: \$ -

Funding Sources: Parks Development DCC: \$141,075
 Parks Development City Assist: \$8,925

Scope: In order to advance the Britannia Shipyards National Historic Site Strategic Plan, the scope of this project includes the development of a park plan, which includes wayfinding and landscape improvements to enhance the functionality of the site, as well as the maritime and cultural heritage experience for residents and visitors. It will also identify and determine the use and locations of the park for future infrastructure and development.

- Investment in an enhanced design park plan for the site will determine the entry points for the site, directional signage for important destinations on the site, provide site identity and develop a plan and identify where any future buildings or structures for the site could be placed (such as an A frame boat building structure).

- A park plan will also assist to determine the scope of work needed to add any additional structures to be incorporated in the site.



Program:	Parks Program	Sub-program:	Parks
Project Name:	Britannia Seine Net Loft Washroom Facilities	Submission ID:	6012

Location: Britannia Shipyards

Cost: \$393,014

OBI: \$8,892

Funding Sources: Arts, Culture and Heritage: \$393,014

Scope: The Seine Net Loft building at Britannia Shipyards National Historic Site was restored in 2013. The restoration project included the rehabilitation of the superstructure, which included seismic and electrical upgrades, a fire protection system as well as life and safety improvements so that the building could be used for public assembly, exhibit space and storage. Since the restoration in 2013, it has been identified the need for washrooms to be installed inside the building to support programs, events and rentals. The scope of the project is construction of two new accessible washroom stalls within the Seine Net Loft building under the northwest stairs within the building; and create needed secure storage for tables and chairs and other equipment in the facility.



Program:	Parks Program	Sub-program:	Parks
Project Name:	Cambie City Centre Park	Submission ID:	5423

Location: Cambie Area

Cost: \$1,000,000

OBI: \$21,824

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

Scope: Cambie City Centre Park is a new park located within the Capstan Village neighbourhood of Richmond's City Centre. The park will function as a local green space and urban square for public gatherings and community activities, and will complement the surrounding high density, urban neighbourhood. It will offer a diverse mixture of landscapes, programs, activities and amenities for residents and visitors alike to experience and enjoy. This phase of work includes the addition of special amenities to the base park development. Work will begin on the planning and design of the children's play area, and a plaza performance area, which may include a stage with support facilities, storage area and public washrooms.

This project supports multiple Council Term Goals including 2.3 - Outstanding places, programs, and services that support active living, wellness and a sense of belonging; and, 3.2 - A strong emphasis on physical and urban design.



Program:	Parks Program	Sub-program:	Parks
Project Name:	City Tree Planting Program	Submission ID:	5955

Location: Various Locations

Cost: \$150,000 **OBI:** \$8,438

Funding Sources: Developer Contribution: \$150,000

Scope: This program will allow for the planting of trees at various sites within the City's park and open space system, many of which have no or few existing trees. Planting trees provides many benefits to the community, including adding beauty to park sites and increasing neighbourhood livability; storing and sequestering carbon; removing pollutants from the air; providing habitat for wildlife; reducing storm water runoff; stabilizing slopes; providing shade moderating temperatures; positively affecting public health.

This program supports Council Term Goal 3.2 - A strong emphasis on physical and urban design; and 4.2 Innovative projects and initiatives that advance sustainability.



Program:	Parks Program	Sub-program:	Parks
Project Name:	Garden City Lands Phase 2	Submission ID:	5647

Location: Garden City Road & Westminster Hwy.

Cost: \$1,200,000

OBI: \$41,251

Funding Sources: Parks Development DCC: \$940,500
 Parks Development City Assist: \$59,500
 Developer Contribution: \$200,000

Scope: Phase 2 of the development of the Garden City Lands (GCL) will focus on completing the installation of the water management infrastructure (e.g., the hydraulic barrier between the bog conservation area and the perimeter trails) that will conserve the bog ecosystem while enabling agriculture uses and recreational trails around the perimeter of the park to be constructed. Phase 2 will also include the continued planting of native trees and shrubs around the perimeter of the park. The water management infrastructure is an essential component of the successful development of the park and, therefore, in enabling the park to fulfill the goals set out in the GCL Legacy Landscape Plan which Council adopted on June 9, 2014 as the guide for developing the GCL lands for community use. The Legacy Landscape Plan outlines over 25 City policies and objectives that development of the GCL supports within a variety of focus areas such as agricultural sustainability, ecological health, community wellness, arts and culture and city vibrancy.



GARDEN CITY LANDS Park Development Plan

CITY OF RICHMOND | P/WL PARTNERSHIP



Program:	Parks Program	Sub-program:	Parks
Project Name:	London Steveston Park Phase 1 of 3	Submission ID:	5626

Location: London Steveston Park

Cost: \$250,000 **OBI:** \$2,874

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

Scope: The concept plan for London/Steveston Park was approved by Council in May 2015. The focus of the plan is to integrate the portion of the old Steveston High site transferred to the City for park purposes, with the existing site of London/Steveston School Park. The public was invited to provide input and feedback towards the preparation of the plan at a series of Open Houses held at the school. Interest shown at the Open Houses was strong and response to the park proposal was generally favourable. The design proposes two distinct areas for the site: 1) Park addition - a large, flexible use, open space and a central area that focusses on social activities and play; and 2) Greenways - two 30 foot wide greenways, located to the north and south of a new townhouse development, that connect the park to No. 2 Road. This project supports Council's Term Goals 2.3 - Outstanding places, programs, and services that support active living, wellness and a sense of belonging; and 3.2 - A strong emphasis on physical and urban design.



Program:	Parks Program	Sub-program:	Parks
Project Name:	Minoru Latrace Backstop Upgrades	Submission ID:	5841

Location: Minoru Park

Cost: \$300,000

OBI: \$ -

Funding Sources: Parks Development DCC: \$282,150
 Parks Development City Assist: \$17,850

Scope: As a consequence of the upgrades to Latrace Baseball Diamond in Minoru Park in 2014, the area has seen an increase in popularity and usage over the previous natural grass field. This includes an increase in pedestrian foot traffic as the field and pathway lighting have created a more pedestrian friendly environment. The upgrades entail the addition of an 80-foot high baseball netting system at Latrace baseball diamond to protect pedestrians and other field users from errant (foul) balls. The field hosts approximately 80 games per year plus various practices and it is estimated that approximately 15 foul balls per game are either going over the backstop or going over the first and third base fence lines.

Minoru Sports fields' complex is a unique site where it combines a variety of sports together in a 360 degree orientation. The diamond has already hosted 2 provincial championships along with various tournaments and countless games and practices. Richmond's Baseball organizations and teams all now consider Latrace as Richmond's premier game and practice location.



Program:	Parks Program	Sub-program:	Parks
Project Name:	Parks Advance Planning & Design	Submission ID:	836

Location: City Wide - Multiple Locations

Cost: \$700,000

OBI: \$11,431

Funding Sources: Parks Development DCC: \$659,300
Parks Development City Assist: \$40,700

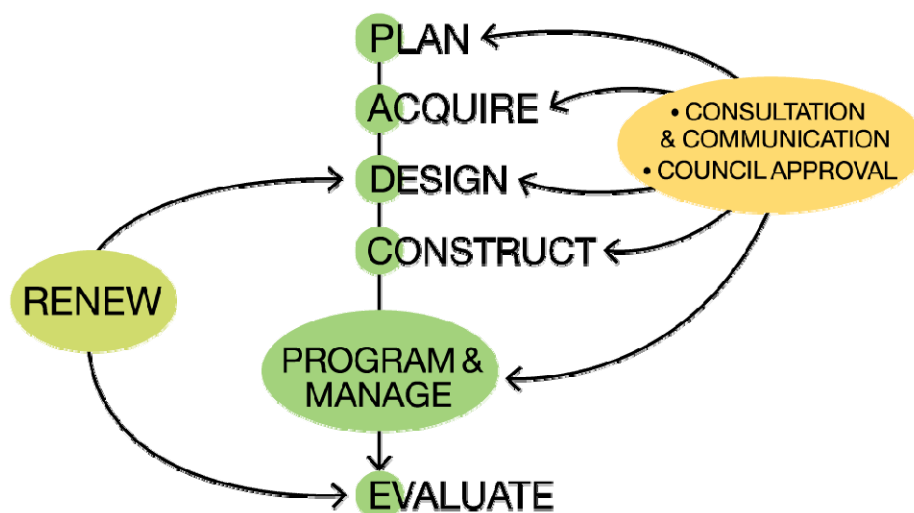
Scope: This annual project submission for Parks Advance Planning & Design is to provide ongoing planning, research, consultation, project management and construction detailing of both immediate and future projects in park construction or strategic open space planning.

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 may serve redeveloping areas of the City.

This program supports Council Term Goals 2.3 - "Outstanding places, programs and services that support active living, wellness, and a sense of belonging; and 3.2 - A strong emphasis on physical and urban design."

2017 Projects include:

- Garry Point Park & Minoru Masterplan
- Conceptual Park & Open Space Planning for various sites.
- Topographical Surveys (engineering site survey pick-up)
- Waterfront & Trails Strategy Implementation projects
- Park Characterization projects
- Best practices research



Program:	Parks Program	Sub-program:	Parks
Project Name:	Parks General Development	Submission ID:	301

Location: Various Locations

Cost: \$500,000

OBI: \$6,651

Funding Sources: Parks Development DCC: \$470,250
 Parks Development City Assist: \$29,750

Scope: This ongoing program addresses new and special opportunities, emergency requests and safety driven concerns from the public. As per City Council and Senior Management Team's (SMT) direction, this program funds ongoing improvements of various park amenities and facilities that are not part of other larger park capital programs. This funding allows the City the flexibility and ability to respond to Council directions and appropriate public requests in a timely fashion.

For 2017, projects include a new dog off-leash area at Garden City Park, drainage improvements at various park locations and emergency repairs as required.

Examples of projects that have been funded by General Development include new community gardens, new dog off-leash areas, walkways and pathways, benches and picnic tables, and new drainage systems.

This project is relative to Council term goals of providing Quality Infrastructure Networks and a Safe Community.



Program:	Parks Program	Sub-program:	Parks
Project Name:	Playground Improvement Program	Submission ID:	4966

Location: Various Locations

Cost: \$300,000

OBI: \$ 0

Funding Sources: Parks Development DCC: \$282,150
 Parks Development City Assist: \$17,850

Scope: This Capital program addresses older playgrounds that 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 age, obsolescence or vandalism. The program is directed toward 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 relates to the following Council Term Goals:

- Goal 1 - A Safe Community
- Goal 2 - A Vibrant, Active and Connected City
- Goal 6 - Quality Infrastructure Networks

The preliminary priority projects for 2017 are Kilgour Neighbourhood School Park playground and completion of the Richmond Nature Park playground replacement.



Program:	Parks Program	Sub-program:	Parks
Project Name:	Rideau Neighbourhood Park Playground	Submission ID:	5932

Location: 8211 Saunders Road

Cost: \$200,000

OBI: \$ -

Funding Sources: Parks Development DCC: \$182,150
 Parks Development City Assist: \$17,850

Scope: The playground equipment at Rideau Neighbourhood School Park was removed by Richmond School District No. 38 in October 2015 because the equipment was nearing the end of its life cycle. The School District has reported to City staff that they will not replace the equipment because Rideau Elementary School is closed, and the building is now home to an adult learning centre and the users have no need for a playground. As a result of the playground removal, there is a gap in neighbourhood park services and subsequently City staff have received several complaints from local residents who are concerned about the lack of play opportunities for children living in the area.

In order to address the current gap in services, City staff propose adding a new playground to the park. If approved, the funding will go towards new playground equipment, surfacing and edging, as well as improved drainage. In response to Richmond's growing and increasingly diverse population, the playground will offer a broad range of play opportunities, all while complying with current safety standards.

Failure to replace the playground will continue the gap in park services for this neighbourhood, and the City will continue to receive complaints from residents. Based on recent playground replacement projects, the cost of the new playground is estimated to be \$200,000.

This program relates to the following Council Term Goals:

- Goal 1 - A Safe Community
- Goal 2 - A Vibrant, Active and Connected City
- Goal 6 - Quality Infrastructure Network



2017 Recommended Parks – Minor Parks Program

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Parkland Acquisition..... 97

Program:	Parks Program	Sub-program:	Parkland
Project Name:	Parkland Acquisition	Submission ID:	5100

Location: Various

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/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.



Public Art Program 2017

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) and 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 2012-2017, which was presented to and supported by Council in September 2012. 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 the Council Term Goals for 2014-2018, for a vibrant, active and connected city through a commitment to strong urban design, investment in public art and place making.

2017 Recommended Public Art Program

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Public Art Program 99

Program:	Public Art Program	Sub-program:	Public Art
Project Name:	Public Art Program	Submission ID:	5092

Location: Various Locations

Cost: \$610,838 **OBI:** \$31,250

Funding Sources: Public Art Program: \$610,838

Scope: The scope of work consists of a variety of public art projects. The following are proposed projects 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.

For Community Public Art Projects, with funds from previously received contributions by private developers deposited to the Public Art Reserve, \$250,000 total, as follows:

- Public education, outreach and promotion of the public art program: \$15,000
- Community public art projects: \$60,000
- Public Art Projects in collaboration with other City Divisions: \$25,000
- Public art legacy projects to celebrate Canada's 150th birthday in 2017: \$150,000

For the Private Development Program, from Developer Contributions received and deposited to the Public Art Reserve for implementation of projects integrated with new development, on either private lands or City-controlled land, with the expectation that some will be on City-controlled sites (parks, streets, greenways) to be located in the City Centre, West Cambie, Steveston and Shellmont, \$360,838.

Based on in-stream development applications, the expected public art contributions from private development will provide sustainable funding for the Public Art Program Five Year Capital Plan.



Land Program 2017

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

2017 Recommended Land – Land Acquisition Program

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Strategic Land Acquisition..... 101

Program:	Land Program	Sub-program:	Land
Project Name:	Strategic Land Acquisition	Submission ID:	5059

Location: Various Properties

Cost: \$16,000,000

OBI: \$ -

Funding Sources: Capital Industrial: \$16,000,000

Scope: 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.



Affordable Housing Project Program 2017

Affordable Housing is responsible for coordinating the implementation of the Richmond Affordable Housing Strategy – a Strategy that was adopted in 2007 which contains recommendations, policies, directions, priorities, definitions and annual targets for affordable housing in the city. The City is working with other levels of government, the non-profit sector, the private sector, local groups and the community in pursuit of the Strategy’s goals.

2017 Recommended Affordable Housing Project Program

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Program:	Affordable Housing Project	Sub-program:	Affordable Housing
Project Name:	Affordable Housing 2017 Operating Initiatives	Submission ID:	5936

Location: City Wide

Cost: \$160,000

OBI: \$ -

Funding Sources: Affordable Housing – Operating: \$160,000

- Scope:**
1. Affordable Housing Legal - The scope of work will include the review of operating agreements, housing agreements, and any other legal services required as the administration of these developments occur \$50,000.
 2. Affordable Housing Support - Support is needed with implementing the Affordable Housing Strategy’s objectives and coordinating affordable housing inventory tracking, development application and housing agreement preparation, data and research collection, public engagement, and other needs as required \$60,000.
 3. Storeys Ribbon-cutting event - The Storeys development is anticipated to be completed in Spring 2017 and will require a ribbon-cutting event to officially open the building. This event will include representatives from the federal, provincial and municipal government, as well as the non-profit partners. It is anticipated that the City will be the lead on this event, as the development is on City-owned land and the City contributed over \$19.8 million for construction/capital costs. The requested amount will cover event materials, printing/advertising and administrative costs \$10,000.
 4. Printing, Publication, Media and Advertising - Ongoing printing and publication services through the course of the year, including meeting traditional and social media needs as they arise \$15,000.
 5. Richmond Homelessness Coalition (meeting expense) - The RHC's goal is to bring stakeholders together on a bi-monthly basis to discuss and enact initiatives to address the immediate and future needs of Richmond's homeless and at-risk/vulnerable population \$10,000.
 6. Affordable Housing Economic Analysis (Consulting) - Procure the services of a consultant to complete economic analysis of complex development applications as required Amount \$15,000.



Program:	Affordable Housing Project	Sub-program:	Affordable Housing
Project Name:	Affordable Housing Homelessness Strategy	Submission ID:	5935

Location: City wide

Cost: \$75,000 **OBI:** \$ -

Funding Sources: Affordable Housing – Operating: \$75,000

Scope: The Homelessness Strategy Update will include: updated data and statistics about homelessness in Richmond, a revised needs assessment, policies and strategies with respect to the City's role in addressing homelessness and stakeholder consultations. The completed Strategy will provide a vision for working towards reducing/eliminating homelessness in Richmond, and address gaps/challenges with the current situation. The funds drawn from the Affordable Housing Reserve will be used to hire facilitation services, meeting/consultation expenses as well as assistance with data collection/analysis and document preparation.



Program:	Affordable Housing Project	Sub-program:	Affordable Housing
Project Name:	Affordable Housing Projects - City Wide	Submission ID:	5933

Location: Various

Cost: \$1,300,000

OBI: \$ -

Funding Sources: Affordable Housing: \$1,300,000

Scope: The City's Affordable Housing Strategy and Social Development Strategy have outlined the requirement for strategic land acquisition, capital investment, and partnering opportunities to support the acquisition and capital development of affordable housing projects.



Program:	Affordable Housing Project	Sub-program:	Affordable Housing
Project Name:	Affordable Housing Projects - West Cambie	Submission ID:	5937

Location: West Cambie

Cost: \$2,200,000

OBI: \$ -

Funding Sources: Affordable Housing: \$2,200,000

Scope: To purchase land in or financially contribute to affordable housing projects in West Cambie in accordance with the Council adopted Affordable Housing Strategy.



Equipment Program 2017

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

2017 Recommended Equipment – Annual Fleet Replacement Program

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Program:	Equipment Program	Sub-program:	Vehicle
Project Name:	Vehicle and Equipment Reserve Purchases (PW and Corporate Fleet)	Submission ID:	5925

Location: Works Yard and Various City Departments

Cost: \$3,152,000

OBI: \$ -

Funding Sources: Public Works Equipment: \$2,447,000
 Sewer Levy: \$205,000
 Water Levy: \$500,000

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

Vehicle replacements in 2017 include 6 trailers, 2 gang mower implements, 4 mower units, 4 generators, 4 municipal work-style vans, 4 cars, 5 pickups, 1 passenger bus, 2 tandem dump trucks, 1 Vactor truck, 2 pieces of Roads equipment and other related Fleet equipment.

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.



2017 Recommended Equipment – Fire Department Vehicles Program

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Program:	Equipment Program	Sub-program:	Equipment
Project Name:	Fire Equipment Replacement	Submission ID:	5231

Location: Fire Hall #1

Cost: \$226,010 **OBI:** \$ -

Funding Sources: Fire Equipment: \$226,010

Scope: Replacement of equipment as planned in the Fire Equipment Reserve for 2017 include Self Contained Breathing Apparatus and Hose:

SELF CONTAINED BREATHING APPARATUS (SCBA):

SCBA Equipment upgrades and replacement are planned and funded by the Fire Reserve.

The purpose of this purchase is to bring RFR closer to the optimal number of SCBA packs and system parts. Currently RFR is operating at a minimal level with only 5 spare SCBAs which does not adequately allow for repair, maintenance and emergency operations. The purchases planned for 2017 are

- 23 - X3 SCBA paks, and
- 50 - 5500 PSI Cylinders. Funding for this equipment is \$200,000.

HOSE:

Hose Replacement planned and funded by the Fire Equipment Reserve for 30 lengths of hose at \$26,010.

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



Program:	Equipment Program	Sub-program:	Fire vehicle
Project Name:	Fire Support Vehicle Replacement Reserve Purchases	Submission ID:	6013

Location: #1 Fire Hall

Cost: \$59,300 **OBI:** \$ -

Funding Sources: Fire Equipment: \$59,300

Scope: Replacement of equipment for Richmond Fire Rescue (RFR) as planned in the Fire Equipment Reserve for 2017.

The replacements requested are aligned with this life cycle replacement plan.

To ensure that RFR has a robust modern fleet of support vehicles to deliver Fire and Rescue services to the community. RFR has developed a replacement plan that maintains financial stability and sustainability of the Equipment Replacement Reserve - Fire.

RFR strives to maintain support vehicles and based on the conditon, the expected life span of these vehicles is 10 years.



Program:	Equipment Program	Sub-program:	Fire vehicle
Project Name:	Fire Vehicle Replacement Reserve Purchases	Submission ID:	4962

Location: #1 Fire Hall

Cost: \$1,617,929 **OBI:** \$ -

Funding Sources: Fire Equipment: \$1,617,929

Scope: Replacement of equipment for Richmond Fire Rescue (RFR) as planned in the Fire Equipment Reserve for 2017.

The replacements requested are aligned with this life cycle replacement plan.

To ensure that RFR has a robust modern fleet of fire apparatus to deliver Fire and Rescue services to the community. RFR has developed a replacement plan that maintains financial stability and sustainability of the Equipment Replacement Reserve - Fire.

RFR strives to maintain a maximum replacement cycle of 20 years with a all suppression apparatus.



2017 Recommended Information Technology Program

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Tempest v8.0 Upgrade and Web Services Intergration..... 120

Wifi Network Expansion 121

Program:	Equipment Program	Sub-program:	Information Technology
Project Name:	Annual Computer Hardware Refresh	Submission ID:	5064

Location: City Hall

Cost: \$530,522 **OBI:** \$ -

Funding Sources: Hardware Upgrade: \$530,522

Scope: This project scope is to perform the scheduled replacement of end-of-lifecycle City computer hardware, which includes computer desktops, laptops, backup printers, monitors, cellular phones and iPads.

The planned equipment for 2017 includes: Desktops, workstations, monitors, printers, etc.



Program:	Equipment Program	Sub-program:	Information Technology
Project Name:	Digital Strategy Implementation	Submission ID:	5534

Location: City Hall

Cost: \$1,400,000 **OBI:** \$84,000

Funding Sources: Capital Revolving: \$816,300
Hardware Upgrade: \$583,700

Scope: This project executes on the Richmond Digital Strategy to enable the concepts of “Smart City”, with the ultimate goal of embedding digital technology into the City’s operations, information dissemination and communication with the residents and business community. It will implement a personalized and customer-centric website to allow residents and partners to manage activities with the City. The website will be complemented with mobile app access. The mobile app is to be enhanced with transactional capability. The implementation includes integration and development work for the website, the mobile app, and backend Enterprise Resource Planning (ERP) to provide customer-facing features. The implementation includes integration and development work for data analytics and reporting and administration for back-office and support operations.

The implementation will follow best practices on software architecture and where possible, self-contained software service or application programming interfaces (API) will be developed to improve reuse and maintainability.



Program:	Equipment Program	Sub-program:	Information Technology
Project Name:	Microsoft Exchange 2016 Upgrade	Submission ID:	5833

Location: City Hall

Cost: \$296,310 **OBI:** \$ -

Funding Sources: Software: \$296,310

Scope: The current hardware that run our Microsoft Exchange 2010 email systems are out of support (Dell) and we will have a hard time finding replacement part. The software is in extended support and will be out of support in 2020.

We will replace our current MS Exchange 2010 servers with latest Exchange 2016 and replace 8 servers.



Microsoft®
Outlook®

Program:	Equipment Program	Sub-program:	Information Technology
Project Name:	OpenText eDocs DM/RM (REDMS) Upgrade	Submission ID:	5967

Location: City Wide

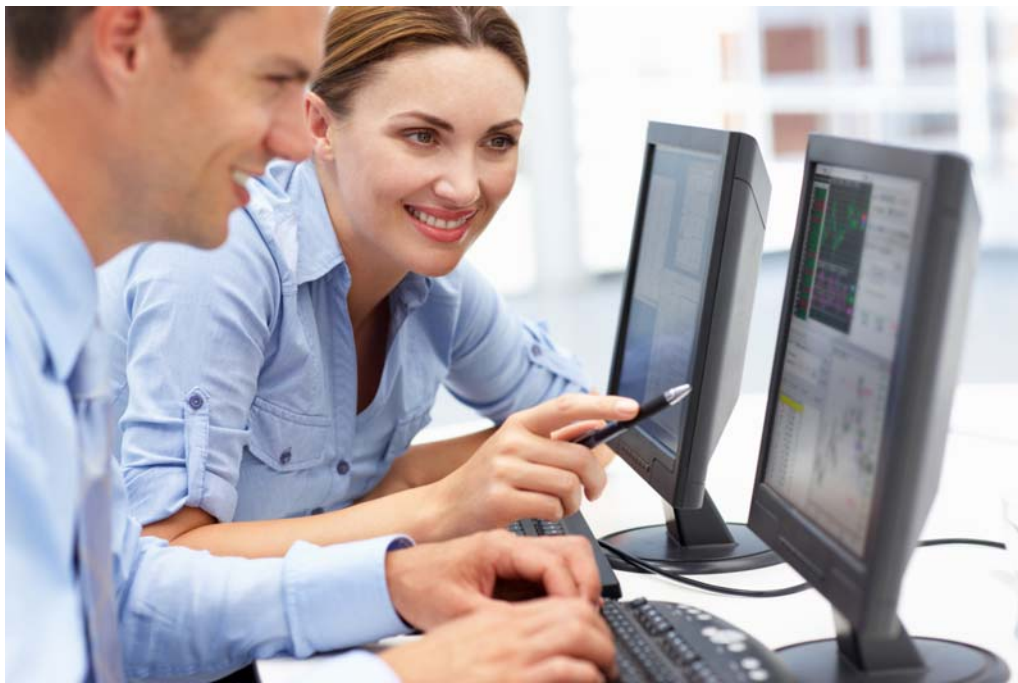
Cost: \$178,400 **OBI:** \$10,000

Funding Sources: Capital Revolving: \$178,400

Scope: The software solution’s support and maintenance for the City of Richmond’s Enterprise Document Management System (REDMS) is currently in a “Sustaining Maintenance” mode, as of June 2015. Effective June 2015, OpenText has determined that eDocs DM and RM versions of 5.3.1 will not be supported by the core development team and no new service packs or patches will be released for general use. Any requests for patches, hot fixes, new features, enhancements or resolution to product defects will not be addressed in this version and clients will be encouraged to upgrade to supported versions as a solution.

City IT Infrastructure has requested that the two physical database servers be replaced. The physical infrastructure has reached a 5 year cycle, so standard warranties and support from the hardware vendor is also expiring. The current hard disk method is using older technology of Solid State Drive (SSD) by Fusion-io, which is no longer a vendor offered SSD solution.

The scope of this project would include sourcing appropriate software version, system design, configuration, implementation and solution testing, upgrading hardware components of the solution, upgrading integration components with other ERP products, training of staff to maintain and use the solution, and developing and archiving reference documentation.



Program:	Equipment Program	Sub-program:	Information Technology
Project Name:	Program Registration & Facility Booking Solution	Submission ID:	5945

Location: City Wide

Cost: \$1,788,250 **OBI:** \$65,680

Funding Sources: Capital Revolving: \$1,788,250

Scope: In 2007, the City purchased an enterprise version of the CLASS product and associated user licenses to facilitate program registration and facility booking functions. In 2014, Active Network Ltd. (the current owner of CLASS) informed the City, along with its other clients, that it would be discontinuing CLASS and all support would cease at the end of 2016. Due to negative customer feedback, Active Network Ltd. extended support for CLASS to the end of 2017.


This project will implement a new software solution that will provide greater flexibility in future opportunities on how technology can enable the City to better support a Program Registration and Facility Booking Software. The benefits of a new software solution will provide key functionalities such as online and in person registrations, electronic point of sale, facility booking, event booking, rentals, and course program management.

The solution will also provide new technology opportunities such as:

- Mobile & Tablet friendly applications
- Integrations with a Customer Relationship Management system that will allow consistent and convenient responses to customer requests
- Integration with the City’s single sign-on profile service allowing for a seamless master log-on to multiple online services
- Membership & personalization customizations improving user experience
- Web engagement and analytic reporting for measuring key service level and outcomes.
- Marketing opportunities with customer account and membership management.

A new software solution will provide a platform that is open to integration with City business applications, flexible in adopting new technology opportunities, and customizable processes that optimizes customer experience.



Program:	Equipment Program	Sub-program:	Information Technology
Project Name:	Server Refresh	Submission ID:	5868
Location:	City Hall & WY		
Cost:	\$589,000	OBI:	\$ -
Funding Sources:	Hardware Upgrade: \$589,000		
Scope:	IT Department annual computer server refresh is a process to replace computer servers that have reached end of life and no longer supported by the vendors. With the new up-to-date hardware, we can reduce the system down time due to hardware failure.		
			

Program:	Equipment Program	Sub-program:	Information Technology
Project Name:	Tempest v8.0 Upgrade and Web Services Intergration	Submission ID:	5985

Location: City wide

Cost: \$120,000

OBI: \$ -

Funding Sources: Capital Revolving: \$120,000

Scope: The Tempest System software has been providing Tax/Utilities billing, collection and reporting, Electronic Commerce, Cashier Collection and Bylaws Case Management capabilities since 2009. The City is currently on version 7.0 which will no longer be supported after December 31, 2017. Any support requests that require patches, hot fixes, new features, enhancements or resolution to product defects will not be addressed in this version and clients will be encouraged to upgrade to Tempest version 8.0 as a solution. Using a discontinued version of software opens the City to the risk of loss of business continuity. As part of the upgrade, Tempest will provide the City with Web services tools to integrate the online functionalities with the City of Richmond’s Customer Profile Service resulting in single log in service for City customers.

The scope of this project would include:

- Sourcing appropriate software version
- System design, configuration, implementation and solution testing
- Upgrading hardware components of the solution
- Upgrading integration components with other ERP products
- Training of staff to maintain and use the solution
- Developing Web Services Integration with Customer Profile Service



Program:	Equipment Program	Sub-program:	Information Technology
Project Name:	Wifi Network Expansion	Submission ID:	5818

Location: Fire Hall 1 / Fire Hall 3 / Minoru Complex

Cost: \$255,000 **OBI:** \$ -

Funding Sources: Hardware Upgrade: \$255,000

Scope: Item One: WiFi in new Firehalls

This one year project will supply WiFi services for the two new Post-Disaster Firehalls throughout the building. This will provide updating of maps and pre-plans in trucks, coverage in office, meeting and training spaces for Fire Dept, City Staff and Outside Agency Emergency Operations Centre (EOC) / Department Operations Centre (DOC) needs (laptops, mobile phones).

Item Two: WiFi in new Minoru Complex

This two year project will supply WiFi services for Public and Staff needs throughout the Facility. This includes coverage in the Natatorium for Spectator and Event use, Fitness facility, Event Centre, Team Rooms and all Office / Public areas.

Item Three: WiFi in Gateway Theatre

This one year project will supply WiFi services for Public and Staff needs throughout the Facility. This includes coverage in the main theatre and lobby for patrons and event use.



2017 Recommended Technology Equipment Program

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Program:	Equipment Program	Sub-program:	Equipment
Project Name:	Electric Vehicle Direct Current Fast Charging Network Development	Submission ID:	5992

Location: City-Wide Multiple Locations

Cost: \$300,000 **OBI:** \$16,000

Funding Sources: Carbon Tax: \$300,000

Scope: Implement 4 to10 electric vehicle Direct Current (DC) fast charging stations at strategic locations throughout Richmond. Staff are applying for matching funds from the Natural Resources Canada Energy Innovations Program; a federal grant would allow the number of fast charging stations to be approximately doubled.



Washington State DOT

Program:	Equipment Program	Sub-program:	Equipment
Project Name:	Energy Management Projects	Submission ID:	5493

Location: Various Locations

Cost: \$240,000 **OBI:** \$-45,000

Funding Sources: Enterprise: \$240,000

Scope: Reduce the energy used at City infrastructure through the following energy conservation measures;

1. Library and Cultural Centre - Optimize heating and cooling systems
2. Richmond Ice Centre - Boiler upgrades and hot water system optimization

These measures are anticipated to save \$45,000 in energy cost avoidance annually, reduce GHG emissions by over 160 tCO₂e, and help to maintain the City of Richmond’s Power Smart Leadership status. The reduction in building related corporate GHG emissions will help the City to achieve its building GHG emissions reduction target of 65% reduction from 2007 levels by 2020.



Child Care Program 2017

To address child care needs, the City plans the development of and partners with organizations to support a range of quality and affordable child care facilities.

2017 Recommended Child Care Program

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Child Care Projects - City Wide.....	127
Child Care Projects - City Wide Non-Capital Grants.....	128
Child Care Support.....	129

Program:	Child Care Program	Sub-program:	Child Care
Project Name:	Child Care Projects - City Wide	Submission ID:	5829

Location: Various

Cost: \$50,000

OBI: \$ -

Funding Sources: Child Care Development Reserve: \$50,000

Scope: To provide sufficient funding to administer the City's 2017 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, 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:	5831

Location: Various

Cost: \$10,000

OBI: \$ -

Funding Sources: Child Care Operating Reserve

Scope: To ensure there is sufficient funding to support the 2017 Child Care Professional and Program Development Grants (non-capital). Grants are advertised in September 2016 and then with Council approval awarded in February 2017.



Program:	Child Care Program	Sub-program:	Child Care
Project Name:	Child Care Support	Submission ID:	5962

Location: City Hall

Cost: \$60,000 **OBI:** \$ -

Funding Sources: Child Care Operating Reserve

Scope: Child Care Support: Additional resources are required to assist the Child Care Section. At present, support is particularly needed to manage the number of child care and early childhood development hub facilities being built out over the next five years. There are six projects in varying stages of design and construction. The Child Care Operating Reserve was established to support grants, conduct research, and fund expenses such as: "Remuneration and costs, including without limitation expenses and travel costs, for consultants and City personnel to support the development and quality of child care within the City." Resources are needed to help with the review of child care amenity proposals, project management for facilities in development, preparation of Requests for Expression of Interest (RFEOI) to solicit for child care operators, review of legal agreements, conduct research collection plus other general administrative tasks as required.



Contingent External Contributions 2017

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

2017 Recommended Contingent External Contributions

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Contingent External Contributions 131

Program:	Contingent External Contributions	Sub-program:	Internal Transfers/Debt Payment
Project Name:	Contingent External Contributions	Submission ID:	5809
Location:	City Wide		
Cost:	\$10,000,000	OBI:	\$ -
Funding Sources:	Grant: \$10,000,000		
Scope:	The Capital Budget includes an estimate for external grants that may be received throughout the year for various projects. Spending will only be incurred 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 2017

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

2017 Recommended Internal Transfers/Debt Payment Program

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7080 River Road Repayment.....	133
City Centre District Energy Utility Advanced Design.....	134
Lansdowne Road Extension Repayment.....	135
Nelson Road Interchange Repayment.....	136
River Rd/North Loop (2005) Repayment	137

Program:	Internal Transfers/Debt Payment		Sub-program:	Internal Transfers/Debt Payment		
Project Name:	7080 River Road Repayment		Submission ID:	6014		
Location:	7080 River Rd.					
Cost:	\$2,341,384		OBI:	\$ -		
Funding Sources:	Parks DCC: \$2,341,384					
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).</p> <p>The 2017 payment of \$2,341,384 is the 1st of 8 payments.</p>					
	Payments	Year	Balance	Payment	Interest	Principal
	1	2017	15,763,942	(2,341,384)	630,558	1,710,826
	2	2018	14,053,115	(2,341,384)	562,125	1,779,259
	3	2019	12,273,856	(2,341,384)	490,954	1,850,430
	4	2020	10,423,426	(2,341,384)	416,937	1,924,447
	5	2021	8,498,979	(2,341,384)	339,959	2,001,425
	6	2022	6,497,554	(2,341,384)	259,902	2,081,482
	7	2023	4,416,072	(2,341,384)	176,643	2,164,741
	8	2024	2,251,331	(2,341,384)	90,053	2,251,331

Program:	Infrastructure Program	Sub-program:	District Energy
Project Name:	City Centre District Energy Utility Advanced Design	Submission ID:	5824

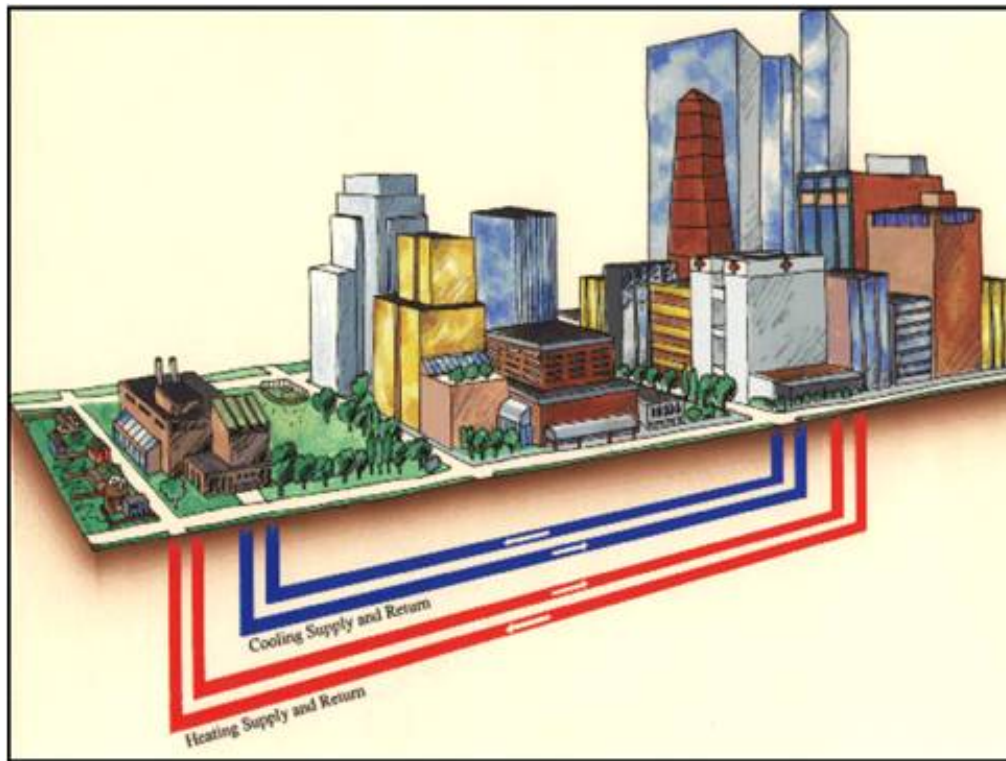
Location: City Centre

Cost: \$400,000

OBI: \$ -

Funding Sources: Other

Scope: Advanced design of the district energy ready (DE-ready) developments in the City Centre neighbourhoods, including District Energy Utility (DEU) corridors. Coordinating design with the new developments including DEU corridors. Professional fees for development and securing DEU-ready building base. Coordinating negotiation of DEU servicing agreements, and implementation of City Centre DEU. Negotiation and implementation of a Request for Expressions of Interest (RFEOI) to execute the plan to provide district energy services in the City Centre North (Capstan) area. Design of the strategy to provide interim energy services outside of defined service areas).



Program:	Internal Transfers/Debt Payment		Sub-program:	Internal Transfers/Debt Payment		
Project Name:	Lansdowne Road Extension Repayment		Submission ID:	3782		
Location:	Lansdowne Rd.					
Cost:	\$77,263		OBI:	\$ -		
Funding Sources:	Roads DCC: \$77,263					
Scope:	<p>A total of \$626,666 is to be repaid from Roads DCC to the Watermain Replacement Reserve over 10 years.</p> <p>The 2017 payment of \$77,263 is the 8th of 10 equal payments</p> <p>The loan amortization schedule is:</p>					
	Payment	Year	Balance	Payment	Interest	Principal
	1 -	2010	626,666	\$(77,263)	25,067	52,196
	2 -	2011	574,470	\$(77,263)	22,979	54,284
	3 -	2012	520,185	\$(77,263)	20,807	56,456
	4 -	2013	463,730	\$(77,263)	18,549	58,714
	5 -	2014	405,016	\$(77,263)	16,201	61,062
	6 -	2015	343,954	\$(77,263)	13,758	63,505
	7 -	2016	280,449	\$(77,263)	11,218	66,045
	8 -	2017	214,404	\$(77,263)	8,576	68,687
	9 -	2018	145,717	\$(77,263)	5,829	71,434
	10 -	2019	74,283	\$(77,254)	2,971	74,283

Program:	Internal Transfers/Debt Payment	Sub-program:	Internal Transfers/Debt Payment
Project Name:	Nelson Road Interchange Repayment	Submission ID:	5299
Location:	Nelson Rd.		
Cost:	\$385,098	OBI:	\$ -
Funding Sources:	Roads DCC: \$385,098		
Scope:	A total of \$2.54M is to be repaid from Roads DCC to Surplus over 8 years. The 2017 payment of \$385,098 is the 4th of 8 equal payments.		
	Payment	Year	Balance
			Payment
			Interest
			Principal
	1	2014	\$2,540,065
			\$(385,098)
			114,303
			270,795
	2	2015	\$2,269,270
			\$(385,098)
			102,117
			282,981
	3	2016	\$1,986,289
			\$(385,098)
			89,383
			295,715
	4	2017	\$1,690,574
			\$(385,098)
			76,076
			309,022
	5	2018	\$1,381,552
			\$(385,098)
			62,170
			322,928
	6	2019	\$1,058,624
			\$(385,098)
			47,638
			337,460
	7	2020	\$ 721,164
			\$(385,098)
			32,452
			352,646
	8	2021	\$ 368,518
			\$(385,098)
			16,583
			368,515

Program:	Internal Transfers/Debt Payment		Sub-program:	Internal Transfers/Debt Payment		
Project Name:	River Rd/North Loop Repayment		Submission ID:	2306		
Location:	River Rd./North Loop					
Cost:	\$1,685,056		OBI:	\$ -		
Funding Sources:	Roads DCC: \$1,685,056					
Scope:	<p>In 2005, \$18.2M was borrowed 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. A total of \$18.2M is to be repaid from Roads DCCs to Surplus over 18 years.</p> <p>The 2017 payment of \$1,685,056 is the 12th of 18 payments.</p>					
	Payments	Year	Balance	Payment	Interest	Principal
	1	2006	17,100,000	(1,769,576)	598,500	1,171,076
	2	2007	15,928,924	(1,200,000)	557,512	642,488
	3	2008	16,236,436	(1,867,000)	568,275	1,298,725
	4	2009	14,937,712	(1,867,000)	522,820	1,344,180
	5	2010	13,593,532	(468,210)	475,774	(7,564)
	6	2011	13,601,095	(300,000)	476,038	(176,038)
	7	2012	13,777,133	(200,000)	482,200	(282,200)
	8	2013	14,059,333	(1,939,202)	492,077	1,477,125
	9	2014	12,612,208	(1,317,000)	441,427	875,573
	10	2015	11,736,635	(1,685,056)	410,782	1,274,274
	11	2016	10,462,361	(1,685,056)	366,183	1,318,873
	12	2017	9,143,488	(1,685,056)	320,022	1,365,034
	13	2018	7,778,454	(1,685,056)	272,246	1,412,810
	14	2019	6,365,644	(1,685,056)	222,798	1,462,258
	15	2020	4,903,386	(1,334,953)	171,618	1,163,334
	16	2021	3,488,258	(1,334,953)	130,902	1,204,051
	17	2022	2,023,601	(1,334,953)	88,760	1,246,193
	18	2023	507,681	(1,334,955)	45,143	1,289,812

Infrastructure Program Unfunded Projects 2017

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

2017 Unfunded Infrastructure Program

Table of Contents

Public Works Minor Capital - Roads	139
Root Damaged Surface Repairs	140

NOT RECOMMENDED

Program:	Infrastructure Program	Sub-program:	Minor Capital
Project Name:	Public Works Minor Capital - Roads	Submission ID:	5001

Location: City Wide

Cost: \$250,000 **OBI:** \$ 0

Funding Sources: Capital Revolving: \$250,000

Scope: 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 tree root ingress or settlement, repair of street lights, and response to resident complaints that require site specific 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:	Roads
Project Name:	Root Damaged Surface Repairs	Submission ID:	5855

Location: City Wide

Cost: \$460,000

OBI: \$ -

Funding Sources: Capital Revolving: \$460,000

Scope: To repair sidewalks damaged by trees in (but not limited to) Blundell, Broadmoor, Shellmont, City Centre, Thompson, Steveston, Seafair and Gilmore neighbourhoods where boulevard trees are adjacent to sidewalks, roadways, curbs and gutters.

The trees were planted 10 or more years ago, at which time root barriers and tree wells were not a requirement. These trees have now matured and are causing significant damage to the surrounding surfaces. This damage is beyond the point of traditional maintenance type repairs. If left unattended, both functionality and public safety will continue to be reduced.



Building Program Unfunded Projects 2017

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

2017 Unfunded Building Program

Table of Contents

East Richmond Community Hall Renewals	142
City Hall Lobby Plaza Tile Replacements	143
Project Development Advanced Planning and Design 2017	144
Works Yard Washroom Renovations	145

NOT RECOMMENDED

Program:	Building Program	Sub-program:	Building
Project Name:	East Richmond Community Hall Renewals	Submission ID:	5503

Location: 12360 Cambie Road

Cost: \$347,000

OBI: \$ -

Funding Sources: Capital Revolving: \$347,000

Scope: Multiple building systems 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.

System renewals include the replacement of the exterior finishes and envelope repairs which will conserve energy through a decrease in energy expenditure heating / cooling the facility.



Program:	Building Program	Sub-program:	Building
Project Name:	City Hall Lobby Plaza Tile Replacements	Submission ID:	5939

Location: 6911 No 3 Road

Cost: \$120,000 **OBI:** \$ -

Funding Sources: Capital Revolving: \$120,000

Scope: City Hall Lobby Plaza tiles and sub-base have reached its life expectancy and require replacement and re-leveling.



Program:	Building Program	Sub-program:	Building
Project Name:	Project Development Advanced Planning and Design 2017	Submission ID:	5815

Location: City Wide

Cost: \$300,000 **OBI:** \$ -

Funding Sources: Capital Revolving: \$300,000

Scope: Engage the appropriate consultants (i.e. Architects, engineers, cost consultants etc.) for a variety of proposed facility projects to provide a range of professional services from project concept to completion.



NOT

Program:	Building Program	Sub-program:	Building
Project Name:	Works Yard Washroom Renovations	Submission ID:	5846

Location: 5599 Lynas Lane

Cost: \$535,000

OBI: \$ -

Funding Sources: Capital Revolving: \$535,000

Scope: Multiple systems in this facility 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 / inhabitants.

Fixtures - existing washroom fixtures to be replaced with modern energy / water efficient products including: automatic flush valves, sinks, and motion activated faucets.

Electrical - All light fixtures to be replaced with energy efficient LED lighting.

Finishes - Flooring and stalls to be replaced.



Parks Program Unfunded Projects 2017

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

2017 Unfunded Parks Program

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Hollybridge Pier Phase 2.....	147
Parks Ageing Infrastructure Replacement Program	148
Waterfront Improvement Program.....	149

NOT RECOMMENDED

Program:	Parks Program	Sub-program:	Parks
Project Name:	Parks Ageing Infrastructure Replacement Program	Submission ID:	4967

Location: Various Locations

Cost: \$350,000

OBI: \$ -

Funding Sources: Capital Revolving: \$350,000

Scope: This replacement program consists of a multi-year phased approach to replace ageing parks and open space infrastructures. These include trails and pathways, drainage systems, outdoor tennis, basketball, lacrosse, and hockey courts, baseball backstops, sports lighting fixtures, and other amenities that cannot be funded through Parks DCCs due to the DCC Bylaw Restrictions for Capital Construction eligibility. Request for funding for this program is from the City's Gaming/Revolving Reserves.

2017 Projects include:

Chainlink fencing retrofit (various sites)	\$70,000
Tennis Courts Resurfacing at King George	\$100,000
Sports Field Repairs	\$100,000
Repairs to timber structures (floats, decks, fences, boardwalks, etc.)	\$80,000

Many of the existing structures have surpassed their respective life cycles. They now present potential liability issues with the lost of structural integrity due to wear and age. Many of these amenities have not been replaced for over 40 years and are in severe damaged condition. As a result, City Staff, Community Centres and its Associations are consistently being contacted to address the safety concerns from the public and sports groups.

A tender process was completed for an annual chain link fencing program to replace damaged fencing within Parks (approximately \$70K annually). This annual fencing replacement program would continue to be funded by this capital submission.

Priority projects are confirmed and scheduled in 2016 in order to meet the current demands from Council and the general public to address high safety issues and concerns.

This program supports Council term goals of providing Quality Infrastructure Networks and a Safe Community.



Program:	Parks Program	Sub-program:	Parks
Project Name:	Waterfront Improvement Program	Submission ID:	5582

Location: Scotch Pond & McDonald Beach - Planning for Dredging Operations

Cost: \$250,000 **OBI:** \$ -

Funding Sources: Capital Revolving: \$250,000

Scope: For 2017, projects include the planning and preparation for the chemical soil analysis investigation and volume calculations at Scotch Pond and McDonald Beach boat launch basin. Results from the chemical soil analysis and volume calculations report will determine the dredging volume and disposal methodology required for permit applications to Environment Canada and Department of Fisheries and Oceans (DFO). The sediment accumulation at both facilities has gradually increased over the years to the point where vessels can only enter or exit during high tides. This creates both a safety and operational issue with the users of the facilities.

A capital submission for the dredging and disposal operations will be completed during the 2017 Capital process upon receiving the engineering and chemical analysis report.

After acquiring the cannery site around 1925 for use as a fishing station, the Canadian Fishing Company dredged the slough in the 1950s to create a moorage pond for their expanding fishing fleet. McDonald Beach is the one of a few available public boat launch facilities in the Lower Mainland. This submission also includes the replacement of the docks and piles at the McDonald Beach Boat Launch Facility.

Proposed funding for these projects is suggested from the Capital Revolving Fund.

In 2009, City Council adopted the Waterfront Strategy and its vision that "Richmond will be a community that celebrates its rich past and recognizes the full potential of its island legacy - a dynamic, productive, and sustainable world class waterfront".



Equipment Program Unfunded Projects 2017

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

2017 Unfunded Equipment Program

Table of Contents

Emergency Supplies Container Project	151
Emergency Supply Cabinets Project	152

NOT RECOMMENDED

Program:	Equipment Program	Sub-program:	Equipment
Project Name:	Emergency Supplies Container Project	Submission ID:	5844

Location: City Wide

Cost: \$515,400

OBI: \$ -

Funding Sources: Capital Revolving: \$515,400

Scope: Supply and install ten containers containing sufficient emergency supplies for a sustained long term response to major emergencies or disasters. These containers will be located strategically around the city, and serve as:

1. Dedicated physical muster points for staff out working around the City to gather and establish staff accountability
2. Provision of emergency supplies including first aid, food, water, portable sanitation and rescue response equipment to support staff efforts post disaster

The ten containers will require insulation, heating, cooling and lighting and would be located on City property at/near City centre, the Works Yard and eight other strategic locations around the City.

During a large scale emergency or disaster, supply chain management may be impacted. These caches of emergency response supplies would bridge the time period between the onset of the emergency and the re-establishment of the supply chain.

Staff emergency supplies would include items such as work gloves, flash lights, safety goggles, tarps, portable sanitation stations and first aid equipment.

Emergency food and water solutions would be selected to have a longer term shelf life (5 years), meet nutritional requirements and be ready to eat with no additional resource requirements.

This project provides critical resources and supplies at the onset of a major emergency or disaster for staff to respond and provide critical services to the community. The intent of this project is for the longer term sustained response by staff for larger emergencies or disasters such as an earthquake.



Program:	Equipment Program	Sub-program:	Equipment
Project Name:	Emergency Supply Cabinets Project	Submission ID:	5819

Location: City Wide

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

Funding Sources: Capital Revolving: \$125,000

Scope: Supply and install thirty cabinets of emergency supplies in City facilities for immediate short term response to emergencies. The cabinets are of sturdy steel construction containing emergency supplies for staff that are containerized for immediate deployment.

Cabinets would be located:

- On each floor of City Hall
- On the occupied floors of the Annex
- In one of the Minoru complex buildings
- At the Oval
- In nine cabinets at the Works Yard for the staff based there
- Eight other locations around Richmond for staff working in those areas.

Cabinets would contain:

- Rescue and safety equipment such as hard hats, work gloves and safety goggles.
- Emergency supplies such as emergency blankets, radio, flashlights and whistles.
- Emergency food bars and drinking water.
- First aid kits to assist until advanced medical personnel arrive.

This project provides critical resources and supplies at the onset of an emergency or disaster for staff to respond to the incident and provide critical services to the community. The intent of this project is for short term immediate emergency response,.



City of Richmond
5 Year Capital Program
(in \$000s)

	2017	2018	2019	2020	2021
Infrastructure Program					
Roads					
Accessible Pedestrian Signal Program	250	250	250	250	-
Active Transportation Improvement Program	320	320	220	160	160
Annual Asphalt Re-Paving Program - MRN	1,081	1,081	1,081	1,081	1,081
Annual Asphalt Re-Paving Program - Non-MRN	3,200	2,740	2,740	2,740	2,740
Arterial Roadway Improvement Program	343	300	200	150	150
Bridge Rehabilitation	-	200	200	200	200
Functional and Preliminary Design (Transportation)	25	25	18	13	13
LED Street Light Replacement Plan	380	380	380	-	-
Neighbourhood Walkway Program	250	250	170	125	125
River Drive Multi-Use Pathway, No. 4 Road to Van Horne Way	1,344	-	-	-	-
River Parkway - Gilbert Road to Cambie Road (Phase 1) - Design	800	-	-	-	-
River Parkway - Gilbert Road to Cambie Road (Phase 2)	-	5,250	-	-	-
River Parkway - Gilbert Road to Cambie Road (Phase 2)	-	-	5,250	-	-
Sexsmith Road Multi-use Pathway, Beckwith Road to River Road	495	-	-	-	-
Special Crosswalk Program	350	350	240	175	175
Street Light Pole Replacement - Seafair & Richmond Gardens - Phase 4 of 5	-	120	-	-	-
Street Light Pole Replacement - Seafair & Richmond Gardens - Phase 5 of 5	-	-	120	-	-
Traffic Calming Program	100	100	70	50	50
Traffic Signal Program	1,600	750	270	200	200
Traffic Video and Communication Program	200	200	130	100	100
Transit-Related Amenity Improvement Program	250	100	70	50	50
Transit-Related Roadway Improvement Program	250	250	180	125	125
Undergrounding - City Centre	-	-	-	-	2,000
Undergrounding - Ferndale Rd	-	-	-	2,000	-
Undergrounding - Garden City Rd	-	2,000	-	-	-
Undergrounding - Hydro/Telus No. 3 Rd	-	-	2,000	-	-
Total Roads	\$11,238	\$14,666	\$13,589	\$7,419	\$7,169
Drainage					
Aquatic Invasive Species Management	-	175	-	-	-
Blundell Road & Burrows Road Irrigation Upgrade	-	-	-	250	-
Box Culvert Repair	1,500	1,500	-	-	-
Burkeville Drainage Improvements	-	1,000	1,000	1,000	1,000
Canal Stabilization	300	-	-	-	-
City Centre Infrastructure Upgrades	3,240	-	-	-	-
Development Coordinated Works - Drainage	250	250	250	250	250
Dike Upgrades	3,000	2,500	2,500	1,500	1,500

	2017	2018	2019	2020	2021
Drainage Pump Station Generator Upgrade	130	130	130	130	130
Drainage Pump Station Rehabilitation	225	300	300	300	300
East Richmond Drainage & Irrigation Upgrades	1,285	300	300	300	300
Horseshoe Slough Dredging	-	500	-	-	-
Knotweed Control & Removal	300	-	-	-	-
Laneway Drainage Upgrade - 10,000 Blk No. 4 Road	-	-	-	340	-
Laneway Drainage Upgrade - Afton Drive (North)	-	-	500	-	-
Laneway Drainage Upgrade - Afton Drive (South)	-	-	1,075	-	-
Laneway Drainage Upgrade - Aintree Crescent (East)	-	-	-	525	-
Laneway Drainage Upgrade - Ashwood Drive/Francis Road	-	-	-	730	-
Laneway Drainage Upgrade - Belair Drive (North)	-	1,090	-	-	-
Laneway Drainage Upgrade - Belair Drive (South)	1,344	-	-	-	-
Laneway Drainage Upgrade - Dennis Crescent (West)	-	-	-	-	345
Laneway Drainage Upgrade - Seacote Road (East)	-	-	-	-	190
Laneway Drainage Upgrade - Seafield Crescent	-	-	-	-	310
Laneway Drainage Upgrade - Seamount Road (East)	-	-	-	-	795
Laneway Drainage Upgrade - Second Ave (East)	-	-	-	165	-
Laneway Drainage Upgrade - Shell Road	-	-	-	-	740
McBurney Drive Drainage Upgrades	350	-	-	-	-
McCallan Rd North Pump Station Upgrade	-	-	-	4,200	-
No. 6 Road South Pump Station Upgrade	-	-	-	-	4,200
Park Road Drainage Upgrade	650	-	-	-	-
Steveston Hwy & Gilbert Rd Pump Station Upgrade	-	-	2,000	-	-
Steveston Hwy & No. 3 Rd Pump Station Upgrade	-	-	2,000	-	-
Williams Road 3000 Block Drainage Pipe Upgrade	-	3,350	-	-	-
Williams Road 6000 Block Drainage Pipe Upgrade	-	-	-	500	-
Total Drainage	\$12,574	\$11,095	\$10,055	\$10,190	\$10,060
Water					
Development Coordinated Works - Water	250	250	250	250	250
Pressure Reducing Valve Upgrades	-	-	-	1,000	1,000
Thompson Gate Pressure Reducing Valve Station	600	-	-	-	-
Water Metering Program	2,120	1,920	-	-	-
Watermain Replacement - Lulu Island East Area	-	753	1,980	3,110	-
Watermain Replacement - Lulu Island North Area	2,865	2,526	-	-	1,967
Watermain Replacement - Lulu Island West Area	800	3,608	6,921	2,060	-
Watermain Replacement - Sea Island Area	-	-	-	-	2,870
Watermain Tie-in and Restoration	650	500	500	500	500
Total Water	\$7,285	\$9,557	\$9,651	\$6,920	\$6,587
Sanitary Sewer					
Aquila Road Sanitary Sewer Replacement	-	-	-	140	-
Bennett West Pump Station Replacement	-	1,700	-	-	-
Development Coordinated Works - Sanitary	400	250	250	250	250

	2017	2018	2019	2020	2021
Gravity Sanitary Sewer Upgrade on River Rd / Beckwith Rd / Charles St	-	-	2,500	-	-
Hamilton Area Sanitary Sewer and Pump Station	1,700	-	-	-	-
Miscellaneous SCADA System Improvements	-	250	250	250	250
Sanitary Facility Land Acquisition for Grease Management	2,500	-	-	-	-
Sanitary Forcemain Valve Installations	100	100	100	100	100
Sanitary Pump Station and Forcemain Assessment, Upgrade and Grease Management	1,000	1,000	1,000	1,000	1,000
Sanitary Pump Station Rehabilitation	350	350	350	350	350
Sanitary Sewer Rehabilitation - Various Catchments	-	625	-	-	-
Sanitary Sewer Tie-in and Restoration	150	400	-	-	-
Steveston and Broadmoor Forcemain Replacements	-	-	-	1,100	-
Steveston Gravity Sewer Replacement	-	-	-	-	600
Van Horne Pump Station Upgrade	-	-	2,780	-	-
Walford Pump Station Replacement	-	-	-	-	1,800
Williams Road Sanitary Forcemain Replacement	-	-	-	1,920	-
Total Sanitary Sewer	\$6,200	\$4,675	\$7,230	\$5,110	\$4,350
Minor Capital					
City Centre Community Centre (C4) North	-	-	1,311	-	-
Public Works Infrastructure Advanced Design	1,962	1,762	1,743	1,731	1,731
Public Works Minor Capital - Drainage	300	300	300	300	300
Public Works Minor Capital - Roads	-	250	250	250	250
Public Works Minor Capital - Sanitary	450	450	450	450	450
Public Works Minor Capital - Sanitation & Recycling	300	300	300	300	300
Public Works Minor Capital - Traffic	250	250	250	250	250
Public Works Minor Capital - Water	500	300	300	300	300
Total Minor Capital	\$3,762	\$3,612	\$4,904	\$3,581	\$3,581
Total Infrastructure Program	\$41,059	\$43,605	\$45,429	\$33,220	\$31,747
Building Program					
Building					
5671 No. 3 Road (Rental Bldg) Roof Renewals	-	222	-	-	-
Advanced Planning and Design for Major Facilities Phase 2	2,000	-	-	-	-
Britannia Japanese Duplex & First Nations Bunkhouse	-	3,000	-	-	-
Cambie Community Centre HVAC Renewal	-	941	-	-	-
City Hall Boiler Replacement Upgrade	230	-	-	-	-
City Hall Domestic Water Piping Upgrade	350	-	-	-	-
City Hall Server Room A/C Unit Installation	325	-	-	-	-
Developer Funded Advanced Design and Coordination	600	-	-	-	-
Direct Digital Control Upgrade & Consolidation Phase 3	180	-	-	-	-
East Richmond Library System Renewals	-	-	115	-	-
Fire Hall 4 Fuel Tank	-	-	125	-	-
Fire Hall 5 System Renewals	-	-	138	-	-

	2017	2018	2019	2020	2021
Fire Hall 7 Roofing	-	-	234	-	-
Gateway Theatre HVAC Renewals	-	-	-	-	425
Hugh Boyd Field House	-	-	-	-	6,674
Library and Cultural Centre Chiller Replacement	300	-	-	-	-
Minoru Arena Stadium Rink System Renewals	-	-	1,988	-	-
Minoru Chapel Restoration	281	-	-	-	-
Minoru Silver Arena HVAC	-	1,987	-	-	-
Phoenix Net Loft Design	500	-	-	-	-
RCMP Exhibit Compound Interim Upgrades	-	904	-	-	-
Richmond Public Courthouse Renewals of Interior Finishes	-	780	-	-	-
South Arm Community Centre Fitness Renovation	1,500	-	-	-	-
South Arm Community Hall System Renewals	-	430	-	-	-
Steveston Martial Arts Interior Finishes	-	463	-	-	-
Watermania System Renewals	-	320	-	-	-
West Richmond Community Centre Interior Finishes	-	-	1,567	-	-
Works Yard Administration Annex Interior Renewals	-	724	-	-	-
Works Yard Administration System Renewals	-	1,170	-	-	-
Works Yard Dispersal System Renewals	-	836	-	-	-
Works Yard Garage Workshop System Renewals	-	-	4,708	-	-
Total Building Program	\$6,266	\$11,777	\$8,875	\$-	\$7,099
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					
Britannia Landscaping Improvements and Wayfinding	150	-	-	-	-
Britannia Seine Net Loft Washroom Facilities	393	-	-	-	-
Cambie City Centre Park	1,000	500	-	-	-
City Centre Middle Arm Waterfront Park	-	-	-	500	500
City Tree Planting Program	150	200	200	200	200
Garden City Lands Phase 2	1,200	-	-	-	-
Garden City Lands Phase 3	-	2,375	-	-	-
Garden City Lands Phase 4	-	-	6,000	-	-
Garden City Lands Phase 5	-	-	-	400	-
Garden City Lands Phase 6	-	-	-	-	500
Hugh Boyd Artificial Turf Sports Fields	-	-	1,800	-	-
King George Waterpark Retrofit	-	150	-	-	-
King George Waterpark Upgrades	-	-	650	-	-
London Steveston Phase 1 of 3	250	-	-	-	-
London Steveston Phase 2 of 3	-	300	-	-	-
London Steveston Phase 3 of 3	-	-	500	-	-
Minoru Latrace Backstop Upgrades	300	-	-	-	-
Minoru Park Aquatic Centre Demolition and Interim Site	-	3,000	-	-	-

	2017	2018	2019	2020	2021
Improvements					
Minoru Park Renewal Phase 1 Planning	-	250	-	-	-
Minoru Park Renewal Phase 2 Construction	-	-	1,750	-	-
Neighbourhood Parks Characterization	-	100	100	100	100
Parks Advance Planning & Design	700	600	600	600	450
Parks Ageing Infrastructure Replacement Program	-	350	350	350	350
Parks General Development	500	300	400	300	500
Playground Improvement Program	300	300	300	300	300
Rideau Neighbourhood Park Playground	200	-	-	-	-
Tait Central Park	-	800	-	-	-
Waterfront Improvement Program - Dredging & Repairs	-	1,000	-	-	-
Total Parks	\$5,143	\$10,225	\$12,650	\$2,750	\$2,900
Total Parks Program	\$9,143	\$14,225	\$16,650	\$6,750	\$6,900
Public Art Program					
Public Art					
Oval Precinct Public Art Program	-	500	278	-	-
Public Art Program	611	100	100	100	100
Total Public Art Program	\$611	\$600	\$378	\$100	\$100
Land Program					
Land					
Strategic Land Acquisition	16,000	30,000	20,000	10,000	10,000
Total Land Program	\$16,000	\$30,000	\$20,000	\$10,000	\$10,000
Affordable Housing Project					
Affordable Housing					
Affordable Housing 2017 Operating Initiatives	160	-	-	-	-
Affordable Housing Homelessness Strategy	75	-	-	-	-
Affordable Housing Projects - City Wide	1,300	400	400	400	400
Affordable Housing Projects - West Cambie	2,200	225	225	225	225
Total Affordable Housing Project	\$3,735	\$625	\$625	\$625	\$625
Equipment Program					
Annual Fleet Replacement					
Vehicle and Equipment Reserve Purchases (PW and Corporate Fleet)	3,152	1,944	1,825	1,650	1,981
Total Annual Fleet Replacement	\$3,152	\$1,944	\$1,825	\$1,650	\$1,981
Fire Dept Vehicles and Equipment					
Fire Equipment Replacement	226	27	27	28	379
Fire Support Vehicle Replacement Reserve Purchases	59	-	-	-	-
Fire Vehicle Replacement Reserve Purchases	1,618	1,095	1,913	1,210	-
Total Fire Dept Vehicles and Equipment	\$1,903	\$1,122	\$1,940	\$1,238	\$379
Information Technology					
Annual Hardware Refresh	531	494	529	562	520
Digital Strategy Implementation	1,400	2,400	-	-	-
Microsoft Exchange 2016 Upgrade	296	-	-	-	-
OpenText eDocs DM/RM (REDMS) Upgrade	179	-	-	-	-
Program Registration & Facility Booking Solution	1,788	712	-	-	-

	2017	2018	2019	2020	2021
Server Refresh	589	-	-	-	-
Tempest v8.0 Upgrade and Web Services Intergration	120	-	-	-	-
Wifi Network Expansion	255	-	-	-	-
Total Information Technology	\$5,157	\$3,606	\$529	\$562	\$520
Equipment					
Corporate Parking Lot Lighting Efficiency Upgrades	350	-	-	-	-
Electric Vehicle DC Fast Charging Network Development	300	-	-	-	-
Energy Management Projects	240	550	550	550	550
Total Equipment	\$890	\$550	\$550	\$550	\$550
Total Equipment Program	\$11,103	\$7,222	\$4,844	\$4,000	\$3,430
Child Care Program					
Child Care					
Child Care Projects - City Wide	50	50	50	50	50
Child Care Projects - City Wide Non-Capital Grants	10	-	-	-	-
Child Care Support	60	-	-	-	-
Total Child Care Program	\$120	\$50	\$50	\$50	\$50
Internal Transfers/Debt Payment					
Internal Transfers/Debt Payment					
7080 River Rd Repayment	2,342	2,342	2,342	2,342	2,341
Alexandra District Energy Utility Expansion	-	3,600	1,400	-	-
City Centre District Energy Utility Advanced Design	400	-	-	-	-
Lansdowne Road Extension	77	-	-	-	-
Nelson Road Interchange Repayment	385	385	385	385	385
River Rd/North Loop (2005) Repayment	1,685	1,685	1,685	1,335	1,335
Shovel - Ready Grant (2009) Repayment Lansdowne Rd Extension	-	77	77	-	-
Total Internal Transfers/Debt Payment	\$4,889	\$8,089	\$5,889	\$4,062	\$4,061
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	\$102,926	\$126,193	\$112,740	\$68,807	\$74,012

CITY OF RICHMOND
5 YEAR CAPITAL PLAN BY PROGRAM (2017-2021)
(In \$000s)

	2017	2018	2019	2020	2021
Infrastructure Program					
Roads	11,238	14,666	13,389	7,419	7,169
Drainage	12,574	11,095	10,055	10,190	10,060
Watermain Replacement	7,285	9,557	9,651	6,920	6,587
Sanitary Sewer	6,200	4,675	7,230	5,110	4,350
Minor Public Works	3,762	3,612	4,904	3,581	3,581
Total Infrastructure Program	\$41,059	\$43,605	\$45,429	\$33,220	\$31,747
Building Program	\$6,266	\$11,777	\$8,875	\$0	\$7,099
Parks Program					
Parks	5,143	10,225	12,650	2,750	2,900
Parkland Acquisition	4,000	4,000	4,000	4,000	4,000
Total Parks Program	\$9,143	\$14,225	\$16,650	\$6,750	\$6,900
Public Art Program	\$611	\$600	\$378	\$100	\$100
Land Program					
Land Acquisition	16,000	30,000	20,000	10,000	10,000
Total Land Program	\$16,000	\$30,000	\$20,000	\$10,000	\$10,000
Affordable Housing Project	\$3,735	\$625	\$625	\$625	\$625
Equipment Program					
Annual Fleet Replacement	3,152	1,944	1,825	1,650	1,981
Fire Dept Vehicles and Equipment Replacement	1,903	1,122	1,940	1,238	379
Technology	5,158	3,606	529	562	520
Equipment	890	550	550	550	550
Total Equipment Program	\$11,103	\$7,222	\$4,844	\$4,000	\$3,430
Child Care Program	\$120	\$50	\$50	\$50	\$50
Internal Transfers/Debt Payment	\$4,889	\$8,089	\$5,889	\$4,062	\$4,061
Contingent External Contributions	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
Total Capital Program	\$102,926	\$126,193	\$112,740	\$68,807	\$74,012

CITY OF RICHMOND
5 YEAR CAPITAL PLAN BY FUNDING SOURCES (2017-2021)
(In \$000's)

	2017	2018	2019	2020	2021
DCC Reserves					
Drainage DCC	-	1,344	-	97	97
Parks DCC	10,097	10,362	10,801	7,757	8,091
Roads DCC	7,008	9,744	8,747	3,005	2,770
Sanitary DCC	1,425	12	1,337	23	-
Water DCC	403	1,484	282	802	-
Total DCC	\$18,933	\$22,946	\$21,167	\$11,684	\$10,958
Statutory Reserves					
Affordable Housing	3,735	625	625	625	625
Arts Culture Heritage	893	-	-	-	-
Capital Building and Infrastructure	2,000	-	2,311	-	-
Capital Reserve	21,438	50,400	38,985	13,517	20,416
Child Care	120	50	50	50	50
Drainage Improvement	12,321	11,050	11,354	11,393	11,263
Equipment Replacement	4,350	2,596	3,486	2,662	2,110
Neighbourhood Improvement	8	-	-	-	-
Public Art Program	611	100	100	100	100
Sanitary Sewer	6,540	5,383	6,614	5,807	5,070
Waterfront Improvement	-	1,000	-	-	-
Watermain Replacement	6,992	7,483	10,099	6,848	7,317
Total Statutory Reserves	\$59,008	\$78,687	\$73,624	\$41,002	\$46,951
Other Sources					
Enterprise Fund	545	550	550	550	550
Grant and Developer Contribution	13,419	10,525	10,490	10,463	10,463
Other Sources	8,496	11,395	6,329	4,582	4,540
Sewer Levy	205	-	-	50	-
Solid Waste and Recycling	300	300	300	300	300
Water Levy	2,020	1,790	280	176	250
Total Other Sources	\$24,985	\$24,560	\$17,949	\$16,121	\$16,103
Total Capital Program	\$102,926	\$126,193	\$112,740	\$68,807	\$74,012

The following is an overview of the major Capital programs proposed for the years 2018 to 2021.

INFRASTRUCTURE PROGRAM

- **River Parkway – Gilbert Road to Cambie Road – Phase 2 (2018: \$10,500,000)**

The general scope of this project includes the construction of a two-lane road along the former CP Railway corridor, from 200 m northeast of Gilbert Road to Cambie Road. The new road is proposed to be built to the interim standard with paved shoulders for cyclists and pedestrians, streetlights, and traffic control devices at intersections. Note: the new road would connect to existing Leslie Road and Cambie Road, with the details of the intersection configurations to be determined through the design process. When completed, this new road would replace the existing River Road between Cambie Road and Gilbert Road and provide a continuous alternate route to No. 3 Road and existing River Road.

The first phase of the project is proposed to start in 2017 to carry out functional and detailed design tasks, as well as any property negotiation, consultation with affected property owners/business operators, and soil remediation as necessary. A more accurate cost estimate will then be carried out and updated in project submissions for subsequent year as necessary. The second phase of the project involves the actual site preparation and construction, which is proposed to start in 2018.

This project is proposed to be funded by the DCC program funding and may be eligible for funding from external agencies such as the federal and/or provincial government, TransLink and/or ICBC

BUILDING PROGRAM

- **Britannia Japanese Duplex & First Nations Bunkhouse (2018: \$3,000,000)**

Japanese Duplex: implement conservation plan, restore and reuse the building, includes fire safety systems, exterior and interior finishes as well as the design, installation and interpretation of exhibits. Substructure work not required as the stabilization was completed in 2004.

First Nations Bunkhouse: implement conservation and program plan for the building, up to and including working drawings and cost estimates.

- **Minoru Park Aquatic Centre Demolition and Interim Site Improvements (2018: \$3,000,000)**

The new Minoru Complex facility is scheduled to be completed in late 2017, at which time, the programs and services currently operated out of the existing Minoru Aquatic Centre will move to the new facility. If approved, the scope of work for this project will include demolition of the existing Minoru Aquatics Centre and interim landscaping. Demolition of the facility requires abatement of hazardous materials and contingencies, which is accounted for in the cost estimate. The interim park space will include site preparation, drainage, lawn and parking so that the area currently occupied by the building is functional and accessible to the public. The interim landscape condition will be replaced in 2019 once the Minoru Vision Plan process is completed and there is a more detailed plan for the area.

The design of Minoru Aquatics Centre, as a purpose-built aquatic centre does not lend itself easily to alternate uses. The poor condition of Minoru Aquatics Centre combined with the lack of adaptability for alternate uses results in a facility where decommissioning and demolition is the most viable option. The new Minoru Complex, that will provide programs and services currently held at Minoru Aquatics Centre, has created an additional facility footprint in the park. By demolishing the current Minoru Aquatics Centre, additional park and open space could be generated.

PARKS PROGRAM

- **Garden City Lands Phase 3 to 6 (2018-2021: \$9,275,000)**

Phase 3 of the development of the Garden City Lands (GCL) will focus on the first stage of development of the Community Hub area, including the construction of a barn to store farm equipment, process and store produce, support agricultural educational programs and events, and provide public washrooms. In addition, community gardens

and pedestrian trails will be constructed within the Community Hub thereby broadening the range of opportunities for offering public programs and expanding the variety of activities on the site.

After extensive public process City Council adopted the GCL Legacy Landscape Plan, on June 9, 2014, as the guide for developing these public lands for community use. The Legacy Plan outlines over 25 City policies and objectives that development of the GCL supports within a variety of focus areas such as agricultural sustainability, ecological health, community wellness, arts and culture, and city vibrancy.

Phase 4 of the GCL project includes design and construction of community amenities including major boardwalks and viewing towers, bridges, trails and bog restoration planting.

This phase will open up the whole park to the public by adding community facilities, interpretation and, by providing controlled public access to environmentally sensitive landscapes, as well as providing critical bog restoration as part of the city-wide Ecological Network.

Phase 5 of the construction of the GCL is the continuation of the construction of community facilities including a children's playground, interpretive signage and site furnishings. The previous four phases provide the foundational work required to allow public access, enable farming and protect the bog ecosystem. This phase is required to more fully achieve the vision of the Council approved plan and will add a greater diversity of activities and experiences to better serve Richmond residents and visitors.

Phase 6 of the development of the GCL will focus on the Community Hub and in particular the construction of a support building that can store and process produce and equipment, provide public washrooms and include a multifunctional room for interpretive and educational programs.

This phase of the project will help protect the sensitive bog environment and add biodiversity to the site.

LAND PROGRAM

- **Strategic Land Acquisition (2018-2021: \$70,000,000)**

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

- **Digital Strategy Implementation (2018: \$2,400,000)**

Building upon the 2017 Digital Strategy foundation to execute on the Richmond Digital Strategy to enable the concepts of "Smart City", with the ultimate goal of embedding digital technology into the City's operations, information dissemination and communication with the residents and business community. Scope includes Data Analytics and Reporting - Phase 2, enhancements to website, mobile apps - Phase 2, data & web services development.