

Broadway Subway Project Construction Approval Process Fixed Guideway Rapid Transit Stations

SCHEDULE 4: APPENDIX E: CONSTRUCTION APPROVAL PROCESS

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List of Acronyms

AHJ	Authority Having Jurisdiction
AIBC	Architectural Institute of British Columbia
ATPC	Authorization to Proceed with Construction
BCCR	Building Code Compliance Report
BCRA	Building Code Review Agent
BP	Building Permit
BSP	Broadway Subway Project
CAP	Construction Approval Process
CRP	Coordinating Registered Professional
DRCs	Drawing Review Comments
EGBC	Engineers and Geoscientists of British Columbia
FD	Fire Department
FLS	Fire and Life Safety
FLSBCC	Fire-Life Safety Building Code Consultant
IFC	Issued for Construction
NFPA	National Fire Protection Association
OAC	Occupancy Approval Certificate
RFAE	Request for Amendment or Exemption
RPR	Registered Professional of Record
SRP	Supporting Registered Professional of Record
TL BCC	TransLink Building Code Criteria – Fixed Guideway Rapid Transit Systems
TSBC	Technical Safety British Columbia
VBBL	Vancouver Building By-law

1.0 Introduction

This Construction Approval Process (CAP) document has been prepared for the Broadway Subway Project (BSP) in Metro Vancouver. It sets out roles and responsibilities for the processes relative to confirming compliance with applicable fire-life safety criteria in the design and construction of Stations. The CAP stands in the place of conventional municipal building and occupancy permit processes and is modelled after those processes.

The CAP is one of three Design and Construction Certification Procedures applicable to the Design and the Construction of the BSP, as set out in Part 3 [Certification and Completion] of Schedule 4.

The CAP supports the administration of the TransLink Building Code Criteria – Fixed Guideway Rapid Transit Systems (TL BCC), which supplements existing building codes through the provision of criteria that anticipates characteristics specific to rapid transit system stations and guideways. The purpose of the TL BCC is to explain the approach to incorporating the requirements and intent of the applicable municipal building code — which for the BSP is the Vancouver Building By Law (VBBL) — and, as appropriate, parts of the NFPA Standard for Fixed Guideway Transit and Passenger Rail Systems (NFPA 130) into the design and construction of Stations.

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2.0 Construction Approval Process (CAP)

This CAP document outlines the processes leading to issuance of the following in respect of each Station:

- (a) an *Authorization to Proceed with Construction* (ATPC) – the equivalent of a building permit; and
- (b) an *Occupancy Approval Certificate* (OAC) – the equivalent of an occupancy permit.

Codes referenced by the TL BCC allow for the development of alternative solutions. In other words, the use of methods, materials, systems or devices that are equivalent or superior to the requirements of a code with respect to fire protection and life safety are permitted, provided that sufficient data is submitted to the Building Code Review Agent (BCRA) and Authority Having Jurisdiction (AHJ) to demonstrate such equivalence. In the context of the CAP, if Project Co wishes to request an alternative solution Project Co shall prepare and submit a *Request for Amendment/Exemption* form (RFAE) in accordance with the Request for Code Amendment/Exemption Procedure described in Section 4.0 of this document.

The following charts provide a step-by-step outline of the CAP subdivided into three primary stages:

Figure 1 - Application for Authorization to Proceed with Construction (ATPC);

Figures 2a & 2b - Construction Reviews; and

Figure 3 - Application for Occupancy Approval Certificate (OAC).

Figure 1 – Application for Authorization to Proceed with Construction (ATPC)

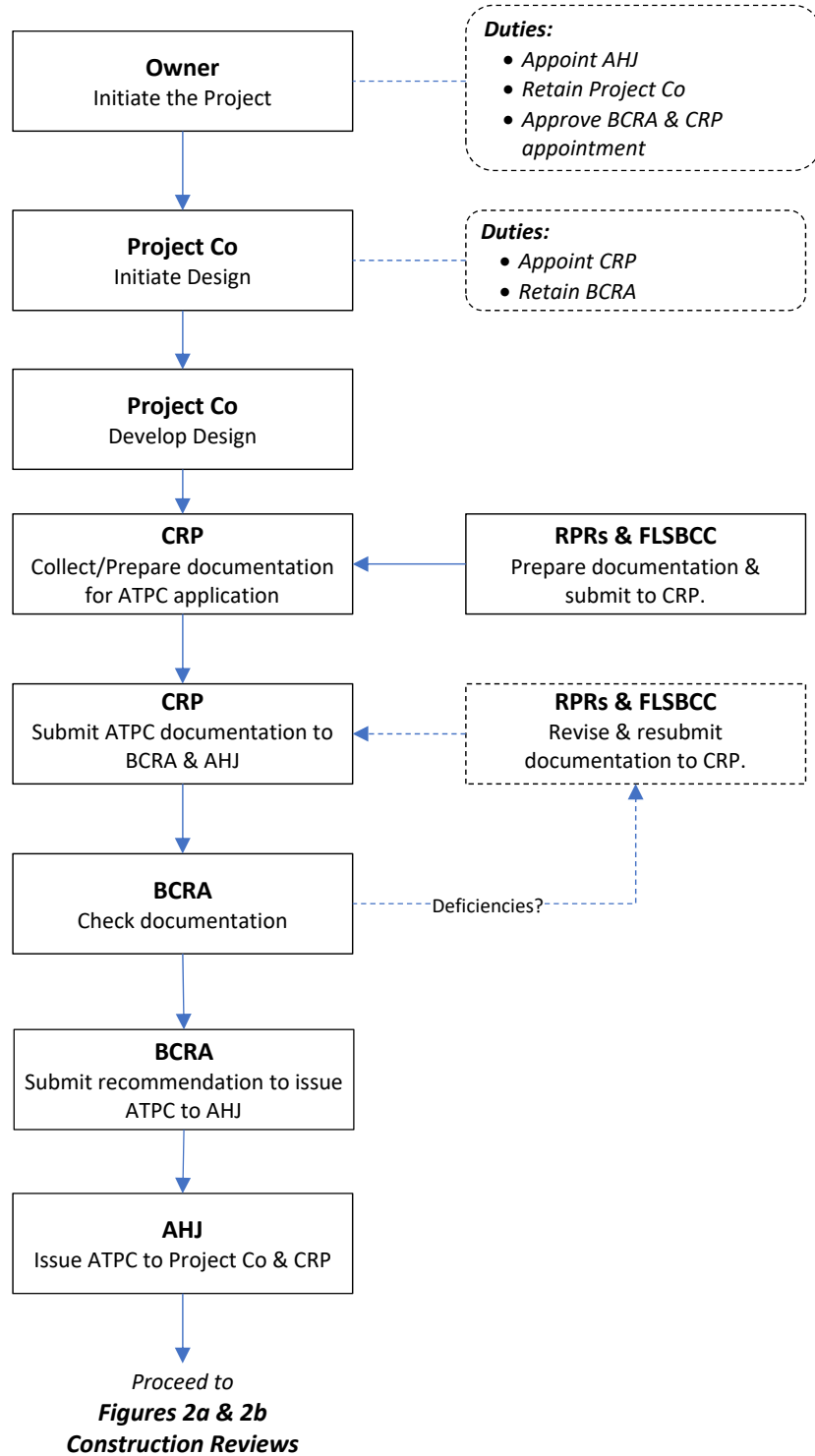


Figure 2a – Construction Reviews

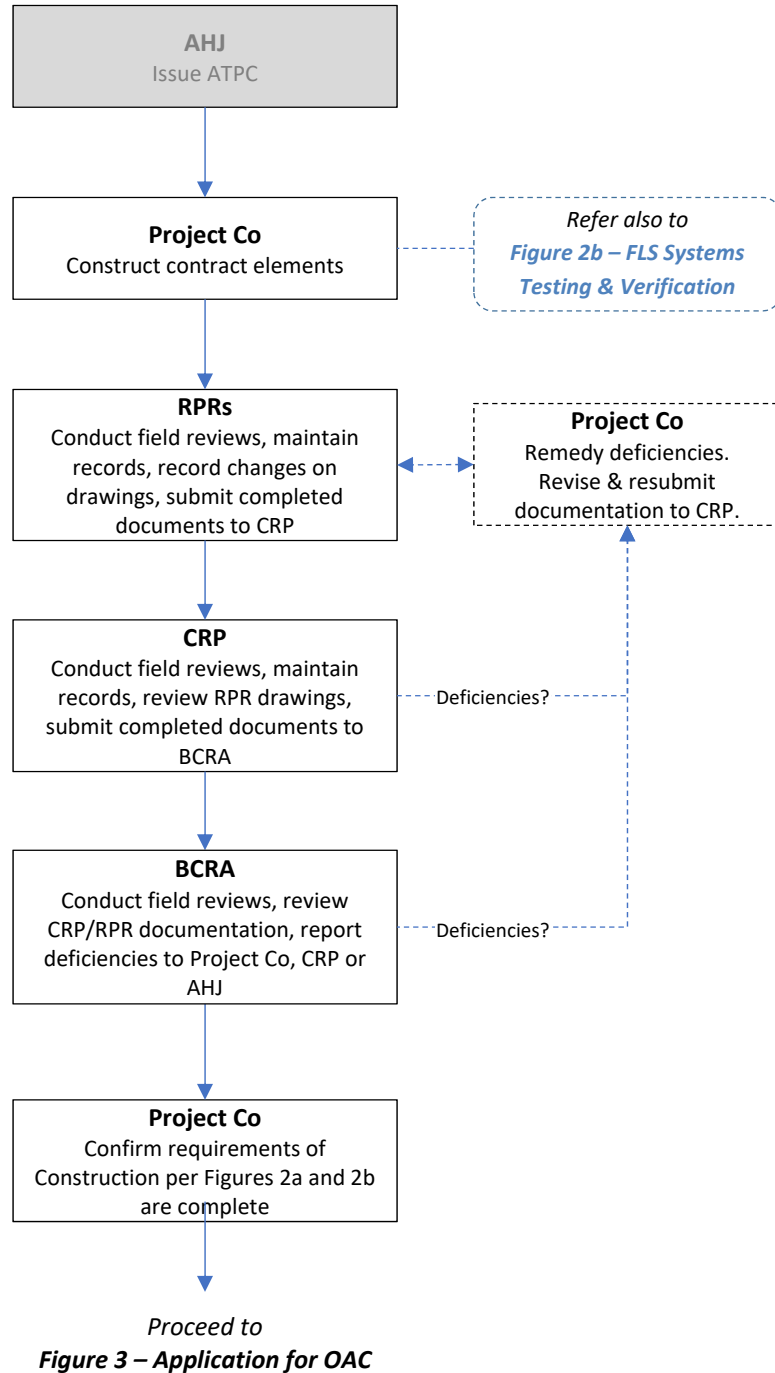
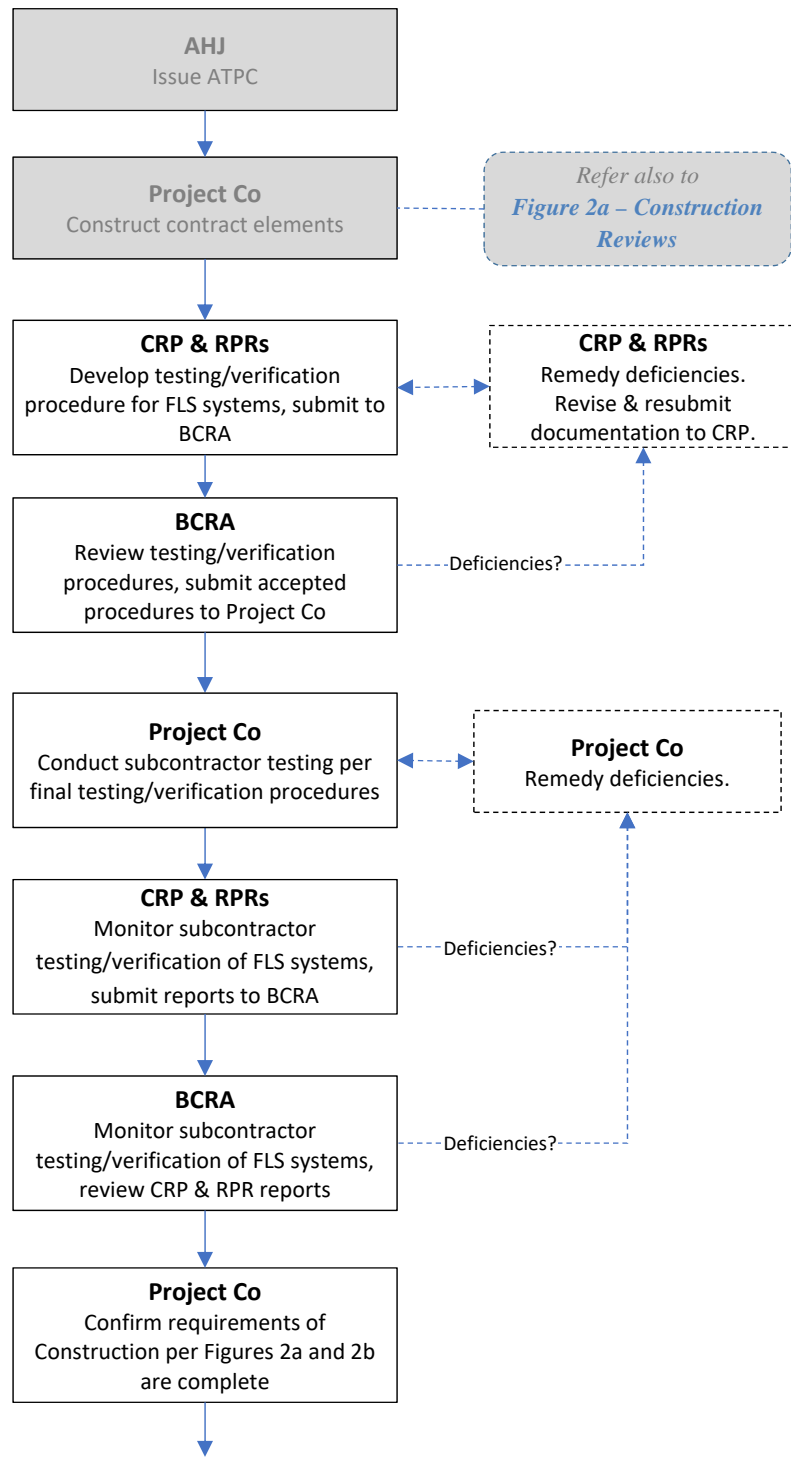
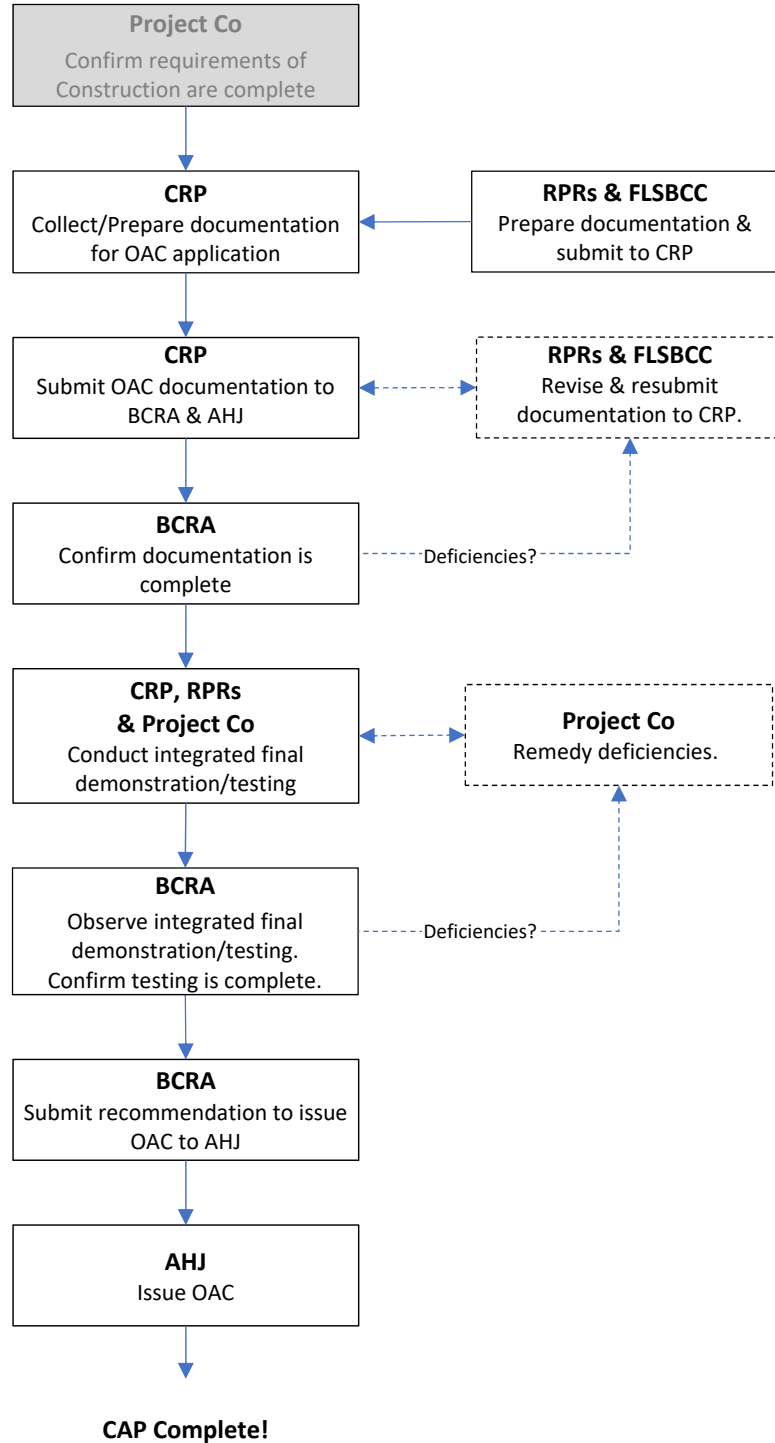


Figure 2b – Construction Reviews: Fire and Life Safety Sub-Systems Testing and Verification



*Proceed to
Figure 3 – Application for OAC*

Figure 3 – Application for Occupancy Approval Certificate (OAC)



BROADWAY SUBWAY PROJECT

PROJECT AGREEMENT

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EXECUTION COPY

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3.0 Roles and Responsibilities

Implementation of the CAP requires the following positions be filled:

- Owner;
- Authority Having Jurisdiction (AHJ);
- Building Code Review Agent (BCRA);
- Project Co;
- Coordinating Registered Professional (CRP);
- Registered Professionals of Record (RPR); and
- Fire-Life Safety Building Code Consultant (FLSBCC).

The respective roles and responsibilities of each of these positions in relation to the CAP are set out in Sections 3.1 through 3.7 below.

3.1 Owner

Role and Responsibilities:

The Owner is responsible for initiating the Broadway Subway Project (BSP).

Duties:

1. Appoint an individual to act as Authority Having Jurisdiction (AHJ) for the BSP.
2. Retain an entity, referred to in this document as “Project Co” to design and construct the BSP.
3. Approve appointment of a Building Code Review Agent (BCRA).
4. Approve appointment of the Coordinating Registered Professional (CRP).
5. With the CRP, complete a *Schedule A Confirmation of Commitment by Owner and Coordinating Registered Professional* as set out in Appendix C of this document and confirm that the Schedule is submitted to the BCRA.

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3.2 Authority Having Jurisdiction (AHJ)

Role and Responsibilities:

The AHJ will be appointed by the Owner and is responsible for enforcing compliance of the Design and Construction of the Stations with applicable building codes, both as appropriate and as amended by the TL BCC and the process described in this document.

Duties:

1. Acknowledge appointment of a Building Code Review Agent (BCRA), reporting to the AHJ.
2. Upon receipt of the following for each Station, issue an Authorization to Proceed with Construction (ATPC) (or a partial ATPC) for that Station to Project Co and the Owner:
 - a. from the BCRA, a completed ATPC form (Appendix A of this document) representing written recommendation that the design of the Station complies with applicable fire life safety criteria; and
 - b. from the CRP, all documentation required to support the ATPC.
3. Monitor construction progress and resolution of issues.
4. Upon receipt of the following for each Station, issue an Occupancy Approval Certificate (OAC) (or a partial OAC) for that Station to Project Co and the Owner:
 - a. from the BCRA, a completed OAC form (Appendix B of this document) representing written recommendation that the design of the Station complies with applicable fire life safety criteria; and
 - b. from the CRP, all documentation required to support the OAC.

3.3 Building Code Review Agent (BCRA)

Role and Responsibilities:

The BCRA will be retained by Project Co, and is subject to approval by the Owner. The BCRA reports to the AHJ with respect to compliance in the Design and Construction of Station with the applicable fire-life safety requirements of the referenced building codes, both as appropriate and as amended by the TL BCC and CAP. In that role, the BCRA conducts periodic design reviews and field reviews throughout the life of the Project and is responsible for providing recommendations to the AHJ regarding issuance of the ATPC and OAC permits.

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Duties:

1. Confirm that the necessary and appropriate registered professionals are retained for Stations; refer any concerns in this area to the appropriate professional association.
2. Provide ongoing review of design development, including milestone Drawing Review Comments (DRCs) and Building Code Compliance Reports (BCCR) prepared and submitted by the FLSBCC.
3. Review and approve or reject, as appropriate, RFAEs submitted pursuant to Section 4.0 of this document.
4. Review the complete ATPC documentation packages submitted by the CRP to confirm that the design of the Stations substantially complies with the applicable building code as amended by the TL BCC and CAP; notify the CRP of any deficiencies.
5. When satisfied that the outstanding issues regarding the design of the Station have been sufficiently resolved so that construction activities may commence, submit the completed ATPC application form (Appendix A of this document) to the AHJ in support of a recommendation to issue the ATPC.
6. Conduct periodic field reviews during construction to audit compliance of the Station with the design documents and requirements in the applicable building code as amended by the TL BCC and confirm that the CRP and the RPRs are conducting necessary field reviews; submit BCRA field review comments to the CRP, with a copy to the AHJ.
7. Conduct completeness reviews of the proposed testing verification procedures submitted by the CRP and the RPRs for the fire and life safety equipment and devices.
8. Review the complete OAC documentation package submitted by the CRP at the completion of construction to confirm that the Station substantially complies with the applicable building code as amended by the TL BCC; notify the CRP and the AHJ of any deficiencies.
9. Conduct a final inspection of the completed Station.
10. Witness the integrated final demonstration/testing of the fire and life-safety systems and devices in respect of the completed Station.
11. When all outstanding issues have been resolved, submit the OAC application form (Appendix B of this document) to the AHJ in support of a recommendation to issue the OAC.

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12. Compile a binder (both hard copy and electronic) to include documentation associated with application for and approval of ATPC and OAC, as well as documents specific to BCRA review throughout Design and Construction of the Station. At the conclusion of construction of the Station, submit the binder to the AHJ.

3.4 Project Co

Role and Responsibilities:

Project Co will be retained by the Owner and is responsible for executing design of the BSP in compliance with the applicable building codes and regulations both as appropriate and as amended by the TL BCC and CAP and coordinating construction of the BSP in conformance with the intended design.

Duties:

1. Prior to initiation of Design and Construction of the BSP, nominate and retain a BCRA.
2. Prior to initiation of Design and Construction of the Station, nominate and retain representatives for each of the following positions:
 - a. a Coordinating Registered Professional (CRP) as approved by the Owner to coordinate the Design, including the field reviews of other registered professionals required for the Station;
 - b. Registered Professionals of Record (RPRs) for each discipline; and
 - c. a Fire-Life Safety Building Code Consultant (FLSBCC).
3. Retain and coordinate the activities of Project Co's subcontractors.
4. Monitor Construction progress to ensure compliance to the design drawings; confirm that identified issues and deficiencies are resolved.
5. Coordinate the commissioning and functional testing of the fire and life safety systems by Project Co's subcontractors.

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3.5 Coordinating Registered Professional (CRP)

Role and Responsibilities:

The CRP will be appointed by Project Co to coordinate the design work and field reviews of the RPRs required for the Stations, in order to ascertain that the Design and Construction will substantially comply with the applicable building code, both as appropriate and as amended by the TL BCC. The CRP functions as the project administrator as far as assurance of code compliance is concerned.

Duties:

1. With the Owner, complete a *Schedule A Confirmation of Commitment by Owner and Coordinating Registered Professional* as set out in Appendix C of this document and submit the Schedule to the BCRA.
2. Coordinate all activities relating to the Design and Construction of the Station, including the field reviews.
3. Keep the BCRA and Project Co advised on all code compliance issues.
4. Prior to initiation of the Design and Construction of the Station, together with Project Co, ascertain that the necessary and appropriate registered professionals are retained.
5. Prepare a project directory of registered professionals engaged to provide services with respect to the Station and update the list with changes in those appointments when advised by Project Co.
6. Review RFAE requests in accordance with Section 4.0 of this document and provide the BCRA with recommendations regarding approval or rejection of any such requests.
7. Prior to the submission of the application for an ATPC in respect of a Station, collect and review all Schedule Bs *Assurance of Professional Design and Commitment for Field Review* and any other design reports relating to that Station. If an RPR has crossed out any item on their Schedule B, determine from the RPR who will be responsible for the design and the field review of that item.
8. When the following documents relative to application for an ATPC have been collected and completed, combine them as a single package and submit the package to the BCRA and AHJ:
 - a. *Schedule A Confirmation of Commitment by the Owner and Coordinating Registered Professional*;

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- b. Schedule Bs *Assurance of Professional Design and Commitment for Field Review* for each RPR;
 - c. a BCCR that reflects the design of the Stations at the time of application;
 - d. the ATPC application form (Appendix A of this document); and
 - e. any required supplementary information as determined by the AHJ or BCRA.
9. During Construction of the Station:
 - a. notify the BCRA and FLSBCC where Construction deviates from the design set-out in the design Drawings and BCCR; and
 - b. maintain written records of field reviews and any corrective action taken as a result of those field reviews.
10. With the RPRs, develop the proposed testing verification procedure for fire and life safety equipment and devices and coordinate the functional testing of any fire-life safety systems and devices.
11. At the conclusion of the Construction of the Station, complete a Schedule C-A *Assurance of Coordination of Professional Field Review*, confirming that the CRP has:
 - a. coordinated the necessary field reviews of the registered professionals engaged with respect to the Stations and that those reviews have been completed, and
 - b. coordinated the functional testing of the fire emergency systems and devices with respect to the Stations to ascertain that they substantially comply with the requirements of the applicable building code.
12. Prior to the submission of the application for an OAC in respect of a Station, collect and review all applicable Schedule C-Bs *Assurance of Professional Field Review and Compliance* and any other design reports relating to that Station.
13. When the following documents relative to application for an OAC have been collected and completed, combine them as a single package and submit the package to the BCRA and AHJ:
 - a. Schedule C-A *Assurance of Coordination of Professional Field Review*,
 - b. Schedule C-Bs *Assurance of Professional Field Review and Compliance* for each discipline,

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- c. an updated BCCR that reflects the as-built condition of the Station,
- d. the OAC application form (Appendix B of this document), and
- e. any supplementary information required as determined by the AHJ or BCRA.

3.6 Registered Professional of Record (RPR)

Role and Responsibilities:

An RPR will be retained by Project Co for each discipline. The RPR is responsible for providing confirmation in respect of the RPR's discipline that the design intent has been realized in the Construction of the applicable Station and that each completed Station is in substantial conformance with the applicable building code, both as appropriate and as amended by the TL BCC.

Duties:

1. Provide design, field review and assurances in respect of the RPR's discipline.
2. Prior to the start of the Construction of a Station, complete a Schedule B *Assurance of Professional Design and Commitment for Field Review* confirming, for the discipline for which the RPR is responsible, that
 - a. the Design substantially conforms to the applicable building code, both as appropriate and as amended by the TL BCC, including the coordination of the fire and life safety systems;
 - b. the RPR undertakes to be responsible for field reviews during the Construction of the applicable Station;
 - c. field review reports shall be submitted to Project Co; and
 - d. in the event that the RPR has crossed out any item on his or her Schedule B, the RPR shall advise the CRP of the deletion and shall identify to the CRP the alternate RPR or Supporting Registered Professional (SRP) who shall be responsible for the Design, including field review, of the deleted item, if appropriate.
3. Where the detailed design of specific components of the discipline for which the RPR is responsible is undertaken by a SRP:

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- a. review the shop drawing for the applicable component to ensure that the design substantially complies with the applicable building code, both as appropriate and as amended by the TL BCC, and is compatible with the remainder of the design,
 - b. at the discretion of the RPR, require the SRP to sign Schedules S-B and S-C as prepared by the AIBC and EGBC, and
 - c. ensure that appropriate field reviews of the applicable component are carried out by the SRP to confirm substantial compliance of the component with the applicable building code, both as appropriate and as amended by the TL BCC.
4. Together with the CRP, develop the proposed testing verification procedure for fire and life safety equipment and devices.
 5. Witness the demonstration testing of the fire and life safety systems to confirm their proper integrated operation and substantial compliance with the applicable building code, both as appropriate and as amended by the TL BCC.
 6. Submit the completed Schedule C-B *Assurance of Professional Field Review and Compliance* to the CRP in respect of the completed Stations.

3.7 Fire-Life Safety Building Code Consultant (FLSBCC)

Role and Responsibilities:

The FLSBCC will be retained by Project Co and is responsible for providing advice relative to application and interpretation of fire-life safety building code criteria.

Duties:

1. During Design of the Stations:
 - a. conduct milestone reviews and submit DRCs to the CRP with copies to the BCRA; and
 - b. prepare a BCCR confirming compliance of the Design with applicable fire-life safety building code criteria and submit the report to the CRP and the BCRA.
2. During Design and Construction of the Stations, assist in preparation of *Requests for Amendment or Exemption* (RFAEs) as requested and submit the RFAE forms to the BCRA for approval, with copies to the CRP.

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3. During Construction of the Stations:
 - a. conduct field reviews to confirm compliance with the terms and conditions documented in RFAEs that the FLSBCC is responsible for—i.e., the RFAEs that will be included in the final BCCR;
 - b. when informed by the CRP of deviations from the design documented in the BCCR, conduct field reviews to confirm appropriate application of applicable fire-life safety building code criteria;
 - c. respond to Project Co queries relative to application of fire-life safety criteria and attend on-site reviews as requested; and
 - d. prepare reports for each field review and forward them to the CRP and BCRA.
4. At the completion of Construction of the Stations, prepare an updated BCCR and submit it to the CRP to support the application for OAC.

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4.0 Request for Amendment/Exemption Procedure

It is anticipated that, during the course of Design or Construction, Project Co may request amendments to or exemptions from requirements in the applicable building code or the TL BCC relative to their respective contractual responsibilities with respect to fire and life safety design requirements for the Stations. These requests will be processed through a Request for Amendment/Exemption (RFAE) procedure that controls and tracks requests and ensures adequate interdisciplinary coordination. The objective of the RFAE procedure is to resolve technical issues through review and determination of the request by the BCRA.

It is the responsibility of the party seeking the amendment or exemption (the "Originator") to complete Part 1 of the RFAE form attached as Form D to this Appendix E and to forward the RFAE form to the CRP and FLSBCC for review and response or, where the FLSBCC in consultation with the CRP determines appropriate, referral to the BCRA for acceptance or rejection. The RFAE form attached as Form D to this Appendix E is designed to accommodate only one requested amendment or exemption, unless multiple requests relate to the same provision of the applicable building code or the TL BCC, in which case they may be combined on one form for expedited response and close out. The Originator shall include the following on the RFAE form:

- Originator (Name);
- Company/Organization;
- Date;
- Originator Reference Number;
- Identification of the requirement being addressed, the requested amendment or exemption and the reason for the request.

The CRP and FLSBCC shall, on receipt of the RFAE, review the requested amendment(s) or exemption(s) (with the Engineer of Record for the related discipline where appropriate) and determine if further review is warranted or whether a simple verbal or e-mail clarification or response is sufficient. If the CRP and FLSBCC determine that further review is required, the FLSBCC shall forward the RFAE to the BCRA with a recommendation for acceptance or rejection and supporting rationale. After review of the RFAE, the BCRA shall approve or reject the RFAE and forward it to the AHJ for confirmation. The AHJ shall return the approved or rejected RFAE to the Originator, the CRP, the FLSBCC and the BCRA.

Upon receipt of the AHJ's determination on the RFAE, the CRP shall forward the approved or rejected RFAE to all other affected parties.

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The CRP shall create a database to adequately track and maintain RFAE documentation for records management. During the RFAE review procedure, the RFAE form is to be produced and distributed in Microsoft Word format. Once the BCRA and the AHJ have formally approved or rejected the RFAE, the AHJ shall convert the RFAE to PDF format for distribution of the response.

5.0 Documentation

Appendices A through D include documentation / forms as referenced in previous sections of this CAP document.

Authorization to Proceed with Construction and Occupancy Approval Certificate forms are included as Appendices A and B respectively.

The Schedules contained in Appendix C, which are adapted from the VBBL 2014, are similar to those used in the conventional building and occupancy permit processes. The documents contained in Appendix C have been modified to meet the requirements of the CAP as described in this document.

Appendix D includes a Request for Amendment or Exemption form as described in Section 4.0.

Appendix A
Authorization to Proceed with Construction
Form

SCHEDULE 4: APPENDIX E: CONSTRUCTION APPROVAL PROCESS

Authorization to Proceed with Construction (ATPC)

Project Name: _____
 Address: _____
 Legal Description: _____
 Date of Application: _____
 Phase of Work: _____
 Signature (CRP): _____
 Signature Name (please print)

Parties Responsible (see Project Directory for more detail)		
AHJ	Authority Having Jurisdiction	[Insert Name]
BCRA	Building Code Review Agent	[Insert Name]
CRP	Coordinating Registered Professional	[Insert Name]
Project Team:		
ARCH	Architect	[Insert Name]
STRUC	Structural Engineer	[Insert Name]
MECH	Mechanical Engineer	[Insert Name]
ELEC	Electrical Engineer	[Insert Name]
GEO	Geotechnical Engineer	[Insert Name]
CIVIL	Civil Engineer	[Insert Name]
LAND	Landscape Architect	[Insert Name]
CONTR	General Contractor	[Insert Name]
CODE	Code Consultant	[Insert Name]

For use by BCRA only:

Recommendation to AHJ: **Issue ATPC** **Issue Partial ATPC** **Reject Application**

Phase of Work Approved: _____

Comments: _____

Signature (BCRA): _____

 Signature Name (please print)

Date: _____

For use by AHJ only:

Authorization: **ATPC Granted** **Partial ATPC Granted** **Application Rejected**

Phase of Work Approved: _____

Comments: _____

Signature (AHJ): _____

Date: _____ Signature _____ Name (please print) _____

Appendix B
Occupancy Approval Certificate
Form

Date:

Schedule A (DRAFT)

**CONFIRMATION OF COMMITMENT BY OWNER
AND COORDINATING REGISTERED PROFESSIONAL**

- Notes:
- (i) This letter must be submitted before issuance of an Authorization to Proceed with Construction.
 - (ii) This letter is endorsed by: Architectural Institute of B.C. and the Engineers and Geoscientists of B.C.
 - (iii) In this letter the words in italics have the same meaning as in the Vancouver Building By-law 2014.

Re: Design and *Field Review* of Construction
by a *Coordinating Registered Professional*

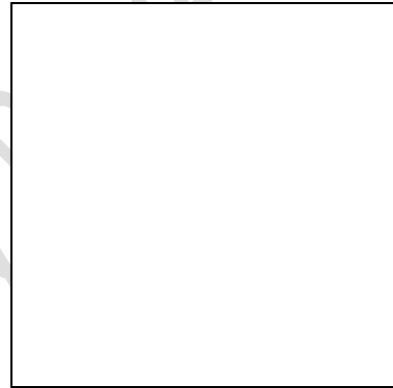
To: The Authority Having Jurisdiction

Name of Authority Having Jurisdiction (Print)

Address of Authority Having Jurisdiction (Print)

Re: _____
Name of Project (Print)

Address of Project (Print)



Date

The undersigned has retained _____ as a *coordinating registered professional* to coordinate the design work and *field reviews* of the *registered professionals of record*¹ required for this project. The *coordinating registered professional* shall coordinate the design work and *field reviews* of the *registered professionals of record* required for the project in order to ascertain that the design will substantially comply with the Vancouver Building By-law and other applicable enactments respecting safety and that the construction of the project will substantially comply with the Vancouver Building By-law and other applicable enactments respecting safety, not including the construction safety aspects.

- “field reviews” are defined in the Vancouver Building By-law to mean those reviews of the work
- (a) at a project site of a development to which an authorization to proceed with construction relates, and
 - (b) where applicable, at fabrication locations where building components are fabricated for use at the project site

that a *registered professional of record* in his or her professional discretion considers necessary to ascertain whether the work substantially complies in all material respects with the plans and supporting documents prepared by the *registered professional of record* for which the authorization to proceed with construction is issued.

The owner and the *coordinating registered professional* have read Subsection 2.2.7, Division C of the Vancouver Building By-law. The *owner* and the *coordinating registered professional* each acknowledge their responsibility to notify the addressee of this letter of the date the *coordinating registered professional* ceases to be retained by the *owner* before the date the *coordinating registered professional* ceases to be retained or, if that is not possible, then as soon as possible. The *coordinating registered professional* acknowledges the responsibility to notify the addressee of this letter of the date a *registered professional of record* ceases to be retained before the

¹ It is the responsibility of the *coordinating registered professional* to ascertain which *registered professionals of record* are required, and to initial each Schedule B.

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Schedule A – Continued

Name of Project

date the *registered professional of record* ceases to be retained or, if that is not possible, then as soon as possible.

Broadway Subway Project

Schedule A – Continued

Name of Project

The *owner* and the *coordinating registered professional* understand that where the *coordinating registered professional* or a *registered professional of record* ceases to be retained at any time during construction, work on the above project will cease until such time as

- (a) a new *coordinating registered professional* or *registered professional of record*, as the case may be, is retained, and
- (b) a new letter in the form set out in Schedule A or in the form set out in Schedules B, as the case may be, is filed with the Building Code Review Agent.

The undersigned *coordinating registered professional* certifies that he or she is a *registered professional* as defined in the Vancouver Building By-law, and agrees to coordinate the design work and *field reviews* of the registered professional of record required for the project as outlined in the attached Schedules B including coordination and integration of functional testing of fire protection and life safety systems. (See A-2.2.7.3 in Appendix A.)

Coordinating Registered Professional

Owner

Coordinating Registered Professional's Name (Print)

Owner's Name (Print)

Address (Print)

Address (Print)

Phone No.

Name of Agent or Signing Officer if applicable (Print)

Date

Owner's or Owner's appointed agent's Signature. (If owner is a corporation the signature of a signing officer must be given here. If the signature is that of the agent, a copy of the document that appoints the agent must be attached.)



Date

(If the coordinating registered professional is a member of a firm, complete the following.)

I am a member of the firm _____
and I sign this letter on behalf of the firm. (Print name of firm)

This letter must be signed by the *owner* or the *owner's* appointed agent and by the *coordinating registered professional*. An agent's letter of appointment must be attached. If the *owner* is a corporation, the letter must be signed by a signing officer of the corporation and the signing officer must set forth his or her position in the corporation.

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Schedule A – Continued

Name of Project

The Vancouver Building By-law defines a *registered professional* to mean

- (a) a person who is registered or licensed to practice as an architect under the Architects Act, or
- (b) a person who is registered or licensed to practice as a professional engineer under the Engineers and Geoscientists Act.

Broadway Subway Project

Schedule B (DRAFT)

**ASSURANCE OF PROFESSIONAL DESIGN AND
COMMITMENT FOR FIELD REVIEW**

- Notes:
- (i) This letter must be submitted prior to the commencement of construction activities of the components identified below.
A separate letter must be submitted by each *registered profession of record*.
 - (ii) This letter is endorsed by: Architectural Institute of B.C. and Engineers and Geoscientists of B.C.
 - (iii) In this letter the words in italics have the same meaning as in the Vancouver Building By-law 2014.

To: the Authority Having Jurisdiction

Name of Authority Having Jurisdiction (Print)

Address of Authority Having Jurisdiction (Print)

Re: _____
Name of Project (Print)

Address of Project (Print)

The undersigned hereby gives assurance that the design of the
(Initial those of the items listed below that apply to this *registered
professional of record*. All the disciplines will not necessarily be employed
on every project.)

- _____ **ARCHITECTURAL**
- _____ **STRUCTURAL**
- _____ **MECHANICAL**
- _____ **PLUMBING**
- _____ **FIRE SUPPRESSION SYSTEMS**
- _____ **ELECTRICAL**
- _____ **GEOTECHNICAL — temporary**
- _____ **GEOTECHNICAL — permanent**

(Professional's Seal and Signature)

Date

components of the plans and supporting documents prepared by this *registered professional of record* in support of the application for the authorization to proceed with construction as outlined below substantially comply with the Vancouver Building By-law and other applicable enactments respecting safety except for construction safety aspects.

CRP's Initials

Schedule B — Continued

_____	Name of Project
_____	Discipline

The undersigned hereby undertakes to be responsible for *field reviews* of the above referenced components during construction as indicated on the "SUMMARY OF DESIGN AND FIELD REVIEW REQUIREMENTS" below.

Broadway Subway Project

CRP's Initials

Schedule B — Continued

_____ Name of Project

_____ Discipline

The undersigned also undertakes to notify the building code review agent in writing as soon as possible if the undersigned's contract for *field review* is terminated at any time during construction.

I certify that I am a *registered professional* as defined in the Vancouver Building By-law.

Registered Professional of Record's Name (Print)

Address (Print)

Phone No.

(Professional's Seal and Signature)

Date

(If the Registered Professional of Record is a member of a firm, complete the following.)

I am a member of the firm _____
and I sign this letter on behalf of the firm. (Print name of firm)

Note: The above letter must be signed by a *registered professional*. The Vancouver Building By-law defines a *registered professional* to mean

- (a) a person who is registered or licensed to practise as an architect under the Architects Act, or
- (b) a person who is registered or licensed to practise as a professional engineer under the Engineers and Geoscientists Act.

Broadway Subway

Schedule B — Continued

Name of Project

Discipline

SUMMARY OF DESIGN AND FIELD REVIEW REQUIREMENTS

(Initial applicable discipline below and cross out and initial only those items not applicable to the project.)

ARCHITECTURAL

- 1.1 Fire resisting assemblies
- 1.2 *Fire separations* and their continuity
- 1.3 *Closures*, including tightness and operation
- 1.4 Egress systems, including *access to exit* within *suites* and *floor areas*
- 1.5 Performance and physical safety features (guardrails, handrails, etc.)
- 1.6 Structural capacity of architectural components, including anchorage and seismic restraint
- 1.7 Sound Control
- 1.8 Landscaping, screening and site grading
- 1.9 Provisions for fire fighting access
- 1.10 Access requirements for *persons with disabilities*
- 1.11 Elevating devices
- 1.12 Functional testing of architecturally related fire emergency systems and devices
- 1.13 Development Permit and conditions therein
- 1.14 Interior signage, including acceptable materials, dimensions and locations
- 1.15 Review of all applicable shop drawings
- 1.16 Interior and exterior finishes
- 1.17 Dampproofing and/or waterproofing of walls and slabs below *grade*)
- 1.18 Roofing and flashings
- 1.19 Wall cladding systems
- 1.20 Thermal insulation systems, including condensation control and cavity ventilation
- 1.21 Exterior glazing
- 1.22 Integration of building envelope components
- 1.23 Environmental separation requirements (Part 5)
- 1.24 Building envelope, Part 10/ASHRAE requirements

(Professional's Seal and Signature)

Date

STRUCTURAL

- 2.1 Structural capacity of structural components of the *building*, including anchorage and seismic restraint
- 2.2 Structural aspects of *deep foundations*
- 2.3 Review of all applicable shop drawings
- 2.4 Structural aspects of unbonded post-tensioned concrete design and construction

MECHANICAL

- 3.1 HVAC systems and devices, including high *building* requirements where applicable
- 3.2 *Fire dampers* at required *fire separations*

CRP's Initials

Schedule B — Continued

	Name of Project
	Discipline

- 3.3 Continuity of *fire separations* at HVAC penetrations
- 3.4 Functional testing of mechanically related fire emergency systems and devices
- 3.5 Maintenance manuals for mechanical systems
- 3.6 Structural capacity of mechanical components, including anchorage and seismic restraint
- 3.7 Review of all applicable shop drawings
- 3.8 Mechanical systems, Part 10/ASHRAE requirements

PLUMBING

- 4.1 Roof *drainage systems*
- 4.2 Site and foundation *drainage systems*
- 4.3 *Plumbing systems* and devices
- 4.4 Continuity of *fire separations* at plumbing penetrations
- 4.5 Functional testing of plumbing related fire emergency systems and devices
- 4.6 Maintenance manuals for *plumbing systems*
- 4.7 Structural capacity of plumbing components, including anchorage and seismic restraint
- 4.8 Review of all applicable shop drawings
- 4.9 Plumbing systems, Part 10 requirements

FIRE SUPPRESSION SYSTEMS

- 5.1 Suppression system classification for type of *occupancy*
- 5.2 Design coverage, including concealed or special areas
- 5.3 Compatibility and location of electrical supervision, ancillary alarm and control devices
- 5.4 Evaluation of the capacity of city (municipal) water supply versus system demands and domestic demand, including pumping devices where necessary
- 5.5 Qualification of welder, quality of welds and material
- 5.6 Review of all applicable shop drawings
- 5.7 Acceptance testing for "Contractor's Material and Test Certificate" as per NFPA Standards
- 5.8 Maintenance program and manual for suppression systems
- 5.9 Structural capacity of sprinkler components, including anchorage and seismic restraint
- 5.10 For partial systems — confirm sprinklers are installed in all areas where required
- 5.11 Fire Department connections and hydrant locations
- 5.12 Fire hose standpipes
- 5.13 Freeze protection measures for fire suppression systems
- 5.14 Functional testing of fire suppression systems and devices

ELECTRICAL

- 6.1 Electrical systems and devices, including high building systems where applicable
- 6.2 Continuity of *fire separations* at electrical penetrations
- 6.3 Functional testing of electrical related fire emergency systems and devices
- 6.4 Electrical systems and devices maintenance manuals

Schedule B — Continued

Name of Project

Discipline

- 6.5 Structural capacity of electrical components, including anchorage and seismic restraint
- 6.6 Clearances from *buildings* of all electrical utility equipment
- 6.7 Fire protection of wiring for emergency systems
- 6.8 Review of all applicable shop drawings
- 6.9 Electrical systems, Part 10/ASHRAE requirements

GEOTECHNICAL — Temporary

- 7.1 *Excavation*
- 7.2 Shoring
- 7.3 Underpinning
- 7.4 Temporary construction dewatering

GEOTECHNICAL — Permanent

- 8.1 Bearing capacity of the soil
- 8.2 Geotechnical aspects of deep *foundations*
- 8.3 Compaction of engineered fill
- 8.4 Structural considerations of soil, including slope stability and seismic loading
- 8.5 Backfill
- 8.6 Permanent dewatering
- 8.7 Permanent underpinning

(Professional's Seal and Signature)

Date

Broadway Subway Project

CRP's Initials

Schedule C-A (DRAFT)

ASSURANCE OF COORDINATION OF PROFESSIONAL FIELD REVIEW

- Notes:
- (i) This letter must be submitted after completion of the project but before the Occupancy Approval Certificate is issued, or a final inspection is made, by the Building Code Review Agent.
 - (ii) This letter is endorsed by: Architectural Institute of B.C. and the Engineers and Geoscientists of B.C..
 - (iii) In this letter the words in italics have the same meaning as in the Vancouver Building By-law 2014.

To: the Authority Having Jurisdiction

Name of Authority Having Jurisdiction (Print)

Address of Authority Having Jurisdiction (Print)

Re: _____
Name of Project (Print)

Address of Project (Print)

Legal Description of Project (Print)



(The coordinating registered professional shall complete the following:)

Name (Print)

Date

Address (Print)

Phone No.

I hereby give assurance that

- (a) I have fulfilled my obligations for coordination of *field review* of the *registered professionals* required for the project as outlined in Subsection 2.2.7, Division C of the Vancouver Building By-law and in the previously submitted Schedule A, "CONFIRMATION OF COMMITMENT BY OWNER AND BY COORDINATING REGISTERED PROFESSIONAL,"
- (b) I have coordinated the functional testing of the fire protection and life safety systems to ascertain that they substantially comply in all material respects with
 - (i) the applicable requirements of the Vancouver Building By-law and other applicable enactments respecting safety, not including construction safety aspects, and
 - (ii) the plans and supporting documents submitted in support of the application for the authorization to proceed with construction,
- (c) I am a *registered professional* as defined in the Vancouver Building By-law.

(If the *coordinating registered professional* is a member of a firm, complete the following.)

I am a member of the firm _____
and I sign this letter on behalf of the firm. (Print name of firm)

CRP's Initials

Note: The above letter must be signed by a *coordinating registered professional*, who is also a *registered professional*. The Vancouver Building By-law defines a *registered professional* to mean

- (a) a person who is registered or licensed to practise as an architect under the Architects Act, or
- (b) a person who is registered or licensed to practise as a professional engineer under the Engineers and Geoscientists Act.

Schedule C-B (DRAFT)

ASSURANCE OF PROFESSIONAL FIELD REVIEW AND COMPLIANCE

- Notes:
- (i) This letter must be submitted after completion of the project but prior to final inspection by the building code review agent. A separate letter must be submitted by each *registered professional of record*.
 - (ii) This letter is endorsed by: Architectural Institute of B.C. and Engineers and Geoscientists of B.C.
 - (iii) In this letter the words in italics have the same meaning as in the Vancouver Building By-law 2014.

To: the Authority having Jurisdiction

Name of Authority Having Jurisdiction (Print)

Address of Authority Having Jurisdiction (Print)

Re:

Discipline (e.g. Architectural, etc.) (Print)

Name of Project (Print)

Address of Project (Print)



(Each *registered professional of record* shall complete the following:)

Name (Print)

Date

Address (Print)

Phone No.

I hereby give assurance that

- (a) I have fulfilled my obligations for *field review* as outlined in Subsection 2.2.7, Division C of the Vancouver Building By-law and in the previously submitted Schedule B, "ASSURANCE OF PROFESSIONAL DESIGN AND COMMITMENT FOR FIELD REVIEW," and
- (b) those components of the project opposite my initials in Schedule B substantially comply in all material respects with
 - (i) the applicable requirements of the Vancouver Building By-law and other applicable enactments respecting safety, not including construction safety aspects, and
 - (ii) the plans and supporting documents submitted in support of the application for the authorization to proceed with construction,
- (c) I am a *registered professional of record* as defined in the Vancouver Building By-law.

(If the *registered professional of record* is a member of a firm, complete the following.)

I am a member of the firm _____
and I sign this letter on behalf of the firm. (Print name of firm)

Note: The above letter must be signed by a *registered professional of record*, who is also a *registered professional*. The Vancouver Building By-law defines a *registered professional* to mean

- (a) a person who is registered or licensed to practise as an architect under the Architects Act, or
- (b) a person who is registered or licensed to practise as a professional engineer under the Engineers and Geoscientists Act.

Broadway Subway Project

Appendix D
Request for Amendment/Exemption
Form

Broadway Subway Project Request for Amendment/Exemption (RFAE)		
PART 1 – To be completed by Originator		
Project:	Location:	
Originator Name:	Date Issued: Click or tap to enter a date.	Issued To: <input type="checkbox"/> CRP <input type="checkbox"/> FLSCC <input type="checkbox"/> Other:
Organization:	Originator Reference No.	
Description of Issue: Describe the requirement you are addressing, the requested amendment/exemption, and the reason for the request.		
PART 2 – To be completed by FLSBCC (Fire Life Safety Building Code Consultant)		
Consultant Name:	RFAE Number: - -	Revision Number: <input type="checkbox"/> Draft <input type="checkbox"/> Final (Rev # -)
Organization:		
Document(s) affected: <input type="checkbox"/> City of Vancouver Building Bylaw 2014 <input type="checkbox"/> TransLink BCC <input type="checkbox"/> Other _____	Code Reference Number(s):	
Recommendation: <input type="checkbox"/> Accept <input type="checkbox"/> Reject <input type="checkbox"/> Further review required	Date Returned/Issued: Click or tap to enter a date.	Returned/Issued To: <input type="checkbox"/> Originator <input type="checkbox"/> CRP <input type="checkbox"/> BCRA
Comment: <input type="checkbox"/> Refer to Part 5 Rationale (next page).		
PART 3 – To be completed by Building Code Review Agent (BCRA)		
BCRA Name:	Date Received: Click or tap to enter a date.	
Disposition: <input type="checkbox"/> Accepted <input type="checkbox"/> Rejected <input type="checkbox"/> Further review required		
Comment: (e.g., conditions for acceptance, reason for rejection, or further information required)		
Signature _____	Date Returned/Issued: Click or tap to enter a date.	Returned/Issued To: <input type="checkbox"/> Originator <input type="checkbox"/> CRP <input type="checkbox"/> FLSBCC <input type="checkbox"/> AHJ
PART 4 – To be completed by Authority Having Jurisdiction (AHJ)		
AHJ Name:	Date Received: Click or tap to enter a date.	
Disposition: <input type="checkbox"/> Accepted <input type="checkbox"/> Rejected <input type="checkbox"/> Further review required		

Comment: (e.g., conditions for acceptance, reason for rejection, or further information required)		
<hr/> Signature	Date Returned/Issued: Click or tap to enter a date.	Returned/Issued To: <input type="checkbox"/> Originator <input type="checkbox"/> CRP <input type="checkbox"/> FLSBCC <input type="checkbox"/> BCRA

Broadway Subway Project Request for Amendment/Exemption (RFAE) (cont.)	
PART 5 – Rationale to Support Recommendations for Acceptance:	
RFAE Number: - - - (Rev# Choose an item.)	
Prepared By:	Date: Click or tap to enter a date.
Introduction:	
Objective and Functional Statements: <input type="checkbox"/> Not Applicable	
Analysis:	