



General Purposes Committee

Anderson Room, City Hall
6911 No. 3 Road

Monday, November 4, 2024
4:00 p.m.

Pg. # ITEM

MINUTES

GP-5 *Motion to adopt the **minutes** of the meeting of the General Purposes Committee held on October 15, 2024.*



FINANCE AND CORPORATE SERVICES DIVISION

1. **AWARD OF CONTRACT 8337P - DATABASE ENCRYPTION PROJECT**
(File Ref. No. 04-1370-01) (REDMS No. 7803709)

GP-10

See Page GP-10 for full report

Designated Speaker: James Teo

STAFF RECOMMENDATIONS

- (1) *That Contract 8337P - Database Encryption Project be awarded to Eclipsys Solutions Inc., for a value of \$662,249.16, excluding taxes, for a contract term of five years as described in the report titled "Award of Contract 8337P - Database Encryption Project" dated October 3, 2024, from the Director, Information Technology; and*
- (2) *That the Chief Administrative Officer and the General Manager, Finance and Corporate Services be authorized to execute the contracts and all related documentation with Eclipsys Solutions Inc.*



Pg. # ITEM

2. **AWARD OF CONTRACT 8350Q – SUPPLY AND DELIVERY OF MICROSOFT SUBSCRIPTION LICENSING**
(File Ref. No. 04-1300-01) (REDMS No. 7793657)

GP-15

See Page GP-15 for full report

Designated Speaker: Grant Fengstad

STAFF RECOMMENDATIONS

- (1) *That Contract 8350Q – Supply and Delivery of Microsoft Subscription Licensing be awarded to NetraClouds Inc. for a three-year term for an estimated value of \$2,180,995.50, excluding taxes as described in the report titled “Award of Contract 8350Q – Supply and Delivery of Microsoft Subscription Licensing” dated October 3, 2024, from the Director, Information Technology; and*
- (2) *That the Chief Administrative Officer and the General Manager, Finance and Corporate Services be authorized to execute the contracts and all related documentation with NetraClouds Inc.*



3. **DRAFT COMMUNITY WAYFINDING STRATEGY**
(File Ref. No. 08-4150-04-06) (REDMS No. 7823529)

GP-19

See Page GP-19 for full report

Designated Speaker: Jill Shirey

STAFF RECOMMENDATION

That the draft Community Wayfinding Strategy, as detailed in the staff report titled “Draft Community Wayfinding Strategy”, dated October 11, 2024, from the Director, Business Services, be endorsed for public consultation.



Pg. # ITEM

PLANNING AND DEVELOPMENT DIVISION

4. **PROPOSED UPDATES TO THE RICHMOND COMMUNITY HOMELESSNESS TABLE TERMS OF REFERENCE**
(File Ref. No. 07-3000-00) (REDMS No. 7787794)

GP-122

See Page GP-122 for full report

Designated Speaker: Chris Duggan

STAFF RECOMMENDATION

That the amended Terms of Reference for the Richmond Community Homelessness Table as outlined in the staff report titled "Proposed Updates to the Richmond Community Homelessness Table Terms of Reference", dated October 15, 2024, from the Director, Community Social Development, be endorsed.



DEPUTY CAO'S OFFICE

5. **AWARD OF CONTRACT 8300Q – ON-CALL REFRIGERATION CONTRACTOR SERVICES**
(File Ref. No. 10-6000-01) (REDMS No. 7780627)

GP-134

See Page GP-134 for full report

Designated Speaker: Martin Younis

STAFF RECOMMENDATIONS

- (1) *That Contract 8300Q – On-Call Refrigeration Contractor Services be awarded to Cimco Refrigeration, a Division of Toromont Industries Inc. (Cimco Refrigeration) for a three-year term for an aggregate value of \$750,000.00, excluding taxes, as described in the report titled "Award of Contract 8300Q – On-Call Refrigeration Contractor Services," dated October 7, 2024 from the Director, Facilities and Project Development;*
- (2) *That the Chief Administrative Officer and Deputy Chief Administrative Officer be authorized to extend the initial three-year term, up to a maximum of five years, for an additional value of \$506,250.00 excluding taxes; and*

Pg. # ITEM

- (3) *That the Chief Administrative Officer and Deputy Chief Administrative Officer be authorized to execute the contracts and all related documentation with Cimco Refrigeration over the maximum five-year term.*



ENGINEERING AND PUBLIC WORKS DIVISION

6. **UPDATED ENERGY STEP CODE AND ZERO CARBON STEP CODE COMPLIANCE OPTIONS FOR NEW SINGLE DETACHED AND DUPLEX HOMES**

(File Ref. No. 10-6125-01) (REDMS No. 7763319)

GP-138

See Page GP-138 for Staff Memorandum

GP-144

See Page GP-144 for full report

Designated Speakers: Norm Connolly & Nicholas Heap

STAFF RECOMMENDATION

That direction be provided regarding the preferred option as outlined in the report titled ‘Updated Energy Step Code and Zero Carbon Step Code Compliance Options for New Single Detached and Duplex Homes’ from the Director, Climate and Environment, dated September 19, 2024.



ADJOURNMENT





General Purposes Committee

Date: Tuesday, October 15, 2024

Place: Anderson Room
Richmond City Hall

Present: Mayor Malcolm D. Brodie, Chair
Councillor Chak Au
Councillor Carol Day
Councillor Laura Gillanders (entered the meeting at 4:04 p.m.)
Councillor Kash Heed
Councillor Andy Hobbs
Councillor Alexa Loo
Councillor Bill McNulty
Councillor Michael Wolfe

Call to Order: The Chair called the meeting to order at 4:02 p.m.

MINUTES

It was moved and seconded
*That the minutes of the meeting of the General Purposes Committee held on
October 1, 2024, be adopted as circulated.*

CARRIED

CAO'S OFFICE

1. **AWARD OF CONTRACT 8283P – EMPLOYEE & FAMILY ASSISTANCE PROGRAM**
(File Ref. No. 05-1400-01) (REDMS No. 7795677)

General Purposes Committee

Tuesday, October 15, 2024

It was moved and seconded

- (1) *That Contract 8283P – Employee & Family Assistance Program (EFAP) be awarded to Green Shield Canada for a three-year term for an estimated value of \$589,050.00, excluding taxes, as described in the report titled “Award of Contract 8283P – Employee & Family Assistance Program,” dated September 18, 2024 from the Senior Director, People & Culture, Human Resources;*
- (2) *That the Chief Administrative Officer and General Manager, Finance and Corporate Services be authorized to execute the contract and all related documentation with Green Shield Canada; and*
- (3) *That the Chief Administrative Officer and General Manager, Finance and Corporate Services be authorized to extend the initial three-year contract term for an additional one year, up to the maximum total term of four years, for an estimated total value of \$785,400.00, excluding taxes.*

The question on the motion was not called as in response to a query from Committee, staff advised that a changeover plan will be implemented.

The question on the motion was then called and it was **CARRIED**.

PARKS, RECREATION AND CULTURE DIVISION

2. CITY OF RICHMOND SIGNATURE AND COMMUNITY EVENTS PLAN 2025–2029

(File Ref. No. 11-7000-01) (REDMS No. 7591445)

The meeting was recessed at 4:03 p.m.

The meeting reconvened at 4:03 p.m.

It was moved and seconded

- (1) *That the revised Guiding Principles for City Events as detailed in the report “City of Richmond Signature and Community Events Plan 2025–2029”, dated September 26, 2024, from the Director, Arts, Culture and Heritage be endorsed;*

General Purposes Committee
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- (2) *That the City of Richmond Signature and Community Events Plan 2025–2029 as detailed in the attached report, dated September 26, 2024, from the Director, Arts, Culture and Heritage be endorsed to guide the planning and delivery of City events for the next five years; and*
- (3) *That the expenditures totaling \$950,200 for the City Events Program 2025 with funding of \$890,600 from the Rate Stabilization Account, \$31,000 estimated sponsorship and \$28,600 estimated grant revenue be considered in the 2025 budget process.*

Councillor Gillanders entered the meeting (4:04 p.m.).

The question on the motion was not called as in response to queries from Committee, staff noted that (i) should the Tall Ships event take place, adjustments would be made to accommodate the event, (ii) the Supporting Food Security through Community Driven Events Grant is proposed to be discontinued, and applicants would be directed to other City Grant Programs, (iii) Nations Cup is not included in this plan as it is beyond the scope, (iv) the proposed city funding is \$890, 600, which does not include staff salaries and other in-kind costs, (v) the contingency fund is for unanticipated costs, not for program enhancements, (vi) the Neighbourhood Block Party was undersubscribed this year and the Community Celebration Grants were oversubscribed, and (vii) going forward economic impact analysis' will be conducted for major events.

The question on the motion was then called and it was **CARRIED**.

Further discussion took place on the proposed discontinuation of the Supporting Food Security through Community Driven Events Grant and as a result the following **referral motion** was introduced:

It was moved and seconded

That staff report back with additional information regarding program options, financial consequences, and other factors related to the Supporting Food Security through Community Driven Events Grant by the Monday, October 21, 2024, Council meeting.

CARRIED

General Purposes Committee
Tuesday, October 15, 2024

FINANCE AND CORPORATE SERVICES DIVISION

3. 2025 COUNCIL AND COMMITTEE MEETING SCHEDULE

(File Ref. No. 01-0105-01) (REDMS No. 7810334)

Discussion took place on changing Committee dates in January 2025 to allow for an easier transition.

It was moved and seconded

(1) That the 2025 Council and Committee meeting schedule, as shown in Attachment 1 of the staff report dated September 17, 2024 from the Director, City Clerk's Office, be approved, with the addition of the following:

(a) That the January 6, 2025 General Purposes Committee and Finance Committee meetings be rescheduled to January 7, 2025; and

(b) That the January 7, 2025 Planning Committee meeting be rescheduled to January 8, 2025.

(2) That the Council Procedure Bylaw No. 7560 be varied to allow for the following revisions as detailed in the staff report titled "2025 Council and Committee Meeting Schedule" dated September 17, 2024, from the Director, City Clerk's Office, be approved:

(a) That the Regular Council meetings (open and closed) of August 11 and August 25, 2025 be cancelled; and

(b) That the August 18, 2025 Public Hearing be rescheduled to September 2, 2025 at 7:00 p.m. in the Council Chambers at Richmond City Hall.

CARRIED

DEPUTY CAO'S OFFICE

4. JAPANESE CANADIAN LEGACIES COMMUNITY GRANT OPPORTUNITIES

(File Ref. No. 10-6000-01) (REDMS No. 7823342)

It was moved and seconded

(1) That the scope of work related to the two grant applications to the Japanese Canadian Legacies Community Fund, for an aggregate total of up to \$1,500,000, be endorsed in principle by Council, as described in the report titled "Japanese Canadian Legacies Community Grant Opportunities," dated October 2, 2024, from the Director, Facilities and Project Development and the Director, Parks Services;

General Purposes Committee
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- (2) *That should the grant application(s) be successful, the Chief Administrative Officer and the Deputy Chief Administrative Officer be authorized to execute the agreement on behalf of the City of Richmond with the Steveston Community Society (SCS), for the contribution from SCS to the City for the Japanese Canadian Legacy Improvements work; and*
- (3) *That a capital budget up to \$1,500,000 for the Japanese Canadian Legacy Improvements be approved and be included in the Consolidated 5 Year Financial Plan (2025-2029).*

The question on the motion was not called as in response to a query from Committee, staff advised that the City will be not contributing any additional funds.

The question on the motion was then called and it was **CARRIED**.

ADJOURNMENT

It was moved and seconded
That the meeting adjourn (4:31 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 Tuesday, October 15, 2024.

Mayor Malcolm D. Brodie
Chair

Sarah Goddard
Legislative Services Associate



City of Richmond

Report to Committee

To: General Purposes Committee **Date:** October 3, 2024
From: Grant Fengstad **File:** 04-1370-01/2024-Vol
 Director, Information Technology 01
Re: **Award of Contract 8337P - Database Encryption Project**

Staff Recommendation

1. That Contract 8337P - Database Encryption Project be awarded to Eclipsys Solutions Inc., for a value of \$662,249.16, excluding taxes, for a contract term of five years as described in the report titled "Award of Contract 8337P - Database Encryption Project" dated October 3, 2024, from the Director, Information Technology; and
2. That the Chief Administrative Officer and the General Manager, Finance and Corporate Services be authorized to execute the contracts and all related documentation with Eclipsys Solutions Inc.

Grant Fengstad
 Director, Information Technology
 (604-276-4096)

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

Staff Report

Origin

The City of Richmond (“City”) operates and manages database technology provided by Oracle and Microsoft in support of many mission-critical enterprise applications and systems serving approximately 2,500 employees and over 170,000 registered MyRichmond customers.

While these databases are secured by physical data centre security, firewalls, and cybersecurity software, the actual information stored in the databases, including backup files, are not encrypted. This would potentially allow a malicious party to gain access to the unencrypted database and or backup files, which in turn, can be restored with the information easily viewed.

In response to the Cybersecurity event that occurred in June 2023, staff are recommending additional database safeguards to protect and secure City data against malicious parties. Staff are recommending that the City implement database encryption technology that secures the data on storage media whereby only authorized parties can decrypt it. Database encryption is an additionally licensed component of Oracle, which requires an Oracle Advanced Security license. Database encryption is included in our current Microsoft SQL Server license agreement.

Implementing database encryption protects data stored on media in the event that the storage media or data file is stolen. Failing to encrypt the databases would introduce potential risk should City data become compromised and accessible by malicious parties.

This report supports Council’s Strategic Plan 2022-2026 Focus Area #4 Responsible Financial Management and Governance:

Responsible financial management and efficient use of public resources to meet the needs of the community.

4.2 Seek improvements and efficiencies in all aspects of City business.

Analysis

Procurement Process

The City issued a Request for Proposal (RFP) 8337P – Database Encryption Project on BC Bid on May 7, 2024, which closed on June 4, 2024.

The RFP scope was for the:

1. Design, installation, and configuration of database encryption as it relates to the Oracle and SQL Server databases.
2. A recommendation for the supply of the required Oracle Advanced Security product to enable encryption.
3. An additional four (4) year license agreement for all Oracle database products currently in use at the City including Oracle Database Enterprise Edition, Oracle Real Application Clusters (“RAC”) and Oracle Advanced Security (beyond year one (1) project completion).

Review Process

The Proposals were evaluated by City staff and consisted of a two-phased evaluation process. The first phase involved independent reviews of each Proposal, which assessed the financial proposals, company information, past projects and team composition, as well as the ability to meet technical requirements.

Table 1 provides a summary of the financial proposals received, with scores awarded by the evaluation team based on the criteria listed above.

Table 1 – Phase 1 Evaluation Summary

Schedule / Specifications	Eclipsys Solutions Inc.	Syntronic R&D Canada
Software License Fees - Oracle Advanced Security Option	\$93,537.89	\$103,564.00
Software License Fees - Oracle Database Prod Environment	\$624,905.87	\$1,024,069.00
Software License Fees - Oracle Database Test Environment	\$312,456.84	\$583,913.00
Professional Services Fees	\$74,873.00	\$468,600.00
Financial Proposal (excluding taxes):	\$1,105,773.60	\$2,180,146.00
Total Evaluation Score (out of 100)	88.67	53.61

Phase 1 Evaluation Summary

The proposal submitted by Eclipsys Solutions (“Eclipsys”) received the highest overall score. Although Eclipsys’ financial proposal was initially over-budget, their proposal outlined a comprehensive methodology for the provisioning of the solution including qualified resources to implement database encryption on both Oracle and SQL Server environments, which met all the City’s technical requirements.

Syntronic R & D Canada Inc. (“Syntronic”) financial proposal was twice the amount of Eclipsys’ and the company did not demonstrate relevant experience with past engagements where Oracle and SQL Server database encryption solution was implemented.

Based on the review and scoring by staff, only the submission by Eclipsys progressed to the second evaluation phase.

Phase 2 Evaluation Summary

Phase 2 of the evaluation process included an interview and offered the proponent an opportunity to clarify elements of their proposal and allow staff to assess technical/business competencies relevant to the project as set out in the RFP.

Eclipsys was asked to leverage channels that entitle the City to government discounts on Oracle Database Licensing and limits to inflationary increases of Software Support and Licensing to a specific Consumer Price Index.

Eclipsys responded with a revised financials proposal on Table 2 which includes the following:

- A new five (5) year agreement that references the Eclipsys Standard Agreement with Oracle
- A discount of 35% and price hold for support increases which is in line with the current BC Government Oracle Master Agreement (35%)
- Inflationary Adjustment Rate (IAR) capped at 2% for support renewals years 2 to 4 on newly acquired Oracle Advanced Security Option
- Inflationary Adjustment Rate (IAR) capped at 2% for existing Oracle Enterprise Edition and Real-Application Cluster (RAC) licences renewal with Eclipsys Solutions

Table 2. Revised Financial Proposal

Schedule / Specifications	Eclipsys Solutions Inc.
Software License Fees - Oracle Advanced Security Option	\$93,537.89
Software License Fees - Oracle Database Prod Environment	\$325,907.32
Software License Fees - Oracle Database Test Environment	\$167,930.95
Professional Services Fees	\$74,873.00
Total Contract Amount (excluding taxes)	\$662,249.16

Financial Impact

Funding is available within the consolidated 5 Year Financial Plan (2024-2028). Table 3. outlines the professional services costs to implement database encryption on both Oracle and SQL Server, as well as Oracle software purchase costs for Advanced Security module to run database encryption. Table 4. outlines the Oracle annual term licensing costs to license all Oracle database products currently in use at the City including Oracle Database Enterprise Edition, Oracle Real Application Clusters (“RAC”) and Oracle Advanced Security for four (4) additional years.

Table 3. Estimated Costs to Complete Project in Year 1 (excluding applicable taxes)

Description	Costs
Eclipsys Solutions Inc. – Professional Services Costs	\$74,873.00
Eclipsys Solutions Inc. – Oracle Initial Term Licensing Costs (Year 1)	\$93,537.89
Total Estimated Costs	\$168,410.89

Table 4. Estimated Costs to operate the system for 4 years after project completion (excluding applicable taxes)

Description	Costs
Eclipsys Solutions Inc. – Oracle Annual Software License Cost (Year 2)	\$111,061.06
Eclipsys Solutions Inc. – Oracle Annual Software License Cost (Year 3)	\$118,913.65
Eclipsys Solutions Inc. – Oracle Annual Software License Cost (Year 4)	\$127,373.82
Eclipsys Solutions Inc. – Oracle Annual Software License Cost (Year 5)	\$136,489.74
Total Operating Costs over 4 years	\$493,838.27

Conclusion

Staff recommend that Contract 8337P - Database Encryption Project be awarded to Eclipsys Solutions Inc. as it represents best value to the City for a five-year term in the amount of \$662,249.16 exclusive of taxes.



James Teo
 Program Manager, Data Science
 (604-204-8657)



City of Richmond

Report to Committee

To: General Purposes Committee **Date:** October 3, 2024
From: Grant Fengstad **File:** 04-1300-01/2024-Vol
 Director, Information Technology 01
Re: **Award of Contract 8350Q – Supply and Delivery of Microsoft Subscription Licensing**

Staff Recommendation

1. That Contract 8350Q – Supply and Delivery of Microsoft Subscription Licensing be awarded to NetraClouds Inc. for a three-year term for an estimated value of \$2,180,995.50, excluding taxes as described in the report titled “Award of Contract 8350Q – Supply and Delivery of Microsoft Subscription Licensing” dated October 3, 2024, from the Director, Information Technology; and
2. That the Chief Administrative Officer and the General Manager, Finance and Corporate Services be authorized to execute the contracts and all related documentation with NetraClouds Inc.

Grant Fengstad
 Director, Information Technology
 (604-276-4096)

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

Staff Report

Origin

The City has several key initiatives using Microsoft 365 services. By mid-2024, the City switched from Cisco Webex to Microsoft Teams for collaboration and meetings. This move aligns with local government best practices and enhances collaboration. The budget previously allocated for Cisco Webex was used to support this change.

The City is upgrading its corporate desktops and laptops to Microsoft Windows 11, as support for Windows 10 ends in 2025. To enhance security, a "passkey" approach using physical security keys or biometrics like fingerprint and facial ID will be implemented. Microsoft 365 is needed to enable these advanced authentication methods.

Users will need Microsoft 365 subscriptions for continued access to Microsoft Office and other productivity tools. The trend is moving from perpetual licenses to annual subscription models.

This report supports Council's Strategic Plan 2022-2026 Focus Area #3 A Safe and Prepared Community:

Community safety and preparedness through effective planning, strategic partnerships and proactive programs.

3.4 Ensure civic infrastructure, assets and resources are effectively maintained and continue to meet the needs of the community as it grows.

This report supports Council's Strategic Plan 2022-2026 Focus Area #4 Responsible Financial Management and Governance:

Responsible financial management and efficient use of public resources to meet the needs of the community.

4.1 Ensure effective financial planning to support a sustainable future for the City.

4.2 Seek improvements and efficiencies in all aspects of City business.

4.3 Foster community trust through open, transparent and accountable budgeting practices and processes.

Analysis

Procurement Process

To facilitate the adoption of Windows 11 workstations and the implementation of passkey-based authentication, as well as to enhance collaboration and productivity tools, organizations will need annual subscriptions for Microsoft 365.

Microsoft 365 services were previously procured through a designated vendor for Microsoft Licensing. This contract expired in 2024, requiring staff to initiate a formal procurement process to select a new vendor for a three-year term with the intention of awarding the contract based on the lowest price Bid that met specification. On July 31, 2024, the City posted a Request for Quotation (RFQ) 8350Q - Microsoft Subscription Licensing on BC Bid, which closed on August 29, 2024.

The RFQ set out specifications representing both base requirements (necessary for supporting the City's objectives), as well as subscription licensing requirements that will be required in the future but are still currently undefined. These licensing requirements offer potential benefit to the City, but incur additional annual per-user costs.

Staff are only recommending bids that reflect the City’s immediate (base) subscription licensing requirements.

Review Process

Staff initially received fifteen (15) Bids in response to the RFQ and reviewed the submissions received against the specifications described in the RFQ and all proposed total costs. After further review, only ten (10) bids met the City’s specifications.

Table 1 provides a summary of total costs proposed by the compliant bidders for base subscriptions.

Table 1 – Total Costs of Base Subscriptions by Bidder

Bidder	Microsoft 365 – F3 based for field workers (Three year term)	Microsoft 365 – E3 based for knowledge workers (Three year term)	Total Costs (Three year term)
NetraClouds Inc.	\$526,560.00	\$1,456,435.50	\$1,982,995.50
ITExpress Direct Inc.	\$539,600.00	\$1,460,387.50	\$1,999,987.50
IC 360 Solutions Inc.	\$531,107.20	\$1,469,691.80	\$2,000,799.00
Insight	\$533,376.00	\$1,469,916.00	\$2,003,292.00
GlobalDWS Corporation	\$569,776.00	\$1,497,542.00	\$2,067,318.00
Ansah Ventures Corp.	\$537,708.80	\$1,689,734.60	\$2,227,443.40
Kalsoft Inc.	\$600,400.00	\$1,661,350.50	\$2,261,750.50
Gravity Union Solutions Ltd	\$627,840.00	\$1,737,360.00	\$2,365,200.00
Connectit Telecommunications St. Laurent Inc.	\$881,568.00	\$1,590,129.00	\$2,471,697.00

Blueshift Computer Technology Inc.	\$1,089,504.00	\$1,965,835.95	\$3,055,339.95
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*Bids received from Softchoice Corporation and Long View Systems were determined to be non-compliant as neither bid met the City's stated specifications.

**Bids received from Bhofo Consulting Inc. and Appficiency (KWIZ) were set aside as neither bidder provided confirmation that their bid could meet the City's specifications despite Staff's attempts to obtain the required confirmation.

***The bid received from Solulan Global Inc, was set aside as the bidder was unable to provide fixed pricing for years 2 and 3.

Financial Impact

The cost to award the base subscriptions to NetraClouds Inc., for three years is \$1,982,995.50 plus \$198,000.00 contingency, for a total of \$ 2,180,995.50.

Funding is available within the City's operating budget and the consolidated 5-year financial plan (2024-2028).

Conclusion

Staff recommend awarding NetraClouds Inc., a three-year contract in the amount of \$2,180,995.50, exclusive of taxes including a 10 percent contingency for additional license subscriptions.



Grant Fengstad
 Director, Information Technology
 (604-276-4096)

GF:gf



City of Richmond

Report to Committee

To: General Purposes Committee

Date: October 11, 2024

From: Katie Ferland
Director, Business Services

File: 08-4150-04-06/2024-
Vol 01

Re: Draft Community Wayfinding Strategy

Staff Recommendation

That the draft Community Wayfinding Strategy, as detailed in the staff report titled “Draft Community Wayfinding Strategy”, dated October 11, 2024, from the Director, Business Services, be endorsed for public consultation.

K. Ferland

Katie Ferland
Director, Business Services
(604-247-4923)

REPORT CONCURRENCE		
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER
Communications	<input checked="" type="checkbox"/>	<i>JR</i>
Information Technology	<input checked="" type="checkbox"/>	
Arts, Culture & Heritage	<input checked="" type="checkbox"/>	
Community Social Development	<input checked="" type="checkbox"/>	
Parks Services	<input checked="" type="checkbox"/>	
Development Applications	<input checked="" type="checkbox"/>	
Policy Planning	<input checked="" type="checkbox"/>	
Transportation	<input checked="" type="checkbox"/>	
SENIOR STAFF REPORT REVIEW	INITIALS: <i>CF</i>	APPROVED BY CAO <i>[Signature]</i>

Staff Report

Origin

The draft Community Wayfinding Strategy (the Strategy), a tourism destination enhancement initiative developed using Municipal and Regional District Tax (MRDT) funding, has been developed through significant public engagement and with support from the City's MRDT Program partners, Tourism Richmond and the Richmond Hotel Association.

On October 10, 2023, Council was presented with a project update and the draft Guiding Principles, and adopted the following resolutions:

- (1) That the Guiding Principles, as detailed in the staff report titled "Community Wayfinding Strategy Guiding Principles," dated September 7, 2023, from the Director, Business Services, be endorsed; and*
- (2) That these Guiding Principles be used to inform the strategic direction and actions of the draft Community Wayfinding Strategy.*

The purpose of this report is to seek Council's endorsement of the draft Community Wayfinding Strategy for public consultation. During this next round of consultation, community feedback will be sought on the draft Strategy and input on potential initial implementation will also be welcomed. This feedback will then be addressed in the Final Community Wayfinding Strategy and Implementation Framework, which will be presented to Council for approval.

This report supports Council's Strategic Plan 2022-2026:

Focus Area #1. Proactive stakeholder and civic engagement to foster understanding and involvement and advance Richmond's interests.

1.4 Leverage a variety of approaches to make civic engagement and participation easy and accessible.

Focus Area #2. Strategic and sustainable growth that supports long-term community needs and a well-planned and prosperous city.

2.3 Ensure that both built and natural infrastructure supports sustainable development throughout the city.

Focus Area #3. Community safety and preparedness through effective planning, strategic partnerships and proactive programs.

3.4 Ensure civic infrastructure, assets and resources are effectively maintained and continue to meet the needs of the community as it grows.

Focus Area #4. Responsible financial management and efficient use of public resources to meet the needs of the community.

4.2 Seek improvements and efficiencies in all aspects of City business.

Focus Area #6. Vibrant, resilient and active communities supported by a wide variety of opportunities to get involved, build relationships and access resources.

6.1 Advance a variety of program, services, and community amenities to support diverse needs and interests and activate the community.

In addition, the draft Community Wayfinding Strategy aligns with and, if endorsed, would support the implementation of other key City strategies, including the Community Wellness Strategy 2018-2023 (Focus Area #4, Facilitate supportive, safe and healthy natural and built environments), Richmond Accessibility Plan 2023-2033 (Strategic Pillar #3, Accessibility in the Built Environment), Richmond Arts Strategy 2019-2024 (Strategic Directions #1, Ensure affordable and accessible arts for all, and #3, Invest in the arts) and the Official Community Plan.

Analysis

Background

Wayfinding refers to how people orient themselves in their surroundings, identify routes and navigate through their physical environment to destinations. It includes directional signage and visual landmarks, and it can be used to promote public attractions, places of special interest, and the best routes for moving through the city. In this context, the focus is on public wayfinding rather than wayfinding on private property or to specific private businesses.

The draft Strategy (Attachment 1) has been informed through a research and needs assessment phase, a robust public engagement process, and ongoing input from a project working group consisting of staff from multiple City departments as well as Tourism Richmond.

The Council-approved Guiding Principles, on which the draft Strategy is based, are the following:

1. Clear and intuitive
2. Inclusive and accessible for all backgrounds and abilities
3. Encourage discovery and exploration
4. Consider the role of technology in navigation and placemaking
5. Promote city and neighbourhood character and identity
6. Support local business and economy

It is anticipated that the Strategy will guide and coordinate future public wayfinding and signage investments in Richmond, ensuring that these are designed and implemented in a well-planned and resource efficient manner. Over time, as the Strategy is implemented, the wayfinding approach in Richmond will enhance the experience for both visitors and residents as they move through the city.

Public Engagement

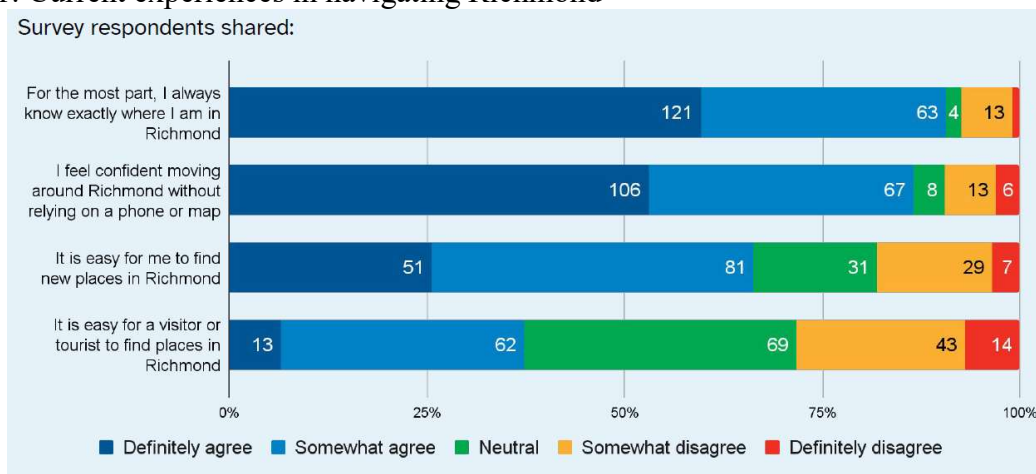
Public consultation¹ has been fundamental in developing the draft Strategy to meet the needs and enhance the experience of Richmond residents and visitors. As detailed in the “What We Heard” report included when the Guiding Principles were brought forward to Council in October 2023, public input was key in creating the Guiding Principles and identifying priorities for the Strategy, including those related to current wayfinding challenges and opportunities. Feedback from the consultation also directly shaped the proposed design concepts presented in the draft Strategy.

Participants in the consultation activities noted their top three priorities for wayfinding:

- It should be clear and intuitive.
- It should be inclusive and accessible for all backgrounds and abilities.
- It should encourage discovery and exploration.

Those surveyed used many different modes of travel, including walking, cycling, car/motorcycle, and public transit, underscoring the need for wayfinding to be multi-modal. They also noted that they were twice as comfortable navigating Richmond themselves as compared with a visiting friend and also found it more difficult to find new places in Richmond (see Figure 1 below). This feedback points to the need for a new way forward that addresses current experiences and stated priorities around clarity, accessibility, and exploration.

Figure 1: Current experiences in navigating Richmond



Participants in the public engagement activities were also asked to vote for and give comments about the wayfinding aesthetic that they thought best represents Richmond (see Figure 2 below). All aesthetic styles scored relatively high, with the exception of “heritage and historic,” which was noted as best applied in site specific contexts, such as in designated heritage areas, rather than the city as a whole. The “fun and playful” aesthetic received the most votes in support,

¹Public and interest-holder engagements conducted during Spring and Summer 2023 included a Let’s Talk Richmond¹ survey, pop-up events in Steveston and at Lansdowne Station, and a series of seven focus groups. There was strong engagement from the community, which included 160 participants at the pop-up events, 39 participants from 28 organizations at the seven focus groups, 999 visitors to the Let’s Talk Richmond page about the initiative, and 203 survey responses from the general public.

though also the most votes in opposition. Based on this public input, the design concepts presented in the draft Strategy include elements of multiple aesthetics, including “modern and fresh” and “natural and authentic,” for which there was strong support. These also consider wayfinding best practices including those related to legibility, accessibility, and ease of maintenance, as well as the Guiding Principles.

Figure 2: Ranked public input on design aesthetic styles



Those who participated in the public engagement also identified key destinations and attractions as well as wayfinding “pain points” across the city, which could help inform future implementation of the Strategy.

Draft Strategy Overview

The draft Strategy is a framework for a cohesive wayfinding system that is specific to Richmond. It is organized into five main sections, which are then followed by the Design Framework.

Part A

Section 1. Finding Your Way: What Is Wayfinding?

This first section introduces wayfinding, describes how people find their way, and identifies tools that help them find their way more easily, thus contributing to a more efficient and enjoyable journey.

Section 2. Where Are We Now: Opportunities for the Richmond Wayfinding Experience

This section identifies needs and challenges of the current wayfinding experience in Richmond, including input received during public consultation. It focuses on potential improvements to help people more easily find their way in the city.

Section 3. Wayfinding Guiding Principles

Based on public input and previously approved by Council, this section identifies six Guiding Principles for an effective wayfinding system in Richmond, including clarity, accessibility, and exploration opportunities.

Section 4. Wayfinding Strategic Recommendations

Drawing on the Guiding Principles, eight Strategic Recommendations form the core of the draft Strategy. It is anticipated that these Strategic Recommendations will provide key direction over a longer-term, phased implementation across Richmond’s multiple areas and neighbourhoods.

Section 5. Where We Want to Be: The Future Richmond Wayfinding Experience

The final section of the main Strategy presents a future vision for Richmond. It emphasizes the broad benefits of wayfinding, including enhanced accessibility, safety, support for tourism and local businesses, and enriching the overall Richmond experience for residents and visitors alike.

Part B

Design Framework

The Design Framework provides guidance on accessibility and best practices, wayfinding signage design and guidelines, and signage placement guidelines.

Sign Types

A family of sign types is proposed and would be deployed based on needs in a given area. These sign types include gateway entry signage, directional signage, and directory signage. Sign types designed for vehicles and pedestrians are both included to meet the needs of multi-modal transportation users.

The proposed gateway entry signage includes horizontal and vertical variations, both of which could be deployed during implementation depending on the characteristics of the given site. The vertical variation also includes additional, non-signage wayfinding elements in the form of light poles arranged at multiple heights. This design was inspired by Richmond's landscape, including the bullrushes, ocean waves, and the heron, and can contribute to both the welcome experience and to placemaking in Richmond.

Colour Options

There are two different colour options presented for the wayfinding visual language in Richmond, and the selected option would be deployed across the full family of sign types. Feedback on these options will be sought during upcoming consultation on the draft Strategy, if endorsed to move forward.

- Option 1 has been created with key attention to accessibility and best practices around legibility, clarity, and contrast. It incorporates feedback received through the first phase of public consultation and influences from the Richmond landscape, including its urban areas, farmlands, and waterfront.
- Option 2 reflects the City's corporate branding, however, due to contrast and clarity considerations and ongoing updates to accessibility best practices, it may not be as accessible as Option 1.

Both design options would contribute to a unified visual experience of Richmond and, at the same time, enable local neighbourhoods to communicate their own distinctive character.

Beyond Signage

In addition to wayfinding signage, it is anticipated that the implementation process for each area will consider and identify, where relevant, digital wayfinding opportunities as well as physical, non-signage elements, such as stamped pavement, that contribute to placemaking and also help people find their way. In all cases, these elements would be developed over time with community input and tested and refined through the implementation process.

It is also anticipated that in areas of Richmond with protected heritage buildings and features, such as Steveston, additional design and other work will be required through the implementation process to ensure that heritage values are preserved and celebrated.

Proposed Public Consultation

If endorsed, staff would undertake public and interest-holder consultation on the draft Strategy as a next step. Input would be sought during consultation on the wayfinding designs, preferences for colour options, and suggestions regarding potential locations for initial implementation of the Strategy.

The following consultation approach is proposed:

- Draft Strategy to be posted on Let's Talk Richmond, where the public can comment and/or participate in an associated short survey.
 - Awareness of the draft Strategy and survey will be raised through social media channels, partner organizations, and advisory committees.
 - All 28 organizations that participated in the previous consultation will be directly contacted and encouraged to complete the survey and/or provide their feedback. These organizations include the Richmond Chamber of Commerce, Richmond Arts Council, Richmond Arts Coalition, HUB Cycling, Richmond Centre for Disability, Steveston Heritage Sites, Steveston Harbour Authority, Richmond Public Library and Gateway Theatre, among others.
 - Additional direct outreach will be done to extend the reach of the consultation as broadly as possible, including to all Richmond community associations.
 - City-facilitated support will be offered to support individuals who may face language or digital barriers to completing the online survey.
- Presentations to City advisory committees and to Boards of key partner and community organizations.
 - Advisory Committees consulted will include the Economic Advisory Committee, Accessibility Advisory Committee, Intercultural Advisory Committee, Seniors Advisory Committee, and the Youth Advisory Committee.
 - A presentation will be given to Richmond Council of Communities (RCC) to ensure that all Richmond community associations are directly engaged for their feedback.
 - Participants will also be directed to the Let's Talk Richmond page to complete the survey and to spread the word to others in their networks/ organizations/ community.
- Roundtable session with 6-10 representatives from key organizations.
 - This session would include an overview of the draft Strategy, with input invited on design options and suggestions for initial implementation. Representatives will include those from organizations who may not have otherwise been able to participate and/or may be key partners in potential future implementation.
 - Participants will also be directed to the Let's Talk Richmond page to complete the survey and to spread the word to others in their networks/ organizations/ community.

Next Steps

Following this next round of public consultation, the feedback received will be used to inform the Final Strategy, which would include the preferred colour option for wayfinding in Richmond. Along with findings from the public consultation and the Final Strategy, an Implementation Framework will also be brought forward for Council's consideration and approval. It is anticipated that this Framework will include criteria for implementation project selection, initial wayfinding projects that could be undertaken, and a long-term, high-level phased implementation approach.

If approved, future implementation of the Strategy would include targeted public engagement directly related to the specific area and wayfinding project. This is anticipated to include public input on the localization elements that are part of the proposed sign types as well as non-signage wayfinding elements that could contribute to placemaking and celebrate local character and identity.

Financial Impact

None at this time. The development of the draft Strategy has been funded by the Municipal and Regional District Tax, including support from Tourism Richmond and the Richmond Hotel Association. Upon potential future adoption of the Final Strategy, capital budget requests related to implementation would be brought forward for Council's consideration. Funding sources for implementation may include the Municipal and Regional District Tax, among others.

Over the course of phased implementation, there is the potential to explore cost-savings opportunities, as it is anticipated that future wayfinding projects in Richmond would align with the Strategy, including those that would have otherwise been undertaken separately by City departments.

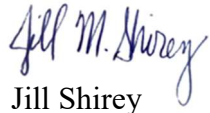
Conclusion

The draft Community Wayfinding Strategy is anticipated to deliver the following benefits in Richmond, if endorsed, and through implementation:

- Meet the needs of residents and visitors for wayfinding through increased accessibility and inclusivity, improved navigation, ease of mobility and an enhanced destination experience.
- Unify the city into one cohesive and vibrant destination, while distinguishing areas of special significance.
- Highlight points of interest, civic and cultural amenities, and support local business hubs, attractions and other destination assets.

If endorsed, staff would proceed with public consultation on the draft Community Wayfinding Strategy, inviting feedback on design options and input on opportunities for implementation. As the public engagement to date has informed the draft Strategy, so also would this next phase of consultation inform the Final Strategy and Implementation Framework, which would then be brought to Council for consideration and approval.

The final outcome expected is a Community Wayfinding Strategy that will guide and coordinate future wayfinding investments in Richmond and improve the experience of the city for residents and visitors alike.



Jill Shirey
Manager, Economic Development
(604-247-4682)

- Att. 1: Draft Community Wayfinding Strategy
- Att. 2: Letter of Support from Tourism Richmond



City of Richmond

Draft Community Wayfinding Strategy

The following strategy is currently a work in progress
and will be refined through further consultation.

October 02, 2024

Part A

Community Wayfinding Strategy

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Design Framework

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Part A

Community Wayfinding Strategy





Introduction

Richmond provides residents and visitors with a captivating blend of natural beauty, historic charm, and modern culture. With countless attractions, sights, and experiences to enjoy, navigating the city with ease is essential to fully appreciate all that Richmond has to offer.

Effective wayfinding can help people explore Richmond and find their way to desired locations. Wayfinding describes the range of methods and tools used to orient and find your way through a city. Although it is often considered synonymous with signage, signs are only one of the tools that contribute to a successful wayfinding experience. In addition to signage, wayfinding success is defined by architectural features and landmarks, verbal instructions, printed materials, electronic content, and interactive technologies.

The City of Richmond recognizes the importance of wayfinding in shaping the experience of Richmond for both residents and visitors. The development of a comprehensive community wayfinding strategy will guide future wayfinding investments that, when implemented, will enhance the Richmond landscape through the use of a common, visual language. This is accomplished by combining the integration of wayfinding principles and best practices with the unique opportunities and needs of Richmond, creating a tailor-made wayfinding strategy.

This wayfinding strategy is designed to provide a unified approach to navigation, simplifying movement through the city whether on foot, in a car, on a bike, or on public transport. This strategy is not just about direction; it's about creating a connected, vibrant community where people can live, work, and thrive. It's an investment in making the city a more intuitive and welcoming destination that considers the diverse needs of residents, visitors, local businesses, and the community.

The recommendations in this strategy are derived from a needs assessment and gap analysis report, best practices review, and extensive public engagement. The strategy is organized in sections, each building on the next, with a series of strategic wayfinding recommendations and future vision for wayfinding in Richmond.



Section 1 Finding Your Way: What Is Wayfinding?

Describes how people find their way through places, and the tools which can help them find their way more easily, to create a more efficient and enjoyable journey.



Section 2 Where Are We Now: Opportunities For The Richmond Wayfinding Experience

Identifies the needs and challenges of Richmond's current wayfinding experience, focusing on areas where improvements would allow people to more easily find their way through the city.



Section 3 Wayfinding Guiding Principles

Identifies key principles needed to develop an effective wayfinding system in Richmond, including clarity, consistency, accessibility, and cultural relevance, to meet the diverse needs of the city's population.



Section 4 Wayfinding Strategic Recommendations

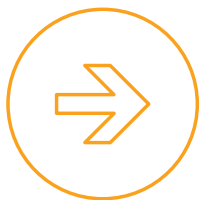
Provides strategic recommendations and a roadmap for the development and implementation of a comprehensive wayfinding strategy for Richmond.



Section 5 Where We Want to Be: The Future Richmond Wayfinding Experience

Presents a future vision for Richmond, transformed by an effective wayfinding system that makes it easier for people to navigate through the city. It emphasizes the broad benefits of wayfinding, including enhanced accessibility, safety, and a boost to local tourism, enriching the overall Richmond experience.

01



What is Wayfinding?

Wayfinding refers to how we orient ourselves, identify routes and navigate successfully to our destinations. It is the process of moving through a place and includes reaching a specific destination or exploring new areas. Our ability to find our way through a city, for example, shapes our experience of the city by allowing us to learn about and access attractions and areas of interest. While the needs of a resident might be different from those of a visitor, both share the common goals of reaching their destinations easily and understanding what the city has to offer.

Wayfinding can be broken down into three parts – each part allowing people to answer three questions that shape their ability to navigate.



Section 1 — What is Wayfinding?

As we move through a city, we often feel a sense of place — that the city, or places within the city, have an identity or character. This sense of place, is about telling the story of the place and is known as placemaking. Placemaking is about understanding the history, personality and character of the place and wayfinding is a key contributor to that experience. For example, wayfinding could help you navigate to City Centre and identify key destinations, while other placemaking elements could communicate the dynamic, urban vibe of the area.

One of the simplest ways to support both wayfinding and placemaking is through signage. Signage can direct people through a place, identify a place and tell the story of the place.



Example of signage in support of wayfinding (Roosevelt Island)

Clear directional information allows people to orient themselves, directs and identifies key destinations.



Example of signage in support of placemaking (Canalside)

While maps allow people to orient themselves to their surroundings, design elements drawn from the personality and character of the place support placemaking.

Signage and Beyond

Signage helps navigation by providing information on the three primary wayfinding needs: orientation, direction and destination, allowing individuals to find their way from a point of entry all the way to a specific location. In a city, signage not only aids in navigation but helps create a sense of place, in support of the city’s story, and also by acting as a representation of the city’s values, identity and character.

A comprehensive signage program includes a range of sign types including directories, directional signs, identification signs, maps, and trail signs. It considers various modes of transportation including pedestrian, vehicular, cycling and public transit.

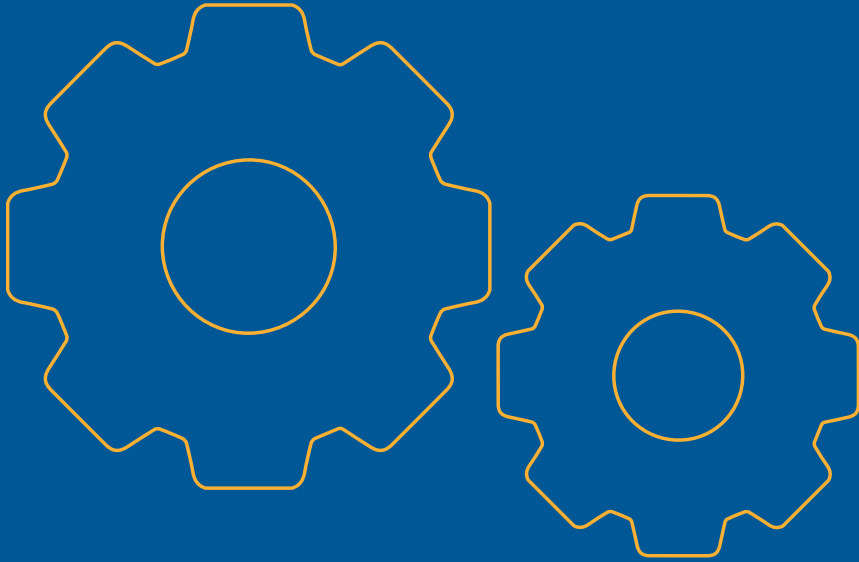
Wayfinding is not just about signs. It’s a whole system that uses many different elements to help people find their way. These include noticeable buildings, landmarks or public art, spoken directions, maps and brochures, and digital tools and technology. All these parts work together to make navigation easier and provide identity and character to a city.

Digital content in particular, presents an opportunity to provide a personalized wayfinding experience, offering significant value. Whether through an online map, a mobile application, a digital kiosk or a QR code on a static sign, digital information creates an elevated experience through dynamic content, and presentation of multiple layers of information that may not be possible on static signage. The personalization provided by digital content also has the ability to create a more accessible and inclusive experience by allowing users to increase size or contrast of content or show information in multiple languages.

While the value of digital content is clear when you consider how many of us rely on Google Maps, Waze, and other apps for navigation, it is important to recognize that signage plays an additional and complementary role. Signage provides specific information, such as the exact entrance to a destination and allows the city to communicate directly with residents and visitors. It helps unify the city and serves as a physical representation of the city’s character and identity. It is also worth noting that not everyone has access to smartphone and mobile data, so signage helps create a more equitable and inclusive city.



*Typha by Puya Khahili
and Charlotte Wall*



Tools Built from Strategy

Regardless of the wayfinding tool used, whether it be a sign, a landmark, or an app, it is important to have a wayfinding strategy applied across these tools. This strategy addresses how we communicate directions, what information needs to be provided, informational needs at different points in a person’s journey, how areas are grouped and organized, and what language, nomenclature, and terminology we use. Such strategic decisions are realized and carried forward using a range of tools — both static and digital.

The strategy should focus on supporting the identity of the place by using signs and symbols that reflect the local culture and environment, ensuring that everyone can navigate easily, no matter what tool they prefer to use.

The wayfinding strategy serves as the foundation from which tools are applied to help people find their way. The strategy defines how we think and what we want to accomplish, while tools such as signage are how we will accomplish it.



02



Where Are We Now: Opportunities for the Richmond Wayfinding Experience

An effective wayfinding strategy responds to the particular needs and challenges of an environment while boosting existing opportunities. Key observations regarding the current Richmond experience have been developed from a public engagement process as well as from a needs assessment and gap analysis report.

1. **Opportunity: Enhance intuitive wayfinding and accessibility.**

The current wayfinding system can be improved for better ease of use and to ensure that signage across the city meets accessible and inclusive design best practices.

2. **Opportunity: Establish a unified Richmond character and identity.**

The character and identity of Richmond and its individual neighbourhoods can be communicated and supported by wayfinding and a signage program with visual language that is consistent from one location to another.

3. **Opportunity: Leverage existing road network.**

The existing grid-based road network provides support for an intuitive wayfinding experience.

4. **Opportunity: Implement clear destination hierarchy.**

A destination hierarchy is used on signage to present the appropriate information in order of importance and proximity. Key or primary destinations are presented first followed by secondary and then tertiary destinations. Implementation of a clear destination hierarchy in Richmond will ensure key destinations are identified and encourage people to discover them.

5. **Opportunity: Enhance Richmond's welcome experience.**

Enhancing Richmond's gateway signs could provide an elevated welcome experience and strong, positive first impression for visitors, while also supporting community pride.

6. **Opportunity: Improve wayfinding in key areas and to key destinations.**

City Centre and Steveston were identified during public and stakeholder engagement as example areas within Richmond where wayfinding to priority destinations and parking could be improved through consistent and well-designed wayfinding.

7. **Opportunity: Enhance the City Centre wayfinding experience using well-designed and positioned signage.**

City Centre is a complex area undergoing much planned or in-progress development. A well-planned and consistent wayfinding experience can strengthen the experience in the City Centre as a key urban area in Richmond.

8. **Opportunity: Support neighbourhood and area character and identity.**

Richmond consists of many distinct neighbourhoods and areas of interest with unique offerings. Wayfinding can support and strengthen these areas through signage and other wayfinding elements.

9. **Opportunity: Ensure that the signage and wayfinding information in Richmond caters to various modes of travel, accommodating the needs of pedestrians, cyclists, drivers, and public transit users alike.**

Richmond residents and visitors move through the city in multiple ways, including walking, cycling, on buses and trains, and in vehicles. Wayfinding can support all travel modes while also encouraging the use of active transportation such as walking and cycling to explore the city.

03



Wayfinding Guiding Principles

Informed by extensive community engagement, best practices and endorsed by City Council¹, the following six principles serve as the foundation for the design of an intuitive, accessible, and ultimately successful, wayfinding program in Richmond. The strategic recommendations outlined in Section 4 draw upon these foundational principles.

¹ City of Richmond (October 10, 2023) Community Wayfinding Strategy Guiding Principles Retrieved from City of Richmond website https://citycouncil.richmond.ca/agendas/archives/council/2023/101023_minutes.html

1. Clear and intuitive

- Easy-to-understand language, legible typefaces, and simple graphics should be used.
 - Establish consistent use of terminology, nomenclature and visual cues.
 - Position and locate signs appropriately to ensure good visibility and legibility.
-

2. Inclusive and accessible for all backgrounds and abilities

- Employ accessibility best practices regarding contrast, typeface size, and typeface, to ensure improved legibility.
 - Where appropriate, include braille or other tactile elements for those who are experiencing sight loss.
 - Employ pictograms to support an inclusive and accessible experience, as these display information quickly and universally, transcending language barriers and levels of ability.
-

3. Encourage discovery and exploration

- Wayfinding and signage can foster a sense of discovery by highlighting key destinations and making users aware of the wide range of attractions proximate to their current location.
 - Application of unique graphics or other design elements to create an inviting atmosphere and encourage people to explore the area.
-

4. Consider the role of technology in navigation and placemaking

- Explore and enhance the interface between physical and digital elements in helping people move through the city.
-

5. Promote city and neighbourhood character and identity

- Support city place-making with the development of an overarching “Richmond” character for the family of signs.
 - Explore opportunities that allow individual neighbourhoods to communicate their own identity (i.e. a sub-brand or differentiating feature).
-

6. Support local businesses and the economy

- Wayfinding and signage should highlight a range of destinations and attractions, in support of the local economy.

04



Wayfinding Strategic Recommendations

The following eight strategic recommendations are based on the wayfinding guiding principles and opportunities outlined in the previous sections. These recommendations address the specific needs and opportunities identified in the assessment of Richmond’s current wayfinding experience. As these are implemented through future wayfinding initiatives over the long term, it is anticipated that the experience of Richmond will become more unified, easy to navigate, and welcoming for all.

Actionable items support each recommendation and are categorized into two groups: those that can be achieved during the design process (Design Framework Related recommendations) and those that can be achieved during implementation (Implementation Related recommendations). Design Framework Related recommendations describe ways in which the strategy is realized through the design of the signage and other tools, such as aesthetic choices, use of colour, typeface legibility etc., many of which are seen in the subsequent Design Framework. Implementation Related recommendations describe items

that relate to the way in which the strategy is rolled-out and applied to environmental conditions, including factors such as placement, identification of key destinations and exact messaging on signage.

The strategic recommendations are applicable across all wayfinding elements and tools, such as signage, printed materials, digital content, and landmark elements. Any items that are signage-specific are identified as such.





Image from Roosevelt Island

1. Welcoming Experience

Provide a sense of welcome for visitors to Richmond that not only orients people to their surroundings but also identifies amenities and attractions available to them. A city with a well-executed wayfinding program projects a positive image of an organized, welcoming, and accommodating place to visit.

Design Framework Related Recommendations

- a. Develop a gateway welcome sign, to be applied at identified points of entry, to ensure efficacy and impact.
- b. Develop a primary directory sign type to serve as a wayfinding hub positioned at key locations, allowing users to easily orient themselves at the first points of contact with Richmond.
- c. Design signage with both durability and ease of maintenance in mind to ensure it remains attractive and appears well cared for, thus presenting a positive first impression.

Implementation Related Recommendations

- d. Identify and establish clear entry points via both vehicular entry (such as bridge, tunnel and land access points) and public transit entry (SkyTrain stations).
- e. Identify opportunities for the integration of public art and placemaking elements as part of the wayfinding experience to create a sense of community and creative discovery.

2. Accessible and Human-Centred

A well-designed wayfinding program considers the needs of all users, including those with physical, cognitive and sensory disabilities. By putting a focus on human-centred design practices, the wayfinding experience will be intuitive, leading to increased user satisfaction and allowing users to more easily find their way through Richmond.

Design Framework Related Recommendations

- a. Meet all accessibility standards as outlined by Accessibility Standards Canada (ASC) and CSA/ASC B651:234, the Richmond Accessibility Plan 2023-2033 and the City of Richmond Enhanced Accessibility Design Guidelines and Technical Specifications.
- b. Use best practices and research-based guidelines for readability and legibility. These consider viewing distance, driving speed, text size and orientation, contrast, and typeface choices for those who are experiencing sight loss.
- c. Use international symbols, icons and plain language to improve overall clarity and ease of understanding.

Implementation Related Recommendations

- d. Where possible, leverage the existing grid-based street network, creating an intuitive method of orientation.
- e. Consider the use of an expanded digital experience to enhance accessibility, such as auditory information and digital access through complementary tactile tools and content that adapts to meet specific user accessibility needs.
- f. Develop a comprehensive nomenclature list, including destinations and amenities, and ensure consistency across static and digital channels, including Google Maps and other digital sources.

3. Multi-Modal Journeys

Whether walking, biking, using a mobility device, driving or using public transit, people experience Richmond using a range of transportation options. The wayfinding experience needs to allow residents and visitors to move efficiently and freely through Richmond, regardless of their method of travel. A multi-modal strategy supports the overall mobility, livability and environmental sustainability of Richmond.

Design Framework Related Recommendations

- a. Develop a clear and intuitive design that meets the wayfinding needs of various transportation modes, considering factors such as sign position, legibility, character sizing, and messaging.

Implementation Related Recommendations

- b. Study user journeys considering various modes of travel for both residents and visitors, identifying key decision points and the wayfinding information and tools required for a successful experience.
- c. Provide clear signage at transportation hubs and key decision points that show connections between different modes (i.e. the location of and distance to public transportation).



4. Visible and Appropriately Positioned

Careful placement of wayfinding tools ensures visibility, allowing people to easily and effectively find the information they need. Visibility and consistent placement of wayfinding elements enables people to confidently navigate through Richmond and encourages exploration, as they can rely on finding information when needed. Strategic placement also minimizes confusion and ensures that the most crucial information is available precisely when and where it is needed, avoiding information scarcity or overload.

Design Framework Related Recommendations

- a. Apply industry best practices and consider environmental conditions when locating signage, noting factors such as distance from the curb and existing civil infrastructure.
- b. Develop signage placement guidelines to ensure standardized and optimal positioning of signage in future implementations.

Implementation Related Recommendations

- c. Develop journey flow methodology based on placement guidelines to identify key intersections and finalize signage locations.
- d. Position signage at key points of connection to allow for ease of movement between neighbourhoods.

5. Hierarchy: City, Neighbourhoods, Destinations

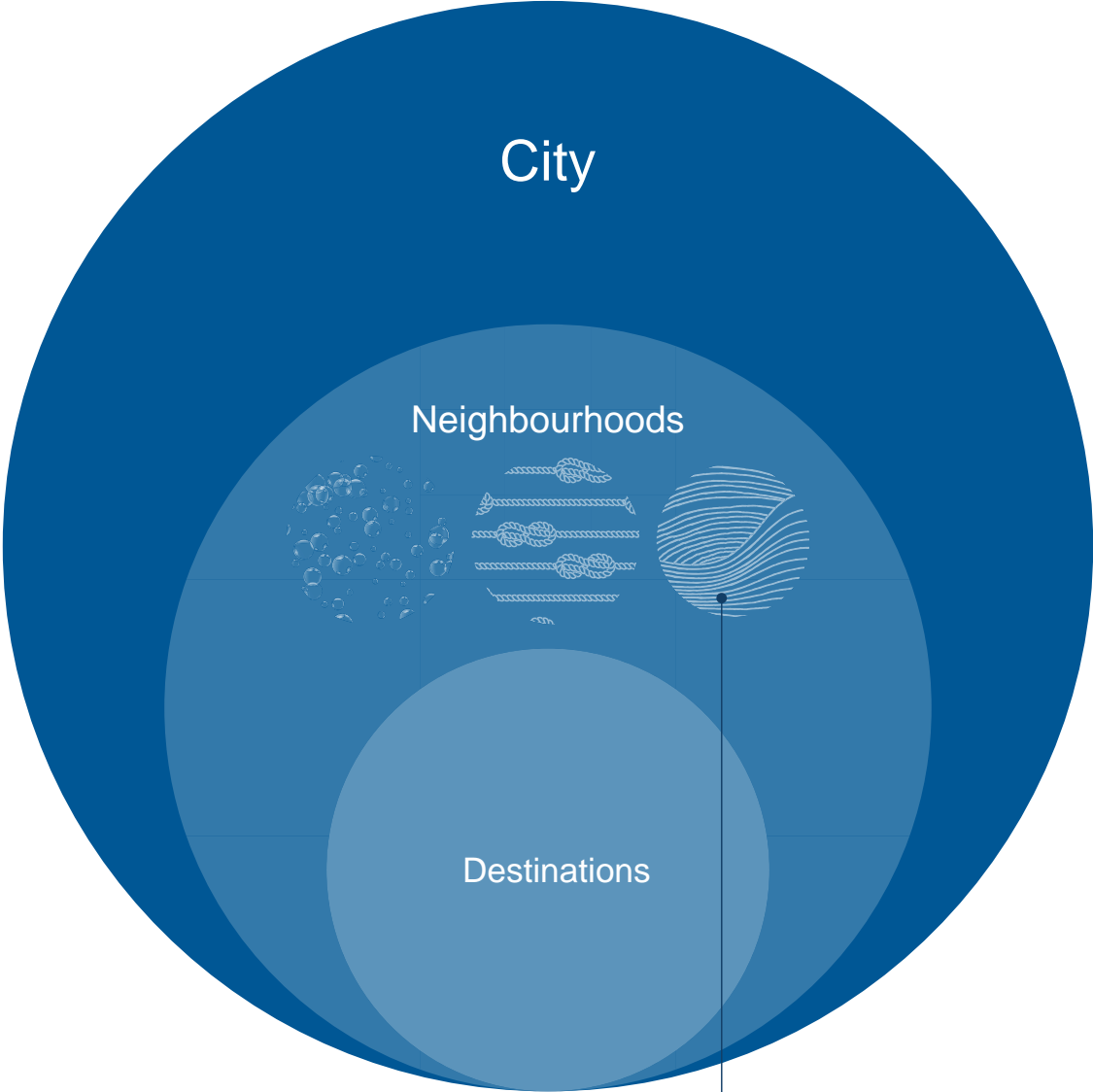
Provide clarity to the wayfinding experience by structuring and organizing wayfinding information into several hierarchical layers, derived from the existing layout and character of Richmond. Beginning at the level of the city, introduce the additional levels of neighbourhoods, followed by destinations. Where appropriate, establish graphic opportunities to express character of areas and points of interest within neighbourhoods. This allows wayfinding information to be grouped into more manageable chunks, simplifying the wayfinding experience, while also providing the opportunity for areas to express their unique character and identity.

Design Framework Related Recommendations

- a. Maintain a consistent design hierarchy throughout the wayfinding system. Use design elements such as typefaces, colours, and patterns to visually indicate the level of information (city, neighbourhood and destination) on each sign.
- b. Adjust the level of detail on signs according to their position in the hierarchy. Gateway or entry signage should be more general, while neighbourhood-level signs can offer more specific information.

Implementation Related Recommendations

- c. In neighbourhoods or districts, where appropriate, develop a clear information hierarchy and introduce the local area's name and any significant landmarks or attractions within that neighbourhood. An example of a local area could be the Richmond Arts District.



Patterns distinguish the character or a point of interest within the neighbourhoods.

6. Unify and Localize

Develop signage program that provides a unified and coherent visual identity throughout the city, while allowing individual areas and neighbourhoods to communicate their unique character, identity and offerings. By creating a consistent signage program, we will establish a sense of unity that helps users recognize and trust the wayfinding system. At the same time, allowing localized variations permits individual areas to maintain their distinctive character. This approach strikes a balance between cohesion and preserving the unique identity of neighbourhoods, enhancing the overall experience.

Design Framework Related Recommendations

- a. Develop a cohesive visual design that represents the entire city of Richmond. This design should include core elements like typeface, colours, and symbols that can be used for physical and digital wayfinding.
- b. Ensure that certain core design elements, such as the use of colour, materials, and layout structure, provide a consistent visual language for signage in Richmond.
- c. Create design guidelines that outline specific elements unique to each neighbourhood or area. This will add a personalized touch to signage while maintaining a unified structure.

Implementation Related Recommendations

- d. Identify areas and develop visual content that can be used in support of these areas, as outlined and allowed by the design framework.
- e. Engage local communities and interested parties in the design and selection process, allowing them to contribute ideas and preferences for signage that reflects the identity of their community.

7. Design: Clear, Identifiable and Timeless

Wayfinding elements should have a timeless design, so they do not become dated. A contemporary design that authentically reflects the identity of Richmond should be easily identifiable and eye-catching, without appearing out-of-place in its surroundings. The design should address both static and digital assets and create a unified experience across platforms and products.

Design Framework Related Recommendations

- a. Develop an aesthetic direction that is modern and fresh, and strategically introduces moments of fun and playfulness (as defined by previous engagement).
- b. Use a simple, clutter-free design that allows for the clear space necessary for legibility.
- c. Develop a visual hierarchy (type size and weight, colour, etc.), allowing for clarity of communication.
- d. Create a distinctive and recognizable design that sets signage apart from other urban elements, making it easy to identify while ensuring it is still perceived as an integrated part of the Richmond environment.

Implementation Related Recommendations

- e. Determine appropriate size and scale of information on signage and digital components based on content type and user requirements.
- f. Consider changeability for information such as directories (digital and static) and maps that may require updates from time to time. A panel system can be used, but the longevity of the signage must still be considered.

8. Versatile, Innovative and Adaptable Digital Wayfinding

A forward-looking wayfinding strategy embraces innovation and a holistic approach to enhancing accessibility, usability, and overall navigation. While the previously discussed recommendations may be realized through static signage, digital wayfinding provides a possible future direction. Digital solutions may include a range of technologies and implementations such as online maps, mobile applications, digital kiosks or QR code on a static sign. Wayfinding solutions should consider both practical wayfinding needs (helping users to find their way) as well as explore opportunities to innovate and position Richmond as a leader in the digital wayfinding experience. Digital wayfinding provides an opportunity to create a more accessible and inclusive experience through personalized information and multi-sensory wayfinding cues, such as auditory information, which can help create a more navigable built environment for everyone. Crucially, acknowledging that technology is always changing and advancing, new technologies should be carefully considered as they become available.

Digital Design Recommendations

- a. Explore the extent to which digital wayfinding can be supported through Google Maps, Apple Maps, and existing digital infrastructure.
- b. Prioritize an intuitive interface, personalized features, and real-time updates to enhance the user experience.
- c. Leverage QR codes at strategic locations and signage to provide quick access to local information, maps, and personalized navigation via a wayfinding app. Ensure that QR codes are easy to scan and offer valuable content.
- d. Leverage digital content in support of an accessible experience by considering features like screen readers, voice commands, auditory wayfinding cues, adjustable contrast and colour, keyboard navigation, and adjustable text sizes.
- e. Establish collaborative opportunities with tech startups and experts to stay at the forefront of wayfinding innovation.

Implementation Related Recommendations

- f. Ensure that the digital wayfinding system seamlessly integrates various modes of transportation, including public transit, cycling, rolling, walking, and vehicles.
- g. Encourage innovation in wayfinding by exploring cutting-edge technologies such as augmented reality (AR) overlays on mobile apps, interactive 3D mapping, kiosk-based wayfinding systems, or digital placemaking moments such as programmable illuminated elements within signage.

Making the Case for Digital and Static Wayfinding

The strategy developed here can be realized through static signage as well as through digital signage and digital content — indeed many of the points are relevant to both static and digital content. Due to cost considerations, clarity of communication, and simplicity of implementation, static signage and information should serve as the baseline solution, while digital signage and information should be considered when the following requirements are met:

1. Frequent updates are needed or real-time information is available

- This can include event information, public notices, traffic updates, transit information, weather updates or emergency alerts.
-

2. Additional and relevant secondary information is available

- There may be times when secondary, non-wayfinding information, such as hours of operation or admission details for a key destination, would be useful to communicate to individuals.
-

3. Clear ownership and source for data and information exists

- While many sources of information exist and many pieces of information could be communicated using digital content, there needs to be a clear understanding of content ownership and source of this information.
-

4. An elevated and memorable experience is desired

- Interactivity, personalization, and dynamic content have the potential to leave a strong positive impression, suggesting that digital content can elevate the experience in certain locations or instances.

Criteria and Strategy for Destination Inclusion on Signage

Since only a limited amount of information can be displayed on a sign, and to avoid overwhelming users, it is not feasible to include every destination or point of interest. By organizing and layering information based on its importance in a typical wayfinding journey, we can clarify what information is included and where it should appear. Primary destinations will appear more prominent on signage and will be on more signs overall, as compared to secondary and tertiary destinations. Tertiary destinations will be least common, and typically found on a small number of signs, usually located closer to their actual locations or at key decision points.

Examples of primary, secondary and tertiary destinations include:

Primary	Secondary	Tertiary
Signature Park National Historic Site Key Civic Building Canada Line Station	Community Park Trail or Greenway Shopping District	Washrooms Bike Share

During the process of implementing wayfinding in a given area of the city, community consultation and user journey mapping will assist in determining the appropriate primary, secondary, and tertiary destinations and sign locations.

Private Institutions and Businesses

While private institutions and businesses may prefer to be included on wayfinding signage, their inclusion presents several challenges:

- There are usually more private institutions and businesses than can reasonably fit on a sign while maintaining legibility and readability.
- Including one private institution or business often raises fairness and ethical concerns, as other businesses would expect to be represented as well.
- Private institutions and businesses sometimes close or re-brand, requiring signage updates, which leads to necessary upkeep and maintenance costs.

For these reasons, businesses are generally excluded from wayfinding signage. However, understanding that private institutions and businesses are key destinations, our hierarchy strategy allows businesses and private institutions to be represented under a broader district or area. A business might be categorized within a specific area, which in turn would be a primary or secondary destination. For example, while the name of a specific restaurant on Food Street would not be included on signage, it could be represented under the umbrella of “Food Street,” which itself could appear on signage.



Where We Want To Be: The Future Richmond Wayfinding Experience

A community wayfinding strategy will have a profound impact on how individuals experience Richmond in the future, transforming it into a more navigable and inclusive place. This strategy utilizes intuitive and well-placed wayfinding elements to help residents and visitors easily find their way to Richmond's many destinations. With a focus on accessible and intuitive information, the strategy will allow everyone to explore the city comfortably.

The wayfinding efforts in Richmond will also involve sharing the city's uniqueness and character. This will enhance the visual appeal of the city and weave a cohesive visual language that celebrates Richmond's identity, while allowing individual destinations and neighbourhoods to express their own identities.

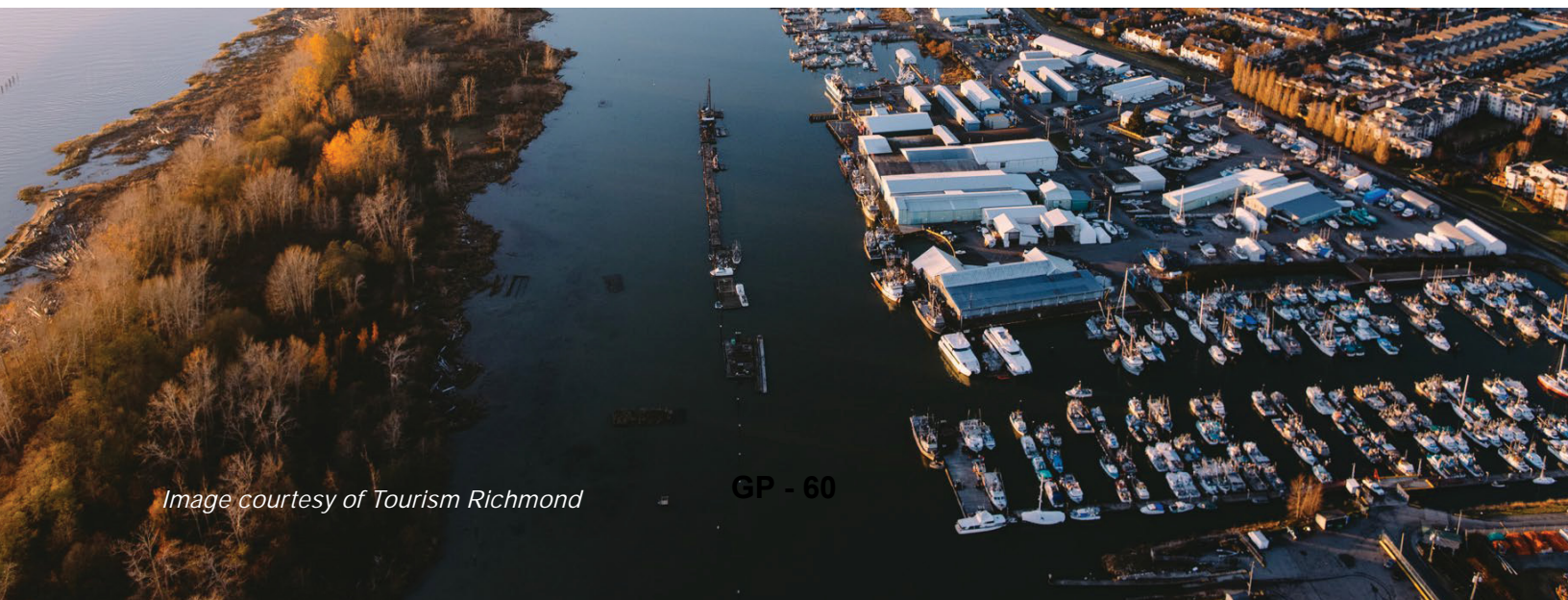
Section 5 – Where We Want To Be: The Future Richmond Wayfinding Experience

While signage will serve as a primary wayfinding tool, digital content such as interactive online maps, QR codes and digital kiosks will provide a deeper, interactive level of content and information. As the strategy is implemented over time, it is anticipated that additional wayfinding elements will be developed, beyond the family of signage outlined in the next section. These elements may include landmarks or public art that help those in Richmond orient themselves and connect to the city. Visitors and residents will have the freedom to choose how to engage with Richmond, whether it be through static signage, digital content, or other wayfinding elements, with the knowledge that their journey will be supported no matter what tools they select and prefer.

It is anticipated that this strategy will be implemented across the city over a period of years using a phased approach. As this occurs, additional work will be required to identify the appropriate wayfinding sign types, locations, and other wayfinding elements for a given area. In areas with protected heritage, such as Steveston, additional work will be required through the implementation process (and which may include separate permits/approvals) to ensure heritage values are preserved and celebrated.

While the aim of this strategy is to help visitors and residents find their way through the city, there is also an opportunity to leverage these design concepts for separate and future projects, such as those related to sharing information about the history or environment of a given area through interpretive signage or at city facilities, among others. Utilizing the strategy in this way can help further unify the experience of Richmond.

As future implementation proceeds, it is anticipated that key areas such as City Centre and Steveston will be further strengthened as vibrant cultural hubs, marked by a clear hierarchy of destinations, paths of travel, points of connection and orientation. The strategy will transform city entrances and introduce wayfinding tools and strategies that make the city more welcoming, help people discover key destinations and attractions, and support multi-modal traffic flow to unite different parts of the city. Overall, Richmond's wayfinding strategy will create an environment that is not only functional but also embodies a sense of cultural richness and pride.



A wayfinding strategy is expected to have several social, economic and cultural benefits:

Improved Wayfinding



Clear and effective wayfinding signage and systems help residents and visitors navigate the city with ease, reducing confusion and frustration.

User-Friendly Experience



A well-designed wayfinding program makes it easier for tourists and newcomers to explore the city, find attractions, and experience its offerings.

Accessibility & Inclusivity



A well-designed wayfinding program considers the needs of all users, including those with disabilities, ensuring a more inclusive and accessible experience.

A Welcoming Experience



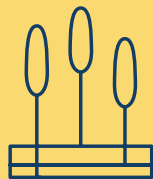
A city with a well-executed wayfinding program projects a positive image of being organized, welcoming, and accommodating, thus improving users' attitudes towards the city.

Economic Benefits



Improved wayfinding encourages people to explore different areas of the city, increasing traffic for local businesses, restaurants, and shops, thus supporting tourism and stimulating the local economy.

Local Culture & Landmarks



Wayfinding can highlight historical sites, cultural landmarks, and local attractions, promoting a sense of identity and pride among residents and visitors.

Multi-modal Transportation



Promoting pedestrian-friendly and alternative transportation, like cycling and public transit, reduces congestion and environmental impact. Wayfinding supports this with clear navigation for walking, cycling, and transit.

Part B

Design Framework



01



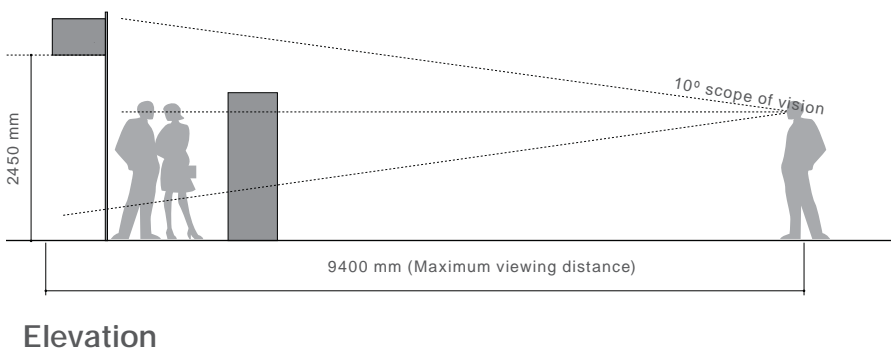
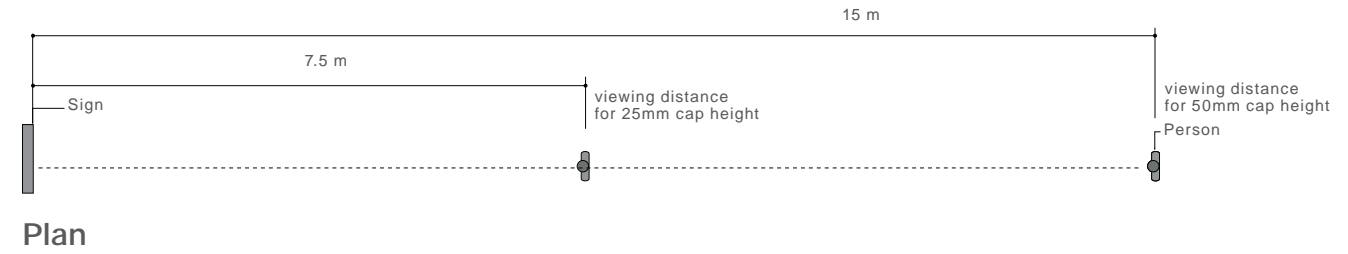
Accessibility & Best Practices

Viewing Distance and Best Practice

Size of visual messages should be based on targeted reading distance and mounting height to ensure readability and legibility. Information hierarchy should be provided through position, colour, and size to differentiate between various levels of message importance.

The suggested minimum cap heights for wayfinding signage should be based on the intended viewing distances of the signs. This may also be dependent on existing conditions and sightlines.

For example, from a viewing distance of 7.5m, the text on a sign should have a cap height of approximately 25mm.



Field of Vision and Speed of Travel

When placing vehicular signs along the street, it's crucial to consider the field of vision of the human eye. Signs should be mounted within the natural angle of vision, which is about 30 degrees horizontally from the vertical centre line of the eyes.

To ensure optimal visibility, the letter height on vehicular signage should be adapted according to the vehicle's traveling speed and viewing distance. The visual character size chart provides suitable recommendations for letter height that align with particular traveling speeds and viewing distances.

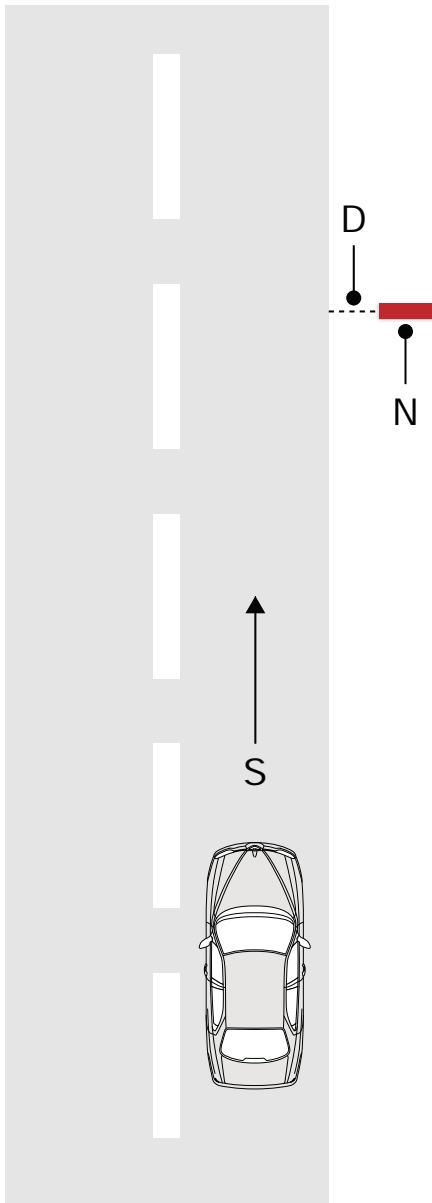
As a general rule of thumb text cap-height on roadway signage should be:

70km/h = 143mm – 190mm (5.6" – 7.5")

30km/h = 68mm – 82mm (2.7" – 3.25")

Note: Sign messaging and placement will be considered in the context of specific location conditions and other standard regulatory sign messaging during the phased implementation of the program. Wayfinding signage will be positioned with priority given to traffic signs.

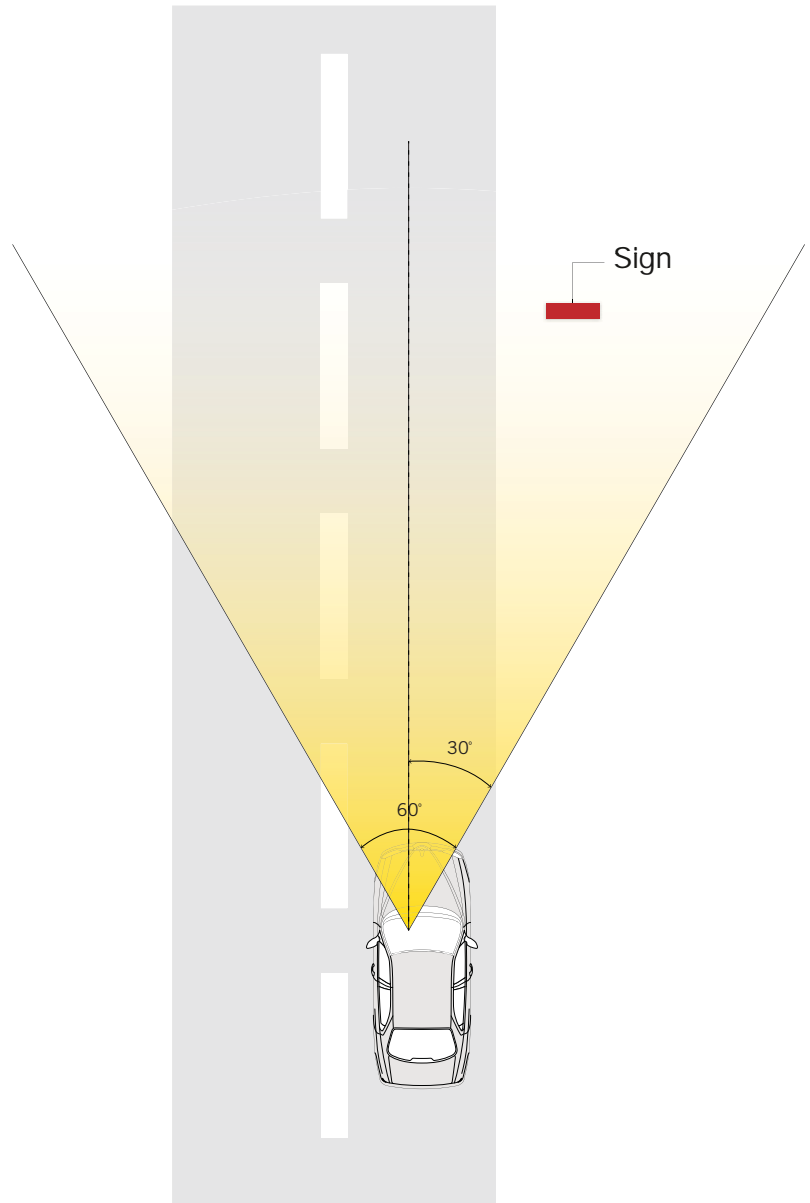
Character height for vehicular signs



$$\frac{(N+6)S}{100} + \frac{D}{10} = H$$

N: Number of Message
 S: Speed Limit
 D: Setback Distance
 H: Height of Letters

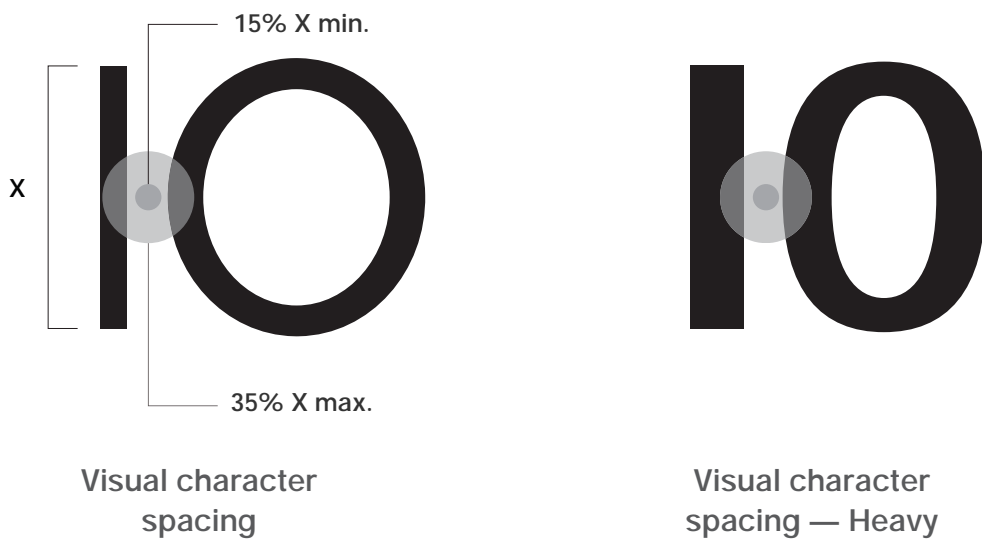
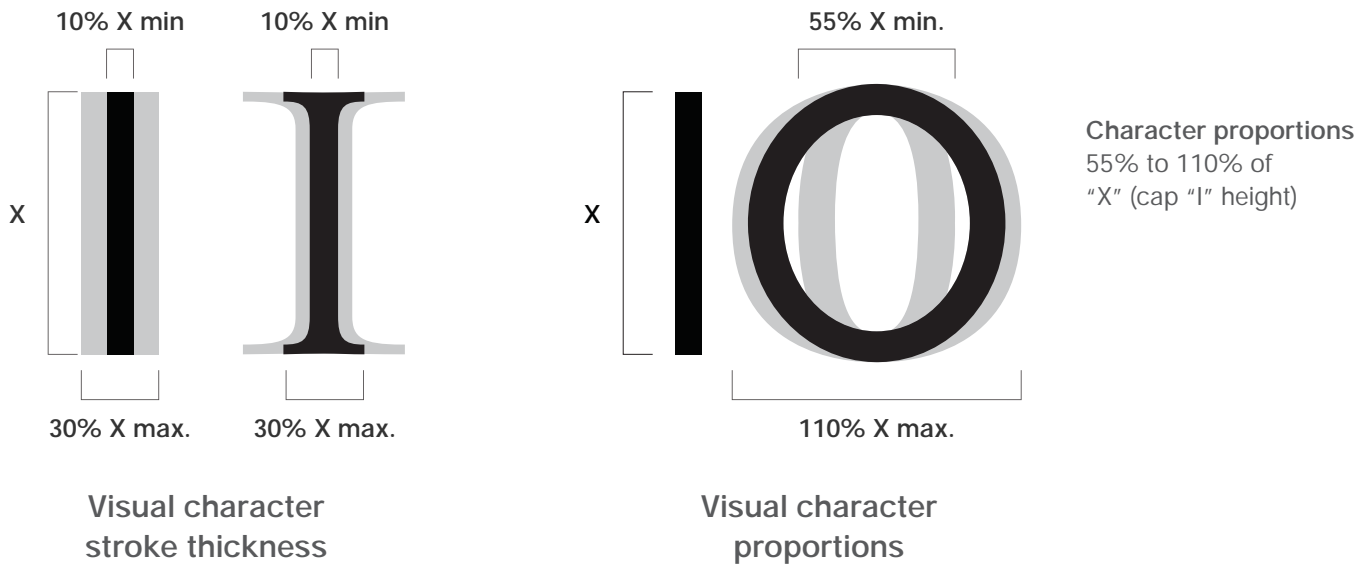
Sign placement and angle of vision



Note: Sign messaging and placement will be considered in the context of specific location conditions and other standard regulatory sign messaging during the phased implementation of the program. Wayfinding signage will be positioned with priority given to traffic signs.

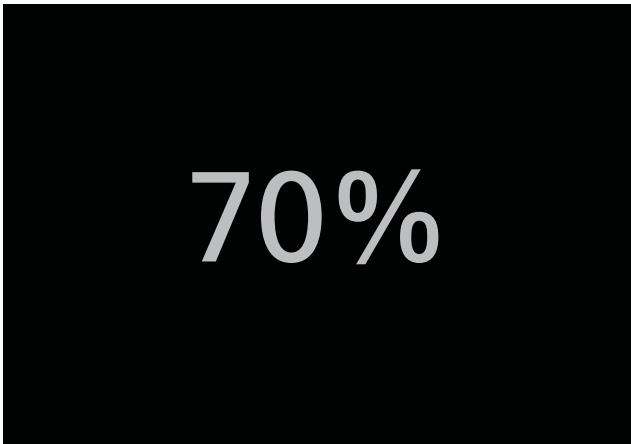
Typography, ADA and CSA Reference

Considering the stroke weight and character spacing for the typeface used in visual messages is essential to ensure readability, compliance with accessibility requirements, and inclusive for individuals with sight loss or reading difficulties. Appropriate stroke weight and visual spacing ensure clear and well-defined characters, promoting easy perception of the text on signage and making it visually impactful.

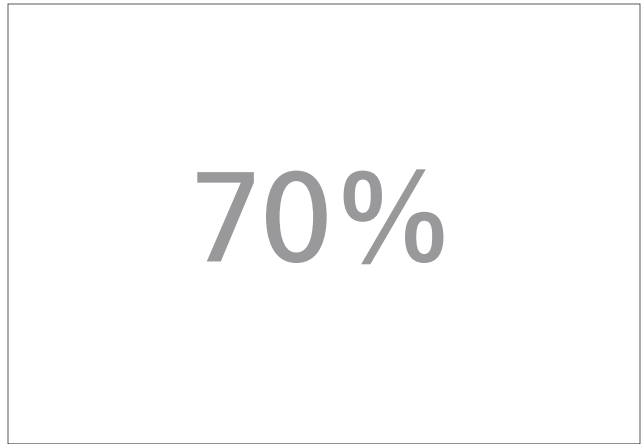


Readability and Legibility — Contrast

To ensure optimal visibility and legibility, it is recommended to display text on a dark background with light-coloured letters for critical wayfinding information, maintaining a foreground/background contrast of 70% for better readability. However, for neighbourhood or area identification, alternate colour schemes—such as dark text on a light background—may be used for distinction. Non-glare sign surfaces are recommended to minimize glare and reflections.



Light characters against dark backgrounds



Dark characters against light backgrounds

Readability and Legibility — Upper vs. Lowercase

Visual messages should be set in upper and lowercase. Mixed-case text on signage enhances readability by aiding word recognition and reducing eye strain, while also providing a more aesthetically pleasing appearance and effectively emphasizing important information.



Richmond Ice Centre

A dashed pink rectangular box surrounds the text "Richmond Ice Centre". The text is in a black, sans-serif font, with the first letter of each word being uppercase and the rest lowercase.

CSA Recommended



RICHMOND ICE CENTRE

A dashed pink rectangular box surrounds the text "RICHMOND ICE CENTRE". The text is in a black, sans-serif font, with all letters being uppercase.

CSA Not Recommended

Nomenclature

Effective wayfinding ensures clarity for users through message organization, hierarchy, and simplified nomenclature.

- To achieve this, terminology should be easily understandable and standardized, promoting consistency.
- Utilizing common language terms in a simple, clear, and consistent manner can reduce message ambiguity, enhance organization, and improve sign readability.
- When identifying destinations on wayfinding signage, it's essential to avoid unnecessary abbreviations.

Pictograms

Incorporate universally recognizable symbols and icons to convey information quickly, especially for multilingual and multicultural audiences. Icons can provide clear direction without relying solely on text. They also present an opportunity to include local charm into the wayfinding, creating a sense of place.



Accessible



Inclusive Washroom



Inclusive Accessible Washroom



Inclusive Accessible Baby Change



Women



Men



Women Baby Change



Men Baby Change



Women Accessible Baby Change



Men Accessible Baby Change



Baby Changing Station



Information



Off Leash Dog Park



Litter Receptacle



Food Services



Pet On Leash



Post Office



Picnic Area



Bicycle Route



Trail



Library



Hospital



Museum



Farmers' Market



Shopping



Marina



Beach



Swimming/Pool



Sailing



Fishing



Train



Bus



Boat Tour



Boat Launch



Airport



Basketball



Tennis



Parking



EV Charging Station



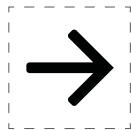
Rideshare

Arrows

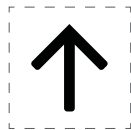
The following are the standard set of arrows used for directional signage.



Left



Right



Up-ahead



Up-left



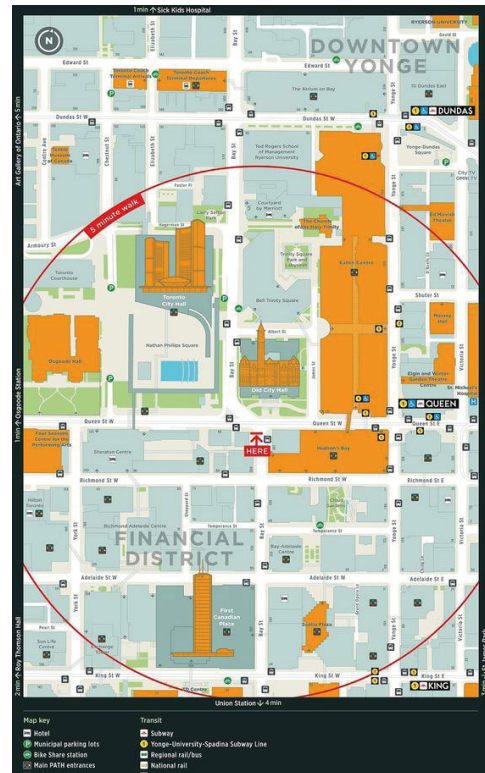
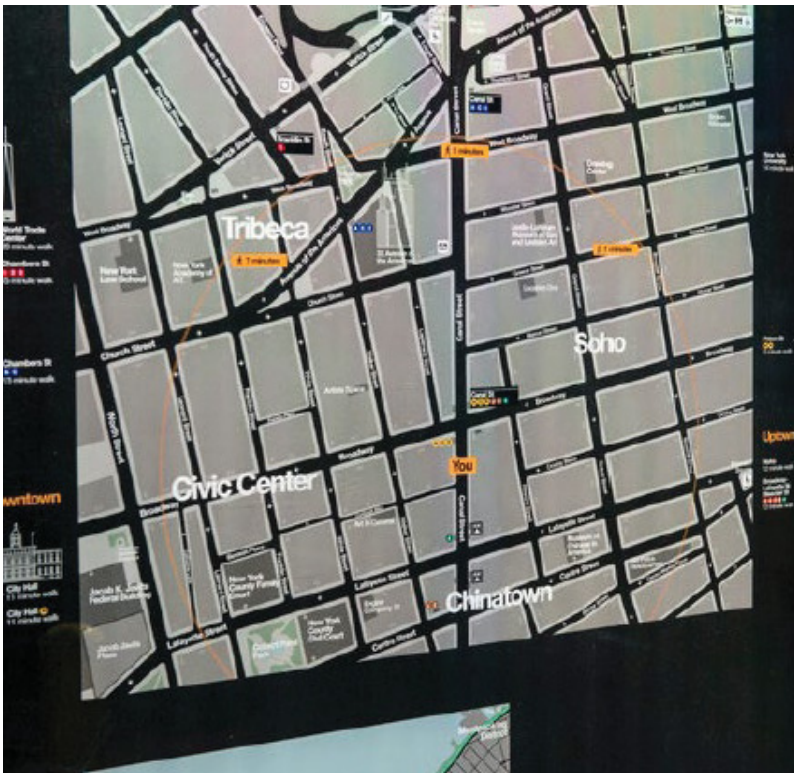
Up-right

If multiple arrows are applied to a directional sign in a vertical stack, they are to be in the following order:

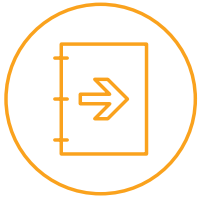
1. Left
2. Right
3. Up-ahead
4. Up-left
5. Up-right

Heads-Up Map

“Heads-up” orientation corresponds to the direction the user is facing (WalkNYC). Map is rotated to match the user’s viewpoint based on sign location.



02



Wayfinding Signage Design & Guidelines

Typography

The Frutiger typeface family has been selected for use on all wayfinding and signage applications. Frutiger is a sans serif typeface that is easy to read in both upper and lower case. It performs well on screen and is machine readable for language translation software and apps.

Frutiger Regular

Frutiger Regular is used for listing destinations on directional and directory signage.

Frutiger Bold

Frutiger Bold is used for identifying neighbourhoods on signage.

Typeface substitutions are not permitted.

It is the responsibility of the appointed fabricator to purchase the typefaces.

Regular and Bold weights are to be used on signage as indicated on each sign type design drawing. No additional typeface styles to be added.

Materials Index

Wood-Stamped Concrete

Combines the warm texture and appearance of wood with the durability and low maintenance of concrete, offering a long-lasting solution.

Anti-Graffiti Coating

Protects sign surfaces from vandalism, allowing graffiti to be easily removed without damage, maintaining the sign's appearance and reducing maintenance costs.

Painted Aluminum Sign Box and Changeable Panels

Aluminum is a sustainable building material known for its longevity and infinite recyclability. Its lightweight, durable, and corrosion-resistant properties make it an ideal choice for outdoor signage, while changeable panels offer the flexibility needed for easy updates.

White Translucent Acrylic Push-Through Logo for Welcome ID Signs

This integrated design has internally illuminated letters, providing a sleek, modern appearance with enhanced nighttime visibility and low maintenance.

Reflective Vinyl Text for Vehicular Directionals

Reflective vinyl ensures signage is visible to drivers in low-light conditions by reflecting vehicle headlights, improving legibility and safety.

Changeable Digitally Printed Vinyl for Localization Patterns

Allows for customizable designs, reflecting local artwork or seasonal updates without altering the structure of the sign.

Digitally Printed Text and Graphics for Pedestrian Signage

Provides high-quality, customizable images and text. This UV-resistant printing method keeps colours vibrant over time and is cost-effective for pedestrian signage.

Brand Identity

Where the Richmond logo is used in wayfinding, a reversed version is recommended.



City of Richmond logo in reverse



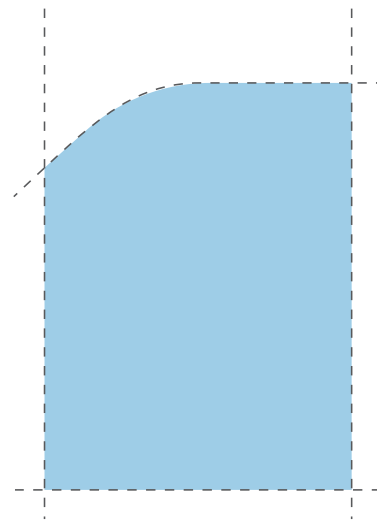
City of Richmond logo in reverse + slogan

Form Inspiration

The form and shape of the signage family is inspired by both the curve of the heron logo and ocean waves, as a nod to Richmond's coastal surroundings.



Heron form – City of Richmond logo



Wayfinding sign form inspiration

Family of Products – Colour Option 1

Family of Products – Colour Option 1

Design Approach:

- Brand colours from both the City of Richmond and Tourism Richmond are used in this option. The blue colour of the information panel has been darkened to improve legibility for the wayfinding program.
- Richmond’s brand yellow is chosen as an accent colour for signage, complementing the primary blue, drawing attention, and serving as a beacon for wayfinding. It provides a high level of contrast with the blue and aligns with Richmond’s core brand colours, ensuring consistency and legibility.
- Natural tones thoughtfully complement Richmond’s diverse landscapes (cityscapes, waterfronts, farmlands, and rural areas) creating a visually cohesive and inviting atmosphere. These tones enhance the city’s rich emphasis on art and heritage, integrating seamlessly with the environment. By minimizing visual clutter, the wayfinding system maintains a clear and unobtrusive presence, offering a subtle contrast that stands out without overpowering the surroundings.
- Natural tones are less prone to fading, which reduces the frequency of maintenance needs over time and ensures the wayfinding system remains in good condition longer.
- This option celebrates the elements and form of the heron logo while allowing flexibility and providing means to future-proof against potential brand evolutions.

Colour Option 1

The City of Richmond offers many stunning views, including lively cityscapes, tranquil waterfronts, beautiful farmlands, peaceful rural areas, and cascading mountains. The colours chosen for the wayfinding program are inspired by both the surrounding landscape, and the City of Richmond and Tourism Richmond brand colours.



Colours used for the wayfinding program



City of Richmond Brand Colours



RED
PMS 485C
CMYK 0,95,100,0



Yellow
PMS 137C
CMYK 0,35,90,0



Light Blue
PMS 3005C
CMYK 100,34,0,2



Green
PMS 355C
CMYK 94,0,100,0

Corporate Colour



Blue
PMS 647C
CMYK 100,56,0,23



Blue
PMS 485C
CMYK 0,95,100,0

Adjusted to be darker to improve legibility and display above the minimum required 70% contrast between message and background.

This achieves 80% contrast.

Tourism Richmond Brand Colours



Golden Sunrise
PMS 124 C
CMYK 0,30,100,0



Deep Blue
PMS 316 C
CMYK 93,56,52,36



Orca Black
PMS Black C
CMYK 0,0,0,100



Spirit Bear White
PMS White C
CMYK 0,0,0,0

Secondary Colours



Beachfront Sand
PMS 2001 C
CMYK 0,3,48,0



Shore Blue
PMS 563 C
CMYK 50,10,29,10



Lichen Green
PMS 2276 C
CMYK 48,23,74,2



Salmon Red
PMS 7608 C
CMYK 20,80,75,20



Winter Night Grey
PMS 425 C
CMYK 0,0,0,85

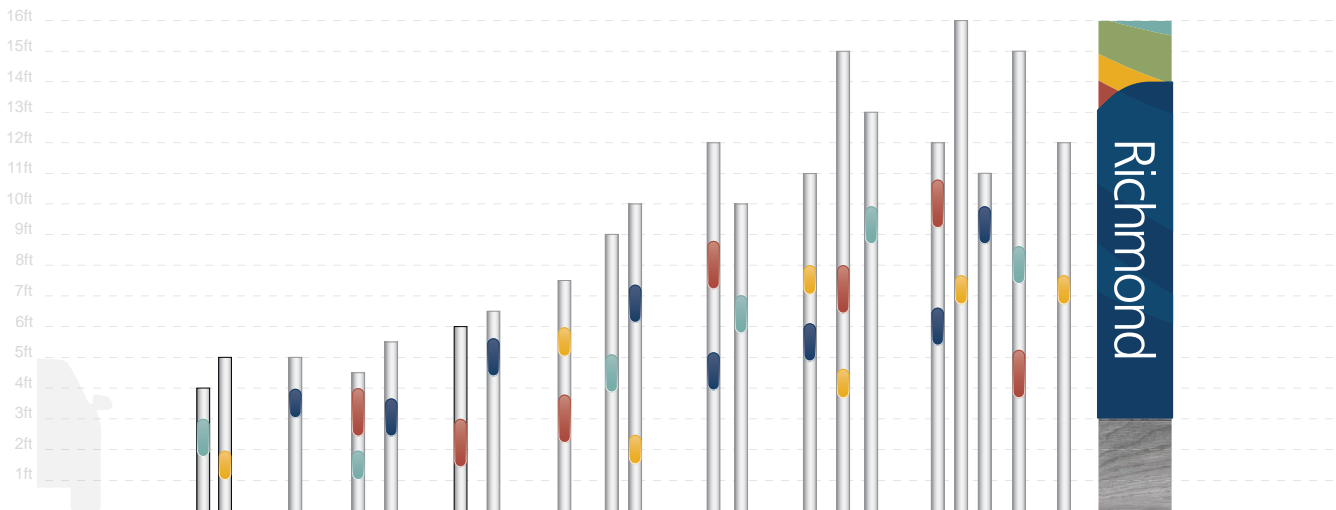
Family of Products – Colour Option 1

The following is an overview of the six sign types that form the wayfinding family of products for Richmond.

These have been categorized by function:

- “A” sign types for gateway entry signage
- “B” sign types for directional signage
- “C” sign types for directory signage

Note: Refer to the individual signage type description pages for additional details and recommended use of each sign type.



A1 Welcome ID Vertical + Light Poles

Family of Products
Scale 1:75

Section 2 — Wayfinding Signage Design & Guidelines



A2 Welcome ID Horizontal



B1 Vehicular
Directional

B2 Vehicular
Directional –
On Post

B3 Pedestrian
Directional

C1 Pedestrian
Directory

Family of Products
Scale 1:50

Localization Elements on Signage

Localized design elements are crafted to capture the unique character of different areas, including landmarks and cultural features.

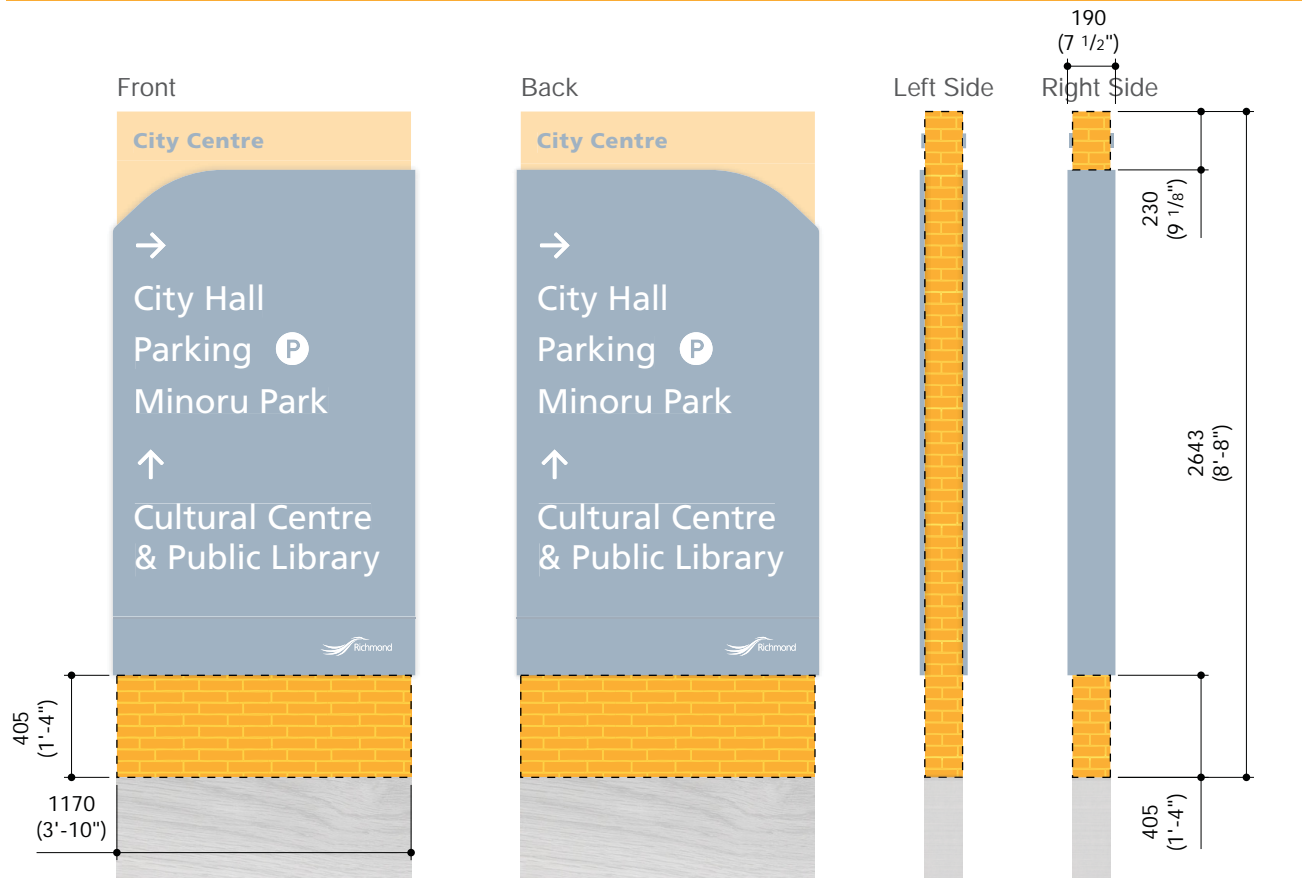
While the primary goal of the wayfinding program is to provide clear navigational guidance and maintain a consistent visual identity across the city, the tailored localization on signage highlights specific references relevant to each area, enhancing the connection between users and their surroundings.

It is crucial that this element of localization does not detract from the functionality and clarity of the wayfinding signage program. The design and placement of localized elements should be balanced with the practical considerations needed to ensure the signage provides clear and easy-to-read guidance without overwhelming users.

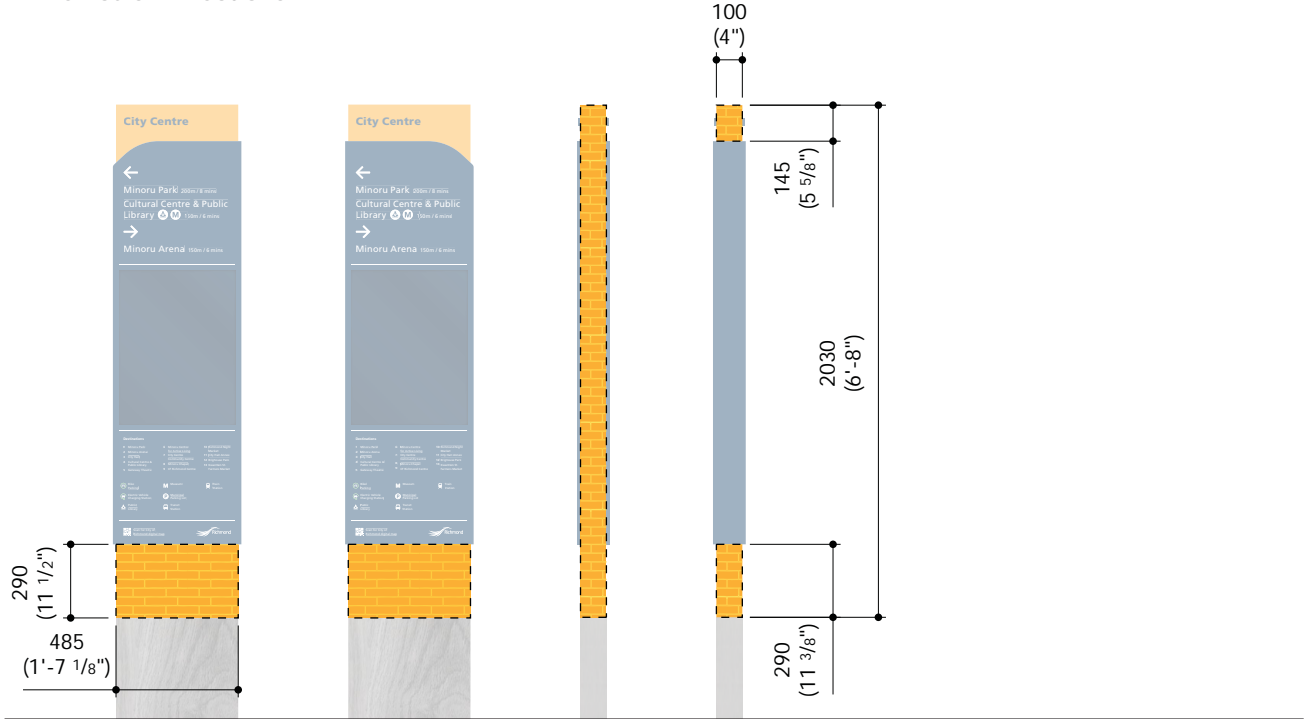
This can be further enhanced through technology, such as QR codes on pedestrian signage, which can offer additional information or context about the localized elements without detracting from the primary navigation function.

By focusing on these aspects, signage can effectively reflect the unique character of different areas while remaining functional and helpful for navigation.

Section 2 — Wayfinding Signage Design & Guidelines



B1 Vehicular Directional



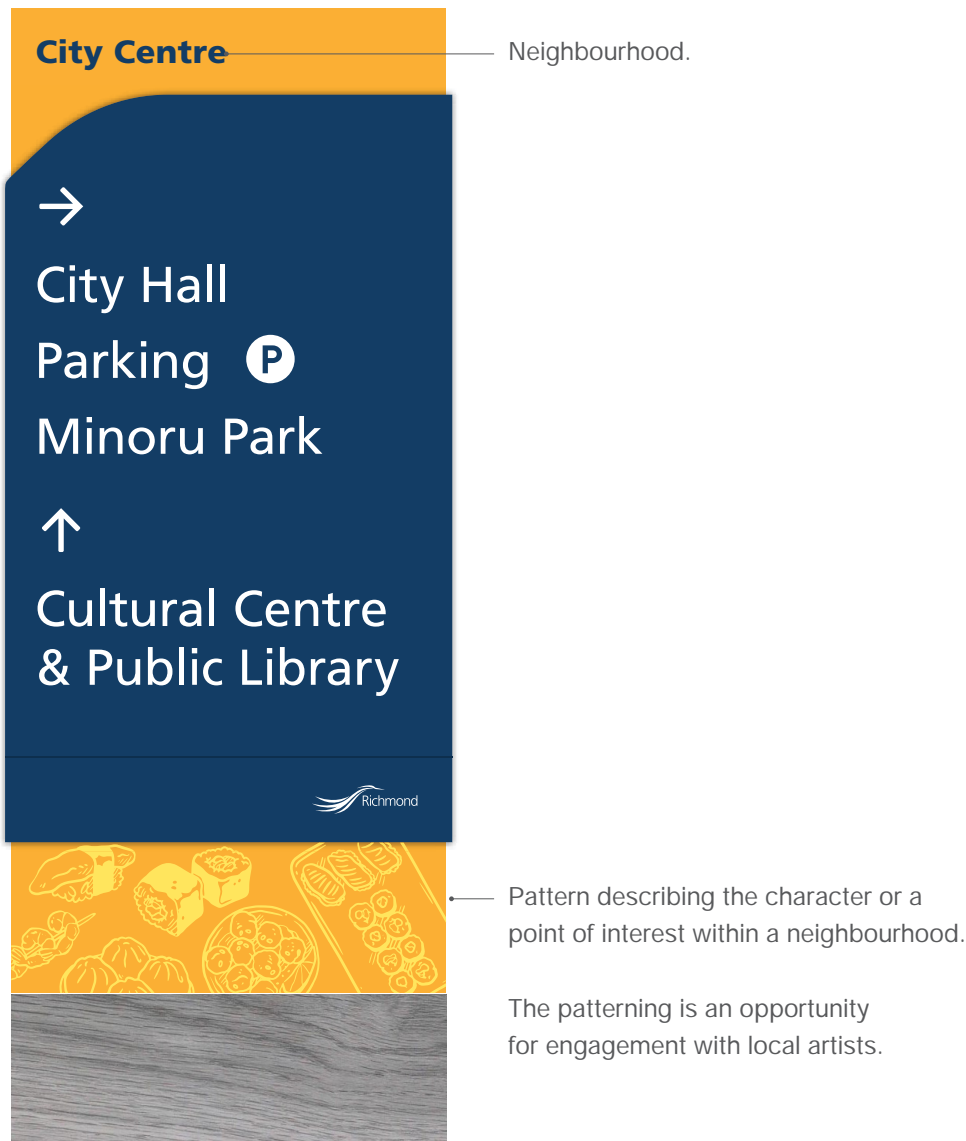
C1 Pedestrian Directory

Localization Surface Area on Signage
Scale 1:30

Localization Elements on Signage

These examples visually demonstrate how signage can effectively reflect the unique character of different areas while remaining functional and helpful for navigation.

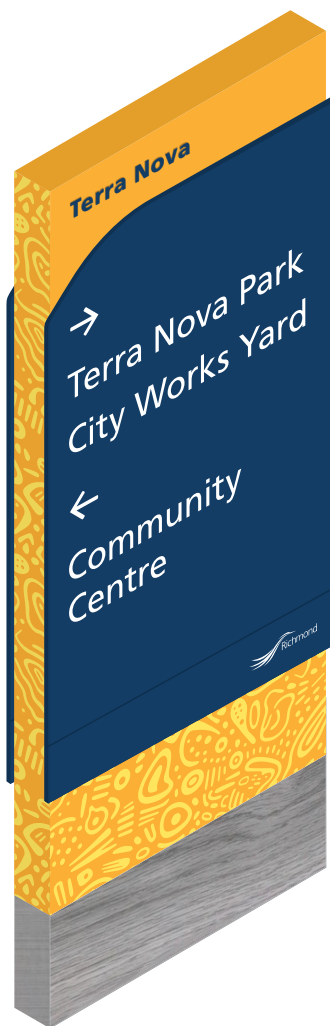
For example, a sign located in the City Center on Food Street might showcase imagery related to the cuisine found along that strip.



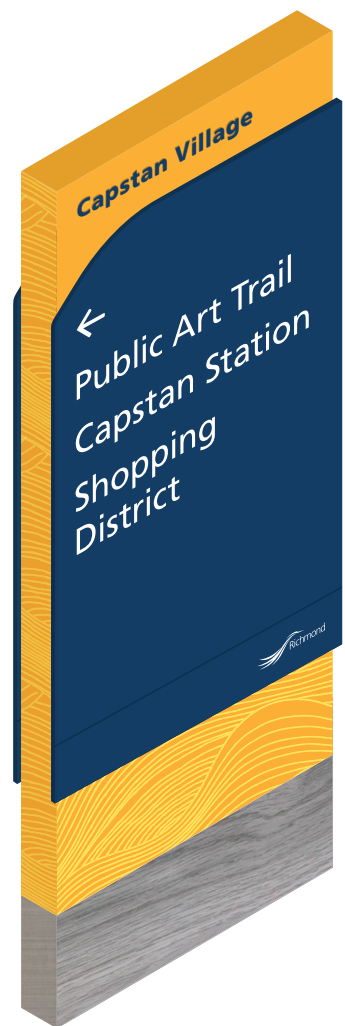
B1 Vehicular Directional
NTS



Example 1



Example 2



Example 3

B1 Vehicular Directional – Localization Element on Signage
NTS

Note: Messaging and graphics are for representation only.

Expanding Localization Beyond Signage

To build a comprehensive placemaking program with localized signage elements, the focus should be on creating an environment that reflects each neighbourhood's unique character while strengthening overall community identity.

This can be achieved by weaving local design elements into various aspects of the public realm, including signage (as illustrated in previous page), street furniture, and public art, to craft a cohesive and engaging atmosphere.

By engaging residents, artists, and even local businesses in the design process ensures that the program resonates with the community's essence.

Example Case Study

Nicollet, Minneapolis

Identity and signage for Central Avenue and destinations in downtown Minneapolis.

A brand identity and comprehensive program of signage, wayfinding, and environmental graphics for Nicollet that capture the spirit of the street and its place in the city. The Nicollet logo is treated as a pattern and used in various applications, including ground graphics, street furniture design, and print and digital media.

Refer to project: <https://www.pentagram.com/work/nicollet/story>



Project by Pentagram

Family of Products – Colour Option 2: Brand Forward

Family of Products – Colour Option 2: Brand Forward

Design Approach:

- This design option is a brand-forward approach, prominently featuring the City’s brand colours, the heron logo and slogan.
- These bright colours align with the Richmond brand. However, brightly coloured backgrounds have the potential to visually overwhelm and detract from the wayfinding content of the sign.
- The vibrant colours, when applied to large surface areas, may lose their appeal over time as they are more prone to fading and could require frequent maintenance.

Colour Option 2

City of Richmond Brand Colours



RED
PMS 485C
CMYK 0,95,100,0



Yellow
PMS 137C
CMYK 0,35,90,0



Light Blue
PMS 3005C
CMYK 100,34,0,2



Green
PMS 355C
CMYK 94,0,100,0

Corporate Colour



Blue
PMS 647C
CMYK 100,56,0,23

City of Richmond Logo



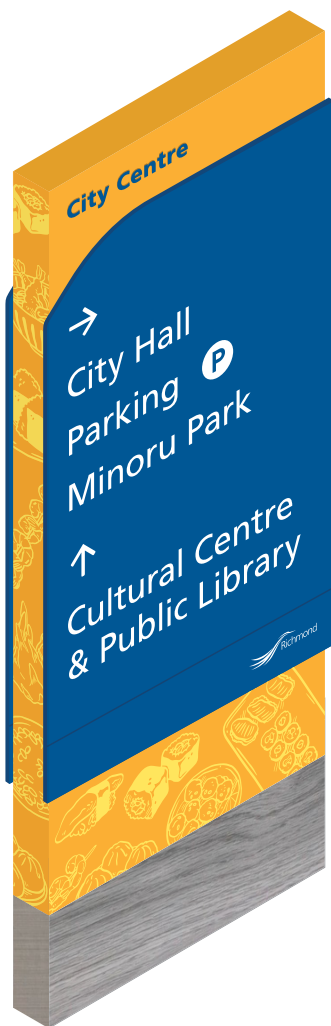
City of Richmond logo
+ slogan



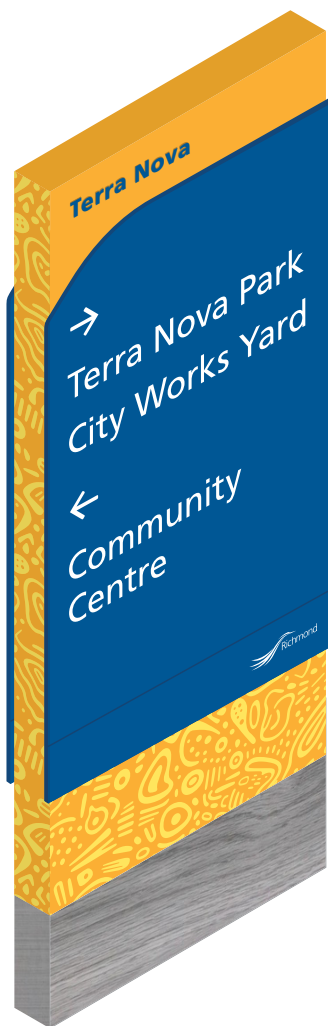
City of Richmond logo in
reverse + slogan

Localization Elements on Signage

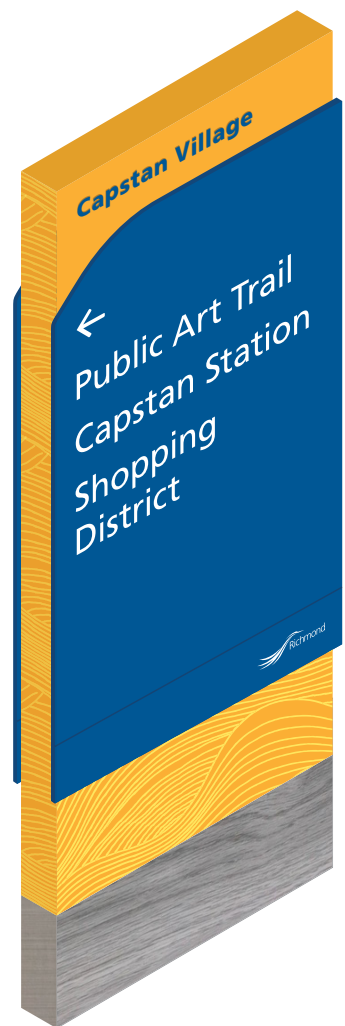
The approach to localization for this option will follow the same strategy as outlined in Colour Option 1.



Example 1



Example 2



Example 3

B1 Vehicular Directional – Localization Element on Signage NTS

Note: Messaging and graphics are for representation only.

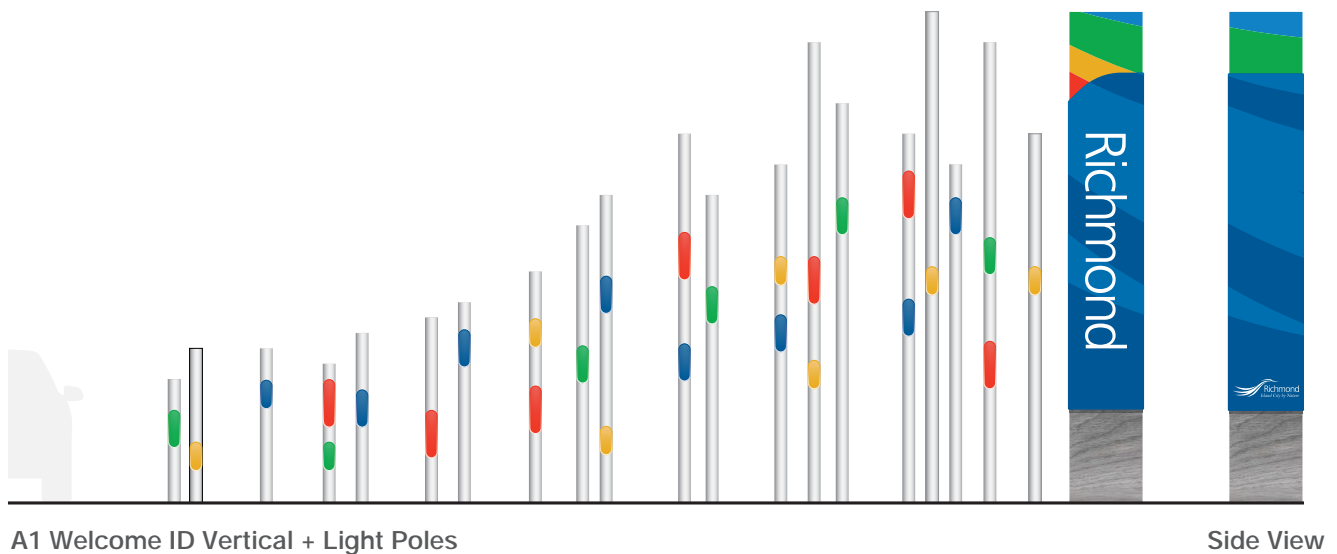
Family of Products – Colour Option 2

The following is an overview of the 6 sign types that form the wayfinding family of products for Richmond.

These have been categorized by function:

- “A” sign types for gateway entry signage
- “B” sign types for directional signage
- “C” sign types for directory signage

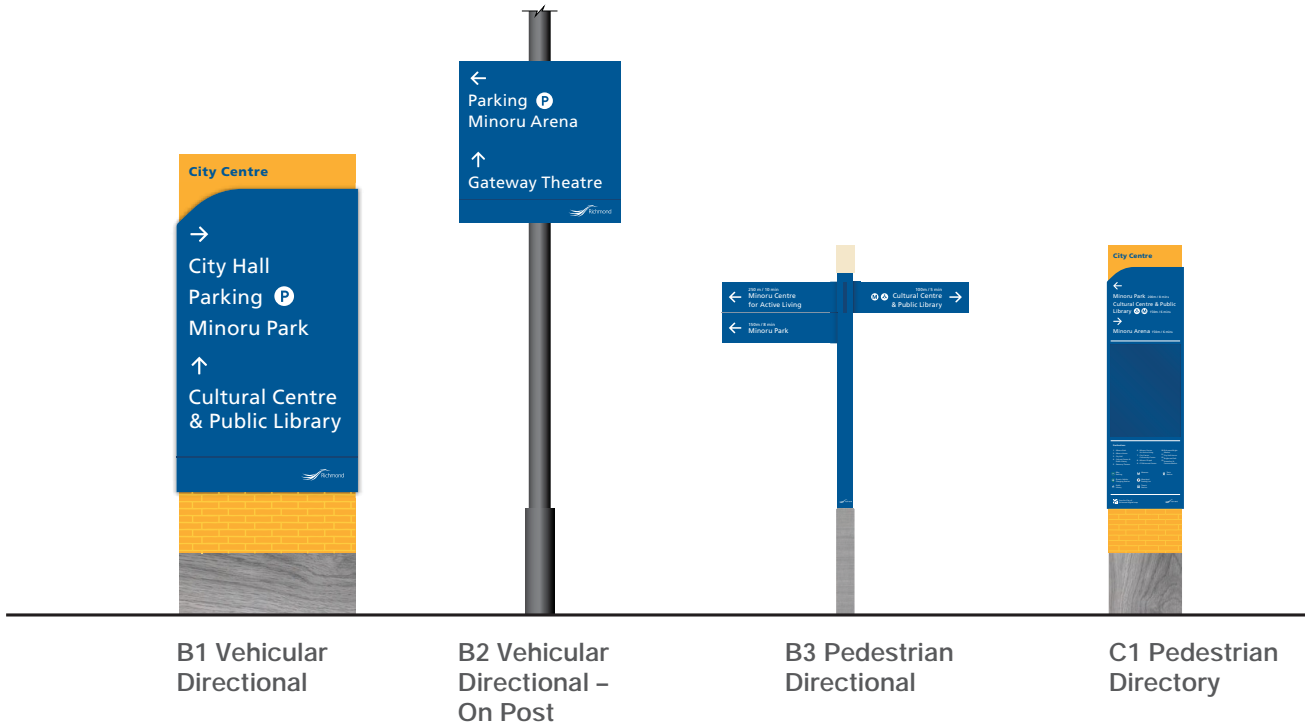
Note: Refer to the individual signage type description pages for additional details and recommended use each sign type.



Family of Products
Scale 1:75



A2 Welcome ID Horizontal



B1 Vehicular Directional

B2 Vehicular Directional – On Post

B3 Pedestrian Directional

C1 Pedestrian Directory

Family of Products
Scale 1:50

Comparing Colour Option 1 & Colour Option 2



A1 Welcome ID Horizontal – Colour Option 1



A1 Welcome ID Horizontal – Colour Option 2

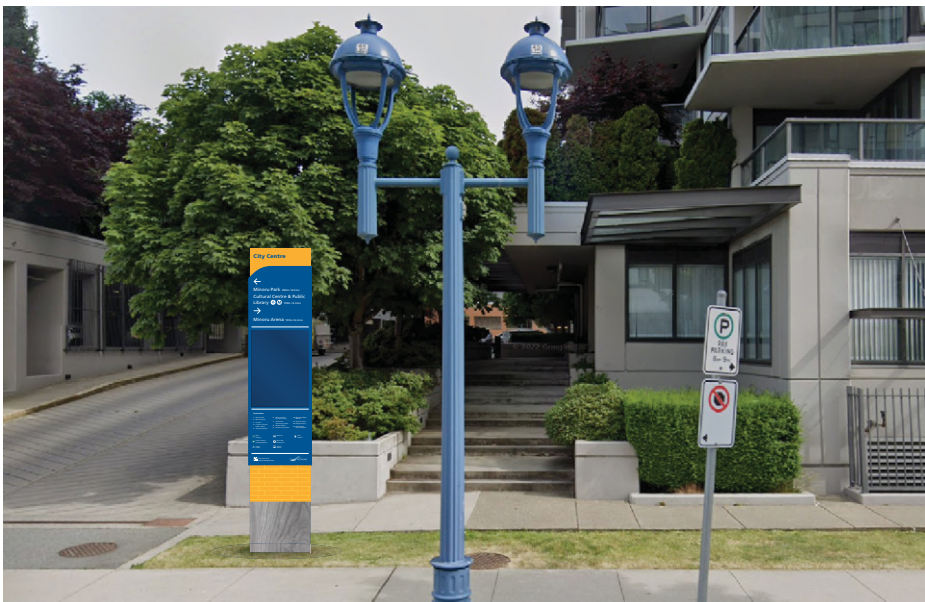
Comparing Colour Option 1 & Colour Option 2

Here we can see how the two colour options work in the Richmond streetscape, alongside the existing blue fixtures.

Note: Locations are for illustrative, colour-study purposes only. Actual locations and messages of signs TBD.



Colour Option 1



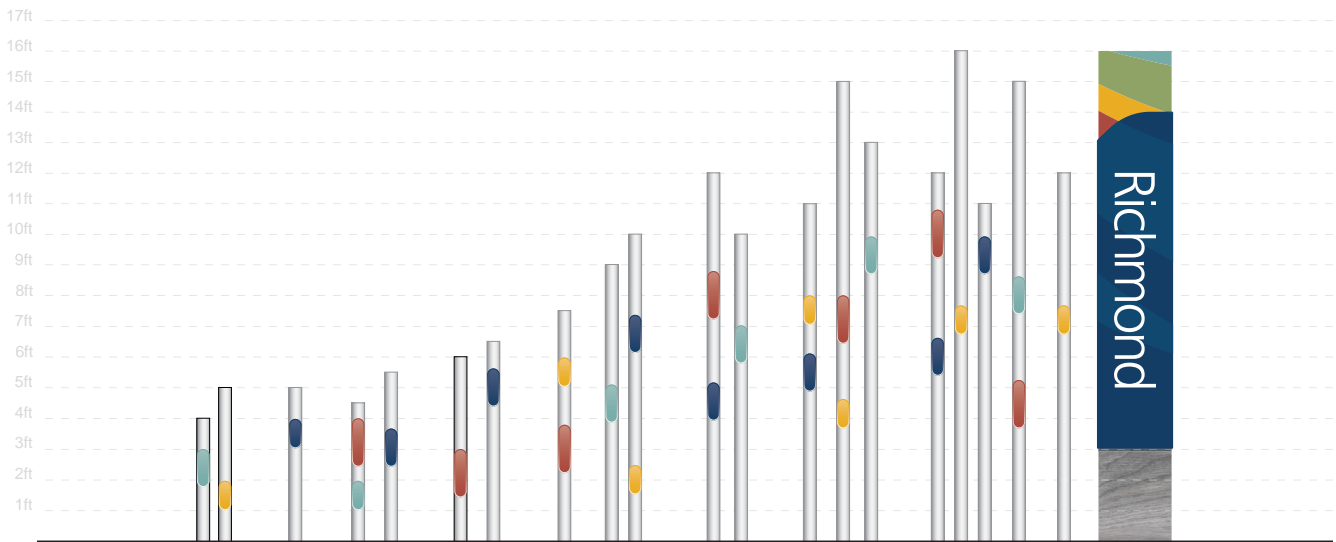
Colour Option 2

Detailed Signage Drawings

Colour Option 1 Shown in Detail Drawings

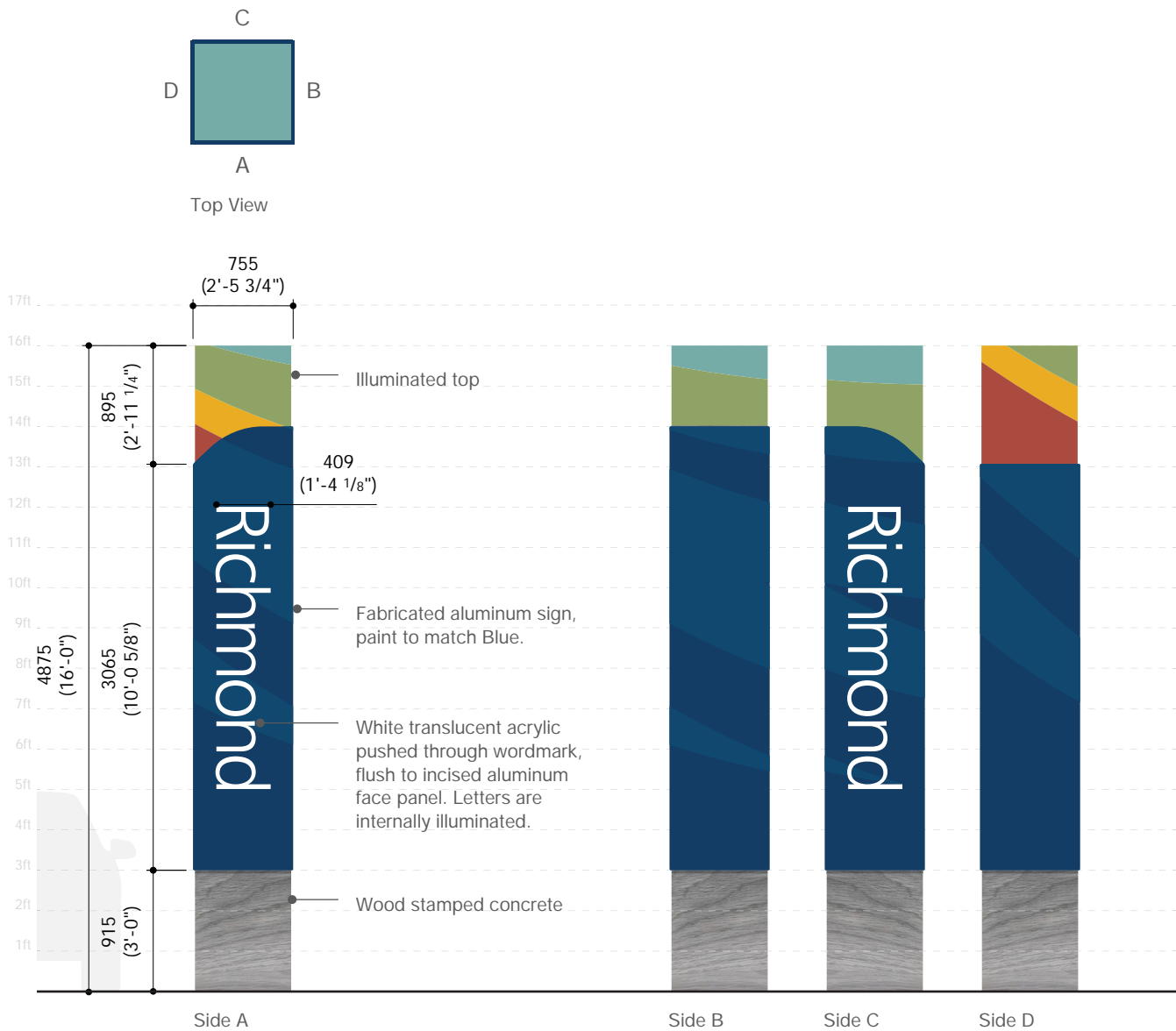
Gateway Entry Signage

Designed to provide a welcoming sense of arrival at primary access locations, these signs help define the boundaries of the City of Richmond. The A1 and A2 gateway entry sign types are developed for use at each entrance based on scale, importance, and available real estate.



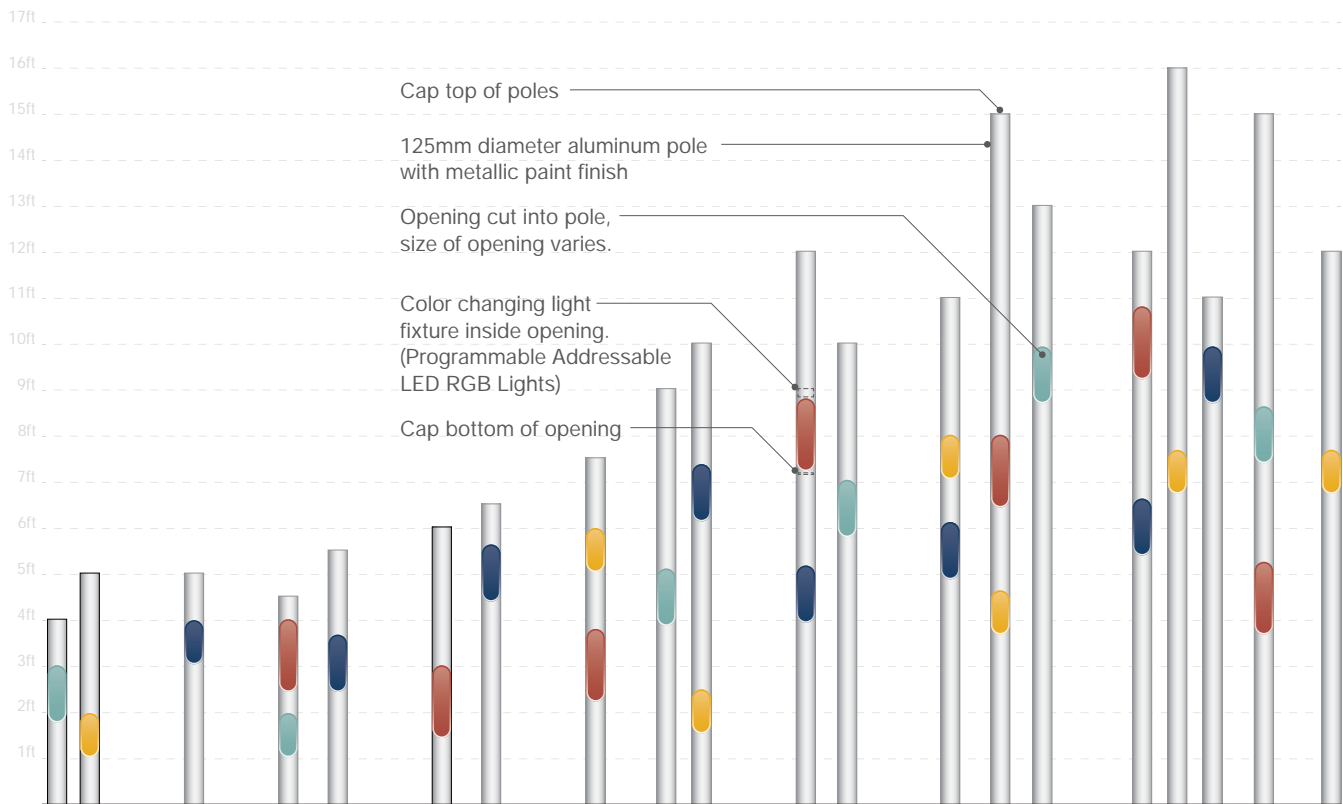
A1 Welcome ID Vertical + Light Poles
Scale 1:75

Displaying a city name vertically enhances visibility and recognition from a distance, much like book spines in a library. Unlike wayfinding information, which needs quick readability from various angles, a vertical orientation helps make the city name more prominent and memorable. Integrated illumination further enhances visibility at night and in inclement weather.

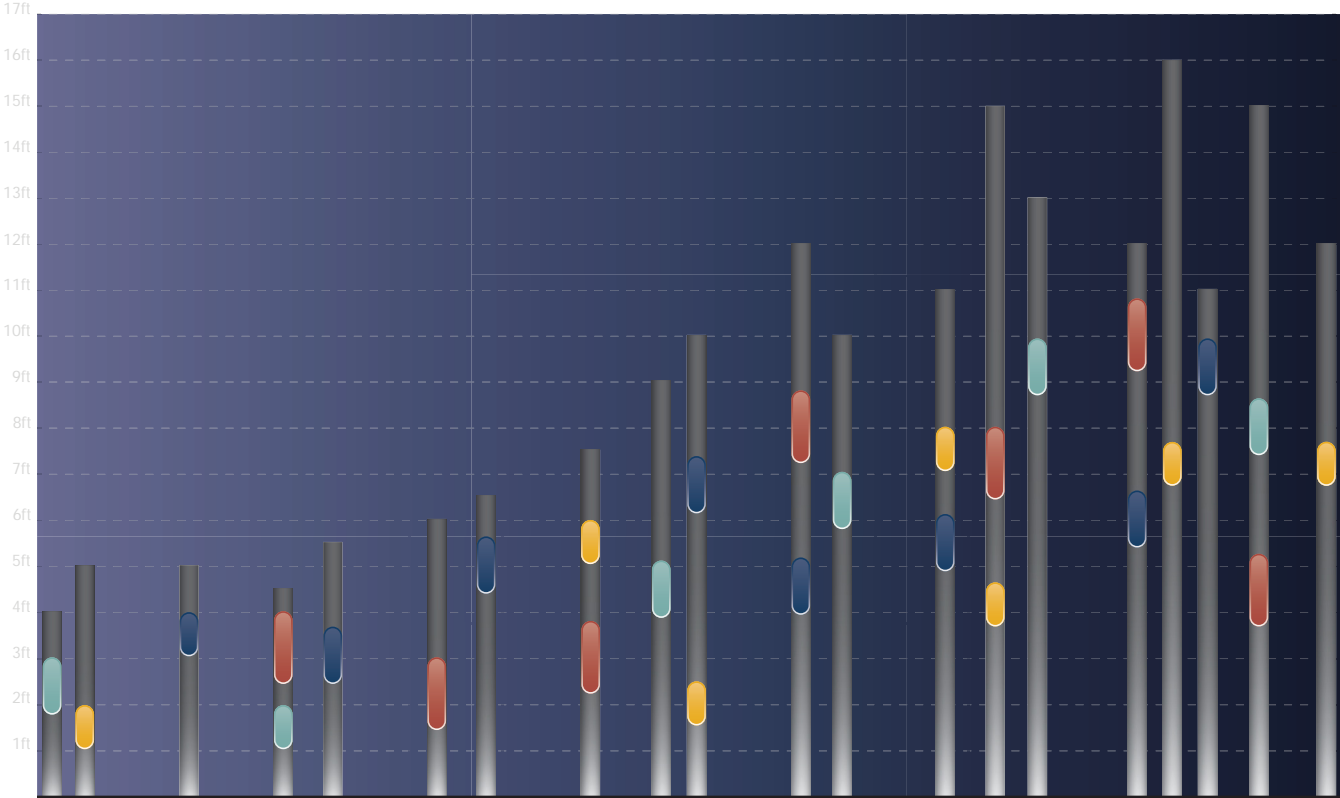


A1 Welcome ID Vertical
Scale 1:50

A1 Welcome ID signage features illuminated poles that can be placed along the approach to primary access points in Richmond, creating a sense of arrival. These poles have cut-out openings with programmable colour changing lights, allowing them to display specific colours based on events, seasons, and other occasions.

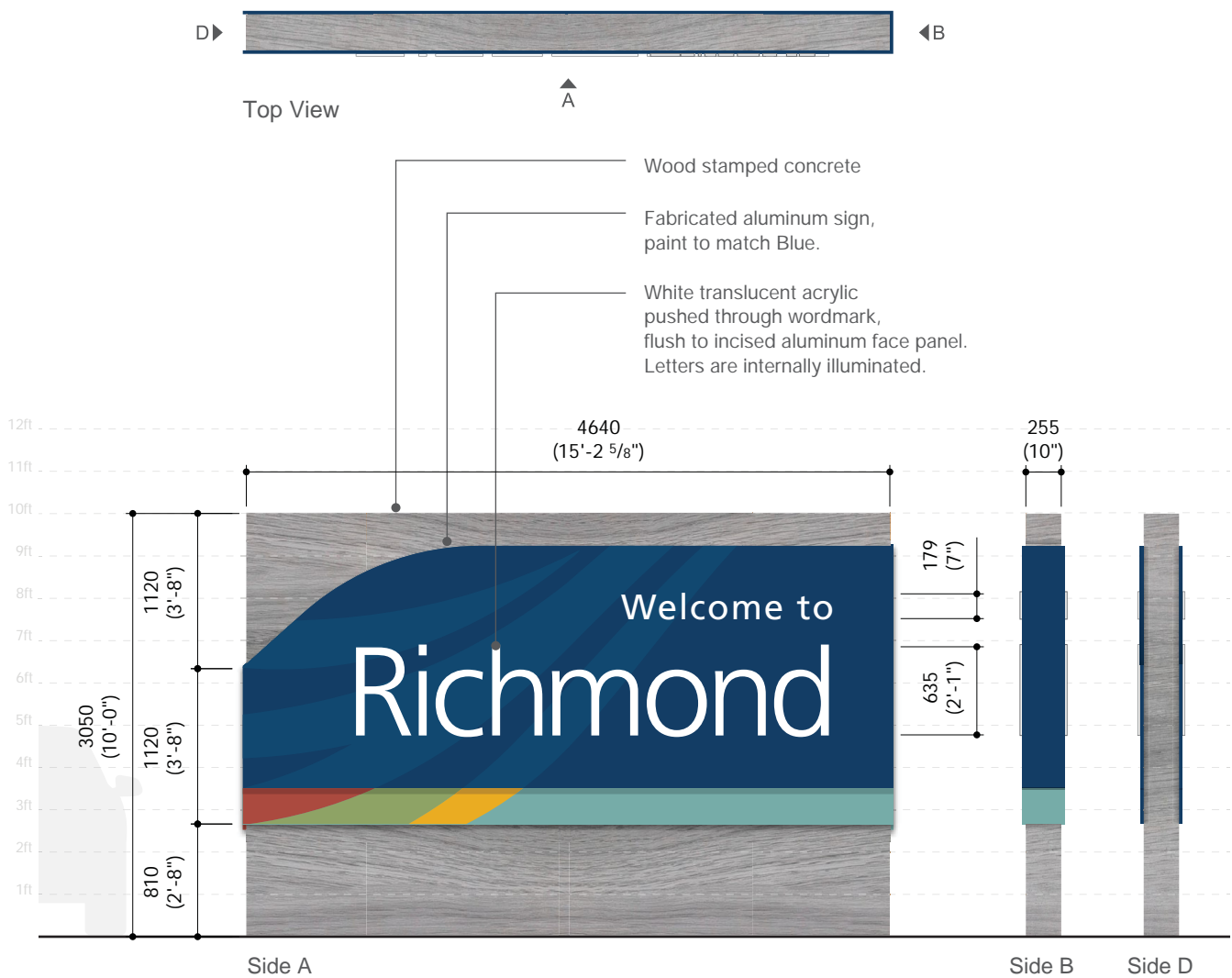


A1 Light Poles
Scale 1:50



A1 Light Poles - Nighttime View
Scale 1:50

A smaller-scale sign designed for entrances that are less prominent or have limited space, where it is more suitable than the larger welcome sign variation.



A2 Welcome ID Horizontal
Scale 1:50

Illumination can be integrated into the signage design to enhance the welcome experience at night and during inclement weather.

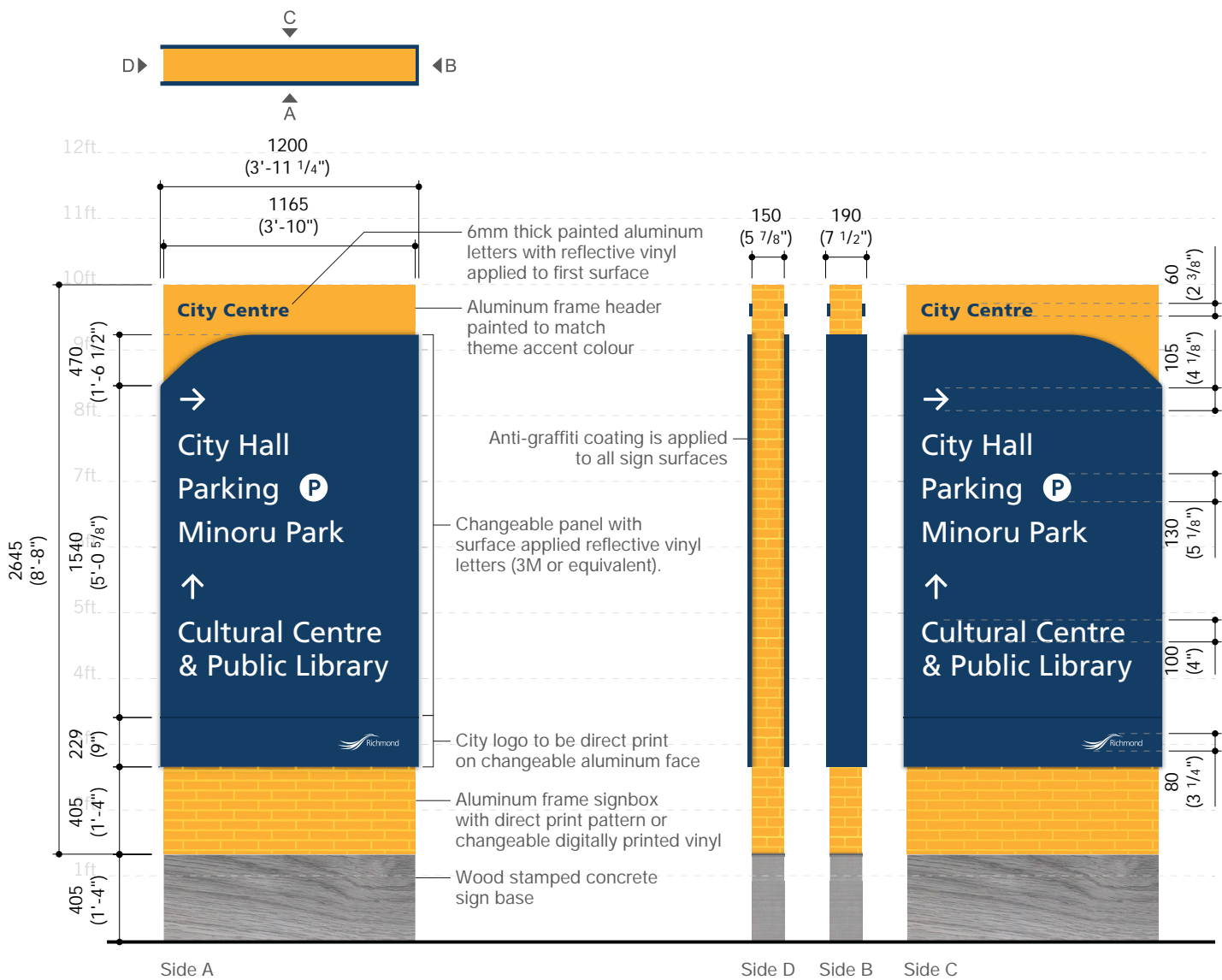


A2 Welcome ID Horizontal – Nighttime View
Scale 1:50

Vehicular Directional

B1 Vehicular Directional sign (double sided where necessary) directs public to primary and secondary destinations. This sign is primarily intended for streets where speed limit is 50km/hr more. This sign could also serve pedestrians and cyclists.

This sign type is placed before a decision node and should be clearly visible along roadways and pathways.

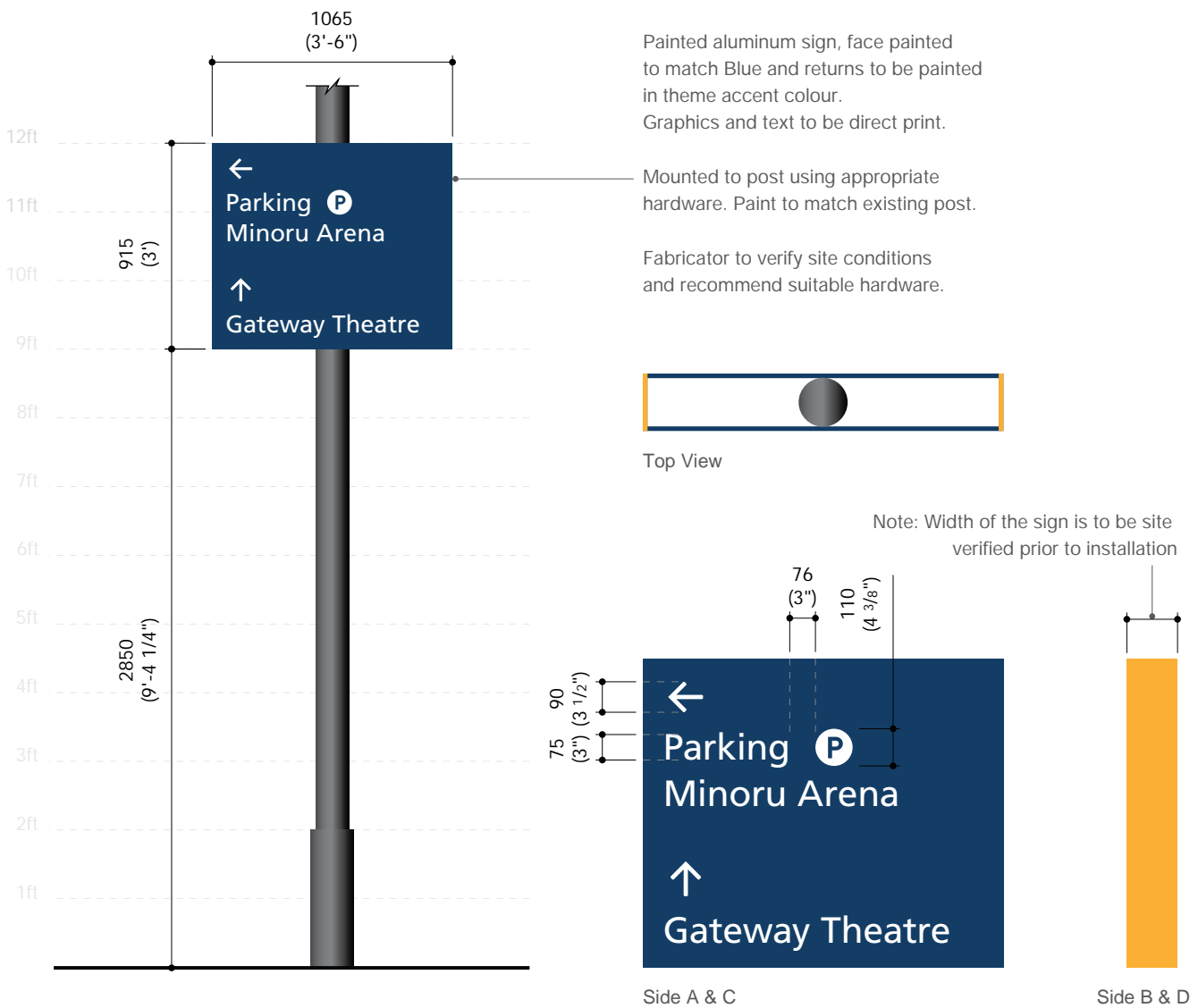


B1 Vehicular Directional
Scale 1:30

Post-Mounted Directional

Post-mounted directional sign (double sided where needed) is a combination of vehicular/ pedestrian level sign designed to provide directional information to destinations. This sign is to be used in areas where the speed limit is 40km/hr. or below.

The B2 sign could also be used as an alternative to B1 on streets with a narrow surrounding space.

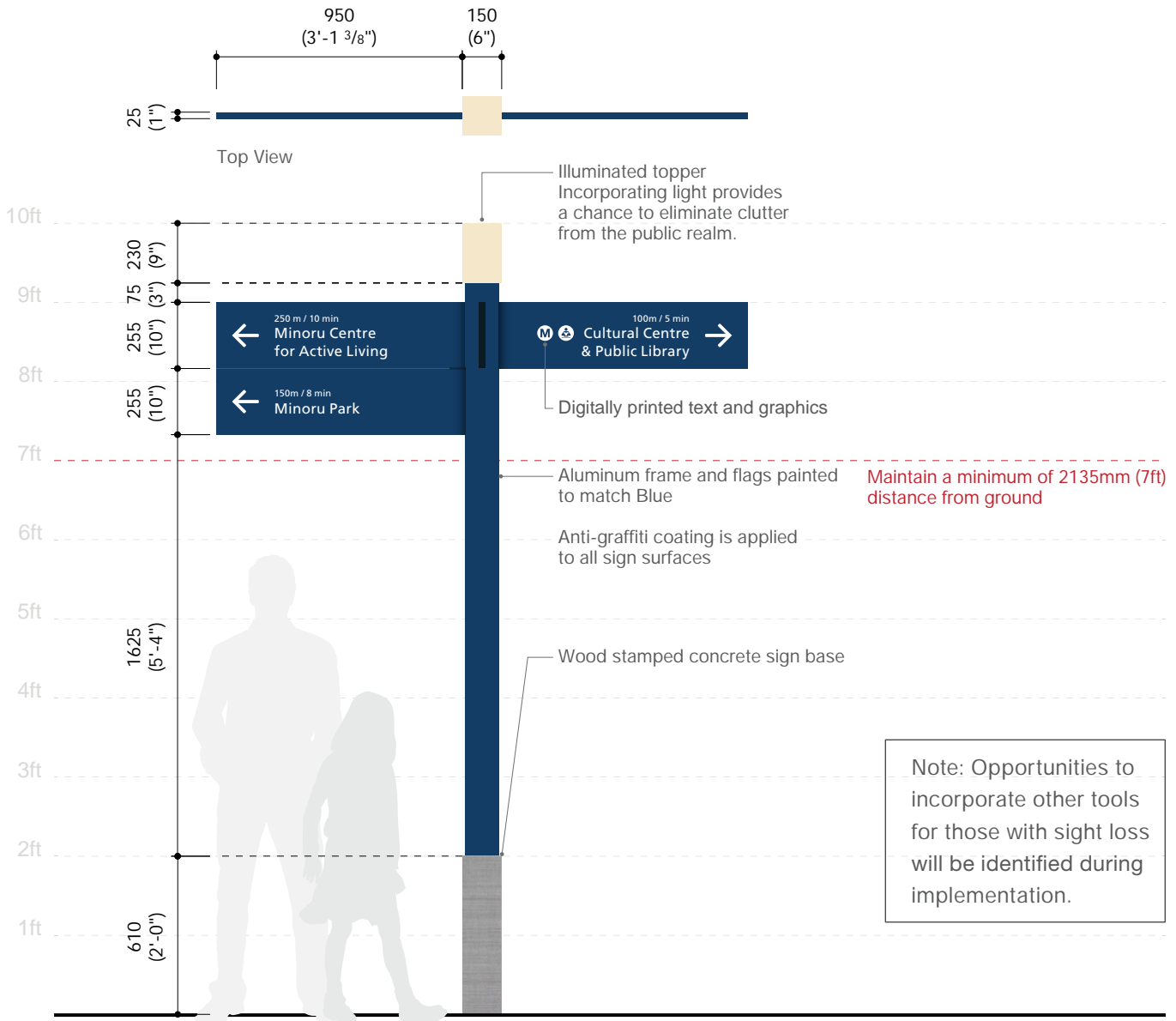


B2 Post-Mounted Directional
Scale 1:30

Detail
Scale 1:20

Pedestrian Directional

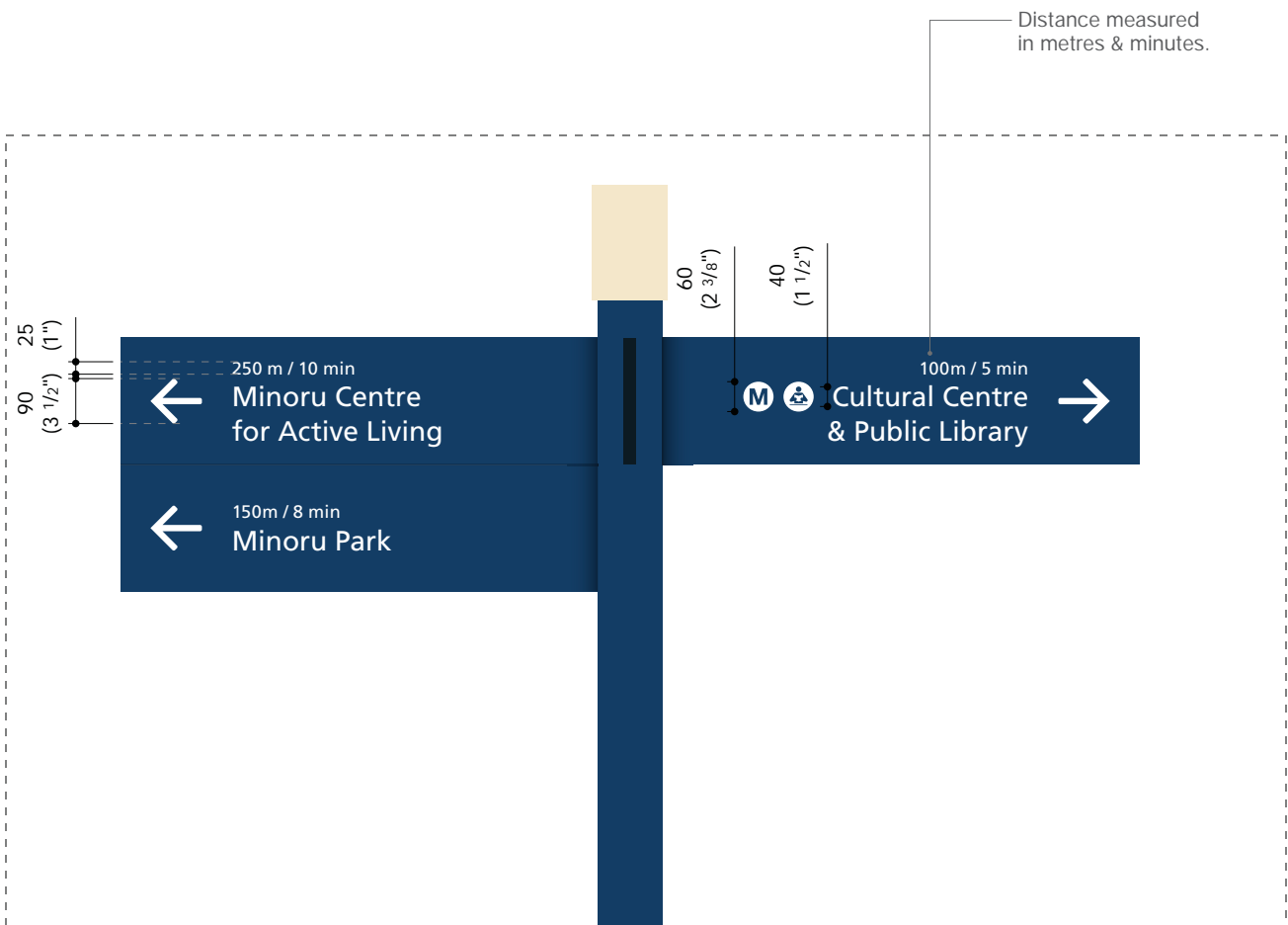
Pedestrian level sign to provide directional information to users for both primary and secondary destinations. This sign also serves other active modes of transport that users may engage in i.e. bicycles, in-line skates, etc. The addition of an illuminated topper ensures the sign is readable at all times and can replace the need for freestanding lighting in the immediate area, thus eliminating street clutter.



B3 Pedestrian Directional
Scale 1:25

Route planning becomes easier when users are presented with distance to their destination. This is also helpful encouraging users to visit a destination if they know that it is in proximity.

- Using minutes could be a more familiar way to assess proximity to destinations. Similar to how we navigate using Google/Apple maps.
- Using meters could be a more inclusive way identify proximity to destination as speed to travel is not a constant. Time of travel to the destination would be different for a person walking to a destination as opposed to someone using a wheelchair.

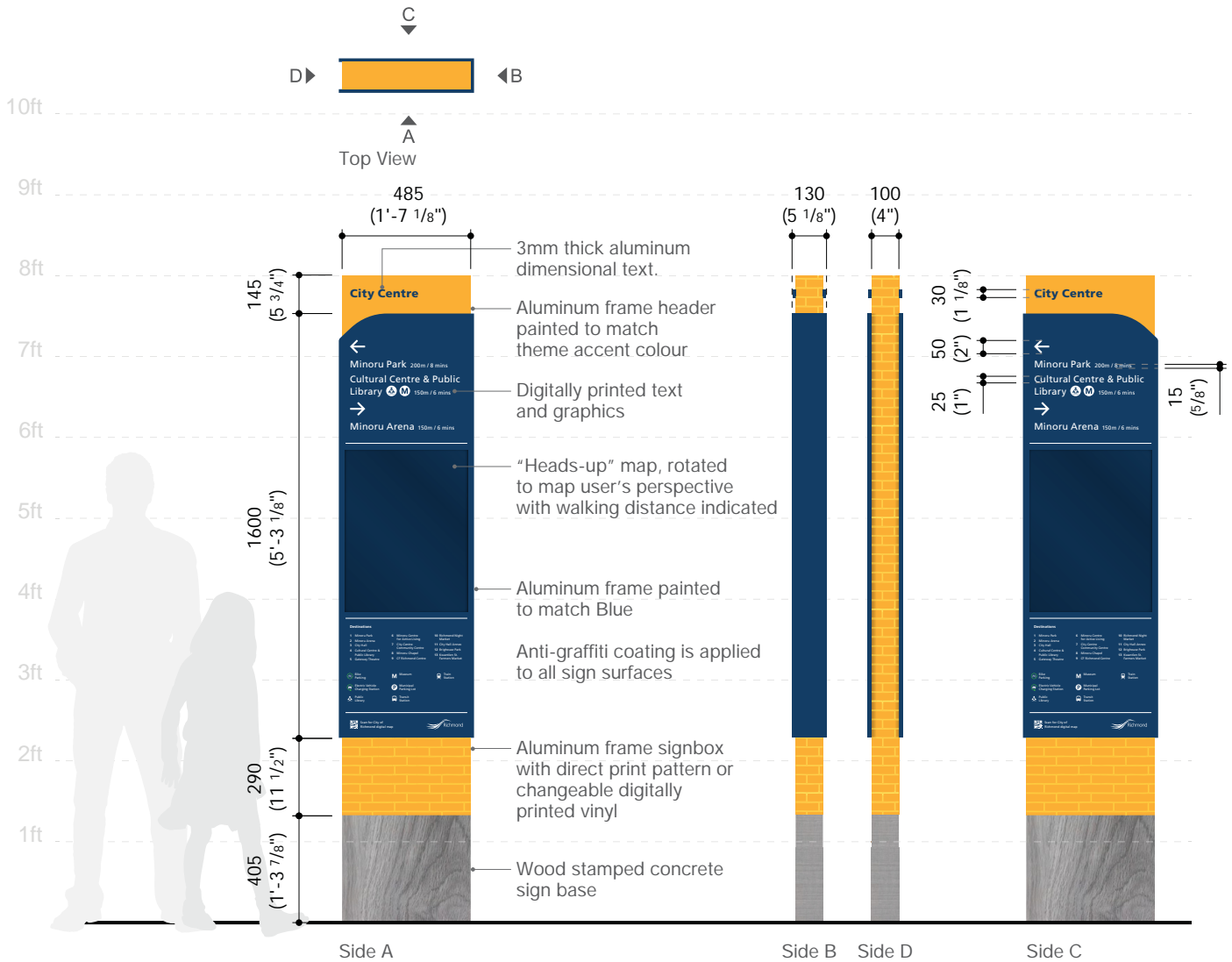


B3 Pedestrian Directional – Detail
Scale 1:15

Pedestrian Directory

Pedestrian level information to help visitors orient themselves of their surroundings. The “Heads-up” map indicates the surrounding area with all primary and secondary destinations including public amenities.

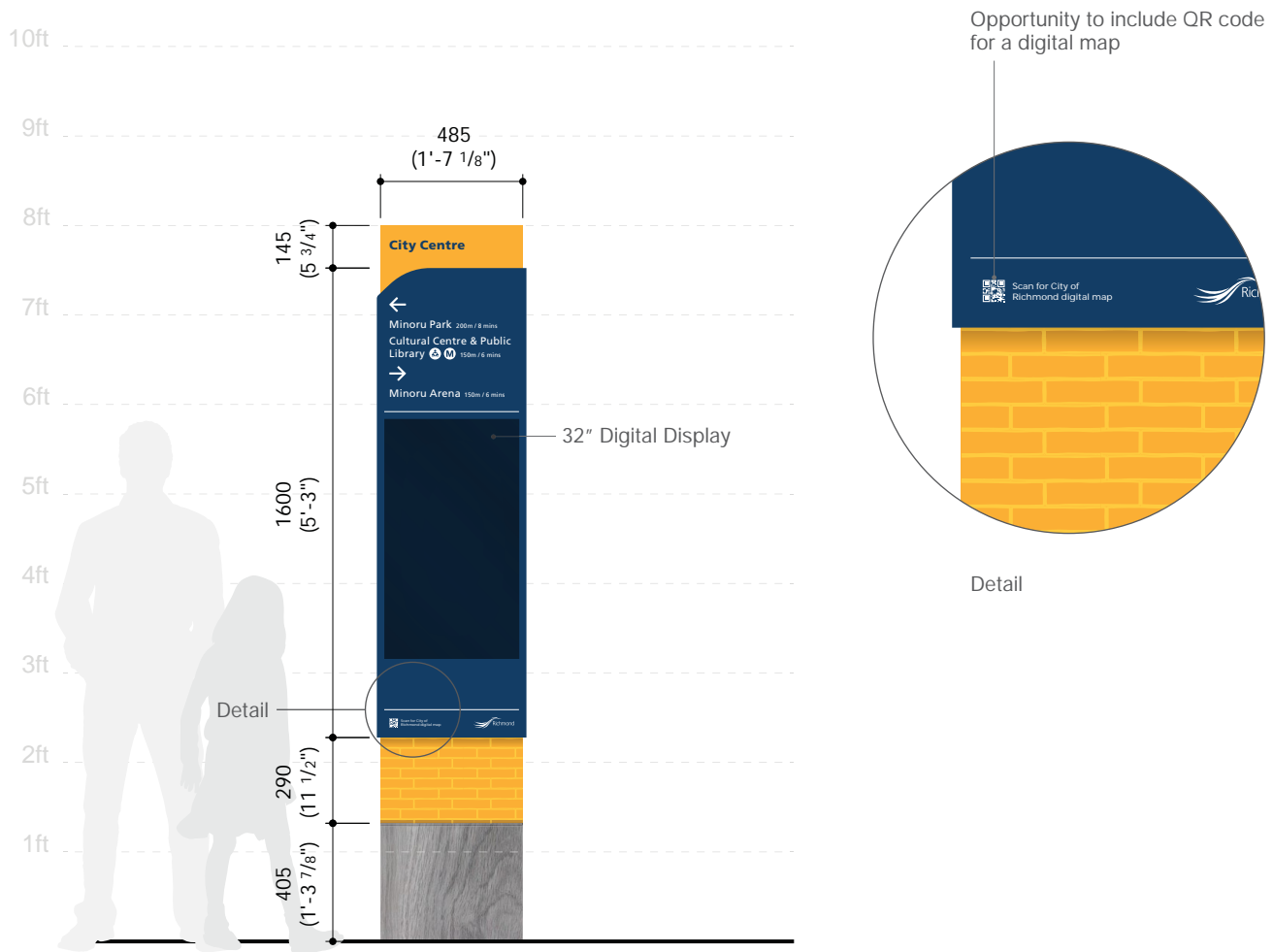
Where appropriate, walking time and distance to destinations should also be indicated. The “Heads-up” map is always rotated/oriented to match the user’s perspective, and it varies based on the placement of this sign. Digital tools, such as QR codes, and tools for greater accessibility, will be considered.



C1 Pedestrian Directory
Scale 1:25

Section 2 — Wayfinding Signage Design & Guidelines

An alternative option is pedestrian directories that feature digital map displays to facilitate easy navigation. Strategically placed QR codes on signage allow for quick access to local information, maps, and personalized navigation through a wayfinding app. Auditory and other tools will also be explored during implementation to increase accessibility of pedestrian directories for all users.



C1 Pedestrian Directory – Digital Option
Scale 1:25

03



Signage Placement Guidelines

Signage Placement Guidelines – Overview

As a general rule of thumb, a minimum clearance of 1.5m from the curb should be maintained when placing signage. This ensures sidewalks and pathways remain clear for the unobstructed movement of mobility devices, sidewalk snowplows, and sweepers, which is critical for defining the proper position and placement of signs.

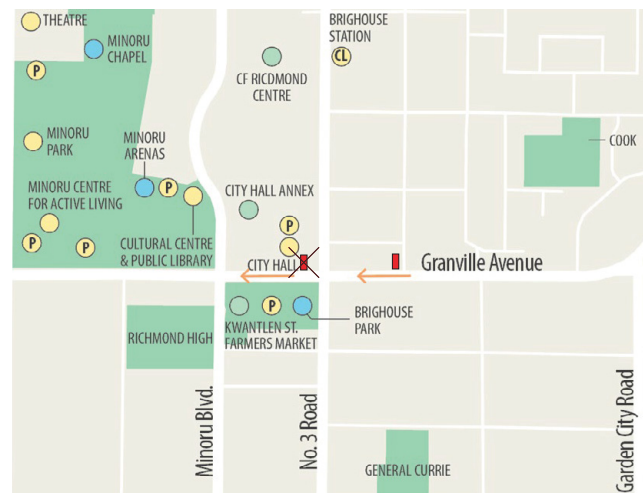
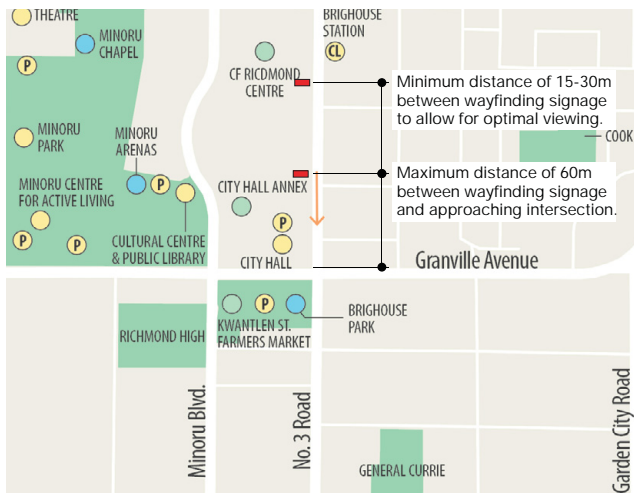
The following should be considered for signage placement:

- Paths and curbs
- Street furniture landscape
- Trees and visual obstruction of foliage are to be considered.
- Heritage places and assets
- Archaeology, if ground disturbance is required
- Maintaining minimum distances from curb
- Maintaining sight triangles and vehicular viewing angles
- Not obstructing existing vehicular or safety signage
- Not obstructing the existing circulation of spaces (e.g., do not block or intrude on bus stops, accessible pathways, etc.).
- Sign should be positioned to avoid visual obstructions such as tree canopies, awning, and existing signs and banners
- Unless otherwise instructed, signs should be placed on the passenger side of the road
- When traffic safety and regulatory signage is present, do not install wayfinding signs within 15m of sign locations
- Sign placement should not impede or reduce existing sidewalk space

Note: Sign placement will be developed in consideration of other regulatory traffic and warning signs on a case-by-case basis. 15m minimum spacing is indicated but may need to be increased in some locations. This will be assessed as part of detailed technical reviews during implementation.

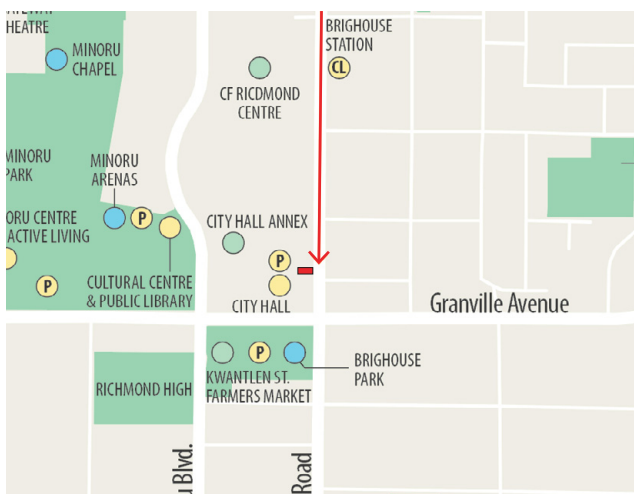
Signage Placement Guidelines – Overview

Signage must be positioned to avoid urban clutter while providing all road users—drivers, cyclists, and pedestrians—with adequate decision-making time. Consistent message placement helps all users quickly find the information they need.



Vehicular directional signs should be placed a maximum of 60m from an approaching intersection. For optimal viewing distance, directional signage should be positioned 15-30m from an intersection to give motorists sufficient time to make decisions and avoid conflicts with traffic signs.

Directional signs should be placed before intersections or decision nodes to allow drivers adequate time to maneuver and continue their appropriate path to their destination.

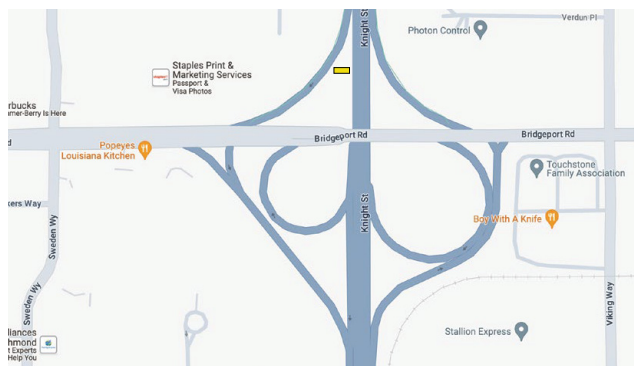
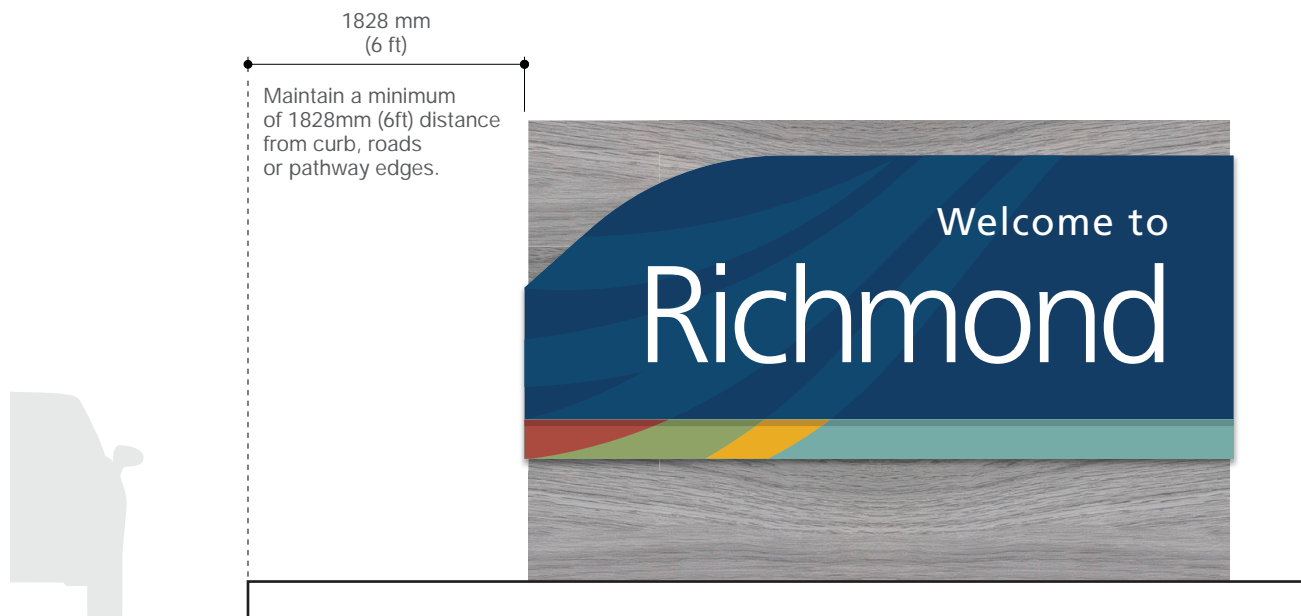


Signs should be placed perpendicular to the path of travel to enhance visibility for all users.

Signage Placement – Identification Signage

Identification signage should be placed perpendicular to the path of travel at the main entry points into the city. As a general rule, the sign should be the first thing users encounter upon arrival.

Signs along roadways and pathways should also be positioned perpendicular to the path of travel. The signage should display information on both sides, including a welcome message as users enter. It is recommended that signs maintain a minimum distance of 6 feet from the edge. Where possible, signage should have clear sightlines and be located consistently to create predictability and make it easy for users to find information to support their journey.



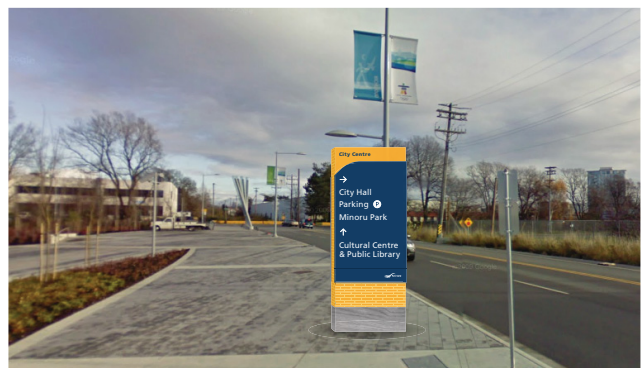
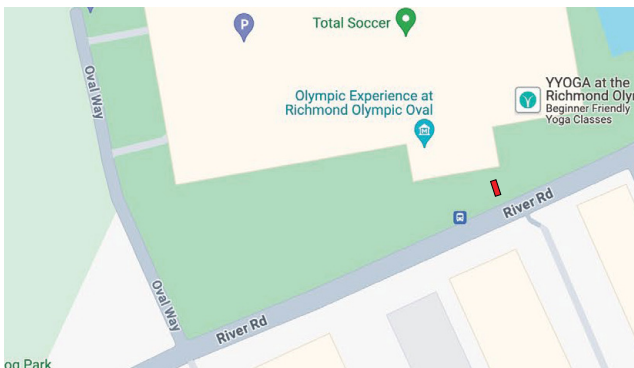
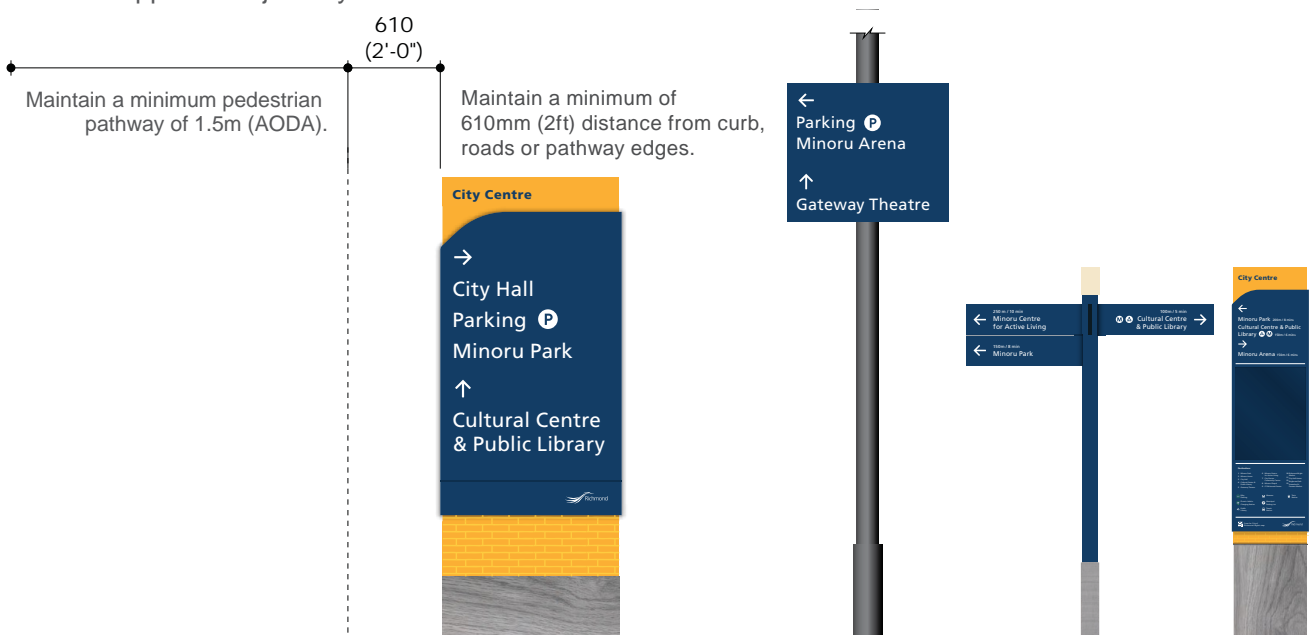
Note: For illustrative purposes only.
Actual placement and messaging of signage to be determined.

Signage Placement – Directional/Directory Signage

Directional signage must be positioned before decision nodes to give users sufficient time to navigate effectively. The signage should be oriented perpendicularly to the path of travel for all modes of transport, including pedestrians and cyclists.

Where necessary, signage should display information on both sides and must be clearly visible along roadways and pathways. It is recommended that signs maintain a minimum distance of 610mm from the edge.

Whenever possible, directional signage should have clear sightlines and be consistently located to create predictability, making it easier for all users—drivers, cyclists, and pedestrians—to find the information they need to support their journey.



Note: For illustrative purposes only.
Actual placement and messaging of signage to be determined.

entro

GP - 120



October 2, 2024

Re: Community Wayfinding Strategy in Richmond

I am writing to express my enthusiastic support for the draft Strategy on wayfinding in Richmond. This project marks a pivotal moment for our community, highlighting the crucial role of effective navigation and an enhanced visitor experience in our city's development.

Wayfinding plays a fundamental role in creating a welcoming and accessible environment for residents and visitors alike. It not only facilitates ease of navigation but also enriches the overall experience of exploring Richmond's cultural, historical, and natural attractions. This Strategy represents a significant step forward in enhancing connectivity and promoting local landmarks, thereby fostering a greater sense of place and community pride.

I am particularly pleased to acknowledge the integral involvement of Tourism Richmond throughout the development of this Strategy. Our expertise and commitment have been valuable in shaping a comprehensive approach that aligns with our shared goals of promoting tourism, supporting local businesses, and enhancing visitor satisfaction.

I am confident that this Strategy will not only strengthen Richmond's position as a desirable destination but also contribute to our long-term economic vitality and cultural vibrancy. It is with great anticipation that I look forward to seeing the next steps.

Please do not hesitate to reach out if you require any further information or assistance.

A handwritten signature in black ink that reads "Nancy Small". The signature is written in a cursive, flowing style.

Nancy Small

CEO, Tourism Richmond



To: General Purposes Committee

Date: October 15, 2024

From: Kim Somerville
Director, Community Social Development

File: 07-3000-00/Vol 01

Re: Proposed Updates to the Richmond Community Homelessness Table Terms of Reference

Staff Recommendation

That the amended Terms of Reference for the Richmond Community Homelessness Table as outlined in the staff report titled "Proposed Updates to the Richmond Community Homelessness Table Terms of Reference", dated October 15, 2024, from the Director, Community Social Development, be endorsed.

Kim Somerville
Director, Community Social Development
(604-247-4671)

Att. 2

REPORT CONCURRENCE	
CONCURRENCE OF GENERAL MANAGER	
SENIOR STAFF REPORT REVIEW	INITIALS:
APPROVED BY CAO	

Staff Report

Origin

At the General Purposes meeting held on October 16, 2023, City Council made the following referral:

That staff review what groups are involved in the Richmond Community Homelessness Table and report back.

The purpose of this report is to respond to the above referral and to propose minor amendments to the Richmond Community Homelessness Table Terms of Reference to reflect the current context of homelessness in Richmond. This is the final aspect of this referral requiring a response.

This report supports City Council's Strategic Plan 2022–2026 Strategic #6 A Vibrant, Resilient and Active Community:

Vibrant, resilient and active communities supported by a wide variety of opportunities to get involved, build relationships and access resources.

6.1 Advance a variety of program, services, and community amenities to support diverse needs and interests and activate the community.

6.4 Support vulnerable populations through collaborative and sustainable programs and services.

This report also aligns with the Council adopted City of Richmond Homelessness Strategy 2019–2029, including the following action:

4.2 Develop a Community Homelessness Table for collaboration among agencies working to prevent or address homelessness.

Analysis

The Richmond Community Homelessness Table (the Table), established in 2019, provides advice related to monitoring and guiding the implementation of the City of Richmond Homelessness Strategy 2019–2029 (the Homelessness Strategy). The Table functions under the intent of the original Terms of Reference approved by Council on December 9, 2019 and continues to align with and operate under the parameters outlined in the original proposal to Council. However, the frequency of meetings have been adjusted from monthly to quarterly and some of the Table's activities have shifted to better reflect the current context of homelessness in the community.

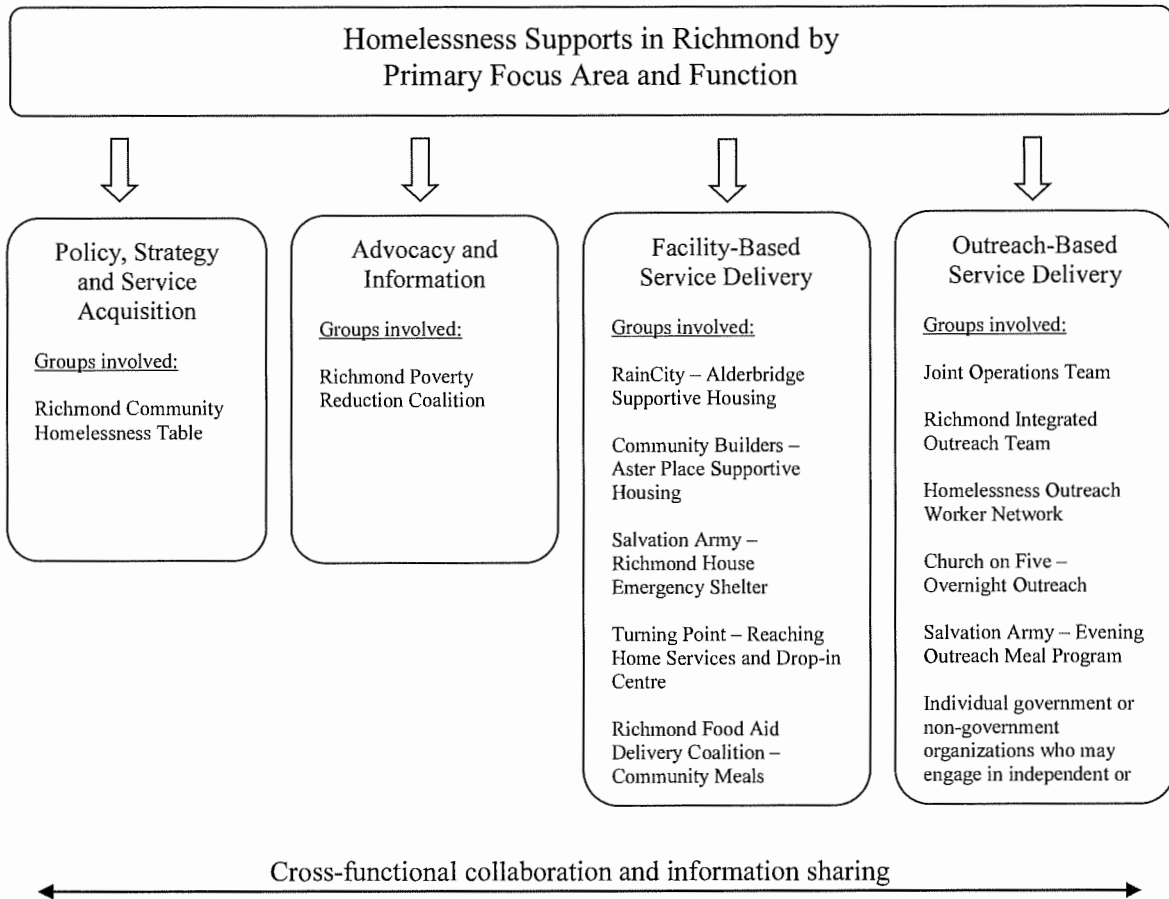
The Richmond Community Homelessness Terms of Reference dated December 3, 2020 outlines the Table's mandate, responsibilities, composition, governance and administration, and includes a Code of Conduct for participating members. The responsibility of the Table is to:

- Provide information and input to support and monitor the progress of the Homelessness Strategy;
- Identify emerging issues, trends and best practices regarding homelessness and discuss potential application to Richmond;
- Identify support service and housing gaps, and provide advice regarding the design of new initiatives that meet the needs of individuals experiencing homelessness in Richmond;
- Discuss relevant funding programs delivered by senior levels of government and other funding agencies; and
- Organize and host presentations from other groups in the community, including representation from people with lived experience, faith-based organizations, and advocacy groups to learn more about experiences of homelessness in Richmond.

The Table's primary role is to provide a strategic venue for collaboration amongst intergovernmental partners and government-funded service providers in order to advance cross-sectoral initiatives and policies. In addition, the Table monitors implementation of the Homelessness Strategy. The responsibilities are complementary to, but distinctly different in nature to, the work of other groups and networks in the community whose primary area of focus may be more advocacy based or operational in nature.

Information was collected about the other organized groups who are undertaking collaborative work to support individuals at risk of or experiencing homelessness in Richmond. There is currently a diverse range of individuals, groups and organizations focused on various aspects of Richmond's response to homelessness including advocacy, service delivery, food initiatives, direct outreach, referral and social supports. These individuals, groups and organizations all play a critical role in responding to the day-to-day needs of those experiencing homelessness in Richmond. Collaboration and information sharing by the many existing groups is ongoing and vital to delivering a comprehensive range of programs and supports while also avoiding duplication and focusing valuable organizational time where it can be most effective. Figure 1 outlines the primary functions of groups in Richmond that provide supports to individuals experiencing homelessness.

Figure 1: Homelessness Supports in Richmond



As illustrated, many organizations and individuals play a role in supporting people who are unsheltered or precariously housed in Richmond. The groups outlined above are composed of a broad spectrum of agencies who strive to work together, share information and collaborate within their different areas of focus towards this issue of common concern. The current structure of homelessness supports in Richmond provides a range of opportunities for individuals and organizations to share experiences, provide input and voice opinions. Table 1 outlines the purpose and member of some of these key groups. The members of these groups are adjusted as needed in response to changes in service provider mandates or programs.

Table 1: Current Members of Richmond Homelessness-related Groups

Name	Members
Richmond Integrated Outreach Team	<p>Agencies that are either non-profit operators or government agencies with a mandate to support homelessness. In addition, all member organizations must have privacy infrastructure and consent practices in place. All agencies are directly involved in homelessness services in Richmond. Current members include:</p> <ul style="list-style-type: none"> • Turning Point Recovery Society – Reaching Home Services and Drop-in Centre (Chair); • City of Richmond – Homelessness Outreach Team; • Ministry of Social Development and Poverty Reduction – Community Integration Team; • The Salvation Army – Richmond House Emergency Shelter; and • Vancouver Coastal Health – Substance Use Outreach, Assertive Community Treatment, Transitions Program and Housing Teams.
Homelessness Outreach Worker Network	<p>Participation is open to any individual, group, organization or government agency that is directly involved in the delivery of street outreach to individuals experiencing homelessness in Richmond. Current members include:</p> <ul style="list-style-type: none"> • City of Richmond – Homelessness Outreach Team (Co-chair); • Vancouver Coastal Health – Substance Use Outreach and Assertive Community Treatment Teams (Co-chair); • Church on Five – Overnight Outreach; • Individual Outreach Volunteers; • Ministry of Social Development and Poverty Reduction – Community Integration Team; • St. Albans – Outreach; • The Salvation Army – Richmond House Emergency Shelter and Evening Outreach Meal Program; • Turning Point Recovery Society – Reaching Home Services and Drop-in Centre; and • Union Gospel Mission – Outreach.
Richmond Food Aid Delivery Coalition	<p>Coalition of Richmond faith groups, food security agencies, social service agencies and individuals who volunteer their time and resources to prepare and deliver a daily meal to people in Richmond who are unhoused and street entrenched. Current members include:</p> <ul style="list-style-type: none"> • Church on Five; • Gilmore Park United Church; • Our Saviour Lutheran Church; • Richmond Food Bank; • Richmond Poverty Reduction Coalition; • Richmond Presbyterian Church;

	<ul style="list-style-type: none"> • St. Alban’s Anglican Church; • The Kehila Society of Richmond; • The Salvation Army; and • Union Gospel Mission.
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Richmond Community Homelessness Table Membership Review

The membership of the Table is comprised of local government-funded, non-profit organizations that directly deliver support services and/or housing services to people experiencing homelessness in Richmond, and government and government agencies that directly support these programs. Organizational representatives are intended to be Executive Directors or a similar leadership, decision-making roles. Currently the Table is comprised of the following organizations:

- BC Housing;
- City of Richmond;
- Ministry of Social Development and Poverty Reduction;
- Vancouver Coastal Health;
- Chimo Community Services;
- Community Builders;
- RainCity;
- The Salvation Army; and
- Turning Point Recovery Society.

Members on the Table have varied and interrelated roles across the system of supports for individuals experiencing homelessness in Richmond. As such, information shared at the Table that is pertinent to member organizations or organized groups is relayed to the appropriate representatives within those organization without duplication.

In order to respond to the Council referral to review the groups involved in the Table, a municipal scan was completed and the current Terms of Reference and the membership composition were reviewed. Staff conducted a scan of similar tables and committees in eight other communities across BC including New Westminster, Burnaby, Langley, Nanaimo and Kelowna. This scan illustrated a range of group models that focused primarily on either service delivery, specific projects or initiatives, information sharing networks or broader policy and strategic planning and initiatives. Many municipalities have a table focused on specific response and case management (similar to the Richmond Integrated Outreach Team and the Richmond Joint Operations Team) and others have specific tables intended to guide development of implementation of a strategy related to homelessness (similar to the Richmond Community Homelessness Table). The current structure and organization of services in Richmond, with organizational membership directly related to the specific table or committee’s function and responsibilities, achieves this. In Richmond, the members represented at the Table play critical leadership roles related to strategy, policy and decision-making within their organizations and in their collaborative work with the community. The level of decision-making authority of these members enables strategic and when necessary, policy-level decisions to be made in a timely and efficient manner. As the nature of discussions may also include cross-sectoral information that is not yet available to the broader public, such as government contracts, new or enhanced funding or programs, commitments to confidentiality are critical. The organizations represented are all

formal legal entities whose staff are bound by a range of organizational policies and procedures that ensure sensitive issues discussed remain confidential when necessary. The review of the membership of the Table confirmed that the current membership remains both relevant to the work and appropriate for the mandate of the Table, the responsibilities outlined in the Terms of Reference and the Table's primary functions related to policy, strategy and service provision. The structure outlined in Figure 1 and the City's involvement in each of these areas, ensures collaboration and coordination.

Proposed Updates to the Richmond Community Homelessness Table Terms of Reference

Coordinating tables, networks or committees by function area and level of accountability or decision making authority, when supported by a commitment to cross-organizational communication and information sharing, appears to be a consistent and aligned approach in other jurisdictions. This broad range of groups and tables, organized in this manner, aligns with the current structure of tables and groups in Richmond. Based on the review of the groups involved in the Table and, as outlined above, modifications to the membership of the Committee is not recommended.

Further to reviewing the composition of the Table, some minor revisions to the Terms of Reference were identified to clearly define the Table's role and more accurately reflect the Table's work in relation to homelessness in Richmond. The proposed updates to the Table's Terms of Reference include minor revisions to two responsibilities of the Table; the addition of two new activities and inclusion of a new statement related to collaboration. These include:

- Revised, additions underlined – Identify emerging issues, trends and best practices regarding homelessness and discuss potential opportunities, policy changes or application relevant to Richmond;
- Revised, additions underlined – Identify support service and housing gaps, and provide strategic advice and professional guidance regarding the design, funding, implementation viability and operational models for new initiatives that meet the needs of individuals experiencing homelessness in Richmond;
- New – Develop data-informed metrics to support the Table, government and the community to gauge successes and progress of initiatives, programs and services to support individuals experiencing homelessness and monitor the flow of homelessness in and out of Richmond; and
New – Develop and distribute information, data and research to the community as relevant and needed.

It is also recommended that a statement reflecting the importance of collaboration and partnerships in the delivery of homelessness services in Richmond be added to the Terms of Reference. The proposed additions include:

- New – The Table will compile and regularly review the list of partners involved in homelessness-related service delivery in Richmond;
- New – The Table will collaborate on policy, strategy level work and direct service planning within the Richmond homelessness sector; and
- New – The Table will implement processes for joint communication and information sharing to support consistent messaging to the public and others.

A redlined version highlighting the proposed amendments to the Richmond Community Homelessness Table Terms of Reference is provided in Attachment 1 and a clean version of the proposed amended Terms of Reference is provided in Attachment 2.

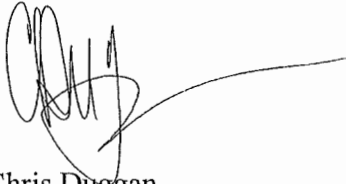
Should Council approve the proposed recommendations, the revised Terms of Reference for the Table will take effect immediately, be communicated to committee members and updated on the City's website.

Financial Impact

None.

Conclusion

The Richmond Community Homelessness Table acts in a leadership capacity and facilitates a number of strategic activities within the range of services that support individuals experiencing homelessness in Richmond. The Table is well-positioned to foster intergovernmental and community relationships and collaboration, leverage resources to inform policy, advance strategic initiatives and expand services. The Table membership provides strategic and diverse expertise and perspectives that support the implementation of the Homelessness Strategy.



Chris Duggan
Manager, Community Social Development
(604-204-8621)

- Att. 1: Richmond Community Homelessness Table – Terms of Reference (Redlined Version)
- 2: Proposed Richmond Community Homelessness Table – Terms of Reference,
DRAFT Revisions – October 2024

Richmond Community Homelessness Table - Terms of Reference (Redlined Version)

Mandate

The purpose of the Community Homelessness Table is to monitor and guide actions that relate to the implementation of the Richmond Homelessness Strategy.

Activities

The responsibility of the Richmond Community Homelessness Table is to:

- Provide information and input to support and monitor the progress of the Richmond Homelessness Strategy 2019--2029;
- Identify emerging issues, trends and best practices regarding homelessness and discuss potential opportunities, policy changes or application to Richmond;
- Identify support service and housing gaps, and provide strategic advice and professional guidance regarding the design, funding implementation viability and operational models for -of new initiatives that meet the needs of individuals experiencing homelessness in Richmond;
- Discuss relevant funding programs delivered by seniors levels of government and other funding agencies; and
- Develop data-informed metrics to support the Table, government and community to gauge successes and progress of initiatives, programs and services to support individuals experiencing homelessness and monitor the flow of homelessness in and out of Richmond;
- Develop and distribute information, data and research to the community as relevant and needed; and
- Organize and host presentations from other groups in the community, including representation from people with lived experience, faith-based organizations, and advocacy groups to learn more about experiences of homelessness in Richmond.

Membership

The membership of the Richmond Community Homelessness Table is comprised of local non-profit organizations that directly deliver support services and/or housing services to people experiencing homelessness in Richmond, and government departments and agencies that directly support these programs. Committee members are intended to be Executive Directors or a similar role.

Governance and Administration

City of Richmond staff will support the administration of the Richmond Community Homelessness Table. Table meetings will be facilitated by a Chair who will be selected from the Table membership on an annual basis. The specific roles of the Chair are to:

- fFacilitate meetings;_{3,7}
- Prepare meeting agendas with assistance from City staff;_{3,7}
- Ensure that all Table members act in a respectful manner;_{3,7} and
- Other related duties as needed.

Meeting Frequency

The Richmond Community Homelessness Table will meet ~~on a quarterly basis~~. Additional meetings may be scheduled at the discretion of the Chair.

Code of Conduct

Participating Committee members are expected to:

- Act in a manner that supports a positive and inclusive environment. Members will consistently demonstrate respect for each other, and foster a trusting environment that allows for an open sharing of ideas. All participating voices and organizations will be valued and encouraged to articulate ideas without judgement;
- Devote the necessary time and effort to prepare and attend meetings and provide feedback consistent with the Committee's mandate;
- Act in the best interest of individuals experiencing homelessness in Richmond; and
- Not disclose confidential information discussed at Committee meetings. ~~F~~—for example, personal information about individuals experiencing homelessness or confidential business matters pertaining to the Committee or any of the member organizations.

Members Role in Partnerships and Collaboration

- The Table will compile and regularly review the list of partners involved in homelessness-related service delivery;
- The Table will offer opportunities to collaborate on policy, strategy level work and direct service delivery within the Richmond Homelessness sector; and
- The Table will implement processes for joint communication and information sharing to support consistent messaging to the public and others.

Last updated: ~~December 3, 2020~~October 2024

Proposed Richmond Community Homelessness Table - Terms of Reference

DRAFT revisions – October 2024

Mandate

The purpose of the Community Homelessness Table is to monitor and guide actions that relate to the implementation of the Richmond Homelessness Strategy.

Activities

The responsibility of the Richmond Community Homelessness Table is to:

- Provide information and input to support and monitor the progress of the Richmond Homelessness Strategy 2019–2029;
- Identify emerging issues, trends and best practices regarding homelessness and discuss potential opportunities, policy changes or application to Richmond;
- Identify support service and housing gaps, and provide strategic advice and professional guidance regarding the design, funding implementation viability and operational models for new initiatives that meet the needs of individuals experiencing homelessness in Richmond;
- Discuss relevant funding programs delivered by senior levels of government and other funding agencies;
- Develop data-informed metrics to support the Table, government and community to gauge successes and progress of initiatives, programs and services to support individuals experiencing homelessness and monitor the flow of homelessness in and out of Richmond;
- Develop and distribute information, data and research to the community as relevant and needed; and
- Organize and host presentations from other groups in the community, including representation from people with lived experience, faith-based organizations, and advocacy groups to learn more about experiences of homelessness in Richmond.

Membership

The membership of the Richmond Community Homelessness Table is comprised of local non-profit organizations that directly deliver support services and/or housing services to people experiencing homelessness in Richmond, and government departments and agencies that directly support these programs. Committee members are intended to be Executive Directors or a similar role.

Governance and Administration

City of Richmond staff will support the administration of the Richmond Community Homelessness Table. Table meetings will be facilitated by a Chair who will be selected from the Table membership on an annual basis. The specific roles of the Chair are to:

- Facilitate meetings;
- Prepare meeting agendas with assistance from City staff;
- Ensure that all Table members act in a respectful manner; and
- Other related duties as needed.

Meeting Frequency

The Richmond Community Homelessness Table will meet quarterly. Additional meetings may be scheduled at the discretion of the Chair.

Code of Conduct

Participating Committee members are expected to:

- Act in a manner that supports a positive and inclusive environment. Members will consistently demonstrate respect for each other, and foster a trusting environment that allows for an open sharing of ideas. All participating voices and organizations will be valued and encouraged to articulate ideas without judgement;
- Devote the necessary time and effort to prepare and attend meetings and provide feedback consistent with the Committee's mandate;
- Act in the best interest of individuals experiencing homelessness in Richmond; and
- Not disclose confidential information discussed at Committee meetings. For example, personal information about individuals experiencing homelessness or confidential business matters pertaining to the Committee or any of the member organizations.

Members Role in Partnerships and Collaboration

- The Table will compile and regularly review the list of partners involved in homelessness-related service delivery;
- The Table will offer opportunities to collaborate on policy, strategy level work and direct service delivery within the Richmond Homelessness sector; and
- The Table will implement processes for joint communication and information sharing to support consistent messaging to the public and others.

Last updated: October 2024



City of Richmond

Report to Committee

To: General Purposes Committee

Date: October 7, 2024

From: Martin Younis, B. Eng., M. Eng.
Director, Facilities and Project Development

File: 10-6000-01/2024-Vol 01

Re: **Award of Contract 8300Q – On-Call Refrigeration Contractor Services**

Staff Recommendations

1. That Contract 8300Q – On-Call Refrigeration Contractor Services be awarded to Cimco Refrigeration, a Division of Toromont Industries Inc. (Cimco Refrigeration) for a three-year term for an aggregate value of \$750,000.00, excluding taxes, as described in the report titled "Award of Contract 8300Q – On-Call Refrigeration Contractor Services," dated October 7, 2024 from the Director, Facilities and Project Development;
2. That the Chief Administrative Officer and Deputy Chief Administrative Officer be authorized to extend the initial three-year term, up to a maximum of five years, for an additional value of \$506,250.00 excluding taxes; and
3. That the Chief Administrative Officer and Deputy Chief Administrative Officer be authorized to execute the contracts and all related documentation with Cimco Refrigeration over the maximum five-year term.

Martin Younis, B. Eng., M. Eng.
Director, Facilities and Project Development
(604-204-8501)

REPORT CONCURRENCE		
ROUTED TO:	CONCURRENCE	CONCURRENCE OF DEPUTY CAO
Finance Department	<input checked="" type="checkbox"/>	
Recreation and Sport Services	<input checked="" type="checkbox"/>	
SENIOR STAFF REPORT REVIEW	INITIALS:	APPROVED BY CAO

Staff Report

Origin

The City is responsible for the maintenance in three buildings in which there are refrigeration plants: Richmond Ice Centre, Minoru Arenas, and Richmond Curling Club. Refrigeration systems require inspection, repair and preventative maintenance to be safe for visitors and staff, and remain compliant with Technical Safety BC regulations. City staff operate the systems, but require support from external certified refrigeration mechanic contractors to provide on-call repair, preventative maintenance and retrofitting services.

The City's current On-Call Refrigeration contract 6512Q expired on May 1, 2024. Emergency response and maintenance are essential to the safe and efficient operation of the City's ice facilities and contribute to ensuring the City's civic infrastructure, assets and resources are effectively maintained to meet the needs of the community. The City requires a qualified and capable contractor to be available for emergency response and day-to-day service requirements. Cimco Refrigeration, the current On-Call Refrigeration Contractor, agreed to provide service until a new contract is awarded.

This report supports Council's Strategic Plan 2022-2026 Focus Area #3 A Safe and Prepared Community:

Community safety and preparedness through effective planning, strategic partnerships and proactive programs.

3.4 Ensure civic infrastructure, assets and resources are effectively maintained and continue to meet the needs of the community as it grows.

This report supports Council's Strategic Plan 2022-2026 Focus Area #4 Responsible Financial Management and Governance:

Responsible financial management and efficient use of public resources to meet the needs of the community.

4.3 Foster community trust through open, transparent and accountable budgeting practices and processes.

Analysis

Procurement Process

The City posted a Request for Quotation (RFQ) 8300Q On-Call Refrigeration Contractor Services to BC Bid on June 21, 2024 which closed on July 19, 2024. The purpose of the public procurement process was to invite responses from qualified and capable refrigeration contractors in order to establish a long term contract with one service provider who would be able to respond to frequent service requests from the City at the most competitive billable rates. The contract term described in the RFQ was for a three-year initial term, with an option to renew for two additional one-year terms.

Bidders were requested to propose hourly rates for on-call emergency repairs, scheduled servicing and maintenance of various refrigeration systems as required.

Two submissions were received by the closing date from the following respondents:

- Cimco Refrigeration a Division of Toromont Industries Ltd. (Cimco Refrigeration)
- Fraser Valley Refrigeration Ltd.

Review Process

With the greatest emphasis on pricing, the RFQ clearly stated that quotations would be reviewed to determine the overall best value to the City. Staff therefore reviewed each contractor’s proposed hourly rates, as well as their experience, capacity, systems, customer service, mark up on parts and sustainability.

Table 1 provides a summary of the estimated financial proposals over the initial three-year contract, based on each bidder’s proposed hourly rates and the estimated total billable labour hours per annum based on historical data.

Table 1: Summary of Financial Proposals for the Initial Three-Year Contract

Contract	Company Bids	
	Cimco Refrigeration	Fraser Valley Refrigeration Ltd.
Year 1 (2024-2025)	\$200,000.00	\$250,000.00
Year 2 (2025-2026)	\$200,000.00	\$250,000.00
Year 3 (2026-2027)	\$200,000.00	\$250,000.00
Subtotal (3 Years)	\$600,000.00	\$750,000.00
Contingency (25%)	\$150,000.00	\$187,500.00
Total (Including Contingency)	\$750,000.00	\$937,500.00

Bidders were also required to propose hourly rates for Years 4 and 5 of the contract. Table 2 provides a summary of the labour and materials proposal received from the bidders for Years 4 and 5, should the City extend the contracts with the recommended respondent.

Table 2: Summary of Financial Proposals for Years 4 and 5

Contract	Company Bids	
	Cimco Refrigeration	Fraser Valley Refrigeration Ltd.
Year 4 (2027-2028)	\$200,000.00	\$260,000.00
Year 5 (2028-2029)	\$205,000.00	\$260,000.00
Subtotal (2 Years)	\$405,000.00	\$520,000.00
Contingency (25%)	\$101,250.00	\$130,000.00
Total (Including Contingency)	\$506,250.00	\$650,000.00

A contingency of 25 per cent has been included to account for anticipated cost escalation of material supplies and unplanned emergency repairs related to the City's ageing infrastructure.

Award Recommendation

Through the RFQ review process, Cimco Refrigeration (Cimco) described their ability to meet the City's operational requirements and provide the best value to the City at a competitive cost. Cimco has significant experience working in similar type facilities and provided strong, relevant references that validated their RFQ submission, and demonstrated their ability to respond to service requests in a timely manner. In addition, Cimco proposed the lowest hourly billable rates.

The proposed contract is for a three-year term. It is further proposed that the award provide for the ability to extend the contract for two additional one-year terms.

As a result of the review undertaken by staff, the submission received from Cimco Refrigeration was determined to offer best value to the City.

Financial Impact

The estimated cost to award Contract 8300Q to Cimco Refrigeration for the first three years is \$750,000.00. The estimated cost to extend the contracts for two additional one-year terms is an estimated total value of \$506,250.00.

Funding is available within the City's Operating Budget and the Consolidated 5 Year Financial Plan (2024-2028).

Conclusion

Bidders were required to outline their capabilities according to the City's desired sustainability practices and were evaluated on cost, capabilities, references for current and past contract and value-added opportunities for the two bids received. The evaluation processes determined the best value scenario for the City is to award a contract for an initial three-year term with the option to extend for two additional one-year terms for an estimated total value of \$1,256,250.00 for the maximum five-year contract.



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

JL:cc



To: Mayor and Councillors **Date:** October 22, 2024
From: Norm Connolly **File:** 10-6000-01/2024-Vol 01
Sustainability Manager, Climate and Environment
Re: **Energy Step Code and Zero Carbon Step Code Compliance Options for New Single Detached and Duplex Homes Update**

This memorandum responds to the General Purposes Committee Referral Motion, dated October 1, 2024:

That the report titled "Updated Energy Step Code and Zero Carbon Step Code Compliance Options for New Single Detached and Duplex Homes", dated September 19, 2024, from the Director, Climate and Environment, be referred back to staff to bring forward to the November 4, 2024 General Purposes Committee meeting, together with information on other municipalities and additional information from BC Hydro.

Analysis

In the report titled "Updated Energy Step Code and Zero Carbon Step Code Compliance Options for New Single Detached and Duplex Homes" dated September 19, 2024, staff outlined three options to amend the City's current Energy Step Code and Zero Carbon Step Code bylaw requirements including:

Option 1 Continue with the City's existing regulatory approach and delay next set of Step Code requirements for detached and duplex houses that is scheduled to occur as early as January 2025. Under this Option, the City's Step Code requirements would remain at the current level until January 2026, followed by subsequent increases in requirements in January 2028 and January 2030 respectively. This provides a minimum of two years between each planned Step Code increment.

Option 2 Continue with the City's existing approach and delay next steps to match Provincial timelines, including extending the next two increments of Step Code requirements for single-detached houses and duplexes to 2027, 2030 and 2032; providing three full years between each planned Step Code increment.

Option 3 Revert the City's current approach to Provincial timelines for detached and duplex houses that minimizes energy efficiency requirements within the BC Building Code increase from Step 3 to Step 4 in 2027, to ZCSC EL-4 in 2030 and from Step 4 to Step 5 in 2032.

Staff note that continuing with the City's current regulatory approach and timeline to implement the Energy Step Code and Zero Carbon Step Code requirements is not included as a proposed option.

Endorsement of an option is not required and Council can elect to adopt a resolution to receive the report for information.

In consideration of the options and the referral above, staff have prepared the information below.

Summary of Regional Step Code Requirements

Staff reviewed current Energy Step Code and Zero Carbon Step Code requirements for 30 municipalities, comparing them to Richmond's current Step Code bylaw requirements for new single-detached and duplex homes. Excluding City of Richmond, currently 30 municipalities have adopted the Energy Step Code, and 24 have also adopted the Zero Carbon Step Code. Based upon no future change to Richmond's current Step Code bylaw requirements into 2025, 17 municipalities have requirements that are equivalent to at least one set of current Step Code requirements in Richmond. Five municipalities have Energy Step Code and/or Zero Carbon Step Code requirements exceeding those currently in Richmond, and 14 municipalities have requirements that are less stringent. As shown in Attachment 1, six municipalities have more than one set of Step Code compliance options for new Part 9 residential buildings, three of which have either equivalent or less stringent requirements than Richmond, and three with equivalent or more stringent requirements.

Assessment of Affected Building Permit Applications

At the Open General Purposes Committee meeting on October 1, 2024, it was requested that staff assess the number of building applications that may be affected if we delayed the City's current regulatory timelines. Staff have estimated the impact of delaying the proposed next increase in Step Code requirements by three, six, and nine months into 2025, based upon the number of affected Building Permit applications. Assuming 2025 follows the long-term average, the City can expect approximately 160 Building Permit applications annually for new single-detached and duplex homes. Typically, more applications are submitted in winter and spring than in summer or fall. Additionally, anticipated changes in Step Code requirements often lead to a surge in applications just before the new rules take effect. Staff estimate that delaying the City's current Step Code timelines to April, July, and October would apply to approximately 55%, 20%, and 10% of building permit applications submitted in 2025, affecting 88, 32 and 16 applications respectively.

Cost Analysis for Energy Step Code Performance Levels

In 2022, the provincial Building and Safety Standards Branch commissioned an Energy Step Code Metrics Research Report that derived the incremental cost of construction for new Part 3 and Part 9 buildings at all levels of the Energy Step Code and for all climate zones in BC. Based upon this work, staff derived the incremental cost of constructing a single-detached or duplex to Steps 3, 4, and 5, using a baseline cost of \$425 per square foot in the Lower Mainland climate zone. Since 2022, staff note that construction costs have increased by at least 1.1% (\$5/ft²) for a Step 3 house, 1.4% (\$7/ft²) for Step 4, and 2.7% (\$13/ft²) for Step 5, compared to a house built to minimum requirements of Revision 4 of the BC Building Code. Since the energy requirements in the BC Building Code (Revision 5) were updated to minimum Step 3 equivalency in May 2023, the incremental cost of building to Energy Step Code level 4 or 5 is now incrementally lower than the 2022 Metrics Research Report suggests (see Attachment 2).

The analysis in the 2022 Metrics Research Report focuses on the Energy Step Code, which includes costing of building envelope components such as windows, walls, insulation levels and airtightness. This report did not assess costs for Zero Carbon Step Code compliance, which is driven by the type of space heating and hot water equipment. Installed and lifecycle costs for space heating / cooling and domestic hot water equipment is included in the report: "Updated Energy Step Code and Zero Carbon Step Code Compliance Options for New Single Detached and Duplex Homes", dated September 19, 2024.

Supplemental Electrical Information

At the Open General Purposes Committee meeting on September 16, BC Hydro presented its electrification strategy and capital plan, committing to provide additional information to Council. At that meeting, BC Hydro committed to providing supplemental information related to local and regional grid capacity, local service reliability and local service connection costs. Staff were notified by BC Hydro that this information will not be available for the November 4, 2024 General Purposes Committee meeting. To support this matter, staff have prepared the following supplemental information that is derived from external and internal resources:

- **Local Electrical Capacity and Network Reliability:** According to information presented by BC Hydro staff in September, existing capacity of substations serving Richmond is 433 megawatts (MVA). Current peak load in Richmond is 361 MVA, or 83% of this installed capacity. Once BC Hydro completes its planned investments at the Steveston and Kidd #2 substations, total capacity would increase to 583 MVA. As a result, Richmond's projected peak load of 450 MVA in 2032/33 would improve to 77% of total installed capacity. In recent years, both the average annual number of service interruptions and number of hours without power in Richmond have been 1/3 below BC Hydro's overall system average.
- **Cost for Electrical Service Hook Ups:** According to BC Hydro website¹, standard fees apply to locations with close access to electrical distribution grid service (750V or less). These fees cover the cost of meter installation and the wire or cable connecting BC Hydro's infrastructure to the building's meter. For a new 200 or 400 Amp overhead service connection, the cost is \$838 or \$1,207 respectively. For a new 200 or 400 Amp underground service connection, the cost is \$1,270 or \$2,225 respectively. Trenching the underground electric service adds an estimated \$2,000 per metre in installation costs. Richmond does not require undergrounding of new electrical service connections, except for townhouses, and developments within the City Centre Area. While it is possible to have two separate 200 Amp service connections to a single house, rather than one 400 Amp connection, BC Hydro discourages this approach. Because of the weight of the wires involved, 600 Amp or larger connections must be undergrounded. New 100 or 200 Amp services are usually installed within a month of a request to BC Hydro, while requests for 400 Amp service go through a design process and typically take between five to nine months to complete.

Staff also note that City has requested intervener status from the BC Utilities Commission on two applications. The first application updates BC Hydro's Distribution Extension Policy, while the second aims to revise the utility's residential service rates. The proposed

¹ <https://app.bchydro.com/accounts-billing/electrical-connections/connection-requests/express/fees-charges.html>

Distribution Extension Policy would modestly reduce the cost for electrical service connections to new smaller residential developments (single detached and multiplex houses), and significantly reduce connection costs for larger residential developments. Additionally, the City seeks to ensure that new residential rates incentivize decarbonization projects, such as onsite solar photovoltaic systems that support energy resiliency and affordability.

- **Availability of 320 Amp Service Connections:** BC Hydro offers 320 Amp service in northern BC, Vancouver Island and southern Interior, but not in the Lower Mainland at present, due to supply chain limitations. In the future, BC Hydro may extend 320 Amp service to the Lower Mainland.²



Norm Connolly
Sustainability Manager, Climate and Environment
(604-247-4676)

Att. 1: Comparison of Current City of Richmond Step Code Bylaw Requirements with Other Municipalities

Att. 2: Incremental Cost of Building to the BC Energy Step Code

pc: SMT
James Cooper, Director, Building Approvals
Chad Paulin, Director, Climate & Environment

² BC Hydro. Limited Release of Single-Phase Secondary 320A 120/240V Services with Self-Contained Metering – Advisory no. 2023-029 R1. Issue date: 2024-05-17

Comparison of Current City of Richmond Step Code Bylaw Requirements with Other Municipalities

Building Bylaw Compliance Requirements (as of January 2025)		
<i>Less stringent than Richmond</i>	<i>Equivalent to Richmond</i> ⁽¹⁾	<i>More stringent than Richmond</i>
<ul style="list-style-type: none"> • Capital Regional District • City of North Vancouver⁽²⁾ • Courtenay • District of North Vancouver⁽²⁾ • Highlands • Nelson • Pemberton • Pentiction • Port Coquitlam • Rossland • Squamish • Surrey • Vernon • West Vancouver⁽²⁾ 	<ul style="list-style-type: none"> • Burnaby • Central Saanich • Colwood • Cowichan Valley RD • City of North Vancouver⁽²⁾ • District of North Vancouver⁽²⁾ • Esquimalt • Nanaimo • New Westminster⁽²⁾ • North Cowichan RD • Saanich • Township of Langley • Victoria • View Royal • West Vancouver⁽²⁾ • Whistler⁽²⁾ • Vancouver⁽²⁾⁽³⁾ 	<ul style="list-style-type: none"> • New Westminster⁽²⁾ • Port Moody • Qualicum Beach • Whistler⁽²⁾ • Vancouver⁽²⁾⁽³⁾

NOTES

- (1) Richmond's current bylaw requirements provide three compliance options for Part 9 builders to select a preferred combination of Energy Step Code (ESC) and Zero Carbon Step Code (ZCSC) performance levels, as follows: ESC Step 5 and ZCSC EL-2, [or] ESC Step 4 and ZCSC EL-3, [or] ESC Step 3 and ZCSC EL-4.
- (2) Municipalities with more than one set of Step Code compliance options for new Part 9 residential buildings.
- (3) City of Vancouver Building Bylaw (VBBL) has two pathways for Part 9 residential compliance: (a) achieve the certified Passive House Standard; or (b) Step Code pathway where mechanical energy use intensity is at Energy Step Code level 4, building airtightness is at Energy Step Code level 3, and GHG intensity is approximately Zero Carbon Step Code level EL-3.

Incremental Cost of Building to the BC Energy Step Code

	Step 3	Step 4	Step 5
Construction cost per square foot (BC Lower Mainland)	\$ 430	\$ 432	\$ 438
Total construction cost of a 3,000 ft ² single detached or duplex home in Richmond	\$ 1,290,000	\$ 1,296,000	\$ 1,314,000
Incremental cost of construction relative to a new house built to minimum prescriptive requirements of the 2018 BC Building Code [Revision 4] ⁽¹⁾	1.10%	1.40%	2.70%
Inferred incremental cost of construction relative to a new house built to minimum prescriptive requirements in the current 2018 BC Building Code [Revision 5] ⁽²⁾	~ 0%	0.3%	1.60%
Inferred incremental total cost of development relative to a new house built to minimum prescriptive requirements in the current 2018 BC Building Code [Revision 5] ⁽²⁾	~ 0%	0.15%	0.8%

NOTES

- (1) Figures are taken from the BC Energy Step Code Metrics Research Report (2022) commissioned by the Building & Safety Standards Branch, Province of BC. This report derived incremental cost of construction for new Part 3 and Part 9 buildings at all levels of the Energy Step Code and for all climate zones in BC. Cost percentages shown are incremental to a new house built to minimum prescriptive requirements of the 2018 BC Building Code (Revision 4).
- (2) Calculated incremental cost of construction and total cost of development recognizing that the Province of BC amended the BC Building Code in May 1, 2023 to Revision 5, which included adoption of the new Zero Carbon Step Code, as well a minimum 20% better energy efficiency requirement for all new buildings. In May 2023, Energy Step Code level 3 became the minimum performance level in the BC Building Code for Part 9 residential.



City of Richmond

Report to Committee

To: General Purposes Committee **Date:** September 19, 2024
From: Chad Paulin **File:** 10-6125-01/2024-Vol
 Director, Climate and Environment 01
Re: **Updated Energy Step Code and Zero Carbon Step Code Compliance Options for New Single Detached and Duplex Homes**

Staff Recommendation

That direction be provided regarding the preferred option as outlined in the report titled 'Updated Energy Step Code and Zero Carbon Step Code Compliance Options for New Single Detached and Duplex Homes' from the Director, Climate and Environment, dated September 19, 2024.

Chad Paulin M.Sc., P.Ag.
 Director, Climate and Environment
 (604-247-4672)

Att. 2

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

Staff Report

Origin

This report responds to GP Committee Referral Motion dated July 15, 2024:

That, in relation to the Zero Carbon Step Code and Energy Step Code in the Building Regulation Bylaw and OCP, for single-detached and duplex residential buildings, staff be directed to:

- (1) Provide options for Council consideration related to the current implementation timeline; and,*
- (2) Clarify the role of natural gas for space heating and domestic hot water, and provide options for Council consideration.*

The Province adopted the Energy Step Code into the BC Building Code in 2017, and in 2018 Richmond became the first local government to opt in to these requirements. In 2023, the Province adopted a second set of opt-in Building Code requirements, the Zero Carbon Step Code, which regulates GHG emissions from building operations. Council adopted the Zero Carbon Step Code requirements within the City's *Building Regulation Bylaw 7230* on October 31, 2023. This report summarizes the City's existing compliance path and outlines three options to consider for future Building Code requirements and timelines.

This report supports Council's Strategic Plan 2022-2026 Focus Area #2 Strategic and Sustainable Community Growth:

Strategic and sustainable growth that supports long-term community needs and a well-planned and prosperous city.

2.2 Develop and implement innovative and proactive solutions that encourage a range of housing options and prioritize affordability.

This report supports Council's Strategic Plan 2022-2026 Focus Area #5 A Leader in Environmental Sustainability:

Leadership in environmental sustainability through innovative, sustainable and proactive solutions that mitigate climate change and other environmental impacts.

5.1 Continue to demonstrate leadership in proactive climate action and environmental sustainability.

This report supports the implementation of Richmond's Community Energy and Emissions Plan 2050, and Official Community Plan emission reduction policies through:

Strategic Direction 3: Carbon Neutral New Buildings

- Action Categories:
- Accelerate transition to the top level of building performance
 - Encourage cost-effective on-site renewable energy generation
 - Advance implementation of low carbon energy systems

Findings of Fact

Council endorsed the City's current building regulation on October 31, 2023. The current regulation includes three options for builders to meet the City's Energy Step Code and Zero Carbon Step Code requirements for new Part 9 residential buildings (i.e. detached houses, duplexes, SSMUHs, townhouses and some small apartment buildings):

- Energy Step Code (ESC) Step 5 and Zero Carbon Step Code (ZCSC) Emission Level (EL)-2;
- ESC Step 4 and ZCSC EL-3; and
- ESC Step 3 and ZCSC EL-4 (Attachment 1).

In referencing the provincial Energy Step Code and Zero Carbon Step Code requirements, the City's Building Development Bylaw has offered Part 9 residential builders at least two options for compliance since 2022, enabling builders to trade off energy efficiency with GHG emissions performance through design. The City's current regulatory schedule proposes an increase in Step Code requirements in 2025, with a final increase to the highest ESC and ZCSC requirements proposed for 2027 (Attachment 1).

Richmond's compliance approach has been developed to allow the building community adequate time for the transition to higher levels of performance, by incrementally improving design and transition construction practices. Feedback received through ongoing Builders' Breakfast sessions, continued uptake of training subsidies, and Building Permit and Occupancy Permit data for Part 9 residential buildings all provides evidence that Richmond's builders have been successfully meeting performance-based energy requirements of the Energy Step Code since adoption in 2018. The City now has approximately 760 better-than-Building Code Part 9 buildings occupied and more than 100 occupied homes that meet the Richmond's Zero Carbon Step Code standards. To date, there have been no compliance failures at building occupancy with respect to these requirements.

On average, heat loss from these homes is 38% less than those completed before 2019, while energy use for heating, cooling and ventilation is down 35%. Since 2022, GHG emissions from the average new detached home in Richmond has declined by two-thirds. GHG emissions from an increasing number of EL-4 homes in Richmond are less than one-tenth of the GHGs produced by a non-ZCSC home. Staff note that almost all detached and duplex Part 9 residential buildings in Richmond feature slab-on-grade construction, a least-cost response to Richmond's soils and high water table. Large areas of conditioned floor space on the ground floor result in significant heat loss into the ground. This has driven the near-universal use of in-floor radiant heating to address the resulting cold floors, powered by natural gas boilers and air-to-water heat pumps. The new BC Building Code overheating provisions, introduced in 2024, require at least one living space that is capable of maintaining an indoor air temperature of not more than 26°C. This provision is accelerating the uptake of heat pumps, and most homes are now being designed with 100% cooling in response to market preferences.

Analysis

Staff received feedback that some builders of new homes with in-floor radiant heating were experiencing challenges designing and building to the "Step 5 and EL-2" option due to potential

cost restraints. In response, staff completed energy modelling to evaluate possible causes, and to assess potential options to adjust the requirements for new detached houses residential buildings. Analysis included a full review of mechanical system options for space heating and cooling, as well as domestic hot water heating to meet the City’s Bylaw requirements with respect to BC Energy Step Code and Zero Carbon Step Code. This work explicitly assessed the feasibility of using natural gas for space heating with the “Step 5 and EL-2” option across a range of house sizes, with and without secondary suites (Attachment 2). This work was limited to detached houses and duplexes, and while the findings suggest Step Code compliance may be easier for smaller buildings and Part 9 buildings with multiple units, these building types were beyond the scope of the work conducted by staff, given the limited time available.

Over a typical 15-year lifecycle, maintenance costs for a gas-fired boiler with radiant heating and a cooling system were assessed to be higher compared to those of a heat pump system. A recent study for the City of Vancouver by RDH comparing the lifecycle cost of natural gas and electrically powered hot water heating similarly concluded that electric heat pumps have the lowest total cost over the life of the equipment (Attachment 2). While air-to-air heat pumps are less expensive on a lifecycle basis, uptake to date has been slower as the industry gains familiarity with these systems.

Step Code Options

Staff outline three options related to the City’s current approach and timelines. A summary of the options is tabulated below.

Option 1	Continue with the City’s existing regulatory approach and delay next set of Step Code requirements for detached and duplex houses that is scheduled to occur as early as January 2025.
Option 2	Continue with the City’s existing approach and delay next steps to match Provincial timelines, including extending the next two increments in Step Code requirements for single-detached houses and duplexes to 2027, 2030 and 2032; providing three full years between each increment.
Option 3	Revert the City’s current approach to Provincial timelines for detached and duplex houses that minimizes energy efficiency requirements within the BC Building Code increase from Step 3 to Step 4 in 2027, to ZCSC EL-4 in 2030 and from Step 4 to Step 5 in 2032.

Considerations for each option are supported by a review of mechanical system options for space heating and cooling, and for domestic hot water heating. The analysis also considered the role of natural gas in these systems with respect to compliance in the City’s Bylaw.

Option 1 – Continue with the City’s existing approach and delay next step

The City’s current regulatory schedule to increase Step Code requirements is proposed for 2025, with a final increase to the highest ESC and ZCSC requirements in 2027 (Attachment 1). This option aligns with the Council-adopted Community Energy and Emissions Plan’s GHG emission reduction target, 50% reduction from 2007 levels by 2030, for 2030. It is also consistent with expected timing of future Energy Step Code requirements for other building types in Richmond

including Part 9 townhouses; Part 3 multi-unit residential buildings; and Part 3 commercial office and retail buildings. This option allows for natural gas heating with the Step 5 and EL-2 option, which significantly reduces compliance costs for large single-unit houses.

With the next set of Step Code requirements scheduled to occur as early as January 2025, staff note that the current timing assumptions may exceed the pace at which some builders in Richmond can cost-effectively transition to using air-to-water heat pump systems for in-floor radiant heating. This problem might be somewhat alleviated by delaying the scheduled 2025 and 2027 changes in Step Code requirements to at least January of the following year, giving Richmond homebuilders additional time to build successfully to current requirements and prepare for future increments. While, the two new administrative changes noted above will substantially increase both GHG emissions and energy use in new buildings for the next three years, and increase long-term energy costs for residents of these buildings, these impacts are likely manageable if both of these allowances expire in 2026 or 2028.

Option 2 – Continue with the City's existing approach and delay next steps to match Provincial timelines

This option includes extending the next two increments in Step Code requirements for single-detached houses and duplexes to 2027 and 2032, providing three full years between each increment (Attachment 1). This option will provide additional time for builders to acclimatize to current and future Step Code requirements. This option also provides more time for the City to support builders with cost-effective approaches to high-performance and the integration of near-zero emission mechanical systems. In particular, it allows more time (than Option 1) for builders and contractors to continue to become proficient with installing air-to-water heat pump systems, helping to grow a pool of skilled mechanical system installers, with increased local product availability and price competition as a result.

While the extended timeline will result in reduced average energy efficiency and GHG emission reductions per home in the 2025-2032 period relative to Option 1, staff have determined that the impact on GHG emissions from this sector is manageable, particularly if the two new administrative changes noted above are retired when Step Code requirements increase in 2027. Given the relatively small number of new single-detached and duplex homes building permit applications during this time period, the City may still be able to achieve its 2030 GHG emission reduction target of 50%, provided that these extended timelines are not applied to other building sectors, and that all other CEEP measures adopted by Council are fully implemented.

Option 3 – Revert City's current approach to Provincial timelines for detached and duplex houses

This option would have energy and GHG requirements for new detached and duplex houses relaxed to align with the Province's minimum building requirements. The Province has stated that minimum energy efficiency requirements within the BC Building Code will increase from Step 3 to Step 4 in 2027, and from Step 4 to Step 5 in 2032 (Attachment 1). At the present time, there are no GHG intensity requirements in the BC Building Code aside from the opt-in Zero Carbon Step Code, but the Province has stated that it will require EL-4 for all new construction in 2030.

Reverting to minimum code requirements may compromise the years of effort by local builders to gain proficiency in high-performance and low-carbon building techniques. This option may also slow the current expansion of local expertise, making it more challenging to comply when minimum code requirements do increase in the future.

If Option 3 is adopted, it would lead to more GHG emissions from new detached and duplex buildings for an extended period. New homes would have increased GHG emissions relative to recent builds and homes currently under construction, and would likely also be associated with lower energy performance and increased operating costs for residents. The increased GHG emissions will be difficult to recoup through increased efforts in other sectors, putting achievement of the City's Richmond GHG emission reduction targets for 2030 at risk.

Financial Impact

None at this time.

Conclusion

The City's current regulatory schedule to increase Step Code requirements is proposed for 2025, with a final increase to the highest Energy Step Code and Zero Carbon Step Code requirements in 2027. Staff received feedback that some builders were experiencing challenges achieving the Step 5 and EL-2 due to potential cost restraints in 2024. Staff have outlined three options for consideration and are seeking direction on the future path for regulatory compliance. With Council direction on any of the options, staff will come back with the appropriate bylaw amendments for consideration as required.



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- Att. 1: Potential Step Code Timelines
- 2: Average cost comparison between space heating and cooling systems for detached homes and duplexes in Richmond

Potential Step Code Timelines

Option 1: Continue with the City’s existing approach and delay next step

	Current Bylaw:			Future Bylaw Amendments Subject to Council Approval							
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Single Family Dwellings and Duplexes	ESC Step 5 & ZCSC EL-2 -or- ESC Step 4*^ & ZCSC EL-3 -or- ESC Step 3*^ & ZCSC EL-4			ESC Step 5* & ZCSC EL-3 -or- ESC Step 4*^ & ZCSC EL-4		ESC Step 5* & ZCSC EL-4					

Option 2: Continue with the City’s existing approach and delay next steps to match Provincial timelines

	Current Bylaw:				Future bylaw amendments, subject to Council approval							
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	
Single Family Dwellings and Duplexes	ESC Step 5 & ZCSC EL-2 -or- ESC Step 4*^ & ZCSC EL-3 -or- ESC Step 3*^ & ZCSC EL-4				ESC Step 5* & ZCSC EL-3 -or- ESC Step 4*^ & ZCSC EL-4			ESC Step 5* & ZCSC EL-4 -or- ESC Step 4*^ & ZCSC EL-4*		ESC 5* & ZCSC EL-4		

Option 3: Revert City’s current approach to Provincial timelines for detached and duplex houses

	Current Bylaw:		Future Bylaw Amendment		Provincial Code changes						
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Single Family Dwellings and Duplexes	ESC Step 5 & ZCSC EL-2 -or- ESC Step 4*^ & ZCSC EL-3 -or- ESC Step 3*^ & ZCSC EL-4		BCBC minimum code: ~Step 3		BCBC minimum code: ~Step 4			BCBC minimum code: ~Step 4 & ~ZCSC EL-4		BCBC minimum code: ~Step 5 & ~ZCSC EL-4	

* modelling natural gas heaters/boilers as “back-up” units is not acceptable;
 ^ “total heat loss reduction” compliance pathway for building envelope is not acceptable

Average cost comparison for space heating/cooling systems and domestic hot water equipment for detached homes and duplexes in Richmond

Table 1: Average cost comparison between space heating and cooling systems for detached homes A, C & G¹

	Heating system efficiency	Builder Affordability		Owner Affordability	
		Total capital cost	Incremental capital costs ²	Total operating costs (15 years)	Total Lifecycle costs (15 years)
<i>In-floor radiant:</i>					
Gas-fired Boiler + Cooling (baseline)	95%	\$ 90,333	-	\$ 16,476	\$ 106,809
Electric Boiler + Cooling	100%	\$ 87,833	-\$ 2,500	\$ 20,168	\$ 108,001
Air-to-water Heat Pump with cooling, and Gas Boiler as backup	200%	\$ 94,167	\$ 3,833	\$ 15,125	\$ 109,292
Air-to-water Heat Pump with cooling	230%	\$ 90,428	\$ 95	\$ 14,551	\$ 104,979
<i>Forced air system:</i>					
Air-to-Air Heat Pump with cooling (no gas backup)	250%	\$ 45,333	-\$ 45,000	\$ 12,352	\$ 57,685

¹ Ecolighten Energy Solutions was commissioned by the City of Richmond to conduct the study on cost estimates for space heating and cooling systems (2024).

² Incremental cost is calculated by taking a high-efficient gas-fired boiler with a separate cooling system as the baseline, and representing the additional cost of higher efficiency equipment relative to this baseline.

Table 2: Cost comparison between space heating and cooling systems for Duplex D

	Heating system efficiency	Builder Affordability		Owner Affordability	
		Total capital cost	Incremental capital costs ³	Total operating costs (15 years)	Total Lifecycle costs (15 years)
<i>In-floor radiant:</i>					
Gas-fired Boiler + Cooling (baseline)	95%	\$ 70,000	-	\$ 11,592	\$ 81,592
Electric Boiler + Cooling	100%	\$ 66,500	-\$ 3,500	\$ 10,960	\$ 77,460
Air-to-water Heat Pump with cooling, and Gas Boiler as backup	200%	\$ 66,000	-\$ 4,000	\$ 9,822	\$ 75,822
Air-to-water Heat Pump with cooling	230%	\$ 65,667	-\$ 4,333	\$ 8,618	\$ 74,285
<i>Forced air system:</i>					
Air-to-Air Heat Pump with cooling (no gas backup)	250%	\$ 34,000	-\$ 36,000	\$ 9,908	\$ 43,908

³ Incremental cost is calculated by taking a high-efficient gas-fired boiler with a separate cooling system as the baseline, and representing the additional cost of higher efficiency equipment relative to this baseline.

Table 3: Cost comparison between different domestic water heating technologies ⁴

	Domestic Hot Water System Efficiency*	Builder Affordability		Owner Affordability	
		Total capital cost	Incremental capital cost ⁵	Total operating costs (15 years)	Total Lifecycle costs (15 years)
Gas-Fired Domestic Water Heater – Standard Efficiency (baseline)	62%	\$ 2,139	\$ 0	\$ 5,940	\$ 8,079
Gas-Fired Domestic Water Heater (High Efficiency)	80%	\$ 4,682	\$ 2,543	\$ 4,140	\$ 8,822
Electric Water Heater	90%	\$ 1,732	-\$ 407	\$ 6,120	\$ 7,852
Electric Heat Pump Water Heater	383%	\$ 5,137	\$ 2,998	\$ 1,800	\$ 6,937

* Manufacturer listed Uniform Energy Factor (UEF) per CoV report

⁴ RDH Building Science has been recently commissioned (2024) by the City of Vancouver to conduct a study on cost estimates for different hot water system scenarios.

⁵ Incremental cost is calculated by taking a standard-efficient gas-fired water heater as the baseline, and representing the additional cost of higher efficiency equipment relative to this baseline.