1. Project Background

Planning for and documentation of the redevelopment of Royal Columbian Hospital (RCH) has been underway since 2008 with the development and submission of the initial Concept Plan. In April 2013 the government granted approval for Fraser Health Authority (FHA) to develop a detailed business case for Phase 1 of the redevelopment and to continue scope definition, refinement of capital costs and scheduling for the balance of the project.

Phase I, which is based on the August 2014 RCH Redevelopment Project Phase I Business Plan, will take the first step in the long term redevelopment of the RCH campus. The most significant elements of this phase are the creation of a new building to house an expanded Mental Health and Substance Use program, replacement parking, and a new campus energy centre. Final drafts of the RCH Redevelopment Phasing Plan and Phase I business plan were formally submitted and unanimously approved by RCH Redevelopment Project Board on Sept 4, 2014.

On June 1, 2015, the government granted approval for the FHA to redevelop RCH in three distinct phases, consistent with the RCH Redevelopment Phasing Plan and to proceed with Phase I of the RCH Redevelopment (the Project).

2. Project Objectives

The RCH Redevelopment project will be guided by the RCH Vision, Mission and Commitments which include:

- Improving the health and well-being of the people of the RCH community;
- Creating a modern facility delivering exemplary clinical outcomes;
- Delivery of high quality, culturally sensitive health care services;
- Developing seamless integration of services into the continuum of care;
- Creating a patient centered approach to health care delivery;
- Improving the energy efficiency of the physical plant;
- Upgrading the electrical systems to allow future expansion;
- Reducing the hospital’s carbon footprint; and,
- Achieving value for money by balancing capital requirements with expected opportunities for increased productivity in clinical operations and long term maintenance requirements.
3. **Project Status and Scope**

Preparations for the project to date have included:

- A clinical services plan to understand how services will be delivered within the new facility and across the campus;
- A functional program in order to consider potential building configurations and estimate approximate building sizes;
- A high level master plan to insure the expanded campus fits into the cultural context of the neighbourhood;
- An indicative design and campus fit test to ensure appropriate site circulation and departmental proximities;
- A quantity survey in order to provide a preliminary estimate of project costs; and,
- Robust discussions with the City of New Westminster and other key stakeholders to insure RCH planning is consistent with other developments in the area.

Phase I (shown in blue below) is the first of three phases that comprise the global redevelopment project as summarized below:

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<tr>
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<tbody>
<tr>
<td>• Construction of a new Mental Health and Substance Use Program building</td>
<td>• Demolition of Main Entrance building, existing power plant</td>
<td>• Renovations in existing Health Care Centre and Columbia Tower to seamlessly link with new Tower programs</td>
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<tr>
<td>• Construction of a new campus Energy Centre</td>
<td>• Site preparations</td>
<td>• Expansion and upgrades to existing services in Health Care Centre and Columbia Tower to accommodate increased patient capacity</td>
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<tr>
<td>• Relocation of the Heliport</td>
<td>• Construction of a new Acute Care Tower</td>
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<tr>
<td>• Relocation of staff and programs in preparation for Phase II/III</td>
<td>• New and expanded emergency department</td>
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<tr>
<td>• Demolition of Sherbrooke Building</td>
<td>• Increase in inpatient capacity</td>
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Phase I is further broken down into three project groups based on the procurement methodology that best meets the objectives and provides value for public funding:

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<tbody>
<tr>
<td>• Construction of a new Mental Health and Substance Use Program building including parking</td>
<td>• Energy Centre fit-out for Mental Health and existing campus</td>
<td>• Relocation of the Heliport</td>
</tr>
<tr>
<td>• Construction of a new campus Energy Centre shell</td>
<td>• Connections to the Campus IM/IT communications Hub</td>
<td>• Creation of temporary replacement parking</td>
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<td></td>
<td>• Steam to Hot water conversion project</td>
<td>• Relocation of staff</td>
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<td></td>
<td>• Connection to City of New Westminster District Energy Centre</td>
<td>• FF&amp;E and IM/IT</td>
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<td>• Demolition of Sherbrooke Building</td>
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4. **Costs and Benefits**

*Project Costs*
The estimated capital cost of the Project is $258.88 million which includes a project reserve of $10.31 million. The provincial share of the total is $249.78 million while the RCH Foundation will contribute $9.1 million. The cost estimate is derived from a Class C quantity survey with an accuracy of ±15 percent, 18 times out of 20 which in turn was based on a detailed functional program and indicative design for the facility.

*Project Benefits*

- The new Mental Health and Substance Use building will improve operational efficiencies and clinical programs in Mental Health while being designed to a LEED Gold standard to support a safe and healthy work environment.

- The new Energy Centre will be sized to accommodate the full build-out of the global redevelopment of the campus, increase energy efficiency by 20-30 percent, eliminate the current risk of power systems failure, and protect power sources and IM/IT infrastructure in a post-disaster building.

- Through connection to a new District Energy System (DES) to be developed by the City of New Westminster, RCH expects to reduce greenhouse gas emissions on the campus by 60-70 percent.

5. **Project Risks**

The major risks associated with the Project generally relate to project scope and functionality, schedule, cost and operations and maintenance risk.

*Scope and Functionality:*
These risks arise when the building is not sized appropriately, and/or does not have an optimum design which results in lower functionality, less efficient clinical operations, and user dissatisfaction. Measures to mitigate these risks include:

- Extensive user involvement during the functional programming and schematic design phase to ensure higher user satisfaction, integration, and functionality.

- The engagement of an architect and engineering team to act as shadow consultants during the Project to ensure accurate technical specifications are prepared, coordination across work within each of the three groups, and compliance of design and construction.

*Schedule Risk:*
This risk arises from the possibility that the procurement process takes longer than expected or the design/construction process takes longer than expected. Measures to mitigate this risk include:
• Engagement of Partnerships BC to assist with the procurement process.

• Utilization of procurement and legal documentation based on industry-accepted templates.

• Use of a Request for Qualifications (RFQ) process to short-list the best proponent teams.

• Preparation of contractual documentation ahead of time to be appended to the Request for Proposals (RFP) so that proponents can consider these documents during proposal preparation.

• Inclusion of an indicative design in the RFP to facilitate proponent understanding.

Cost Risk:
This risk arises from the possibility that overall project cost and construction costs are higher than budget. Measures to mitigate this risk include:

• A preliminary budget based on an indicative design and a quantity surveyor report that contains appropriate cost contingencies.

• Inclusion of estimates of construction escalation and inflation in the budget based on current market forecasts. The capital cost will be checked by a quantity surveyor immediately prior to release of the RFP to ensure that project is estimated within budget.

• Inclusion of a mandatory affordability ceiling which proponents for the DB RFP must meet in order to have the rest of their proposal evaluated. This will ensure that FHA does not enter into construction contracts without the assurance the project can be completed within budget.

Operations and Maintenance Risk:
This risk arises if the facility is not well-maintained over time and/or the cost of maintenance is higher than expected. Measures to mitigate this risk include:

• The development of detailed performance specifications to be included as part of the RFP to ensure the proper building systems are initially installed and commissioned.

• Active participation of FM staff in user group meetings to ensure the design maximizes operation efficiencies.