GUIDE TO THE LETTERS OF ASSURANCE IN THE BC BUILDING CODE 2018 AND VANCOUVER BUILDING BY-LAW 2019

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Building & Safety Standards Branch Office of Housing and Construction Standards Province of British Columbia

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1. Foreword

This Guide to the Letters of Assurance in the BC Building Code 2018 (BCBC 2018) and Vancouver Building By-law 2019 (VBBL 2019) is jointly endorsed by the Architectural Institute of BC (AIBC) and Engineers and Geoscientists BC and was developed with the cooperation and assistance of the Building Officials' Association of BC, the Union of BC Municipalities, the City of Vancouver and the Building and Safety Standards Branch of the Province of British Columbia.

The Letters of Assurance are only endorsed for use in accordance with the British Columbia Building Code and the Vancouver Building By-Law.

Questions relating to this Guide should be addressed to the Building and Safety Standards Branch [Building.Safety@gov.bc.ca] or for projects located in the City of Vancouver, addressed to City of Vancouver [infoVBBL@vancouver.ca].

Questions relating to professional practice of engineers or architects should be directed respectively to:

Practice Advisor Professional Practice, Standards & Development Department Engineers and Geoscientists BC 200 – 4010 Regent Street Burnaby, BC V5C 6N2 Telephone: 604-430-8035 Email: <u>PracticeAdvisor@egbc.ca</u>

Practice Advisor Architectural Institute of BC 100 – 440 Cambie Street Vancouver, BC V6B 2N5 Telephone: 604-683-8588 Email: PracticeAdvice@aibc.ca

2. Purpose of the Guide

The purpose of this Guide to the Letters of Assurance in the BC Building Code 2018 and the Vancouver Building By-law 2019 is to foster the appropriate and consistent use and application of Letters of Assurance. It provides guidance on:

- the scope and intent of Letters of Assurance;
- roles and responsibilities of persons executing Letters of Assurance; and
- when and how Letters of Assurance should be completed.

This Guide provides guidance only on BCBC 2018 and VBBL 2019 requirements for Letters of Assurance. It does not address scope of practice or other issues for which the regulatory bodies for *registered professionals*, the AIBC and Engineers and Geoscientists BC, are responsible. Readers should be aware that there are additional requirements in the *Architects Act* and the *Professional Governance Act* and Engineers and Geoscientists BC bylaws that determine when

and on what type of projects such *registered professionals* are required by law to provide services.

Under the *Professional Governance Act*, firms practicing engineering are required to register with Engineers and Geoscientists BC and obtain a permit to practice number which must be applied once to all documents signed, sealed, and dated by an engineering *registered professional*. For more information, see the <u>Firm Practice page</u> of the Engineers and Geoscientists BC website.

3. Defined Terms

The following defined terms are used throughout this document:

Letters of Assurance, otherwise known as Schedules A, B, C-A and C-B, are legal accountability documents under Subsection 2.2.7. in Part 2 of Division C of the Building Code. All italicized words in the Letters of Assurance are defined terms in the Building Code and have the same meaning set out in that regulation.

Building Code means the BC Building Code 2018 (BCBC 2018) for projects in British Columbia that are located outside of the City of Vancouver, and the Vancouver Building By-Law 2019 (VBBL 2019) for projects located within the City of Vancouver. Note there are some projects within British Columbia and within the City of Vancouver where the BCBC 2018 or VBBL 2019 do not apply. Refer to Division A Sentence 1.1.1.1.(2) for the exemptions.

Plumbing Code means the BC Plumbing Code 2018 (BCPC 2018) which is Book II (Plumbing Systems) of the BC Building Code 2018 (BCBC 2018) and applies to the design, construction, extension, *alteration*, renewal or repair of *plumbing systems* for projects in British Columbia that are located outside of the City of Vancouver, and the Vancouver Plumbing By-law 2019 (VPBL 2019) which is Book II (Plumbing Systems) of the Vancouver Building By-Law 2019 (VBBL 2019) for projects located within the City of Vancouver.

Fire Code means the BC Fire Code 2018 (BCFC 2018) for projects in British Columbia that are located outside of the City of Vancouver and the Vancouver Fire By-law 2019 (VFBL 2019) for projects located within the City of Vancouver.

Any italicized words throughout the document are defined terms in the Building Code and have the same meaning set out in those regulations. Definitions are therefore not repeated in this document.

3.1 Legend

Words which are simultaneously bolded, underlined, and preceded by a number are clickable chapter markers. When viewed digitally, these links will take the reader to the relevant parts of this document.

Words which are simultaneously blue and underlined are external links, usually to other relevant documents such as professional practice guides. Readers are responsible for ensuring they are viewing the latest version of such guides.

Excerpts from Building Codes will be placed in a grey text box to visually distinguish them from other text.

To avoid confusion with defined terms, BC Building Code 2018 (BCBC 2018), BC Plumbing Code (BCPC 2018), and BC Fire Code 2018 (BCFC 2018) will not be italicized despite being provincial regulations.

4. Scope of Letters of Assurance

4.1 Building Code Requirements for Design and *Field Review*

Subsection 2.2.7. in Part 2 of Division C of the Building Code specifies when Letters of Assurance are required. The VBBL 2019 lists a number of additional circumstances for which Letters of Assurance are required.

Note: the excerpt reproduced below is from BCBC 2018. Refer to Subsection 2.2.7. in Part 2 of Division C of the VBBL 2019 for the VBBL requirements.

2.2.7. Professional Design and Review

(See Note A-2.2.7.)

2.2.7.1. Application

1) The requirements of this Subsection apply to

a) buildings within the scope of Part 3 of Division B,

b) *buildings* within the scope of Part 9 of Division B that are designed with common egress systems for the occupants and require the use of *firewalls* according to Article 1.3.3.4. of Division A, and

c) the following, in respect of *buildings* within the scope of Part 9 of Division B other than *buildings* described in Clause (b),

i) structural components that are not within the scope of Part 9 of Division B (See Note A-2.2.7.1.(1)(c)(i).),

ii) geotechnical conditions at *building* sites that fall outside the scope of Part 9 of Division B,

iii) sprinkler systems designed to NFPA 13, "Installation of Sprinkler Systems", and

iv) standpipe and hose systems designed to NFPA 14, "Installation of Standpipe and Hose Systems".

The Building Code Letters of Assurance apply to all Part 3 *buildings*. Letters of Assurance do not apply to Part 9 *buildings*, except for Part 9 *buildings* or their components that fall within the scope of Subsection 2.2.7. in Part 2 of Division C.

<u>14 Application of Letters of Assurance to Part 9 Buildings</u> provides information and guidance on aspects of Part 9 projects to which Letters of Assurance may apply.

<u>19 Application of Letters of Assurance to Building Alterations and Tenant Improvements</u> provides information on the application of the Building Code Letters of Assurance to alterations and tenant improvements to existing *buildings*. Alterations to existing *buildings*, including tenant improvements, will require Letters of Assurance if the work involves components that fall within the scope of Subsection 2.2.7. in Part 2 of Division C.

20 Application of Letters of Assurance to Phased (Staged) Building Permits and Phased (Staged) Occupancies provides information on the application of the Building Code Letters of Assurance to phased (staged) building permits and phased (staged) occupancies.

4.2 What Letters of Assurance Are

Letters of Assurance are legal accountability documents that are required under the Building Code, intended to clearly identify the responsibilities of key participants in a construction project. Uniform, mandatory Letters of Assurance have been included as Schedules in the BC Building Code since December 1992 and in the Vancouver Building By-law since 1987.

The Building Code requires Letters of Assurance in specific instances to document the parties responsible for design and *field review* of construction, and to obtain their professional assurances that the design and the work substantially comply with the requirements of the Building Code and other applicable enactments respecting safety, except for construction safety aspects, and that the requisite *field reviews* will be and have been completed.

Letters of Assurance are signed and sealed by individual *coordinating registered professionals* and *registered professionals of record*, so the roles and responsibilities described in the Letters of Assurance rest with the individual rather than the firm.

Construction safety is the responsibility of the *constructor*. Refer to <u>17 Application of Letters</u> <u>of Assurance to Geotechnical Components</u> for the application of Article 8.2.2.2. regarding protection of adjoining property during construction.

Letters of Assurance, located in Part 2 of Division C of the Building Code, consist of the following Schedules:

Schedule A: Confirmation of Commitment by Owner and Coordinating Registered Professional

This assurance by the owner and the *coordinating registered professional* must be submitted to the *authority having jurisdiction* before issuance of a *building* permit; submission of Schedule A is a pre-condition for issuing a *building* permit.

In jurisdictions where *building* permits are required, *authorities having jurisdiction* require the submission of Schedule A as part of the *building* permit process.

Note that in jurisdictions that do not issue *building* permits, Letters of Assurance are still required if the project falls within the scope of Subsection 2.2.7. in Part 2 of Division C of the Building Code. In such cases the Letters of Assurance should be collected and retained by the *coordinating registered professional*.

Schedule A confirms that the owner has retained a *coordinating registered professional* who will:

- ascertain which disciplines are required on the project, and which *registered professionals of record* will need to be retained; and
- coordinate design work and *field reviews* including coordination of functional testing of fire protection and life safety systems by all *registered professionals of record* required on the project.

See <u>6 Roles and Responsibilities for Letters of Assurance</u> for further details on the responsibilities of owners and *coordinating registered professionals* with respect to Schedule A.

Schedule B: Assurance of Professional Design and Commitment for *Field Review* & Summary of Design and *Field Review* Requirements

The Schedule B for each *registered professional of record* retained on the project must be submitted to the *authority having jurisdiction* prior to the commencement of construction activities of the components identified. Submission of the full suite of Letters of Assurance (one Schedule A, and a Schedule B for each discipline of *registered professionals of record*) is a necessary condition for construction to commence.

In jurisdictions where *building* permits are required, *authorities having jurisdiction* require the submission of Schedule Bs as part of the *building* permit process.

Note that in jurisdictions that do not issue *building* permits, Letters of Assurance are still required if the project falls within the scope of Subsection 2.2.7. in Part 2 of Division C of the Building Code. In such cases the Letters of Assurance should be collected and retained by the *coordinating registered professional*. The complete set of Schedule Bs serves to document all the *registered professionals of record* who have taken responsibility for an applicable discipline on a project.

Schedule B confirms that the design substantially complies with the Building Code and with other applicable enactments respecting safety and that the *registered professional of record* signing and sealing it will be responsible for *field review* within the discipline which they initialed.

The Schedule B also serves to document the specific Building Code items within each discipline for which a *registered professional of record* will be undertaking design, *field review* and functional testing.

See <u>6 Roles and Responsibilities for Letters of Assurance</u> for further details on the responsibilities of *coordinating registered professionals* and *registered professionals of record* with respect to Schedule B.

Refer to Engineers and Geoscientists BC Building Code related practice guidelines for further information of the items listed on Schedule B within each discipline.

Schedule C-A: Assurance of Coordination of Professional Field Review

A Schedule C-A must be submitted by the *coordinating registered professional* after completion of the project but before an occupancy permit is issued or a final inspection is made by the *authority having jurisdiction*.

Schedule C-A provides assurance that the *coordinating registered professional* has done what they undertook to do on the Schedule A, specifically that they:

- fulfilled their obligation for coordination of *field reviews* of the *registered professionals of record* retained on the project;
- coordinated the functional testing of the fire protection and life safety systems to ascertain that they substantially comply in material respects with:
 - the Building Code and other enactments respecting safety except for construction safety aspects, and
 - the plans and documents submitted for *building* permit application; and
- coordinated the *field reviews* to ascertain that the project substantially complies with:
 - the applicable requirements of Part 10, and
 - the plans and supporting documents submitted in support of the application for the *building* permit.

See <u>6 Roles and Responsibilities for Letters of Assurance</u> for further details on the responsibilities of owners and *coordinating registered professionals* with respect to Schedule C-A.

See <u>20 Application of Letters of Assurance to Phased (Staged) Building Permits and</u> <u>Phased (Staged) Occupancies</u> for information on the acceptable use of Letters of Assurance when occupancy permits are sought for portions of a *building* project.

Schedule C-B: Assurance of Professional Field Review and Compliance

A separate Schedule C-B must be completed for each Schedule B and submitted to the *authority having jurisdiction* after completion of the project but before the *authority having jurisdiction* issues an occupancy permit or makes a final inspection.

The Schedule C-B provides assurance that the *registered professional of record* for that discipline has done what they undertook to do on the Schedule B, specifically that they:

- fulfilled their obligations for *field review* of the components under their respective Schedule B discipline;
- provided assurance that the components initialed on Schedule B substantially comply in all material respects with:
 - the Building Code and other applicable enactments respecting safety except for construction safety aspects, and
 - the *registered professional of record's* design (the plans and documents submitted in support of the *building* permit application).

See <u>6 Roles and Responsibilities for Letters of Assurance</u> for further details on the responsibilities of *coordinating registered professionals* and *registered professionals* of record with respect to Schedule C-B.

See <u>20 Application of Letters of Assurance to Phased (Staged) Building Permits and</u> <u>Phased (Staged) Occupancies</u> for information on the acceptable use of Letters of Assurance when occupancy permits are sought for portions of a *building* project.

4.3 What Letters of Assurance Are Not

The Schedules A, B, C-A and C-B outlined above are the full extent of Building Code Letters of Assurance. Other types of accountability documents, including those provided by individual *authorities having jurisdiction* and commonly referred to as "Owner's Undertaking Letters"; "Schedule D" or "Schedule E" should not be confused with Building Code Letters of Assurance. Similarly, Building Code Letters of Assurance should not be confused with other accountability documents that may be employed between *registered professionals of record* and supporting *registered professionals*, or by *authorities having jurisdiction* on matters that are outside the scope of Subsection 2.2.7. in Part 2 of Division C of the Building Code (Refer to <u>5 The</u> <u>Community Charter and Other Means of Achieving Accountability</u>). Additionally, Letters of Assurance are not appropriate accountability documents for the author of an Alternative Solution. Refer to <u>23 Alternative Solutions</u> for further information.

Other accountability documents that should not be confused with Letters of Assurance include written commitments by *registered professionals* with respect to enhanced *building* envelope services, professional liability insurance, and structural concept review, as well as some standardized forms of written commitment for use between *registered professionals* of *record* and supporting *registered professionals* such as Schedules S-B and S-C prepared by AIBC and Engineers and Geoscientists BC. Schedules S-B and S-C and guidance on their use can be obtained from the AIBC or the Engineers and Geoscientists BC, the regulatory bodies for *registered professionals*. Refer to the Joint Professional Practice Guideline – Professional Design and Field Review by Supporting Registered Professionals (AIBC and Engineers and Geoscientists BC 2020b) for further information on Schedules S-B and S-C.

These other forms of written commitment are not part of the Building Code requirements for Letters of Assurance and are not addressed in this Guide. As well, Building Code Letters of Assurance do not replace any third-party monitoring activities (e.g., plan reviews and site inspections) that may be provided by *authorities having jurisdiction*.

4.4 Components That Are Not Regulated by the Building Code or Plumbing Code

Certain components contained within *buildings* are regulated by means other than the Building Code and Plumbing Code. Letters of Assurance are not appropriate for providing professional assurances for such components.

Examples include the following:

• Fuel tanks and fuel piping systems for gas stations (refer to BC Fire Code 2018 and Vancouver Fire By-law 2019)

5. The *Community Charter* and Other Means of Achieving Accountability

Authorities having jurisdiction are accorded specific powers with respect to building regulation under the Local Government Act and the Community Charter. Note that the Local Government Act and the Community Charter do not apply to the City of Vancouver. Refer to the Vancouver Charter for the City of Vancouver's building regulation authority.

The *Community Charter* and the *Local Government Act* authorize local governments to require means of accountability on specific matters that are not addressed within the BCBC 2018. Some local governments, on the basis of site conditions, complexity of developments, or aspects of developments, require by bylaw that applicants for *building* permits provide "certifications" (i.e. assurances) from *registered professionals* that plans submitted with a permit application comply with the BCBC 2018 or other applicable laws with respect to safety except for construction safety aspects.

The City of Vancouver is regulated under the *Vancouver Charter*, a provincial statute that provides Vancouver City Council the authority to pass bylaws including the Vancouver Building By-law, as well as establish the process and requirements for applying for *building* permits. The Vancouver Building By-law requires that *registered professionals* provide assurance that plans submitted in support of a permit application comply with the VBBL 2019 or other applicable laws with respect to safety except for construction safety aspects.

Under the applicable legislation, local governments may also require the involvement of *registered professionals* in matters that do not involve *buildings*. The Building Code Letters of Assurance cannot be used for these purposes.

The Building Code Letters of Assurance are only required for projects, or components of projects, that fall within the scope of Subsection 2.2.7. in Part 2 of Division C of the Building Code.

Questions regarding means of accountability that are outside the scope of Building Code Letters of Assurance should be directed to the relevant local government or the AIBC or Engineers and Geoscientists BC.

6. Roles and Responsibilities for Letters of Assurance

6.1 Key Participants in Design and Field Review

Most *building* projects described in Subsection 2.2.7. in Part 2 of Division C involve more than one *registered professional* in more than one discipline, and often more than one *registered professional* within a single discipline. Each *registered professional* is responsible for the design and *field review* of the components of the plans and supporting documents that they prepared.

- The coordinating registered professional
- The registered professionals of record for each discipline

• The supporting *registered professionals* who may be retained within each discipline

The coordinating registered professional is responsible for coordinating design and field reviews by all the various registered professionals of record retained on the project, and advising the constructor and the registered professionals of record that field review reports should be made available for examination by the authority having jurisdiction upon request, as required by Sentence 2.2.7.3.(2) in Part 2 of Division C.

The registered professional of record is responsible for the design and field review of the components of the plans and supporting documents that they prepared. The registered professional of record is also responsible for reviewing the shop drawings prepared under the direction of any supporting registered professionals within that discipline, and either performing the field review of those components or satisfying themselves that the necessary field reviews have been performed by the supporting registered professional.

The *registered professionals of record* document their commitment to provide *field review,* and provide assurance that *field reviews* within their particular disciplines have been completed, by submitting Letters of Assurance (Schedules B and C-B) to the *coordinating registered professional.*

Supporting *registered professionals* do not complete the Building Code Letters of Assurance, but, at the discretion of the *registered professional of record*, may be required to provide the *registered professional of record* for that discipline with sealed design documents, *field review* reports or other appropriate documentation such as Schedules S-B and S-C showing that they have *field reviewed* the work related to their design and have determined that it substantially complies with applicable Building Code requirements and their design.

Schedules S-B and S-C have been developed cooperatively by the AIBC and Engineers and Geoscientists BC for use by supporting *registered professionals*, and their use is strongly encouraged.

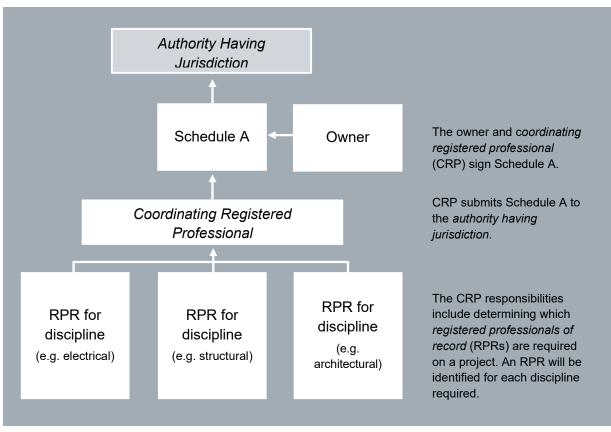
Field review is a defined term in the Building Code as follows:

Field review means a review of the work

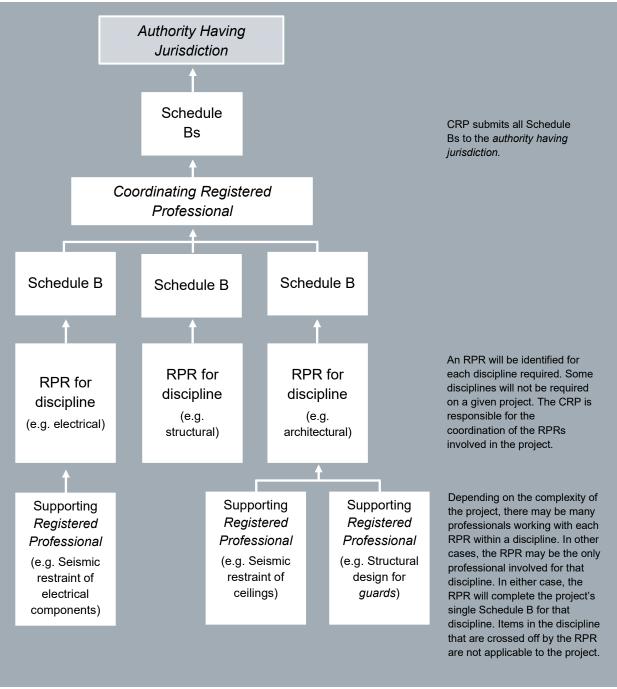
- a) at a *building* site, and
- b) where applicable, at locations where *building* components are fabricated for use at the *building* site

that a *registered professional* 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 a *registered professional*.

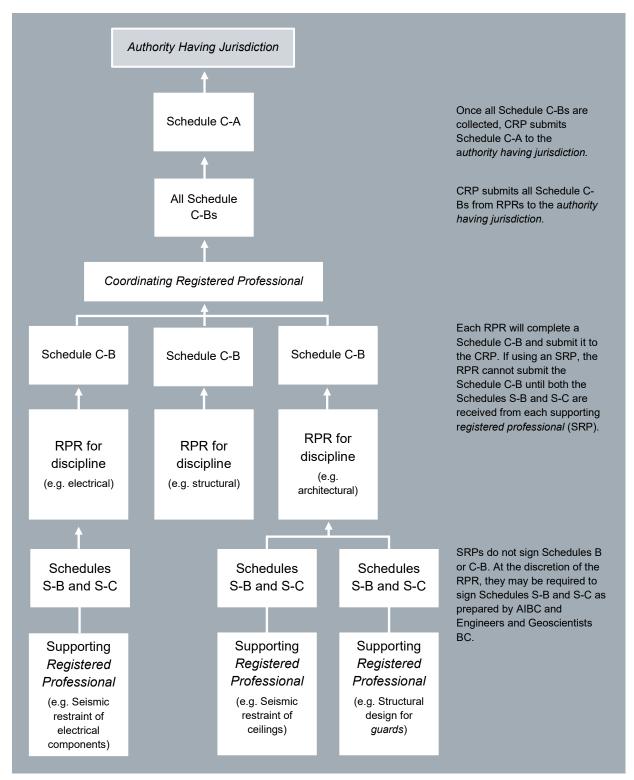
The following flowcharts provide an overview of the functional relationships among the three tiers of *registered professional* that may be retained on a given project. These functional relationships are independent and do not necessarily indicate the business (i.e. contractual) relationships among the parties, which may vary.



Schedule A: Functional Relationships



Schedule B: Functional Relationships



Schedules C-A and C-B: Functional Relationships

6.2 Owner Responsibilities

For projects regulated by BCBC 2018, the definition of owner is established by the *authority having jurisdiction*. Owner is intended to be the person, firm or corporation controlling the property during the time the Building Code is being applied. This could include a tenant.

For projects regulated by VBBL 2019, the definition of owner is in Article 1.4.1.2. of Division A.

See <u>19 Application of Letters of Assurance to Building Alterations and Tenant</u> <u>Improvements</u> for information on the tenant's roles and responsibilities during tenant improvements.

For any project that requires Letters of Assurance, the owner is responsible for retaining a *coordinating registered professional* and completing a Schedule A in order to apply for a *building* permit. There are a few exceptions to the requirement for an owner to retain a *coordinating registered professional* as follows:

- Some Part 9 *buildings* as described in Clause 2.2.7.1.(1)(c) may not require a *coordinating registered professional* if the extent of work is relatively simple and the designs of the various *registered professionals of record* have limited or no interaction.
- *Alterations* and tenant improvements may not require a *coordinating registered professional* if the work is relatively simple and the designs of the various *registered professionals of record* have limited or no interaction.

If an owner is unclear as to whether to retain a *coordinating registered professional* for their project, the owner should review the project specific requirements with the *authority having jurisdiction* to determine if a *coordinating registered professional* is required. Also see <u>6.3.1</u> When is a *Coordinating Registered Professional* Required for further guidance.

By signing Schedule A, the owner confirms that they:

- are either the owner (which could be a tenant) of the property in question or the authorized agent of the owner, in which case an agent's letter of appointment must be attached;
- have retained a *coordinating registered professional* to coordinate the design work and *field reviews* of the project including coordination and integration of functional testing of fire protection and life safety systems;
- will notify the *authority having jurisdiction* immediately if that *coordinating registered professional* ceases to be retained on the project, even if the firm providing service to the owner does not change; and
- will ensure that work on the project ceases until another *coordinating registered professional* has been retained and a new Schedule A has been submitted.

The owner is responsible for ensuring that the *authority having jurisdiction* receives all Schedules A and B as part of the *building* permit application per Clause 2.2.7.2.(1)(b) and Schedules C-A and C-B after completion of the project and before the final inspection by the *authority having jurisdiction*, per Sentence 2.2.7.2.(2) in Part 2 of Division C. Typically, the *coordinating registered professional* collects all Schedules and submits them to the *authority*

having jurisdiction on the owner's behalf. If there is no *coordinating registered professional,* then this is the owner's obligation.

6.3 Coordinating Registered Professional Responsibilities

The coordinating registered professional is responsible for coordinating all registered professionals of record for the project in order to substantially comply with the Building Code and other applicable enactments respecting safety except for construction safety aspects. This coordination must be undertaken throughout the design, construction, and occupancy phases. The coordinating registered professional's role is defined in Article 1.4.1.2. of Division A and is described in Division C - Notes to Part 2 Administrative Provisions, Clause A-2.2.7.2.(1)(a) and Article A-2.2.7.3. Item 3.2.1.

Generally, the *coordinating registered professional* is responsible for coordinating the work of each *registered professional of record*, and for the review and coordination of design documents prepared by the *registered professionals of record* throughout the duration of the project. The *coordinating registered professional* is the contact point among the *authority having jurisdiction*, the owner, and each *registered professional of record*, and, as such, is responsible for facilitating communication among the various parties.

Registered professionals of record are responsible for their own design and field review.

It is the *coordinating registered professional's* responsibility to determine that all Letters of Assurance for the project are completed correctly. The *coordinating registered professional* submits the completed Letters of Assurance to the *authority having jurisdiction* on the owner's behalf.

By signing Schedule A, the coordinating registered professional confirms that they:

- will coordinate the design work and *field reviews* of all *registered professionals of record* retained for the project in order to ascertain that the design substantially complies with the Building Code and other applicable enactments respecting safety except for construction safety aspects;
- will coordinate and integrate the functional testing of fire protection and life safety systems (see Article A-2.7.7.3. in Division C - Notes to Part 2 Administrative Provisions, Item 1.0 for further details);
- will notify the *authority having jurisdiction* immediately if they cease to be retained on the project;
- will provide the *authority having jurisdiction* with a Schedule B from each *registered professional of record* retained on the project; and
- will notify the *authority having jurisdiction* immediately if any *registered professional of record* ceases to be retained on the project, even if the firm employing the *registered professionals* is still on the project.

The coordinating registered professional is responsible for making sure that a registered professional of record for each discipline completes a Schedule B and a Schedule C-B at the appropriate times during the project. The coordinating registered professional must initial each of these Schedules and submit them, on behalf of the owner, to the authority having jurisdiction.

By signing Schedule C-A at the end of the project, the *coordinating registered professional* confirms that they have:

- fulfilled their responsibilities for coordination of *field review* by all the *registered* professionals of record;
- coordinated the functional testing of fire protection and life safety systems (see Article A-2.7.7.3. in Division C - Notes to Part 2 Administrative Provisions, Item 1.0 for further details);
- coordinated the *field reviews* to ascertain that the project substantially complies in all
 material respects with the applicable requirements of Part 10 and the plans and
 supporting documents submitted in support of the application for the *building* permit; and
- collected and initialed the appropriate Schedules C-B from the *registered professionals* of *record* to confirm that these systems substantially comply with both the Building Code and with the plans and supporting documents that were submitted with the *building* permit application.

Article A-2.2.7.3 in Division C - Notes to Part 2 Administrative Provisions, Item 3.2.1 provides further guidance on the roles and responsibilities of the *coordinating registered professional*.

6.3.1 When is a *Coordinating Registered Professional* Required

Clause 2.2.7.2.(1)(a) states that the owner must retain a *coordinating registered professional* on every project where *registered professionals of record* are required as determined by Article 2.2.7.1. The following examples illustrate when a *coordinating registered professional* may not be required:

- Some authorities having jurisdiction may not demand a coordinating registered professional when the project involves a single registered professional of record. Although this varies from the strict interpretation of Clause 2.2.7.2.(1)(a), AIBC and Engineers and Geoscientists BC consider this to be acceptable practice. It is advisable that the registered professional of record should confirm with the authority having jurisdiction that no coordinating registered professional is required if only one registered professional of record is required for a project.
- Some authorities having jurisdiction may not demand a coordinating registered professional for Part 9 buildings when the project involves more than one registered professional of record, provided the disciplines involved do not require coordination (e.g. a structural engineer and a fire suppression engineer). Although this varies from the strict interpretation of Clause 2.2.7.2.(1)(a), AIBC and Engineers and Geoscientists BC consider this to be acceptable practice provided the *registered professionals of record* undertake the necessary coordination between themselves (e.g. service penetrations through structural members).
- Some authorities having jurisdiction may not demand a coordinating registered professional for Part 9 buildings when the project involves more than one registered professional of record even though coordination is required of such disciplines (e.g. structural engineer and geotechnical engineer). Coordination between these disciplines is part of normal professional practice. Although this varies from the strict interpretation of Clause 2.2.7.2.(1)(a), AIBC and Engineers and Geoscientists BC consider this to be

acceptable practice provided the *registered professionals of record* undertake the necessary coordination between themselves.

Some authorities having jurisdiction may not demand a coordinating registered professional for simple tenant improvement works within Part 3 or Part 9 buildings when the project involves more than one registered professional of record, provided the disciplines involved do not require coordination. Although this varies from the strict interpretation of Clause 2.2.7.2.(1)(a), AIBC and Engineers and Geoscientists BC consider this to be acceptable practice. Refer to <u>19 Application of Letters of Assurance to Building Alterations and Tenant Improvements</u> for further discussion of tenant improvements.

6.4 Registered Professional of Record and Supporting Registered Professional Responsibilities

The *registered professional of record* is the *registered professional* retained for the provision of the major part of the professional services within a particular discipline. The *registered professional of record* is also responsible for the review of the design documents prepared by any supporting *registered professionals* retained on the project within that discipline.

The *registered professional of record* for each discipline must complete a Schedule B as part of the *building* permit process. By signing Schedule B, the *registered professional of record*:

- Identifies the professional discipline (i.e., architectural, structural, mechanical, plumbing, fire suppression systems, electrical, or geotechnical) for which they are responsible (see Article A-2.2.7.3. of Division C - Notes to Part 2 Administrative Provisions, Item 3.0 for further details).
- Confirms that the design that they have prepared substantially complies with the requirements of the Building Code and other applicable enactments respecting safety except for construction safety aspects (see Article A-2.2.7.3. of Division C - Notes to Part 2 Administrative Provisions, Item 1.0 for further details).
- Confirms that they will take responsibility for the *field reviews* during construction within their respective disciplines.
- Confirms their responsibility for determining that *field reviews* have been undertaken on the work of any supporting *registered professionals* retained on the project within their discipline.
- Commits to notifying the *authority having jurisdiction* immediately if they cease to be retained on the project, even if the firm that retained that *registered professional* is still on the project.

Except under special circumstances, only one Schedule B and Schedule C-B should be completed and submitted by one *registered professional of record* for each discipline.

An example of a case where two Schedules B and C-B may be appropriate is pre-engineered steel *buildings*, which often have one *registered professional of record* who designs the steel superstructure and a second *registered professional of record* who designs the concrete *foundations*.

A registered professional of record should only undertake design and *field review* for the items identified on the Letter of Assurance for their discipline based on their competency. As such, a *registered professional of record*, or owner, may require supplementary supporting engineering or architectural services for a particular component, or sub-component, of a discipline. In instances where supporting engineering or architectural services are required, it is recommended that appropriate assurances be obtained by the relevant *registered professional of record* from the supporting *registered professional* (who could be engaged by the *registered professional of record*; the owner; a contractor, sub-trade or supplier) providing the supporting design service and *field review*. Upon receipt of assurance from such supporting *registered professional* that a particular component or sub-component substantially complies, in all material respects, with the applicable requirements of the Building Code, the *registered professional of record* can confidently complete and submit the Letter of Assurance for their discipline. This allows the integrity of the Building Code scheme for Letters of Assurance to be maintained (one Letter of Assurance per discipline).

If an *authority having jurisdiction* asks for plans and supporting documents prepared by the supporting *registered professional*, these documents should be signed and sealed by the supporting *registered professional*. The professional seal on those documents indicates the appropriate assurance of the design. Refer to Schedule S-B and S-C for the commitment and execution of *field reviews*.

Refer to the <u>Joint Professional Practice Guideline – Professional Design and Field Review by</u> <u>Supporting Registered Professionals</u> (AIBC and Engineers and Geoscientists BC 2020b) for further information on the role of the supporting *registered professional*.

Clause A-2.2.7.2.(1)(b) in Division C - Notes to Part 2 Administrative Provisions of the Building Code provides further guidance on the roles and responsibilities of *registered professionals of record*.

6.5 Authority Having Jurisdiction Responsibilities

The *authority having jurisdiction* receives signed and sealed Letters of Assurance from the *coordinating registered professional* at the appropriate times during the *building* project. Although, in the first instance, the *coordinating registered professional* is responsible for delivering the Letters of Assurance appropriately and correctly completed, the *authority having jurisdiction* should confirm that they have been completed properly - i.e., that no information is missing; items have not been crossed out unless they do not apply to the project; and that they do not contain inappropriate notations or qualifications, such as 'interim', 'partial', with 'expiration dates' or noting of deficiencies. Refer to <u>20 Application of Letters of Assurance to Phased (Staged) Building Permits and Phased (Staged) Occupancies</u> for appropriate annotations for phased *building* permits or phased occupancies.

An *authority having jurisdiction* must not request or accept Building Code Letters of Assurance on projects that are outside the scope of Subsection 2.2.7. in Part 2 of Division C. Note that the Vancouver Building By-law lists some additional circumstances where Letters of Assurance are required.

When a coordinating registered professional or registered professional of record ceases to work on a project, they must notify the *authority having jurisdiction* and the *authority having* *jurisdiction* must not allow them to retract their Schedule A or B or the plans and supporting documents in support of those Schedules that were previously submitted in support of a *building* permit application. As outlined in <u>8.4.1 Responsibilities of the Outgoing</u> <u>Coordinating Registered Professional or Registered Professional of Record</u>, the *coordinating registered professional* or *registered professional of record* retains responsibility for their design compliance assurances and they retain *field review* obligations up until the date of their work terminating on the project.

For information regarding *Building Act* requirements related to local *authorities having jurisdiction* and building officials, see the <u>building official qualifications</u> page on the provincial government website.

7. How to Complete and Submit Letters of Assurance

Letters of Assurance are legal documents, and as such, carry legal implications for the owners and *registered professionals* who complete them. The Letters of Assurance and this Guide were developed in close consultation with the Union of BC Municipalities, the Building Officials' Association of BC, the Architectural Institute of BC and Engineers and Geoscientists BC, to confirm appropriate accountability in protecting public safety while not imposing inappropriate risks or liabilities on the *registered professionals* who submit them. The precise wording of the Schedules is critical. **The Building Code Letters of Assurance must not be altered or used for purposes for which they are not intended**.

Each Schedule contains precise instructions for its completion. Schedules must be completed according to these instructions.

Registered professionals of record completing Schedule B may cross out and initial any items that do not apply to <u>that project</u>. For example, a *registered professional of record* could cross out 'deep foundations' on a project which does not have any deep foundations. The *registered professional of record* will determine which components are required and which are not required for a project to substantially comply with the Building Code.

An item must not be crossed out if it applies to the project. The applicable items are those indicated on the plans and supporting documents prepared by the *registered professional of record*. A *registered professional of record* will have to submit a Schedule B and C-B to accept responsibility for each item applicable to the project, arranging for supporting *registered professionals* as required. No other items on Letters of Assurance may be crossed out, and their language must not be altered or qualified in any way, except as noted below:

- Refer to <u>8 Dealing with Changes in Registered Professionals of Record Before and</u> <u>After a Building Permit is Issued</u> for modifications that may be appropriate when there are changes to the coordinating registered professional or registered professional of record.
- Refer to <u>10 Application of Letters of Assurance to Part 9 Buildings</u> for modifications that may be appropriate to identify the applicable portions of Part 9 buildings.
- Refer to <u>12 Application of Letters of Assurance to Part 6 HVAC</u> for modifications that may be appropriate for NFPA 96 – Commercial Cooking Operations.

- Refer to <u>13 Application of Letters of Assurance to Part 7 Plumbing Services</u> for modifications that may be appropriate when both a plumbing engineer and a civil engineer provide design and *field review* of on-site plumbing services.
- Refer to <u>19 Application of Letters of Assurance to Building Alterations and Tenant</u> <u>Improvements</u> for modifications that may be appropriate to identify the applicable portions of a *building* for *alterations* or tenant improvements to existing *buildings*.
- Refer to <u>20 Application of Letters of Assurance to Phased (Staged) Building</u> <u>Permits and Phased (Staged) Occupancies</u> for modifications that may be appropriate for phased (staged) building permits and phased (staged) occupancies.
- Refer to <u>21 Application of Letters of Assurance for Civil Works</u> for modifications that may be appropriate when a civil engineer undertakes the design and *field review* of onsite civil works.

Letters of Assurance must be submitted to the *authority having jurisdiction* by the *coordinating registered professional* in accordance with note (i) at the top of each Letter of Assurance (i.e. prior to commencement of construction activities of the components identified in Schedule B). In jurisdictions that issue *building* permits, Letters of Assurance are generally submitted with the *building* permit application.

 Refer to <u>8.3 When an Additional Registered Professional of Record Becomes</u> <u>involved after Issuance of a Building Permit</u> for guidance on that situation.

An exception to the submission of Schedule B with the *building* permit application is the detailed design of fire suppression systems. Refer to Division C - Notes to Part 2 Administrative Provisions Article A-2.2.7.3. Item 3.2.4. Scenario 1 or Scenario 2 for submission of Schedule B for fire suppression systems.

In such cases, the *registered professional of record* who is responsible for the fire suppression design and *field review* must arrange to have the *coordinating registered professional* provide coordination and apply their *coordinating registered professional* initials to the Schedule B and submit it to the *authority having jurisdiction* with the sprinkler drawings as soon as possible. The *coordinating registered professional* will also coordinate the design by this *registered professional* of *record* with the other disciplines.

Refer to the *authority having jurisdiction* on their requirements for sprinkler permit application processes.

For other exceptions, including cases where work has commenced prior to issuance of a *building* permit, contact the *authority having jurisdiction* and the **professional regulators** for guidance on the proper use and submission of Letters of Assurance.

8. Dealing with Changes in *Registered Professionals of Record* Before and After a *Building* Permit is Issued

The Letters of Assurance were developed on the basis that the *coordinating registered professional* and *registered professionals of record* would maintain their involvement throughout the entire design and *field review* process. It was contemplated that the *coordinating registered*

professional who signed the Schedule A would be the same coordinating registered professional who signed the Schedule C-A. It was also contemplated that the registered professional of record who signed a Schedule B would be the same registered professional of record who signed the Schedule C-B for that discipline. Although the most common approach is to have the same coordinating registered professional and registered professionals of record throughout the design and field review process in order to maintain clear allocations of responsibility and to avoid coordination and accountability gaps, there are many circumstances where transitions to other coordinating registered professionals or registered professionals of record are perfectly acceptable and can be in the best interest of the project.

In some instances, it may be beneficial for the project in terms of delivery efficiencies to have different *registered professionals of record* for design and *field review*. In this case, refer to <u>9</u> **Design and Field Review Conducted by Different Registered Professionals of Record**. For most projects, continuity of the *coordinating registered professional* is preferred. The following circumstances are examples when it is appropriate to transition to other *coordinating registered professionals* or *registered professionals of record*:

- The original *coordinating registered professional* or *registered professional of record* is no longer available due to personal circumstances, retirement, illness or death.
- The original *coordinating registered professional* or *registered professional of record* is no longer available due to significant geographic relocation.
- The professional services contract with the original *coordinating registered professional* or *registered professional of record* is terminated.
- The original *coordinating registered professional* or *registered professional of record* transfers to a different firm and the owner maintains the professional services contract with the original firm. This original firm must then assign an incoming *coordinating registered professional* or *registered professional of record* to continue with the coordination or *field review* services.

If any one of the above examples or a similar circumstance occurs, Article 2.2.7.4. in Part 2 of Division C requires that work on the project site must stop, and before work can resume:

- for a change in coordinating registered professional, the owner and the outgoing coordinating registered professional must both notify the authority having jurisdiction in writing, clarifying and documenting the transition of responsibilities to the incoming coordinating registered professional; or
- for a change in registered professional of record, the coordinating registered professional and the outgoing registered professional of record must both notify the authority having jurisdiction in writing, clarifying and documenting the transition of responsibilities of the outgoing registered professional of record to the incoming registered professional of record.

In some of the circumstances noted above, the outgoing *coordinating registered professional* or *registered professional of record* may remain available for consultation with the incoming *coordinating registered professional* or *registered professional of record*. In this case, the continuity of information flow is maintained and there is less likelihood of any accountability gaps in the project. This is the preferred approach to dealing with changes of the *coordinating registered professional* or *registered professional* or *registered professional* or *registered professional*.

On the other hand, there will be circumstances where the outgoing *coordinating registered professional* or *registered professional* of *record* is not available for consultation with the incoming *coordinating registered professional* or *registered professional* of *record*. In this case, it is much more challenging to address the division of responsibilities between the outgoing and incoming *coordinating registered professional* or *registered professional* of *record*.

Regardless of the circumstance, anytime there is a change of either the *coordinating registered professional* and *registered professionals of record*, the outgoing *coordinating registered professional* or *registered professional of record* remains responsible for the services they provided up to the date of their departure. The incoming *coordinating registered professional* or *registered professional of record* takes responsibility for the services starting on the date of their retention. The incoming *coordinating registered professional of record* must provide a new Schedule A or B effective on the date of their retention. The date of transfer must be clearly indicated on the new Schedule A or B. Since AIBC and Engineers and Geoscientists BC do not permit backdating of professional seals, the date when the professional seal is applied to the Letter of Assurance may be different from the date of transfer.

There are potentially three separate dates that are related to the transition from one *coordinating registered professional* or *registered professional of record* to another:

- 1. Transition date when the outgoing *coordinating registered professional* or *registered professional of record* is no longer working on the project.
- 2. Retention date when the owner retains the incoming *coordinating registered professional* or *registered professional of record.*
- 3. Date when the incoming *coordinating registered professional* applies their professional seal to the Schedule A, or when the incoming *registered professional of record* applies their professional seal to the Schedule B.

Ideally all three dates should be the same, but in practice this is often not feasible, particularly since AIBC and Engineers and Geoscientists BC do not permit backdating when applying a professional seal.

When there is no gap in transition between the outgoing and incoming *coordinating registered professional* or *registered professional of record*, the following procedure for indicating the appropriate dates on Schedules A and B is as follows:

- The line labelled "Date" on each page of the Schedules A & B should be filled in as the "Transition" date.
- When the *coordinating registered professional* or *registered professional of record* applies their professional seal to Schedule A or Schedule B respectively, the date of application of the professional seal should be indicated within the "Professional Seal and Signature" box on each page of Schedule A or Schedule B.

If there is a gap in the transition between the outgoing and incoming *coordinating registered professional* or *registered professional of record* and work occurred during the gap period in contravention of Article 2.2.7.4. in Part 2 of Division C, the incoming *coordinating registered professional* or *registered professional of record* must take steps necessary to determine, in their professional discretion, that any work undertaken during the gap substantially complies with the Building Code. These steps would be in the form of a due diligence review related to

the complexity and extent of the work rather than a *field review*. If this type of review is feasible, the application of dates on Schedules A & B as described above would apply.

Each project will have unique requirements depending upon the circumstances of the change in *coordinating registered professional* or *registered professional of record*. The incoming *coordinating registered professional* or *registered professional of record* should consult with the *authority having jurisdiction* to determine the appropriate course of action with respect to the submission of the additional Schedules A, B, C-A and/or C-B.

8.1 When There is a Change of a *Registered Professional of Record* Just Prior to a *Building* Permit Application

Registered professionals of record must review, with *authorities having jurisdiction*, the process within their jurisdiction for changing *registered professionals of record* prior to a *building* permit application. Some *authorities having jurisdiction* may not permit a change in *registered professional* prior to *building* permit application.

Changing *registered professionals of record* must be done in a fashion that is consistent with the policies and procedures of AIBC and Engineers and Geoscientists BC.

Only AIBC and Engineers and Geoscientists BC have the legal authority to regulate the practice of *registered professionals of record*.

AIBC and Engineers and Geoscientists BC guidelines for use of professional seals state that a *registered professional of record* should only seal a document that they have prepared or that was prepared under their direct supervision.

Direct supervision means that the *registered professional of record* has responsibility for the control and conduct of the work of a subordinate.

The *registered professional of record* who prepares the design of the project, or who provides direct supervision of the preparation of the design of the project, is the appropriate person to sign and seal the Schedule B for the *building* permit application.

If such registered professional of record leaves the firm (outgoing registered professional of record) just prior to the building permit application, and another registered professional takes over the role of registered professional of record for that discipline (incoming registered professional of record), the transition to the incoming registered professional of record must follow the process described in <u>9 Design and Field Review Conducted by Different</u> <u>Registered Professionals of Record</u>.

8.2 When There is a Change of a *Registered Professional of Record* after the *Building* Permit Application but Prior to Issuance of the *Building* Permit

Registered professionals of record must review, with *authorities having jurisdiction*, the process within their jurisdiction for changing *registered professionals of record* after the *building* permit application but prior to *building* permit issuance. Some *authorities having jurisdiction* may not permit a change in *registered professional* prior to *building* permit issuance.

For this scenario, the outgoing *registered professional of record* has already submitted their *building* permit documents with their professional seal for the *building* permit application.

The transition process described in <u>8.1 When There is a Change of a Registered</u> <u>Professional of Record Just Prior to a Building Permit Application and 9 Design and</u> <u>Field Review Conducted by Different Registered Professionals of Record</u> would apply.

8.3 When an Additional *Registered Professional* Becomes Involved after Issuance of the *Building* Permit

The coordinating registered professional must immediately advise the owner and the authority having jurisdiction if a new registered professional of record becomes involved in a project after the building permit has been issued. For example, structural alterations might not be anticipated in a renovation project and the building permit issued as such, but then construction activities reveal the need for structural alterations and a registered professional of record in the structural discipline provides design and field review services.

If a new *registered professional of record* is retained by the owner after the *building* permit is issued, the *coordinating registered professional* will obtain plans and supporting documents, including a completed Schedule B, from the new *registered professional of record*, and submit them to the *authority having jurisdiction* on the owner's behalf.

If the additional *registered professional* is a supporting *registered professional* within a discipline, they do not complete Letters of Assurance. Rather, the *registered professional of record* for that discipline shall obtain appropriate alternate documentation from the new supporting *registered professional* specifying their design and *field review* responsibilities (e.g. Schedules S-B and S-C). The *registered professional of record* must keep this documentation available for the *coordinating registered professional* and the *authority having jurisdiction* to review upon request.

8.4 When There is a Change of Coordinating Registered Professional or Registered Professional of Record During Construction

The following principles will be used to determine the appropriate allocation of responsibilities between the outgoing and incoming *coordinating registered professional* or *registered professional of record*, and the appropriate annotations on the additional Schedules A, B, C-A and C-B:

8.4.1 Responsibilities of the Outgoing Coordinating Registered Professional or Registered Professional of Record

The outgoing coordinating registered professional or registered professional of record:

 cannot retract the design compliance assurances in their Schedules A or B or the plans and supporting documents in support of those Schedules that were previously submitted;

- retains responsibility for all of the *field review* obligations in their Schedule A or B until the date of termination;
- except when not possible due to death or incapacity, will provide the incoming coordinating registered professional or registered professional of record with all of the completed *field review* reports and other relevant documents (see Sentence 2.2.7.3.(2) in Part 2 of Division C of the Building Code);
- except when not possible due to death or incapacity, will provide a letter to the *authority having jurisdiction* confirming that they have fulfilled the obligations described in their Schedule A or B from the start of construction to the date of termination; and
- will not provide a Schedule C-A or C-B.

8.4.2 Responsibilities of the Incoming Coordinating Registered Professional

Although the incoming *coordinating registered professional* is not responsible for the work done by the outgoing *coordinating registered professional*, the incoming *coordinating registered professional* is expected to:

- Review the relevant documents provided by the outgoing *coordinating registered professional* to ascertain the extent of coordination of design and *field review* that has been provided to date.
- If the incoming *coordinating registered professional* determines that the documentation and/or coordination from the outgoing *coordinating registered professional* is inadequate, they should discuss with the *authority having jurisdiction* the proposed course of action to address the inadequacy.
- If it is not possible to obtain the above-mentioned letter and other relevant documents from the outgoing *coordinating registered professional* (e.g. due to death, illness or other legitimate cause), the incoming *coordinating registered professional* should discuss with the *authority having jurisdiction* the proposed course of action for the transfer of responsibilities.
- The incoming *coordinating registered professional* must provide the *authority having jurisdiction* with a new Schedule A by crossing off and initialling the word "design" and replace it with the words "design changes during construction". The date that is applied to this new Schedule A represents the date when their role as a *coordinating registered professional* commenced. This date may be different from the date when they applied their professional seal to the Schedule. Refer to the beginning of this chapter for the procedure for applying dates on Schedule A.
- Ideally, the start date of the incoming *coordinating registered professional* should match the termination date of the outgoing *coordinating registered professional*. In the event that there is a gap between these two dates, the incoming *coordinating registered professional* should discuss with the *authority having jurisdiction*, in consultation with AIBC and Engineers and Geoscientists BC, regarding the appropriate course of action, which may vary depending upon the length of the gap and the construction activities on the project site during such gap.

• Upon completion of the project, the incoming *coordinating registered professional* must provide a Schedule C-A to the *authority having jurisdiction*. By signing the Schedule C-A, the incoming *coordinating registered professional* takes responsibility for coordination of design changes during construction and coordination of the *field reviews* of the *registered professionals of record* associated with both the original design as well as the design changes during construction.

Since the Schedule C-A from the incoming *coordinating registered professional* confirms that they have fulfilled the obligations described in their Schedule A, the submission of the Schedule C-A to the *authority having jurisdiction* covers all coordination of *field review* that was undertaken after the date which is indicated on the Schedule A. The only modification necessary to the incoming *coordinating registered professional's* Schedule C-A is to replace the word "the" with the word "my" in the following phrase:

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 British Columbia Building Code and in the **my** previously submitted Schedule A, "CONFIRMATION OF COMMITMENT BY OWNER AND BY COORDINATING REGISTERED PROFESSIONAL"

8.4.3 Responsibility of the Incoming Registered Professional of Record

Although the incoming *registered professional of record* cannot be responsible for the work done by the outgoing *registered professional of record*, the incoming *registered professional of record* is expected to:

- Review the plans and supporting documents, including *field review* reports, provided by the outgoing *registered professional of record* to ascertain the extent to which the outgoing *registered professional of record* has fulfilled the obligations of their Schedule B to date.
- If it is not possible to obtain the resignation letter to the *authority having jurisdiction*, field *review* reports and other relevant documents from the outgoing *registered professional of record* (e.g. due to death, illness or other legitimate cause), the incoming *registered professional of record* should discuss with the *authority having jurisdiction* the appropriate course of action for the transfer of responsibilities.
- Conduct a review of the project site to determine if there are any substantial Building Code deficiencies in the work to date and to recommend any appropriate remedial actions. The incoming *registered professional of record* cannot take responsibility for concealed elements in the construction.
- If the incoming *registered professional of record* determines that the documentation from the outgoing *registered professional of record* is inadequate, or there are a significant number of Building Code deficiencies in the work to date, they should discuss with the *authority having jurisdiction* the appropriate course of action. Depending upon the severity of the concerns, there may be a need for an in-depth review and investigation of the construction to date, which may include non-destructive or destructive testing, removal of *building* components to expose hidden construction and concealed elements, or other actions at the discretion of the incoming *registered professional of record* in consultation with the *authority having jurisdiction*.

- The incoming *registered professional of record* must provide the *authority having jurisdiction* with a new Schedule B by crossing off and initialling the word "design" and replacing it with the words "design changes during construction". The date that is applied to this new Schedule B represents the date when their role as a *registered professional of record* commenced. The incoming *registered professional* should clearly indicate the date when their role commenced, which may be different from the date when they applied their professional seal to the Schedule. Refer to the beginning of this chapter for the procedure for applying dates on Schedule B.
- Ideally, the commencement date of the incoming registered professional of record should match the termination date of the outgoing registered professional of record. In the event that there is a gap between these two dates, the incoming registered professional of record should discuss with the authority having jurisdiction, in consultation with AIBC and Engineers and Geoscientists BC, the appropriate course of action, which may vary depending upon the length of the gap and the activities on the project site during such gap. Refer to the beginning of this chapter for the registered professional of record's responsibility during the gap.
- Upon completion of the project, the incoming *registered professional of record* must provide a Schedule C-B to the *authority having jurisdiction*. By signing the Schedule C-B, the incoming *registered professional of record* takes responsibility for *field reviews* of both the original design, as well as the design changes during construction, for those components within their discipline that were constructed after the transition date between the outgoing and incoming *registered professional of record*.

Since the Schedule C-B from the incoming *registered professional of record* confirms that they have fulfilled the obligations described in Schedule B, the submission of the Schedule C-B to the *authority having jurisdiction* covers all *field reviews* that were undertaken after the transition date which is indicated on the Schedule B (refer to <u>8 Dealing with Changes in Registered</u> <u>Professionals of Record Before and After a Building Permit is Issued</u> for "transition date"). The only modification necessary to the incoming *coordinating registered professional's* Schedule C-B is to replace the word 'the' with the word 'my' in the following phrase:

I have fulfilled my obligations for *field review* as outlined in Subsection 2.2.7. Division C of the British Columbia Building Code and in the **my** previously submitted Schedule B, "ASSURANCE OF PROFESSIONAL DESIGN AND COMMITMENT FOR FIELD REVIEW"

8.5 Change of Supporting *Registered Professional* During Construction

The same principles and processes as those that apply to changes of *registered professionals* of *record* apply to changes of supporting *registered professionals* during the course of the project, except that supporting *registered professionals* within a discipline do not complete Letters of Assurance, and their changes are not of concern to *authorities having jurisdiction*. It will be the responsibility of the relevant *registered professional of record* to see that the same process is followed when there is a change of a supporting *registered professional*.

9. Design and *Field Review* Conducted by Different *Registered Professionals of Record*

The Letters of Assurance are based on the preferred and most common concept that there is a single *registered professional of record* within each discipline who is responsible for both the design and *field review* associated with that discipline. The division of responsibilities for design and *field review* to two separate *registered professionals of record* is generally undesirable and should be avoided. However, there are instances where a single, continuing *registered professional of record* within a discipline may not be possible, and design and *field review* are performed by different *registered professionals of record*. The *registered professional of record* providing *field reviews* may or may not be from within the same firm as the *registered professional of record* providing the design. In either case, the Letters of Assurance must be amended to reflect these two different *registered professionals of record*.

The *registered professional of record* providing the design maintains responsibility for substantial compliance of the original design with the Building Code, and possibly any changes to the design during construction. The *registered professional of record* providing *field reviews* takes on the responsibility for *field reviews* during construction and possibly substantial compliance with the Building Code of any design changes during construction. Depending on when the transfer of responsibility happens in the *building* permit application process, the *registered professional of record* providing *field reviews* may also take on responsibility for some design changes prior to construction.

Since the purpose of *field review* is to confirm that the construction substantially complies with the Building Code and the submitted plans and supporting documents, it is imperative that close coordination and communication exist between the *registered professional of record* providing design and the *registered professional of record* providing *field review*.

The registered professional of record providing design must amend their Schedule B as follows:

- Cross out and initial "and Commitment for Field Review" from the title on page 1
- Cross out and initial the last 2 lines on page 1 regarding field review
- Cross out and initial the top 2 lines on page 2 regarding notification to the *authority having jurisdiction*
- Cross out and initial "and Field Review" from the title on page 3

The *registered professional of record* providing *field review* must amend their Schedule B as follows:

- If the *registered professional of record* providing *field review* is taking responsibility for design changes during construction, revise the word "design" throughout to read "design changes during construction".
- If the *registered professional of record* providing *field review* is taking responsibility for design changes that occur prior to issuance of the *building* permit as well as design changes during construction, revise the word "design" throughout to read "design changes before and during construction".

- If the *registered professional of record* providing *field review* is not taking responsibility for design changes during construction and this responsibility remains with the *registered professional of record* providing design, amend their Schedule B as follows:
 - cross out and initial "Assurance of Professional Design and" from the title on page 1;
 - o cross out and initial all but the last 2 lines on page 1 regarding design; and
- cross out and initial "Design and" from the title on page 3.

In any case, the *registered professional of record* providing design is not required to submit a Schedule C-B. If the *registered professional of record* providing design is taking responsibility for all design changes both prior to and during construction, then their Schedule B covers the substantial Building Code compliance of such design changes.

The *registered professional of record* providing *field review* need not make any annotations on their Schedule C-B since the wording of Schedule C-B refers back to the commitments in Schedule B (i.e. the substantial Building Code compliance only relates to the design changes during construction, or before and during construction, if that work is included in the scope).

The coordinating registered professional is responsible for coordinating the design and *field review* by the *registered professionals of record* and for verifying that the Letters of Assurance are appropriately annotated to suit the project specific requirements.

10. Project Abandonment

If the owner decides to abandon a project prior to completion of construction, the process of notifying the *authority having jurisdiction* will vary depending upon the status of the project, as outlined in the following scenarios.

Scenario 1: *Building* permit application has been submitted to the *authority having jurisdiction*, but *building* permit has not been issued

- The owner notifies the coordinating registered professional of the project abandonment.
- The coordinating registered professional notifies the registered professionals of record of the project abandonment.
- The owner and the *coordinating registered professional* notify the *authority having jurisdiction* that the project has been terminated and advise the date of termination.
- The owner or the *coordinating registered professional* fill out the applicable forms required by the *authority having jurisdiction* to verify the termination and request a refund of the surplus *building* permit fees, if applicable.

Scenario 2: *Building* permit has been issued, but construction on site has not yet commenced

• All procedures described in Scenario 1 would apply; and

- The owner or the *coordinating registered professional* notifies the *authority having jurisdiction of the termination date and* that no work has commenced on site under the *building* permit.
- The Schedules and plans and supporting documents cannot be retracted and the *authority having jurisdiction* may retain them on file.

Scenario 3: *Building* permit has been issued, and construction on site is partially complete

- All procedures described in Scenario 1 would apply; and
- The coordinating registered professional provides written notification to the authority having jurisdiction that the ongoing obligations of their Schedule A are terminated for all work after the date of project termination.
- Each *registered professional of record* provides written notification to the *authority having jurisdiction* that the ongoing obligations of their Schedule B are terminated for all work after the date of project termination.
- The owner is responsible to ensure that the abandoned project is left in a safe condition to the satisfaction of the *authority having jurisdiction*.

11. Application of Letters of Assurance to Part 5 Environmental Separation

As indicated in Schedule B, the *registered professional of record* who signs and seals for architectural components is the one that takes overall responsibility for substantial compliance to Part 5 of the Building Code.

It is common industry practice in complex projects for *building* envelope professionals to assist the architect with enhanced *building* envelope services. This *building* envelope professional acts as a supporting *registered professional* to the architect for design review and enhanced *field reviews*.

The following resources are guidance documents for professionals working in Part 5 of the Building Code.

Bulletin 34: Building Envelope Services – Appropriate Professional Practice

AIBC and Engineers and Geoscientists BC have jointly published <u>Bulletin 34: Building Envelope</u> <u>Services – Appropriate Professional Practice</u> (AIBC and Engineers and Geoscientists BC 2011) which clarify the roles and responsibilities of the architect and the *building* envelope professional. This Bulletin includes model Schedules D and C-D that could be used by *building* envelope professionals for their role as a supporting *registered professional* to the architect.

Bulletin 68: Building Envelope

AIBC has published <u>Bulletin 68: Building Envelope</u> (AIBC 2017) with respect to the architect's core knowledge, competency and scope of responsibilities as related to *building* envelope. When enhanced *field review* is being provided by a *building* envelope professional, the architect

remains responsible for design and *field review* of the *building* envelope. Such responsibility is primary and not transferable.

Professional Practice Guideline – Building Enclosure Engineering Services

Engineers and Geoscientists BC has published a <u>Professional Practice Guidelines – Building</u> <u>Enclosure Engineering Services</u> (Engineers and Geoscientists BC 2020a) to guide professional practice related to *building* enclosure engineering services for *building* projects.

12. Application of Letters of Assurance to Part 6 Heating, Ventilating and Air-conditioning

As indicated in Schedule B, the *registered professional of record* who signs and seals for mechanical components is the one that takes overall responsibility for substantial compliance to Part 6 of the Building Code for Heating, Ventilating and Air-Conditioning (HVAC). For more information see Engineers and Geoscientists BC's Professional Practice Guidelines - Mechanical Engineering Services for Building Projects (Engineers and Geoscientists BC 2021).

There are certain components of the HVAC system that may involve specialty *registered professionals*. Such components that are governed by the Building Code may include the following:

- Commercial Kitchen Exhaust Systems per NFPA 96 (see below)
- Chemical fire suppression systems for commercial kitchen exhaust hoods
- HVAC requirements for paint spray booths
- Structural capacity of mechanical components, including anchorage and seismic restraint

If specialty *registered professionals* are required for components that are regulated by the Building Code, the appropriate mechanism to deal with assurances is with the use of Schedules S-B and S-C for supporting *registered professionals* as described in <u>4.3 What Letters of</u> <u>Assurance are Not</u> and <u>6.1 Key Participants in Design and Field Review</u>. The supporting *registered professional* submits the Schedules S-B and S-C to the *registered professional of record* within the relevant discipline.

12.1 NFPA 96 – Ventilation Control and Fire Protection of Commercial Cooking Operations

The design and *field review* of commercial kitchen exhaust systems per NFPA 96 – Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations and of fire suppression systems for commercial exhaust hoods are areas of practice that may include multiple disciplines (architectural, structural, mechanical, fire suppression, electrical) and therefore coordination is crucial. An example is coordination with the architect regarding the location of exterior windows in relation to the exterior discharge louvre, clearances to combustibles and limited combustibles, and *fire-resistance ratings* of shafts.

If the design of a commercial kitchen exhaust system per NFPA 96 is undertaken by a supporting *registered professional*, the appropriate mechanism to deal with assurances from the supporting or specialty *registered professional* is by using Schedules S-B and S-C, which are submitted to the *registered professional of record* within the relevant discipline.

For the case of a chemical fire suppression system for the commercial kitchen exhaust hood, it is best to discuss appropriate assurances with the *authority having jurisdiction*. If there are no special requirements from the *authority having jurisdiction*, Schedules S-B and S-C may be utilized by the professionals.

13. Application of Letters of Assurance to Part 7 Plumbing Services

As stated in Article 1.3.3.1. of Division A, Part 7 Plumbing Services applies to all *buildings*, whereas Letters of Assurance are only required for projects described in Subsection 2.2.7. of Division C.

On projects that are subject to Subsection 2.2.7. of Division C and where the owner retains a civil engineer to undertake the design and *field review* of site drainage systems, refer to <u>21.2</u> <u>Civil Plumbing Systems for On-Site Services</u> for the procedures for filling out the Schedule B by both the plumbing engineer and the civil engineer.

In addition, refer to the following Engineers and Geoscientists BC professional practice guidelines for more information:

- <u>Mechanical Engineering Services for Building Projects</u> (Engineers and Geoscientists BC 2021)
- <u>Geotechnical Engineering Services for Building Projects</u> (Engineers and Geoscientists BC 2020b)

14. Application of Letters of Assurance to Part 9 Housing and Small *Buildings*

Letters of Assurance are generally not intended to apply to Part 9 *buildings*, although *authorities having jurisdiction* often elect to utilize them. Only those Part 9 *buildings* or their components that fall within the scope of Subsection 2.2.7. in Part 2 of Division C are required to be subject to Letters of Assurance.

Clause 2.2.7.1.(1)(c) describes the parameters when *registered professionals* and Letters of Assurance are required for certain components within Part 9 *buildings* (e.g. structural, geotechnical, sprinkler systems and standpipe systems).

Note that Article 2.2.7.1. of the VBBL 2019 includes many additional conditions when *registered professionals* are required on a *building* projects, including Part 9 *buildings*.

Refer to the <u>Joint Professional Practice Guidelines – British Columbia Building Code Letters of</u> <u>Assurance Requirements for Part 9 Buildings</u> (AIBC and Engineers and Geoscientists BC 2021) for further information.

For example, Letters of Assurance are required for a structural component (in a Part 9 *building*) that falls within the scope of Part 4 of Division B. Letters of Assurance are required for that structural component only. Beams with point loads, girder trusses, trusses with spans greater than 12.2 meters and proprietary engineered products are some examples of structural components that may exceed the scope of Part 9 of Division B and will require a *registered professional* to assume responsibility for the substantial Building Code compliance of such components.

If a Part 9 *building* contains numerous Part 4 components, many *authorities having jurisdiction* require that the scope of the Letter of Assurance include the integrated structural design and *field review* for the entire *building*. The *registered professional of record* should review with the *authority having jurisdiction* the local requirements for such circumstances.

If a registered professional is taking responsibility for specific components within a Part 9 *building*, the Schedule B should be clearly annotated to describe the applicable components.

14.1 Factory-Built Roof Trusses

Factory-built roof trusses that are designed under Article 9.23.14.11. in Part 9 of Division B of the Building Code do not require Letters of Assurance from the truss designer. However, in some cases *authorities having jurisdiction* request a written commitment from a *registered professional* that the girder reactions and loads are satisfactory. These written commitments are not required under the Building Code and must not take the form of Building Code Letters of Assurance.

Factory-built roof trusses that do not fall within the limits defined in Article 9.23.14.11. in Part 9 of Division B are within the scope of Part 4 of Division B and do require Letters of Assurance.

14.2 Beams

Uniformly loaded steel beams which can be sized from Table 9.23.4.3. in Part 9 of Division B, and for uniformly loaded glulam beams which can be sized from Table 9.23.4.2.-K of the Part 9 Span Tables do not require Letters of Assurance from the beam designer. In some cases, *authorities having jurisdiction* request a written commitment from a *registered professional* that the beams have been designed according to Tables 9.23.4.3. and 9.23.4.2.-K. These written commitments are not required under the Building Code and must not take the form of Building Code Letters of Assurance.

Beams with non-uniform or concentrated loads fall within the scope of Part 4 of Division B and require Letters of Assurance.

14.3 Alterations

Alterations to Part 9 *buildings*, particularly to commercial *buildings* that are subject to changes of use or *occupancy*, may sometimes trigger the need for Letters of Assurance. More information on the possible implications of *building alterations* is provided in <u>19 Application of</u> Letters of Assurance to *Building Alterations* and Tenant Improvements.

15. Application of Letters of Assurance to Part 10 Energy Efficiency

The successful application of Part 10 of Division B energy efficiency requirements will mean that a range of *registered professionals* will have accountability for design, *field review* and testing.

Ongoing coordination between the *coordinating registered professional* and the *registered professionals of re*cord will be necessary. The Letters of Assurance are worded to explicitly reference the Part 10 provisions. *Registered professionals of record* must indicate that the *building* substantially complies with the Part 10 of Division B requirements, just as any other Part of the Building Code.

16. Application of Letters of Assurance to Requirements for Existing *Buildings*

Letters of Assurance apply to the design and *field review* associated with the work that is indicated on the plans and supporting documents prepared by the *registered professionals of record*. While existing *buildings* are expected to have met the applicable code at the time of their permitting, they often do not meet the requirements of the current Building Code.

For projects located within the City of Vancouver, when renovations, additions or changes of *major occupancy* are undertaken, Part 11 of the VBBL 2019 provides prescriptive requirements for the appropriate level of upgrade to the existing *building*. All new work must substantially comply with the current VBBL 2019 and all existing conditions must be upgraded in accordance with Part 11 of the VBBL 2019. The Letters of Assurance only apply to the new work and the upgrades as required by Part 11 of the VBBL 2019. They do not apply to other aspects of the existing *building*, even in situations when those other aspects include existing nonconforming conditions.

For projects located outside the City of Vancouver, all new work must substantially comply with the BCBC 2018. Refer to Division A - Notes to Part 1 Compliance Sentence A-1.1.1.2.(1) regarding *alterations*, additions or changes of *major occupancy* to existing *buildings*.

17. Application of Letters of Assurance to Geotechnical Components

For Part 3 *buildings*, a subsurface investigation by a *registered professional of record* is mandated by Sentence 4.2.2.1.(1) in Part 4 of Division B. The *coordinating registered professional* will submit to the *authority having jurisdiction* a Schedule B from the *registered professional of record* for the geotechnical discipline at the time of *building* permit application.

Due to the variable nature of geotechnical conditions, the geotechnical design will be based upon the subsurface investigation, however, during *field review* the geotechnical design may have to be altered to suit the site conditions found during *field reviews*. The geotechnical *registered professional of record* should advise the owner and the *coordinating registered professional* of any significant modifications that are required.

For Part 9 *buildings*, in accordance with Subclause 2.2.7.1.(1)(c)(ii) in Part 2 of Division C, a subsurface investigation by *a registered professional of record* is only required when the geotechnical conditions at the *building* site fall outside the scope of Part 9 in Division B. This could include any of the following conditions:

- the allowable bearing pressure is less than 75 kPa
- foundations that are supported on permafrost
- *foundations* that may be subject to slope instability (see reference to Article 8.2.2.2. below)
- shoring (see reference to Article 8.2.2.2. below)
- underpinning
- deep foundations
- foundation walls that exceed the criteria of Subsection 9.15.4. in Part 9 of Division B, or
- retaining walls, other than *foundation* walls, that are critical for the support of *building foundations* and are considered to be structural elements of the *building* as described in the Division B Notes to Part 9 Housing and Small Buildings, Sentence A-9.3.2.9.(4)

As described in Division B - Notes to Part 9 Housing and Small Buildings, Sentence A-9.3.2.9.(4), some projects include site retaining walls that are not critical for the support of *building foundations*. Although such site retaining walls are not regulated by the Building Code for either Part 3 and Part 9 *buildings* and are not subject to Letters of Assurance, professional design of such walls is important for public safety, particularly when the height of retained soil exceeds 1.2 metres. Refer to Engineers and Geoscientists BC Professional Practice Guidelines - Retaining Wall Design (Engineers and Geoscientists BC 2020c) for the appropriate method to demonstrate professional assurance using the "Assurance Statement" found in Appendix A of the retaining wall guideline. Also note that Clause 1.1.1.1.(1)(r) of Division A of the Vancouver Building By-law requires all retaining structures greater than 1.2m in height be designed to the requirements of the "Assurance Statement" found in Appendix A of the retaining wall guideline.

Due to the variable nature of geotechnical conditions, the conditions noted above for Part 9 *buildings* may not become apparent until after the *excavation* has commenced. In such a case,

the *excavation* should cease, and the owner must retain a *registered professional of record* for the geotechnical discipline to provide direction to stabilize the partially completed *excavation*, undertake subsurface investigation, provide geotechnical design and submit a Schedule B to the *authority having jurisdiction* upon completion of their design. The geotechnical *registered professional of record* may cross out the items on Schedule B that are not applicable to the project. The geotechnical *registered professional of record* will conduct *field reviews* during construction and submit a Schedule C-B to the owner for submission to the *authority having jurisdiction* prior to occupancy.

Although the Letters of Assurance specifically exclude "construction safety aspects", which is the sole responsibility of the *constructor*, there is one specific requirement in Part 8 of the Building Code which can significantly affect both public safety and worker safety and may warrant the involvement of a geotechnical *registered professional* for both Part 3 and Part 9 *buildings*.

Article 8.2.2.2. Protection of Adjoining Property

1) If the stability of adjoining *buildings* may be endangered by the work of excavating, adequate underpinning, shoring and bracing shall be provided to prevent

a) damage to, or movement of, any part of the adjoining building, and

b) the creation of a hazard to the public.

With respect to Geotechnical (Temporary) for Part 3 *buildings*, the responsibility for slope stability of the site rests with the geotechnical engineer of record and stability of the adjoining *buildings* required by Article 8.2.2.2. is generally addressed with the *excavation* and shoring drawings prepared by geotechnical engineer and is included in their Schedule B.

With respect to Geotechnical (Temporary) for Part 9 *buildings*, although there is no requirement for the plans and supporting documents submitted in support of the *building* permit application to specify *excavation*, shoring, underpinning and temporary dewatering systems, these systems should still be designed so that requirements of Article 8.2.2.2 are met. It is the responsibility of the owner and the contractor to engage qualified persons to fulfill this obligation.

Schedule B is not the appropriate mechanism to demonstrate professional assurance for protection of adjoining property for Part 9 *buildings* because it is not within the scope of Article 2.2.7.1. of Division C. The owner or the contractor should discuss with the *authority having jurisdiction* the appropriate means to protect the adjoining property during construction.

17.1 Terms Used in Letters of Assurance for Geotechnical Components

Refer to Engineers and Geoscientists BC Professional Practice Guidelines - Geotechnical Engineering Services for Building Projects (Engineers and Geoscientists BC 2020b) for a detailed description of the terms used in Schedule B for Items 7.1 to 7.4 and Items 8.1 to 8.7.

There are two terms that are commonly misunderstood in the industry, so they warrant clarification in this guide.

Schedule B Item 7.4 under Geotechnical (Temporary) is titled Temporary Construction Dewatering and is defined in the aforementioned guidelines as:

"...the installation of well and/or pumping systems and/or temporary cut-off structures to maintain stability of the excavation and partially constructed buildings (i.e., due to buoyancy) by control of groundwater levels or flow. This normally is related to the pumping and drainage of groundwater, including consideration of measures to reduce temporary and long-term (i.e., if subject structure will not be removed) off-site impacts such as settlement/subsidence due to raising or lowering the water table."

Schedule B Item 8.6 under Geotechnical (Permanent) is titled Permanent Dewatering and is defined in the aforementioned guidelines as:

"...the geotechnical aspects of the installation of well, drainage, and/or groundwater cut-off systems. This normally is related to the pumping, drainage, and/or cut-off structures that are required to limit hydrostatic pressures acting on the building. Considerations should include seismic load and performance, soil and structure interaction, measures to reduce off-site impacts such as settlement or subsidence due to raising or lowering the water table. This item also includes specification of design hydraulic conductivities, and seepage estimates. This should include setting or affirming an appropriate maximum design groundwater elevation, which incorporates a 'freeboard' or factor of safety, and potentially relates to a specific return period, if available."

In both definitions, temporary cut-off structures can include sheet pile walls or secant pile walls.

It should be noted that there is a distinction between "groundwater" and "surface water". Engineers and Geoscientists BC's definitions of both Temporary Construction Dewatering and Permanent Dewatering relate only to "groundwater".

Erosion and sediment control drawings are primarily an environmental issue and are not covered under the Letters of Assurance with the exception of erosion control as it relates to the stability of temporary slope cuts during *excavation*.

Schedule B Item 7.1 under Geotechnical (Temporary) is titled *Excavation* and is defined in the aforementioned guidelines to include the stability of temporary cut slopes during *excavation* and the potential influence of changing weather conditions on slope stability.

18. Application of Letters of Assurance to Landscape Design and *Field Review* and Development Permits and Conditions

Item 1.8 of Schedule B indicates that the responsibility for design and *field review* of "landscaping, screening and site grading" rests with the architect.

Item 1.13 of Schedule B indicates that the responsibility for design and *field review* of "Development Permit and conditions therein" also rests with the architect.

All items listed in Schedule B relate to "Components of the plans and supporting documents prepared by this *registered professional*" and must be shown on the architect's drawings.

For Item 1.8 of Schedule B, the architect is taking responsibility for landscaping that is shown on their drawings and for aspects of the landscaping that are regulated by the Building Code (e.g. firefighter access, accessibility, stairs, ramps, handrails, *guards*, *grade*, etc.).

The architect may not have the training and experience in other aspects of landscape design such as plant species, growing medium or site irrigation. These items are not regulated by the Building Code and are not covered by the architectural Schedules B and C-B.

For Item 1.13 of Schedule B, when the architect confirms responsibility for the "Development Permit and conditions therein", it could imply that the architect is taking responsibility for all aspects of landscape design because the landscape drawings, which are usually prepared by an independent landscape architect, form part of the development permit.

An architect cannot provide assurance on drawings prepared by a landscape architect. The development conditions that the architect is providing the assurance on are the development permit conditions as described in the architect's drawings. If *authorities having jurisdiction* require someone to take responsibility for the design *and field reviews* of landscape development permit conditions that go beyond the scope of the Building Code, then assurance for such responsibility should be provided by the designer of the landscaping, using appropriate accountability documents, not by the architect using the Letters of Assurance.

For Item 1.13 of Schedule B, when the architect confirms responsibility for the "Development Permit and conditions therein", it could imply that the architect is taking responsibility for all aspects of the development permit and its conditions. However, the assurance only covers the development permit matters and conditions that are documented in the drawings prepared by the architect.

19. Application of Letters of Assurance to *Building Alterations* and Tenant Improvements

While it is difficult to make definitive statements about when the Letters of Assurance are required for *alterations* to existing *buildings*, the Building Code requirements for Letters of Assurance are not intended to apply to simple *building alterations* or simple tenant improvements. Only when a *building alteration* or tenant improvement falls within the scope of Subsection 2.2.7. in Part 2 of Division C are Letters of Assurance required.

Simple *building alterations* that meet <u>both</u> of the following criteria typically do not require Letters of Assurance:

- The improvements involve no structural, mechanical or electrical components that require the retention of a *registered professional* under the Building Code.
- The improvements involve no *alterations* to fire and life safety components or *access* requirements for *persons with disabilities*.

Letters of Assurance are typically required for:

- Situations when either of the two above noted conditions is present.
- *Alterations*, including tenant improvements, to Part 3 *buildings* that involve changes to *fire separations*, or significant changes to egress systems.

- *Alterations,* including tenant improvements, to Part 3 *buildings* that involve significant changes to the energy efficiency of the *building.*
- Alterations, including tenant improvements to Part 9 buildings that involve components that fall outside the scope of Part 9 of the Building Code as described in Clause 2.2.7.1.(1)(c) in Part 2 of Division C.
- *Alterations* that involve additions to floor space, including mezzanines, or interconnected floor spaces.

Building alterations or tenant improvements that are associated with a change of use or *occupancy*, such as *alterations* to a Part 3 *building*, or change of use or *occupancy* to a Part 9 *building* which will make it a Part 3 *building*, might trigger significant Building Code requirements not only for the *alteration* itself but also for the upgrading of the base *building*. This should be determined at the earliest opportunity in consultation with the *authority having jurisdiction* and will require Letters of Assurance from a *coordinating registered professional* and from each *registered professional of record*.

For the purposes of tenant improvements, the tenant is the appropriate entity to sign the Schedule A, rather than the property owner as per the records of the Land Title Office. Some *authorities having jurisdiction* may require additional accountability documentation from the property owner with respect to tenant improvement works (e.g. Owner's Undertaking Letter).

By signing and sealing a Letter of Assurance with respect to a *building alteration* or tenant improvement, a *registered professional* is providing assurance that for their discipline the *alteration* substantially complies with the Building Code, and has not created a non-conformity or substantially increased the level of non-conformity of the existing *building*.

It is fairly common for tenant improvement work to be underway at the same time that the base *building* is still under construction (e.g. shopping malls). Very often the tenant improvement *registered professionals of record* and *constructors* are different from the base *building registered professionals of record* and *constructors*. If the tenant improvement work commences prior to completion of the base *building* shell, there can be many complications with overlapping responsibilities between the base *building* and tenant improvement *registered professionals of record* and *constructors*. The *coordinating registered professional* should discuss with the owner, the tenants and the *authority having jurisdiction* the most appropriate method for undertaking the tenant improvement work to minimize confusion with respect to the responsibilities of the different *registered professionals of record*.

20. Application of Letters of Assurance to Phased (Staged) *Building* Permits and Phased (Staged) Occupancies

20.1 Acceptable Use of Letters of Assurance for Phased (Staged) *Building* Permits

Some *authorities having jurisdiction* allow phased or staged *building* permit applications in order to accommodate fast-tracked projects (e.g. *excavation* and shoring phase, *foundation* phase,

full *building* permit phase). In this instance the design of the full project may not be complete at the time of *building* permit application for the initial phases or stages.

Since Schedule B refers to "plans and supporting documents prepared by this *registered professional of record*", it is appropriate that Schedules B only be submitted to the *authority having jurisdiction* once the plans and supporting documents are complete.

For example, for an *excavation* and shoring phase, the only Letters of Assurance that should be submitted for the *building* permit would be the Schedule A from the owner and *coordinating registered professional*, and the Schedule B from the *registered professional of record* for the geotechnical discipline.

For a subsequent *foundation* permit phase, the only additional Letter of Assurance that should be submitted for the *building* permit is the Schedule B from the *registered professional of record* for the structural discipline. This Schedule B should be clearly annotated "For Foundations Only", since the only plans and supporting documents that accompany this permit application are the structural *foundation* drawings.

For the subsequent full *building* permit, the *registered professional of record* for the structural discipline will submit another Schedule B with no annotations.

The coordinating registered professional should review with the authority having jurisdiction the appropriate procedures for phased (staged) building permit applications. Some authorities having jurisdiction require the submission of plans and supporting documents for the entire project before considering the issuance of phased (staged) building permits. There is some risk associated with proceeding with pouring concrete foundations prior to having a complete set of plans and supporting documents and Letters of Assurance from all disciplines that demonstrate substantial Building Code compliance for the entire project.

20.2 Acceptable Use of Letters of Assurance for Phased (Staged) Occupancies

Phased (staged), or partial, occupancy sometimes occurs when a discrete or stand-alone portion of a *building* or project has been completed with respect to the plans and supporting documents that were submitted in support of the *building* permit application.

Owners, coordinating registered professionals and authorities having jurisdiction need to discuss the potential for project occupancy phasing early in the design process to ensure that the coordinating registered professional and registered professionals of record will be able to issue Schedules C-A and C-B for discrete or stand-alone portions of the project.

There are two possible approaches regarding *building* permits to accommodate phased or staged occupancies:

 If the discrete portions of the project for which phased (staged) occupancies are requested are known at the *building* permit application stage, then the *authority having jurisdiction* could issue discrete *building* permits for each portion of the project to match the phased (staged) occupancies. The *coordinating registered professional* and *registered professionals of record* could then provide separate Schedules A, B, C-A and C-B for each discrete portion of the project. In this case the Schedules would not require any amendments. 2. If the discrete portions of the project are not known at the *building* permit application stage, and a single *building* permit is issued for the entire project, then the Schedules C-A and C-B could be amended to clearly identify the portion of the project that is to be included in the phased (staged) occupancy.

For this second approach, if phased or staged or partial occupancy is sought for portions of a project under a single *building* permit, Schedules C-A and C-B may only be issued where:

- the architectural registered professional of record will prepare a set of drawings which clearly indicates the portion of the project that will be occupied, and these drawings will be submitted with the Schedules C-A and C-B for the phased (staged) or partial occupancy;
- the portion of the project for which occupancy is sought is clearly defined in the 'Address of Project' section of the Schedules C-A and C-B with the annotation "Partial occupancy for the portion of the project indicated on the attached drawings";
- the work for the portion of the project for which occupancy is sought substantially complies in all material respects with the Building Code and other applicable enactments respecting safety except for construction safety aspects and with the drawings and supporting documents that were submitted in support of the *building* permit application;
- the portion of the project for which occupancy is sought has complete and inherent integrity with respect to fire and life safety; and
- any project portions that are excluded from the Schedules C-A and C-B are clearly
 protected from premature use and will have no adverse effect on the safe occupancy of
 the completed portion of the project.

Once all work on the project has been completed and before the final occupancy permit is issued, final Schedules C-A and C-B must be submitted, with no annotations, covering the entire project to which the single *building* permit applied.

20.3 Unacceptable Use of Letters of Assurance for Phased (Staged) Occupancies

Letters of Assurance must not be issued for any portion of a project that does not substantially comply with Building Code requirements or with the plans and supporting documents that were submitted in support of the *building* permit application. **If deficiencies remain in the portion to be occupied, the Letters of Assurance cannot be issued**. Deficiencies under a construction contract are not necessarily deficiencies with respect to compliance with Building Code.

20.4 Delayed Completion of Landscaping and Other Development Permit Conditions

Landscaping that is a development permit condition is only covered by the Letters of Assurance insofar as it appears in the drawings of the various *registered professionals of record*, primarily those of the architectural *registered professional of record*. If the landscaping element is

fundamental to substantial compliance with the Building Code, the Letter of Assurance cannot be amended to note deficiencies due to incomplete landscaping.

There may be other development permit conditions that may not be completed at the time of occupancy which should be discussed with the *authority having jurisdiction*.

21. Application of Letters of Assurance to Civil Works

Schedule B does not include a specific discipline for civil works within private property. Since some projects have a separate *registered professional* who undertakes the design and *field review* of civil works, the following guidance outlines the appropriate approach for the use of Letters of Assurance for civil works.

21.1 Roadways, Sidewalks, Fire Access Routes

Since the item "Provisions for firefighting access" is included in Item 1.9 of Schedule B under the architectural discipline, if the design and *field review* of such components is undertaken by a civil *registered professional*, this *registered professional* will be considered to be a supporting *registered professional* to the architectural *registered professional of record*. For these components, the civil *registered professional* should provide a Schedule S-B and S-C to the architectural *registered professional of record*.

21.2 Civil Plumbing Systems for On-Site Services

For some projects, the plumbing *registered professional of record* provides the design *and field review* of *plumbing systems* within the *building*, and a separate civil *registered professional of record* provides the design and *field review* of on-site services that extend from the property line to the *building*. The on-site services could include such items as sanitary piping, storm piping, drainage piping for site retaining walls, fire suppression water supply piping, domestic water supply piping and fire hydrants on private property. In most cases *plumbing systems* that are located on private property are subject to the requirements of Part 7 in Division B of the Building Code. If a separate civil *registered professional of record* provides design and *field review* services for such on-site *plumbing systems*, then such work is considered to be a primary discipline, and the civil *registered professional of record* should submit Schedules B and C-B for the relevant items in Schedule B.

Although <u>6.4 Registered Professional of Record and Supporting Registered Professional</u> <u>Responsibilities</u> states "Except under special circumstances, only one Schedule B and Schedule C-B should be completed and submitted by one *registered professional of record* for each discipline", civil plumbing works for on-site services are an exception to this rule.

Since Schedule B states that the *registered professional of record* "gives assurance that the design of the components of the plans and supporting documents <u>prepared by this registered</u> <u>professional of record</u>" (emphasis added) substantially comply with the Building Code, by signing a Schedule B, the civil *registered professional of record* is only taking responsibility for the work that is indicated on their drawings. This provides a clear delineation of the scope of

services between the plumbing *registered professional of record* and the civil *registered professional of record*.

It is appropriate for the civil *registered professional of record* to cross out and initial those items on Schedule B that do not apply to their scope.

The following items may be included in the civil *registered professional of record* list for civil works:

Component	Appropriate Item on Schedule B
Storm water piping Drainage for site retaining walls Sanitary piping Domestic water piping Fire suppression water piping Fire hydrants on private property	 4.2 Site and foundation drainage systems services

All other items on Schedule B should be crossed out and initialed.

Some plumbing services may be located on private property but may not be subject to the requirements of Part 7 in Division B of the Building Code (e.g. site services located under private roadways in a new subdivision). Such installations are commonly designed to the requirements of the local jurisdiction's municipal servicing bylaw and are not subject to Part 7 of Division B of the Building Code or to Letters of Assurance.

21.3 Off-Site Civil Works

The Building Code only applies to work within a *building*, or work located on private property to service a *building*. Off-site civil works are not regulated by the Building Code so Letters of Assurance do not apply.

22. Anchorage and Seismic Restraint

Schedule B includes a requirement for anchorage and seismic restraint of non-structural elements in *buildings*, including architectural, mechanical, plumbing, fire suppression and electrical components. Since the *registered professionals of record* for these disciplines may not be experienced in structural design, they commonly require the involvement of supporting *registered professionals* to undertake the structural design and *field review* of the subject anchorage and seismic restraint. The recommended practice by AIBC and Engineers and Geoscientists BC is for these supporting *registered professionals* to submit Schedules S-B and S-C, to the *registered professional of record* for that particular discipline.

The supporting *registered professional* can only take responsibility for the anchorage and seismic restraint of components that they design. They are responsible for the structural capacity of the seismic restraint bracing and the attachment of this bracing to the base *building* structure. They are also responsible for verifying with the *registered professional of record* of the structural discipline that the base *building* structure can adequately support the seismic loads induced by this bracing. They are not responsible for the structural capacity of the internal components within a piece of equipment that is being braced. For example, the structural

integrity of the internal components of an air handling unit is the responsibility of the manufacturer of that piece of equipment, not the supporting *registered professional* who designs the anchorage and seismic restraint systems.

23. Alternative Solutions

23.1 What the Building Code Requires

As described in Article 1.2.1.1. in Part 1 of Division A, compliance with the Building Code can be achieved by either complying with the acceptable solutions described in Division B, or by alternative solutions that achieve at least the minimum level of performance required by Division B in the areas defined by the objectives and functional statements referenced in Subsection 1.1.2. of Division B.

Section 2.3. of Division C of the Building Code describes the requirements for alternative solutions as follows:

- Article 2.3.1.1. describes how an *authority having jurisdiction* is obligated to accept an alternative solution if they are satisfied that the alternative solution demonstrates that the level of performance required by Clause 1.2.1.1.(1)(b) of Division A will be achieved.
- Article 2.3.1.2. states than an *authority having jurisdiction* may require the person requesting the use of an alternative solution to provide documentation to demonstrate that the level of performance required by Clause 1.2.1.1.(1)(b) of Division A will be achieved. This documentation shall include the following:
 - A Building Code analysis outlining the analytical methods and rationales used to determined that the required level of performance is achieved.
 - Information concerning any special maintenance or operational requirements that are necessary to achieve the required level of performance after the *building* is constructed.
 - Identification of applicable objectives, functional statements and acceptable solutions, and any assumptions, limiting or restricting factors, testing procedures, engineering studies or performance parameters that will support a Building Code compliance assessment.
 - Information about the qualifications, experience and background of the person or persons taking responsibility for the alternative solution.
 - Provision of sufficient detail to convey the design intent and to support the validity, accuracy, relevance and precision of the Building Code analysis.
- Sentence 2.3.1.2.(6) discusses the situation where more than one person is responsible for the design of a *building* or facility that includes a proposed alternative solution, stating that in this instance, the person requesting the use of the alternative solution shall identify a single person to coordinate the preparation of the design, Building Code analysis and documentation referred to in Article 2.3.1.2.

Refer to Section 2.3. of Division C of the VBBL 2019 for additional alternative solution requirements for projects located within the City of Vancouver.

23.2 How do Letters of Assurance Apply to Alternative Solutions?

The Building Code Letters of Assurance have been developed to address the design approach using the acceptable solutions described in Division B. These letters are not an appropriate form of accountability for alternative solutions.

The assurance that the alternative solution demonstrates a level of performance required by Clause 1.2.1.1.(1)(b) of Division A has been achieved should be demonstrated through an alternative assurance mechanism.

24. Use of Professional Seal

Both AIBC and Engineers and Geoscientists BC have guidance documents on the proper use of a professional seal as noted in <u>24.1 Professional Seals Using AIBC or Engineers and</u> <u>Geoscientists BC Digital Certificates</u>.

In accordance with the *Architects Act* and the *Professional Governance Act* and Engineers and Geoscientists BC bylaws, all plans, supporting documents, and Letters of Assurance that are prepared by an *registered professional of record* and submitted to an *authority having jurisdiction* must bear the *registered professional's* seal, signature and date. For engineering *registered professionals*, any document submitted with seal, signature, and date must also have the firm's permit to practice number visibly applied. For more information, see the <u>Firm Practice page</u> of the Engineers and Geoscientists BC website.

Except as described in <u>8 Dealing with Changes in Registered Professionals of Record</u> <u>Before and After a Building Permit is Issued</u> and <u>9 Design and Field Review Conducted</u> <u>by Different Registered Professionals of Record</u>, the registered professional of record who applies their professional seal to their own drawings that form part of a *building* permit application must be the same registered professional of record who applies their professional seal to the Schedule B and Schedule C-B.

If a *registered professional of record* prepares plans and supporting documents for *buildings* or *building* components that do not require professional design and *field review* per Article 2.2.7.1. in Part 2 of Division C, such plans and supporting documents also must bear the *registered professional's* seal, signature and date. The application of a professional seal to such documents does not trigger a requirement for Letters of Assurance.

Letters of Assurance are only required for projects or *building* components that fall within the scope of Article 2.2.7.1. in Part 2 of Division C, and for the City of Vancouver as otherwise required by the Vancouver Building By-Law.

24.1 Professional Seals Using AIBC or Engineers and Geoscientists BC Digital Certificates

Some *authorities having jurisdiction* are accepting professional seals using AIBC or Engineers and Geoscientists BC digital certificates. *Registered professionals* should consult with the

authority having jurisdiction to obtain their policy for use of AIBC or Engineers and Geoscientists BC digital certificates.

For *authorities having jurisdictions* that accept the use of Notarius digital certificates, the following applies:

 Letters of Assurance may be sealed by a *registered professional* using a valid AIBC or Engineers and Geoscientists BC digital certificate for the professional seals, as well as a valid AIBC or Engineers and Geoscientists BC digital certificate for the *coordinating registered professional*'s initials on Schedules B and C-B.

Refer to the following documents and links for further information on the use of professional seals and Notarius digital certificates:

- AIBC's Bulletin 60: Signature, Seal and Delivery of Electronic Documents (AIBC 2020)
 - <u>https://aibc.ca/wp-content/uploads/files/2020/06/Bulletin-60-Signature-Seal-and-Delivery-of-Electronic-Documents.pdf</u>
- AIBC's Bulletin 61: Seal of an Architect (AIBC 2013)
 - <u>https://aibc.ca/wp-content/uploads/files/2018/10/Bulletin-61-Seal-of-an-</u> <u>Architect.pdf</u>
- Engineers and Geoscientists BC's Guide to the Standard for the Authentication of Documents (Engineers and Geoscientists BC 2021)
 - <u>https://www.egbc.ca/getmedia/bf1c2174-de3b-45b2-812f-</u>
 <u>cceb6958e1e8/EGBC-Authentication-of-Documents-V3-0.pdf.aspx</u>
- Digital Seals https://notarius.com/en/
 - o AIBC's Notarius Webpage https://notarius.com/en/certifio/professionals/aibc/
 - Engineers and Geoscientists BC's Notarius Webpage https://notarius.com/en/certifio/professionals/engineers-geoscientists-bc/

24.2 Delegation of Signing Authority

Refer to the reference documents listed in 24.1 Professional Seals Using AIBC or Engineers and Geoscientists BC Digital Certificates.

In general terms, a *registered professional* cannot delegate their signing authority to another *registered professional* when it relates to applying their professional seal.

If a *registered professional* is on vacation, the only acceptable methods for applying their professional seal to a document are as follows:

- Have the original hard copy document sent to the *registered professional* for application of their professional seal, or
- The *registered professional* can apply their professional seal using their Notarius digital certificate and email the document to their office or to the *authority having jurisdiction*.

25. References

Architects Act [RSBC 1996], Chapter 17 Community Charter [SBC 2003], Chapter 26 Local Government Act [RSBC 2015], Chapter 1 Professional Governance Act [SBC 2018], Chapter 47 Vancouver Charter [SBC 1953], Chapter 55

Architectural Institute of British Columbia (AIBC) and Engineers and Geoscientists BC. 2011. Bulletin 34: Building Envelope Services – Appropriate Professional Practice. AIBC: Vancouver, BC. [accessed: 2020 Dec 16]. <u>https://aibc.ca/about/regulatory-authority/bulletins</u>

Architectural Institute of British Columbia (AIBC) and Engineers and Geoscientists BC. 2021. Joint Professional Practice Guidelines – British Columbia Building Code Letters of Assurance Requirements for Part 9 Buildings. Vancouver and Burnaby, BC: AIBC and Engineers and Geoscientists BC. [accessed: 2021 Sept. 28]. <u>https://www.egbc.ca/Practice-Resources/Individual-Practice/Guidelines-Advisories</u>

Architectural Institute of British Columbia (AIBC) and Engineers and Geoscientists BC. 2020b. Joint Professional Practice Guidelines – Professional Design and Field Review by Supporting Registered Professionals. Vancouver and Burnaby, BC: AIBC and Engineers and Geoscientists BC. [accessed: 2021 Jan 12]. <u>https://www.egbc.ca/Practice-Resources/Individual-</u> <u>Practice/Guidelines-Advisories</u>

Architectural Institute of British Columbia (AIBC). 2020. Bulletin 60: Signature, Seal and Delivery of Electronic Documents. AIBC: Vancouver, BC. [accessed: 2020 Dec 16]. <u>https://aibc.ca/about/regulatory-authority/bulletins</u>

Architectural Institute of British Columbia (AIBC). 2013. Bulletin 61: Seal of an Architect. AIBC: Vancouver, BC. [accessed: 2020 Dec 16]. <u>https://aibc.ca/about/regulatory-authority/bulletins</u>

Architectural Institute of British Columbia (AIBC). Bulletin 68: Building Envelope. AIBC: Vancouver, BC. [accessed: 2020 Dec 16]. <u>https://aibc.ca/about/regulatory-authority/bulletins</u>

Architectural Institute of British Columbia (AIBC). Notarius Digital Signature. AIBC: Vancouver, BC. [accessed: 2021 Oct 05]. <u>https://www.notarius.com/en/certifio/pro/aibc</u>

Architectural Institute of British Columbia (AIBC). 2019. Practice Guideline: "Qualified" Letters of Assurance. AIBC: Vancouver, BC. [accessed: 2021 Oct. 05]. <u>https://aibc.ca/wp-</u>content/uploads/files/2019/10/Practice-Guidelines Qualified-Letters-of-Assurance.pdf

Architectural Institute of British Columbia (AIBC). 2019. Practice Guideline: Letters of Assurance for Phased (or Partial) Occupancies. AIBC: Vancouver, BC. [accessed: 2021 Oct. 05]. https://aibc.ca/wp-content/uploads/files/2020/04/Practice-Guidelines Letters-of-Assurance-for-Phased-or-Partial-Occupancies.pdf

British Columbia (BC) Building and Safety Standards Branch. 2018. BC Building Code. [accessed: 2020 Dec 15]. <u>http://www.bccodes.ca</u> British Columbia (BC) Building and Safety Standards Branch. 2018. BC Fire Code. [accessed: 2020 Dec 16]. <u>http://www.bccodes.ca</u>

British Columbia (BC) Building and Safety Standards Branch. Building Official Qualifications. [accessed: 2021 Oct 05]. <u>https://www2.gov.bc.ca/gov/content/industry/construction-industry/building-codes-standards/building-act/building-official-qualifications</u>

City of Vancouver. 2019. Vancouver Building By-law 2019. [accessed: 2020 Dec 15]. http://www.bccodes.ca/vancouver-bylaws.html

City of Vancouver. 2019. Vancouver Fire By-law 2019. [accessed: 2020 Dec 16]. https://vancouver.ca/your-government/fire-bylaw.aspx

Engineers and Geoscientists BC. Notarius Digital Signature. Burnaby, BC: Engineers and Geoscientists BC. [accessed: 2021 Oct 05]. <u>https://www.notarius.com/en/certifio/pro/egbc</u>

Engineers and Geoscientists BC. 2021. Firm Practice. Burnaby, BC: Engineers and Geoscientists BC. [accessed: 2021 Oct 05]. <u>https://www.egbc.ca/Practice-Resources/Firm-Practice</u>

Engineers and Geoscientists BC. 2020a. Professional Practice Guidelines – Building Enclosure Engineering Services. Burnaby, BC: Engineers and Geoscientists BC. [accessed: 2020 Sep 28]. <u>https://www.egbc.ca/Practice-Resources/Individual-Practice/Guidelines-Advisories</u>

Engineers and Geoscientists BC. 2020b. Professional Practice Guidelines – Geotechnical Engineering Services for Building Projects. Burnaby, BC: Engineers and Geoscientists BC. [accessed: 2020 Dec 16]. <u>https://www.egbc.ca/Practice-Resources/Individual-Practice/Guidelines-Advisories</u>

Engineers and Geoscientists BC. 2021. Professional Practice Guidelines – Mechanical Engineering Services for Building Projects. Burnaby, BC: Engineers and Geoscientists BC. [accessed: 2021 Sept. 28]. <u>https://www.egbc.ca/Practice-Resources/Individual-Practice/Guidelines-Advisories</u>

Engineers and Geoscientists BC. 2020c. Professional Practice Guidelines – Retaining Wall Design. Burnaby, BC: Engineers and Geoscientists BC. [accessed: 2020 Dec 16]. https://www.egbc.ca/Practice-Resources/Individual-Practice/Guidelines-Advisories

Engineers and Geoscientists BC. 2021. Guide to the Standard for the Authentication of Documents. Version 3.0. Burnaby, BC: Engineers and Geoscientists BC. [accessed: 2021 Mar 12]. https://www.egbc.ca/Practice-Resources/Individual-Practice/Quality-Management-Guides

National Fire Protection Association (NFPA). 2017. NFPA 96 – Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations 2017 Edition. NFPA: Quincy, MA