

Capital Project Plan
BC Children's and BC Women's Redevelopment Project
October 8, 2010

1. Project Background

In 2006, the Provincial Health Services Authority (PHSA) identified the replacement of BC Children's Hospital (Children's) and the development of a new ambulatory care centre for BC Women's Hospital (Women's) as its number one priority and they began developing a business case for the project in 2007.

In 2008, the government, through the Ministry of Health Services, directed the PHSA to develop a plan to address the urgent need for Neonatal Intensive Care Unit (NICU) and meet government's commitment to upgrade and expand Children's.

PHSA is embarking on a Redevelopment Project (Project) that will construct a new acute care and diagnostic services hospital for British Columbia's women, children and families. The long-term master plan is to develop a shared campus for Children's and Women's that will be a provincial centre of excellence that meets the specialized care needs of British Columbians.

In September 2010, the government approved funding of \$90.48 million for Phase 1. In addition, the Project was directed to prepare an indicative design and final cost estimates for Phases 2 and 3. A revised Business Case including final scope, schedule and budget for Phases 2 and 3 is being prepared for submission in fall 2011.

2. Project Objectives

The vision for the Project is: *A campus of patient-centred care that operates in an environment of quality, excellence and innovation.* This vision is supported by the following objectives:

- Improve patient-centred delivery care by creating optimal patient access and patient flow;
- Support the needs of staff, physicians, volunteers, learners, patients, and visitors;
- Improve operational efficiency/capacity utilization;
- Provide flexible spaces to support changes in health care models, including response to public health and environmental disasters, technological changes, and changing demographics;
- Provide space for clinical and academic research that supports the core mandate of Children's & Women's; and
- Build a facility that is environmentally responsible (to a standard similar or equal to LEED® Gold) and supports a safe and healthy work environment.

The Project includes three phases:

Phase 1 – Relocation of Programs, Additional NICU beds and Demolition

- Three additional NICU beds and expansion of the UBC Medical School;
- New Clinical Support Building and new Child Care Centre; and,
- Demolition and Phase 2 site preparation.

Phase 2 - New Children’s Acute Care Centre

- New Acute Care Centre including: Emergency and Radiology Departments and UBC Medical School expansion space;
- 70 bed NICU and Labour/Delivery space; 28 bed PICU and 96 inpatient medical-surgical and 27 oncology inpatient beds;
- Oncology outpatient and day care program; and
- Additional parking and site work to access routes.

Phase 3 - Renovation to the existing Children’s Hospital

- Ten additional single room maternity care beds and upgraded existing single room maternity care units and ante - and post-partum and drug dependency units;
- Expansion of Rapid Assessment Area with four new high acuity observation beds; and
- Relocation of the Child Development and Rehabilitation outpatient services from Sunny Hill to renovated spaces in the existing Children’s Hospital.

3. Project Status and Preparations

Preparations for the project have included:

- Development of a Site Master Plan;
- Development of a Master Program for all Children’s and Women’s services;
- Development of a program by the UBC Medical School that supports academic services;
- Completion of a business case for three phases of the project confirming the range of service delivery and the approximate space requirements;
- A Class “C” project cost estimate using a quantity surveyor;
- Development of an order of magnitude operating cost projection;
- Development of a preliminary equipment list for all components;
- Analysis of project risks;
- Completed application for site rezoning;
- Consultations with the City of Vancouver and local residents; and
- Approval from Treasury Board/Cabinet to proceed with Phase 1 and to continue planning to the end of indicative design for Phases 2 and 3.

4. Costs and Benefits

Project Costs:

The total estimated capital cost of the Project is \$682.2 million. This estimate is based on the Master Program and Master Site Plan Phases 1 to 3 developed for the existing site. The BC Children’s Hospital Foundation is contributing \$150 million to the total capital cost. The

capital cost allocation by Phase is: Phase 1: \$90.5 million; Phase 2: \$546.1 million; Phase 3: \$45.6 million.

Project Benefits:

Solutions for many of the issues facing Children's and Women's will:

- Provide larger inpatient rooms to improve infection control, patient safety, minimize patient movement, and accommodate family-centred care;
- Provide inpatient rooms that are acuity flexible single rooms, which can be used in the event of natural or inflicted disasters;
- Increase the number of paediatric critical care beds (Phase 2), paediatric oncology beds (Phase 2), and neonatal intensive care beds (Phases 1 and 2);
- Improve integration of teaching and research into clinical spaces and patient flows;
- Provide a base for the provincial Child Health BC and Telehealth programs;
- Improve way finding on the campus;
- Incorporate the latest technologies to support excellence in patient care and service delivery;
- Provide efficient working conditions and anticipates health care provider shortages; and
- Provide space for programs that are appropriately sized to accommodate demand (to 2035) and ensure that the adjacencies are consistent with clinical best practices.

The new Acute Care Centre will be the first acute care facility that will fully integrate Lean design concepts in BC. This solution is part of a comprehensive, long-term vision of a true Children's and Women's campus that will include a Women's Hospital and consolidated Women's ambulatory services. The vision also includes a learning commons and administrative building.

The project will benefit the Children's and Women's site and patients and families by:

- Improved patient access and flow;
- Increased efficiency and capacity for inpatient services by consolidating and developing space designed to current paediatric care standards;
- Increased use of new technology;
- Increased opportunities for health human resource recruitment and retention;
- Ability to provide care for the sickest children, rather than referring outside BC, and
- Improved operational efficiencies through streamlined patient, provider and logistics flow.

5. Project Risks

Risks are related to project scope and functionality, schedule, budget and facility operations.

Scope and Functionality:

Scope and functionality risks arise when the building is not sized appropriately or does not have optimum design resulting in lower functionality, less efficient operations, and user dissatisfaction. Mitigation measures include:

- Extensive user involvement during the functional programming and indicative design process included as part of the next step in the Business Case development. User involvement will continue through the design phases ensuring higher user satisfaction, integration, and functionality; and
- PHSA has engaged an architect and design team to act as “shadow consultants” and advisors to the Project Team during parts of the project that will be procured as a Design Build or a PPP model. This will reduce the likelihood of oversights.

Schedule Risk:

Scheduling risks arise from a longer than anticipated procurement, design and construction process. Mitigation measures include:

- Engagement of Partnerships BC to assist with the procurement process. Procurement and legal documentation based on industry-accepted templates;
- A Request for Qualifications (RFQ) process used to short-list the best proponents for the Design Build and PPP portions of the work;
- Contractual documentation preparation ahead of time and append to the Request for Proposal (RFP). Proponents will be required to base their proposals on this documentation; and
- Indicative design drawings included in the RFP to support the procurement cycle.

Cost Risk:

Cost risks arise from higher project and construction costs than the budget. Mitigation measures include:

- The budget is based on a quantity surveyor report and contains cost contingencies;
- Estimates of construction escalation and inflation have been built into the budget based on current market forecasts, and includes contingencies; and
- Expected costs will be reaffirmed prior to release of the RFP and an affordability limit will be included in the RFP.

Operating Risk:

Operating risks arise when the facility is not maintained over the building’s lifecycle or the cost of maintenance is higher than anticipated. Risk may arise if building layouts fail to promote an optimized work flow in the operations of the departments included in this project. Mitigation measures include:

- Performance specifications included as part of the RFP for the Design Build and PPP procurement portions to ensure the expected performance and functionality;
- Engagement of the maintenance team included in the specification preparation and review of the Design Bid Build portions of the Project; and
- User groups and Lean consultants involvement in design meetings to maximize operational efficiencies in day to day operations of the departments.