1. Project Background

In 2012 the Peace Arch Hospital Master Concept Plan was prepared by Fraser Health (FH) through Lower Mainland Facilities Management (LMFM) and in partnership with PAH site leadership and the Peace Arch Hospital & Community Health Foundation (the Foundation). The Master Concept Plan created a 20-year vision for the site and outlined a 10-year site development plan for the immediate and longer-term clinical service delivery requirements. Two of the short-term priorities called for facility improvements and service capacity expansion for Emergency services and Surgical services.

A PAH Emergency Department Renovation & Expansion business plan was completed in 2013 and approved by government in December, 2014. As the Emergency Department project was advancing, an Accreditation Canada review of the PAH Medical Device Reprocessing (MDR) department and a Surgical services review at PAH revealed escalating needs for facilities improvements. Subsequent planning for the MDR and Surgical services explored options for accommodation of these services and site studies concluded that the planned building expansion for the new ED offered the best opportunity for a cost-effective, long-term solution for MDR and Surgical services.

In 2016 the approved Emergency Department project was revisited and expanded to make the case for a broader facility solution for Emergency services, MDR, and Surgical services. The resulting PAH Renewal Business Plan documented the case for an integrated and comprehensive facility solution to accommodate an expanded Emergency department, a new MDR department, and a new Perioperative Suite to support Surgical service delivery. This Project provides a cost-effective, long-term strategy for PAH to effectively resolve safety issues impacting patient care, increase surgical and emergency capacity to meet current and future demand, and substantially improve building deficiencies.

2. Project Objectives

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

- Improving the health and well-being of the people of the South Surrey & White Rock community;
- Creating a modern facility delivering exemplary clinical outcomes;
- Delivering 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;
- 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:

- Completion of the PAH Master Concept Plan to understand global site needs over the next 20 years and to prioritize immediate, short-term, and medium-term service/facility needs.
- Service delivery review and service delivery planning with key service delivery stakeholders for Emergency services, MDR, and Surgical services; these activities define the current and future state service delivery model and service volumes to inform space planning.
- Functional programming for Emergency services, MDR, and a Perioperative suite; this work outlines the key service delivery flows, departmental adjacency requirements, support service elements, and the gross department space requirements that inform required building size and layout.
- 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 White Rock and other key stakeholders to insure PAH planning is consistent with other developments in the area.

The Project is a three level facility expansion on the west side of the main Acute Building. On the ground floor (Level 1), the expansion will increase the size of the Emergency Department from a current area of approximately 760m² to over 2,100m². The number of patient care spaces will be increased from 24 to 50 and they will be sized to contemporary design standards. The expanded ED will include the required clinical support spaces to enable safe and effective care.

In the basement below the ED expansion (Level 0) a new Medical Device Reprocessing department will be built. The new MDR department will be sized and fit-out with equipment to support the site’s needs beyond 2030. The department will be designed with one-way flow of materials and proper air-pressure differentials to support leading practice in medical device reprocessing.

On the floor above the ED expansion (Level 2) the new space will accommodate five (5) new operating rooms to replace the three (3) existing ORs. The new ORs will be sized and designed to meet contemporary space planning guidelines; at 55m² they will be more than 50% larger than the current, outdated ORs. The space on Level 2 currently being used for ORs and patient recovery will be renovated and combined with the new Level 2 space to create a contiguous Perioperative suite that includes the required pre/post patient care spaces and clinical support spaces to enable safe and effective perioperative care.

Project Procurement

The project will be procured using a “Design-Bid-Build” procurement method.
Project Schedule

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<thead>
<tr>
<th>Milestone</th>
<th>Estimated Timeline</th>
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<td>Facility Design Development</td>
<td>Spring 2017 – Winter 2017</td>
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<tr>
<td>Tender Documents and Permits</td>
<td>Spring 2018</td>
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<tr>
<td>Construction</td>
<td>Summer 2018 – Summer 2020</td>
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<tr>
<td>Commissioning</td>
<td>Summer 2020 – Winter 2020</td>
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<tr>
<td>Occupancy</td>
<td>Fall 2020 – Spring 2021</td>
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4. Costs and Benefits

Project Costs

The estimated capital cost of the Project is $68.2 million. The Peace Arch Hospital & Community Health Foundation will contribute $37 million, funding from the province will be $8.2 million, and Fraser Health will fund the remaining $23.0 million (including a management reserve of $3.25 million). The cost estimate is derived from a high Class C quantity survey with a projected level of accuracy of +/- 15%, 18 times out of 20.

Project Benefits

This capital project will deliver numerous benefits to the patients who rely on Peace Arch Hospital for Emergency and Surgical services; some of the highlights include:

- Appropriately sized clinical spaces to support high quality health care delivery;
- Implementation of infection-control measures to keep patients, visitors, and staff safe;
- Provision of clinical support spaces to improve efficiency by making supplies and services readily available to health care providers;
- Departmental layouts that support efficiency in patient, staff, and materials flow;
- Inclusion of infrastructure and environmental control systems (e.g. air supply, medical gases, Information Technology) to meet the requirements for Emergency, Surgical, and MDR services;
- Increased capacity to meet current and future demand for services;
- A sustainable space solution that supports the longer term site development plans for PAH;
- A building designed to withstand a sizable seismic event and enable ongoing care delivery in a post-disaster situation.
5. Project Risks

The 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:

- Calculation of service demand projections to understand future capacity requirements.
- Review of service delivery model (including key flows of medicine) to ensure that the functional requirements are well understood and documented.
- Extensive user involvement during the functional programming and schematic design phase to increase stakeholder endorsement and to ensure the space and infrastructure plans align with the functional requirements.

**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:

- Utilization of procurement and legal documentation based on industry-accepted templates.
- Development of stakeholder-endorsed Functional Programs and Schematic design during the Business Plan facilitates project-team readiness for detailed design.

**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:

- Development of schematic plans for use by a quantity surveyor to develop an industry-based cost-estimate with 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 at appropriate times during the design process and prior to the Construction Tender to ensure that the project is designed within budget.
- Use of an Equipment Planner to develop equipment lists and associated budgets during the Business Plan.
- Fraser Health will fund a 5% project reserve from working capital.

**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 design documents to be included as part of the Construction Tender 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.