

APPENDIX 2C

USER CONSULTATION AND DESIGN REVIEW

1. SUBMITTALS

Except as expressly set out otherwise in this Agreement, the provisions of this Appendix 2C will apply to any and all drawings, specifications or other documents (“**Submittals**”) required or specified by this Agreement, including Section 5.3 (Design Process) of Schedule 2 [Design and Construction Protocols], in respect of the Design and the Construction to be submitted to, reviewed, accepted or otherwise processed by the Authority prior to Service Commencement or after Service Commencement in respect of the completion of Deficiencies, including any and all subsequent revisions, amendments and changes thereto.

2. SUBMITTAL SCHEDULE

- (a) The schedule for Submittals (the “**Submittal Schedule**”) is attached as Attachment 1 to this Appendix. The Submittal Schedule may be amended by agreement of the parties in accordance with the terms of this Section 2.
- (b) Any amendment to the Submittal Schedule will provide for a progressive and orderly flow of Submittals from Project Co to the Authority as appropriate to allow sufficient time for review of each Submittal by the Authority, taking into account both the resources necessary to be available to the Authority to conduct such review (as anticipated by or inferred from the Submittal Schedule attached as Attachment 1 to this Appendix) and consultation with the User Consultation Groups.
- (c) Unless a longer period is required by this Agreement or is otherwise reasonably required by the Authority, the Authority will have 15 Business Days for review of a Submittal from the date the Authority received the Submittal. If the Submittal Schedule is inconsistent with the foregoing review period then it will be deemed to be amended to be consistent. If the Authority receives a Submittal after 12pm (Pacific time) on a Business Day, the 15 Business Day review period will commence on the next Business Day.
- (d) Project Co will, in scheduling Submittals and consultations with the User Consultation Group, and in the performance of the Design and the Construction, allow adequate time prior to performing the Design and the Construction that is the subject of the Submittals, for review of the Submittals by the Authority and the User Consultation Group as applicable, and for Project Co to make changes to the Submittals, the Design and the Construction as may be required to account for any comments received from the Authority and the User Consultation Group.
- (e) If the Submittal Schedule indicates that a large number of Submittals will be made at one time, the Authority may, acting reasonably, request a longer period for review or a staggering of the Submittals, and Project Co will, acting reasonably, revise the Submittal Schedule accordingly, taking into account both the availability of resources required by the Authority to conduct such review and the availability of the User Consultation Groups

and whether delay in the review of the subject matter of the Submittal will have a material impact on Project Co's ability to progress future anticipated Submittals and the Design or Construction in accordance with the Project Schedule.

- (f) Project Co will submit the then current Submittal Schedule to the Authority on a monthly basis until the Service Commencement Date. All amended Submittal Schedules will be required to meet all the requirements of this Section 2.
- (g) Project Co will submit all Submittals to the Authority in accordance with the then current Submittal Schedule.
- (h) Project Co will bear the risk of delays and additional costs caused as a result of the late submission of Submittals to the Authority, by Submittals which are rejected or required to be corrected and re-submitted in accordance with the terms of this Appendix 2C, or by changes in the Design and Construction required as a result of comments made pursuant to this Appendix 2C.

3. GENERAL REQUIREMENTS FOR SUBMITTALS

- (a) Unless otherwise specified by the Authority, Project Co will:
 - (1) deliver 5 printed copies of each Submittal to the Authority, together with an electronic copy in a format acceptable to the Authority; and
 - (2) post an electronic copy of each Submittal (in a format acceptable to the Authority) on an internet-based system that is established by Project Co for the Project and accessible to Authority staff.
- (b) All Submittals will be in English.
- (c) All Submittals required by this Agreement, by applicable Law or Good Industry Practice to be signed or sealed by persons with professional designations (including where applicable by registered professional architects or engineers) will be so signed and, where applicable, sealed.
- (d) All Submittals will refer to the relevant provisions of the Design and Construction Specifications, the Services Protocols and Specifications (if applicable) and to any matter that has previously been subject to review. All Submittals (or covering documentation delivered with the Submittals) will include a statement confirming that the Submittals comply with, or identifying any elements of the Building that for any reason vary from, the requirements of the Project Agreement, with particular reference to Schedule 2 [Design and Construction Protocols] and Schedule 3 [Design and Construction Specifications].
- (e) All Submittals will be clearly identified as a Submittal and will be delivered with appropriate covering documentation, which will include:
 - (1) a list of all attached Submittals;

- (2) a description of:
 - (A) the purpose of the Submittal(s) (including whether the Submittal is being submitted for review by the User Consultation Group, for review under Section 5 of this Appendix or for other purposes);
 - (B) the specific item or items in the Submittal that is subject to review by the Authority or the User Consultation Group; and
 - (C) Project Co's expectations for the Authority's review of the Submittal and Project Co's proposed course of action relating to the Submittal and the Design and the Construction that are the subject of the Submittal;
- (3) if the Submittal is submitted as part of the Design phases described in Section 5.3 of Schedule 2 [Design and Construction Protocols], a report for the Submittal including the information described in Section 5.3(c)(10) of Schedule 2 [Design and Construction Protocols] as applicable to that Submittal;
- (4) for each Submittal:
 - (A) the document number(s) or drawing number(s);
 - (B) revision numbers (if applicable);
 - (C) document or drawing title(s);
 - (D) name of entity that prepared the Submittal;
 - (E) the Submittal history showing date and delivery information and/or log number of all previous submissions of that Submittal; and
 - (F) identification of any previous Submittal superseded by the current Submittal.
- (f) Project Co will compile and maintain a register of the date, contents and status of the submission of all Submittals, including the date of receipt and content of all returned Submittals and comments thereon.

4. USER CONSULTATION PROTOCOL

- (a) Project Co acknowledges that review of the Design by the Authority and consultation with the Building Users is an essential step in the completion of the detailed design of the Building. Accordingly, Project Co will conduct consultations with the Authority and the User Consultation Groups as described in this Appendix 2C. The Authority will make reasonable efforts, as requested by Project Co, to assist and support Project Co with the consultation process, but nothing in this Section 4 will be interpreted to give the Authority responsibility for the Design, the Design schedule or the user consultation process.

- (b) The Authority will establish User Consultation Groups that may include representatives of the Authority, Housing Operators, commercial tenants and others.
- (c) Unless agreed by the Authority, all aspects of the Design will be subject to review by one or more User Consultation Groups.
- (d) The User Consultation Groups will include a User Consultation Group designated as the “**Core User Group**” with responsibility for coordinating the Design review process with Project Co.
- (e) Unless otherwise agreed, Submittals will be provided and reviewed in accordance with the following:
 - (1) Draft Submittal to the Authority:
 - (A) Project Co will provide a draft Submittal as indicated on the Submittal Schedule that includes all relevant material with a covering transmittal indicating the purpose of the Submittal, and the information that should be reviewed by the Authority and the User Consultation Groups.
 - (B) All changes from a previous Submittal should be clearly indicated in accordance with Section 11 of this Appendix 2C.
 - (2) User Group Consultation:
 - (A) One week following the draft Submittal, Project Co will present the relevant material at a meeting of the relevant User Consultation Group(s).
 - (B) The presentation will be made in person by the Architect or, if the Authority agrees, the Design-Builder’s engineer or other subject matter expert.
 - (C) Project Co’s presentation will include a page-by-page review of the draft Submittal.
 - (D) Project Co, the Design-Builder and a representative of the Service Provider must be in attendance, preferably in person but teleconference is acceptable.
 - (E) During the presentation, a representative of Project Co will take “live minutes” so that all parties can agree on the content of the minutes during the meeting. Project Co will circulate the minutes immediately after the meeting to all parties and within 3 Business Days Project Co must circulate formal minutes for review. If the Authority notifies Project Co of any errors in the minutes, Project Co will correct such errors within 3 Business Days of the Authority’s notice.
 - (3) Informal Comments from the Authority:

- (A) The Authority will provide any additional informal feedback through to Project Co.
 - (B) The Authority will provide additional informal feedback within one week after the presentation, unless the Authority advises Project Co in writing. The period will not exceed two weeks unless agreed with Project Co.
- (4) Formal Submittal to the Authority:
- (A) Project Co will make the formal Submittal within two weeks following the presentation (or one week after receiving additional informal feedback).
 - (B) If Project Co does not address the feedback received at the presentation or subsequently provided by the Authority, Project Co will provide commentary on the reasons for not addressing the feedback.
- (5) Formal Response from the Authority:
- (A) The Authority will respond within 15 Business Days following the formal Submittal in accordance with this Appendix 2C.
- (f) The process set out this Section 4 will be set out in the Submittal Schedule.
- (g) The parties acknowledge that Design development is an iterative and interactive process and that additional User Consultation Group review and meetings may be required from those shown on the Submittal Schedule. The parties will co-operate to amend the Submittal Schedule as may be required from time to time to ensure that sufficient consultations with the User Consultation Group in relation to each component of the Design (and changes to the Design resulting from such consultations) are completed prior to Project Co making the formal Submittal.
- (h) The Authority and Project Co will not be bound by the consultations with the User Consultation Groups, unless reflected in the formal Submittal and comments from the Authority.
- (i) If Project Co considers that compliance with any comment raised by a User Consultation Group member would lead to a Change, Project Co will, before taking into account such comment or objection, notify the Authority. If it is agreed by the Authority that such comments or objections would lead to a Change then the procedure as detailed in Schedule 6 [Changes, Minor Works and Innovation Proposals] will apply. In all cases, the parties will cooperate to identify potential alternative solutions to any comments or objections raised that would not lead to a Change.
- (j) The User Consultation Group consultation meetings will be held at the Orange Hall or other space made available by the Authority.

5. REVIEW PROCEDURE

- (a) The Authority will review and respond to each Submittal in accordance with the applicable time periods set out in the Submittal Schedule (as may be amended from time to time in accordance with this Appendix).
- (b) Before commencing Construction of a particular component of the Project, Project Co will submit to the Authority a Submittal:
 - (1) that fully addresses the User Group Consultation described in Section 4 of this Appendix; and
 - (2) describing that component, including all necessary Design and other information as the Authority may reasonably require, including any Design reports and calculations, reasonably necessary for the Authority to conduct an appropriate review to confirm that the Design described in the Submittal conforms to the requirements of this Agreement (including the Design and Construction Specifications and the Proposal Extracts (Design and Construction)).
- (c) Each time before Project Co submits a Submittal or package of Submittals to the Authority under Section 5(b) above, Project Co will meet with the Authority and: make a presentation to the Authority regarding the content and purpose of the Submittal(s), carry out a page-by-page review of the Submittal(s) with the Authority; and answer any questions the Authority may have in advance of its review.
- (d) The Authority will review Submittals submitted under Section 5(b) above and assign one of the following 4 comments:
 - (1) "REVIEWED";
 - (2) "CORRECT DEFICIENCIES";
 - (3) "REJECTED"; or
 - (4) "NOT REVIEWED".
- (e) The comment "REVIEWED" will be assigned to those Submittals that, in the opinion of the Authority, acting reasonably, appear to conform to the requirements of this Agreement, including the Design and Construction Specifications and the Proposal Extracts (Design and Construction).
- (f) The comment "CORRECT DEFICIENCIES" will be assigned to those Submittals that, in the opinion of the Authority, acting reasonably, appear to generally conform to the requirements of this Agreement, but in which minor deficiencies have been found and identified by the Authority's review. Project Co will to the extent necessary correct these Submittals and provide a copy of such corrected Submittals to the Authority within 15 Business Days. Project Co may proceed on the portions of such Submittals that have not received comments but Project Co will not proceed on the portions of such Submittals

that have received the comment “CORRECT DEFICIENCIES” until Project Co obtains a comment that permits Project Co to proceed. Project Co will correct, revise and resubmit Submittals as often as may be required to obtain a comment that permits Project Co to proceed. If at any time it is discovered that Project Co has not corrected the deficiencies on Submittals that were correctly stamped "CORRECT DEFICIENCIES", then Project Co will be required to modify the Submittals and the relevant Design and the Construction as required to correct the deficiencies and Project Co may be required, at the Authority's discretion, acting reasonably, to resubmit relevant Submittals.

- (g) The comment “REJECTED” will be assigned to those Submittals that, in the opinion of the Authority, acting reasonably, contain significant deficiencies or do not generally conform with the requirements of this Agreement. Project Co will correct and re-submit these Submittals within 15 Business Days after the comment has been provided to Project Co. The Authority will then review such corrected Submittals and assign a comment to the corrected Submittal. Project Co will correct revise and resubmit Submittals as often as may be required to obtain a comment that permits Project Co to proceed. Except with the written consent of the Authority, Project Co will not proceed with any Design or Construction to which such Submittals receiving the comment “REJECTED” relate until Project Co obtains a comment that permits Project Co to proceed.
- (h) The comment “NOT REVIEWED” may be assigned to those Submittals that have not been reviewed by the Authority in detail because, in the opinion of the Authority, acting reasonably, the Submittals do not comply with the requirements of this Appendix (including Section 5(b) above), are incomplete or otherwise insufficient for the purposes of a Design review, or are received by the Authority before the date scheduled in the Submittal Schedule. Project Co will correct and re-submit these Submittals within 15 Business Days or, if a later date is set out on the Submittal Schedule, by such later date. Project Co will correct, revise and resubmit Submittals as often as may be required to obtain a comment that permits Project Co to proceed. Project Co will not proceed with any Design or Construction to which such Submittals receiving the comment “NOT REVIEWED” relate until Project Co obtains a comment that permits Project Co to proceed.
- (i) The Authority may request additional time for the review of any Submittal, including where the Submittal is voluminous or requires extensive review by representatives (including consultants) of the Authority, and Project Co will, in consultation with the Authority, extend such time for any reasonable requests by the Authority.
- (j) If the Authority does not respond to a Submittal within the applicable time period for that Submittal as determined in accordance with Section 2(c) of this Appendix, the Submittal will be deemed “REVIEWED” and Project Co may proceed with and implement the Design and the Construction on the basis set forth in the applicable Submittal without any further action or documentation required.
- (k) Where the Authority issues the comment “CORRECT DEFICIENCIES”, “REJECTED” or “NOT REVIEWED” the Authority will provide reasons for the comment, referencing

particulars of the Section(s) of the Agreement (including the Design and Construction Specifications) that the Submittal fails to satisfy, and if requested by Project Co, the Authority will meet with Project Co to discuss the reasons for the comment.

- (l) If at any time after assigning any comment to a Submittal or where Section 5(j) above has applied, the Authority or Project Co discovers deficiencies or any failure to conform to the requirements of this Agreement, the Authority or Project Co, as the case may be, will promptly notify the other party of such deficiencies or non-conformance and the Authority may revise the comment assigned to any Submittal. If the parties agree or it is determined in accordance with the Dispute Resolution Procedure that the revised comment is correct, Project Co will make all such corrections to the Submittals and the Design and the Construction.
- (m) For the purpose of facilitating and expediting the review and correction of Submittals, the Authority and Project Co's Design and Construction Representatives will meet as may be mutually agreed to discuss and review any outstanding Submittals and any comments thereon.
- (n) Where an individual Submittal item is voluminous, the Authority at its discretion may elect to stamp only the cover page or first sheet of the Submittal with the appropriate comment, if any, and return to Project Co the cover page or first page together with individual pages or sheets on which comments are made, together with an explanation of the status of all pages not returned to Project Co. Any pages not returned without such an explanation as to their status will be deemed to be "REVIEWED" by the Authority.
- (o) In lieu of returning a Submittal, the Authority may by letter notify Project Co of the comment assigned to the Submittal and if such comment is "CORRECT DEFICIENCIES", "REJECTED", or "NOT REVIEWED" the letter will contain comments in sufficient detail, including referencing applicable Section(s) of the Agreement, for Project Co to identify the correction sought.

6. REVIEWED DRAWINGS AND SPECIFICATIONS

- (a) The following Submittals will be deemed to be "**Reviewed Drawings and Specifications**":
 - (1) Submittals which the Authority has marked as "REVIEWED" under Section 5(e) of this Appendix;
 - (2) portions of Submittals that Project Co may proceed with under Section 5(f) of this Appendix;
 - (3) Submittals which have been deemed "REVIEWED" by the Authority under Section 5(j) of this Appendix.
- (b) Project Co's Design and Construction Representative will deliver promptly one complete copy of the Reviewed Drawings and Specifications to the Independent Certifier.

7. DISPUTES

If Project Co disputes any comment issued by the Authority in respect of a Submittal made under Section 5 of this Appendix, Project Co will promptly notify the Authority of the details of such Dispute and will submit the reasons why Project Co believes a different comment should be assigned, together with appropriate supporting documentation. The Authority will review the Submittal, the reasons and supporting documentation and within 7 Business Days after receipt thereof will either confirm the original comment or notify Project Co of a revised comment. Nothing in this Section 7 will limit either party's right to refer a Dispute to the Dispute Resolution Procedure.

8. CHANGES

- (a) If Project Co considers that compliance with any comment raised by the Authority in respect of a Submittal made under Section 5 of this Appendix would lead to a Change, Project Co will, before taking into account such comment, notify the Authority. If it is agreed by the Authority that such comment would lead to a Change then the procedure set out in Schedule 6 [Changes, Minor Works and Innovation Proposals] will apply. If the parties are unable to reach agreement, then either party may refer the matter directly to the Referee in accordance with Schedule 13 [Dispute Resolution Procedure].
- (b) In all cases, the parties will cooperate to identify potential alternative solutions to any comments raised that would not lead to a Change.

9. EFFECT OF REVIEW BY AUTHORITY

For greater certainty, Section 2.5 (Authority Not Responsible for Design or Construction) of Schedule 2 [Design and Construction Protocols] applies to any review or comment by the Authority on any Submittal.

10. SUBMITTAL MEETINGS AND EXPLANATIONS

At any time, the Authority may, acting reasonably, require Project Co, including Project Co's consultants, Sub-Contractors, and any other relevant personnel, at no additional cost to the Authority, to meet with representatives of the Authority and its advisors to answer questions regarding Project Co's Submittals or to explain to the Authority and the Authority's advisors the intent of Project Co's Submittals, including in relation to any Design and any associated documentation and as to its satisfaction of the requirements of this Agreement (including the Design and Construction Specifications). Project Co will, and will cause its consultants, Sub-Contractors, and any other relevant personnel to, attend all meetings requested by the Authority and answer all questions asked by the Authority in accordance with this Section as soon as practicable and in any event no later than 5 Business Days from the date it received the Authority's questions or such longer period as agreed by the parties.

11. REVISIONS

- (a) Project Co will ensure that Submittals keep the same, unique reference number throughout the review process, and that all subsequent revisions of the same Submittal are identified by a sequential revision number. Correspondence related to such Submittal will reference the reference number and revision number.

- (b) Re-submittals will clearly show all revisions from the previous Submittal. Bound documents, including reports and manuals, will contain a preface that clearly states how revisions are marked and the previous revision number against which the revisions have been marked. A consistent format for mark-ups of documents will be used (e.g. deletions struck out and additions underscored). Revised portions of drawings will be clearly marked (with appropriate means to visually distinguish between the parts of the drawing that are revised and the parts that are not revised) and the revision number and description of the revision will be included on the drawing.
- (c) All revisions on print media will be initialled by hand by the individual designer, design checker and, where applicable, by the drafter and the drafting checker and will identify the persons who initialled the Submittal. Electronic versions of the Submittal will identify the persons who initialled the revisions to the printed version of the Submittal.
- (d) Project Co will keep all Reviewed Drawings and Specifications current. If any Reviewed Drawings and Specifications are revised as part of a Submittal, all other Reviewed Drawings and Specifications relying on or based on that Reviewed Drawings and Specifications will also be revised accordingly. All such revised Reviewed Drawings and Specifications will also be submitted with the Submittal to which it relates.

Attachment 1 (Appendix 2C)

Submittal Schedule

Attachment 2 (Appendix 2C)

Required Submittals (Refer to Section 5.3 of Schedule 2)

1. SCHEMATIC DESIGN STAGE (Refer to Section 5.3(b)(1) of Schedule 2)

(a) Site Plan (1/16" = 1'-0" or 1:200)

List applicable required and provided land use by-law requirements and note on the site plan, such as:

- Setbacks
- Building height
- Site area
- Site coverage
- Landscape open space (LOS), gross floor area (GFA), units per acre (UPA)
- Daylight angles, sun angles (where required by municipality)
- Vehicle and bicycle parking ratios

(b) Floor Plans (scale 1/8" = 1'-0" or 1:100)

Provide for each level with a different floor configuration. Identify all amenity spaces.

(c) Typical Unit Plans (scale 1/4" = 1'-0" or 1:50)

Provide floor plans for all typical unit types and include the following information:

- Furniture layouts - show proposed furniture layouts and clearances.
- Turning radii at unit entrance, kitchen, bedroom, bathroom, living/dining.
- Note unit area and dimensions of each room.
- Cabinet elevations for one typical unit type with sufficient detail to verify conformity with the Design Guidelines.

(d) Front Elevation (scale 1/8" = 1' or 1:100)

Provide front elevation for heritage design.

2. DESIGN DEVELOPMENT STAGE (Refer to Section 5.3(b)(2) of Schedule 2)

(A) Outline Specifications

Outline specifications should describe introductory project information and all major building components, systems and finishes including:

- Contacts - identification of owner, developer (where applicable), design consultants.
- Scope – brief description of the scope of the project: e.g., number of units and type, number of storeys, gross floor area, parking spaces provided, major common areas provided.

- Civil - proposed road works, site drainage, sewage collection and domestic water supply.
- Landscape - paving, planting, fences, and other major landscape elements.
- Structural – structural systems and adequate load paths, foundation design, lateral load (Wind and Seismic) design, structural remediation work, structural renovations and upgrades; and identify any landscape elements that require structural design such as retaining walls.
- Architectural Materials and Systems - describe construction assemblies, finish materials and their integration within the building.
- Mechanical – define the HVAC system, including confirmation of air conditioning, plumbing systems and control systems. Describe energy conservation measures and provide energy use calculations to confirm compliance with the energy performance standard of 25% less energy than MNECB. (e.g., printout of CBIP Screening Tool or EE4 or DOE2 summary to confirm 25% below MNECB). Confirm specifications for independent metering for gas and water. Confirm extent of irrigation system.
- Electrical – outline service and distribution, feeders and wiring, proposed lighting fixtures and proposed illumination levels (provide lighting calculations for typical building areas), emergency lighting, exit signage, fire alarm system, communication system, data and television and security system. Confirm specifications for independent metering for electricity.
- Energy Efficiency Requirements - Describe measures proposed to meet the energy efficiency requirements set out in Schedule 3.
- Hazardous Materials – Describe hazardous materials identified and provide risk assessment(s) and a description of planned remediation measures.
- Security – outline CPTED approach and brief description of security improvements for each Building.
- Building Envelope – outline building envelope restoration strategies for all envelope components such as heritage windows, storefront, new windows and masonry walls.
- Heritage - outline the heritage restoration approach, conservation rationale, techniques, materials and systems employed to satisfy the approved conservation plan for masonry, sheet metal, window, storefront, tile surfaces, and wood/metals restoration.
- Elevators – describe proposed alternations and new equipment.

(B) Drawing Requirements

Submit three sets of drawings that include the following:

(1) Unit Type Schedule

Provide a unit type schedule indicating:

Unit Type	Net Unit Area -
A	
B	
C	
Total	

(2) **Location Plan**

Provide a key plan with sufficient information to locate the site.

(3) **Site Plan** (scale 1/16" = 1'-0" or 1:200)

- Cross reference unit types to site plan.
- Land Use Bylaw - list required and proposed land use bylaw requirements; see requirements for the Schematic Design Site Plan. Note setbacks on site plan.
- Site services - show existing and proposed site services located at grade e.g. electrical, gas and water fixtures and sewer catch basins. Confirm required setbacks from electrical services (transformers, high voltage lines).
- Site boundaries - show all property lines, orientation, length and corner pins; refer to survey by registered land surveyor.
- Site topography - note all existing and proposed topographic features (e.g. swales, rock outcrop, watercourses, etc.). Note extent of cutting and filling required (dotted cutouts).
- Grades - show existing and proposed grades at principal corners of the building and property lines, sufficient to indicate drainage patterns. Show spot levels on a grid as required by architect, plot contours at minimum interval of 1 m (3'-3").
- Show existing grades of adjacent properties and streets to 3.1 m (10'-0") depth of adjacent lot or to centerline of street.
- First floor grade elevation(s) of proposed structures.
- Building Plan - note extent of building at grade, underground garage and roof overhang.
- Paved areas - note all existing and proposed paved areas and indicate dimensions and materials (e.g. roads, parking, walks, and patios).
- Landscaping - note extent of planted areas and existing and proposed trees with trunk diameter over 100 mm (4"); coordinate with landscape plan.
- Snow storage - in areas with substantial snowfall note designated snow storage areas.
- Retaining walls, fences and screens - note extent and materials; coordinate with landscape plan.
- Garbage pad - note pad and enclosure location and dimensions; confirm location with municipal authorities.
- Heritage, demolition or renovation - note existing buildings to be renovated, restored or demolished and outline scope of work.
- Recreation area - indicate outdoor recreation area, coordinate with landscape plan (refer to 10 Landscaping, in this section).
- Access for disabled – review and verify compliance with requirements for accessibility for disabled persons.

(4) **Floor Plans** (scale 1/8" = 1'-0" or 1:100)

- Levels - show each level from garage to roof where layout varies.
- Structural grid - provide lettered and numbered structural grid and dimensions.
- Rooms - label all common spaces and unit types.

- Stairs and corridors - dimension stairs and corridors; ensure compliance with accessibility requirements.
- Mechanical/Electrical - coordinate locations of mechanical and electrical rooms with incoming services. Show rooms such as transformer room, exhaust and intake shafts, electrical closets, boiler rooms, elevator hoistways, elevator machine rooms and/or control rooms, corridor fresh air shafts, etc.
- Fire hose / extinguisher cabinets - locate as per building code requirements.
- Mail - note proposed mailbox location and review with Canada Post and sponsor.
- Balconies, overhangs - show all balconies, roof overhangs, roof decks.

(5) **Unit Plans** (scale 1/4" = 1'-0" or 1:50)

- Scope - show all unit types and common rooms (e.g., lounges, laundry and others where applicable).
- Furniture layouts - show proposed furniture layouts and clearances.
- Show door swings
- Show turning radii at unit entrance, kitchen, bedroom, bathroom, laundry, living/dining.
- Cabinet Details - provide cabinet elevations for all unit types with sufficient detail to verify conformity with the Design Guidelines.
- Mechanical/Electrical shafts - note location of all ducts and vent shafts. Provide for pipe chases in unit plans clear of exterior and party walls.
- Note unit area and dimensions of each room.

(i) **Cross Section** (scale 1/8" = 1'-0" or 1:100)

- Grades - note existing and proposed finish grades at section line to centerline of street.
- Elevations - note elevations of all floors and top of roof.
- Detail sections - locate and cross-reference details on section for details noted in Typical Details (listed below).

(ii) **Elevations** (scale 1/8" = 1'-0" or 1:100)

Elevations - show all elevations of all buildings and note the following:

- Finish materials - note extent of all finish materials.
- Grades - show finish grade at building.
- Elevations - show top of each floor level and roof and note height.
- Roof slope

(6) **Typical Details** (scale 1 1/2" = 1'-0" or 1:10, or larger as required)

Provide the following details and describe typical assemblies including:

- Foundation walls – from footing to top of slab on grade or suspended slab
- Pad Footings – show connection between footings and columns.
- Suspended slab - at junction with building wall and at beam to column locations.

- Seismic Upgrade – in areas that seismic upgrades will occur, ie. anchorage at foundation walls and columns; anchorage of roof and floors to walls; and beam to column connections.
- Exterior wall - at grade and typical floor.
- Masonry Connections- at grade, window lintels, cornices, parapets, tie locations, repining locations and typical floor
- Anchorage of falling hazards – typical anchorage and tying back of falling hazards
- Window - head, jamb, sill.
- Storefront base/sill, transom bar/clearstorey sill, header, and mullion/jamb.
- Sheet metal cornice and pediment details.
- New exterior door details.
- Parapet – showing new seismic braces, vented back wall, and envelope details.
- Roof - at eaves, roof decks and low roofs.
- Typical Wood and Timber Framing – beam to column connections, column to foundation connections; and joist to beam connections.
- Structural upgrades – details of how to reinforce or replace existing structural members that have been found structurally inadequate.
- Remediation work – details showing replacement or reinforcing of decayed framing members
- Building Envelope – describe recommended wall assemblies and window types based on the most recent version of Woodframe Envelopes in the Coastal Climate of BC:
- Best Practice Guide Building Technology, CMHC, Table 5.1, or other relevant standard, where applicable. Document calculations for window ratings A, B and C based on CSA A 440.1 User Selection Guide to CSA A 440. Recommend air barrier, vapour barrier and sheathing membrane materials and assemblies and outline the rationale for the recommended strategy.
- Heritage restoration details (eg. cornices, parapets, storefront).
- Envelope seismic stabilization sketches, bracing etc.).
- Fire separation assemblies (typical details).
- Building assembly sections (typical sections).

(7) **Landscape Plan** (scale 1/8" = 1'-0" or 1:100)

- Paving - note extent of all paving for walks, roads, parking and label finish materials.
- Planting - note planting types: trees, shrubs, sod, groundcover, etc., and clearly indicate extent (species and number of plants to be provided at Construction Documents stage).
- Indicate extent of irrigation system.
- Note existing trees and planting to be retained.
- Recreation Areas - refer to Section 2 – Design Guidelines, 1.3.3 Outdoor Recreation Areas, for requirements.
- Grading - indicate slope to drain and grades at building and for roads, walks and site perimeter.
- Screens/Fences - note extent and provide detail for fence and screen types.

(C) Colour Schemes

Provide a colour scheme and sample boards for residential unit interiors and for the building exterior and common areas.

3. CONSTRUCTION DOCUMENTS STAGE (Refer to Section 5.3(b)(3) of Schedule 2)**(A) Specifications**

- Provide full specifications prepared by a qualified construction specification writer.

(B) Drawing Requirements**(1) Site Plan** (scale 1/16" = 1'-0" or 1:200)

As outlined in the Design Development stage, with the following additional information:

- Provide detailed grading at perimeter of building.
- Indicate percent of slope and direction of site drainage to curb (not just to property line).
- Note extent of paving materials and location of drains and catch basins.
- Show retaining walls and note elevations (top and bottom).

(2) Floor Plans (scale 1/8" = 1'-0" or 1:100)

- As outlined in the Design Development stage above.
- Show drop ceilings for services for areas not shown elsewhere.

(3) Roof Plans (scale 1/8" = 1'-0" or 1:100)

Indicate all penetrations, percent of slope, drainage pattern, roof drains and roof top equipment.

(4) Unit Plans (scale 1/4" = 1'-0" or 1:50)

Provide detail plans of all typical unit types, cross-referencing the following:

- Room names - room finish schedule.
- Door, window types - door and window schedule.
- Cabinets - kitchen, bathroom elevations.
- Show drop ceilings for services.

(5) Common Areas (scale 1/4" = 1'-0" or 1:50)

- Detail common areas – e.g., lobbies, amenity and service rooms as required.
- Show drop ceilings for services.

(6) **Sections** (scale - 1/8" = 1'-0" or 1:100 for high-rise; 1/4" = 1'-0" or 1:50 for low-rise, 4 storey or less)

- Full sections from footings to roof to show typical exterior wall sections and non-typical conditions where wall plane changes or low roofs occur.
- Cross reference sections on plans.
- Details - cross reference all typical details at sections, e.g. foundation, wall, window, and roof.
- Assemblies - cross reference all typical floor and roof assemblies.
- Note the following (or cross reference to details) to show:
 - Existing and proposed grades.
 - Foundation drainage requirements as per geotechnical requirements.
 - Roof and slopes.
 - Window and /patio door sections.
 - Floor to ceiling heights and elevations of all floor levels.
 - Heritage restoration features, such as cornices and pediments.

(7) **Elevations** (scale 1/8" = 1'-0" or 1:100)

- Show all exterior elevations including portions of buildings hidden on the principal elevations, e.g. courtyards.
- Grade - note existing and finish grade line.
- Floor elevations - note all levels and top of roof.
- Walls - note elevation at top of foundation and retaining walls.
- Materials and finishes - note all exterior materials and finishes including railings, trim, and flashing.
- Roof slopes - note all roof slopes.
- Doors and windows - note all door and window openings, indicate hinge location; provide sufficient information for windows to locate head and sill heights.
- Mechanical vents and louvers - locate all vents and louvers and coordinate with mechanical, including roof vents.
- Lights - locate all wall mounted electrical fixtures and coordinate with electrical.
- Roof drainage - show all gutters and rain water leaders.
- Details - cross reference details as required.

(8) **Detail Sections** (scale 1 1/2" = 1'-0" or 1:10, or larger as required)

- Waterproofing - provide three-dimensional sequential details for assemblies such as windows, doors, saddle conditions, exhaust vents and balconies to give a clear indication of the installation of the building envelope components in these assemblies (e.g., flashing, membranes, building paper, vapour barrier, caulking, etc.).
- Wall, Floor and Roof construction - provide wall, floor and roof type schedule; note assembly components and any required ratings, including Sound Transmission Class (STC) and fire resistance rating. Provide BC Building Code or Underwriters Laboratory of Canada (ULC) ratings and numbers.

- Wall/shaft sections - show non-typical conditions (i.e. those not shown on full cross or longitudinal sections) including changes in wall plane, low roofs, elevator shafts, garbage chute, penthouse, garage ramps, exhaust shafts, etc.
- Stair details - provide cross section at party walls and typical tread.
- Windows - show head, jamb, sill for all conditions. Detail sections to indicate waterproof membrane, building paper, thermal breaks, flashing, caulking and show continuity of air and vapour barrier.
- Non-typical openings - provide details at grilles and louvers, etc.
- Miscellaneous metal - railings, ladders, special fabrications.
- Shafts, bulkhead - provide details for all horizontal and vertical rated shafts and nonrated bulkheads (e.g., mechanical - plumbing and duct enclosures and drop ceilings).
- Roof types - provide detail sections through all typical roof types at eaves, low roof at wall junctions and penetrations.
- Storefront – provide a detailed wall cross section related a partial and representative storefront elevation and plan, at the wall face and at an entry alcove.
- Storefront – base/sill, transom, header, and jamb/mullion details sections.
- New Sheet metal cornice/pediment section/elevation/plan details fully describing brackets, soffit and fascia sections and profiles, as well as all structural support and anchorage to back up wall or roof slabs/structure.
- Skylights – provide details sections of curb and skylight construction.
- Canopies – provide detailed section/plan/elevation details full describing structure, anchorage to the building, glazing, drainage and sheet metal cladding,
- Wood detailing – provide plan/section details of soffits, wainscot, wall paneling, door/sidelight/transom entry systems
- Balustrades – provide a detail of all retained heritage balustrade/guard system and any required pipe rail extensions for code compliance.

(9) **Stair Details** (1/4" = 1'-0" or 1:50)

- Stair shafts - show all exit stairs and indicate rise/run dimensions, headroom and landings; section and plan detail required.
- Show railing height and material.
- Landing and tread - note and dimension non-slip nosing and tactile warning strips as required.

(10) **Window Schedule** (1/4" = 1'-0" or 1:50)

- Elevations - note all window types, including dimensions, height above finish floor, operable portions, hinge location, direction of slide or swing, and glazing type.
- Ensure operable portion of unit windows are easily accessed, i.e. less than 1219 mm (4'-0") above finish floor; note latch height above finish floor and confirm latch location with specified manufacturers.

(11) **Door Schedule** (elevation 1/4" = 1'-0" or 1:50; frame detail 3" = 1'-0" or 1:5)

- Elevations of all door types.

- Frame types - jamb section of all frame types.
- Schedule - include door dimensions, hinges, frame types, glazing, hardware, fire rating and any special installation requirements, e.g. threshold, weather-strip, closer, panic set, etc.

(12) **Cabinet Details - Kitchen, Bathroom, Common Areas** (scale $\frac{1}{4}' = 1'-0''$ or 1:50)

Provide cabinet elevations for all unit types (kitchen and bathroom) and common area cabinets (e.g. amenity and laundry).

(13) **Room Finish Schedule**

- Scope - provide room finish schedule for typical suite and for all common area rooms; cross reference to floor plan room names and numbers.
- Note floor, wall, and ceiling finish.
- Include subfloor, base and ceiling height; note drop ceilings where applicable.

(14) **Structural Drawings** (scale $\frac{1}{8}'' = 1'-0''$ or 1:100)

- Overall footings and foundation plans.
- Overall floor framing plans.
- Roof framing plans, including roof truss layout.
- Typical framing sections and details.
- Sections and details of structural connections, shear walls and moment frames.
- Columns, beams, wall and lintel schedules (sizes and reinforcements)
- General design notes on loads, e.g., snow, earthquake, etc.
- Spacing, size, construction of control joints (both horizontal and vertical).
- Details to include miscellaneous metal fabrication and related code and submittal requirements.

(15) **Mechanical Drawings** (scale as noted)

- Mechanical site services plan - show all existing and new services, their sizes, invert elevations, etc. (scale $\frac{1}{16}'' = 1'-0''$ or 1:100); show storm water disposal arrangement. Mechanical consultant is to obtain the inverts, sizes and status of all existing services from utility or municipality.
- Overall floor plans with ventilation (exhaust and make-up) forced air heating ducts, plumbing and fire protection layouts (scale $\frac{1}{8}'' = 1'-0''$ or 1:100).
- Typical unit plans (scale $\frac{1}{4}'' = 1'-0''$ or 1:100) – HVAC and plumbing layouts for all unit types.
- All riser diagrams for services listed above.
- Domestic hot and cold water distribution and fire protection diagrams; include sprinklers, standpipes, fire hose cabinets, etc.
- Irrigation system layout. Coordinate with landscape drawings.
- Make-up air control diagram and details of make-up air unit.
- Heating layout drawings - coordinate with framing plans to minimize drop ceilings.
- Plumbing fixtures – cross reference plumbing fixtures to the mechanical specifications.

(16) **Electrical Drawings** (scale as noted)

- Electrical site services plan (scale 1/16" = 1'-0" or 1:100). Where required, provide detail for underground power cable installation, site lighting, type and detail of installation, etc. Include on site plan the location of main electrical and communication rooms and the location of the fire alarm control panel and annunciator.
- Overall floor plans with electrical distribution, lighting and lighting controls, emergency lighting, exit light signage, fire protection system, entry phone / intercom, security, television cable, and data and telephone system layouts (scale 1/8' = 1'-0"). Present fire alarm and security drawings so that each system has dedicated floor plans.
- Typical unit plans (scale 1/4" = 1'-0" or 1:50) - electrical layout for all unit types.
- All riser diagrams electrical systems listed above.
- Power distribution one line diagram.
- Provide the following calculations on the drawings: building code load summary, fault calculations, emergency battery load summary, ASHRAE 90.1 Lighting Compliance calculations, and voltage drop calculations for electrical panel feeders.
- Provide the following electrical schedules: Lighting Fixture Schedule, Mechanical Schedule, Fire Alarm Zoning Schedule and Panel Schedules.

(17) **Landscape Drawings** (scale 1/16" = 1'-0" or 1:200)

Add the following information to the Landscape Concept Plan:

- Lighting - note site lighting locations.
- Drainage - note swales, area drains, co-ordinate with mechanical.
- Details - provide details for all landscape elements including planting, paving assemblies, fences and screens, planters, retaining walls, etc.
- Outdoor furniture - note type and location.

(18) **Smoke Control Measures**

Where applicable, specify on Architectural, Electrical and Mechanical Drawings the "Smoke Control Measures" selected for high rise buildings.