City of Richmond

Agenda

General Purposes Committee

Anderson Room, City Hall
6911 No. 3 Road

Monday, June 18, 2018
4:00 p.m.

Pg. # ITEM

MINUTES

GP-5 ***Motion to adopt the minutes of the meeting of the General Purposes Committee held on June 4, 2018.***

COMMUNITY SAFETY DIVISION

1. **UBCM RESOLUTION – SAFETY REGULATIONS FOR TRAMPOLINE PARKS**
(File Ref. No. 12-8275-01) (REDMS No. 5860738 v. 2)

GP-7 See Page **GP-7** for full report

Designated Speaker: Carli Edwards

STAFF RECOMMENDATION

That the proposed UBCM resolution titled "Safety Regulations for Trampoline Parks" be submitted to the Union of BC Municipalities as outlined in the staff report titled "UBCM Resolution – Safety Regulations for Trampoline Parks", dated May 31, 2018, from the General Manager, Community Safety.

COMMUNITY SERVICES DIVISION

2. **REVIEW OF COUNCIL APPROVAL PROCESS FOR PUBLIC ART PROJECTS ON PRIVATE LAND**
(File Ref. No. 11-7000-09-00) (REDMS No. 5722457 v. 5)

GP-13 See Page **GP-13** for full report

Designated Speaker: Eric Fiss

STAFF RECOMMENDATION

(1) That the staff report titled "Review of Council Approval Process for Public Art Projects on Private Land" dated June 12, 2018, from the Director, Arts, Culture and Heritage Services be received for information; and

(2) That the minutes of the Public Art Advisory Committee meetings, including public art plans and public art concept proposals for each individual private development project, be forwarded to Council for information, and that the Public Art Program Administrative Procedures be updated to reflect this procedural change.

ENGINEERING AND PUBLIC WORKS DIVISION

3. **BC ENERGY STEP CODE**
(File Ref. No. 10-6125-07-02) (REDMS No. 5827315 v. 4)

GP-32 See Page **GP-32** for full report

Designated Speakers: Peter Russell and Victor Wei

STAFF RECOMMENDATION

(1) That Building Regulation Bylaw No. 7230, Amendment Bylaw No. 9769, which adds Part 10 Energy Step Code, be introduced and given first reading;

(2) That Richmond Zoning Bylaw No. 8500, Amendment Bylaw No. 9845, which amends Sections 3.4, 4.2.1, 4.3.3 and 4.4.1, be introduced and given first reading;

(3) That Richmond Official Community Plan Bylaw No. 9000, Amendment Bylaw No. 9771, which amends Sections 12.4 and 14.2.10.A, be introduced and given first reading;

(4) That Richmond Official Community Plan Bylaw No. 7100, Amendment Bylaw No. 9770, which amends Sections 2.2.3 and 2.5, be introduced and given first reading;

(5) That Bylaw 9771 and Bylaw 9770, having been considered in conjunction with:

(a) the City's Financial Plan and Capital Program; and

(b) the Greater Vancouver Regional District Solid Waste and Liquid Waste Management Plans;

are hereby found to be consistent with said programs and plans, in accordance with 477(3)(a) of the Local Government Act;

(6) That Bylaw 9771 and Bylaw 9770, having been considered in accordance with Official Community Plan Bylaw Preparation Consultation Policy 5043, are hereby found not to require further consultation;

(7) That the creation of a two-year temporary full time Building Energy Specialist, partially funded by a $100,000 contribution from BC Hydro, with remaining salary and benefits of $130,000 fully recovered through building permit fees, be endorsed and that the Chief Administrative Officer and General Manager, Engineering and Public Works be authorized to enter into a funding agreement with BC Hydro to support the Building Energy Specialist position;

(8) That the creation of new Plan Reviewer and Building Inspector 1 positions, with total salary and benefits of $200,000 fully recovered through building permit fees, be endorsed;

(9) That the Consolidated 5 Year Financial Plan (2018-2022) be amended to include the temporary full-time Building Energy Specialist, Plan Reviewer, and Building Inspector 1 positions funded by an increase in grant revenue and building permit fees;

(10) That the Energy Step Code training programs identified in the staff report titled "BC Energy Step Code" dated May 5, 2018, from the Senior Manager, Sustainability and District Energy, and Acting Director, Building Approvals, be approved with $110,000 from the Carbon Tax Provision, as funded in the 2018 Operating Budget; and

(11) That for Part 3 and Townhouse developments, notwithstanding the adoption of Building Regulation Bylaw No. 7230, Amendment Bylaw No. 9769:

(a) If a Development Permit has been issued prior to September 1, 2018, the owner may, while their Development Permit remains valid, apply for a Building Permit in compliance with the energy efficiency requirements applicable prior to the adoption of Bylaw 9769; and

(b) If an acceptable Development Permit application has been submitted to the City prior to the adoption of Bylaw 9769, the owner may, until December 31, 2019, apply for a Building Permit in compliance with the energy efficiency requirements applicable prior to the adoption of Bylaw 9769.

ADJOURNMENT

City of Richmond

Minutes

General Purposes Committee

Date: Monday, June 4, 2018

Place: Anderson Room
Richmond City Hall

Present: Mayor Malcolm D. Brodie, Chair
Councillor Chak Au
Councillor Derek Dang
Councillor Carol Day
Councillor Ken Johnston
Councillor Alexa Loo
Councillor Bill McNulty

Absent: Councillor Linda McPhail
Councillor Harold Steves

Call to Order: The Chair called the meeting to order at 4:09 p.m.

MINUTES

It was moved and seconded
That the minutes of the meetings of the General Purposes Committee held on May 22, 2018 and May 28, 2018, be adopted as circulated.

CARRIED

FINANCE AND CORPORATE SERVICES DIVISION

1. **HOUSEKEEPING UPDATES TO CIVIC ELECTION ADMINISTRATION AND PROCEDURE BYLAW**
(File Ref. No. 12-8060-20-009888) (REDMS No. 5848172)

It was moved and seconded
That Civic Election Administration and Procedure Bylaw No. 7244, Amendment Bylaw No. 9888 be introduced and given first, second and third readings.

CARRIED

2. **UPDATE TO ELECTIONS AND POLITICAL SIGNS BYLAW**
(File Ref. No. 12-8060-20-009887) (REDMS No. 5844661, 5837636)

It was moved and seconded
That Election and Political Signs Bylaw No. 8713, Amendment Bylaw No. 9887 be introduced and given first, second and third readings.

The question on the motion was not called as, in response to questions from Committee, David Weber, Director, City Clerk's Office and Chief Elections Officer clarified that (i) the update to the bylaw includes a prohibition on vehicles stored or parked for the sole purpose of functioning as a sign, (ii) the majority of enforcement of the bylaw in past years has been successful in seeking compliance from violators through contact and education, and (iii) violations that are egregious or dangerous, such as blocking sightlines, are removed immediately. Mr. Weber further advised that the current Election and Political Signs Bylaw permits the immediate removal of any political sign that is placed in contravention to any provision of the bylaw.

The question on the motion was then called and it was **CARRIED** with Cllr. Day opposed.

3. **FCM SPECIAL ADVOCACY FUND**
(File Ref. No. 03-0900-01) (REDMS No. 5851629 v. 4)

It was moved and seconded
That the City of Richmond participate in FCM's Special Advocacy Fund for the 2019 Federal Election at $10,400 per year for the next two years.

CARRIED

ADJOURNMENT

It was moved and seconded
That the meeting adjourn (4:15 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 Monday, June 4, 2018.

Mayor Malcolm D. Brodie
Chair

Amanda Welby
Legislative Services Coordinator

City of Richmond

Report to Committee

To:	General Purposes Committee	**Date:**	May 31, 2018
From:	Cecilia Achiam, MCIP, BCSLA General Manager, Community Safety	**File:**	12-8275-01/2018-Vol 01
Re:	**UBCM Resolution - Safety Regulations for Trampoline Parks**		

Staff Recommendation

That the proposed UBCM resolution titled "Safety Regulations for Trampoline Parks" be submitted to the Union of BC Municipalities as outlined in the staff report titled "UBCM Resolution - Safety Regulations for Trampoline Parks", dated May 31, 2018, from the General Manager of Community Safety.

Cecilia Achiam, MCIP, BCSLA
General Manager, Community Safety
(604-276-4122)

Att. 2

REPORT CONCURRENCE	
ROUTED TO:	**CONCURRENCE**
Community Social Development	☑
REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE	**INITIALS:** CJ
APPROVED BY CAO	

Staff Report

Origin

During the May 8, 2018 Planning Committee meeting the following staff referral was made:

(1) That staff examine the City's business licence bylaws to ensure that particular businesses comply with industry standards prior to the issuance of a business licence and report back; and

(2) That staff prepare a resolution for submission to the Union of British Columbia Municipalities (UBCM) for consideration calling for provincial regulations for trampoline parks to comply with current ASTM International standards and report back.

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.

Findings of Fact

Earlier this year, there was a tragic accident at a trampoline park business in Richmond. Review of the circumstances leading to the accident has prompted regulators to consider implementing safety standards for trampoline parks that would prevent other accidents from occurring in the future.

Vancouver Coastal Health is recommending that Technical Safety BC (TSBC), the organization who oversees the safe installation and operation of technical systems and equipment, assume regulatory responsibility over trampoline parks in the province (see letter given as Attachment 1). TSBC has further responded to say that they will be initiating review of international standards, including consultation with the industry. In the meantime, Vancouver Coastal Health has asked the City of Richmond to consider requiring trampoline parks to comply with ASTM International standards (see letter given as Attachment 2).

Analysis

ASTM Standard F2970, titled the "Standard Practice for Design, Manufacture, Installation, Operation, Maintenance, Inspection and Major Modification of Trampoline Courts" is a very detailed list of requirements and standards. Many of the requirements relate to component design and material composition of springs, bed design, fabric and supporting structures. Australia and several states in the US have passed legislation for trampoline parks that are consistent with this standard.

While ASTM Standard F2970 is very comprehensive, City of Richmond staff would not have the technical knowledge to be able to confirm compliance with these requirements. Requirements of this nature are better suited with a province-wide, technical authority such as TSBC.

In order to support the recommendation from Vancouver Coastal Health it is recommended that the City of Richmond forward the following resolution to UBCM:

Safety Regulations for Trampoline Parks

WHEREAS the incidence of injury at trampoline parks is increasing and there are no safety standards or operational requirements in the Province of BC;

AND WHEREAS; several jurisdictions in North America and Australia impose safety standards for the construction, maintenance and operation of trampoline parks;

THEREFORE be it resolved that the Province implement safety standards for trampoline parks and that Technical Safety BC assume regulatory responsibility for the safe installation and operation of all trampoline parks in the province.

Financial Impact

None.

Conclusion

While many jurisdictions in North America have safety standards for trampoline parks, British Columbia remains a jurisdiction without standardized requirements. It is recommended that the City of Richmond forward the UBCM resolution as given in this report so that regulations can be implemented for all trampoline parks in the Province.

Carli Edwards, P.Eng.
Manager, Community Bylaws and Licencing
(604-276-4136)

CE:ce

Att. 1: Letter from Patricia Daly, Vancouver Coastal Health to Technical Safety BC
2: Letter from Meena Dawar, Vancouver Coastal Health

Vancouver Coastal Health
Promoting wellness. Ensuring care.

Office of the Chief Medical Health Officer
#800-601 West Broadway
Vancouver BC V5Z 4C2
Tel: 604-675-3900

26 March 2018

Ms. Catherine Roome
President and CEO
Technical Safety BC
Suite 600 – 2889 East 12th Avenue
Vancouver, BC V5M 4T5

By email: Catherine.Roome@technicalsafetybc.ca; Bo.Feng@technicalsafetybc.ca

Re: It's time to develop and implement regulatory standards for trampoline parks in BC

Trampolines were originally designed as a training tool for gymnasts and other athletes to be used under closely supervised conditions; their use as a recreation device in indoor parks is a relatively new and expanding commercial enterprise. Though these parks promise recreation and physical activity opportunities for BC residents, access to strenuous physical activity and acrobatic stunts for untrained visitors in a primarily unsupervised and unregulated environment is troubling.

In follow up to the recent tragic fatality at Extreme Air Park in Richmond, Vancouver Coastal Health (VCH) has conducted an analysis of trampoline-park associated injuries presenting to VCH emergency departments, examined the medical literature, reviewed the available international standards for trampoline parks, and identified jurisdictions regulating the parks. The purpose of this communication is to share our insights and to recommend safety standards for this industry.

Our analysis shows that in comparison to backyard trampolines, injuries acquired at trampoline parks are more likely to involve youth and adults > 15 years of age, result in more severe injuries (fractures), and are more likely to involve the back and neck (which have the potential to result in catastrophic spinal injuries). It is important to note that our analysis of data in our region does not capture more severe injuries among children and youth that would normally present to BC Children's Hospital. Research from the United States demonstrates a rapid increase in number of injuries associated with trampoline parks; these are more likely to be severe and warrant hospitalization[i]. In general, these findings are consistent with those reported from Australia[ii], Korea[iii], and New Zealand[iv].

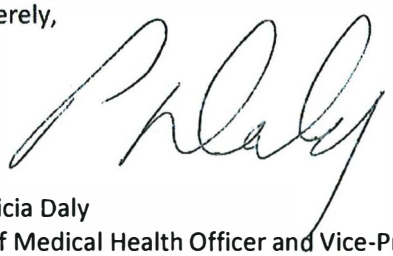
Severe life-threatening injuries, while rare, have been reported in many countries including elsewhere in Canada[v], Australia[vi], UK[vii], and the US[viii]. Due to concern about severe injuries associated with recreational trampolines, both the Canadian Pediatric Society[ix] and the American Association of Pediatrics[x] recommend against children playing on backyard trampolines. The Canadian Pediatric Society states that trampoline parks should not be considered safer than home trampolines[xi].

Injuries are potentially preventable through attention to safe design and operation of equipment and facilities, training of staff, and education and monitoring of users to prevent and mitigate unsafe behaviours. Unfortunately, trampoline parks in BC and Canada fall into a regulatory vacuum. Such is not the case in Britain[xii] where standards have been created and enforced. Australia Trampoline Park Association requires compliance with Australian safety code as a condition of membership. In the absence of federal standards in the US, several states have passed or have recently proposed legislation governing trampoline parks; these include

Arizona, California, Georgia, Illinois, Michigan, New Jersey, New Mexico, and Utah. In the absence of local standards, the International Association of Trampoline Parks endorses voluntary compliance with the ASTM International Standards F2970-15[xiii].

Extreme Air has recently called on the provincial government to regulate trampoline parks[xiv]. I agree that safety of park users should be regulated rather than left to chance. I call on Technical Safety BC to fill this important regulatory void by developing criteria for trampoline park design, equipment, installation specifications and maintenance standards. Attention should also be paid to operational requirements including minimum staffing ratios, staff training, critical incident documentation and reporting standards, insurance requirements, mandatory rules for user behaviour and appropriate education and signage for users. Rather than voluntary standards, I recommend that the regulatory standards be a requirement of operation and compliance is assessed and enforced. Urgent action is needed in order to prevent further serious injuries.

Sincerely,



Patricia Daly
Chief Medical Health Officer and Vice-President, Public Health

cc. Minister Selina Robinson, Minister of Municipal Affairs and Housing
George Abbott, Chair of the Board of Directors, Technical Safety BC
Bonnie Henry, Provincial Health Officer
Mayor Malcom Brodie, City of Richmond
Richard Stanwick, Chief Medical Health Officer, Island Health
Victoria Lee, Chief Medical Health Officer, Fraser Health
Trevor Corneil, Chief Medical Health Officer, Interior Health
Sandra Allison, Chief Medical Health Officer, Northern Health

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[i] Kasmire KE, Rogers SC, Sturm JJ. Trampoline Park and Home Trampoline Injuries. Pediatrics. 2016;138(3).
[ii] Mulligan CS, Adams S, Brown J. Paediatric injury from indoor trampoline centres. Injury prevention : journal of the International Society for Child and Adolescent Injury Prevention. 2017;23(5):352-4. http://injuryprevention.bmj.com/content/early/2016/07/28/injuryprev-2016-042071
[iii] Choi ES, Hong JH, Sim JA. Distinct features of trampoline-related orthopedic injuries in children aged under 6 years. Injury. 2018;49(2):443-6. http://www.injuryjournal.com/article/S0020-1383(17)30905-1/fulltext
[iv] L Roffe, et al. The effect of trampoline parks on presentations to the Christchurch Emergency Department. 2018. NZMJ 2018, V131 (N1468):43-53.
[v] https://www.ctvnews.ca/canada/it-s-been-hell-man-sues-trampoline-park-after-breaking-neck-1.3764836
[vi] Arora V, Kimmel LA, Yu K, Gabbe BJ, Liew SM, Kamali Moaveni A. Trampoline related injuries in adults. Injury. 2016;47(1):192-6. http://www.injuryjournal.com/article/S0020-1383(17)30905-1/fulltext
[vii] https://www.theguardian.com/sport/2017/mar/14/trampoline-park-injuries-trigger-hundreds-of-ambulance-call-outs
[viii] http://www.phoenixnewtimes.com/news/maureen-kerley-pushes-for-trampoline-park-regulations-following-2012-death-of-son-at-phoenixs-skypark-6663641
[ix] Canadian Pediatric Society 2007 Position Statement on Trampoline use in homes and playgrounds. https://www.cps.ca/en/documents/position/trampoline-home-use
[x] American Association of Pediatrics 2012 Policy Statement: Trampoline safety in childhood and adolescence. http://pediatrics.aappublications.org/content/early/2012/09/19/peds.2012-2082
[xi] https://www.caringforkids.cps.ca/handouts/home_trampolines
[xii] https://global.ihs.com/doc_detail.cfm?&rid=Z56&mid=BSI&input_search_filter=BSI&item_s_key=00703466&item_key_date=820900&input_doc_number=TRAMPOLINE%20PARKS&input_doc_title=&org_code=BSI
[xiii] https://www.astm.org/Standards/F2970.htm
[xiv] http://www.richmond-news.com/news/extreme-air-park-asks-government-to-draw-up-trampoline-regulations-1.23176007

VCH-Richmond Public Health
8100 Granville Avenue
Richmond BC V6Y 3T6
Tel : 604-233-3150 Fax : 604-233-3198

24 April 2018

Mayor and Council
City of Richmond
6911 No. 3 Road
Richmond, B.C.
V6Y 2C1

Mayor Brodie,

Re: Local trampoline parks should comply with industry recommended standards

The use of trampolines for recreation at home or at trampoline "parks" has exploded. Richmond Hospital Emergency physicians have become concerned with the rising number of injuries occurring at local trampoline parks. In follow up to these reports, as well as the recent tragic fatality at Extreme Air Park, Vancouver Coastal Health has reviewed the burden of injuries associated with trampoline parks and international trampoline park standards, both voluntary and mandated.

We have also recommended that Technical Safety BC (TSBC), the BC organization which oversees the safe installation and operation of technical systems and equipment, assume regulatory responsibility for trampoline parks in the province.[i]

TSBC informed us that in the absence of Canadian standards, they will be initiating a review of the standards[ii] of the internationally recognized body, ASTM International, later this year. The review will involve consultation with industry, stakeholders, and results in recommendations to the Ministry of Municipal Affairs and Housing. Regulatory changes may be needed as the current definition of 'amusement ride' does not accommodate trampoline parks.[iii] The process will take some months, during which visitors to the two Richmond trampoline parks cannot be assured of their safety.

In light of this, we recommend additional local action. I would ask Mayor and Council to consider requiring indoor trampoline parks to comply with current ASTM International standards. In addition, I would ask City Council to work with UBCM in supporting the call for provincial regulations.

While the City considers whether to oblige adherence to the ASTM International standards, it would be helpful if Council would encourage both local businesses to comply with them *voluntarily*.

Surely, in light of recent events, both businesses will wish to embrace the best industry standards to improve the safety of their customers.

Yours sincerely,

MDawar

Dr. Meena Dawar
Medical Health Officer
Vancouver Coastal Health - Richmond

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[i] Please see attached letter from Dr Daly to TSBC.
[ii] https://www.astm.org/Standards/F2970.htm
[iii] http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/13_101_2004#section1

City of Richmond

Report to Committee

To:	General Purposes Committee	**Date:**	June 12, 2018
From:	Jane Fernyhough Director, Arts, Culture and Heritage Services	**File:**	11-7000-09-00/Vol 01
Re:	**Review of Council Approval Process for Public Art Projects on Private Land**		

Staff Recommendation

1. That the staff report titled "Review of Council Approval Process for Public Art Projects on Private Land" dated June 12, 2018, from the Director, Arts, Culture and Heritage Services be received for information; and

2. That the minutes of the Public Art Advisory Committee meetings, including public art plans and public art concept proposals for each individual private development project, be forwarded to Council for information, and that the Public Art Program Administrative Procedures be updated to reflect this procedural change.

Jane Fernyhough
Director, Arts, Culture and Heritage Services
(604-276-4288)

Att. 5

REPORT CONCURRENCE		
ROUTED TO:	**CONCURRENCE**	**CONCURRENCE OF GENERAL MANAGER**
Development Applications	☑	
REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE	**INITIALS:** CJ	**APPROVED BY CAO**

Staff Report

Origin

On January 24, 2017, at the Parks, Recreation and Cultural Services Committee meeting, discussion took place regarding opportunities to include Council input on art projects in private developments.

As a result of the discussion, the following referral motion was introduced:

> *That the staff report titled, "City of Richmond Private Development Public Art Program Review" dated January 18, 2017, from the Director, Arts, Culture and Heritage Services be referred back to staff to review adding Council approval for Projects on Private Land under section 9(a) of the proposed Richmond Public Art Process.*

This report brings forward a summary of the staff review of the approvals process for artwork located on private property, and provides options and recommendations for improvements to the administrative procedures to address questions and concerns raised by Council.

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.*
>
> *2.1. Strong neighbourhoods.*
>
> *2.4. Vibrant arts, culture and heritage opportunities.*

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.*
>
> *3.2. A strong emphasis on physical and urban design.*

This report supports Council's 2014-2018 Term Goal #9 A Well-Informed Citizenry:

> *Continue to develop and provide programs and services that ensure the Richmond community is well-informed and engaged on City business and decision making.*
>
> *9.2. Effective engagement strategies and tools.*

Background

Private Development Public Art Program Policy Goals and Objectives

The intent of the Richmond Public Art Program is to animate the built and natural environment with meaning, contributing to a vibrant city in which to live and visit.

Adopted by Council in 1997, and updated in 2010, the Richmond Public Art Program Policy and the Richmond Private Development Public Art Program encourage the private sector to support the

integration of public artworks in the community during the rezoning and development permit processes, as well as the collaboration of artists, design professionals and community members in the selection of that art. In the Development Permit Guidelines, in the Richmond Official Community Plan, the Public Art Policy is identified as a development standard to be applied across the entire community to achieve a high standard of urban design for the public realm. The Public Art Program Policy Goals include commitments to community diversity and sustainability. Goals of the program, as contained in the policy, are summarized as follows:

- Spark community participation;
- Provide leadership in public art planning;
- Complement and develop the character of Richmond's diverse neighbourhoods;
- Increase public awareness, understanding and enjoyment of the arts in everyday life;
- Encourage public dialogue about art; and
- Encourage public art projects that work towards achieving a more sustainable community.

The Program Objectives, as updated in 2010, are based on Richmond's experience with the program since the program initiation in 1997, research on other public art programs and best practices in public art implementation. Objectives of the Public Art Program are summarized as follows:

- Increase opportunities for the community and artists to participate;
- Develop original site-specific works of art;
- Select art through an arm's-length professional process;
- Ensure that public art is developed through a public and transparent process;
- Enter into partnerships with private and public organizations;
- Ensure that public art and the environs of that art are maintained; and
- Maintain a continuous, consistent and affordable funding mechanism to support the City's commitment to public art.

Analysis

In considering a change in policy regarding project approval and opportunities to include Council input on public art projects in private developments, the following topics have been identified for further analysis:

- The nature of public art and best practices in its selection;
- The current approval process for public art on private property and Council's role in that process;
- Community stakeholder consultation; and
- Options to include Council input on art projects in private developments.

Public Art and Best Practices

Public art is defined as the expression of human creativity, imagination and skill typically produced by professional artists with training and expertise in the placement of art in the public realm for the benefit and enjoyment of the general public. The appreciation of art is subjective, and the preference for different forms of artistic expression is as varied as there is variety in human personalities. The merits, appreciation and evaluation of public art are highly subjective and it is common to see changes in opinions by the public of particular artworks over time.

Unlike landscape features, including trees, plants and fountains, and utilitarian street furnishings such as benches and lighting fixtures, public art is a unique feature of the public realm, as its value to society is in its ideas and aesthetics. It is not easy to establish parameters for what constitutes an artwork as its creation is based on the imagination and creativity of the professional artist, trained in producing artworks suitable for the public realm.

In other Canadian cities, public art programs are managed by municipal staff, arts agencies or autonomous art commissions. To maintain the independence of the public art program, Councils take the role of establishing over-arching administrative policies and approving funding for the public art program, with the day-to-day administration delegated to City staff. The arm's-length approach enshrines transparency in the selection process and ensures that Council is not held directly accountable for the choice of artwork. Best practice across Canada is to focus the role of Council to approval of policies and annual budgets. Research has not identified any examples across Canada where City Councils are directly involved in the selection of public artworks. In Victoria, for example, Council ratifies the recommended public artworks that are publicly funded on public lands but not on private lands or development projects.

Selection of artworks is conducted through a rigorous and professional evaluation process that considers the artistic merit of the artwork and is informed by technical considerations including safety, structural integrity, budget and maintenance. Works are evaluated by a jury of individuals with an expertise, understanding and appreciation of public art and design, often with the participation of community stakeholders.

Private Development Public Art Program Approval Process

Through the Richmond Public Art Program, art is voluntarily commissioned by the City, private developers and community donors who see value in enriching the public realm with art. There are five primary stages for the commissioning of private development public artwork:

1. **Voluntary contribution** (based on percentage of construction cost) for public art is offered by the developer through the development application process and accepted by the City;
2. **Public art plan** is prepared by the developer's public art consultant and reviewed by the Public Art Advisory Committee and the City;
3. **Selection** of the artwork, through a jury and interview process, is managed by the developer's public art consultant;
4. **Approval** of the artwork concept proposal by the developer, following technical review; and

5. **Implementation** of fabrication and installation of the artwork is completed by the artist and developer, and administered by the public art consultant.

The developer's public art consultant will set the terms of reference for the goals for the artwork in the public art plan, including potential themes, locations and specific technical requirements to provide a point of departure and inspiration for the artist.

In order to maintain an open and transparent process in the selection of public art, the best practice is to work with arm's-length advisory committees and selection panels composed of artists, art professionals and community representatives with knowledge and experience in evaluating art. Their criteria in evaluating art includes that it will be of high artistic quality, relevant to the goals set in the terms of reference provided to the artist and appropriate to the location. City staff and art professionals assist the selection panel by providing technical assessments of proposed public artworks.

For private development projects, the selection panel typically includes a representative of the owner—often the project architect, landscape architect or project manager—who can provide advice on the relationship of the artwork to the overall design and project vision.

To further reduce the perception of conflict of interest or favouritism, the Public Art Policy states that an artist selection panel shall not include any person from the Public Art Advisory Committee, City of Richmond staff, City Council or their respective partners, employees or families.

In the case of private development, the process for selecting art is guided by the Public Art Program Policy Goals and Objectives above, as outlined in the Public Art Plan prepared by the developer's public art consultant. This process is both independent of, and linked to, the development application approvals process. It is independent in that it follows a timeline and review process overseen by the Public Art Program staff; and it is linked in that often legal agreements stipulate payment of the public art contribution, preparation of the Public Art Plan and/or installation of the artwork prior to issuance of various permits (i.e., Rezoning, Development, Building or Occupancy).

Moreover, upon the advice of the Richmond Public Art Advisory Committee (RPAAC), private developers have included community representation on their selection panels.

The Public Art Program Administrative Procedures Manual includes a chart to illustrate the Richmond Public Art Process (Attachment 1).

City Council, which has the ultimate responsibility for establishing administrative policy, has the following roles and responsibilities with respect to the Public Art Program, both Civic and Private Development:

- In order to ensure City work programs are appropriately aligned, Council sets Term Goals to guide and influence the City's social and physical development as well as the quality of life and lifestyle choices available to residents;
- Council appoints members to RPAAC to advise City Council and contribute to the decision making process;

- Council receives informed advice from RPAAC on the implementation of the Public Art Program through civic, private development and community public art initiatives;
- Council refers public art policy issues and questions to RPAAC and staff for review and advice;
- Council may periodically review the voluntary public art contribution rate, currently set at 1% of construction budgets for civic projects and 0.5% of construction budgets for private development;
- Council accepts private developer voluntary public art contributions through the development application approvals process;
- Council approval is sought for all proposals of gifts of artwork;
- Council approval is sought for all public art plans and projects on City-owned land;
- The annual Public Art Program report, including an RPAAC annual work plan, is brought forward to Council for review; and
- Council delegates the administration and management of the Public Art Program to City staff, including the Director, Development and Director, Arts, Culture and Heritage Services, through the Chief Administrative Officer.

Community Stakeholder Consultation

As the Council referral to review adding Council approval for projects on private land involves a potential significant change to the Public Art Policy, feedback from community stakeholders was sought.

Urban Development Institute Richmond Liaison Committee

The success of the Richmond Public Art Program relies on the continued participation of the private development sector.

At the September 27, 2017 meeting of the Urban Development Institute (UDI) Richmond Liaison Committee, City staff presented the current Council referral on the approval process for public art on private property and requested feedback from the development community.

The following is a summary of the response to two primary questions:

What should Council's role entail in relation to the approval of Public Art on Private Land?

- The UDI Committee firmly recommends against Council making decisions on what art should or should not be placed on private land – especially when the funds for the public art are also private. The UDI Committee supports the role of the Richmond Public Art Advisory Committee (RPAAC) in its role in the review of the public art selection process and recommends improved communication between RPAAC and Council.

When should the Public Art Plan be prepared and submitted for review and approval?

- The UDI Committee has concluded that it is most appropriate and logistically feasible to proceed with the Public Art Plan review after adoption of the Rezoning or Development Permit and prior to issuance of the Building Permit. There are numerous reasons for this

recommendation, both from the developer's and the artist's standpoint, including timing and cost implications. First and foremost, as public art should ideally be well integrated with the building and site, there is difficulty and potentially lost opportunities from commissioning public art at any stage prior to the finalized development plan.

A letter prepared by UDI with additional recommendations is included as Attachment 2.

Richmond Public Art Advisory Committee

At the September 17, October 17 and November 21, 2017 meetings of RPAAC, the Council referral was presented for discussion and recommendations. As an advisory committee to Council, committee members offered the following comments for Council's consideration:

- Requiring Council approval of private development public art undermines the public art process; that is, if Council vetoes a proposal that has followed the selection process, it diminishes the value of the artists' and selection panelists' time and negates the expertise of the panel and RPAAC recommendations;
- The current model for artist selection on public lands follows best practices and uses an arm's-length process. Currently, Council does not have a role in the selection of the artwork. Council approval of the artwork on civic lands is required to approve the funding sources and to enter into contracts for implementation of the artwork, based on the recommendations by the selection panel, the Public Art Advisory Committee and staff. Members expressed concerns that requiring Council approval of the selection of the artwork does not follow the practice of most municipalities where Council ratifies funding rather than the artwork itself to maintain Council at arm's-length from the actual artwork selection;
- Council members do not have the benefit of the presentations, interviews and fulsome discussions and debate that occur at the selection panel deliberations and may not have adequate information to make an informed decision in the selection of artwork. There are significant costs in both time and money associated with rejecting a project that has been vetted through the selection process. Members suggested informing Council of the selection process and artwork more regularly throughout the process, and identifying other ways that Council could add their voice to the process without providing final say;
- Public art projects on private land are selected through objective and consistent criteria identified in the Public Art Program Policy that is set by Council; and
- Members expressed concerns that the additional requirement for Council approval for public art on private property may compromise the integrity of the final artwork. It was suggested that Council would benefit by leaving the selection of art with selection panels which include art professionals and community representatives, offering input vs. having final say. As well, approval by Council of artwork should be free from the bias of individual personal taste.

An excerpt from the Minutes of the November 21, 2017 Richmond Public Art Advisory Committee (RPAAC) meeting recommendations is included as Attachment 3.

Richmond Arts Coalition

On July 27, 2017, staff met with the Executive Director and the Chair of the Richmond Arts Coalition (RAC) to review the Council referral and request feedback. The Richmond Arts Coalition surveyed its members on the referral to staff regarding the approval process for public art on private lands.

- The consensus is that Council's responsibility is to create policy and process and then stand behind it, supporting staff and their advisory bodies who administer it. The concept of Council approving the individual art works at the final stage is not supported.

- RAC expresses its hope that this feedback is helpful to Council in considering this issue.

The Richmond Arts Coalition member email and Letter of Recommendations is included as Attachment 4.

Options to include Council Input on art projects in private developments

The following are options to consider for Council's role in the commissioning of public art on private property:

Option 1 – Status Quo with Procedural Improvements

Maintain the status quo, with revisions made to the Administrative Procedures Guidelines to improve communication regarding current public art plans and proposed concept proposals of artworks. Forward the minutes and agenda packages of the Public Art Advisory Committee to Council for information. The proposed updated Richmond Public Art Process Private Development Chart would be amended to reflect improved information presented to Council (Attachment 5).

Additional opportunities include regular updates to Council on proposed private development artworks through memos and staff reports.

This option ensures Council's neutrality in the determination of art placed in the public realm to avoid a perception of imposing personal preferences in an open and independent process. It retains the integrity of an arm's-length and transparent practice and maintains Richmond's status as a leader in public art best practices.

There are no financial implications for Option 1, to maintain the status quo, with revisions made to the Administrative Procedures.

Option 2 – Revise Policy to Define a New Approval Process

Staff requests Council approval of the selection for all artwork on private property when commissioned to satisfy a voluntary public art contribution commitment through the development application process. Revise the Public Art Program Policy to request Council approval of all public artworks, both on City lands and on private property when commissioned through the development applications process. Establish criteria and processes to assist Council and the development community in the selection of public art.

This option has the following implications:

- Council will be held directly accountable for the selection of the public artwork;
- Potential for perception of favouritism or subjectivity by Council in the selection of the artwork;
- Development community may be reluctant to participate in the City's voluntary public art program;
- Public art installed by individual property owners not requiring a development permit would be exempt;
- Artists may be reluctant to propose artworks where there is a perceived political bias and/or limitations on artistic freedom;
- Community members may be reluctant to serve on selection panels if there is a perception that their recommendations reached after thoughtful deliberations will be overturned by Council;
- If Council rejects a proposed artwork, there are increased costs for a repeated selection process with less money available for the final artwork;
- Council will need to rescind the current Public Art Program Policy and replace it with a new set of Goals, Objectives and Administrative Procedure Guidelines. In order to prevent repeated artist calls and delays for the same project, the Guidelines should include criteria for public artworks suitable for approval, either based on the views of sitting Councillors or based on a policy statement specifying what type of art will be appropriate in Richmond;
- Risk that artwork will tend to become homogenous, not current with advancements in art forms and less able to appeal to multiple audiences, nor reflect the diversity of the community; and
- Reputational harm to the City, which has been recognized as a leader in public art policy and implementation.

There are financial implications for Option 2, as it would require additional staff resources and time to research and prepare a revised Public Art Program Policy to replace the current policy.

Recommended Option

Following consultation with the Richmond Public Art Advisory Committee, Urban Development Institute and Richmond Arts Coalition, and in consideration of best practices on commissioning of public art, staff recommend Option 1, that Council remain at arm's-length in the selection and approval of artwork on private property commissioned through the development applications process, with enhancements to current practice to improve communication with Council on proposed artworks.

Financial Impact

None.

Conclusion

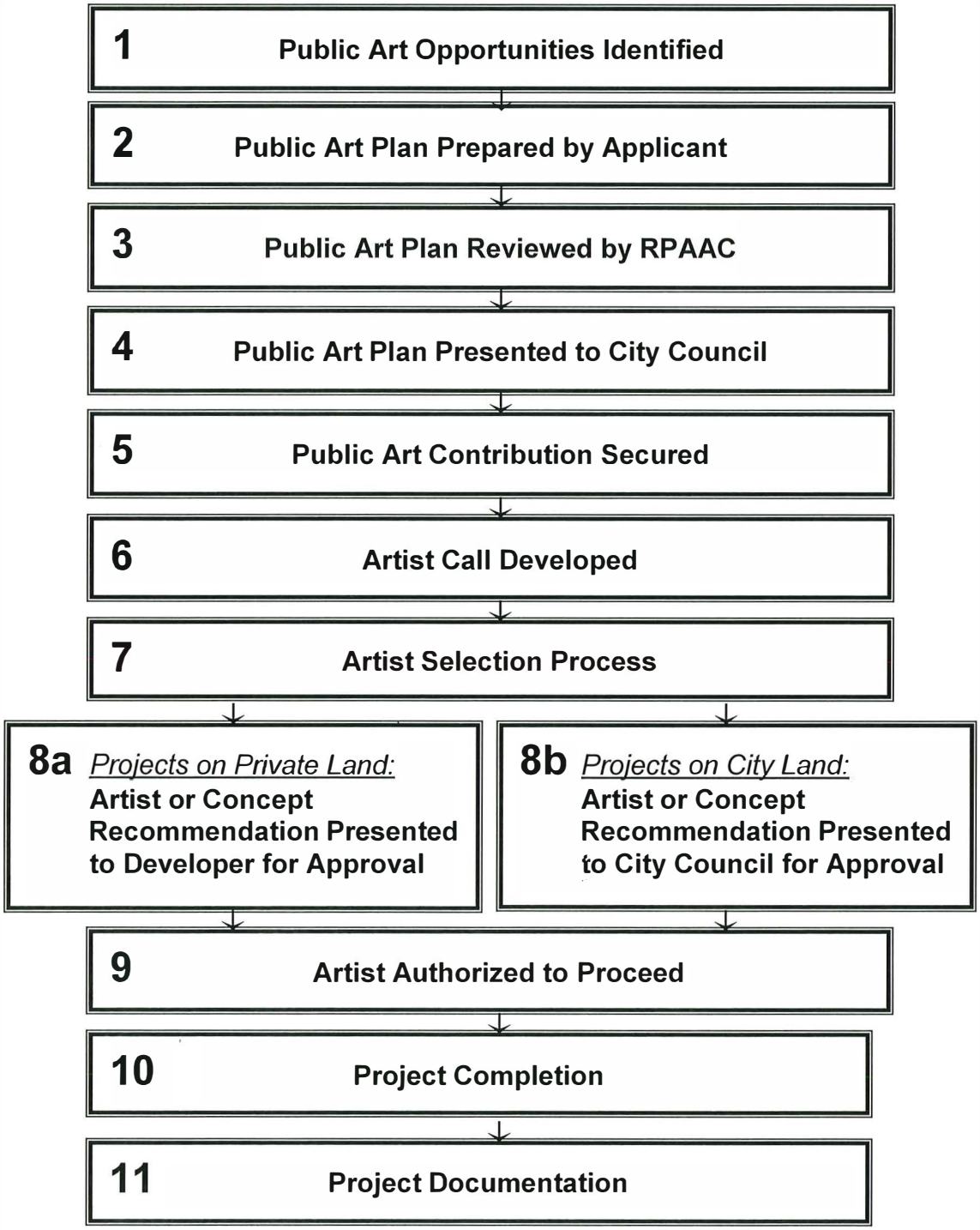
The private development public art program supports Council's Term Goals to advance the City's destination status and ensure continued development as a vibrant cultural city through enhanced public art and character-defining elements throughout the City.

The process for selecting art for private development public art projects has been guided by the Public Art Program Policy for more than 20 years. Richmond City Council and staff have important roles in the administration of the process. Additional measures proposed to improve the flow of information to Council will aid Council in formulating broad policy goals in realizing the vision for Richmond to be the most appealing, livable and well-managed community in Canada.

Eric Fiss
Public Art Planner
(604-247-4612)

Att. 1: Current Richmond Public Art Process Chart
2: Urban Development Richmond Liaison Committee Recommendations
3: Richmond Public Art Committee Recommendations
4: Richmond Arts Coalition eBlast (member email) October 5, 2017 and Letter of Recommendations December 18, 2017
5: Proposed Updated Richmond Public Art Process Private Development Chart

Current
Richmond Public Art Process
Civic • Private • Community



Urban Development Richmond Liaison Committee Recommendations

URBAN DEVELOPMENT INSTITUTE – PACIFIC REGION
#200 – 602 West Hastings Street
Vancouver, British Columbia V6B 1P2 Canada
T. 604.669.9585 F. 604.689.8691
www.udi.bc.ca

November 9, 2017

Dear Mr. Eric Fiss,

Re: UDI Response to Questions for the Review of Council Approval Process for Public Art on Private Land

I would like to thank you on behalf of the Urban Development Institute's (UDI's) Richmond Liaison Committee for meeting with us on September 27, 2017 to consult on Council's role in the approval process for public art on private land. In your briefing note you asked several pertinent questions of our members which can be summed up to:

1. **When should the Public Art Plan be prepared and submitted for review and approval?**
2. **What should Council's role entail in relation to the approval of Public Art on Private Land?**

In response to the first question, our Committee has concluded that it is most appropriate and logistically feasible to proceed with the Public Art Plan review after adoption of the Rezoning or Development Permit and prior to issuance of the Building Permit. There are numerous reasons for this recommendation, both from the developer's and the artist's standpoint. First and foremost, there is difficulty and potentially lost opportunities from incorporating public art into any stage prior to the finalized plan. One UDI member pointed out that as a project evolves, there may be spots and opportunities that open up for the inclusion of more public art.The premature submission of a Public Art Plan may potentially limit a project's overall ability to contribute public art on private land.

The second component concerns the artist that is chosen to undertake the public art project. If the Public Art Plan is required to be prepared and submitted for review prior to adopting the Rezoning or Development Permit, the artist may be left waiting, possibly up to 4 years, before the necessary approvals are secured to allow them to begin their work. Such a timeframe would be difficult to administer as it is unreasonable to expect artists to accommodate such lengthy timelines. Therefore, we are in support of selecting the public art and associated artist, subsequent to the issuance of the Rezoning or Development Permit.

In response to the second question, our Committee firmly recommends against Council making decisions on what art should or should not be placed on private land – especially when the funds for the public art are also private.

The Richmond Public Art Advisory Committee (RPAAC) exists to provide informed and expert input on matters associated with public art. For Council to now also be responsible for approving public art would encroach on the responsibilities and good work of the RPAAC.

It would also add unnecessary risk and delays to the City's development approval process as developers will naturally refrain from commissioning controversial and offensive public art projects that could potentially adversely affect the marketability of their projects.

UDI recognizes there is an opportunity for Council to become involved in the public art approval process through more frequent communication with the RPAAC. For example, following each of RPAAC's meetings, the Committee could write summary reports to Council to provide updates in relation to public art approvals. RPAAC members could also make more frequent presentations to Council about what has been approved and emerging issues. Council through these presentations, could provide high-level direction to the Committee if need be. This approach would not impact the overall approval process and maintain the integrity of the RPAAC.

Thank you, again, for meeting with our Committee, and seeking the development industry's input on a key issue. We look forward to working with you on this and other initiatives.

Yours sincerely

Anne McMullin
President & CEO

1. When should the Public Art Plan be prepared and submitted for review?
    a. submitted with the Rezoning Application
    b. submitted with the Development Permit Application
    c. submitted after adoption of the Rezoning or Development Permit

2. When should the Public Art Plan be submitted for approval by the City?
    a. with the Rezoning Application by Council
    b. with the Development Permit Application by the Development Permit Panel and endorsed by Council
    c. after adoption of Rezoning/Development Permit in a separate report to Council
    d. after adoption of the Rezoning or Development Permit with a recommendation by Richmond Public Art Advisory Committee and City staff

3. When should the public artwork be selected and the artist contracted?
    a. selected with the Rezoning Application
    b. selected with the Development Permit Application
    c. selected after adoption of the Rezoning or Development Permit

4. Who should give final approval for the selection of the artwork?
    a. Artist Selection Panel
    b. Developer/Applicant
    c. Richmond Public Art Advisory Committee
    d. City staff
    e. Development Permit Panel
    f. City Council

5. Do you support a separate report to Council to approve the artwork after selection?
    a. yes, Council approval required to proceed with the artwork
    b. yes, as a report for information, only, with Council's advice to be considered by the artist and applicant but not binding
    c. no, the decision to proceed with the artwork rests with the applicant/developer

6. Are there other opportunities to include Council input in the artwork selection process?
    a. Council provides recommendations through the development application approval process (i.e., comments at Planning Committee or First Reading at Council)
    b. Council provides recommendations with the formal review of the Public Art Plan
    c. Council receives Minutes from the Public Art Advisory Committee meetings where the Public Art Plans and Concept Proposals are presented and reviews

7. What are the implications for requiring Council approval of the artwork concept proposal?
    a. impact on timing and development schedule
    b. consistency of approval process for all applicants
    c. requires more time for Council to approve the criteria for evaluation and to engage in a thorough review of the proposals

Richmond Public Art Committee Recommendations

Richmond Public Art Advisory Committee
Tuesday, November 21, 2017

8. REVIEW OF COUNCIL REFERRAL ON COUNCIL APPROVAL OF PUBLIC ART PROJECTS ON PRIVATE PROPERTY

Discussion resumed from the meeting of October 17, 2017 on the Council Referral for Council approval of public art projects on private property.

It was moved and seconded

1. ***That the Committee does not support an amendment to the City of Richmond's Public Art Program Policy 8703 providing Council a veto or final say on public art situated on private lands.***

2. ***That the Committee recommends that where a rejection of public art on City-owned public lands is made by Council, that the Committee receive a written summary of the rationale for the rejection, and that the decision of Council and rationale be entered into the minutes of the Public Art Advisory Committee.***

3. ***That the Committee recommends that the City amend the City of Richmond's Public Art Program Administrative Procedures Manual to clearly reflect that rejections of public art on City-owned lands by Council should be based upon objective criteria and not the subjective individual aesthetic preferences of the current members of Council. Additionally, that a set of objective criteria be developed to assist Council in the evaluation of public art projects.***

4. ***That the Committee and public art staff provide Council information regarding pending and proposed public art projects in a timely manner, allowing for reasonable evaluation and discussion, and that the "Richmond Public Art Program Process for Public Art Projects Chart," as contained in the Public Art Program Administrative Procedures Manual, be amended to provide a step for discussion between Council and the Committee where Council has concerns related to public art.***

CARRIED

Richmond Arts Coalition eBlast (member email) October 5, 2017 and Letter of Recommendations December 18, 2017

Public Art Policy Issue

View this email in your browser

RICHMOND ARTS COALITION
YOUR ARTS VOICE

Public Art Policy Issue:

Like many other cities, Richmond has a Public Art Policy, a Public Art Advisory Committee, and city staff to guide public art processes; one for public lands and one for private lands. The processes are the same, up to Council approval. Right now Council has to approve the public art plan on public land and on private land, but has final veto power on public lands only.

There are proposed changes for the Richmond Public Art Process for Public Art Projects that would include a final veto power in regards to art on private lands as well as public lands. We are hearing concerns and feel it is our responsibility to help voice the opinions of local artists and arts supporters. We are asking our members' opinions on this subject. Please reply to the question below by October 15th, 2017:

Should Council have final veto power over public art on private lands that has already been selected and vetted through a process that includes both professional and community stakeholders? (Please elaborate)

Please send your feedback to rac@richmondartscoalition.com .

****

RICHMOND ARTS COALITION
YOUR ARTS VOICE

December 18, 2017

To Whom It May Concern:

In October 2017, the Richmond Arts Coalition posted the following in our newsletter regarding Public Art referral:

Public Art Policy Issue:

Like many other cities, Richmond has a Public Art Policy, a Public Art Advisory Committee, and city staff to guide public art processes; one for public lands and one for private lands. The processes are the same, up to Council approval. Right now Council has to approve the public art plan on public land and on private land, but has final veto power on public lands only.

There are proposed changes for the Richmond Public Art Process for Public Art Projects that would include a final veto power in regards to art on private lands as well as public lands. We are hearing concerns and feel it is our responsibility to help voice the opinions of local artists and arts supporters. We are asking our members' opinions on this subject. Please reply to the question below by October 15th, 2017:

Should Council have final veto power over public art on private lands that has already been selected and vetted through a process that includes both professional and community stakeholders? (Please elaborate)

The following are comments received by RAC on the issue:

1. If a project has been vetted, selected, RECOMMENDED, and also created through a public art process with the involvement of art professionals and stakeholders, why should council have a veto power? NO, I do not believe council has the expertise to turn a process into a mockery and decide ON THEIR OWN that something is not deemed worthy of creating. The public art process is in place for the very reason of avoiding such a situation.

2. No. While Council has the best interests of the community at heart, I do not believe they should have veto in either situation, but there is no case particularly for veto on private land.

3. As streams for both private and public-space artwork go through an arm's-length, democratic selection process as set out in the City of Richmond's Public Art Policy,

Council should by all means be updated and have an opportunity to review proposed artwork, but should not be in a position to censor artwork. If the work is offensive or in poor taste, it's unlikely to pass through a selection panel composed of residents and stakeholders, and I'm sure there is recourse to have it blocked or removed if it does, without allowing Council's particular tastes to influence the artwork selected to engage the wider community.

4. Richmond Council has the power of final say on Art on public lands, whether or not I agree with their decision. They should, however, as a responsible elected body, pay heed to public opinion in a reasonable manner.

5. NO, council should definitely NOT have final veto over art that has already been selected and vetted by professional and community stakeholders. Leave it in the capable hands of art professionals.

6. Art is subjective, a painting to one person may be viewed as a masterpiece, while to another, it may be viewed as rubbish. The saying is true, beauty is truly in the eye of the beholder. Therefore, it is not the duty of City Council to pick or approve of art work that only they like, but it is their duty to keep works that are morally reprehensible away from the public.

7. I don't think council should have final veto power. I think it is Council's responsibility to put in place a competent and comprehensive selection process and then to stand by that process, rather than short-circuiting it at the final moment (and after much city expense). Thanks.

8. Council doesn't approve the design of individual buildings (staff does that based on standards set for building permit applicants) so why should they approve the art on the property?

9. Q: How can we ensure that Richmond has a wide variety of public art, not just one style? A: That should be part of the public art policy.

10. Q: Is controversial public art something we should allow or encourage? A: Consider the entertaining and passionate public debate the Miss Mao biennale piece created and the number of people who came to the City just to see what all the fuss was about.

The consensus appears to be that Council's responsibility is to create policy and process and then stand behind it, supporting staff and their advisory bodies who administer it. The concept of Council approving individual art works at the final stage is not supported.

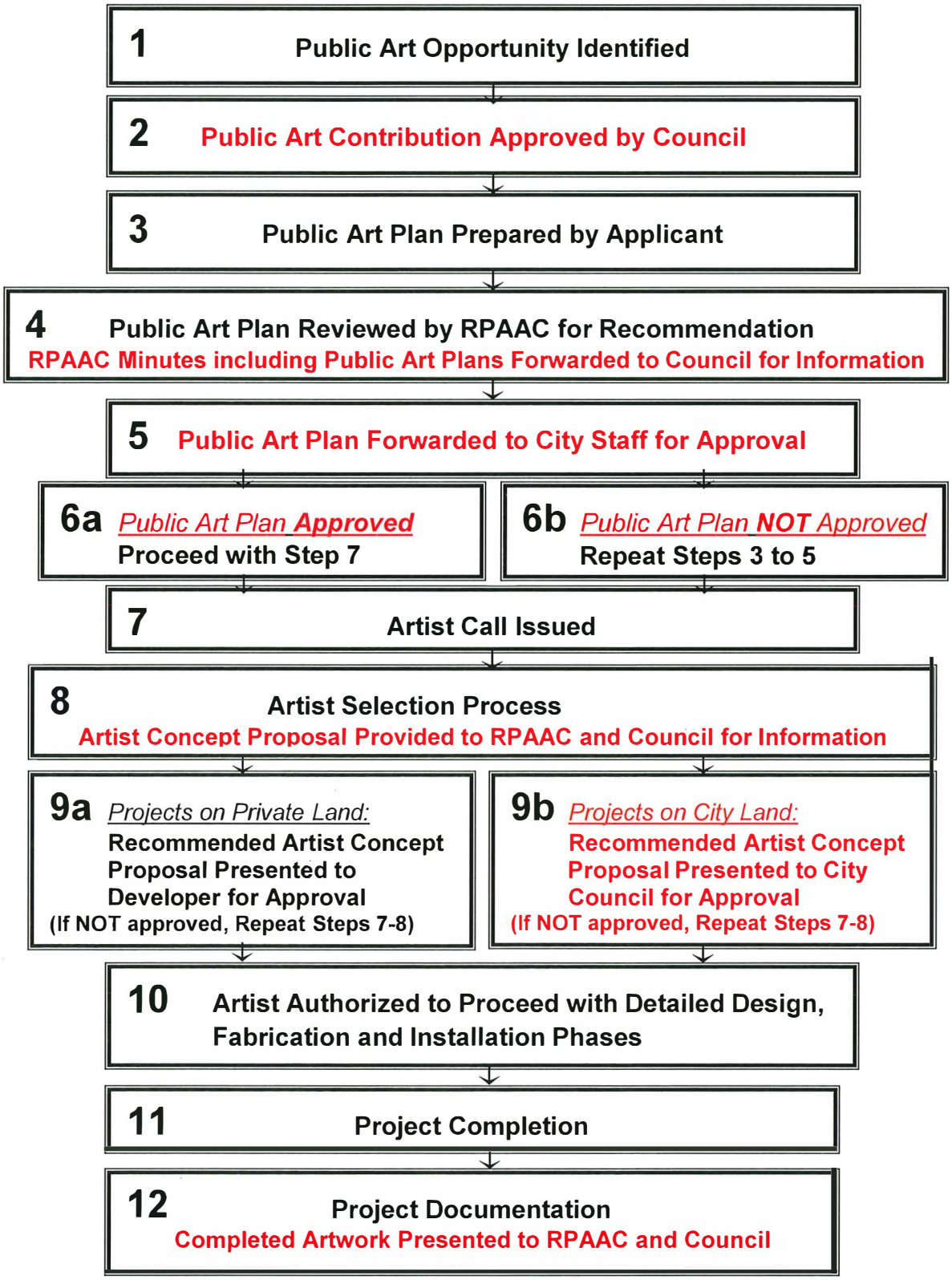
We hope this feedback is helpful to you as you make your recommendations on this issue.

Sincerely,

Linda Barnes, Chair
Richmond Arts Coalition

www.richmondartscoalition.com

Proposed Updated
Richmond Public Art Process
Private Development



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City of Richmond

Report to Committee

To:	General Purposes Committee	**Date:**	May 5, 2018
From:	Peter Russell Senior Manager, Sustainability and District Energy	**File:**	10-6125-07-02/2017-Vol 01
	Victor Wei, P. Eng. Acting Director, Building Approvals & Director, Transportation		
Re:	**BC Energy Step Code**		

Staff Recommendation

1. That the Building Regulation Bylaw No. 7230, Amendment Bylaw No. 9769, which adds Part 10 Energy Step Code, identified in the report titled "BC Energy Step Code" dated May 5, 2018, from the Senior Manager, Sustainability and District Energy, and Acting Director, Building Approvals, be introduced and given first reading;

2. That Richmond Zoning Bylaw No. 8500, Amendment Bylaw No. 9845, which amends Sections 3.4, 4.2.1, 4.3.3 and 4.4.1, identified in the report titled "BC Energy Step Code" dated May 5, 2018, from the Senior Manager, Sustainability and District Energy, and Acting Director, Building Approvals, be introduced and given first reading;

3. That Richmond Official Community Plan Bylaw No. 9000, Amendment Bylaw No. 9771, which amends Sections 12.4 and 14.2.10.A, identified in the report titled "BC Energy Step Code" dated May 5, 2018, from the Senior Manager, Sustainability and District Energy, and Acting Director, Building Approvals, be introduced and given first reading;

4. That Richmond Official Community Plan Bylaw No. 7100, Amendment Bylaw No. 9770, which amends Sections 2.2.3 and 2.5, identified in the report titled "BC Energy Step Code" dated May 5, 2018, from the Senior Manager, Sustainability and District Energy, and Acting Director, Building Approvals, be introduced and given first reading;

5. That Bylaw 9771 and Bylaw 9770, having been considered in conjunction with:

    a. The City's Financial Plan and Capital Program; and

    b. The Greater Vancouver Regional District Solid Waste and Liquid Waste Management Plans;

are hereby found to be consistent with said programs and plans, in accordance with 477(3)(a) of the *Local Government Act*;

6. That Bylaw 9771 and Bylaw 9770, having been considered in accordance with Official Community Plan Bylaw Preparation Consultation Policy 5043, are hereby found not to require further consultation;

7. That the creation of a two year temporary full time Building Energy Specialist, partially funded by a $100,000 contribution from BC Hydro, with remaining salary and benefits of $130,000 fully recovered through building permit fees, be endorsed; and that the Chief Administrative Officer and General Manager, Engineering and Public Works be authorized to enter into a funding agreement with BC Hydro to support the Building Energy Specialist position;

8. That the creation of new Plan Reviewer and Building Inspector 1 positions, with total salary and benefits of $200,000 fully recovered through building permit fees, be endorsed;

9. That the Consolidated 5 Year Financial Plan (2018-2022) be amended to include the temporary full-time Building Energy Specialist, Plan Reviewer, and Building Inspector 1 positions funded by an increase in grant revenue and building permit fees.

10. That the Energy Step Code training programs identified in the report titled "BC Energy Step Code" dated May 5, 2018, from the Senior Manager, Sustainability and District Energy, and Acting Director, Building Approvals, be approved with $110,000 from the Carbon Tax Provision, as funded in the 2018 Operating Budget;

11. That for Part 3 and Townhouse developments, notwithstanding the adoption of Building Regulation Bylaw No. 7230, Amendment Bylaw No. 9769:

    a. If a Development Permit has been issued prior to September 1, 2018, the owner may, while their Development Permit remains valid, apply for a Building Permit in compliance with the energy efficiency requirements applicable prior to the adoption of Bylaw 9769; and

    b. If an acceptable Development Permit application has been submitted to the City prior to the adoption of Bylaw 9769, the owner may, until December 31, 2019, apply for a Building Permit in compliance with the energy efficiency requirements applicable prior to the adoption of Bylaw 9769.

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

Victor Wei, P. Eng.
Acting Director, Building
Approvals &
Director, Transportation
(604-276-4131)

Att. 7

REPORT CONCURRENCE		
ROUTED TO:	**CONCURRENCE**	**CONCURRENCE OF GENERAL MANAGER**
Law	☑	
Building Approvals	☑	
Development Applications	☑	
Policy Planning	☑	
Finance	☑	
REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE	**INITIALS:** CJ	**APPROVED BY CAO**

Staff Report

Origin

In May 2017, Council endorsed a stakeholder consultation program regarding how the BC Energy Step Code can be implemented in Richmond.

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.*

Analysis

Background

In 2010, Council adopted targets included in Richmond's Official Community Plan to reduce community greenhouse gas (GHG) emissions 33% below 2007 levels by 2020, and 80% below 2007 levels by 2050. Richmond's 2014 Community Energy and Emissions Plan (CEEP) outlines strategies and actions for the City to take to reduce community GHG emissions, including:

> ***Strategy 2:*** Increase Energy Efficiency in New Developments
>
> - **Action 4:** Promote energy efficiency in all rezoning.
> - **Action 5:** Develop incentives for new development to exceed the building code energy requirements.

Modeling undertaken as part of the CEEP indicates that in order for Richmond to meet its emissions targets, all new buildings will need to be constructed to achieve zero carbon emissions by 2025. Thus, pursuing Zero Carbon Buildings is one of the "Big Breakthroughs" called for in the CEEP.

Current policies support energy use and emissions reductions in new construction, including:

- The City Centre Area Plan's policy that new developments over 2000m^2 undergoing rezoning achieve LEED Silver, and
- The OCP's Townhouse Energy Efficiency and Renewable Energy policy.

When introduced, staff noted that revisions to these policies would come forward over time, recognizing changes in standards and construction practices.

Purpose and Rationale for the BC Energy Step Code

The BC Energy Step Code is the product of a multi-year collaboration between the Province, industry stakeholders, utilities and local governments. Adopted by the Province in April 2017, the Energy Step Code allows BC local governments to voluntarily reference a series of progressively more stringent energy performance "steps" in regulation. The Province has indicated that future iterations of the base BC Building Code will align with the Energy Step Code, and has committed that the BC Building Code will achieve "net zero energy ready" levels of performance by 2032, equivalent to the highest "step" of the Energy Step Code. Attachment 1 provides further background on the Energy Step Code, and the estimated costs to achieve different steps for different building types.

The Energy Step Code measures energy performance in a way that aligns with best practices from leading jurisdictions and standards used in Europe and, increasingly, North America. It is intended to result in better real world building performance. In brief, the BC Energy Step Code focuses on the following performance categories (more details are provided in Attachment 2):

- Building envelope performance – This encourages high quality insulation and window systems, and good passive design practices, to minimize the heating energy required of buildings; and
- Energy efficient systems – This encourages efficient heat delivery, cooling, ventilation, hot water, and lighting systems.

The Energy Step Code includes different sets of targets for both larger "Part 3" and smaller "Part 9" buildings (Figure 1).

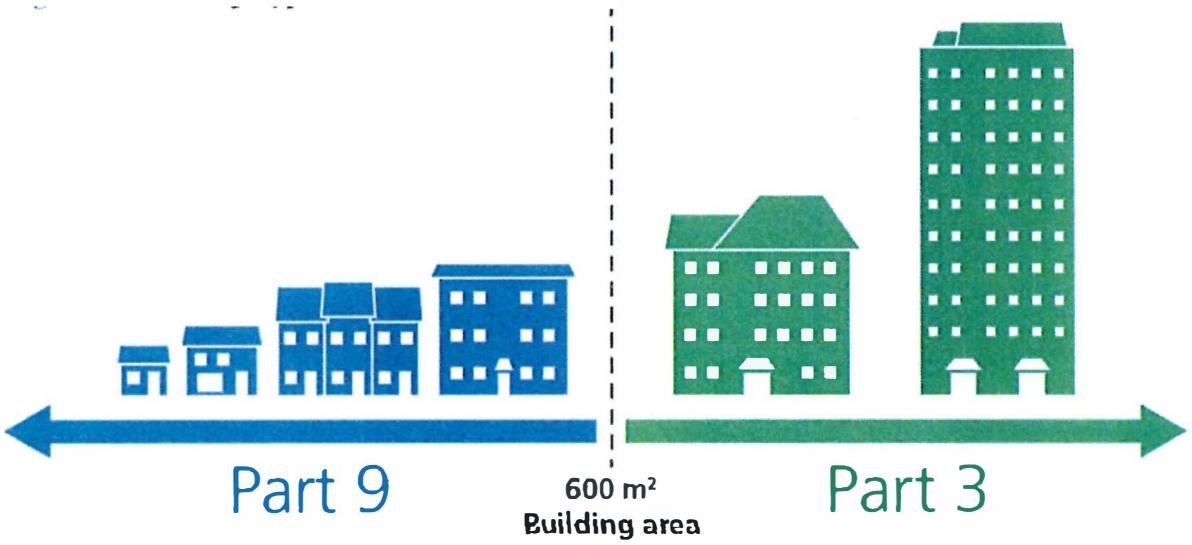

Figure 1: Building types

Specifying Greenhouse Gas Performance

The BC Energy Step Code is widely viewed as a critical advancement in the regulation of energy performance in new buildings. It will reduce energy use and emissions, and increase comfort. However, it alone is unlikely to achieve widespread adoption of very low/zero GHG emissions new buildings, which will be necessary to achieve the City's emissions targets. The Energy Step Code does not currently directly measure GHG emissions from buildings. In contrast, some building performance standards do measure GHG emissions, such as the Canada Green Building Council's Zero Carbon Building Framework, and the City of Vancouver's Green Buildings Policy for Rezoning, and the City of Toronto's Zero Emissions Buildings Framework.

Specifying low carbon building energy systems in new developments will better achieve the low/zero carbon outcomes necessary to meet emissions targets, as well as to recognize the beneficial roles that district energy systems can play in delivering low carbon outcomes. Encouraging low carbon building energy systems accounts for the GHG intensity of different fuels, ensuring buildings achieve low levels of emissions. Implementing Step Code and low carbon building energy systems together can decrease energy use, costs, and emissions in a timely manner.

LEED Rating System

The Leadership in Energy and Environmental Design® (LEED) rating systems are used to measure and certify buildings' performance. LEED scoring involves projects achieving a certain number of credits across a range of different green building categories. First released in 1994, the LEED rating systems have been central to the growth and expansion of green building practices.

As noted above, the City Centre Area Plan established a policy that new developments greater than 2000m^2 achieve a level of performance equivalent to LEED Silver as a consideration of rezoning. This policy demonstrated Richmond's leadership in green buildings. However, there are issues with continuing to reference LEED:

- Staff estimates that approximately 80% of the credits necessary to achieve LEED Silver would now be implemented in new developments even without the existence of City's the LEED Silver policy, by virtue of most Richmond developments' location, applicable regulations, and the evolution of construction practices. This is partly because many best practices pioneered by LEED have spread throughout the industry and have increasingly been incorporated into local and provincial regulations.
- LEED measures energy performance in a way that differs from best practices reflected in the Energy Step Code. Energy Step Code establishes absolute targets for different building types. In contrast, LEED measures relative energy performance compared to baseline code-compliant building. The Energy Step Code means of measuring energy performance better rewards buildings designed to optimize form, orientation, and massing to minimize energy demand.

Townhouse Energy Efficiency and Renewable Energy Policy

In September 2014, Council adopted the City's Townhouse Energy Efficiency and Renewable Energy policy, requiring all new townhouse units resulting from rezoning applications to achieve an "EnerGuide 82" energy efficiency performance rating or better, and comply with the BC Solar Hot Water ready regulation, or alternatively, to connect to a renewable energy system[1]. In June 2015, this policy was amended to also reference Natural Resources Canada's "Energy Star for New Homes" program as a compliance pathway. As of January 2018, 862 townhouse units have been approved under this policy. In almost every case, applicants have chosen to design and build townhouse units to an EnerGuide 82 performance level or better.

An analysis of reports received to date indicates that townhouses approved under the City's existing policy are designed, on average to consume 14% less energy than equivalent townhouses built to minimum requirements under the existing building code, and would achieve Step 2 of the Energy Step Code (leaving aside the airtightness requirement). A significant number of townhouse units designed under the current policy are modelled as achieving EnerGuide scores of 83 or higher[2]. Many of these units would achieve Step 3 of the Energy Step Code (again, leaving aside the airtightness requirement).

In 2017, Natural Resources Canada introduced a new energy efficiency rating system for new homes, and plans to discontinue the 0-100 rating system on December 31st 2018, rendering the City's existing Townhouse Energy Efficiency and Renewable Energy Policy obsolete.

The Energy Step Code is intended to replace the current LEED in City Centre and townhouse energy efficiency requirements at rezoning. Adopting the Energy Step Code, and its broad applicability to all new construction across Richmond, will further the City's leadership on energy-efficient new developments, while also bringing the City's policies in line with stated industry preferences and provincial government policy objectives.

[1] In July 2015, the policy was revised to allow townhouse units to achieve the Energy Star for New Homes standard and comply with the BC Solar Hot Water ready regulation an alternate compliance option.
[2] Commonly middle units in row house buildings, where every unit receives the same energy efficiency upgrades.

Stakeholder Consultation

In May 2017, Council endorsed a stakeholder consultation program to inform implementation of the BC Energy Step Code. The City's consultation program consisted of:

- Three workshops with Part 9 (buildings 3 storeys or less and less than 600m^2 footprint) home builders in Richmond's community. Attendees included representatives of the Richmond Home Builders Group, the Greater Vancouver Home Builders Association, multiple builders involved in recent projects in Richmond, and Energy Advisors. 209 people participated in at least one workshop, with good attendance at all events. These sessions successively introduced the BC Energy Step Code and how it works, provided opportunities for feedback on how the City can ensure successful implementation, and provided an opportunity for members of Richmond's home builder community to make comment on Energy Step Code implementation.

- Four workshops with representatives of Richmond's Part 3 larger buildings development community, updates to the Urban Development Institute (UDI) Liaison Committee, and a presentation at a UDI Breakfast Seminar on the Energy Step Code to regional development community members.

- An update to the Advisory Committee on the Environment.

- Direct engagement with energy utilities, including BC Hydro, FortisBC and Lulu Island Energy Company.

- A multi-stakeholder workshop of building industry stakeholders to review draft recommendations and receive feedback.

- A workshop with Energy Advisors, who provide energy modeling and air-tightness testing services to help builders meet the requirements of the BC Energy Step Code.

Attachment 3 summarizes the feedback received during stakeholder consultations.

Recommended Energy Step Code Regulations and Policies Applicable to New Development

It is recommended that the Building Regulation Bylaw be amended to require new developments to adhere to the BC Energy Step Code. Amendment Bylaw 9769 proposes amendments to the Building Regulation Bylaw to establish requirements that new developments adhere to the Energy Step Code. The requirements apply to building permits received after September 1, 2018. These requirements vary for different building types, reflecting differences in the cost of achieving these steps defined in the code, and industry's readiness to deliver to different steps. Should the recommendations be endorsed, staff will monitor implementation and building performance under the new policies and bylaws. With successful progress it is anticipated that further steps can be advanced for consideration as per the timetable in Table 1 below.

Table 1: Proposed BC Energy Step Code Requirements

	Approximate Current Performance	Building Permit Application			
		Recommended	*Estimated Timetable for Future Consideration*		
Smaller Part 9 Residential		**September 1 2018[3]**	**Jan 2020**	**Jan 2022**	**Jan 2025**
Townhomes and apartments	~Step 2 (townhomes)	Step 3	Same as 2018	Step 4	Step 4 or Step 5
Single family, duplex and other residential	BC Building Code	Step 1	Step 3	Step 3 or Step 4	Step 4 or Step 5
Larger Part 3 developments					
Residential Concrete	~Step 2 (in City Centre) BC Building Code (outside CC)	Step 3, or OR Step 2 for buildings that implement low carbon building energy systems	Same as 2018	Step 3	Step 4
Residential Woodframe Low/Mid Rise	~Step 2 (in City Centre) BC Building Code (outside CC)	Step 3	Same as 2018	Step 4	Step 4
Office & Retail Buidlings	~Step 2 (in City Centre) BC Building Code (outside CC)	Step 2	Same as 2018	Step 3	Step 3

Amendment Bylaw 9769 proposes two compliance paths for residential concrete buildings. Such developments must achieve Step 3, or Step 2 if they implement a low carbon building energy system. Such low carbon systems can be achieved through connection to district energy, or through implementation of onsite low carbon energy systems, including air-source heat pumps, geo-exchange, waste heat recovery and solar as approved by the City. Lulu Island Energy Company and the City are working on an additional amendment to support onsite low carbon energy systems.

Additional bylaw amendments are proposed to support Energy Step Code implementation. These are summarized in Table 2 below.

[3] Projects with "in-stream" DP applications will have until December 31, 2019, to submit an acceptable Building Permit under previous requirements.

Table 2: Summary of Bylaw Amendments

Purpose	Description
Adjust calculation of floor area in the Richmond Zoning Bylaw to support more insulated walls and green building systems	Amendment Bylaw 9845 proposes floor area calculation exclusions for projects implementing "beyond-Code" insulation, as well as low carbon green building systems that that can sometimes be larger than conventional mechanical systems. For all building types, exterior wall thickness in excess of 0.16 m (typical to meet the baseline BC Building Code) is excluded from floor area calculations, up to a maximum exclusion of 0.31 m, provided that the wall thickness is utilized for the provision of insulating materials. These amendments ensure those developments that provide greater insulation or green building features are not penalized through reduced living space.
Update existing Official Community Plan policies to reflect implementation of the Energy Step Code	Amendment Bylaws 9771 and 9770 comprise of amendments to the Official Community Plan (OCP) and the City Centre Area Plan (CCAP). They introduce relevant context about the importance of low energy and emissions in the built environment in both the OCP and CCAP. They remove reference to the Townhouse Energy Efficiency and Renewable Energy policy, and LEED Silver for building types to which the Energy Step Code applies; the CCAP will continue to reference LEED Silver for buildings over 2000m^2 for which the BC Energy Step Code applies to less than 50% of gross floor area. Amendment Bylaw 9771 (OCP) also augments development permit guidelines to note that projects subject to the Energy Step Code will continue to comply with other development permit guidelines relating to building design and neighbourhood character. As a housekeeping update, amendments to the CCAP will remove reference to particular performance standards for City facilities. The City's Sustainable "High Performance" Building Policy – City Owned Facilities (Policy 2307) continues to reference LEED Gold certification for new City owned buildings. As a housekeeping update, Amendment Bylaw 9770 (CCAP) will clarify requirements for the City Centre Area Plan with regards to the commitment to connect to a district energy system or develop an on-site low carbon energy system.
Indicate anticipated future Energy Step Code and low carbon building requirements in the Official Community Plan	Amendment Bylaw 9771 (OCP) establishes as policy the schedule of future changes to Energy Step Code requirements set out in Table 1. It also includes new policies that all developments be encouraged (but not immediately required) to achieve zero carbon operations.

The recommended amendments in this report:

- **Support the attainment of high performance buildings on a timeframe consistent with meeting the City's emissions goals** – The CEEP suggests that for the City to achieve its GHG emissions reduction targets, all new construction would need to achieve near zero carbon emissions by 2025.

- **Represent a cost effective means of achieving building performance** – The BC Housing costing study noted in Appendix 4 suggests that the costs to achieve the BC Energy Step Code are relatively modest. Lowest additional costs for compliance are typically less than 1.5% of the cost of construction for the proposed requirements beginning in 2018, while the proposed 2025 requirements and zero emissions rezoning considerations could be met with no more than a 2-4% increase in construction costs, assuming today's technologies and typical pricing. As such, the overall increase in total capital cost will only be a fraction of the percentages noted above. The incremental cost of construction will not only generate ongoing utility bill savings throughout the life cycle of the building, but result in a higher quality building product characterized by greater comfort for occupants, improved indoor air quality and improved durability against moisture buildup and damage. Future advances in technology and market transformation of low carbon building systems are expected to reduce these additional construction costs over time.

- **Improve consistency** - A key desire expressed by the development and home building industries during consultations carried out for the BC Energy Step Code was consistency in the standards applied by local governments, to improve clarity and transferability of approaches between jurisdictions. Referencing the BC Energy Step Code will help achieve this consistency.

- **"Telegraph" the requirements for new developments into the future** – Establishing BC Energy Step Code requirements for future years will help industry members plan for training and development of innovative building practices. Industry has noted repeatedly that providing this assurance into the future is necessary to plan investments in training and innovation, and to control costs.

- **Support improved health, comfort and durability of new homes and buildings in Richmond** – As noted above, the performance requirements of the BC Energy Step Code will directly result in more airtight, less drafty buildings that provide improved indoor air quality, better thermal comfort, and more durable building envelopes.

Ensuring Fairness for Smaller Homes

As noted in Attachment 1, the potential increases in incremental costs for small homes (e.g. those approximately 1100 square feet) to meet Steps 2-5 of the BC Energy Step Code are projected to be higher than those anticipated for other building types. This is because these homes use more energy per square foot (though less total energy), and because they have a relatively higher ratio of wall and roof area to total volume than larger buildings, making building envelope performance measures relatively more difficult to achieve. Conversely, the percent increase in

incremental costs for very large homes to meet higher steps of the BC Energy Step Code is projected to be lower than that for an average-sized home. Since Step 1 is currently referenced, the City's initial Step Code standards will not entail any disproportionate impact to homes of smaller or larger size.

The provincial government has acknowledged this issue and is considering revisions to the Energy Step Code to provide a level playing field for smaller homes. If such revisions are not adopted, staff will bring forward recommendations for revisions to the City's requirements, to ensure that the construction of smaller homes is not disproportionately burdened.

Implementation

Building Regulation Bylaw 7230, Amendment Bylaw 9769 specifies that applicable Building Permit applications filed on or after September 1, 2018, will need to adhere to the BC Energy Step Code. In order to accommodate in-stream applications for Part 3 buildings and townhouse developments that may face greater difficulty adjusting their building systems to be able to achieve these new targets:

- Developments that have been issued Development Permits prior to the effective date, may apply for a Building Permit to construct in compliance with the previous requirements for duration of the time that their Development Permit is valid;

- Developments that have submitted acceptable Development Permit applications before the date of Council's adoption of Bylaw 9769 will have until December 31, 2019, to submit an acceptable Building Permit application in order to build under previous requirements.

Going forward, achieving the higher steps (e.g. Step 4 for Part 3 buildings and Step 4-5 for Part 9 buildings) of the Energy Step Code may impact the form and character of new construction. As such, staff may closely monitor building design trends and bring forward Richmond Zoning Bylaw amendments and design guideline amendments in the Official Community Plan that support implementation of the higher steps in Richmond. These amendments are not required for recommended starting levels applicable in 2018, but will support the widespread adoption of very low energy and emissions buildings in future years.

Next Steps

Staff are evaluating the viability of referencing low carbon building energy systems as part of the Building Regulation Bylaw and/or OCP for additional building types (i.e. other than residential "Part3" buildings with concrete construction) to achieve zero/low GHG emissions. Such a policy would be consistent with other leading jurisdictions, and with what Richmond's Community Energy and Emissions Plan indicates is necessary to be able to achieve the City's GHG reduction targets. Staff will also evaluate the need to introduce additional rezoning policy relating to health and other green building attributes as part of a more streamlined rezoning approach. Lastly, staff are evaluating updates to the Sustainable "High Performance" Building Policy – City Owned Facilities (Policy No. 2307), to introduce new energy performance options for leadership in corporate facilities.

Building Energy Specialist Position

BC Hydro offers $100,000 over a two year term for a new staff position to support the implementation of the Step Code and related efforts to facilitate more energy efficient buildings. As such, it is recommended that a two year temporary full time Building Energy Specialist position be created. Key roles will include implementing BC Energy Step Code approvals processes; training staff; developing education and training opportunities for building industry stakeholders; and tracking results to support continuous improvement. The remaining costs will be fully funded through building permit fees.

Building Approvals Resources

Richmond is experiencing ongoing high levels of development. Endorsement of the Energy Step Code and its requirements will result in additional workload on Building Approvals staff at both the Plan Review and Inspection stages. Design criteria meeting the advanced energy conservation measures will require additional review of supporting documents as well as verification in constructed form during inspections. Additional efforts will also have to be made in order to integrate the results of performance testing of the buildings as required by the Step Code into the exiting inspection process. To support customer service excellence and reliable, timely building approvals, it is recommended that a new Plan Reviewer position and a new Building Inspector 1 position be created. These positions will be fully funded through building permit fees.

Energy Step Code Training Programs

To complement the introduction of the BC Energy Step Code, it is proposed that the following programs be funded from pre-existing resources in the 2018 Operating Budget:

- $80,000 to expand the City's existing Air-Tightness Training Programs. Council approved implementation of this program on May 23, 2017. Accordingly, under this program, the City supports local builders, including their sub-trades and labourers, to gain expertise in building airtight homes in advance of regulatory requirements by funding:
    - Attendance at a hands-on one-day Airtightness Techniques Course; and/or
    - Free pre-drywall blower door tests to directly measure the airtightness of new homes under construction in Richmond.
- $15,000 to expand the very well attended City's Builders Workshop Series, presentations providing information about energy efficiency strategies.
- $15,000 training for Part 3 (buildings greater than 3 stories or 600m^2 footprint) designers, contractors, and trades in air-tightness testing, energy modeling, and associated programming.

These programs will complement and leverage existing Energy Step Code training being offered by BC Housing, BCIT, the Greater Vancouver and Canadian Home Builders Associations, Architectural Institute of BC, Engineers and Geoscientists of BC, and other providers.

OCP Consultation Summary

Staff have reviewed the proposed 2041 OCP Amendment Bylaws with respect to the *Local Government Act* and the City's OCP Bylaw Preparation Consultation Policy No. 5043 requirements. The table below clarifies this recommendation. Public notification for the public hearing will be provided as per the *Local Government Act*.

OCP Consultation Summary	
Stakeholder	**Referral Comment (No Referral necessary)**
BC Land Reserve Commission	No referral necessary.
Richmond School Board	No referral necessary.
The Board of the Greater Vancouver Regional District (GVRD)	No referral necessary.
The Councils of adjacent Municipalities	No referral necessary.
First Nations (e.g., Sto:lo, Tsawwassen, Musqueam)	No referral necessary.
TransLink	No referral necessary.
Port Authorities (Vancouver Port Authority and Steveston Harbour Authority)	No referral necessary.
Vancouver International Airport Authority (VIAA) (Federal Government Agency)	No referral necessary.
Richmond Coastal Health Authority	No referral necessary.
Stakeholder	**Referral Comment**
Community Groups and Neighbours	No referral necessary.
Utilities	The proposed amendments were referred to BC Hydro and FortisBC.
Home builders and developers	The proposed amendments were referred to the Richmond Home Builders Group, the Greater Vancouver Home Builders Association, and the Urban Development Institute.
All relevant Federal and Provincial Government Agencies	No referral necessary.

Richmond Official Community Plan Bylaw No. 9000, Amendment Bylaw No. 9771, and City Official Community Plan Bylaw No. 7100 (CCAP), Amendment Bylaw No. 9770, having been considered in accordance with OCP Bylaw Preparation Consultation Policy 5043, do not require further consultation.

The public will have an opportunity to comment further on all of the proposed amendments at the Public Hearing.

Financial Impact

BC Hydro will support the Building Energy Specialist position with $100,000 funded over two years. The Building Energy Specialist position will result in approximately $130,000 in total salary and benefits impacts to the operating budget over a two-year period, after support by BC Hydro. These funds will be sourced from building permit revenue.

New Building Approvals department positions will result in approximately $265,000 in additional salary and benefits annually. These funds will be sourced from building permit revenue. Based on the trend for increasing development as experienced in the past several years and current and projected activity into the foreseeable future, staff anticipate that the revenue derived from building fees will be sufficient to fund the proposed 2 full time and 1 temporary building energy specialist position.

Energy Step Code training programs will cost $110,000. These funds are approved as part of the 2018 Operating Budget funded by the carbon tax provision.

Conclusion

The BC Energy Step Code, and associated policies to support low carbon emissions in new developments, are critical elements to the City pursuing its GHG reduction goals. This report recommends referencing the BC Energy Step Code as requirements in the Building Regulation Bylaw; updating policies in the Official Community Plan to encourage zero emissions development and identify planned future Step Code considerations; creating a Building Energy Specialist position to support BC Energy Step Code implementation; creating a new Plan Reviewer position and Building Inspector 1 position; and implementing training programs to assist the homebuilding and development industry.

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Att. 1: Background on the BC Energy Step Code
2: Summary of BC Energy Step Code Technical Requirements
3: Energy Step Code Consultation Feedback
4: Building Regulation Bylaw No. 7230, Amendment Bylaw No. 9769
5: Richmond Zoning Bylaw No. 8500, Amendment Bylaw No. 9845
6: Richmond Official Community Plan Bylaw No. 9000, Amendment Bylaw No. 9771
7: Richmond Official Community Plan Bylaw No. 7100, Amendment Bylaw No. 9770

Attachment 1: Background on the BC Energy Step Code

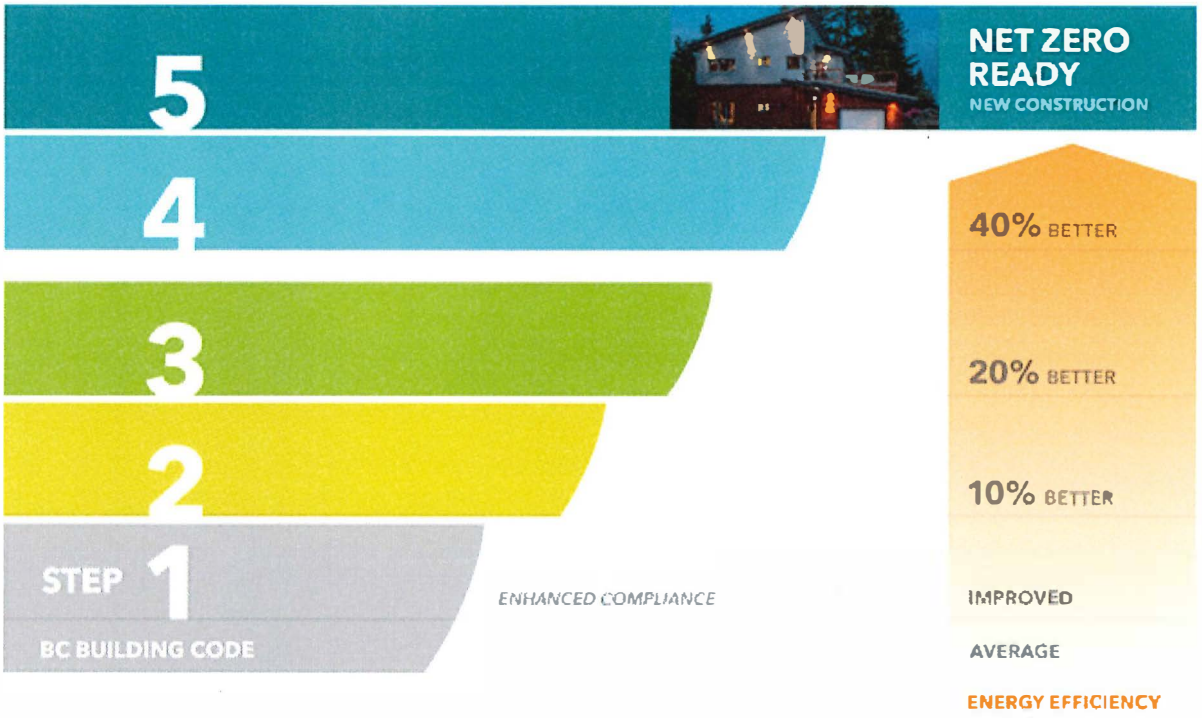
The BC Energy Step Code

The BC Energy Step Code is a provincial standard that provides a series of incremental steps to achieve progressively more energy-efficient buildings than delivered by the base BC Building Code. The BC Energy Step Code is a provincial building regulation that adds new compliance pathways to the energy sections of the BC Building Code. The Province has added the BC Energy Step Code to the unrestricted matters list in the BC Building Act General Regulation, thereby allowing local governments to establish the Energy Step Code as requirements in bylaws.

The BC Energy Step Code is largely a product of the multi-stakeholder "Stretch Code Implementation Working Group" (SCIWG), which the Province convened in the spring of 2016. A variety of stakeholders were represented in the SCIWG, including the Urban Development Institute, Canadian Home Builders Association, Greater Vancouver Home Builders Association, BC Hydro, FortisBC, Architectural Institute of BC, the Association of Professional Engineers and Geoscientists of BC, BC Housing, the Local Government Management Association, and other local governments. City of Richmond staff participated on the SCIWG. This group deliberated on the development of the BC Energy Step Code, and the Province released the consensus recommendations of the SCIWG in November 2016.

The Province enacted the BC Energy Step Code in April 2017, and published a "Provincial Policy: Local Government Implementation of the BC Energy Step Code" document, outlining expectations for local governments' application of the Energy Step Code consistent with the recommendations of the SCIWG. In August 2017, the Province released a more detailed "Best Practices Guide for Local Governments" to support the BC Energy Step Code's implementation. The SCIWG has now been renamed the "Energy Step Code Council," and will continue to advise the provincial government on the further development of, and revisions to, the Energy Step Code going forward. A City staff person is on the Energy Step Code Council.

The Energy Step Code comprises of a series of graduate performance Steps. There are five Steps for "Part 9" residential buildings (i.e. buildings less than 4 stories and 600m^2 building footprint); four Steps for larger "Part 3" residential buildings; and three Steps for "Part 3" office, institutional and retail buildings. Attachment 2 summarizes the technical requirements. The Figure below, showing Part 9 Energy Step Code targets, illustrates the BC Energy Step Code's basic structure of progressively more stringent steps.



In addition to energy and emissions savings, the BC Energy Step Code can deliver other benefits, including:

- **Comfort –** Buildings with high performance building envelopes typically are more comfortable, being less drafty and warmer near exterior windows and walls.

- **Quiet –** Well insulated buildings better attenuate sound, resulting in quieter indoor conditions. This can help achieve the City's Aircraft Noise policy requirements for achieving CMHC noise standards and ASHRAE internal building thermal comfort levels.

- **Indoor air quality –** Constructing high performance systems requires greater attention to building ventilation. Typically, high performance residential buildings will use either direct to unit ventilation, or suite-by-suite heat recovery ventilation. These systems can better deliver fresh air than is typical of other common ventilation practices, improving indoor air quality.

- **Simple building systems and ease of maintenance –** Low thermal energy demand can allow for relatively simple building heating strategies. This can reduce the operations and maintenance, as well as the potential for expensive repairs, which are often associated with more complicated mechanical systems. Moreover, attention to quality building envelop construction can increase building durability.

- **Regional economic development –** The Step Code encourages high performance building envelopes. Insulation, windows and wood framing components tend to be manufactured locally, supporting local economic development.

- **Climate change adaptation** – The better building envelope design associated with the proposed approach can help ensure that buildings remain comfortable in the warmer climates anticipated in the future.

BC Energy Step Code Costs

In August 2017, BC Housing released the results of a study of the costs associated with constructing new buildings to the BC Energy Step Code. The study assessed the costs of achieving different Steps, for a range of different building types and uses. The table below summarizes the study's findings for select building archetypes in Climate Zone 4, where Richmond is located. It notes that estimated construction cost premium for the lowest cost building strategies to achieve a given Step. These costs represent only the cost of construction, and do not account for the cost of land, developer profit, nor any design fees, which together make up the majority of the cost of housing in Richmond.

Table 1: Estimated construction cost premiums for different building types to achieve different Steps of the BC Energy Step Code. Sources: BC Housing 2017 & City of Richmond Analysis.

Part 3 Buildings	Step 1	Step 2	Step3	Step 4
High Rise Multifamily (concrete)	<0.1%	0.4%	0.8%	2.4%
Low Rise Multifamily (woodframe)	<0.1%	0.5%	0.6%	2.6%
Office	<0.1%	0.1%	0.1%	N/A
Retail	<0.1%	0.9%	2.1%	N/A
Part 9 Buildings	**Step 1**	**Step 2**	**Step3**	**Step 4**
10 unit multifamily apartment	0.1%	0.3%	0.3%	0.7%
6 unit row house	0.1%	0.4%	1.0%	1.9%
Quadplex	0.3%	1.3%	2.2%	3.5%
5500 square foot single family	0.2%	0.6%	1.4%	1.4%
2600 square foot single family	0.2%	0.6%	1.6%	2.7%
1100 square foot single family	0.5%	4.0%	7.4%	10.1%

For most building types, construction cost premiums are modest at Steps 3 and below, typically about 1.6% or less for the residential building typologies common to Richmond. The exception is for small single family homes, for which it is more costly to achieve the Energy Step Code as currently designed (based on the outcomes of this study, there is a proposal before the Energy Step Code Council to recommend amendments to the Energy Step Code that would relax requirements for small homes to provide a more level playing field. Staff will track the outcomes of this proposal, and recommend any appropriate adjustments to City policy in the future, to ensure a level playing field for smaller homes).

These costing values were derived from data from Natural Resources Canada's LEEP program which tracked the costs of more efficient projects from real construction projects across the country, and have been extensively vetted with industry. As such, they represent the anticipated costs for builders with a good understanding of energy efficiency strategies. Staff note that

training will be required for some builders to improve understanding of energy efficient construction practices, and reduce the costs associated with learning and capacity development.

The study noted above did not allow for optimization of passive design strategies that can lower energy use such as form, massing, and glazing area. Many projects will be able to optimize for these considerations, and should thus face lower cost premiums.

Attachment 2: Summary of Energy Step Code Technical Requirements

Part 3 Construction

The Energy Step Code for large "Part 3" buildings (e.g. buildings that are 4 or more stories and greater than 600m^2) involves a number of technical requirements, including:

Steps 1 to 4 - Adherence to an "Enhanced Compliance Package", involving:

- **Energy modeling for all projects**. All projects will be required to produce an energy model of the building to confirm that it exceeds minimum energy and emissions targets. The Step Code references Energy Modeling Guidelines outlining standardized assumptions, acceptable modeling software, and processes. These Guidelines ensure a fair "apples to apples" evaluation of building performance. Energy models will be professionally signed and sealed. Submission of an energy model to the City is already required as part of district energy connection approvals, and a large percentage of buildings undertake energy modeling for LEED and/or Building Code compliance.

- **Whole building air-tightness testing.** Developments will be required to conduct a test of their air-tightness. At first, testing will be used to baseline performance. Various jurisdictions already have mandatory air tightness testing, including the City of Vancouver, the State of Washington, and many European countries.

- **Building energy reporting.** While not a part of the Energy Step Code, it is proposed that as an administrative procedure, the City specify that developments create an Energy STAR Portfolio Manager account used to track energy performance. This will facilitate future evaluation of buildings' energy performance. The Portfolio Manager tool is widely used and considered the *de facto* energy reporting and benchmarking system, with over 20% of commercial floor space in Canada using the tool, and over 40% in the USA.

Steps 2 to 4 - Exceeding minimum energy performance targets. In addition to the "enhanced compliance package" noted above, developments will be required to exceed minimum energy performance targets. Different performance targets exist for different building types, including residential, office, and retail. Performance targets for mixed use buildings are pro-rated based on floor area. Targets include:

- **Thermal energy demand intensity (kWh/m^2/year)** – The annual modeled thermal energy required to provide space heating for a development. This target encourages energy efficient building envelope and passive design features, to limit heating requirements.

- **Total energy use intensity (kWh/m^2/year)** – The total annual modeled energy demand of a development. This target encourages all building systems to be energy efficient.

Energy Step Code performance levels are summarized in the tables below. The specific targets cited in the Energy Step Code may be adjusted over time, as additional information becomes available, notably the BC Housing study now underway.

	Energy Step Code Performance Levels for Residential Occupancies	
	Equipment and Systems – Maximum Total Energy Use Intensity ($kWh/m^2/yr$)	Building Envelop – Maximum Thermal Energy Demand Intensity ($kWh/m^2/yr$)
Step 1		
Step 2	130	45
Step 3	120	30
Step 4	100	15

	Energy Step Code Performance Levels for Business and Personal Services or Mercantile Occupancies	
	Equipment and Systems – Maximum Total Energy Use Intensity ($kWh/m^2/yr$)	Building Envelop – Maximum Thermal Energy Demand Intensity ($kWh/m^2/yr$)
Step 1		
Step 2	170	30
Step 3	120	20

Part 9 Construction

All five steps of the Energy Step Code for Part 9 construction require two basic "Enhanced Compliance" measures, which are not required under the BC Building Code:

- **Energy modeling** of the building is required at the design stage, in order to confirm that the structure as designed will achieve the Step Code targets.

- **"Air-tightness" testing** is required once the building has been constructed, in order to measure uncontrolled flows of heat and moisture[4] in and out of the building.

Beyond this, each tier of the Part 9 Energy Step Code sets out three performance targets:

- **The air-tightness of the completed building** – air-tightness is typically measured in terms of air changes per hour when the building is pressurized and depressurized by a defined amount (50 Pascals of air pressure).

- **Mechanical energy performance** – The energy model for the building must meet performance thresholds for one of the following two metrics:

    - Mechanical Energy Use Intensity (MEUI) of the building.
    - Percentage reduction in total energy use relative to the same home built to BC Building Code minimum standards, as measured by the EnerGuide Rating System's reference house.

- **Building envelope performance** – The energy model for the building must meet performance thresholds for one of the following two metrics:

    - Thermal Energy Demand Intensity (TEDI) which measure annual energy demand for heating a space.
    - Peak Thermal Load (PTL) which measure peak heat loss through the building envelope.

The table below summarizes Part 9 Energy Step Code requirements for Climate Zone 4, which includes Metro Vancouver.

[4] Mostly as water vapour

Part 9 Step Code Requirements for Climate Zone 4 (Lower Mainland and southern Vancouver Island)

	Airtightness (Air changes per hour at 50 Pa Pressure Differential)	Performance Requirements for Building Equipment and Systems	Performance Requirements for Building Envelope
Step 1	NA	EnerGuide Rating % lower than EnerGuide Reference House: not less than 0% lower energy consumption - or - conform to Subsection 9.36.5.	
Step 2	≤ 3.0	EnerGuide Rating % lower than EnerGuide Reference House: not less than 10% lower energy consumption - or - mechanical energy use intensity ≤ 60 kWh/m^2·year	thermal energy demand intensity ≤ 45 kWh/m2·year - or - peak thermal load ≤ 35 W/m^2
Step 3	≤ 2.5	EnerGuide Rating % lower than EnerGuide Reference House: not less than 20% lower energy consumption - or - mechanical energy use intensity ≤ 45 kWh/m^2·year	thermal energy demand intensity ≤ 40 kWh/m^2·year - or - peak thermal load ≤ 30 W/m^2
Step 4	≤ 1.5	EnerGuide Rating % lower than EnerGuide Reference House: not less than 40% lower energy consumption - or - mechanical energy use intensity ≤ 35 kWh/m^2·year	thermal energy demand intensity ≤ 25 kWh/m2·year or peak thermal load ≤ 25 W/m^2

Step 5	≤ 1.0	mechanical energy use intensity ≤ 25 kWh/m2·year	thermal energy demand intensity ≤ 15 kWh/m2·year or peak thermal load ≤ 10 W/m^2

Viewed together, the five Steps of the Step Code span the large performance gap between current BC Building Code minimum requirements and the highest levels of building energy performance yet achieved in British Columbia.

- **Step 1** is quite literally intended to be a "first step" on the road to improved building energy efficiency performance, for communities and/or segments of the building market with limited previous requirements for building energy efficiency. Step 1 energy performance targets are modest, requiring only that that building achieve the same energy performance as the intended performance of a building built to minimum BC Building Code requirements. As noted above, however, achieving this target requires builders to do energy modeling, and to install the building's air-barrier in an effective manner, skills that are essential to achieving success at higher levels of the Step Code.

- **Step 2** calls for homes only 10% more efficient than that expected with Building Code minimum requirements, and a required air-tightness of 3.0 ACH50. Step 2 is best characterized a half-step relative to the larger jumps in performance between higher tiers.

- **Step 3** entails an overall energy performance 20% better than Building Code minimum requirements, and an airtightness of 2.5 ACH. The overall energy target for this Step is a close match to two of the four available options under the City's existing townhouse energy efficiency policy. Based on modeling information available to date, townhouses in Richmond designed to achieve an EnerGuide 82 rating are, on average, 13% more efficient than those built to code minimum requirements, while homes built to the Energy Star for New Homes standard are expected to be 22% more energy efficient than a minimally code compliant home.

- **Step 4** is comparable to the energy performance of a home to Natural Resources Canada's R-2000 ® standard. Homes meeting this standard would use 40% less energy than the expected performance of a minimally code compliant home, and have an airtightness of 1.5 ACH50 or better – less than a third of the average new home built to minimum building code requirements

- **Step 5** approaches the performance required by the stringent "Passive House" standard, and broadly matches the level of energy performance that the Climate Leadership Plan has committed to for new construction in 2032. Homes achieving Step 5 would use less than half of the energy of a minimally code compliant home, and an airtightness level of just 1.0 ACH_{50}. Homes with this level of performance can achieve "net-zero energy ready," in if onsite renewable energy such as solar panels are implemented they can be capable of generating as much energy on an annual basis as they consume. At present, achieving this level of energy performance is exceptional.

Attachment 3: Energy Step Code Consultation Feedback

What we heard…	Staff response
Members of the development and homebuilding industries expressed that training pertaining to the BC Energy Step Code, especially regarding air-tightness for contractors and trades, and energy efficient design training, would be valuable.	Staff have implemented the City's Airtightness Training Program in September 2017 for local Part 9 builders, providing free tuition to a one-day airtightness training course, and free pre-drywall blower door tests for houses and townhouses under construction. The City is also hosting training on building to Step 3 of the BC Energy Step Code. Staff propose to maintain these existing programs and expand the City training programs, to complementing existing training being made available by BC Housing, BCIT, home builders associations, product suppliers, and other providers.
Development industry members noted the importance of avoiding impacts to development approvals timelines, and of the need for energy efficient form and character choices to be encouraged.	In consultation with stakeholders, staff have developed approvals processes for the BC Energy Step Code that complement existing development and building approvals processes.
Development industry stakeholders suggested that developments that have proceeded through a significant process of design iteration anticipating previous requirements (for instance, had a concept endorsed by the Development Permit Panel) would face a hardship if they are required to adhere to the BC Energy Step Code, as building massing and systems design decisions impact the energy efficiency of buildings.	Staff recommend that projects developments that have been issued Development Permits prior to the effective date, may apply for a Building Permit to construct in compliance with the previous requirements for duration of the time that their Development Permit is valid. Furthermore, developments that have submitted acceptable Development Permit applications before the date of Council's adoption of Bylaw 9769 will have until December 31, 2019, to submit a complete Building Permit application in order to build under previous requirements.
Members of the development and homebuilding industries expressed a desire for low/zero carbon technologies to be recognized as valuable. They further requested that the City consider implementing a GHG intensity compliance option instead of more aggressive Energy Step Code implementation.	The BC Energy Step Code currently does not award projects for realizing zero GHG emissions. As part of its engagement with the Energy Step Code Council, staff are pursuing the recognition of onsite renewable energy and GHG reductions, to complement the valuable metrics already referenced in the BC Energy Step Code.

	The proposed Building Regulation Bylaw amendments specify a low carbon compliance option for larger concrete building. Staff are evaluating options to implement a similar requirement for other forms of development.
It is important that the City "telegraph" future requirements, so that the development industry can plan for future requirements.	The proposed regime includes future targets, to provide greater certainty for industry.
Representatives of the development and homebuilder industries expressed appreciation for the City's thorough consultation process	Staff appreciate the productive engagement of the development and homebuilder industry representatives.
City's district energy provider, Lulu Island Energy Company (LIEC), noted that their analysis showed that with the adoption of the BC Energy Step Code, implementation of the low carbon energy sources for the district energy systems could potentially be delayed; however, combined implementation of BC Energy Step Code and low carbon district energy systems is the path to achieving the largest greenhouse gas emissions reductions.	Staff will continue to work closely with LIEC to explore solutions to best manage impacts created by adopting BC Energy Step Code and implement low carbon energy sources for the district energy systems as soon as possible.

City of Richmond

Bylaw 9769

Building Regulation Bylaw No. 7230, Amendment Bylaw No. 9769 (BC Energy Step Code Implementation)

The Council of the City of Richmond, in open meeting assembled, enacts as follows:

1. *Building Regulation Bylaw No. 7230*, as amended, is further amended by adding the following as a new Part Ten and renumbering the remainder of the bylaw:

"**PART TEN: ENERGY STEP CODE**

10.1 Energy Step Code Requirements

10.1.1 Part 3 and Part 9 **buildings** and **structures** must be designed and **constructed** in compliance with the applicable step of the **energy step code,** as set out in the schedule below:

Building Type	**Building permit** application filed on or after September 1, 2018
Buildings subject to Part 9 of the Building Code	
Townhomes and **apartments**	Step 3
Single family, **duplex** and other **dwelling units**	Step 1
Buildings subject to Part 3 of the Building Code	
Group C Residential occupancies greater than 6 stories or **non-combustible construction** (not including hotel and motel occupancies)	Step 3 OR Step 2 for **buildings** that implement a **low carbon building energy system.**
Group C Residential occupancies 6 stories or less and **combustible construction** (not including hotel and motel occupancies)	Step 3
Group D Business and personal services occupancies or **Group E mercantile occupancies**	Step 2

10.1.2 For a Part 9 **building** or **structure** that is designed in compliance with the applicable step of the **energy step code** but where the **constructed building** or **structure** does not meet the performance requirements of the applicable step of the **energy step code,** after all reasonable mitigation measures are implemented to the satisfaction of the **building inspector**, the **building inspector** may issue an inspection notice for **provisional occupancy,** or final, of the **building** or **structure** if it is constructed in compliance with alternative energy efficiency performance or prescriptive requirements set out in the **building code** for Part 9 construction, as applicable.

10.2 Requirement for Energy Advisor

10.2.1 With respect to a **building permit** for a **building** or **structure** that falls within the scope of Part 9 of the **building code**, the **owner** must provide**,** to the satisfaction of the **building inspector,** the all the materials and documentation required by the **energy step code,** prepared and signed by an **energy advisor,** and such other reports and materials as required by the **building inspector.**

10.2.2 The **energy advisor**, providing the required materials and documentation set out in the **energy step code,** must provide evidence to the **building inspector** that he or she is an energy advisor registered and in good standing with Natural Resources Canada in accordance with the EnerGuide Rating System Administrative Procedures and adheres to the technical standards and procedures of the ERS**.**

10.2.3 Prior to:

(a) the issuance of a **building permit**; and

(b) the **provisional occupancy** of a **building** or **structure**,

in respect of which a **building inspector** has required the materials and documentation set out in the **energy step code**, the **owner** must submit written confirmation of insurance coverage of the **energy advisor** in the form specified by the **City**.

10.2.4 For certainty, and notwithstanding section 10.2.1 above, where a **registered professional** is required under section 5.13.1 of this bylaw, in respect of a **building permit** for a **building** or **structure** that falls within the scope of Part 3 or Part 9 of the **building code**, the **professional design** and **field review** shall include the materials and documentation required by applicable step of the **energy step**

code, and such other reports and materials as required by the **building inspector**.

2. *Building Regulation Bylaw No. 7230*, as amended, is further amended at Part Fifteen [Interpretation] by adding the following definitions in alphabetical order:

"APARTMENT	means apartment housing as defined in the **zoning bylaw**.
BUSINESS AND PERSONAL SERVICES OCCUPANCY	means a business and personal services occupancy as defined in the **building code.**
COMBUSTIBLE CONSTRUCTION	means combustible construction as defined in the **building code**.
DUPLEX	means two-unit housing as defined in the **zoning bylaw**.
DWELLING UNIT	means a dwelling or dwelling unit as defined in the **building code**.
ENERGY ADVISOR	means a person is registered as an energy advisor, and in good standing, with Natural Resources Canada, and who conducts EnerGuide home evaluations on behalf of service organizations licenced by Natural Resources Canada.
ENERGY STEP CODE	means the requirements set out in Sections 10.2.3 and 9.36.6 of the **building code**, and includes Step 1, Step 2, Step 3, Step 4 and Step 5.
GROUP C RESIDENTIAL OCCUPANCY	means a residential occupancy as defined in the **building code**.
GROUP D BUSINESS AND PERSONAL SERVICE OCCUPANCIES	means business and personal services occupancies as defined in the **building code**
GROUP E	means a mercantile occupancy as defined in the **building**

MERCANTILE OCCUPANCY	**code.**
LOW CARBON BUILDING ENERGY SYSTEM	means a **building**'s space heating, cooling and domestic hot water heating mechanical system that is supplied energy through: a) a connection to a **City** owned district energy utility system; or b) on-site energy supply equipment designed to meet a minimum 70% of the **building**'s annual heating, cooling and domestic hot water energy demand from a renewable energy source, approved by the **City**'s Director of Engineering. Applicable renewable energy source technologies include, but are not limited to, air and ground source heat pump systems, waste heat recovery systems, solar collectors, or other systems as approved by the **City**'s Director of Engineering. The **building**'s energy system must be designed and constructed such that it is ready to connect to a future **City** owned district energy utility system.
NON-COMBUSTIBLE CONSTRUCTION	means non-combustible construction as defined in the building code.
SINGLE FAMILY	means single detached housing as defined in the **zoning bylaw**.
TOWNHOUSE	means town housing as defined in the **zoning bylaw**."

3. This Bylaw may be cited as **"Building Regulation Bylaw No. 7230, Amendment Bylaw No. 9769".**

FIRST READING		CITY OF RICHMOND
SECOND READING		APPROVED by
THIRD READING		APPROVED by Manager or Solicitor
ADOPTED		

MAYOR

CORPORATE OFFICER

City of Richmond

Bylaw 9845

Richmond Zoning Bylaw No. 8500, Amendment Bylaw No. 9845 (Floor Area Exclusion for Additional Insulation and Green Building Features)

The Council of the City of Richmond, in open meeting assembled, enacts as follows:

1. Richmond Zoning Bylaw 8500, as amended, is further amended at Section 3.4 [Use and Terms Definitions] by adding the following definition in alphabetical order:

"Green building system means:

a) equipment that converts, stores, or transfers energy from a renewable energy source. This includes equipment used to support solar collectors, small wind energy systems, air or ground source heat pump systems, waste heat recovery systems, and biomass systems; or

b) equipment that stores and treats rainwater, grey water, or both."

2. Richmond Zoning Bylaw 8500, as amended, is further amended at Section 4.2 [Calculation of Density in All Zones] by inserting the following as new subsection 4.2.1 (c):

"c) exterior wall thickness in excess of 0.16 m, up to a maximum exclusion of 0.31 m, provided that the wall thickness is utilized for the provision of insulating materials."

3. Richmond Zoning Bylaw 8500, as amended, is further amended at Section 4.3 [Calculation of Density in Single Detached Housing, Agriculture and Two-Unit Housing Zones] by:

(i) deleting the words "item is" from section 4.3.3 and replacing them with the words "items are"; and

(ii) inserting the following as new subsections 4.3.3(b):

"b) up to a maximum of 2.35m^2 per **dwelling unit** for **floor area** occupied by those components of a **green building system** constructed or installed within the **principal building**."

4. Richmond Zoning Bylaw 8500, as amended, is further amended at Section 4.4 [Calculation of Density in Town Housing Zones] by inserting the following as new subsections 4.4.1(e):

"e) up to a maximum of 2.35m^2 per **dwelling unit** for **floor area** occupied by those components of a **green building system** constructed or installed within the **principal building**."

5. This Bylaw is cited as "**Richmond Zoning Bylaw No. 8500, Amendment Bylaw No. 9845**".

FIRST READING	
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CITY OF RICHMOND
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MAYOR

CORPORATE OFFICER

City of Richmond

Bylaw 9771

Richmond Official Community Plan Bylaw No. 9000, Amendment Bylaw No. 9771 (Energy Step Code)

The Council of the City of Richmond enacts as follows:

1. Richmond Official Community Plan Bylaw 9000, as amended, is further amended at Schedule 1, Section 12.4 by deleting the "Overview" subsection and replacing it with the following:

"**OVERVIEW:**

The City has adopted greenhouse gas reduction targets of 33% below 2007 levels by 2020 and 80% by 2050. On July 26, 2010, Council endorsed the Corporate Sustainability Framework, Energy Strategic Program, which called for the development of a Community Energy and Emissions Plan (CEEP), and included a target "to reduce energy consumption in the Richmond community by at least 10% from 2007 levels by 2020". On January 27th, 2014, Council approved Richmond's CEEP.

The CEEP includes a range of strategies and actions to reduce emissions from Richmond's community's buildings, transportation, and waste sectors. The CEEP also identifies "Breakthrough Opportunities", which can drive the deeper emissions reductions needed to achieve the City's 2050 emissions reduction goal. These "Breakthroughs" include a wide-spread switch to zero emissions vehicles by the 2040s; all new buildings achieving zero carbon emissions by 2025; and deep energy upgrades to most of Richmond's existing building stock. Richmond cannot achieve these breakthroughs alone. All levels of government, the private sector, and members of Richmond's community will need to act together to realize these reductions.

The objectives and policies below focus on reducing energy use and emissions from buildings, while those relating to transportation and waste management are located in other sections of the Official Community Plan.

The City of Richmond is a leader in corporate energy management of its own facilities. The City has been recognized by BC Hydro as a Municipal Power Smart Leader (the highest recognition BC Hydro gives to organizations) several years in a row due to its outstanding efforts to incorporate new and alternative technologies into its energy system, and improve its corporate energy management program. The experience and knowledge which the City has gained through its energy

management initiatives informs its community-wide energy use and emissions reduction efforts.

Nearly two-thirds of energy consumed in Richmond occurs in commercial buildings and residences. The BC Energy Step Code was established in 2017 by the province of British Columbia; it is a standard that local governments can choose to reference that requires improved energy performance from new construction over and above what is required by the BC Building Code. There is a need to improve the performance of new buildings using tools such as the BC Energy Step Code, as well as speed the adoption of energy upgrades and renovations to existing buildings. Doing so will not only help the City achieve its emissions goals, but can also improve indoor environmental quality, health, productivity, and foster economic opportunity and jobs.".

2. Richmond Official Community Plan Bylaw 9000, as amended, is further amended at Schedule 1, Section 12.4 by deleting "Objective 3" and replacing it with the following:

"**OBJECTIVE 3:**

Improve the energy efficiency and greenhouse gas emissions performance of new construction.

POLICIES:

a) incrementally increase energy efficiency and greenhouse gas emissions performance requirements for new construction over time.

b) use the BC Energy Step Code, district energy utility connection, and other tools, to demonstrate Richmond's leadership on construction of energy-efficient, low-carbon buildings. The BC Energy Step Code is anticipated to be implemented according to the schedule in the table below:

Building Type	**Building Permit Application**			
		Estimated Timetable for Future Consideration		
Smaller Part 9 Residential	**September 1, 2018**	**Jan 2020**	**Jan 2022**	**Jan 2025**
Townhomes and apartments	Step 3	Same as 2018	Step 4	Step 4 or Step 5
Single family, duplex and other residential	Step 1	Step 3	Step 3 or Step 4	Step 4 or Step 5
Larger Part 3 developments				
Residential Concrete Towers	Step 3 or Step 2 for buildings with low carbon energy system	Same as 2018	Step 3	Step 4
Residential Woodframe Low/Mid Rise	Step 3	Same as 2018	Step 4	Step 4
Office & Retail Buildings	Step 2	Same as 2018	Step 3	Step 3

c) all new construction is encouraged to achieve zero GHG emissions from operations.

d) the City will explore strategies to enable development of energy efficient, zero GHG new buildings, including low carbon district energy utility system development.".

3. Richmond Official Community Plan Bylaw 9000, as amended, is further amended at Schedule 1, by deleting Section 14.2.10.A [Energy Efficiency] and replacing it with the following:

"14.2.10.A **Low Carbon, Energy Efficient Buildings**

a) As required in the Building Regulation Bylaw, applicable new developments will be designed and constructed to meet the BC Energy Step Code to support more energy efficient development.

- Compliance with a given Step of the BC Energy Step Code shall not compromise any of the other Development Permit guidelines contained in Schedule 1 or Schedule 2 of the OCP.

- In the event that a new building must take remedial actions to achieve compliance with the applicable Step of the BC Energy Step Code and therefore change building systems or components included in the original design of the building, these changes shall not compromise the intent of other development permit guidelines applicable to the development.

b) New construction encouraged to be designed to achieve low or zero greenhouse gas emissions in their operations.".

4. This Bylaw is cited as **"Richmond Official Community Plan Bylaw No. 9000, Amendment Bylaw No. 9771".**

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CITY OF RICHMOND

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APPROVED for legality by Solicitor

MAYOR

CORPORATE OFFICER

5827441

City of Richmond

Bylaw 9770

Richmond Official Community Plan Bylaw No. 7100, Amendment Bylaw No. 9770 (Energy Step Code)

The Council of the City of Richmond enacts as follows:

1. Richmond Official Community Plan Bylaw 7100, as amended, is further amended at Schedule 2.10 (City Centre Area Plan), Section 2.2.3(a) "Office Friendly Checklist" by deleting item "7. Green Building Design" and replacing it with the following:

   "**7. Green Building Design**

   BC Energy Step Code required typically.".

2. Richmond Official Community Plan Bylaw 7100, as amended, is further amended at Schedule 2.10, Section 2.5 (Ecology & Adaptability) by:

   (a) deleting the final paragraph in the "VISION MANDATE" section and replacing it with the following:

   "The City has established sustainability as a corporate priority. As well, it has established a Sustainability Office to lead the City in establishing policies to address the many complex issues. These issues include improved eco-regeneration; connectivity; improved ecological services and functions; green, energy efficient buildings and built environment; a triple bottom line; a multi-objective development approach and adapting to climate change. Policies and actions regarding these issues continue to be developed, and the City, developers and community stakeholders are encouraged to address these issues innovatively.";

   (b) deleting the policies listed in section 2.5.2 [Greening the Built Environment] of the "POLICIES" table, and replacing them with the following:

   "**2.5.2 Greening the Built Environment**

   a) Reduce per Capita Resource Demands & Strengthen Ecological Base

   - Optimize the use of existing infrastructure through compact land use and transit-oriented development policies.
   - Private developments:
     - as specified in the *Building Regulation Bylaw*, new developments are subject to the BC Energy Step Code;

- new developments are encouraged to achieve zero GHG emissions from operations;
- for new developments to which the BC Energy Step Code applies to less than 50% of gross floor area, LEED Silver will be required for all rezonings of private developments over 2,000 m^2;
- new developments are subject to commitment to connect to the district energy system or have on-site low carbon energy system.

- City of Richmond development:
  - City facilities will be developed and operated in accordance with the City's High Performance Building policy;
  - demand-side management and an ***Eco-Plus***+ (see below) approach will be adopted for all City servicing (e.g., park management, transportation planning, engineering servicing.).

b) Reduce Greenhouse Gas Emissions

- Transportation need and automobile reliance will be reduced through compact land use and transit-orientated development practices.
- Corporate and community-wide greenhouse gas emissions reduction targets and strategies are included in the City's 2014 Community Energy and Emissions Plan.
- Economic policies which support the transition to a low carbon economy continue to be explored and implemented.";

(c) deleting the "Proposed Strategy" subsection in section 2.5.2 [Greening the Built Environment" and replacing it with the following:

"**Strategy**

To:

- encourage zero carbon new buildings, a "breakthrough" strategy identified in the Community Energy and Emissions Plan as necessary to achieving the City's greenhouse gas emissions reduction targets;
- require adherence to ***High Performance building standards*** (BC Energy Step Code, LEED, Passive House, or other equivalent) for all City facilities and larger developments;
- continue advancement of district energy systems;
- encourage an "***Eco-Plus***+" approach aimed at maximizing environmental returns during development."; and

(d) deleting the "High Performance Building Standards – About LEED" subsection in section 2.5.2 and replacing it with the following:

"**High Performance Building Standards**

The BC Energy Step Code is a consistent, provincially-endorsed tool that BC local governments can use to support healthier, comfortable, energy efficient, lower emissions buildings. It is the product of a multi-year collaboration between local governments, industry stakeholders, the provincial government, and utilities.

Projects not covered by the BC Energy Step Code, are expected to adhere to the Leadership in Energy and Environmental Design (LEED) rating system. LEED was developed by the US Green Building Council as a means to evaluate the degree to which buildings meet high performance standards. Buildings are evaluated based on factors pertaining to site selection, water and energy efficiency, material use and indoor air quality. To achieve a specific level of certification, buildings must meet certain requirements (prerequisites) and gain a certain number of credits."

3. This Bylaw is cited as **"Richmond Official Community Plan Bylaw No. 7100, Amendment Bylaw No. 9770."**

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