

## APPENDIX B: PROPOSAL REQUIREMENTS

Proposals are to be presented in two submissions: a Technical Submission and a Financial Submission, each of which consists of the following packages:

### **TECHNICAL SUBMISSION**

**Package 1: Transmittal Package for Technical Submission**

**Package 2: Technical Submission (Technical Review)**

### **FINANCIAL SUBMISSION**

**Package 3: Transmittal Package for Financial Submission**

**Package 4: Financial Submission (Financial Review)**

#### **Note:**

The tables below describe the requirements for the Technical Submission and Transmittal Package, and the Financial Submission and Transmittal Package. For ease of reference, Proposals should be written using the section numbers and titles as indicated with variations, if any, clearly identified. Any deviation in a Proposal from the requirements of the RFP or the Final Draft Design-Build Agreement should be clearly noted. Where the Proponent believes there is a redundant request in the requirements of the RFP, the Proponent can prepare the information in one location and clearly refer the evaluators to this location as applicable.

Proposals should be clear and concise. Unless stated otherwise, where a narrative explanation is required, Proponents should limit their narrative to 1500 words for each lettered subsection.

Proponents should provide required drawings in 30" x 42" (762mm x 1067mm) format (five sets) and 11" x 17" format or A3 Metric (three sets). Where provided electronically, drawings must be to scale and in PDF format.

Defined terms have the meaning set out in the RFP or the Final Draft Design-Build Agreement as the context may require. References to schedules and appendices are to the schedules and appendices to the Final Draft Design-Build Agreement unless otherwise specified.

**Table 1: Transmittal Package for Technical Submission**

**Package 1: Transmittal Package For Technical Submission**

The transmittal package is to contain the following information and documents:

- a) Name and contact details for the Proponent’s Representative.

Please note: The Proponent’s Representative will be the only person to receive communications from the Contact Person regarding the RFP.

- i. Name;
- ii. Employer;
- iii. Mailing/courier addresses;
- iv. Telephone number; and
- v. Email address.

- b) Provide the Company/Firm name and names of the Key Individuals for the following team members:

- i. Design-Build Director;
- ii. Lead Architect;
- iii. Design Team Technical Lead;
- iv. Mental Health Advisor;
- v. Design-Build Construction Lead;
- vi. Mechanical Engineering Lead;
- vii. Electrical Engineering Lead; and
- viii. Design-Builder IMIT Lead.

Proponents should submit the required information in the following format:

Individual’s Name	Company Name	Role

- c) Relationship Disclosure Form(s)
- d) Overview table of contents for all parts of the Proposal.

**Package 2: Technical Submission**

The Technical Submission should address the requirements set out in the tables below. Proponents should use the section numbers and corresponding titles shown in these tables in their Technical Submission to demonstrate to the satisfaction of the Authority that the Proponent is capable of performing the obligations and responsibilities of the Design-Builder and delivering the Project in accordance with the Design-Build Agreement, and that the Proponent has a good understanding of the Project and the work.

**Table 2: Technical Submission (Technical Review)**

Section No.	Title	Contents (Package 2, Technical Review)
<b>1.</b>	<b>PROPONENT TEAM</b>	<b>Proposal Requirements</b>
<b>1.1</b>	<b>Team Organization</b>	<ul style="list-style-type: none"> <li>a) Provide an organization chart(s), at the corporate level, showing the relationships between Proponent Team members (including major sub-trades and consultants), reporting relationships, and any anticipated changes contemplated over the life of the Design-Build Agreement.</li> <li>b) Provide the business relationships amongst the Proponent Team members (e.g., corporation, joint venture, partnership, subcontractor agreement, and consultant service agreement).</li> </ul>
<b>2.</b>	<b>PROJECT APPROACH, MANAGEMENT AND CONSTRUCTION</b>	<b>Proposal Requirements</b>
<b>2.1</b>	<b>Approach and Project Schedule</b>	<ul style="list-style-type: none"> <li>a) Confirm compliance of the Proposal with the Statement of Requirements.</li> <li>b) Confirm if any Acceptable Equivalents, to the extent they have been previously accepted by the Authority as described in Section 7.15 of the RFP, have been used.</li> </ul>

Section No.	Title	Contents (Package 2, Technical Review)
		<p>c) Provide a preliminary project schedule in the form of a Gantt chart, identifying (at a minimum) the following information in bullets i. through vii, as well as written narrative explaining how the Design and Construction will be implemented to achieve the milestone dates and describing the key milestones and decisions on how each align and work together:</p> <ul style="list-style-type: none"> <li>i. Effective Date and early access of the Energy Centre, Campus Communications Hub, Campus Perimeter Pathway System (refer to 3.1 of the RFP), and Substantial Completion of the Project;</li> <li>ii. Critical path;</li> <li>iii. Development of plans and reports during the construction phase, including:             <ul style="list-style-type: none"> <li>1) Health and Safety Plan;</li> <li>2) Project Management Plan; and</li> <li>3) Commissioning Plan.</li> </ul> </li> <li>iv. Design period, including User Group consultation reviews and Submittal schedules and Authority review at various stages as described in the Design-Build Agreement;</li> <li>v. Provision of mock ups, prototypes and required demonstrations including a detailed description of schedule, location, scope and method of development;</li> <li>vi. Equipment:             <ul style="list-style-type: none"> <li>1) Selection and itemized listing of Equipment</li> <li>2) Procurement of Equipment package</li> <li>3) Installation of Equipment packages</li> <li>4) Commissioning / demonstrations / training</li> </ul> </li> <li>vii. Construction Period:             <ul style="list-style-type: none"> <li>1) Site establishment and mobilization</li> </ul> </li> </ul>

Section No.	Title	Contents (Package 2, Technical Review)
		<ul style="list-style-type: none"> <li>2) Cranes established on Site</li> <li>3) Securing approvals, including permits and licenses</li> <li>4) Major construction stages</li> <li>5) Utility relocations and/or protection</li> <li>6) Testing, commissioning, integration, programming and training</li> <li>7) Deficiency Review Period</li> <li>8) Staff move-in period</li> <li>9) Other significant work functions.</li> </ul> <p>d) Provide a written narrative describing the proposed project controls, including how the Proponent will manage cost, schedule, documents, procurement and contract administration.</p> <p>e) Provide a written narrative describing the early access of the Energy Centre, Campus Communications Hub (CCH), and Campus Perimeter Pathway System.</p>
2.2	<b>Construction Approach and Safety</b>	<p>a) Describe and provide details of the Proponent’s Construction management plan including:</p> <ul style="list-style-type: none"> <li>i. The overall construction methodology and general approach;</li> <li>ii. Consideration of the City’s Good Neighbour Protocol;</li> <li>iii. Construction constraints, risks and mitigation strategies;</li> <li>iv. Approach to safety including a safety policy statement providing the Proponent’s health and safety objectives;</li> <li>v. Approach to infection control considerations during construction; and</li> <li>vi. Approach to site access and egress including the location of the construction crane.</li> </ul>
2.3	<b>Quality Management</b>	<p>a) Provide a draft Quality Management Plan which integrates the design and construction teams, and include the following:</p>

Section No.	Title	Contents (Package 2, Technical Review)
		<ul style="list-style-type: none"> <li>i. Quality control and quality assurance procedures to be implemented;</li> <li>ii. Processes, testing, certification and auditing that will be performed;</li> <li>iii. The Design-Builder’s approach to managing the sub-trades’ quality management responsibilities; and</li> <li>iv. Provide an organization chart that depicts the responsibility of the Design-Builder and the Design-Build Design Firm(s) in ensuring the quality of the design and construction.</li> </ul>
<b>2.4</b>	<b>Commissioning</b>	a) Describe and provide details of the Proponent’s process for managing commissioning including a table of contents or description of the major elements of the Commissioning Plan, as described in section 33 of the Design-Build Agreement.
<b>3</b>	<b>DESIGN AND CONSTRUCTION</b>	<b>Proposal Requirements</b>
<b>3.1</b>	<b>Facility Design</b>	<p>Provide a narrative and schematic summaries of the Design to explain the Proponent’s proposal including, but not limited to:</p> <ul style="list-style-type: none"> <li>a) Renderings; an “exterior 3D Fly-Through” demonstrating proposed massing, materials and image of the Facility, landscape, and the context within the Site; and an Interior “3D Fly-Through” illustrating the Main Entry and Lobby, reception and standard Patient Bedroom.</li> <li>b) Narrative supported by three exterior renderings, as a minimum, presenting different views, required to communicate intent. All elements of the Facility shown in renderings (except furniture and equipment listed in the Equipment list in a category provided by the Authority) form part of the Design-Builder’s submission.</li> <li>c) Site plan showing existing key spot elevations and finish grade levels. Include major equipment installation and removal routes as they apply to the completed Facility.</li> </ul>

Section No.	Title	Contents (Package 2, Technical Review)
		d) Describe and provide details of how the Proponent will preserve sufficient flexibility in the initial design submitted in its Proposal to accommodate changes during the detailed design development process that will take place post-contract award.
3.2	<b>Facility Design – Efficiency</b>	<p>Provide a narrative, schematic summaries, and cost schedules as required to demonstrate how the Proposal balances first costs with life cycle costs over the expected life of the Facility, refer to Appendix A (section 4.2 b):</p> <p>a) Brief, no more than three pages, staffing plan for the Energy Centre demonstrating the efficiency and effectiveness of the design;</p> <p>b) How the life cycle plan and cost schedule, including equipment and building materials consistent with the Proposal, is efficient and optimized; and</p> <p>c) Narrative explaining how the selection of the Facility's systems has optimized upfront costs against the maintenance requirements and life cycle costs over the life of the Facility.</p>
3.3	<b>Clinical Design</b>	<p>a) Provide written and graphical summaries to demonstrate how the design of the Facility meets the following design principles:</p> <ul style="list-style-type: none"> <li>i. Evidence-Based Design;</li> <li>ii. Lean Design;</li> <li>iii. Healing Environment;</li> <li>iv. Elderly-Friendly;</li> <li>v. Standardization;</li> <li>vi. Sustainability;</li> <li>vii. Technology; and</li> <li>viii. Accessible Design.</li> </ul> <p>b) Provide a narrative, supported by plans, renderings and sketches as needed, that demonstrates how the Building design promotes, facilitates, and enhances interaction between clinicians, patients, visitors, and staff, as described in Appendix A (section 4.1 b).</p>



Section No.	Title	Contents (Package 2, Technical Review)
		<p>c) Provide a narrative, supported by plans, renderings and sketches as needed, that demonstrates how the Building design achieves optimum clinical outcomes, as described in Appendix A (section 4.1 c).</p> <p>d) Provide functional relationship drawings (1:200 architectural plans) indicating the location and functional relationships of all program elements, horizontal and vertical circulation, and internal traffic flow (i.e., resident, staff, visitor and non-clinical support services):</p> <ul style="list-style-type: none"> <li>i. Use colour to illustrate the program elements and to differentiate internal circulation systems as above.</li> <li>ii. Drawings are to show major elements such as doors, windows, and major millwork locations.</li> <li>iii. Drawings are to show room designations (to match the Accommodation Schedule), doors, windows, interior glazed screens, millwork, plumbing fixtures, furniture and equipment. Drawings must also illustrate lines of sight from key staff areas to Patient spaces.</li> <li>iv. Functional relationship drawings that clearly identify the lines of sight for areas identified in Appendix A (section 4.1 a).</li> <li>v. Functional relationship drawings that clearly identify the travel distances for areas identified in Appendix A (section 4.2 a).</li> </ul> <p>e) Provide a narrative, supported by plans, renderings and sketches as needed, that demonstrates how the Building design supports the Authority’s staffing plan and optimizes key staff workflows. This narrative should include an explanation of how the Building optimizes clinical efficiency during both peak and off-peak staffing regimes; refer to Appendix A (section 4.2 a)</p> <p>f) Provide a narrative, supported by plans, renderings and sketches as needed, that demonstrates how the Building design supports the efficient delivery of clinical services and non-clinical services such as supplies and logistics as described in Appendix A (section 4.2 a).</p> <p>g) Provide an Accommodation Schedule (room list), in an Excel spreadsheet, for all Functional</p>

Section No.	Title	Contents (Package 2, Technical Review)
		<p>Space Requirements identifying for each space:</p> <ul style="list-style-type: none"> <li>i. An area summary of the Proponent's design by department and by floor that includes the total net and a gross floor area, and the net to gross ratios for each department and for each floor;</li> <li>ii. An area summary of the Building that includes building total net and gross areas; and</li> <li>iii. Amount of any variance(s) in net area between the Proponent's design and the Statement of Requirements Appendix 1A [Clinical Specifications] expressed in real terms and as a percentage.</li> </ul> <p>The Accommodation Schedule should follow the template that has been provided in the Data Room. The Authority expects that the Proponent will not change the sequence and terminology in the template provided as it follows the Statement of Requirements, Appendix 1A [Clinical Specifications].</p>
3.4	<b>Patient, Staff, and Visitor Safety</b>	<p>Provide narratives, supported by plans, renderings and sketches as needed, that demonstrate how the Building design commits to patient, staff and visitor safety; refer to Appendix A (section 4.3 a.), including:</p> <ul style="list-style-type: none"> <li>a) The features in public spaces, including the space itself, that minimize the threat of vandalism and the ability for individuals to elope and/or hide;</li> <li>b) How the space promotes good situational awareness and visibility;</li> <li>c) How the space minimizes opportunities for theft and the exchange of contraband;</li> <li>d) How the space creates a healthy and safe work environment; and</li> <li>e) How the space facilitates the reduction of seclusion rooms and restraint.</li> </ul>
3.5	<b>Patient, Staff and Family Experiences</b>	<p>Provide narratives, supported by plans, renderings, sketches, including view cones as needed, that demonstrate how the Building design enhances patient, staff and family experiences as described in Appendix A (section 4.4):</p> <ul style="list-style-type: none"> <li>a) Describe how the design of the Building optimizes the utilization of natural light (includes</li> </ul>

Section No.	Title	Contents (Package 2, Technical Review)
		<p>Direct Natural Light and Borrowed Natural Light) through the room configuration, placement of equipment and furniture, and structural elements; and</p> <p>b) Describe how the design of the Building provides an unobstructed view to the outdoors for mental well-being and calming.</p>
3.6	<b>Site Development</b>	<p>Provide site plans, together with narrative and information, sufficient to demonstrate the intent of the design and its conformance with the requirements of the Statement of Requirements, including:</p> <p>a) A Facility site plan showing:</p> <ul style="list-style-type: none"> <li>i. A colour-coded Site circulation strategy illustrating travel routes for vehicles and pedestrians; staff and visitor arrival and drop-off at main entries; service delivery and waste removal; handibus, morgue vehicle and ambulance access and parking; as well as routes for firefighting and disaster response access; and</li> <li>ii. Surface parking plan and access to structured parking.</li> </ul>
3.7	<b>Wayfinding</b>	<p>Provide narratives, supported by plans, renderings and sketches as needed that demonstrate how patients and visitors are able to easily find destinations within the Building; refer to Appendix A (section 4.4 c). The narratives should include:</p> <ul style="list-style-type: none"> <li>a) How the interior design and wayfinding concepts are well-integrated and coordinate with the Building design;</li> <li>b) How wayfinding is intuitive within the Building;</li> <li>c) The approach used to the exterior wayfinding scheme and how its integrated with the Building's interior wayfinding scheme;</li> <li>d) Ease of access to the Facility; and</li> <li>e) How the wayfinding scheme integrates with the community and meets the requirements of the City Design Guidelines.</li> </ul>

Section No.	Title	Contents (Package 2, Technical Review)
3.8	Architecture	<p>a) Provide schematic level drawings, together with narrative and information, sufficient to demonstrate the intent of the design and its conformance with the requirements of the Statement of Requirements, including:</p> <ul style="list-style-type: none"> <li>i. Building envelope details;</li> <li>ii. All floor plans (1:100) with area overlays that are consistent with the intention of the Facility;</li> <li>iii. Roof plans;</li> <li>iv. Building sections and all building elevations including 3-D sections (sufficient number to illustrate the design configuration of all major equipment of the Energy Centre); and</li> <li>v. A draft elevator capacity and utilization report justifying the number of elevators planned for.</li> </ul> <p>b) Provide a brief outline specification for the following list of materials and finishes:</p> <ul style="list-style-type: none"> <li>i. Exterior building envelope (wall assemblies and roof, windows, doors);</li> <li>ii. Interior finishes; and</li> <li>iii. Outdoor spaces.</li> </ul> <p>c) Provide three interior renderings (at a minimum) of the Building that present different views to communicate interior design intent.</p> <p>d) Provide a narrative, supported by plans, renderings and sketches as needed, that demonstrates how the interior design will provide natural, healing and calming environments. The narrative should reference the concept and vision, scale, and materials, colour and texture principles referred to in Appendix A (section 4.4 d).</p> <p>e) Provide schedules of room finishes, millwork, furniture finishes, fixtures, fittings and Design-Builder-supplied equipment.</p>

Section No.	Title	Contents (Package 2, Technical Review)
		<ul style="list-style-type: none"> <li>f) Provide a master colour palette and sample board of exterior envelope materials.</li> <li>g) Provide a narrative, supported by plans, renderings and sketches as needed, that demonstrates how the exterior design meets the principles described in Appendix A (section 4.4 e).</li> <li>h) Provide any Building Code “Alternative Solutions” supported by a code consultant’s report outlining and supporting the proposed approach.</li> <li>i) Describe in written narrative, and provide supporting sketches of, the wayfinding and signage program including: <ul style="list-style-type: none"> <li>i. Exterior wayfinding and directional signage; and</li> <li>ii. Interior wayfinding and directional signage.</li> </ul> </li> </ul>
3.9	<b>Energy and Sustainability</b>	<ul style="list-style-type: none"> <li>a) Provide an energy model and summary, complete with energy model inputs, assumptions and end-use breakdown (including heating, humidification, cooling, lighting, fans, pumps, service water heating, and plug and process loads): <ul style="list-style-type: none"> <li>i. Complete the energy model in accordance with the ASHRAE 90.1-2010 Appendix G method, Schedule 8, and Appendix 1 to Schedule 8; and</li> <li>ii. Include any assumptions not provided in Appendix 1 to Schedule 8: <ol style="list-style-type: none"> <li>1) Hours of Operation/Schedules</li> <li>2) Occupant density</li> <li>3) Receptacle load.</li> <li>4) Targeted and Non-Targeted load.</li> <li>5) Weather data (per Canadian Weather year for Energy Calculation (CWEC) for Vancouver International Airport.</li> </ol> </li> </ul> </li> <li>b) Provide calculations and results for total indicative building annual energy consumption, both as MWh, kWh/m<sup>2</sup> and cost, with separate listings for Targeted and Non-Targeted</li> </ul>

Section No.	Title	Contents (Package 2, Technical Review)
		<p>Energy Consumption and by energy type:</p> <ul style="list-style-type: none"> <li>i. Proponents are to use the Authority’s assumed energy unit rates below to calculate estimated energy costs, based on estimated consumption: <ul style="list-style-type: none"> <li>1) Fuel oil: \$1.00/L (39 MJ/L (HHV))</li> <li>2) Propane: \$0.90/L (25 MJ/L)</li> <li>3) Natural Gas: \$6.92/GJ (includes commodity and transportation cost, plus carbon tax)</li> <li>4) Electricity (per month): \$0.064/kWh</li> <li>5) Demand charge is \$11.44 kW</li> <li>6) Biomass: \$95/bdt (bone dry tonne); and</li> </ul> </li> <li>ii. If considering an alternate type of energy, the Proponent must notify the Authority, through a “Commercial in Confidence” Enquiry, in advance of submitting the Technical Submission and the Authority will provide the unit rate which will be used in calculating the energy consumption.</li> </ul> <p>c) Provide a summary of the following measures incorporated in the Proposal:</p> <ul style="list-style-type: none"> <li>i. Energy efficiency;</li> <li>ii. Energy management;</li> <li>iii. Materials and resources;</li> <li>iv. Water efficiency;</li> <li>v. Indoor environmental quality; and</li> <li>vi. Daylighting strategies, including narratives, calculations, and other supporting documentation.</li> </ul>
3.10	<b>Leadership in Energy and Environmental Design (LEED®)</b>	<ul style="list-style-type: none"> <li>a) Describe how the proposal will obtain LEED® Gold certification.</li> <li>b) Provide a preliminary Project scorecard checklist which identifies targeted credits.</li> </ul>

Section No.	Title	Contents (Package 2, Technical Review)
3.11	<b>Structure</b>	<p>Describe and provide details of the structural systems including schematic level (1:100) drawings, including the following as a minimum:</p> <ul style="list-style-type: none"> <li>a) Foundation system including bearing assumptions for footings and rafts, pile capacity, foundation walls, drainage, expected total and differential settlement.</li> <li>b) Floor and roof framing systems including member sizes, columns and wall sizes, and layout and grid dimensions.</li> <li>c) Lateral load resisting system including design criteria, system type, system layout and member dimensions, foundations, and any special features including seismic joints.</li> </ul>
3.12	<b>Mechanical Systems</b>	<ul style="list-style-type: none"> <li>a) For the Building, provide narratives describing the design, capacities (where applicable) and arrangement of infrastructure of the following systems as applicable: <ul style="list-style-type: none"> <li>i. Main energy sources;</li> <li>ii. Heating and cooling systems;</li> <li>iii. Domestic hot and cold water systems at various temperatures, including: <ul style="list-style-type: none"> <li>1) Piping system materials</li> <li>2) Description and location of main network components</li> <li>3) Domestic hot water recovery rate, number and size of storage vessels, construction and material</li> <li>4) Strategy for Legionella prevention and disinfection;</li> </ul> </li> <li>iv. Domestic water filtration and softening systems;</li> <li>v. Plumbing fixtures;</li> <li>vi. Sanitary and storm drainage systems;</li> <li>vii. Medical gases;</li> <li>viii. Space heating and cooling systems;</li> </ul> </li> </ul>

Section No.	Title	Contents (Package 2, Technical Review)
		<ul style="list-style-type: none"> <li>ix. Ventilation systems, including: <ul style="list-style-type: none"> <li>1) Zoning of floor areas served by each air handling unit</li> <li>2) Air handling unit type and function</li> <li>3) Various components of the air handling units</li> <li>4) System for controlling smoke under fire conditions;</li> </ul> </li> <li>x. Exhaust systems;</li> <li>xi. Energy recovery systems;</li> <li>xii. Metering for energy management and verification;</li> <li>xiii. Sound attenuation and vibration isolation;</li> <li>xiv. Redundancy and post-disaster provisions;</li> <li>xv. Control systems; and</li> <li>xvi. Overview of commissioning process.</li> </ul> <p>b) For the Energy Centre and CCH, provide narratives describing the design, capacities (where applicable) and arrangement of infrastructure of the following systems as applicable:</p> <ul style="list-style-type: none"> <li>i. Main energy sources;</li> <li>ii. Heating and cooling plants; <ul style="list-style-type: none"> <li>1) Boiler type(s) and configuration, indicating number of machines and their connection to the heating networks</li> <li>2) Flow rates for heating water, steam and condensate.</li> <li>3) Cooling devices and cooling towers, indicating configuration, number of machines and their connection to the cooling networks</li> <li>4) Flow rates for chilled and condenser water</li> </ul> </li> </ul>



Section No.	Title	Contents (Package 2, Technical Review)
		<ul style="list-style-type: none"> <li>5) Plant control strategies;</li> <li>iii. Fuel oil systems including location and arrangement of storage tanks including volume and period of autonomy, fill and vent provisions, pumping and distribution;</li> <li>iv. Boiler and generator stacks including emission information;</li> <li>v. Generator ventilation systems;</li> <li>vi. Domestic hot and cold water systems at various temperatures including volume, period of autonomy, and water treatment for process water storage;</li> <li>vii. Domestic water filtration and softening systems;</li> <li>viii. Plumbing fixtures;</li> <li>ix. Sanitary and storm drainage systems;</li> <li>x. Ventilation systems;</li> <li>xi. Exhaust systems;</li> <li>xii. Energy recovery systems;</li> <li>xiii. Metering for energy management and verification;</li> <li>xiv. Sound attenuation and vibration isolation: Provide a narrative describing the design and arrangement of infrastructure based on future plant equipment for compliance with noise criteria including acoustical modelling to demonstrate compliance with identified noise criteria;</li> <li>xv. Redundancy and post-disaster provisions;</li> <li>xvi. Control systems; and</li> <li>xvii. Description of commissioning process.</li> </ul>

		<p>c) Describe the proposed fire protection system and how it will integrate with the fire detection systems incorporated within the electrical, hydronic and/or mechanical installations.</p> <p>d) Describe measures to ensure safe and convenient access to equipment for maintenance or repair, specifically in the Energy Centre, and clinical environments such as Patient rooms.</p> <p>e) Demonstrate allocation of space for mechanical rooms, including specifications as to positioning, number and size of initial and future mechanical equipment, and equipment replacement strategy. Identify the pathways and procedure to remove/replace each type of major equipment.</p> <p>f) Provide the following drawings:</p> <ul style="list-style-type: none"><li>i. Layout drawings of each level of the Building (1:200) showing location, distribution and configuration of the following services:<ul style="list-style-type: none"><li>1) HVAC systems including zoning of each system and functional areas served</li><li>2) Air intake and exhaust locations</li><li>3) Distribution mains for cooling and heating</li><li>4) Domestic water and medical gases including zoning of each system;</li></ul></li><li>ii. Design drawings of a typical Building Patient Bedroom (1:50) showing distribution of typical plumbing, fire protection, ventilation and heating services;</li><li>iii. Design drawings of the Energy Centre (1:100) showing:<ul style="list-style-type: none"><li>1) Layout of all floors including equipment (initial and future), service clearances and main piping breeching and ventilation runs</li><li>2) Air intake and exhaust locations</li><li>3) Routing for replacement of initial equipment and installation and replacement of future equipment</li><li>4) Routing of services to and from the new Energy Centre to points of connection in existing buildings, and demonstrating provisions for future services</li></ul></li></ul>
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Section No.	Title	Contents (Package 2, Technical Review)
		<ul style="list-style-type: none"> <li>5) Control room layout</li> <li>6) Section drawings;</li> <li>iv. Schematic drawings (not to scale) of the Building, Energy Centre and CCH showing: <ul style="list-style-type: none"> <li>1) Ventilation systems</li> <li>2) Heating and cooling systems</li> <li>3) Steam system</li> <li>4) Domestic water and specialty water networks</li> <li>5) Drainage and treatment systems</li> <li>6) Gas networks</li> <li>7) Fuel oil systems</li> <li>8) Fire protection systems</li> <li>9) Plant control system.</li> </ul> </li> </ul>
3.13	<b>Electrical Systems</b>	<ul style="list-style-type: none"> <li>a) Provide narratives describing the design, capacities (where applicable) and arrangement of infrastructure for: <ul style="list-style-type: none"> <li>i. Incoming utility feed and normal power supply in the Energy Centre;</li> <li>ii. Emergency power system including diesel generators in the new Energy Centre;</li> <li>iii. High voltage distribution for vital/delayed-vital and conditional power;</li> <li>iv. Uninterruptible Power System (UPS) for the Building and the CCH;</li> <li>v. Power distribution in the Building;</li> <li>vi. Power distribution to HCC and Columbia Tower;</li> <li>vii. Space and provisions for future equipment, e.g., main electrical service, diesel generators, switchgear, step-down transformer substations, UPS, pathways for campus distribution, expandability of switchgear provided;</li> </ul> </li> </ul>

Section No.	Title	Contents (Package 2, Technical Review)
		<ul style="list-style-type: none"> <li>viii. Equipment replacement strategy: identify the pathways and procedure to remove/replace each type of major equipment;</li> <li>ix. Approach to prevent flooding in areas where electrical power system equipment is located;</li> <li>x. Redundancy: outline the design aspects that will provide resiliency and allow concurrent maintenance;</li> <li>xi. Diesel generator load management system;</li> <li>xii. Fire alarm and EVAC system: describe the integration between the fire alarm system and Building Management System (BMS);</li> <li>xiii. Digital addressable lighting control system: describe the integration between the lighting control system and the BMS;</li> <li>xiv. Wireless clock system;</li> <li>xv. Metering system; and</li> <li>xvi. Wiring and raceways.</li> </ul> <p>b) Provide the following drawings:</p> <ul style="list-style-type: none"> <li>i. Schematics / Single line drawings (not to scale) showing:           <ol style="list-style-type: none"> <li>1) High voltage utility/normal power distribution in the Energy Centre</li> <li>2) High voltage emergency power distribution in the Energy Centre</li> <li>3) High voltage distribution for vital/delayed-vital and conditional power</li> <li>4) High voltage power distribution to the Building, CCH, HCC and Columbia Tower</li> <li>5) Low-voltage conditional and vital/delayed-vital power distribution in the Building</li> <li>6) Low-voltage conditional and vital/delayed-vital power distribution in the Energy Centre, the Building and CCH</li> </ol> </li> </ul>

Section No.	Title	Contents (Package 2, Technical Review)
		<ul style="list-style-type: none"> <li>7) UPS system and distribution in the Building and CCH</li> <li>8) Low-voltage conditional and vital/delayed-vital power infrastructure upgrade in HCC and Columbia tower</li> <li>9) Electrical grounding, lightning protection, and telecommunication grounding systems in the Energy Centre, the Building and CCH</li> <li>10) Fire alarm and EVAC paging system in the Energy Centre, the Building and CCH</li> <li>11) Synchronized clock system in the Energy Centre, the Building and CCH</li> <li>12) Lighting control system in the Energy Centre, the Building and CCH</li> <li>13) Power monitoring systems in the Energy Centre, the Building and CCH;</li> <li>ii. Design drawings (1:100) of the Energy Centre showing: <ul style="list-style-type: none"> <li>1) Layout of all floors including equipment, service clearances and main distribution routes</li> <li>2) Footprint space and service clearances for identified future equipment</li> <li>3) Rated fire compartments and fire separations at each floor level</li> <li>4) Routing for replacement of initial equipment, and installation and replacement of future equipment</li> <li>5) Routing of services to and from the new Energy Centre to points of connection in existing buildings, and demonstrating provisions for future services</li> <li>6) Section drawings;</li> </ul> </li> <li>iii. Site plan layout (1:200) showing: <ul style="list-style-type: none"> <li>1) Site lighting</li> <li>2) High voltage distribution routes indicating duct bank sizes, maintenance hole locations, sections, etc.;</li> </ul> </li> </ul>

Section No.	Title	Contents (Package 2, Technical Review)
		<ul style="list-style-type: none"> <li>iv. Layout drawings (1:200) of each floor of the Building and of CCH showing: <ul style="list-style-type: none"> <li>1) Location of main and sub-electrical rooms</li> <li>2) Location of Telecommunication rooms and cable tray routing indicating proposed cable tray sizes;</li> </ul> </li> <li>v. Design drawings (1:50) of typical Building spaces showing receptacle layout, lighting design layout, lighting control device layout and fire alarm device layout. Include luminaire selections and identify lighting levels achieved by the proposed design. Submit this information for the following typical Building spaces: <ul style="list-style-type: none"> <li>1) ECT Treatment Room and associated Recovery Room</li> <li>2) Consultation / Therapy Room</li> <li>3) Secure Room, Secure Room Shower, and Secure Room Ante Room</li> <li>4) Care Team Base.;</li> </ul> </li> <li>vi. Design drawing (1:50) of typical Inpatient Corridor in one wing of one floor. Include receptacle layout, lighting layout, lighting control device layout, fire alarm device layout and cable tray layout. Include luminaire selections and identify lighting levels. Include details for remote lighting controls including devices at the Care Team Base and include the cable tray dimensions.</li> </ul> <p>c) Provide cut-sheets of proposed equipment for the following:</p> <ul style="list-style-type: none"> <li>i. Diesel Generators;</li> <li>ii. Generator Paralleling Switchgear;</li> <li>iii. High-voltage Switchgear including details of protective relaying and metering;</li> <li>iv. High-voltage Automatic Transfer Switch (HVATS);</li> <li>v. 12.47kV-600V step-down transformers, dry-type and liquefied padmount type;</li> <li>vi. 600V Switchgear;</li> </ul>

Section No.	Title	Contents (Package 2, Technical Review)
		<ul style="list-style-type: none"> <li>vii. 600V Automatic Transfer Switch;</li> <li>viii. UP; and.</li> <li>ix. Metering System.</li> </ul>
3.14	<b>Communication Systems</b>	<ul style="list-style-type: none"> <li>a) For each of the following technology and communication systems, describe the system and associated scope, and the typical devices and functions for each area to be served, and demonstrate integration of the systems: <ul style="list-style-type: none"> <li>i. Communications pathways and rooms;</li> <li>ii. Structured cabling;</li> <li>iii. Wireless network infrastructure;</li> <li>iv. Data and voice communications;</li> <li>v. Audiovisual, multimedia and videoconferencing;</li> <li>vi. Clinical education and observation camera and audio systems;</li> <li>vii. CATV and digital signage;</li> <li>viii. Public address;</li> <li>ix. Intercommunication system;</li> <li>x. Nurse call system; and</li> <li>xi. Distributed antenna system.</li> </ul> </li> <li>b) Provide a layout of these systems on floor plans indicating: <ul style="list-style-type: none"> <li>i. Locations of all Communications Rooms and their associated serving zone boundaries;</li> <li>ii. Principal routing of cabling and pathways;</li> <li>iii. Outlet locations identifying types of cabling with an indication of quantities per outlet; and</li> </ul> </li> </ul>

Section No.	Title	Contents (Package 2, Technical Review)
		<ul style="list-style-type: none"> <li>iv. The wireless cabling grid as specified in Schedule 1 [Statement of Requirements] showing the outlet locations.</li> <li>c) Provide riser diagrams and design documentation for:               <ul style="list-style-type: none"> <li>i. Telecommunications bonding and grounding system;</li> <li>ii. Intra-building backbone pathway system;</li> <li>iii. Intra-building backbone cabling subsystem;</li> <li>iv. Public address systems; and</li> <li>v. Video, sound and control systems in multimedia rooms.</li> </ul> </li> <li>d) Provide a typical layout for a Telecommunications Room serving an Outpatient area and one serving an Inpatient area. The layouts should include sufficient detail to demonstrate that the technical requirements and Authority standards are being met with a particular focus on:               <ul style="list-style-type: none"> <li>i. Service clearances;</li> <li>ii. Utilization of wall and equipment rack space;</li> <li>iii. Footprint for future equipment (located on either walls or in equipment racks); and</li> <li>iv. Requirements such as electrical distribution, lighting, pathways, grounding and bonding components, mechanical ducting and equipment, fire detection and suppression systems, and security and access control.</li> </ul> </li> <li>e) Provide a typical dimensioned layout for each type of Multimedia Room (Type 2, 3, 5 and 6) in sufficient detail to demonstrate that the technical requirements are understood. Include a reflective ceiling plan showing speaker and microphone locations and quantities, screen dimensions, and distance from screen to most distant viewer. Each layout should have an accompanying narrative that identifies the quantity of each room type and describes how the infrastructure provided will meet the needs of the stated use cases.</li> </ul>



Section No.	Title	Contents (Package 2, Technical Review)
		<p>f) For the Type 4 Large Multipurpose Room provide:</p> <ul style="list-style-type: none"> <li>i. A dimensioned plan view showing the location of doors, screens wall-mounted controls, furniture and connectivity.</li> <li>ii. A dimensioned plan view and cross-section of the adjacent projection control room.</li> <li>iii. Reflective ceiling plans showing speaker and microphone locations and quantities.</li> <li>iv. A dimensioned cross-section that identifies presenter position, audience first row and last row, screen heights and viewing angles to screens from the seating area;</li> <li>v. A dimensioned plan that identifies presenter position, audience first row and last row, screen heights and viewing angles to screens from the seating area;</li> <li>vi. A dimensioned plan that identifies presenter position, audience rows, screen widths and viewing angles to screens from the seating area; and</li> <li>vii. A narrative describing the push to talk audience microphone methodology (e.g., wired, wireless.) and functionality in videoconferencing mode.</li> </ul> <p>g) Provide a narrative and layout for CCH detailing how the CCH design meets all the key elements specified in the Statement of Requirements with a key focus on:</p> <ul style="list-style-type: none"> <li>i. post-disaster and survivability;</li> <li>ii. general paths of access (to the CCH);</li> <li>iii. horizontal and vertical clearances;</li> <li>iv. electrical and mechanical (cooling) systems;</li> <li>v. vibration mitigation;</li> <li>vi. raceways;</li> <li>vii. fibre and copper cabling; and</li> <li>viii. racks and cabinets and DCIM.</li> </ul>

Section No.	Title	Contents (Package 2, Technical Review)
		<ul style="list-style-type: none"> <li>h) Provide a narrative that describes the approach that will be taken to provide the Authority with early access to the CCH and to complete the Campus Perimeter Pathway System a year in advance of the earliest Substantial Completion Date for either the Energy Centre or the Building. The narrative is to be accompanied by a high level schedule identifying tasks, interdependencies, and milestones.</li> <li>i) Referencing Appendix 1B(II) [Campus Communications Hub Technical Specifications], provide: <ul style="list-style-type: none"> <li>i. An “add” price to provide a Clean Agent Gas Fire Suppression System, complete with the Vesda system, in addition to the pre-action sprinkler system; and</li> <li>ii. A “delete” price for the pre-action sprinkler system in the CCH in the event that the AHJ allows the deletion in lieu of the Gas Fire Suppression System.</li> </ul> </li> <li>j) Provide a price for each DAS solution being considered by the Authority as detailed in Sections 7.9.18.3, 7.9.18.4 and 7.9.18.5 of Schedule 1 [Statement of Requirements]. Include the cost of the requirements in Section 7.9.18.2 of Schedule 1 [Statement of Requirements] in the price for each option.</li> </ul>
3.15	<b>Electronic Safety and Security</b>	<p>Provide single-line design drawings and brief descriptions for the following systems:</p> <ul style="list-style-type: none"> <li>a) All security systems and connected sub-systems (e.g., intercom) including: access control, video surveillance, panic/duress and intrusion.</li> <li>b) General layout of fire alarm system including initiation, detection and monitoring devices, speakers and strobes, fire phones, digital voice command panel, annunciators, amplifier cabinets and auxiliary power supplies.</li> </ul>

Section No.	Title	Contents (Package 2, Technical Review)
3.16	<b>Civil Works</b>	<ul style="list-style-type: none"> <li>a) Provide a narrative describing how the Campus Perimeter Pathway System communication design meets all the key elements specified in the Statement of Requirements. The narrative is to be accompanied by a site plan layout (1:200).</li> <li>b) Provide a narrative and schematic level civil drawing(s) for onsite civil works, including the following: <ul style="list-style-type: none"> <li>i. Onsite plan showing storm water drainage, sanitary sewer, domestic and fire flow water supply, electrical, storage tanks, roads, parking, sidewalk, bikeways, and any temporary works or interim phases; and</li> <li>ii. Grading plan of the site with cross-sections through any retaining walls.</li> </ul> </li> </ul>
3.17	<b>Landscape</b>	<ul style="list-style-type: none"> <li>a) Provide a brief narrative describing how the landscape design is responsive to the site and Facility architecture.</li> <li>b) Provide narrative and schematic level landscape drawing(s) for onsite landscape development, sufficient to demonstrate the intent of the design, including the following: <ul style="list-style-type: none"> <li>i. One site drawing showing major tree groupings, shrub and perennial planting beds, Secure Outdoor Spaces, yards, sidewalks, turf areas, fencing, site furniture, raised planters, courtyard, gardens and entry spaces; and</li> <li>ii. One plan view and at least one perspective rendering of a typical deck showing planters and other deck elements.</li> </ul> </li> <li>c) Include a narrative describing how the proposed parking solution maximizes site efficiency over the long term while following CPTED design principles.</li> </ul>
3.18	<b>Furniture, Fittings and Equipment</b>	<p>Provide the following:</p> <ul style="list-style-type: none"> <li>a) A summary of the processes and activities that will be undertaken to ensure all furniture, fittings and equipment, including IMIT components, are received, placed, installed and commissioned prior to Substantial Completion.</li> </ul>

Section No.	Title	Contents (Package 2, Technical Review)
		b) Outline of the roles and timing the Design-Builder would expect the Authority to provide in achieving the above.
3.19	<b>Infection Prevention and Control</b>	a) Describe and provide details of how the design will achieve the infection control requirements described in the Statement of Requirements. b) Include a description of finishes proposed on exposed surfaces as well as locations of hand wash sinks.
3.20	<b>Facility Integration and Future Considerations</b>	Provide narratives, supported by plans, renderings and sketches as needed, that demonstrate how the interior of the Facility has been designed to be flexible and adaptable; refer to Appendix A (section 4.5 a).

### Package 3: Transmittal Package for Financial Submission

The transmittal package is to contain the following information and documents:

- A letter confirming that the Cost of the Proposal is within the Design-Build Price Ceiling and is valid for a period of 90 days beyond the date of this Financial Submission;
- Confirmation of the Scope Ladder items used, if any, to achieve the Design-Build Price Ceiling;
- Confirmation that there have been no changes to the Proponent Team other than those with respect to which the Proponent has complied with Section 7.12 of the RFP; and
- One (1) fully executed copy of Appendix C – Proposal Declaration Form.

### Package 4: Financial Submission

The Financial Submission should address the requirements set out in the tables below. Proponents should use the section numbers and corresponding titles shown in these tables in their Financial Submission to demonstrate that the Financial Submission substantially satisfies the requirements of this RFP.

Proponents should provide a cover letter with their Financial Submission that includes or attaches:

- (a) Confirmation of bonding undertakings; and
- (b) Completed Form A1 – Breakdown of Contract Price and Monthly Progress Payments.

Section No.	Title	Contents (Package 4, Financial Submission)
4.	<b>Basis of Financial Submission</b>	
4.1	<b>Proposal Authorization</b>	Certified copies of board resolutions or other legally binding evidence where applicable from the Design-Builder approving the Proposal and authorizing submission of the Proposal in response to this RFP.
4.2	<b>Insurance and Bonding</b>	<p>a) Demonstrate the insurability of the Proponent Team by providing written confirmation from insurers that the insurance coverage required by the Final Draft Design-Build Agreement will be available for the Project if the Design-Builder is awarded a contract.</p> <p>b) Demonstrate the bondability of the Design-Builder by providing written confirmation, generally in the form of the bonding undertaking contained in Appendix I, from a surety company acceptable to the Authority and authorized to transact the business of suretyship in British Columbia, that the bonding requirements of the Final Draft Design-Build Agreement will be available for the Project if the Proponent is awarded a contract.</p> <p>The Proponent may alternatively provide the surety’s standard form Consent of Surety or Agreement to Bond in respect of a commitment to provide the performance bond and labour and material payment bond required to be provided.</p>
4.3	<b>Financial Capacity</b>	<p>a) Demonstrate the financial capacity of the Design-Builder by providing a description of the company that will manage the cash flow and working capital including:</p> <ul style="list-style-type: none"> <li>i. Details of any bankruptcy, insolvency, company creditor arrangement or other insolvency litigation in the last three fiscal years; and</li> <li>ii. Details of any credit rating(s).</li> </ul> <p>b) Provide written authorization to permit the Authority to perform a credit check.</p>

Section No.	Title	Contents (Package 4, Financial Submission)
5.	Proposal Price	
5.1	Price Validity	Confirm all prices listed in the Proposal will remain valid for the period of at least 90 days after the Submission Time for Financial Submissions.
5.2	Form A1 – Breakdown of Contract Price and Monthly Progress Payments	<p>a) Proponents must submit Form A1 – Breakdown of Contract Price and Monthly Progress Payments in both electronic and hard copy. Form A1 will include:</p> <ul style="list-style-type: none"> <li>i. The breakdown of the contract price adding up to the Nominal Cost of the Proposal; and</li> <li>ii. Estimated monthly progress payments over the construction schedule: <ul style="list-style-type: none"> <li>a. Estimated progress payments must coincide with work completed based on the Time Schedule.</li> </ul> </li> </ul> <p>b) The Proponent’s Form A1 should be consistent with the following:</p> <ul style="list-style-type: none"> <li>i. Produced using the template supplied by the Authority with no changes or entries other than as indicated in the model;</li> <li>ii. Produced in Microsoft Excel version 2010 or newer;</li> <li>iii. Except where otherwise expressly indicated, include all taxes other than GST;</li> <li>iv. Be expressed in Canadian dollars; and</li> <li>v. Include no hidden or password-protected cells or sheets.</li> </ul> <p>c) All sheets should be printed clearly and legibly on 8.5” x 11” paper including row and column references on each page. Form A1 is supplied in the Data Room as “Form A1 – Breakdown of Contract Price and Monthly Progress Payments.xlsx”.</p>

**Form A1 – Breakdown of Contract Price and Monthly Progress Payments**

Refer to the Excel document titled “Form A1- Breakdown of Contract Price and Monthly Progress Payments.xlsx” which is provided in the Data Room.

Form A1 includes a Breakdown of Contract Price input sheet substantially in the form of Table 1 below which includes prices for the work required as described in the RFP and the Design-Build Agreement. These prices include all taxes other than GST, except where otherwise expressly indicated. Provide the cost breakdown for the development, design, construction and commissioning of the Facility to be used in the establishment of the Nominal Cost of the Proposal. These cost estimates should also describe the basis upon which the capital costs have been developed, clearly identifying any exclusions.

Form A1 also includes a Monthly Progress Payments input sheet substantially in the form of Table 2 below which requires the calculation of estimated monthly progress payments over the construction period. These estimated monthly progress payments and the breakdown of the contract price will be used to help determine the Schedule of Prices to be used in Schedule 6 of the Design-Build Agreement as described in the Design-Build Agreement.

**Table 1: Breakdown of Contract Price**

Breakdown of Contract Price	
	Value
<b>HARD COSTS</b>	
Division 1 - General Requirements	-
Division 2 - Existing Conditions	-
Division 3 - Concrete	-
Division 4 - Masonry	-
Division 5 - Metals	-
Division 6 - Wood, Plastics and Composites	-
Division 7 - Thermal and Moisture Protection	-
Division 8 - Openings	-
Division 9 - Finishes	-
Division 10 - Specialties	-
Division 12 - Furnishings	-
Division 13 - Special Construction	-
Division 14 - Conveying Equipment	-
Division 21 - Fire Suppression	-



Breakdown of Contract Price	
	Value
Davison 22 - Plumbing	-
Division 23 - Heating, Ventilating and Air Conditioning (HVAC)	-
Division 25 - Integrated Automation	-
Division 26 - Electrical	-
Division 27 - Communications	-
Division 28 - Electronic Safety and Security	-
Division 31 - Earthwork	-
Division 32 - Exterior Improvements	-
Division 33 - Utilities On Site	-
Division 33 - Utilities Off Site	-
Landscape Maintenance	-
Other (specify)	-
<b>Hard Costs Sub-Total</b>	<b>\$ XX</b>
<b>SOFT COSTS</b>	
Architectural Design Fees	-
Structural Design Fees	-
Mechanical Engineering Design Fees	-
Electrical Engineering Design Fees	-
Civil Engineering Design Fees	-
Geotechnical Engineering Design Fees	-
Building Envelope Consultants Fees	-
Landscape Architect Fees	-
Infection Control Professional Fees	-
Code Consultant Fees	-
Legal Advisor Fees	-
Other Consultant - Specify	-
Other Consultant - Specify	-
Other Consultant - Specify	-
Insurances - Specify	-

Breakdown of Contract Price	
	Value
Insurances - Specify	-
Development Permit	
Building Permit	-
Development Cost Charges	-
Other - Specify	-
Other - Specify	-
<b>Soft Costs Sub-Total</b>	<b>\$ XX</b>
<b>GENERAL EXPENSE COSTS</b>	
Pursuit Costs	-
Ongoing General Expense	-
Mobilization	-
Project Staff	-
Project Overhead	-
Construction Equipment	-
Testing	-
Mockups	-
Permits and Fees	<i>Only those not included in Soft Costs</i>
Bonding and Security	-
Insurance	<i>Only those not included in Soft Costs</i>
<b>General Expense Sub-Total</b>	<b>\$ XX</b>
<b>Future Enabling Works Cost</b>	-
<b>Total Costs</b>	-
<b>Fee</b>	-
<b>Nominal Cost of the Proposal (Contract Price)</b>	<b>\$ XX</b>

**Table 2: Monthly Progress Payments**

Period Ending	Expected Monthly Construction Period Payments
Month 1	
Month 2	
Month 3	
...	
...	
...	
...	
...	
<b>Nominal Cost of the Proposal</b>	<b>\$xx</b>