



Project Report: Achieving Value for Money

Fort St. John Hospital and Residential Care Project



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partnerships
British Columbia

Purpose of this Document

Before entering into a public private partnership, Partnerships British Columbia (Partnerships BC) works with its clients to undertake an analysis of the value for money expected over the life of the partnership. Value for money is a broad term that captures both quantitative factors, such as costs, and qualitative factors, such as service quality and protection of public interests.

Value for money is one of six key principles guiding public sector capital asset management in British Columbia (B.C.). The others are:

1. Sound fiscal and risk management;
2. Strong accountability in a flexible and streamlined process;
3. Emphasis on service delivery;
4. Serving the public interest; and
5. Competition and transparency.

Since 2002, these principles have guided the B.C. public sector's approach to acquiring and managing assets such as bridges, roads and health care facilities. Ministries and other public bodies, such as health authorities, are encouraged to consider all available options for meeting their service objectives. Under the B.C. Province's (the Province) Capital Asset Management Framework, procurement options are analyzed and, after considering the qualitative and quantitative advantages and disadvantages of each, the one that overall best meets service delivery needs and makes the best use of taxpayers' dollars is chosen.

In some cases, the best option may be a traditional procurement approach—where assets are acquired entirely with taxpayer supported finance and operated exclusively by the public sector. In other cases, agencies may find innovative ways to meet their service needs. In all cases, agencies are publicly accountable through regular budgeting, auditing and reporting processes.

In all of its procurement processes, the Province is committed to a high standard of public disclosure as part of its accountability for the delivery of public projects. This report describes the need for the Fort St. John Hospital and Residential Care project, and the rationale, objectives and processes that led to its delivery, giving the public a clear sense of how and why the decision was reached to proceed with the project. It explains how value for money was measured and how it is expected to be achieved in the context of current market conditions. It provides a summary of the key aspects of the project agreement and describes the benefits of the project as a whole.

For more information on the Capital Asset Management Framework, go to:
www.fin.gov.bc.ca/tbs/camf.htm

For more information on partnership projects in B.C., go to: www.partnershipsbc.ca

Partnerships BC and the Northern Health Authority are accountable for the contents of this report, including the reasonableness of facts, assumptions and professional opinions that have been presented.

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1. Executive Summary and Highlights

In 2005, the Northern Health Authority (Northern Health) released a study that identified construction of a new hospital and residential care facility as a top priority for the city of Fort St. John to expand health care services, improve patient flows, address population growth demands and to improve the quality of health care in the Peace River North region.

Northern Health's 2007–2008 Strategic Plan responded to these challenges by identifying the need to construct a new replacement hospital and residential care facility as a way to significantly enhance the delivery of health care services.

The approval to proceed with the Fort St. John Hospital and Residential Care (FSJHRC) project was announced in 2008 to deliver a new 55-bed acute-care hospital and a 123-bed residential care facility for seniors. The project is well positioned to meet Northern Health's vision to lead the way in promoting health and providing health services for northern and rural populations. Construction of the FSJHRC project is scheduled to be completed by May 2012.

The FSJHRC project will be delivered using a Design-Build-Finance-Maintain (DBFM) partnership delivery model. The total project capital cost is \$297.9 million¹. The DBFM capital cost components are fixed at \$249.4 million, and will be delivered within the project's Affordability Threshold², utilizing a wide-equity financing model. In addition, there are other project elements that are required to support the FSJHRC project, such as medical and information technology (IT) equipment. These other project elements are budgeted at \$48.5 million and will be procured using a traditional delivery model, between 2009 and 2012.

Procurement Decision

A thorough analysis of a variety of procurement options, including both traditional and partnership delivery models, showed project objectives could best be met by procuring the project using a DBFM procurement model. Under this procurement model, the successful proponent designs, builds, finances and maintains the facilities.

Rigorous and Fair Selection Process

A two-stage procurement process was employed to select a preferred proponent for this project. This included Request for Qualifications (RFQ) and Request for Proposals (RFP) stages. The two teams that responded to the RFQ were both qualified and short-listed to participate in the RFP stage of the competition. Both teams represented a range of B.C., Canadian and international experience in design, construction, facilities management services and financing.

Following a rigorous evaluation process, ISL Health was selected as the preferred proponent with whom Northern Health negotiated the resulting Project and Funding Agreements.

A Fairness Advisor was engaged to monitor the competitive selection process and concluded that the process was fair, open and transparent. Reports of the Fairness Advisor are available on Partnerships BC's website at www.partnershipsbc.ca

Partnership Agreement Highlights

Under the DBFM agreement, ISL Health will design, build and finance a two-storey, 23,353 square-metre acute-care hospital, with an integrated services centre for food, laundry and material services, and a two-storey, 7,916 square-metre residential care facility for seniors. ISL Health will be responsible for completing and commissioning the facilities by May 2012.

¹The total project capital cost (as-spent dollars) increased from when the project was first announced in 2008. The factors that led to this increase are described in Appendix 1.

²Definition of Affordability Threshold described in Section 3: Competitive Selection Process and Results.

The project capital cost for the DBFM portion of the FSJHRC project is \$249.4 million, with financing arranged by the Province through Northern Health, the Peace River Regional Hospital District (PRRHD) and ISL Health. Once constructed, ISL Health will receive annual service payments (ASP) over the 30-year operating period. Part of the ASP is for a limited number of services that ISL Health will provide in the new facilities during the operating period, including: replacement and refurbishment of building elements and facilities management services, such as physical plant maintenance, grounds maintenance and security. Northern Health will continue to be responsible for providing all clinical services, food services, portering and other miscellaneous services.

Actual payments will be made monthly to ISL Health and are based on performance, facility availability and service quality. Deductions will be made for non-availability of the facility or failure to achieve defined quality service levels. For the first 12 months of operations, the ASP will be \$10.5 million (June 1, 2012–May 31, 2013), assuming no deductions.

The new facilities will be constructed on a portion of a greenfield 16-hectare site donated by the City of Fort St. John, located between 86th Street and the 79th Street Bypass road. Northern Health owns the site and the facilities.

Project Benefits and Innovations

The FSJHRC project is a major investment for Northern Health and the Province, combining an acute-care hospital and residential care facility into a single project to address growing population demands for expanded health care. The project delivers numerous benefits and innovations to best meet the health care needs of Fort St. John residents and surrounding communities, while delivering value for money to B.C. taxpayers. The project features modern facilities, equipment, services and supporting infrastructure, co-located at a single site.

Appropriate Risk Allocation

Under the traditional procurement delivery model, project design, construction, operation and maintenance are procured separately and as a result, the public sector retains significant risk. One of the key advantages of a partnership structure is the integrated procurement approach resulting in an allocation of risks to the party best able to manage them. For example, Northern Health is better able to determine whether the design of a hospital meets a health authority's clinical functionality needs, and so retains that risk. Similarly, ISL Health is better able to ensure the design will be cost-effective from an operational and maintenance perspective over the facilities' life cycle, and so accepts that risk.

Achieving Value for Money

Value for money is a broad term that captures both quantitative factors, such as costs, and qualitative factors, such as service quality. Partnerships BC looks at a broad range of factors in determining whether a project offers value for money to taxpayers, including a comparison of the final agreement to other benchmarks—in this case, the expected results of a hypothetical traditional delivery model (public sector comparator), and the expected results of the actual partnership delivery model.

Northern Health, with Partnerships BC, analyzed the net present cost³ (NPC) of the project and compared it to the NPC of the risk-adjusted, public sector comparator. Together, Partnerships BC and Northern Health determined that the NPC of the FSJHRC project, using a traditional delivery model, is an estimated \$327.1 million. The final agreement with the private partner, ISL Health, has an NPC of \$306.4 million. In financial terms, the final agreement is expected to achieve value for taxpayers' dollars of \$20.7 million.

³A net present cost (NPC) is the present value of a series of future cash flows to a common base date. It allows for a like-to-like comparison of cash flows that occur at different points in time, over a 30-year period.

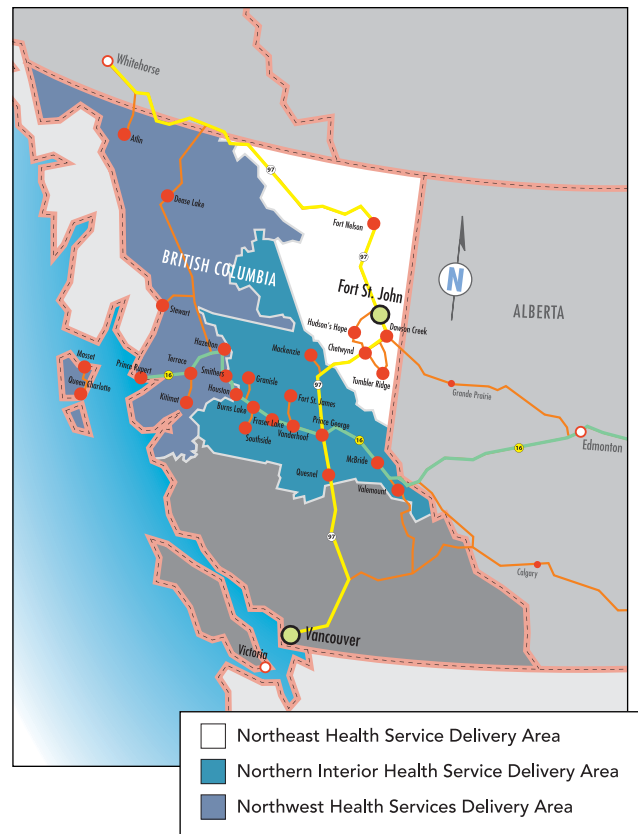
2. Project Background, Rationale and Objectives

Project Background

Northern Health is responsible for the delivery of health care across northern B.C. and is committed to responding to the people it serves, providing quality health care services, and seeking ongoing innovation to meet its commitment to be a model of excellence in rural health care. Northern Health covers almost two-thirds of B.C.'s landscape, bordered by the Northwest and Yukon Territories to the north, the B.C. Interior to the south, Alberta to the east, and Alaska and the Pacific Ocean to the west. In 2007, as part of the initial planning process, population studies revealed that more than 300,000 people live in northern B.C. and by 2010, population growth would rise to more than 348,000, with the highest projected area of growth amongst seniors.

Constructed in 1962, the existing 44-bed Fort St. John Hospital operates within Northern Health and is one of three hospitals serving northeastern B.C. The hospital in the City of Fort St. John is situated in the Peace River region, which is the largest regional service centre in northeastern B.C., servicing 61,000 people in the area. Population is expected to grow to 81,000 by 2036⁴, a 32 per cent increase. Despite several renovations and upgrades in the years since its original construction (1976, 1999 and 2000), the current facility will not be able to meet the future needs of Fort St. John and the Peace River North communities in the next decade. The hospital's flexibility in dealing with a growing range of issues is diminished, as its current configuration of departments reflects the health care processes of the 1960s.

While the existing hospital still provides exceptional health care services, opportunities remain to better serve the expanding needs of the region. A Northern Health study identified the pressures leading to the need for change and making the case for investment to replace and expand the



existing hospital and, to address the shortage of residential care beds for seniors. Northern Health identified the construction of a new 55-bed acute-care hospital and a 123-bed residential care facility as the preferred option.

Project Rationale: The Need for Change

A team of architects, engineers, analysts, and representatives of Northern Health and Partnerships BC prepared a business case to consider a major hospital replacement and expansion project, combined with a new residential care facility for seniors. The business case articulated the overall broad project objective as the need to expand and enhance the delivery of health care services to address capacity constraints at the existing hospital and population growth demands. The business case also identified several essential areas of need lacking in the existing facilities, which include:

⁴Population data compiled and released July 2009 by Ministry of Citizen's Services, B.C. Statistics, Regional Population Estimates and Projections.

Existing Fort St. John Hospital

- The facility is more than 47 years old and was built to serve a much smaller population—about 30,000 rather than the approximately 61,000 people that it currently serves;
- The current hospital configurations no longer support efficient patient flows or staff workflows;
- The condition of the building and the site location cannot accommodate further expansion and renovations would have little impact addressing capacity shortages;
- The existing site and adjacent land is not large enough to support hospital and complex care developments, which both need to be combined for support service efficiencies;
- All departments are undersized by current standards making the provision of services difficult;
- The emergency department is undersized for the volume of services delivered and layout is insufficient to handle increasing volumes;
- Existing operating rooms cannot accommodate increasing volumes or new technologies; and
- Outpatient services are limited to a confined area with no capacity to expand, creating operational inefficiencies.

Residential Care Expansion

- More residential care beds for seniors are needed to address the current shortage in northeastern B.C.;
- Some of the existing facilities in northeastern B.C. are not suitable for expansion or renovation.

Project Objectives

Northern Health's 2007–2008 Strategic Plan committed to improving the health of all the people of northern B.C. The plan is based on meeting the needs of a growing population and developing infrastructure that is supportive of this requirement. The FSJHRC project aligns with these objectives and enables a long-term growth strategy through facility and residential care capacity development.

In addition to the strategic plan, Northern Health developed a vision, and identified six core objectives and guiding principles for the procurement and

development of the FSJHRC project. The vision, objectives and guiding principles will continue to be at the forefront of thinking as the facilities are constructed and in operation.

Vision:

Northern Health leads the way in promoting health and providing health services for northern and rural populations.

Mission:

Through the efforts of our dedicated staff and physicians, in partnership with communities and organizations, we provide exceptional health services for Northerners.

Objectives:

1. Position Northern Health to meet growth in demand for health care services;
2. Provide adequate space to enable client focused care delivery and positive outcomes for patients, clinicians and staff;
3. Improve quality of care provided to patients of the Fort St. John and Peace River region;
4. Improve working conditions to improve safety, efficiency, and outcomes for patients, clinicians and staff;
5. Provide a practice and learning environment that will attract and retain quality health care professionals; and
6. In order to meet expanding health care need, complete the FSJHRC project by 2012.

Guiding Principles:

- **Responsiveness:** Northern Health will be responsive to the people and communities it serves and will seek partnerships with communities to achieve better health for northern people.
- **High Quality Health Services:** Residents and visitors to northern B.C. will have access to high quality health services in an appropriate setting.
- **Integration:** Northern Health will create a single health care organization to better meet individual needs through integration of services and resources.

- **Work Life:** Northern Health staff and medical staff members will enjoy a high quality of work life, including significant opportunity for learning.
- **Academic Health Care:** Northern Health will work with partners to expand teaching of the health professions and support research within northern B.C.
- **Sustainability:** Northern Health will operate within the public and private revenues available to it, without depleting the financial, physical or human resources required for the future.

The Project and Scope

In 2008, Northern Health received provincial approval for the construction of a new acute-care hospital, a services building (food, laundry, etc.) and a residential care facility. In April that year, the FSJHRC project was officially announced by the Province, to be procured using a DBFM partnership model, with debt and equity financing contributions by a private partner and the PRRHD. Scope of the project included:

- Design and construction of a 55-bed acute-care hospital;
- Design and construction of a services facility;
- Design and construction of a 123-bed residential care facility;
- The ongoing hard facilities maintenance and rehabilitation of the three facilities;
- A 30-year concession term, with the structure and term linked to availability and performance; and
- Appropriate risk sharing and compensation.

The facilities will be built to achieve Leadership in Energy and Environmental Design (LEED) Gold certification. The buildings will be designed to be high-performance and energy-efficient.

There are additional scope components outside of the public private partnership (PPP), elements such as medical and IT equipment and offsite services. These elements are necessary to support the new facilities and will be procured by Northern Health between 2009 and 2012 using a traditional delivery model. In the case of medical equipment, it is procured traditionally as it is needed shortly before construction is completed. These equipment costs are included in the overall project budget. Examples of some of the different types of large

equipment required to equip the hospital include, but are not limited to: Computed Tomography (CT) scanner, Bone Densitometer and Ultrasound. In the case of offsite services, Northern Health is delivering the required infrastructure in partnership with the City of Fort St. John.

All medical and clinical services will continue to be provided under the universal, publicly-funded health care system, consistent with the Canada Health Act. Patients will use their Care Card to obtain service, as in other public health care facilities in B.C., and will not pay for health care services that are medically necessary and covered by the Medical Services Plan.

Procurement Options Analysis

As part of the procurement planning process, and consistent with the Province's Capital Asset Management Framework, a range of traditional and partnership delivery models were considered:

- Design Bid Build
- Construction Management
- Design Build
- Build Finance
- DBFM

Northern Health, with assistance from Partnerships BC, selected the following two procurement models for comprehensive analysis during the business case phase:

- **Design Bid Build (DBB):** This is a traditional delivery model where an architect is retained by the owner to develop a detailed design (working drawings) for the facilities. Once the working drawings are complete, a tender call for a construction contract is issued. The lowest qualified price is selected and an industry standard construction contract is used. The construction contractor takes responsibility for constructing the building to the specifications detailed in the working drawings developed for the owner by the architect. The owner remains responsible for design errors and omissions and monthly progress payments to the contractor, whereas the contractor is only responsible for all construction errors.

Once the building is completed, the owner takes possession and maintains and operates the asset for its entire lifespan. The owner retains key design and construction risks, for example, schedule, construction cost, and life cycle maintenance costs.

In this model, since separate parties design, build and maintain the facilities, cooperation between consultants and contractors can be less than ideal, and the opportunities for integration in design, construction and maintenance are not maximized.

- Design Build Finance Maintain (DBFM):** This is a partnership model where the owner sets output specifications, invites competitive proposals to design, build, finance and maintain the asset, and then remits an annual service payment to the private partner after the asset is delivered. The private partner is responsible for designing, building and commissioning the facilities, arranging the project financing for its portion of the capital cost, providing facilities management services, conducting life cycle maintenance and meeting defined hand-back requirements at the end of the project term. The private partner assumes all construction (cost and schedule), design, long-term maintenance cost and operational cost risks.

The procurement options analysis concluded that the DBB and DBFM models both offered

advantages according to a number of criteria. The analysis determined that the DBFM model would best deliver the acute-care hospital and residential care facility on-time and on-budget, meet Northern Health's objectives, and provide the strongest overall value for taxpayers' dollars. In April 2008, the Province approved funding for the project to proceed as a PPP, using the DBFM procurement model.

Partnership Delivery Model

The partnership delivery model is designed to capture the strengths of both the public and private sectors, recognizing that private companies have always played an integral role in delivering public infrastructure such as bridges, highways and hospitals. Partnership agreements build on that history and clearly delineate areas of responsibility for both sectors over the life of a long-term, performance-based agreement. The partnership delivery model has successfully been used to deliver health care and transportation infrastructure projects in B.C.

For projects with certain attributes, the partnership delivery model adds value by transferring risk to the private sector and encouraging private sector innovation. A partnership delivery model ensures greater accountability for performance as ongoing payments made by the public sector are conditional based on the private partner continuously meeting performance standards.



Aerial view of the entrance to the hospital and residential care facility. In the background, a retention pond for excess storm water and snow-melt collected from the roof is part of the storm management program.

3. Competitive Selection Process and Results

Objectives

The competitive selection process had the following key objectives:

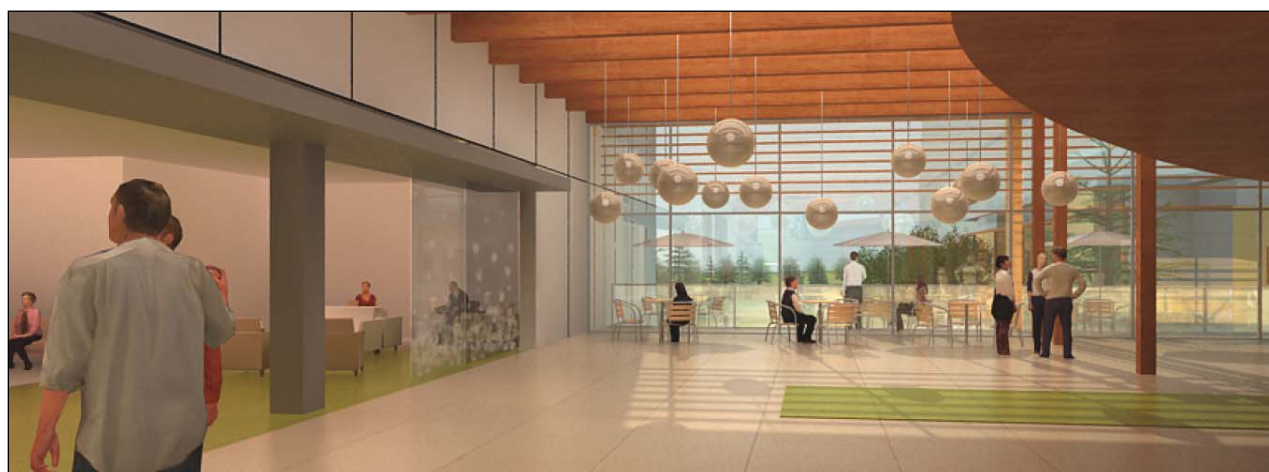
1. Select a qualified, experienced partner to design, build, finance and maintain the facilities;
2. Implement a fair, timely and competitive procurement process; and
3. Achieve value for money, from both a quantitative and qualitative perspective.

The successful proponent, ISL Health, was selected using a two-stage procurement process, which included an RFQ and RFP⁵. Two teams responded to the RFQ and both teams were identified as having the development, construction and financial capacity to undertake a project of this size and complexity. Therefore, both proponents were selected to participate in the RFP stage of the competition.

The table below lists the members of each of the proponent teams that responded to the RFP:

RESPONDENT	LEAD DESIGN	CONSTRUCTION	FINANCING	FACILITIES
ISL Health	<ul style="list-style-type: none"> • Cannon Design Architecture • H.H. Angus 	<ul style="list-style-type: none"> • Acciona Infrastructures Canada • Stuart Olson Constructors 	<ul style="list-style-type: none"> • Innisfree Ltd. • Acciona S.A. 	<ul style="list-style-type: none"> • Health Care Projects (Canada) Ltd. • ACML
Peace River Healthcare Solutions	<ul style="list-style-type: none"> • CJP Architects 	<ul style="list-style-type: none"> • Bird Design Build Ltd. 	<ul style="list-style-type: none"> • Bilfinger Berger Project Investments and Affiliates 	<ul style="list-style-type: none"> • Honeywell Ltd. (Canada)

The RFP invited the proponents to submit proposals to design, build, finance and maintain the FSJHRC project. A draft Project Agreement was issued with the RFP; during bilateral—or collaborative discussions—proponents had the opportunity to identify issues or provisions for amendment. These collaborative discussions covered three broad areas: design and construction, commercial/legal and facilities management.



Artist's rendering of the acute-care hospital lobby. The new facilities will incorporate extensive use of large windows for natural light, with views to the outdoors.

⁵The RFQ and RFP are both available on Partnerships B.C.'s website: www.partnershipsbc.ca

The table below outlines the competitive selection process and timelines:

PROCUREMENT STAGE	TIMING	OUTCOME:
Request for Qualifications (RFQ)	May 6, 2008 to July 8, 2008	The project was marketed provincially, nationally and internationally. Submissions from two respondents were evaluated and two short-listed teams were announced July 28, 2008: <ul style="list-style-type: none"> • ISL Health • Peace River Healthcare Solutions
Request for Proposals (RFP)	October 17, 2008 to February 26, 2009	The two short-listed proponents submitted proposals. This stage included bilateral and collaborative discussions with the proponents.
Selection of Preferred Proponent	March 31, 2009	After evaluation of the proposals, ISL Health was selected as the preferred proponent.
Project Agreement Finalization	July 16, 2009	A project agreement was signed by Northern Health and ISL Health.
Project Development to Substantial Completion	June 11, 2009 ⁶ to May 31, 2012	Construction and detailed design development commences for the acute-care hospital and residential care facility.

RFP Process and Evaluation of Proposals

Northern Health appointed an evaluation committee, with the assistance of topic-specific teams, that evaluated proposals according to the criteria and procedure as set out in the RFP. The evaluation teams consisted of individuals with specific expertise who were selected based on their ability to assist the evaluation committee.

There were three broad categories of evaluation criteria:

- Design and Construction
- Financial and Commercial
- Services

Evaluation teams were assisted by individual technical experts who were appointed by the evaluation committee to provide critical technical advice. These technical experts specialized in a variety of industry specific areas, including: architecture, structural, civil, mechanical,

electrical and geotechnical. More than 115 clinical stakeholders were involved, ensuring a cross-functional approach that facilitated better engagement and ownership of the outcomes for the facilities and their users. The overall objective of the evaluation was to select the proposal that provided the best health care facilities within the Affordability Ceiling and the terms of the RFP.

To ensure Northern Health received affordable proposals, the RFP included two types of affordability calculations:

1. Affordability Ceiling
2. Affordability Threshold

Affordability Ceiling

It was mandatory for the cost of proposals to be equal to or lower than the Affordability Ceiling. The Affordability Ceiling is the net present cost of annual service payments at an assumed cost of finance⁷. For the FSJHRC project, the Affordability Ceiling was set at \$203 million and both proposals satisfied this requirement.

⁶An early works agreement was executed June 11, 2009, in advance of Financial Close to maximize the short construction season in northern B.C. There are only approximately 100 frost-free days per year in Fort St. John.

⁷Assumed cost of financing measured as a project internal rate of return of 7.32%, discount rate was 7.32%.

Affordability Threshold

The Affordability Threshold is the NPC of the ASP at the market cost of financing. The Affordability Threshold is similar to the Affordability Ceiling, with the only difference being that in the Affordability Threshold calculation, the cost of finance is not assumed, but rather the proponents' actual cost of finance is used. The Affordability Threshold, like the Affordability Ceiling, was set at \$203 million; however, it was not a mandatory criterion of the RFP. Neither of the initial RFP submissions by proponents met the Affordability Threshold due to the high cost of financing.

Following a rigorous process, the evaluation committee issued a report recommending ISL Health as the preferred proponent. This recommendation was approved by the project steering committee and Northern Health's Board of Directors.

Innovative Financing in Adverse Financial Markets: A Technical Explanation

Innovation in Procurement

The RFP for the procurement of the FSJHRC project was released to the short-listed proponents in October 2008. At that time, the extent of the international financial crisis—as well as prospects for recovery—were uncertain. The priority of Northern Health and the Province in this environment was unchanged: to deliver an affordable project within scope, schedule and budget.

To acknowledge that the global financial markets were volatile and financing charges might increase to above-normal rates (that is, to levels higher than typically experienced in previous partnership projects), the procurement process incorporated an Affordability Ceiling. This approach was taken to ensure that above-normal financing charges could not result in proposals for the project exceeding the funding amounts approved by government. Proponents were required to assume specified (normal) financing rates in making their proposals, with the remainder of the affordability constraint allocated to the non-financing aspects of the project. They were also required to submit their expected actual financing rates.

The actual financing rates submitted by ISL Health in its response to the RFP reflected above-normal financing charges, primarily due to the high cost of bank debt as a result of the global financial crisis. As an innovative interim solution, a wide-equity financial structure was negotiated with ISL Health. In this solution, a larger amount of equity, approximately 20 per cent, was invested by ISL Health (typical PPP projects have around 10 per cent equity). The high cost of the proposed bank debt in their proposal was eliminated on account of being unaffordable.

The equity investment from ISL Health, in combination with funding from the Province to Northern Health and the PRRHD, are financing the project.

Impact of Wide-Equity Financing Structure on Risk Transfer

PPPs traditionally have private financing (senior lenders) such as bank debt, which typically assumes certain business risks beyond those assumed by equity investors. Examples include those risks with financial consequences that exceed the amount of equity invested (cataclysmic risks that are uninsured).

Northern Health's exposure to these risks is mitigated by the wide-equity solution, but not to the same extent as a traditional PPP structure with senior lenders. The wide-equity structure continues to provide a significant level of risk transfer beyond that of a traditional procurement.

In the wide-equity structure, a portion of the payments made to ISL Health (on its equity investment) are held until the last two years of the agreement to ensure they are motivated to provide high levels of service until the end of the agreement. This arrangement is similar to that required in PPP transactions involving senior lenders.

The senior lenders are also typically responsible to exercise due diligence and fiduciary responsibility over the private partner (ISL Health) under certain conditions. In the wide-equity model, Northern Health has assumed the typical due diligence role of senior lenders, which for this project will be applied during construction and the operating period. Northern Health has retained advisors to perform the due diligence functions normally undertaken by senior lenders.

Calculating Value for Money in a Wide-Equity Model

The quantitative value for money expected to be realized over the life of the Project Agreement has been defined in previous reports as the difference between (a) the present value of the maximum payments (annual service payments, or ASP) from the Province (or the Authority) under the Project Agreement, applying a discount rate⁸ that reflects the value to the Province (or the Authority) of risks transferred to the private partner and other benefits from the DBFM, and (b) the present value of the public sector comparator (PSC), adjusted for the expected

value of risks transferred to the private partner. It was deemed that a discount rate of 7.3 per cent would be appropriate for a project of this type, as it approximates the normal cost of capital, and eliminates the impact of the global financial crisis on financing charges at the time. The discount rate is within the range of discount rates used by Partnerships BC on previous PPP health care projects in B.C.

In the case of this project, the ASP does not pay for the entire provincial contribution to the project, as a significant proportion will come from Northern Health in the form of construction milestone contributions. Nevertheless, the present value of the overall cost of the project in the DBFM is calculated as the present value of the maximum ASP in the Project Agreement plus the present value of Northern Health's contributions using the discount rate of 7.3 per cent. This rate is reflective of the overall cost to Northern Health of transferring risks and achieving other benefits from the DBFM.

Northern Health's construction milestone contributions, rank senior to the equity contributions, and therefore have a significantly reduced risk exposure. As a result, Northern Health's construction milestone contributions are assumed to be financed over the life of the concession at the Province's long-term borrowing rate (5.2 per cent). When Northern Health's construction milestone contributions and the private partner's equity are combined, the overall project internal rate of return is approximately 7.3 per cent.

⁸Discount rate is the interest rate used in determining the present value of future cash flows.

Fairness Advisor

A Fairness Advisor, Joan M. Young of Heenan Blaikie LLP, monitored all evaluation activities and completed two fairness reports—one for each procurement stage—that were presented to Northern Health’s Board of Directors, prior to final ratification.

The Fairness Advisor was satisfied with the RFQ process, and in the RFP report the advisor noted that, *“I am satisfied that each of the two Respondent teams were provided with a fair opportunity to have their proposals considered by the evaluation committee in accordance with the terms of the RFP.”*

Project Agreement Finalization and Financial Close

A number of legal, financial and technical items were needed to meet Northern Health’s requirements for a final agreement to be reached. With no commercial lenders involved in the project, due diligence was undertaken by a combination of Northern Health’s advisors, which included legal counsel, the Authority Technical Advisor and Partnerships BC.

The Authority Technical Advisor, a party with experience undertaking similar engagements for commercial lenders, determined that the following were satisfactory to achieve the project on-time and on-budget and to meet output specifications:

- Planning and design documents
- Construction budgets
- Life cycle budgets
- Project schedule
- Design Build agreement

The procurement process was completed in fourteen months from the release of the RFQ on May 6, 2008 to Financial Close on July 16, 2009.

Competitive Selection Costs

The cost of the competitive selection process is factored into the value for money analysis. The total competitive selection cost for the FSJHRC project from approval of the business case to Financial Close is \$5.3 million, including partial compensation to the unsuccessful proponent (\$500,000). Other competitive selection expenses include the cost of developing output specifications, preparing procurement documentation and obtaining advice from external advisors.

Procurement Best Practices

As a centre of PPP procurement expertise, Partnerships BC has developed an extensive library of best practices. Partnerships BC continually transfers knowledge and experience gained from past projects to others, to improve efficiency and quality, and to streamline and expedite the procurement process to save time and money for the public sector. Partnerships BC’s representation on project steering committees facilitates the application of best practices across projects. For example, the use of best practice procurement documents across health care projects, including the FSJHRC project, has resulted in the reduction of certain procurement related costs. Procurement expertise is shared with ongoing knowledge transfer between projects in various sectors.

New best practices implemented in the FSJHRC project procurement included:

- Cost estimates based on indicative design completed prior to release of the RFP to provide greater certainty of the cost estimate; and
- Use of affordability measures—ceiling and threshold—in evaluation to clearly communicate the Province’s priorities to proponents.

4. The Final Project Agreement and Funding Agreement

Final Project Agreement Cost

The capital cost of the FSJHRC project, to be delivered using the DBFM partnership delivery model, is fixed at \$249.4 million.

Profile of the Private Sector Partner

ISL Health is a team that combines the strength, innovation and experience of B.C.-based companies with international firms to deliver the project. The members of the ISL Health team are:

Health Care Projects (Canada) Ltd. (HCP): HCP will provide senior project management services throughout the construction and operations phases ensuring long-term continuity for the people of Fort St. John.

Stuart Olson Constructors Inc. and Acciona Infrastructures Canada Inc.: The construction joint venture, made up of Acciona Infrastructure and Stuart Olson (50/50), is responsible for all the design and construction activities of the FSJHRC project. Stuart Olson Constructors is a Canadian company and Acciona Infrastructures is an international developer/construction company. The experience, capabilities, and resources of this joint venture will ensure that the partnership meets the technical and quality requirements of the project.

Cannon Design Architecture: Cannon Design, a Canadian company, is the lead design team for the project.

Angus Consulting Management Western Ltd. (ACML): ACML will perform the plant services and utility management services for the project.

Innisfree Ltd. and Acciona S.A.: The lead companies for the FSJHRC project are Acciona and Innisfree (50/50), with responsibilities shared by both firms throughout the term of the Project Agreement. Both companies are responsible for providing financing for the project and overseeing the works completed by the construction joint venture and the operator.

Key Terms of the Project and Funding Agreements

There are two separate agreements to keep the role of Northern Health as a funder—during the construction phase—separate from its responsibilities and obligations as project owner, under the specified terms of the Project Agreement. The private sector partner has incorporated a single purpose entity, ISL Health, to enter into the Project and Funding Agreements to undertake the project.



Artist's rendering of the entrance to the hospital and residential care facility. There will be 290 surface parking stalls for patients, visitors and staff.

Project Agreement

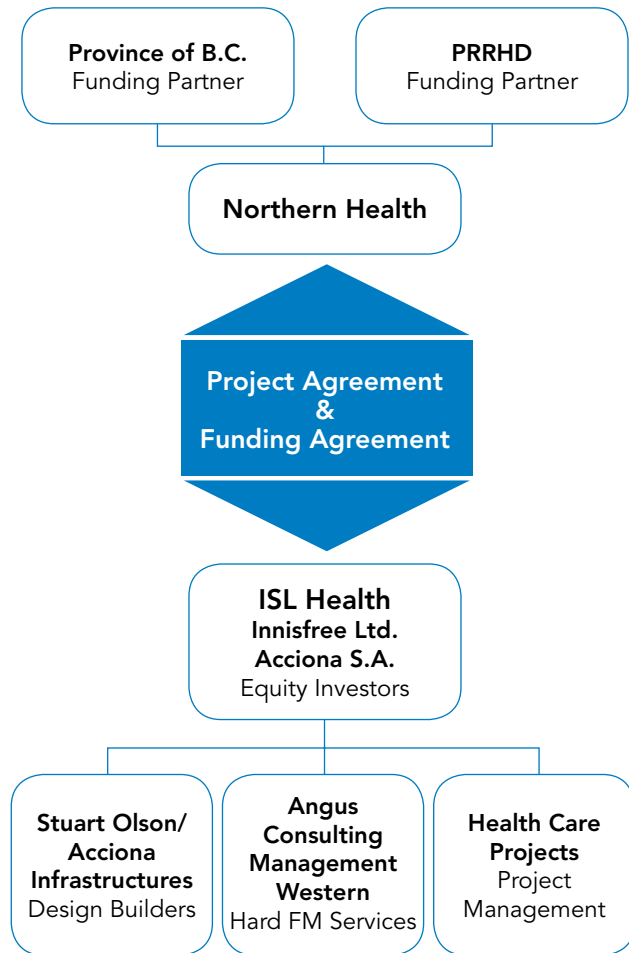
The Project Agreement is a contractual arrangement between ISL Health and Northern Health that spans the period from financial close to 30 years after construction is complete. It contains provisions to govern all aspects of the project except for Northern Health’s financial contributions during construction. ISL Health is responsible for the design, construction, operations and life cycle maintenance of the FSJHRC project as defined in the Project Agreement. ISL Health has been granted an exclusive license to undertake the construction of the project, and then a non-exclusive license to provide the services as defined in the Project Agreement.

Funding Agreement

The Funding Agreement is between ISL Health and Northern Health, which replaces the credit agreement that would have existed between ISL Health and commercial lenders in a traditional PPP. The term of the agreement is from financial close to service commencement⁹. The agreement permits Northern Health to contribute funds up to \$121.5 million during the construction period for eligible costs. Funding is scheduled monthly, based on satisfactory documentation and completed construction progress, which is monitored by the Authority Technical Advisor. This is the same method that commercial lenders employ when funding PPP projects.

In addition, the Funding Agreement specifies a number of positive and negative covenants that ISL Health must abide by. The agreement provides Northern Health with security in the event that ISL Health fails to comply with the positive and negative covenants during construction.

The organization chart below depicts the relationship between the signatories to the final Project Agreement and the Funding Agreement.



Peace River Regional Hospital District (PRRHD)

The PRRHD is contributing \$98 million, which includes a contribution of \$95.7 million to the project and \$2.3 million in financing costs. This PRRHD contribution will be paid monthly against construction progress and is part of the funding payments that ISL Health will receive during the construction period. Construction progress is determined by a third party: the Independent Certifier.

⁹Service commencement is defined as construction of the facilities is completed and ready for patients and residents.

Scope Contracted with ISL Health

ISL Health is responsible for all aspects of the design, construction and commissioning of the new facilities. The key features of ISL Health's design are as follows:

Acute-Care Hospital:

- A new two-storey, 23,353 square-metre building comprised of 55 acute-care beds (80 per cent single-bed patient rooms), an intensive care unit, endoscopy suite and two state-of-the-art operating rooms and a procedure room.
- Designated ambulatory clinic space for cancer care clinics and hemodialysis.
- Medical and surgical inpatient rooms.
- Maternity ward with single-bed patient rooms.
- Modernized emergency department with separate entrance and ambulance bay.
- 290 surface-parking spaces for hospital staff, patients and visitors.
- Academic space for the University of Northern B.C.'s Northern Medical Program (NMP). This is a partnership with the Faculty of Medicine at the University of B.C., and will include distance education rooms, library resources, and simulation facilities for doctors in residency programs, medical and nursing students.
- Flexible interior reconfigurations and an expandable building exterior to accommodate future health care demands.
- An integrated services centre for food, laundry and materials management used by both facilities, and for storage purposes for Northern Health.

Residential Care Facility:

- A new two-storey, 7,916 square-metre residential care facility comprised of 123-beds, with palliative and special care units;
- Elder friendly designs and environment;
- Individual rooms with en-suite bathrooms;
- Extensive use of large windows providing views to the outside landscape and community, with easy access for residents to outdoor courtyards and patios;
- Convenient access to diagnostic and other health care services in the acute-care hospital;
- Retail and community meeting space;
- Shared daily living and dining space;
- Designs and building features that embody the Eden Alternative¹⁰ design philosophy for long-term care; and
- Design innovations that allow for flexible interior reconfigurations and an expandable building exterior to accommodate future health care demands.

The acute-care hospital and residential care facility will be co-located on a single site and linked together through an indoor passageway. The overall building designs will ensure adequate space to enable client-focused care and excellent outcomes for patients, residents, visitors, clinicians and staff.

¹⁰The Eden Alternative was developed by Dr. William Thomas, a Harvard trained family physician. The program philosophy is to deinstitutionalize long-term care facilities by alleviating the three plagues of boredom, helplessness and loneliness.

Refinancing

In the event ISL Health restructures its portion of the financing of the project and there is a financial benefit, Northern Health will be entitled to receive a 70 per cent share of the financial benefit in excess of \$3 million. Amounts below \$3 million do not need to be shared with Northern Health.

Construction Schedule

ISL Health is responsible for completing and commissioning the FSJHRC project by May 2012.

Ownership

Northern Health owns the site and the FSJHRC facilities.

Facilities Management Services

ISL Health is required to provide facilities management services for the new facilities throughout the term of the Project Agreement.

ISL Health is responsible for delivering the following facilities management services:

- Plant services;
- Help desk services;
- Utility management services;
- Roads, grounds and landscape maintenance services; and
- Security.

Equipment

ISL Health is responsible for designing and constructing the acute-care hospital and residential care facility to accommodate specified equipment. Northern Health assumes the price and procurement risk for the majority of the specified medical equipment. ISL Health will coordinate the installation of equipment.

Term of the Project and Funding Agreements

The Project Agreement term is 33 years. This includes a construction period and 30 years of operation from the expected date of substantial completion, May 2012. The contractual expiry date remains fixed regardless of when service actually commences—that is, construction delays reduce the operating period while early delivery extends the operating period. At the end of the term, the facilities must meet the hand-back standards specified in the Project Agreement.



Artist's rendering of the hospital cafeteria. All work and rest areas will contain natural light through the use of large windows with views to the outdoors.

Performance-Based Payment Principles

Once construction is complete and occupancy permits are in place, Northern Health is responsible for paying ISL Health an ASP for 30 years.

Northern Health is responsible for making monthly payments to ISL Health based on performance, facility availability and service quality. ISL Health's performance will be continuously monitored throughout the operating period based on key performance indicators, and Northern Health may make deductions from the monthly payments if the Project Agreement standards are not met.

Payment deductions are based on the severity of the failure, the importance of the areas affected and their degree of availability. For example, unavailability events apply when a functional unit (room or department) fails to comply with the availability condition. The amount of the deduction for each unavailability event is between \$5 and \$600 per day. Service failures and their consequences are categorized as high, medium or low, with indexed penalties ranging from \$30 to \$1,000 per day.

Adjustments to Payments

The ASP may be adjusted to reflect specific circumstances as defined in the Project Agreement, including:

- **Indexation:** The capital component of the ASP will not be indexed. The facilities management services component of the ASP is indexed by the consumer price index (CPI) with periodic calibration to the market through benchmarking.
- **Variations:** If Northern Health requires ISL Health to make a physical change or amend the services, Northern Health can either make a lump sum payment, or have the cost of the change financed. If Northern Health chooses to have the change financed, the cost will be reflected in an amended ASP. The mechanism for developing and determining the cost of a variation is set out in the Project Agreement.
- **Change in Law:** If there is a discriminatory change in law, the ASP may be amended to leave ISL Health in no better or worse position than if that change in law had not occurred.
- **Compensation Events:** If an event occurs that warrants compensation of ISL Health, the amount may be provided by adjustment to the ASP. An example of a compensation event during construction would be the discovery of any human remains, relics or other articles or structures of historical or archeological interest.
- **Benchmarking:** Every three years, the costs of certain services will be compared and calibrated against the market cost of procuring similar services in the Fort St. John area. Changes in the cost of those services following this process will be reflected in an amended ASP.

Risk Allocation Summary

In projects that are procured using the traditional delivery model, the design, construction, operations and maintenance are rarely integrated and as a result, the public sector retains significant risk. One of the key advantages of the partnership delivery model is the sharing of the burden of risk. For example, the public sector is better able to determine the size and characteristics of the facility (e.g. number of beds: patients, level of care required, etc.) and retains the risk that the specifications for the project are adequate to meet the long-term needs of the region. The private partner, as they are responsible for the design, will be the party best able to accept the risk associated with the long-term maintenance costs of the building.

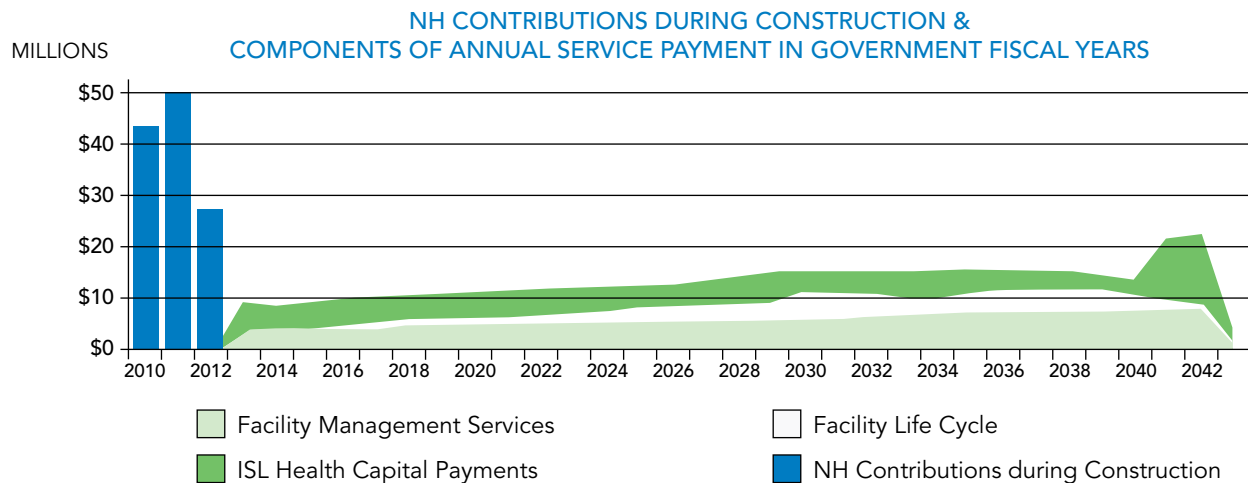
Some risks are shared, such as a relief event like an earthquake or flood. For every shared risk, the Project Agreement stipulates how the risk will be allocated, for example, by providing thresholds for each party's responsibility for a certain risk. The dispute resolution mechanism would apply in the event of any disagreements in the interpretation of the risk allocation.

This risk allocation is supported by the following provisions in the Project Agreement:

- Northern Health begins making performance-based payments to ISL Health only when an Independent Certifier confirms that the conditions for service commencement have been achieved;
- The expiry date of the Project Agreement is fixed, so any delays in completing construction will reduce payments to ISL Health, providing a strong incentive for timely completion;
- Provisions are in place for payment reductions if ISL Health does not meet agreed upon standards for facility operation and maintenance; and
- Step-in rights allow Northern Health to take over aspects if ISL Health fails to remedy a defect.

Financial Summary

The graph below demonstrates the cash-flows to ISL Health that meet the Affordability Threshold as defined in the RFP; Northern Health’s contributions during construction are assumed to be amortized over 28 years, during the operating period at 5.2 per cent. The graph is expressed in nominal dollars, which assumes 2.5 per cent inflation for facility management services. Payment projections assume no penalties, or deductions.



Accounting Treatment

B.C.’s Office of the Comptroller General, responsible for the overall quality and integrity of the government’s financial management and control systems, has established accounting guidelines for PPP projects. Based on the unique financial arrangement between Northern Health and ISL Health for the Project, the total project value for accounting purposes is \$297.9 million.

5. Ongoing Project Agreement Monitoring

The Project Agreement with ISL Health includes checks and public interest safeguards to ensure project delivery, performance and high quality standards. Monitoring spans every phase of the project, from Financial Close through design and construction, and operations and maintenance over the term of the agreement. There are a number of major phases in the project-monitoring schedule, with roles and responsibilities assigned to project participants at each stage.

Self Monitoring by the Partner

The Project Agreement is designed to motivate the partner to ensure delivery, performance and high standards of quality given the monetary consequences of not achieving these requirements.

Monitoring by the Northern Health Authority

Northern Health has retained an Authority Technical Advisor to provide services, up to the end of the construction period, in connection with funding payments during construction to be made by Northern Health to ISL Health under the Funding Agreement. These services are similar to those services ordinarily provided if commercial lenders were involved.

The Authority Technical Advisor will monitor the project's progress during construction on a monthly basis and as per the Funding Agreement, will report monthly to Northern Health that:

- Actual project costs have been incurred to date, and are broken down by major expense category;
- Details of any variances from the construction budget are reported;
- The estimated date of service commencement is preserved; and
- Remaining project costs to be incurred or already incurred, but not yet paid for, do not exceed available construction funds.

Design and Construction Phases

The Project Agreement stipulates that Northern Health will designate a design representative and a construction representative. These representatives have authority to act on behalf of Northern Health during the design and construction phases of the project, and to review, approve, accept or confirm ISL Health activities, in accordance with the Project Agreement. Northern Health representatives will have full access to the construction site, drawings and specifications, and report their observations to Northern Health. In addition, an Independent Certifier will monitor and report on the construction progress and will provide certification that the conditions for service commencement have been achieved.

Operations and Maintenance Phase

The Project Agreement stipulates that Northern Health must assign a representative to serve as a member of the Operating Period Joint Committee over the 30-year term of the partnership. The committee is a formal forum where parties consult and cooperate on all matters related to the facilities during the operational term.

In addition, ISL Health will be required to provide annual service plans and five-year maintenance plans to Northern Health over the life of the operating term.

Long-Term Project Agreement Review

Partnerships BC will work with Northern Health and the Ministry of Health Services to design a process for reviewing the Project Agreement at appropriate intervals from the start of operations. The review process will enable the Province to establish whether the Project Agreement is functioning as intended, and whether the expected benefits have been realized.

Hand-Back Survey

Three years prior to the expiry date of the operating term, ISL Health and Northern Health will jointly appoint and pay for an independent party to conduct a joint inspection and survey of the facilities in conjunction with the preparation of that year's regular annual service plan. ISL Health is responsible for meeting the defined hand-back requirements at the end of the project term.

Role of Project Management Office

Northern Health has established a Project Management Office responsible for leading the project oversight and monitoring efforts. An experienced Project Officer, along with experts in design and construction, clinical services, facilities management services, and technical requirements, will serve full-time roles in the Project Management Office. The Project Management Office is responsible for reporting to an executive steering committee on all aspects of the FSJHRC project, and is required to adhere to a detailed Project Implementation Plan based on Project Management Institute best practices.



The new facilities will be constructed on a portion of a greenfield 16-hectare site donated by the City of Fort St. John, located between 86th Street and the 79th Street Bypass road.

6. Project Benefits and Key Features

The design and construction specifications for the FSJHRC project were developed by evidence-based literature and research undertaken as part of Northern Health's vision to lead the way in promoting health and providing health services for northern and rural populations by delivering state-of-the-art health care facilities for the residents of Fort St. John and surrounding Peace River North communities. The design provided by ISL Health is expected to achieve Northern Health's six core objectives for the new facilities. The corresponding benefits and key features of ISL Health's design are outlined below.

1. Position Northern Health to meet growth in demand for health care services.

The new Fort St. John Hospital will include 55 acute care beds—80 per cent single-bed patient rooms—which is an increase of 11 more beds than currently provided at the existing hospital. The new hospital will be double in size, offering 23,353 square-metres of new clinical space; the existing hospital is 10,142 square-metres. In addition, the modern two-storey residential care facility for seniors will be 7,916 square-metres and will include 123-residential care beds for seniors.

The emergency department (ED) at the new hospital will be approximately two-and-a-half times larger than the ED at the existing hospital, to allow for an enhanced short-stay function, for patients requiring less than a 24-hour stay. The clinical decision unit has also been enhanced to allow for monitoring and decision making on how to address patient issues, such as diagnosis, cast room function, cardiac testing, home visits, etc. The balance of this space addresses all the necessary functions the current ED has, while reflecting a newer, more updated patient flow approach. In addition, there will be a separate maternity entrance and ward, with single room maternity care for expectant mothers and their families.

Both facilities will be designed using the universal-grid with standardized room configurations strategy, along with the accompanying advantages of modularization—a proven innovation in health care that promotes maximum flexibility for future expansion, while retaining clinical adjacencies with minimal disruption to existing hospital operations.

Upon completion of the new facilities, there will be approximately six greenfield hectares of undeveloped space available for future building expansion to address either future growth in health care demand, or other revenue generating opportunities.

2. Provide adequate space to enable client focused care delivery and positive outcomes for patients, clinicians and staff.

The hospital and residential care facilities have been designed to facilitate excellent patient and resident flows, and superior work flow for staff and supplies by applying "Lean"¹¹ based principles. With patient safety-first designs at the forefront, all materials used to construct the facilities will help to reduce slips, trips and falls, as well as minimize the spread of infections. The logical and intuitive flow for the layout of the facilities will incorporate reduced decision points with strong wayfinding signage that will reduce stress and confusion associated with navigating for residents, patients and visitors.

To promote a healing environment and provide patients with connection to nature, the new facilities will incorporate extensive use of large windows for natural light, with views from every room and plenty of access to the outdoors.

During the design planning stages, noise and reduced stressors were identified as a way to promote positive outcomes for patients and residents. Enhancements such as sound-absorbing construction materials will be selected, and zoning and placement of key rooms were taken into consideration.

¹¹ "Lean" is an integrated set of industrial principles applied to a project during the design process in order to eliminate waste, streamline processes and cut costs. Lean has been practiced in health care increasingly in the last 10 years with demonstrated results in quality improvement, cost and error reduction and worker and patient satisfaction.

3. Improve quality of care provided to patients of the Fort St. John and Peace River region.

The facilities are intended to deliver all key aspects of the functional program and to enhance health care capacity in the region. The facilities will be efficient and highly functional in the delivery of treatment, diagnostic and academic services to enhance patient and resident outcomes.

The design and layout of the facilities will minimize the spread of infection through a high number of single patient rooms, special attention to finishing details and materials to facilitate effective cleaning, and hand washing sinks in all rooms. A key feature of the hospital that will improve the quality of care will be a communications and technology services link to provincial health care networks, where doctors can share and exchange secure medical information, that will reduce the need for some patients to travel for specialized services.

To achieve efficiencies and maximize resources, both facilities will be linked together by an indoor passageway, eliminating the need to venture outdoors when transferring patients for health care services. The integration of the hospital and residential care facilities will allow patients, doctors, hospital staff and visitors to flow seamlessly back and forth, reducing exposure during the winter season, when climatic conditions can be severe.

4. Improve working conditions to improve safety, efficiency, and outcomes for patients, clinicians and staff.

The FSJHRC project will be state-of-the-art and will incorporate the latest innovations in health care technologies. It is expected that these facilities will attract and retain staff by creating a working environment in which doctors, nurses and other health care providers will have a high level of job satisfaction, with a reduced staff turnover rate resulting in excellent patient outcomes. There are a number of elements to ensure a safe and caring facility and examples include:

- Well defined separate spaces for patients and residents, as well as for caregivers and clinicians. The majority of patient rooms are single-bed for greater privacy and for family to assist with patient care.

- Ceiling lifts in all patient and resident rooms.
- Excellent patient monitoring capability through improved views of the patient by staff, lowering the risk of patient and resident injury related to falls.
- Proper wheelchair turning-circle in room and en-suite washroom.
- Provision of clear sight lines to the window from the patient or resident bed to support caring approach and enhancing the healing environment (light, airy, connection to nature).
- Functional separation of inpatients, diagnostic services and supportive services so that the mixing of patient types and services is avoided.
- An ergonomic and clinically efficient workplace that will include the careful location and decentralization of supplies, limit staff walking distances, increase care time for nurses and other care givers. The longest travel time between key departments will be less than two and a half minutes.

5. Provide a practice and learning environment that will attract and retain quality health care professionals.

The new hospital includes academic space for the University of Northern B.C.'s NMP, a partnership program with the Faculty of Medicine at the University of B.C. The NMP was established in 2004 to address the shortage of doctors practicing in northern B.C. communities. Students and residents that will be placed in Fort St. John working towards their medical degrees or residency will benefit from the onsite location and convenient access to the hospital and residential care facilities. The modern facilities will help further attract and retain these doctors and clinicians. Available academic space will also be used for simulation facilities and other health care professional education, such as nursing.

Every staff work and rest area will contain natural light and will be aesthetically pleasing in design. The site of the new facilities will tie in with local municipal walking and bike trails and provide ample staff parking.

6. To meet the urgent health care need, complete the new hospital by 2012.

A strategic schedule and work plan that is responsive to the climate, material and labour supply in Fort St. John has been created and implemented. In addition, an early works agreement was executed in June 2009 to take advantage of the short construction season in northern B.C. In addition, time-saving construction techniques employed to meet the project schedule include the use of pre-fabricated wall panels and bathroom units assembled off-site.

The following three objectives were identified by the Province as key deliverables for the FSJHRC project. The design provided by ISL Health is expected to achieve the Province's objectives for the new facilities. The corresponding benefits and key features of ISL Health's design are outlined below.

i. The facilities must be designed and built to LEED Gold standards

ISL Health has committed to meeting the LEED Gold standard and intends to undertake the following in support of that commitment:

- A construction waste management plan to achieve a 75 per cent reduction in construction waste sent to the landfill;
- Use of pine beetle-killed wood in the construction of the residential care facility, and for design features in both facilities—externally and internally;
- Storm water management, including a storm water wetland rainwater collection landscape feature and bio-swales;
- A building that is 25 per cent more efficient than that called for by the Model National Energy Code for Buildings;
- High indoor air quality through the use of low emitting materials (adhesives, sealants, paints, coatings and carpets); and
- Provision of two hybrid vehicles on site for staff use.

ii. The project must meet the Affordability Ceiling and Threshold

The final negotiated deal with ISL Health met the Affordability Ceiling and Affordability Threshold, and provides value for taxpayers' dollars.

iii. Use of wood in provincially-funded buildings

ISL Health will use extensive wood in the construction of the residential care building, and for interior and exterior design features in both the hospital and residential care buildings.

Additional Community Benefits

Sustainable Community

Approximately six hectares of the 16-hectare project site will not be developed, thereby providing land for potential future development. The City of Fort St. John is planning a major sustainable community to the north of the site. Plans include commercial and residential development, combined with community spaces.

Local Economic Benefit

In addition to the health care benefits offered, there will be a number of positive economic benefits for the local economy. The FSJHRC project is the largest public sector construction project in the history of Fort St. John and will create significant new job opportunities, engage the use of local suppliers and work force. In addition, the project will create new high-paying, long-term employment at the hospital. It is expected that the new state-of-the-art facilities will attract and retain doctors and clinical staff who will want to practice health care in a rural northern community.

Off-Site Services

Northern Health, in partnership with the City of Fort St. John and its civil works division, is providing all of the off-site services, such as water, sewage and roads to connect to the project site. These activities will have a positive impact on employment and will also serve to support new development in the surrounding area.

7. Achieving Value for Money

Value for money is a broad term that captures both quantitative factors such as costs, and qualitative factors such as service quality. Partnerships BC looks at a broad range of factors in determining whether a project offers value for money to taxpayers, including comparison of the final Project Agreement to other benchmarks. For this project, the expected results of a hypothetical traditional delivery model, and the expected results of the actual partnership delivery model were compared.

Quantitative Benefits

Financial value for money is the difference between the NPC of the ASP that will be paid to ISL Health over the life of the Project Agreement and the expected NPC of the capital cost, facility management and operating costs, life cycle maintenance costs and transferable risk costs included in the public sector comparator. The RFP included an Affordability Threshold, set at \$203 million. The wide-equity financing approach was used to deliver the project within the \$203 million amount.

The NPC of the FSJHRC project delivered traditionally (the PSC) is an estimated \$327.1 million.

The final Project Agreement, utilizing the wide-equity model, with ISL Health has an NPC of \$306.4 million, of which the Affordability Threshold is only one part. A high-level comparison of these numbers is provided in the graphic below. In financial terms, the final Project Agreement is expected to achieve value for taxpayers' dollars of \$20.7 million, when compared to the PSC.

The significant factors contributing to value for money include efficiencies from competitive construction pricing, integrating the design, build and finance teams and an efficient allocation of risk. The risk adjustments were made following Partnerships BC's quantitative analysis best practices¹². The NPC figures above were developed using a discount rate, which represents the costs of capital over time taking into account factors such as inflation and interest rates. The discount rate used for the calculation of value for money is 7.32 per cent. Sensitivity analysis of the discount rate showed that the NPC of the final Project Agreement would have been approximately \$27.3 million less than that of the public sector comparator if the discount rate was 50 basis points lower, and about \$14.7 million less if the discount rate was 50 basis points higher.



Artist's rendering of the residential care facility exterior. Plenty of access to outdoor courtyards and patios providing an important connection to nature and leisure activities for residents.

¹²A guidance paper is available at Partnerships BC's website: www.partnershipsbc.ca

The table below describes the NPC comparison. All numbers are in millions of dollars as of March 31, 2009, as per the RFP:

	FINAL PROJECT AGREEMENT	PSC
ASP Payment to ISL Health (Affordability Threshold)	\$ 202.2	
Capital Costs		\$ 198.7
PRRHD Contribution to Capital Cost	\$ 85.6	
Life Cycle and Operating Costs		\$ 78.7
Risk Adjustment	\$ 8.1	\$ 38.3
Competitive Neutrality Adjustment (includes GST, insurance and public sector procurement costs)	\$ 10.5	\$ 11.5
Total	\$ 306.4	\$ 327.1
Cost Differential		\$ 20.7
Percentage Savings from PSC		6.3%

Qualitative Benefits

Innovative Uses of Wood

ISL Health has partnered with Canfor, an integrated forest project company with a sawmill located in Fort St. John, in developing an innovative engineered laminated timber structural deck system that is planned for the construction of the residential care building. The structural deck system uses three layers of cross laminated two-by-six beetle-killed pine wood. This is a wood product never used in B.C. before. Compared to standard concrete options, this construction system uses less than half the amount of concrete by volume.

The wood product has passed testing to verify its structural soundness, but more testing is required before it can be manufactured in quantities for construction use. There will be many more potential opportunities for the use of wood throughout the project, both for construction and aesthetically for interior design. There is significant opportunity for an effective use of beetle-killed wood products in the FSJHRC project.

Steam Plant

During the course of negotiations, ISL Health proposed an alternative to the high pressure steam plant required in the output specifications. It involved the use of different equipment, which does not require high pressure steam from a central plant, thereby eliminating the need for high pressure boilers. This resulted in savings for ISL Health, of four full-time equivalent facility maintenance employees that would have been required to monitor the high pressure steam plant 24-hours a day, thereby being unavailable to respond to other facilities maintenance issues. The funds associated with the reduction in steam plant equipment and four full-time equivalent employees, will be used to deliver additional scope during construction and additional services during the operating period.

Integration and Connectivity of Facilities

ISL Health's innovative and forward-thinking design includes an indoor passageway linking the hospital and residential care facility together. Patients, visitors, clinicians and staff will be able to transfer seamlessly between the two facilities without exposure to the outside weather during winter, and will benefit from reduced travel times.

Rather than building a stand-alone facility adjacent to the two facilities, the support services centre will be integrated within the acute-care hospital. This integration will help expedite the delivery of services and supplies to the hospital and residential care facility.

Responding to the Future

ISL Health presented an exceptional future expansion strategy that will permit strategic additions to the buildings so that key departmental expansions can occur in a logical fashion, while at the same time, minimizing disruption to existing operations. ISL Health's plan for future expansion was beyond what Northern Health had originally contemplated or thought was possible. In addition, the interior of the facilities have been tactically designed to allow for the ability to expand key departments without sacrificing clinical adjacencies. The benefits of ISL Health's design provide Northern Health the capability of responding to future changes in demand for health care services.

First Nations Treaty 8 Tribal Association

The Aboriginal community is very supportive of the FSJHRC project and represents a significant segment of the population in Fort St. John and surrounding communities. Representatives from local First Nations groups are involved in the design of a spiritual room/gathering place that can accommodate traditional ceremonies, such as smudging. The smudging ceremony involves the burning of clippings from dried herbs. An independent ventilation system will be installed so smudging ceremonies can take place without affecting other areas of the building.

PPP projects typically ensure the following qualitative benefits are achieved:

- **Competition and innovation:** the competitive nature of the bidding process encourages the private partner teams to develop innovative solutions in all aspects of the project from design, construction and through to operations.
- **Schedule and cost certainty:** the private partner is only paid once the facilities are available for use, thereby providing a financial incentive to complete the project on-time and on-budget.
- **Integration:** because the private partner is responsible and accountable for the design and construction, long-term maintenance and rehabilitation of the facilities, there are opportunities and incentives to integrate these functions in order to optimize performance of the facilities over the duration of the Project Agreement.
- **Life cycle maintenance:** the private partner is responsible and accountable for ensuring the facilities are maintained and rehabilitated over the duration of the Project Agreement, with financial penalties for non-compliance.

Appendix 1 – Changes in the Project

The FSJHRC project team incorporated improvements and refinements to the project during the planning and design phase following approval of the original business case in 2007.

The project was originally announced in spring of 2008 with an estimated total project capital cost of \$268 million. As a result of the changes described below, the final total project capital cost is fixed at \$297.9 million, an increase of \$29.1 million. These costs were incorporated into the Affordability Ceiling that was in the RFP at the time of its initial release. The capital costs upon which the Affordability Ceiling is based, are supported by third party validation from a quantity surveyor.

- **LEED Gold Certification:** A provincial policy introduced in late 2007 requiring all capital projects built to achieve LEED Gold certification required the cost of the project and indicative design to be re-assessed in advance of the RFP release.
- **Off-site services:** The scope and extent of off-site services was unknown in 2007, but was clarified in advance of issuing the RFP through consultation with the City of Fort St. John.
- **Procurement schedule:** The release of the RFP was delayed by approximately two months and the procurement period was extended by five weeks to allow proponents adequate time to respond to the RFP, which ultimately resulted in stronger, quality bids.
- **Project schedule:** The construction schedule for the facilities is five months longer than originally estimated. The revised construction schedule takes into account certain aspects of construction that cannot be undertaken during the winter months in Fort St. John. Construction in the north is limited due to severe winter conditions; there are only approximately only 100 frost-free days per year.

