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## General Purposes Committee

Anderson Room, City Hall  
6911 No. 3 Road

Monday, January 21, 2019  
4:00 p.m.

Pg. #      ITEM

### MINUTES

**GP-4**      *Motion to adopt the **minutes** of the meeting of the General Purposes Committee held on January 9, 2019.*



### COMMUNITY SERVICES DIVISION

1. **INVESTING IN CANADA INFRASTRUCTURE PROGRAM  
COMMUNITY, CULTURE AND RECREATION STREAM**  
(File Ref. No. 06-2052-25-SCCR1) (REDMS No. 6067220 v. 13)

**GP-8**

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

*Designated Speakers: Elizabeth Ayers and Kirsten Close*

### STAFF RECOMMENDATION

- (1) *That the submission to the Investing in Canada Infrastructure Program Community, Culture and Recreation Stream requesting funding of up to \$10 million for the Steveston Community Centre and Branch Library replacement project, as outlined in the report titled, "Investing in Canada Infrastructure Program Community, Culture and Recreation Stream," dated January 7, 2019, from the Director, Recreation and Sport Services, be endorsed;*

- (2) *That the Chief Administrative Officer and General Manager, Community Services be authorized to enter into funding agreements with the government for the aforementioned project should it be approved for funding, as outlined in the report titled, “Investing in Canada Infrastructure Program Community, Culture and Recreation Stream,” dated January 7, 2019, from the Director, Recreation and Sport Services; and*
- (3) *That the Consolidated 5-Year Financial Plan (2019-2023) be amended accordingly should the aforementioned project be approved for funding as outlined in the report titled, “Investing in Canada Infrastructure Program Community, Culture and Recreation Stream,” dated January 7, 2019, from the Director, Recreation and Sport Services.*



2. **ANIMAL SHELTER GUIDING PRINCIPLES, PROGRAM OPTIONS AND SITE**

(File Ref. No.) (REDMS No. 5868777 v. 60)

GP-12

See Page GP-12 for full report

*Designated Speakers: Kirsten Close and Jim Young*

**STAFF RECOMMENDATION**

- (1) *That the Guiding Principles as described in the staff report titled “Animal Shelter Guiding Principles, Program Options and Site” dated December 11, 2018, from the Director, Recreation Services and the Senior Manager, Capital Buildings Project Development, be endorsed;*
- (2) *That one of the three program options as described in the staff report titled “Animal Shelter Guiding Principles, Program Options and Site” dated December 11, 2018, from the Director, Recreation Services and the Senior Manager, Capital Buildings Project Development, be approved;*
- (3) *That should Council endorse a program option that exceeds the previously approved budget of \$8.0 million, staff amend the budget and the Consolidated 5-Year Financial Plan (2019-2023) by cancelling or delaying other Capital Projects and report back to Council as part of the Financial Amendment report as described in the staff report titled “Animal Shelter Guiding Principles, Program Options and Site” dated December 11, 2018, from the Director, Recreation Services and the Senior Manager, Capital Buildings Project Development; and*

- (4) *That the site located at 12071 No. 5 Road, as described in the staff report titled “Animal Shelter Guiding Principles, Program Options and Site” dated December 11, 2018, from the Director, Recreation Services and the Senior Manager, Capital Buildings Project Development, be approved.*



## ENGINEERING AND PUBLIC WORKS DIVISION

3. **CITY CENTRE DISTRICT ENERGY UTILITY BYLAW NO. 9895, AMENDMENT BYLAW NO. 9947**

(File Ref. No. 12-8060-20-009947) (REDMS No. 59924863 v. 7; 5992897)

GP-29

See Page GP-29 for full report

*Designated Speakers: Peter Russell and Kevin Roberts*

### STAFF RECOMMENDATION

*That the City Centre District Energy Utility Bylaw No. 9895, Amendment Bylaw No. 9947 presented in the “City Centre District Energy Utility Bylaw No. 9895, Amendment Bylaw No. 9947” report dated December 20, 2018, from Director, Engineering be introduced and given first, second, and third readings.*



### ADJOURNMENT





## General Purposes Committee

Date: Wednesday, January 9, 2019

Place: Anderson Room  
Richmond City Hall

Present: Mayor Malcolm D. Brodie, Chair  
Councillor Carol Day  
Councillor Kelly Greene  
Councillor Alexa Loo  
Councillor Bill McNulty  
Councillor Harold Steves  
Councillor Michael Wolfe

Absent: Councillor Chak Au  
Councillor Linda McPhail

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

### MINUTES

It was moved and seconded

*That the minutes of the meeting of the General Purposes Committee held on December 17, 2018, be adopted as circulated.*

**CARRIED**

### ENGINEERING AND PUBLIC WORKS DIVISION

1. **CITY BUILDINGS – BUILDING FACILITIES DESIGN GUIDELINES AND TECHNICAL SPECIFICATIONS**

(File Ref. No. 06-2050-01) (REDMS No. 6047006 v. 4)

Jim Young, Senior Manager, Capital Buildings Project Development, provided background information and noted that the proposed Building Facilities Design Guidelines and Technical Specifications (the “Guidelines”) consolidate Council-approved guidelines for child care, affordable housing, enhance accessibility and so forth to name a few.

1.

## General Purposes Committee

### Wednesday, January 9, 2019

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In reply to queries from Committee, Mr. Young stated that the proposed Guidelines is a living document and therefore, the addition of other components, such as embedded carbon, may be incorporated. Also, he remarked that the Guidelines will act as a resource with regard to understanding chain of authority for various approval processes.

In response to further queries from Committee, Peter Russell, Senior Manager, Sustainability and District Energy, advised that in light of the introduction of the BC Step Code, staff are re-examining the City's Sustainable "High Performance" Building Policy for City Owned Facilities and that a staff report is forthcoming. Also, Mr. Russell highlighted that the City's Official Community Plan was amended to reflect the target date of 2025 for buildings to be net-zero energy ready – seven years ahead of the Step Code's target of 2032.

In light of Committee's discussion, the Chair directed staff to make minor edits to the proposed Guidelines and comment on feedback from the City's capital buildings' contractors.

It was moved and seconded

- (1) That the proposed "City of Richmond Building Facilities Design Guidelines and Technical Specifications" presented as Attachment 1 and described in the staff report dated January 9, 2019, from the Director, Engineering be endorsed and used in planning for future corporate facilities; and*
- (2) That the proposed "City of Richmond Building Facilities Design Guidelines and Technical Specifications" presented as Attachment 1 and described in the staff report dated January 9, 2019, from the Director, Engineering, be sent to interested stakeholders including the Richmond Centre for Disability.*

**CARRIED**

## COMMUNITY SAFETY DIVISION

### 2. **NON-FARM USE FILL APPLICATION FOR THE PROPERTY LOCATED AT 21800 RIVER ROAD (YEE)**

(File Ref. No. 12-8080-12-01) (REDMS No. 5981518 v. 10)

In reply to queries from Committee, Carli Williams, Manager, Community Bylaws and Licencing, advised that (i) City-led inspections will be carried out daily until the process is well established, (ii) the Applicant will maintain a daily log of trucks depositing soil on the property, and (iii) the City may require the Applicant to provide a topographic survey in order to establish the volume of soil deposited.

## General Purposes Committee

### Wednesday, January 9, 2019

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Discussion ensued and Committee expressed concern regarding the City's soil deposit protocol and the amount of the security bond.

Dr. John Paul, Professional Agrologist, stated that he has been retained by the Applicant to assist with the proposed project. In reply to queries from Committee, Dr. Paul advised that cranberries could be grown with the soil currently on the subject property, and soil to be deposited on the subject site has not been inspected as its source is not known at this stage of the application process.

It was moved and seconded

*That the non-farm use fill application submitted by Joanna Yee for the property located at 21800 River Road for the purposes of developing a vegetable farm and the corresponding staff report titled "Non-Farm Use Fill Application for the Property Located at 21800 River Road (Yee)" dated November 14, 2018, be referred to the Agricultural Land Commission (ALC) for the ALC's review and decision.*

The question on the motion was not called as discussion took place and in reply to further queries from Committee, Ms. Williams, accompanied by Mike Morin, Soil Bylaw Officer, provided the following information:

- staff's costs are typically recovered through permit fees and revenues generated by enforcement activities;
- based on current market conditions, the Applicant will likely be compensated for accepting soil onto the subject site; and
- a load of fill can result in approximately \$150 to \$200 in tipping fees and factors such as the season and type of soil affect said amounts.

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

It was moved and seconded

*That the non-farm use fill application submitted by Joanna Yee for the property located at 21800 River Road for the purposes of developing a vegetable farm and the corresponding staff report titled "Non-Farm Use Fill Application for the Property Located at 21800 River Road (Yee)" dated November 14, 2018, be referred back to staff for information on (i) water drainage issues, (ii) permit fees, (iii) the standard of soils deposited, and (iv) inspection protocols.*

**CARRIED**

Opposed: Cllrs. Greene  
Loo  
Steves

**General Purposes Committee**  
**Wednesday, January 9, 2019**

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**COMMUNITY SERVICES DIVISION**

3. **BC POVERTY REDUCTION COALITION'S "ABC" PLAN**

(File Ref. No. 07-3000-01) (REDMS No. 6051450 v. 2)

Discussion took place and it was suggested that the resolution also be forwarded to local Members of Parliament and the Leader of the Opposition.

As a result, the following **motion** was introduced:

It was moved and seconded

- (1) *That the BC Poverty Reduction Coalition's proposed Municipal Resolution, "Call for the ABC Plan for an Accountable, Bold and Comprehensive poverty reduction plan for British Columbia," be endorsed; and*
- (2) *That the resolution be sent to the Premier, the Minister of Social Development and Poverty Reduction, Richmond Members of the Legislative Assembly, Richmond Members of Parliament and the Leader of the Opposition.*

**CARRIED**

**ADJOURNMENT**

It was moved and seconded

*That the meeting adjourn (4:54 p.m.).*

**CARRIED**

Certified a true and correct copy of the Minutes of the meeting of the General Purposes Committee of the Council of the City of Richmond held on Wednesday, January 9, 2019.

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Mayor Malcolm D. Brodie  
Chair

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Hanieh Berg  
Legislative Services Coordinator



# City of Richmond

## Report to Committee

**To:** General Purposes Committee **Date:** January 7, 2019  
**From:** Elizabeth Ayers **File:** 06-2052-25-  
Director, Recreation and Sport Services SCCR1/Vol 01  
**Re:** **Investing in Canada Infrastructure Program Community, Culture and Recreation Stream**

### Staff Recommendation

1. That the submission to the Investing in Canada Infrastructure Program Community, Culture and Recreation Stream requesting funding of up to \$10 million for the Steveston Community Centre and Branch Library replacement project, as outlined in the report titled, "Investing in Canada Infrastructure Program Community, Culture and Recreation Stream," dated January 7, 2019, from the Director, Recreation and Sport Services, be endorsed;
2. That the Chief Administrative Officer and General Manager, Community Services be authorized to enter into funding agreements with the government for the aforementioned project should it be approved for funding, as outlined in the report titled, "Investing in Canada Infrastructure Program Community, Culture and Recreation Stream," dated January 7, 2019, from the Director, Recreation and Sport Services; and
3. That the Consolidated 5 Year Financial Plan (2019-2023) be amended accordingly should the aforementioned project be approved for funding as outlined in the report titled, "Investing in Canada Infrastructure Program Community, Culture and Recreation Stream," dated January 7, 2019, from the Director, Recreation and Sport Services.

Elizabeth Ayers  
Director, Recreation and Sport Services  
(604-247-4669)

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



## **Staff Report**

### **Origin**

In the Fall of 2018, Infrastructure Canada and the Province of British Columbia announced the Investing in Canada Infrastructure Program Community, Culture and Recreation (CCR) Stream for infrastructure projects in communities across the province. The program supports projects that improve citizens' access to or the quality of cultural, recreational and community spaces. The initial funding available is \$134.84 million, with applications due by January 23, 2019.

The purpose of this report is to seek Council's endorsement for the application submission to the CCR Stream for grant funding of up to \$10 million for the Steveston Community Centre and Branch Library replacement project, which is part of the 2020 capital projects submissions and will be included in the Consolidated 5 Year Financial Plan (2019-2023), subject to Council approval.

This report supports Council's 2014-2018 Term Goal #2 A Vibrant, Active and Connected City:

*Continue the development and implementation of an excellent and accessible system of programs, services, and public spaces that reflect Richmond's demographics, rich heritage, diverse needs, and unique opportunities, and that facilitate active, caring, and connected communities.*

This report supports Council's 2014-2018 Term Goal #3 A Well-Planned Community:

*Adhere to effective planning and growth management practices to maintain and enhance the livability, sustainability and desirability of our City and its neighbourhoods, and to ensure the results match the intentions of our policies and bylaws.*

This report supports Council's 2014-2018 Term Goal #5 Partnerships and Collaboration:

*Continue development and utilization of collaborative approaches and partnerships with intergovernmental and other agencies to help meet the needs of the Richmond community.*

This report supports Council's 2014-2018 Term Goal #6 Quality Infrastructure Networks:

*Continue diligence towards the development of infrastructure networks that are safe, sustainable, and address the challenges associated with aging systems, population growth, and environmental impact.*

## **Analysis**

### **Funding Requirements**

The CCR Stream is to support projects that provide improved access to or increased quality of cultural, recreational and community infrastructure. Projects must be community oriented, non-commercial in nature and open for public use. In the case of a community centre, the facility should have multipurpose spaces that bring together a variety of services, programs and cultural activities that reflect local community needs.

Only one project per municipality may be submitted and projects approved for funding must be completed within five to six years, or by March 31, 2024.

Total funding available for the initial phase of the CCR Stream is \$134.84 million. Funding requests must be a minimum of \$150,000 and, while there is no stated maximum, the guidelines ask applicants to consider a fair distribution of funding. Staff have been advised that a request for up to \$10 million is appropriate; however, options for a lesser amount and/or phasing of funding should be also included in the application. A successful grant application does not preclude the City from applying for other grant opportunities so long as the total provincial and federal contribution does not exceed 73.33 per cent of the total project cost.

### **Steveston Community Centre and Branch Library Replacement**

The advanced planning and design for the Steveston Community Centre and Branch Library replacement was approved by Council in 2016 as part of the Phase Two Major Facilities Projects. Subsequently, the Steveston Community Centre and Branch Library project is part of the 2020 capital projects submissions and will be included in the Consolidated 5 Year Financial Plan (2019-2023), subject to Council approval.

Staff considered other Phase Two Major Facilities Projects as options for submission; however, the Steveston Community Centre and Branch Library replacement project best fits the criteria for the grant as a multipurpose and multidisciplinary community hub that meets identified community needs. It also has the largest potential value for grant funding as it is the Phase Two Major Facilities Project with the greatest capital cost to the City. Therefore, it is recommended that a funding request for the Steveston Community Centre and Branch Library replacement project be submitted to the CCR Stream.

The building program for the Steveston Community Centre and Branch Library is in the process of being confirmed and a report to Council to endorse the preferred program is expected this Spring. Following confirmation of the program, staff will proceed with the concept design and site location for the facility.

In order to meet the project completion timelines as stated in the CCR Stream funding guidelines, staff will require Council's approval of the concept design and site for the replacement facility by late Fall of 2019. In addition, staff will make adjustments such as fast-tracking the design and construction procurement processes to ensure the CCR Stream's project

eligibility requirements are met, as the current project schedule does not align with the grant funding timelines.

### **Financial Impact**

The City of Richmond will be requesting up to \$10 million towards the Steveston Community Centre and Branch Library replacement project under the Investing in Canada Infrastructure Program Community, Culture and Recreation (CCR) Stream.

Capital funding for the Steveston Community Centre and Branch Library replacement project has been included in the Consolidated 5 Year Financial Plan (2019-2023) funded by the capital building and infrastructure reserve and the revolving fund, subject to Council approval, as part of the 2019 budget process. Should the City be successful with the grant application, the amount received will replace the City funding which is currently allocated to the project.

### **Conclusion**

Staff are seeking Council's endorsement to submit an application to the Investing in Canada Infrastructure Program Community, Culture, and Recreation Stream for the Steveston Community Centre and Branch Library replacement project. The City of Richmond is requesting up to \$10 million of grant funding for the project.



Kirsten Close  
Coordinator, Community Services  
Major Projects  
(604-247-4461)



Denise Tambellini  
Manager, Intergovernmental  
Relations and Protocol Unit  
(604-276-4349)



# City of Richmond

## Report to Committee

**To:** General Purposes Committee

**Date:** December 11, 2018

**From:** Elizabeth Ayers  
Director, Recreation Services


**File:** 06-2055-20-012/Vol 01

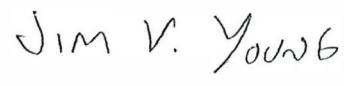
Jim V. Young, P. Eng.  
Senior Manager,  
Capital Buildings Project Development

**Re:** **Animal Shelter Guiding Principles, Program Options and Site**

### Staff Recommendation




1. That the Guiding Principles as described in the staff report titled "Animal Shelter Guiding Principles, Program Options and Site" dated December 11, 2018, from the Director, Recreation Services and the Senior Manager, Capital Buildings Project Development, be endorsed;
2. That one of the three program options as described in the staff report titled "Animal Shelter Guiding Principles, Program Options and Site" dated December 11, 2018, from the Director, Recreation Services and the Senior Manager, Capital Buildings Project Development, be approved;
3. That should Council endorse a program option that exceeds the previously approved budget of \$8.0 million, staff will amend the budget and the Consolidated 5 Year Financial Plan (2019-2023) by cancelling or delaying other Capital Projects and report back to Council as part of the Financial Amendment report as described in the report titled "Animal Shelter Guiding Principles, Program Options and Site" dated December 11, 2018, from the Director, Recreation Services and the Senior Manager, Capital Buildings Project Development.
4. That the site located at 12071 No. 5 Road, as described in the staff report titled "Animal Shelter Guiding Principles, Program Options and Site" dated December 11, 2018, from the Director, Recreation Services and the Senior Manager, Capital Buildings Project Development, be approved.

  
Elizabeth Ayers  
Director, Recreation Services  
Community Services  
(604-247-4669)  
Att. 4

  
Jim V. Young, P. Eng.  
Senior Manager,  
Capital Buildings Project Development  
(604-247-4610)

December 11, 2018

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

## Staff Report

### Origin

On December 12, 2016, Council approved the Advanced Planning and Design for Major Facilities Projects, including the Animal Shelter, subject to funding being approved as part of the 2017 Capital Budget. Capital funding in the amount of \$8.0 million for the Animal Shelter replacement facility was approved by Council on December 11, 2017, as part of the 2018 Capital Budget.

At the General Purposes Committee meeting held on May 22, 2018, staff received the following referral:

*That the staff report be referred back to examine options and costs on the overall size of a new animal shelter, including additional spaces such as a multi-purpose room and wildlife temporary holding room, that would meet the City's growing needs.*

The purpose of this report is to seek Council endorsement of the Animal Shelter Guiding Principles, to obtain Council approval of a program for the new Animal Shelter, and to seek Council approval for the site.

This report supports Council's 2014-2018 Term Goal #1: A Safe Community

*Maintain emphasis on community safety to ensure Richmond continues to be a safe community*

*1.2 Program and service enhancements that improve community safety services in the City.*

This report supports Council's 2014-2018 Term Goal #2: A Vibrant, Active and Connected City

*Continue the development and implementation of an excellent and accessible system of programs, services, and public spaces that reflect Richmond's demographics, rich heritage, diverse needs, and unique opportunities, and that facilitate active, caring, and connected communities.*

*2.3 Outstanding places, programs and services that support active living, wellness and a sense of belonging.*

This report supports Council's 2014-2018 Term Goal #6: Quality Infrastructure Networks

*Continue diligence towards the development of infrastructure networks that are safe, sustainable, and address the challenges associated with aging systems, population growth, and environmental impact.*

*6.1 Safe and sustainable infrastructure.*

*6.2 Infrastructure is reflective of and keeping pace with community need.*

## **Analysis**

### **Background**

The Richmond Animal Shelter is located at 12071 No. 5 Road. The single storey 4,580 sq. ft. facility was built in 1978. The facility is supported by a 455 sq. ft. portable structure that was added to the site in 2016. The shelter accommodates over 800 animals annually, ranging from companion animals (including dogs, cats, rabbits, small animals, and birds) to wildlife and small farm animals. Best practices in animal sheltering have advanced considerably over the past 40 years and are no longer being met by the existing facility, which is at the end of its lifecycle and due for replacement.

### **Animal Shelter Guiding Principles**

The proposed Guiding Principles for this project were developed based on a review of industry standards and best practices in the design and operation of animal shelters, and with input from the Regional Animal Protection Society (RAPS) and the British Columbia Society for the Prevention of Cruelty to Animals (BC SPCA). These Guiding Principles are identified below.

The new Animal Shelter will:

- Be designed to ensure efficient and effective operations and delivery of services;
- Include design measures to reduce animal stress and promote animal welfare and health;
- Incorporate best practices and industry standards in the care of animals;
- Provide appropriate spaces for adoption activities;
- Provide adequate spaces to effectively manage disease control;
- Provide safe and appropriate spaces for staff and volunteer operations;
- Provide safe spaces for interaction between the staff and animals, between the staff and the public, and between the public and animals; and
- Be designed to integrate sustainable practices and accommodate future growth.

The Animal Shelter Guiding Principles are intended to provide overall direction in the program development, facility design, and operation of the facility.

### **Program Development Process**

This report presents three program options for the new Animal Shelter, including order of magnitude costing, for Council's consideration.

The proposed program options were developed through a review of the existing shelter's animal intake data, industry guidelines and best practices, science-based animal welfare principles, visits to regional animal shelters, and consultation with key stakeholders. The program development process considered the needs of today's population of approximately 223,000 residents, as well as the City's future needs resulting from anticipated population growth, which the Official Community Plan (OCP) projects to be 280,000 residents by 2041. A summary of the trends related to municipal animal sheltering is provided in Attachment 1.

In addition to the Animal Shelter Guiding Principles, the development of the proposed program options was guided by the *Canadian Standards of Care in Animal Shelters*, published by the Canadian Advisory Council on National Shelter Standards. These standards were developed to address deficiencies in the care of companion animals in shelters and are considered industry best practices in the design and operation of animal shelters. Key considerations identified in these standards, and to be applied to the new facility, are provided in Attachment 2.

The key community stakeholders that were consulted include the RAPS, which currently operates the Richmond Animal Shelter as a contractor of the City, and the BC SPCA, which operates 29 shelters across the province. The BC SPCA also operates an Education and Adoption Centre for small animals in Richmond. In addition, staff consulted with the City of Delta Community Animal Shelter, the City of New Westminster Animal Shelter, the City of Surrey Animal Resource Centre, and the Langley Animal Protection Society (LAPS) which operates the Langley Animal Shelter.

This report presents three program options for Council's consideration. All three options will be designed to meet the Canadian Standards for Care in Animal Shelters.

### Summary of Program Options

The three program options for the new facility, with order of magnitude costs for each, are summarized below in Table 1, with description of each option following. A detailed animal shelter program chart outlining program spaces, function, and size is provided in Attachment 3.

Table 1 – Comparison of Program Options for the New Animal Shelter

<b>Program Allocation</b>	<b>Current Capacity*</b>	<b>Current Average Demand</b>	<b>Option 1 (\$8.0 million)**</b>	<b>Option 2 (\$10.9 million)**</b>	<b>Option 3 (\$13.0 million)**</b>
<b>Total sq. ft.</b>	<b>4,580 sq. ft.</b>		<b>3,700 sq. ft.</b>	<b>7,300 sq. ft.</b>	<b>8,000 sq. ft.</b>
Dogs	16	8-10	10	16	16
Cats	38	20-25	28	36	36
Rabbits	8 (outdoor)	8	2	8	8
Small animals	5-6	5-6	Retain portable	10-12	10-12
Farm animals (e.g. chickens, roosters, goats)	Outdoor fenced area	10-15 per year	0	Outdoor fenced area with enclosure	Outdoor fenced area with enclosure
Injured Wildlife Room	0	200 per year	Retain portable	52 sq. ft.	52 sq. ft.
Adoption Room	0	520 adoptions per year	0	0	68 sq. ft.
Multi-purpose Room	0	N/A	0	0	600 sq. ft.
Volunteer Office	0	70 volunteers 4,500 hrs per year	0	0	68 sq. ft.
Animal Control Receiving Bay	0	515 per year	0	276 sq. ft. with 2 kennels	276 sq. ft. with 2 kennels

\* Space allocation for animal housing at the existing facility does not meet industry standards.

\*\* See Attachment 4 for the detailed Animal Shelter Class D Cost Estimates.



Program Option 1 (\$8.0 million)

Program Option 1 provides a shelter that is approximately 3,700 sq. ft. While this option is smaller than the existing facility (4,580 sq. ft.), the efficient and modern design would enable a more effective delivery of the services currently offered at the City's animal shelter.

The proposed program includes the following spaces:

- Animal intake and examination room;
- 10 dog kennels (adoption, stray, and aggressive);
- Six cat rooms with 28 cat capacity (adoption, stray, and isolation);
- Rabbit room with two rabbit capacity;
- Outdoor dog runs;
- Reception desk and waiting area;
- Administration and animal control offices;
- Staff room; and
- Storage, laundry, medical and food preparation areas.

With Option 1, the total capacity for dogs is 10, and the capacity for cats is 28. While these capacities are lower than the existing facility (which has a total capacity of 16 dogs and 38 cats), the existing animal housing does not meet the Canadian Standards for Care in Animal Shelters. On an average day, the shelter has between 8-10 dogs and 20-25 cats in the shelter. Given these numbers, Program Option 1 will meet the average demands on the shelter. During seasonal increases in animal intake, particularly in the summer months where the intake of stray dogs and cats increases, excess demands on the shelter could be managed in ways such as working with other shelters, moving animals into volunteer foster homes, and asking those wishing to surrender their animal to wait until capacity is available.

The proposed service area for domestic rabbits is an indoor room with capacity for two rabbits. While this is lower than the existing shelter's eight rabbit capacity (housed outdoors), moving the rabbits indoors is projected to increase adoption rates and turnover as the welfare of the rabbits will be increased, making them more suitable and appealing for adoption.

The existing shelter has a 455 sq. ft. portable structure that was installed by the City in 2016 to provide space for animal intake, cat isolation, and administration. As these functions would be provided in the replacement facility, it is recommended that the portable remain on-site and be re-purposed to support small animals and injured wildlife should Council endorse Program Option 1.

Program Option 1 can be achieved within the budget of \$8.0 million (2020 dollars) approved by Council as part of the 2018 Capital Program.

Program Option 2 (\$10.9 million)

Program Option 2 is a shelter of approximately 7,300 sq. ft. which increases the animal capacity of the shelter to effectively address peak volumes of cats and dogs seen in the spring and summer months and provides space for small animals as well as farm animals. This option also

accommodates projected future demands on the shelter related to Richmond's population growth and the corresponding increase of companion animals in the community.

The proposed program expands on Option 1 with the addition of:

- Increase from 10 to 16 dog kennels (adoption, stray, and impound), which includes addition of an isolation kennel for sick dogs;
- Increase from 28 to 36 cat capacity, including a room for cats requiring isolation for aggressive behaviour and an additional isolation room for sick cats;
- Increase from two to eight rabbit capacity;
- Addition of two rooms with 10-12 small animal capacity;
- Addition of a designated room to temporarily hold injured wildlife and provide heat, food, and water until they are picked up by Wildlife Rescue or Critter Care;
- Addition of an animal control receiving bay with two dog kennels for after-hours intake;
- Outdoor fenced area with enclosure for farm animals such as chickens, roosters, and goats;
- Separate room for cat and dog food storage and preparation;
- A contained food preparation area for the dog and cat isolation rooms to prevent the spread of disease; and
- Additional space for storage of food, medical supplies, and animal equipment as well as additional space for shelter administration.

Program Option 2 includes space for an outdoor fenced area, with a small enclosure for farm animals such as chickens and roosters, which provides protection from the elements. On occasion, the existing animal shelter receives larger animals such as goats and sheep. As per current practice, larger farm animals are kept at the shelter for a short time, until they can be transferred to farm homes.

This option also provides indoor rooms for both small animals and injured wildlife.

Program Option 2 can be achieved at an order of magnitude cost of \$10.9 million (2020 dollars). The \$10.9 million budget is equivalent to the Council approved budget of \$8.0 million (2016) when construction cost escalation is factored in to 2020. Construction cost escalation is discussed later in this report.

#### Program Option 3 (\$13.0 million)

Program Option 3 is a shelter of approximately 8,000 sq. ft. and builds on Program Option 2 with the addition of the following program spaces:

- A multi-purpose room;
- An adoption room; and
- A volunteer office.

Through the consultation process, stakeholders identified the benefits of a multi-purpose room for education programs, volunteer training, and meetings. Education programs contribute to reduced rates of animal surrenders and promote responsible pet ownership, thus reducing

pressure on the shelter. A multi-purpose space could also be used for programming opportunities such as summer camps and dog training that would generate revenue for the shelter.

An adoption room is a common feature in many shelters to help facilitate the adoption process as it helps reduce the number of animals returned to the shelter due to incompatible matches between the adopted animal and its new family. When not actively in use for adoptions, this space could be used by volunteers to socialize shelter animals in a comfortable space, which can have positive impacts on their health and well-being.

Volunteers play a critical role in animal shelter operations. A robust volunteer program contributes to the well-being of animals and also reduces the shelter's operating costs. A volunteer office is included as a space for volunteers to sign-in, access resources, and meet with the volunteer coordinator.

The building size for Program Option 3 is approximately 8,000 sq. ft. Program Option 3 can be achieved at an order of magnitude cost of \$13.0 million (2020 dollars).

### Site

The existing site continues to be well-suited for the purposes of a new animal shelter as it:

- is City-owned;
- has minimal site servicing costs;
- poses no land use or zoning challenges;
- is familiar to current users;
- has access to dog walking routes; and
- is accessible by public transit.

Staff recommend that a new animal shelter be built on the existing site at 12071 No. 5 Road. The construction strategy will allow for the existing shelter to continue operating while a new one is being built at the east end of the site. Staff have conducted a high-level constructability analysis of the site, the preliminary findings of which indicate that a sufficiently wide driveway can be made available from No. 5 Road for access to the facility during the construction period. This driveway will be shared at times with construction crews, following all the necessary safety measures.

It is estimated that this project can be delivered in approximately 24 months after program approval, which includes procurement, design and construction. Upon completion of the new facility, the existing shelter will be demolished and the space will be available for outdoor program opportunities.

Staff have investigated the impact of construction noise to the welfare of animals at the shelter. After consulting with scientific officers at the BC SPCA and with staff from LAPS, which had a similar experience of operating Langley's shelter while the new facility was under construction on the same site, it is believed that the impact to animals from the construction activity can be mitigated through implementation of sound dampening measures.

### Cost Escalation in the Construction Market

For the past year, the construction market has experienced significant cost escalation. This is partly attributed to the tariffs on steel and aluminum, the impact of which is still unfolding in the trades marketplace. Another contributing factor is related to supply and demand locally. With so much work available, general contractors, trade contractors, and consultants are at overcapacity. As they are not actively pursuing new projects, the competition level in the marketplace is reduced. For the trades that are available with the capacity to bid, many of them decline to bid on “unusual” or “difficult” projects. Further compounding this labour shortage is the sheer number of skilled trade contractors in the industry who will be retiring over the next decade.

Many recent public sector capital projects have been tendered at well above estimated budgets. The City of New Westminster’s Animal Shelter, which is currently under construction, received only one bid and had a tender cost that was 40% over budget. This shelter is comparable to Option 2 since it has approximately 7,000 sq. ft. and its total cost (construction and soft costs) would be about \$10.5M, if escalated to 2020 rates.

Staff have contacted local professional cost estimators in order to identify the trends for the upcoming years. It was identified that the escalation rate was approximately 7% for 2017 and 8% for 2018. Despite slower growth within the region and forecasts of a housing recession, the projection is for the escalation rate to continue to increase to approximately 9% for 2019 and 2020. The budget estimates for the options presented in this report reflect these levels of cost escalation.

### Next Steps

Should Council endorse the guiding principles, a preferred program option, and the site, the next step is to develop the form and character for the new animal shelter, including concept level costing and a funding strategy should the estimated cost exceed the \$8.0 million.

### Financial Analysis

Option 1 for \$8.0M was previously approved by Council and does not require any additional funding. Therefore, this is the recommended option as the amount has been set aside and funded in the City’s committed reserves.

Option 2 for \$10.9M requires an additional \$2.9M of funding. During the 2019 Budget process, staff have ranked and reviewed all submitted projects and recommended funding for high priority projects, including several building projects for various aging facilities. If Council endorses Option 2, the impact of providing an additional \$2.9M for the Animal Shelter will result in other projects not being funded or will delay projects that are currently planned, which may result in additional risks to the City and higher costs due to cost escalation or for potential emergency repairs.

Option 3 for \$13.0M requires an additional \$5.0M of funding. If Council endorses Option 3, the impact of providing an additional \$5.0M for the Animal Shelter will result in more projects not being funded or will delay even more projects that are currently planned, which may result in

additional risks to the City and higher costs due to cost escalation or for potential emergency repairs.

### Financial Impact

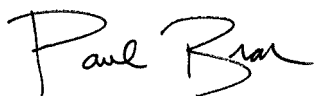
The costs associated with the concept design will be funded by the previously approved project 2017 Advanced Planning and Design for Major Facilities Projects.

Should Council endorse a program option that exceeds the previously approved budget of \$8.0 million, staff will amend the budget and the Consolidated 5 Year Financial Plan (2019-2023) accordingly, and report back to Council as part of the financial amendment report.

The preliminary Operating Budget Impact (OBI) estimate for the replacement facility is currently projected to be up to \$65,000 (2022 dollars). The operation of the City's animal shelter is currently subject to tender and determined through a Request for Proposals (RFP) process. The current agreement with RAPS is scheduled to expire on January 31, 2022, should the options for contract renewal in 2019 and 2021 be executed. A detailed business plan for the new facility and refinement of the OBI will be submitted to Council for consideration at a future time.

### **Conclusion**

The Animal Shelter Guiding Principles reflect the City's commitment to the health and welfare of animals in its care. The program options presented in this report reflect current best practices, research, and industry standards in shelter design and operation. The existing site continues to be well-suited for the purposes of a new animal shelter. A new facility will be designed to ensure effective and efficient operations that uphold industry standards in animal sheltering are met.



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- Att. 1: Trends in Animal Sheltering  
2: Canadian Standards of Care in Animal Shelters  
3: Animal Shelter Program (including Space Allocation Details)  
4: Animal Shelter Class D Cost Estimates

## Trends in Animal Sheltering

In identifying the following trends in animal sheltering, research was conducted by consulting with the BC SPCA and RAPS, interviewing Shelter Managers during best practices tours, and reviewing the Canadian Federation of Human Societies' *Animal Shelter Statistics 2015* and *Cats in Canada 2017* publications:

- The number of dogs coming into animal shelters is declining. The number of cats and small animals relative to dogs in shelters is increasing. The number of cats coming into animal shelters is approximately twice the number of dogs;
- Dogs or cats that come into the shelter as strays are quickly returned to owners as a result of effective licensing, micro-chipping, and other animal identification programs;
- Animal shelters have evolved from primarily serving a community safety and impoundment function to also include animal surrender/adoption and the promotion of animal welfare;
- Shelter management practices have evolved over the years to focus on animal welfare and reducing animal stress. Animals under stress are more susceptible to sickness and disease, which can result in longer stays in shelters and also infection of other animals;
- Animal sheltering organizations have become increasingly professionalized, using data, science, and metrics to achieve strategic positive outcomes for animals, families, and communities;
- Intake must be managed in order to prevent the number of animals in care from overtaking the shelter's capacity to provide conditions that meet basic needs. Rather than accepting any surrendered animal at any time, appointments are scheduled to take in surrendered animals when the shelter's capacity permits it;
- Rescue organizations are playing an increasing role in the sheltering of homeless animals. This emergence of rescue organizations is alleviating the pressure on municipal shelters;
- Digital technology has made it easier for people to adopt animals and transfer ownership of animals from sources other than municipal animal shelters (e.g., breeders, rescue agencies, Craigslist, Kijiji, etc.);
- Foster programs for companion animals that are not readily adoptable are essential to limit an animal's length of stay in a shelter, thereby easing pressures on capacity and also improving the animal's welfare; and
- Inter-municipal collaboration to transfer animals from areas where they are overpopulated to areas where they are in lower supply or higher demand increases the rate of adoption for some animals.

## Canadian Standards of Care in Animal Shelters

The *Canadian Standards of Care in Animal Shelters*, published by the Canadian Advisory Council on National Shelter Standards, is a guiding document which informed the proposed program options and will inform the detailed design of the shelter. These standards were developed to address deficiencies in the care of companion animals in shelters and are considered industry best practices in the design and operation of animal shelters.

Key considerations identified in these standards, and to be applied in the new City of Richmond Animal Shelter, include the following:

- Facilities must be appropriate for the species, the number of animals receiving care, and the expected length of stay in order to ensure the physical and psychological well-being of the animals.
- Shelter design should provide for proper separation of animals by species, health status, age, gender, temperament and predator-prey status.
- Shelter design should include sufficient space for operations, including intake, examination, holding, adoption, isolation, treatment, food storage and euthanasia.
- Entrances and exits, hallways, and rooms should be arranged so that movement through the facility and cleaning should proceed from the areas housing the most susceptible to disease and/or healthiest animals to those who are most likely to be a source of contagious disease.
- At least 10% of the facility housing capacity should be made available for isolation of animals diagnosed with, or suspected of having, a contagious disease.
- An animal's primary enclosure must be structurally sound and maintained in safe, working condition to properly confine animals, prevent injury, keep other animals out, and enable the animals to remain dry and clean.
- In addition to size considerations, proper layout of the primary enclosure is essential to maintain animal health and welfare. Food and water bowls or receptacles must be provided. The location of food, water, and litter containers relative to each other, resting areas, and doors can have a significant impact on the well-being of animals.
- As the length of stay increases (e.g., beyond 1-2 weeks), it becomes increasingly important to provide space that is both mentally and physically stimulating. Alternatives to traditional housing must be provided. For animals housed long term, the physical environment must include opportunities for hiding, playing, resting, feeding, and eliminating. For cats, the environment should also allow for scratching, climbing and perching.
- Protected indoor-outdoor access is ideal for most species, especially when animals are held long-term. Outdoor spaces must be suitably enclosed to protect from adverse weather, vandalism, and prevent escape or predation.
- Every sheltering organization has a maximum capacity to provide humane care, and the population in their care must not exceed that level. Factors that determine capacity for care include: the number of appropriate housing units; staffing for programs or services; staff training; average length of stay; and the total number of reclaims, adoptions, transfers, release, or other outcomes.

**Animal Shelter Program  
(including space allocation options)**

Program Area	Function	Current Facility	Option 1	Option 2	Option 3
<b>DOG SPACES</b>					
Dogs – Adoption	Kennels for adoptable dogs, with inside and outside compartments.	528 sq. ft. (10 kennels, 10 dogs)	124 sq. ft. (4 kennels, 4 dogs)	148 sq. ft. (8 kennels, 8 dogs)	148 sq. ft. (8 kennels, 8 dogs)
Dogs – Stray Hold	Kennels for temporary up to 7-day hold for stray dogs, with inside and outside compartments.	270 sq. ft. (6 kennels, 6 dogs)	124 sq. ft. (4 kennels, 4 dogs)	155 sq. ft. (5 kennels, 5 dogs)	155 sq. ft. (5 kennels, 5 dogs)
Dogs – Aggressive	Isolated dog kennels for dogs with aggressive behaviour and dangerous dogs.	0	109 sq. ft. (2 kennels, 2 dogs)	156 sq. ft. (2 kennels, 2 dogs)	156 sq. ft. (2 kennels, 2 dogs)
Dogs – Isolation (sick)	Quarantined animal housing for sick dogs.	0	0	54 sq. ft. (1 room, 1 dog)	54 sq. ft. (1 room, 1 dog)
Dogs – Isolation Prep	Preparation area to treat sick dogs; area to change into personal protective equipment (e.g., gowns, gloves, etc.); sink, residential-sized laundry machines, small fridge.	0	0	74 sq. ft.	74 sq. ft.
<b>Subtotal – Dog Spaces</b>		<b>798 sq. ft. (16 dogs)</b>	<b>357 sq. ft. (10 dogs)</b>	<b>587 sq. ft. (16 dogs)</b>	<b>587 sq. ft. (16 dogs)</b>
<b>CAT SPACES</b>					
Cats – Adoption	Cats available for adoption.	360 sq. ft. (2 rooms, 26 cats)	417 sq. ft. (3 rooms, 18 cats)	492 sq. ft. (5 rooms, 20 cats)	492 sq. ft. (5 rooms, 20 cats)
Cats – Behavioural	Cats with behavioural challenges.	0	53 sq. ft. (1 room, 2 cats)	150 sq. ft. (2 rooms, 4 cats)	150 sq. ft. (2 rooms, 4 cats)
Cats – Stray Hold	Short-term housing for stray cats awaiting reunion with their families. After 7-day stray hold and acclimatisation to the shelter, cats move to adoption rooms.	123 sq. ft. 1 room, 12 cats)	139 sq. ft. (1 room, 6 cats)	214 sq. ft. (2 rooms, 8 cats)	214 sq. ft. (2 rooms, 8 cats)



Program Area	Function	Current Facility	Option 1	Option 2	Option 3
<b>CAT SPACES (CONTINUED)</b>					
Cats – Isolation (sick)	Temporary quarantined housing for sick and contagious cats.	0 (100 sq. ft. in portable)	53 sq. ft. (1 room, 2 cats)	104 sq. ft. (2 rooms, 4 cats)	104 sq. ft. (2 rooms, 4 cats)
Cats – Isolation Prep	Preparation area for treating sick cats; area to change into personal protective equipment (e.g., gowns, gloves, etc.).	0 (50 sq. ft. in portable)	0	52 sq. ft.	52 sq. ft.
<b>Subtotal – Cat Spaces</b>		<b>483 sq. ft. (38 cats)</b>	<b>662 sq. ft. (28 cats)</b>	<b>1,012 sq. ft. (36 cats)</b>	<b>1,012 sq. ft. (36 cats)</b>
<b>OTHER ANIMAL SPACES</b>					
Rabbits	Rabbits should be housed indoors to increase adoption rates and reduce susceptibility to parasites such as flies, fleas, mosquitoes and ticks.	0 (150 sq. ft. outside facility)	74 sq. ft.	278 sq. ft.	278 sq. ft.
Small Animals	Room for small animals such as gerbils, hamsters, rodents, and birds.	112 sq. ft. (indoor storage room repurposed for small animals)	0 (100 sq. ft. in portable)	252 sq. ft.	252 sq. ft.
Wildlife	Temporary indoor holding room for wildlife such as racoons or birds of prey before pick-up or transfer to Wildlife Rescue or Critter Care.	0	0 (80 sq. ft. in portable)	52 sq. ft.	52 sq. ft.
<b>Subtotal – Other Animal Spaces</b>		<b>112 sq. ft.</b>	<b>74 sq. ft.</b>	<b>582 sq. ft.</b>	<b>582 sq. ft.</b>
<b>ADMINISTRATIVE AND OPERATIONAL SPACES</b>					
Reception and Administration	Reception desk with waiting area; offices for shelter manager and animal control staff.	186 sq. ft. (+100 sq. ft. in portable)	371 sq. ft.	523 sq. ft.	523 sq. ft.
Intake/Exam Room	Examination room for all incoming animals.	0 (79 sq. ft. in portable)	74 sq. ft.	156 sq. ft.	156 sq. ft.

Program Area	Function	Current Facility	Option 1	Option 2	Option 3
<b>ADMINISTRATIVE AND OPERATIONAL SPACES (CONTINUED)</b>					
Animal Control Receiving Bay	Receiving area for after-hours animal intake by Animal Control staff, with two holding kennels.	0	0	276 sq. ft.	276 sq. ft.
Adoption Room	Quiet and contained area for individuals to interact with animals they are considering for adoption. The room is also used by volunteers to socialize animals.	0	0	0	68 sq. ft.
Food Prep Room	Food preparation area; includes storage for food and medical supplies.	80 sq. ft.	113 sq. ft.	113 sq. ft.	113 sq. ft.
Grooming	Area for hygienic care and cleaning of animals.	0	74 sq. ft.	74 sq. ft.	74 sq. ft.
Volunteer Office	Workstation for Volunteer Coordinator; support space for volunteers to sign in hours, access resources and meet with Volunteer Coordinator.	0	0	0	68 sq. ft.
Staff Room	Sanitary space with small kitchen for meal breaks, storage of personal belongings; staff and/or volunteer briefings.	150 sq. ft.	138 sq. ft.	203 sq. ft.	203 sq. ft.
Multi-purpose Room	Programmable space to hold meetings, training sessions, and education programs.	0	0	0	600 sq. ft.
Incinerator	Area to dispose of animal remains. To be contracted out in the facility.	196 sq. ft.	0	0	0
Laundry	Large enough to accommodate industrial washer/dryer as well as extensive shelving.	131 sq. ft.	125 sq. ft.	139 sq. ft.	139 sq. ft.
Circulation and Support Spaces	Washrooms; showers; mechanical, electrical and communications rooms; janitorial closets; storage rooms; foyer.	2,444 sq. ft. (+126 sq. ft. in portable)	1,712 sq. ft. (+275 sq. ft. in portable)	3,635 sq. ft.	3,599 sq. ft.
<b>Subtotal – Administrative &amp; Operational Spaces</b>		<b>3,187 sq. ft.</b>	<b>2,607 sq. ft.</b>	<b>5,119 sq. ft.</b>	<b>5,819 sq. ft.</b>

Program Area	Function	Current Facility	Option 1	Option 2	Option 3
<b>EXTERIOR SPACES</b>					
Exterior Dog Runs	Outdoor fenced in exercise areas for dogs.	16,000 sq. ft.	19,300 sq. ft.	15,300 sq. ft.	15,300 sq. ft.
Covered Livestock Area	Enclosure for small farm animals (e.g., chickens) and large farm animals (e.g., goats).	200 sq. ft.	0	488 sq. ft.	488 sq. ft.
Exterior "Catio" Space	Fenced in outdoor space adjacent to cat rooms to allow access to sunlight and fresh air.	0	225 sq. ft.	300 sq. ft.	300 sq. ft.
<b>Subtotal – Exterior Spaces</b>		<b>16,200 sq. ft.</b>	<b>19,525 sq. ft.</b>	<b>16,088 sq. ft.</b>	<b>16,088 sq. ft.</b>
<b>TOTAL INDOOR CONDITIONED AREA</b>		<b>4,580 sq. ft.</b>	<b>3,700 sq. ft.</b>	<b>7,300 sq. ft.</b>	<b>8,000 sq. ft.</b>

**Animal Shelter Class D Cost Estimates**

<b>Cost Element</b>	<b>Option 1 3,700 sq. ft.</b>	<b>Option 2 7,300 sq. ft.</b>	<b>Option 3 8,000 sq. ft.</b>
Site Development	\$1,637,000	\$1,882,000	\$1,882,000
New Building Construction	\$3,311,000	\$5,319,000	\$6,209,000
Offsite Work	\$100,000	\$100,000	\$100,000
Construction Escalation	\$594,000	\$669,000	\$967,000
Furniture and Equipment	\$251,000	\$367,000	\$408,000
Soft and Project Costs	\$961,000	\$1,197,000	\$1,583,000
Design and Construction Contingency	\$1,146,000	\$1,366,000	\$1,851,000
<b>Total Project Costs</b>	<b>\$8,000,000</b>	<b>\$10,900,000*</b>	<b>\$13,000,000</b>

\*The \$10.9 million budget for Option 2 is equivalent to the Council approved budget of \$8.0 million (2016) when construction cost escalation is factored in to 2020.



# City of Richmond

## Report to Committee

**To:** General Purposes Committee

**Date:** December 20, 2018

**From:** John Irving, P.Eng. MPA  
Director, Engineering

**File:** 12-8060-20-009921/Vol 01

**Re:** **City Centre District Energy Utility Bylaw No. 9895, Amendment Bylaw No. 9947**

### Staff Recommendation

That the City Centre District Energy Utility Bylaw No. 9895, Amendment Bylaw No. 9947 presented in the "City Centre District Energy Utility Bylaw No. 9895, Amendment Bylaw No. 9947" report dated December 20, 2018, from Director, Engineering be introduced and given first, second, and third readings.

John Irving, P.Eng. MPA  
Director, Engineering  
(604-276-4140)

REPORT CONCURRENCE		
<b>ROUTED TO:</b>  Development Applications Law	<b>CONCURRENCE</b>  <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<b>CONCURRENCE OF GENERAL MANAGER</b>  
<b>REVIEWED BY 1A/5B</b>	<b>INITIALS:</b>  	<b>APPROVED BY CAO</b>  

## Staff Report

### Origin

In October 2015, Council endorsed the issuance of a Request for Expression of Interest (RFEOI) to identify a suitable utility partner to conduct a feasibility analysis to design, build, finance and operate a district energy utility (DEU) in the City Centre North area of Richmond, on the basis of the following guiding principles:

1. The DEU will provide end users with energy costs that are competitive with conventional energy costs based on the same level of service; and
2. Council will retain the authority of setting customer rates, fees and charges for DEU services.

LIEC staff issued a Request for Proposals (RFP) in September 2016, with an expanded scope for City Centre to the three proponents shortlisted under the RFEOI. LIEC executed a Memorandum of Understanding with the lead proponent, Corix Utilities Inc. (Corix) in February 2018, as directed by LIEC Board and endorsed by Council.

As the City Centre DEU due diligence process has advanced, through rezoning applications and/or Official Community Plan (OCP) amendment application, six developments have committed to construct and transfer energy plants to the City or LIEC at no cost to the City or LIEC, so that LIEC can provide immediate service to these customers.

Council endorsed City Centre District Energy Utility Bylaw No. 9895 (CCDEU Bylaw) in September 2018, introducing a new district energy service area starting with five developments. In October 2018, Council amended the CCDEU Bylaw to include the Richmond Centre Mall development.

The purpose of this report is to recommend expansion of the service area to include the Polygon Fiorella development, located at 3551, 3571, 3591, 3611 and 3631 Sexsmith Road, associated with rezoning application RZ 17-778835.

This report supports Council's 2014-2018 Term Goal #4 Leadership in Sustainability:

*Continue advancement of the City's sustainability framework and initiatives to improve the short and long term livability of our City, and that maintain Richmond's position as a leader in sustainable programs, practices and innovations.*

*4.1. Continued implementation of the sustainability framework.*

*4.2. Innovative projects and initiatives to advance sustainability.*

This report supports Council's 2014-2018 Term Goal #6 Quality Infrastructure Networks:

*Continue diligence towards the development of infrastructure networks that are safe, sustainable, and address the challenges associated with aging systems, population growth, and environmental impact.*

6.1. *Safe and sustainable infrastructure.*

6.2. *Infrastructure is reflective of and keeping pace with community need.*

## **Background**

### District Energy Utilities as Part of a Sustainable Community

Richmond's 2041 Official Community Plan (OCP) establishes a target to reduce community greenhouse gas (GHG) emissions 33 per cent below 2007 levels by 2020 and 80 per cent by 2050. The OCP also includes a target to reduce energy use 10 per cent below 2007 levels by 2020. Richmond's Community Energy & Emissions Plan (CEEP) identifies that buildings account for about 64 per cent of energy consumption in Richmond, and 43 per cent of GHG emissions; residential developments especially are prime energy consumers in the community. Richmond is growing, with today's population expected to increase by 35 per cent by 2041, and employment by 22 per cent. This growth will be accompanied by new building development, the majority of which will occur in Richmond's City Centre.

Shifting to more sustainable energy systems for buildings will support the City's climate and energy targets. Sustainable energy systems have the following characteristics:

- Use energy wisely – e.g. they are efficient, minimize consumption, minimize waste energy, and use low carbon sources of energy.
- Increase energy security by being reliant and resilient – e.g. they minimize price volatility, incorporate localized systems to avoid being completely dependent on external systems, and are adaptable to future technologies and energy sources.
- Have low-carbon intensity – e.g. they emit zero to low GHG emissions.
- Are cost-effective and do not result in unacceptable impacts (social, environmental or economic).

The City has identified district energy utilities (DEUs) as a key component of sustainable energy systems that can be implemented in neighbourhoods undergoing redevelopment. Some of the key benefits of a DEU are as follows:

- Reduced building capital and operations costs – DEUs replace the need for individual buildings to have their own boilers or furnaces, chillers or air conditioners, resulting in capital cost and maintenance cost savings.
- Efficiency – DEUs can operate more efficiently than typical stand-alone building mechanical systems, thereby reducing emissions and costs.

- Reduced emissions through using renewable energy and waste energy sources – DEUs can use renewable sources such as sewer heat recovery, geothermal, biomass, combined heat and power generation, and other technologies with the potential for very low emissions. Moreover, DEUs can capture and use waste heat from industrial, commercial and institutional use (i.e. ice surfaces and wastewater treatment plants).
- Reliability – DEUs use proven technology; most DEU's operate with a high reliability rate.
- Resiliency – District energy systems' ability to make use of multiple different fuel sources allow DEUs to incorporate new energy source opportunities in the future, providing financial and environmental resiliency and mitigating the potential for volatility in thermal energy prices.

Many DEUs come to be identified by the energy source they are hooked up to, such as geothermal, biomass, or solar; however, the most critical elements of a DEU are the customer base and the distribution network, and when establishing the partnerships and legal framework of a DEU the primary focus should be on these elements. The specific system or technology that is used to generate the heat can be altered or switched out over the life of the DEU depending on the best available technology at the time.

#### District Energy in Richmond

The City incorporated Lulu Island Energy Company Ltd. (LIEC) in 2013 for the purposes of managing district energy utilities on the City's behalf. LIEC currently owns and operates the Oval Village District Energy (OVDEU) and Alexandra District Energy (ADEU) Utilities, as well as advances new district energy opportunities. Attachment 1 indicates the current and planned future DEU areas throughout Richmond. LIEC has been recognized for excellence, leadership, innovation and sustainability through receiving thirteen awards since the company's inception, ranging from the provincial to international scale.

LIEC currently services eight buildings in the OVDEU service area, containing over 1,700 residential units. Energy is currently supplied from the two interim energy centres with natural gas boilers which combined provide 11 MW of heating capacity. When enough buildings are connected to the system, a permanent energy centre will be built which will produce low carbon energy. Currently the OVDEU is planned to harness energy from the Gilbert Trunk sanitary force main sewer through the implementation of the permanent energy centre in 2025. Over the next 30 years, the OVDEU system is anticipated to reduce GHG emissions by more than 52,000 tonnes of CO<sub>2</sub> as compared to business as usual<sup>1</sup>. OVDEU is developed under a concession agreement with Corix. During the concession period (30 years), Corix will design, build, finance and operate the OVDEU and will supply energy services to LIEC; LIEC owns the assets and Council sets customer rates.

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<sup>1</sup> Assumed that all energy was provided for heating. The business-as-usual (BAU) assumed that 40% of the building heating load would be provided from electricity and the remaining 60% would be from gas make-up air units.



LIEC provides heating and cooling services to six residential buildings in the ADEU service area, the large commercial development at “Central at Garden City”, the Richmond Jamatkhana temple and Fire Hall #3, in total connecting over 1450 residential units and over 1.6 million square feet of floor area. While some electricity is consumed for pumping and equipment operations, almost 100% of this energy is currently produced locally from the geo-exchange fields in the greenway corridor and West Cambie Park, and highly efficient air source heat pumps. The backup and peaking natural gas boilers and cooling towers in the energy centre have operated for only a few days throughout the system’s operation to date. LIEC staff estimate that this has eliminated 2,340 tonnes of GHG emissions in the community.

The City has continued to secure commitments that new developments in potential DEU service areas will be “District Energy Ready” through rezoning, development and building permit processes. This means that new developments in appropriate potential service areas are built with in-building mechanical systems that are compatible with district energy connection for space heating and domestic water heating.

LIEC is continuing to work with Corix on the City Centre DEU due diligence process as per the executed MOU. This work includes the development and analysis of long term DEU servicing strategies for the City Centre area. Staff are expecting to report to Council on the outcomes of this due diligence process in early 2019.

As the City Centre DEU due diligence process has advanced, staff saw the opportunity to secure a customer base for the immediate implementation of greenhouse gas emissions reduction through the rezoning and/or OCP amendment application process. Six development applicants have committed to construct and transfer energy plants to the City or LIEC through either of these processes, so that LIEC can provide immediate service to these customers. The commitment for these developments to construct and transfer energy plants to the City or LIEC was subject to adoption of a DEU service area bylaw pertaining to these sites. LIEC and City staff subsequently developed the CCDEU Bylaw to secure commitments from the first five developments, which Council adopted in September 2018. Council amended the CCDEU Bylaw to include the Richmond Centre Mall development in October 2018.

The Polygon Fiorella rezoning application (RZ 17-778835) was granted third reading at the Public Hearing held on May 22, 2018. The applicant is actively working to fulfill the rezoning considerations and advance the associated Development Permit for the project to the City’s Development Permit Panel for consideration.

### **Analysis**

The Polygon Fiorella development is estimated to consist of approximately 175,000ft<sup>2</sup> of residential space.

Expanding the City Centre District Energy Utility service area to include a development of this type results in the following direct benefits:

- Immediate reduction of greenhouse gas (GHG) emissions compared to business as usual;
- Immediate connectivity opportunity with the future low carbon district energy system;
- Expansion of LIEC's customer base under a positive stand-alone business case while the City Centre strategy develops;
- Increasing community's energy resiliency; and
- Providing financial and environmental stability to customers, mitigating potential volatility in energy costs.

City and LIEC staff met with the developer's representatives and, through the rezoning application, obtained their commitment to design and construct a low carbon energy plant, and transfer its ownership to the City or LIEC at no cost to the City or LIEC so that LIEC can provide immediate service to the customer and start immediate implementation of GHG emission reduction.

The LIEC Board of Directors has reviewed this opportunity and recommends expanding the City Centre District Energy Utility service area to include the development located at 3551, 3571, 3591, 3611 and 3631 Sexsmith Road.

In order to address this and other business development opportunities already approved by Council and LIEC Board in the City Centre DEU service area, ongoing growth and expansion of ADEU and OVDEU, and management of LIEC assets, the need for additional staff member has been identified. LIEC staff have recommended to the Board that one regular full time Assistant Project Manager be hired with the primary responsibility to support district energy approvals process coordination, grant funding applications coordination, implementation and management of information and communication technology. This position will also allow existing staff to focus further on the operational improvements of the existing customers and infrastructure and further business expansion as directed by Council and LIEC Board. 2019 LIEC operating budget approved by the Board and presented to Council at January 9, 2019 Finance Committee had accounted for the cost of this new position. As a part of the mandate given by Council to LIEC Board to manage the business and affairs of the LIEC, LIEC Board will consider creation of this new staff position.

### **Financial Impact**

None. The low carbon energy system will be designed and constructed by developers at their cost. Costs incurred by LIEC for engineering support and operations and maintenance will be funded from the existing and future LIEC capital and operating budgets. All LIEC costs will be recovered from customers' fees.

## Conclusion

Expanding the service area for the City Centre District Energy Utility Bylaw No. 9895 as proposed will allow for immediate provision of low carbon energy and in turn immediate avoidance of GHG emissions from a large development in Richmond's City Centre area. It would also provide the new Polygon Fiorella development an immediate connectivity opportunity with the future district energy system which is currently in development. The project will increase the community's energy resiliency by taking advantage of the district energy system's ability to utilize different fuel sources and future fuel switching capability of the technology.

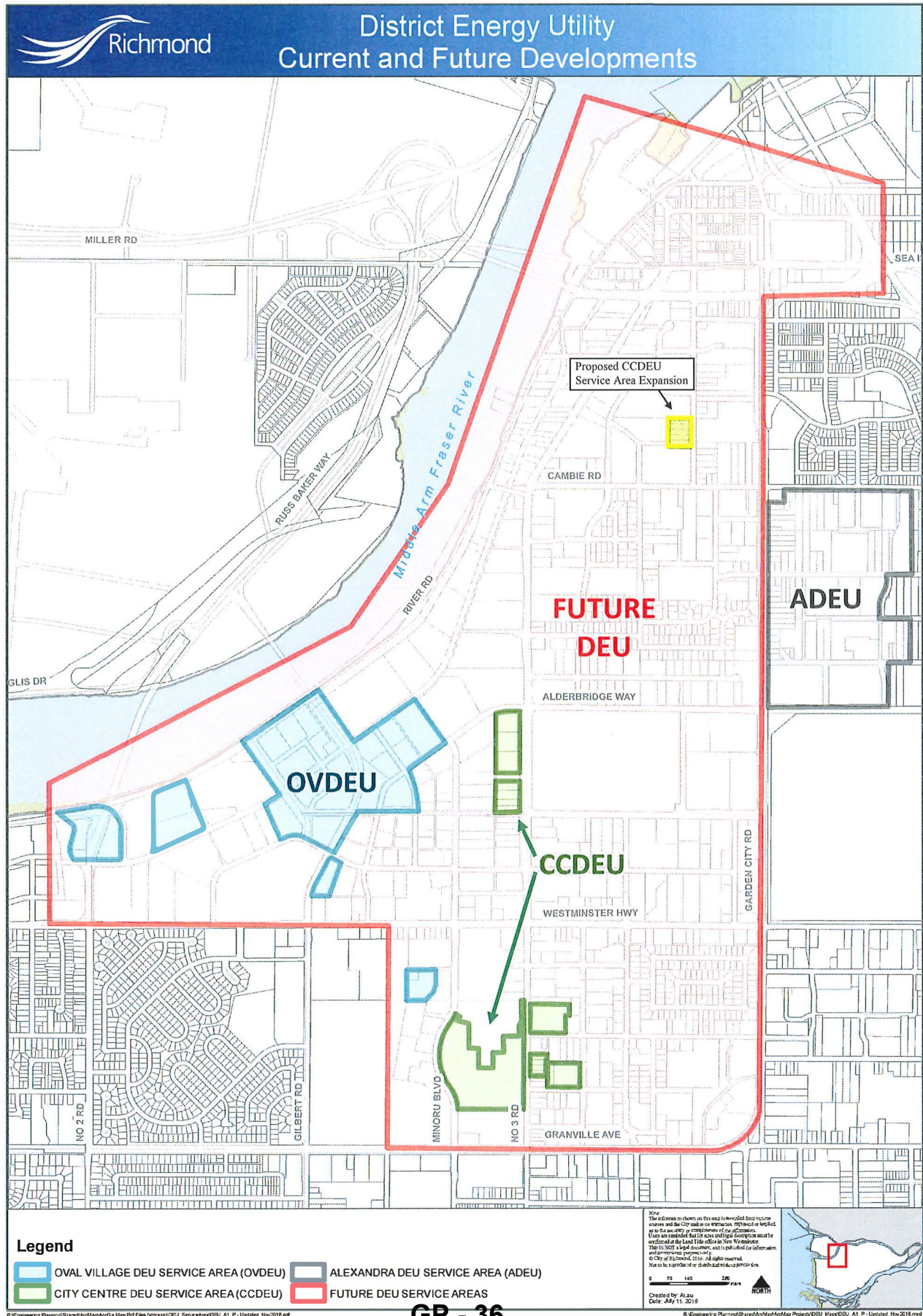
For: 

Peter Russell, MCIP RPP  
Senior Manager, Sustainability and District Energy  
(604-276-4130)

PRcd

Att. 1: Map of Current and Future District Energy Utility Areas in Richmond

# Attachment 1 – Map of Current and Future District Energy Utility Areas in Richmond





**City Centre District Energy Utility Bylaw No. 9895  
Amendment Bylaw No. 9947**

The Council of the City of Richmond enacts as follows:

1. The **City Centre District Energy Utility Bylaw No. 9895** is further amended:
  - (a) by deleting Schedule A (Boundaries of Service Area) in its entirety and replacing with a new Schedule A attached as Schedule A to this Amendment Bylaw; and
  - (b) by deleting Schedule E (Energy Generation Plant Designated Properties) in its entirety and replacing with a new Schedule E attached as Schedule B to this Amendment Bylaw.
2. This Bylaw is cited as “**City Centre District Energy Utility Bylaw No. 9895, Amendment Bylaw No. 9947**”.

FIRST READING

SECOND READING

THIRD READING

ADOPTED

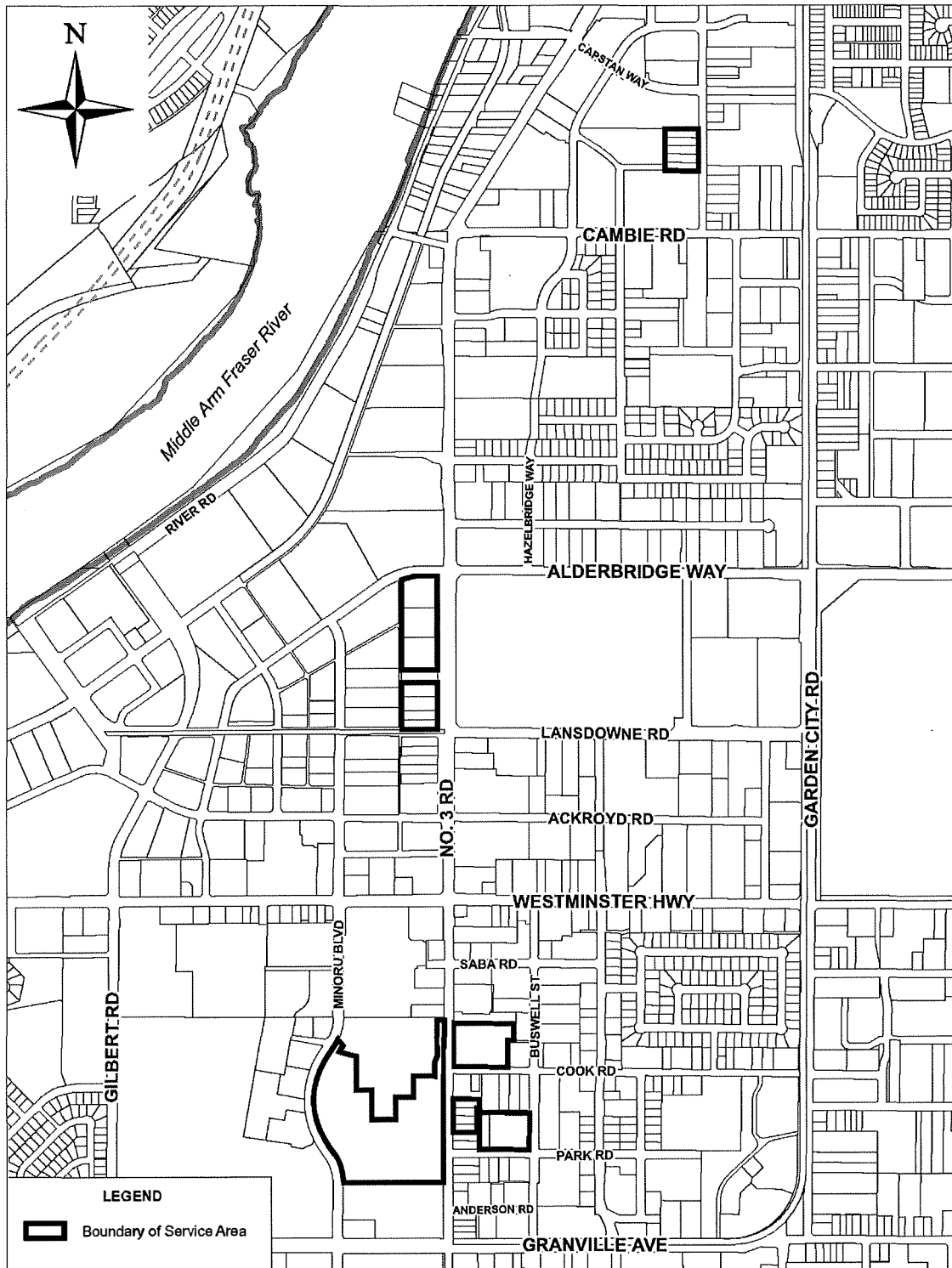
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CITY OF RICHMOND
APPROVED for content by originating dept.
APPROVED for legality by Solicitor
BRB

\_\_\_\_\_  
MAYOR

\_\_\_\_\_  
CORPORATE OFFICER



**Schedule A to Amendment Bylaw No. 9921*****SCHEDULE A to BYLAW NO. 9895******Boundaries of Service Area***

**Schedule B to Amendment Bylaw No. 9921*****SCHEDULE E to BYLAW NO. 9895******Energy Generation Plant Designated Properties***