Project Report

Surrey Memorial Hospital Redevelopment and Expansion: Emergency Department and Critical Care Tower

AUGUST 2011

BRITISH COLUMBIA

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Purpose of this Report

The purpose of this report is to provide key information about the Surrey Memorial Hospital Redevelopment and Expansion: Emergency Department and Critical Care Tower Project to the public. This report describes the need for the project and how it will be delivered. The report explains how different procurement delivery methods were analyzed and how project benefits and innovations are expected to be achieved. A summary of the key aspects of the project agreement is also provided.

In all of its procurement processes, the Province is committed to a high standard of disclosure as part of its accountability for the delivery of public projects. Ministries, Crown corporations and other government agencies are publicly accountable for projects through regular budgeting, auditing and reporting processes.

The Surrey Memorial Hospital Redevelopment and Expansion Project Board, which includes representatives from the Ministry of Health, the Ministry of Transportation and Infrastructure, Fraser Health and Partnerships BC, is accountable for the contents of this project report, including the reasonableness of facts, assumptions and professional opinions that have been presented.

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1. Executive Summary and Highlights

3,760
CONSTRUCTION-RELATED JOBS

48
BASSINETTES FOR HIGH-RISK BABIES

5,350
-SQUARE-METRE EMERGENCY DEPARTMENT

Surrey Memorial Hospital (SMH) is the largest acute care site in the Fraser Health region, with more than 450 acute care beds and the busiest emergency department in the province. Surrey Memorial Hospital was originally built in 1959 when the population of Surrey was close to 50,000. Since then, there has been rapid population growth in Surrey, with the city's population at approximately 474,000 and growing by 9,000 people per year. The expansion and redevelopment of Surrey Memorial Hospital is needed to improve access to care for patients in this large and fast-growing region.

Investments in the new emergency department and critical care tower at Surrey Memorial Hospital will help reduce emergency room congestion, increase the number of acute care beds, establish a centre of excellence in care for high-risk newborns, provide a larger adult intensive care unit, create improved space for the University of British Columbia (UBC) clinical academic campus at Surrey and help attract and retain health care professionals.

The expansion at SMH will also include renovations to the existing hospital. Those renovations will add inpatient beds, create an expanded family birthing unit, including a second dedicated maternity operating room, and expand the pharmacy and sterile processing unit.

As part of the Province's commitment to environmental sustainability and green buildings, the new emergency department and critical care tower will be designed and built to achieve LEED Gold certification. It will also maximize the interior and exterior use of wood, in keeping with the Wood First Act announced in September 2009.

The total project capital cost is $512 million, which includes the emergency department and critical care tower (partnership delivery method) and renovations to the existing hospital (traditional delivery method). The emergency department will be completed in 2013, and the critical care tower will open to patients in 2014.

The procurement decision to use the partnership delivery method was based on a thorough analysis of procurement options, including both traditional and partnership delivery methods. The analysis undertaken indicated that project objectives could best be met by using the partnership method.

Following a competitive process based on the principles of openness, transparency and fairness, Integrated Team Solutions was selected as the private partner to design, build, finance and provide facility management services for the emergency department and critical care tower.

Integrated Team Solutions is responsible for delivering:

- A new, 5,350-square-metre emergency department that will create additional capacity and help reduce emergency room congestion;
- A neonatal intensive care unit comprised of 48 bassinettes to care for high-risk babies together with a dedicated pediatric pharmacy;
- An adult intensive care unit accommodating 25 beds;
- Three medical/surgical units that can accommodate up to 36 beds of which 20 are high-dependency beds;
- A clinical academic campus;
- A rooftop helipad;
- A new, 2,270-square-metre purpose-built laboratory; and
- A total of 444 parking stalls (surface and underground).

Integrated Team Solutions will also provide a range of facilities management services to the new facility, including: plant services, housekeeping and waste management services, and help desk services.

Fraser Health will pay Integrated Team Solutions a monthly service payment; those payments are based on performance, facility availability and service quality. Service payments can be reduced if Integrated Team Solutions does not meet the high-quality standards contained in the project agreement.

The final partnership agreement between Fraser Health and Integrated Team Solutions is expected to achieve value for taxpayers' dollars of $31 million (net present cost) compared to the traditional procurement delivery method. Additional benefits from the partnership delivery method include:

- 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 and construction through to operations.
- Schedule certainty: The private partner receives a significant portion of their payment through monthly availability payments once the facilities are available for use, thereby providing a financial incentive to complete the project on time.
- Cost certainty: The project agreement is a fixed-price contract.
- Integration: The private partner is responsible for the design and construction, long-term operations, maintenance and rehabilitation of the asset. This creates opportunities and incentives to integrate these functions 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 otherwise the annual service payment may be reduced.

8 -STOREY CRITICAL CARE TOWER

25 BEDS FOR ADULT INTENSIVE CARE UNIT

CAPITAL BUDGET

$512 MILLION

2. Project Benefits and Key Features

The Surrey Memorial Hospital Redevelopment and Expansion: Emergency Department and Critical Care Tower is designed to deliver better health care for children and families in Surrey. The project will help reduce emergency room congestion, increase the number of acute care beds, establish a centre of excellence in care for high-risk newborns, create improved space for the UBC clinical academic campus at Surrey and help attract and retain health care professionals.

Benefits for Patients

An expanded emergency department at Surrey Memorial Hospital (SMH) will help ease congestion in the busiest emergency room in the province. The new emergency department will be much larger than the current emergency department and will include a separate children's emergency room, a specialized mental health zone, an enhanced minor treatment unit and an improved area for acute patients. These enhancements will substantially improve SMH's efficiency, provide the best emergency care to patients and place the hospital in a prime position to continue attracting and retaining the finest medical expertise, supported by the latest medical equipment and technology.

As well, there will be more beds for patients who are recovering from surgery or illness, including high-dependency beds and an adult intensive care unit. The increase in beds will help meet the acute care needs of Surrey, and will play a crucial role in decreasing emergency room congestion.

Benefits for Children and Families

Surrey Memorial Hospital will become a new, regional centre of perinatal excellence providing specialized care for high-risk newborns, children and their families. Located within the new eight-storey tower, the perinatal centre will include a neonatal intensive care unit (NICU) needed to treat premature infants and newborns in critical distress. Family-centred care will be the focus of the expanded facility and families will play an integral role in the care team.

Benefits for Health Care Professionals

Additional academic space will be created to support the growing partnership between Fraser Health and the University of British Columbia medical school. When complete, SMH will become an important part of the Province of British Columbia's (the Province) capacity to train new doctors and health care professionals for the future.

Other Benefits

A new rooftop helipad will be located on the top of the new tower and more than 440 surface and underground parking stalls will be added.

Environmental Benefits

The new facility will be designed and constructed to Leadership in Energy and Environmental Design (LEED®) Gold standards as part of the Province's commitment to environmental sustainability and green buildings. In addition, the facility will be designed to be energy efficient and is expected to result in a 47 per cent reduction in energy consumption compared to the Model National Energy Control Building.

Wood First

In 2009, the Province introduced the Wood First Act to facilitate a culture of wood by requiring the use of wood as the primary building material in all new provincially funded buildings, in a manner consistent with the British Columbia Building Code. The design of the new facility features many innovative uses of wood, both structural and decorative, resulting in a warm and natural environment. The use of wood is most prominent in the exterior of the facility and the interior lobby.

Economic Benefits

Construction of the emergency department and critical care tower is expected to create economic opportunity throughout the region generating approximately 3,760 jobs.[1]

[1]BC Government News Release, "Surrey Memorial Hospital Expansion Moves Ahead", October 7, 2010

3. Project Background, Objectives and Scope

Surrey Memorial Hospital is the largest acute care site in the Fraser Health region, with more than 450 acute care beds and the busiest emergency department in the province. SMH currently provides a full range of primary and secondary level hospital services to the community of Surrey and the wider South Fraser area. In addition, the hospital provides selected tertiary-level services to the entire Fraser Health region. A number of key issues demonstrate the urgent need for additional emergency, maternal/child and inpatient capacity for the Surrey community.

Population and Demographic Issues

Fraser Health is the largest health authority in British Columbia, serving 36 per cent of the province's population. Between 2011 and 2020, Fraser Health's population is expected to grow by 18 per cent to more than 1.9 million people, resulting in Fraser Health serving an even greater percentage of British Columbia's population. The Surrey Local Health Area (LHA) has the largest population of all the communities served by Fraser Health and it is projected to grow at one of the fastest rates of any of the LHAs within the Fraser Health region. Surrey Memorial Hospital was originally built in 1959 when the population of Surrey was close to 50,000. Since then, there has been rapid population growth in Surrey, with the city's population at approximately 474,000 and growing by 9,000 people per year. In addition to the massive population growth within Surrey, the demography of the Surrey community presents further challenges when compared to other LHAs.

Infrastructure Constraints

Surrey Memorial Hospital was built in several stages and different parts of the facility range in age from 11 to 52 years old. The older parts of the facility have numerous deficiencies, including a shortage of clinical space, clinical support space and non-clinical support space, a lack of storage space for supplies and equipment, undersized program areas compared to current standards and inefficient functional departmental layouts. For example, the emergency department was originally built to handle 44,000 visits annually but it currently handles in excess of 90,000 visits annually.

Repatriation of Health Services

Population growth in the Fraser Health region combined with efforts to reduce people's impact on the environment will put additional pressure on providing full health services closer to home. For example, children from the Fraser Health region represent the largest volumes for BC Children's Hospital in inpatient and outpatient services, including surgery and clinic visits (with exception of emergency).

Other Health Care Investments

Complementing the expansion of SMH is the development of the new Jim Pattison Outpatient Care and Surgery Centre. Located just one kilometre from SMH, the new outpatient facility will become an integral part of the care delivery system in Surrey. This new facility is the first of its kind in British Columbia to combine day surgery and diagnostic procedures with specialized health clinics and programs, all within one building. Currently, SMH handles almost 134,000 outpatient clinic visits a year and performs more than 94,000 outpatient diagnostic procedures. The majority of these services will move from SMH to the new Jim Pattison Outpatient Care and Surgery Centre thereby significantly reducing congestion and pressure at SMH.

Objectives

Fraser Health developed the following objectives for the emergency department and critical care tower:

- **Master planning:** including how the facility integrates into the SMH campus, provides a highly visible main entry, creates a strong urban presence and complies with regional health care standards.
- **Optimized outcomes:** including how the design facilitates the delivery of efficient and effective workflow and processes and the elimination of waste within both clinical and non-clinical operations, supports Lean health care, standardizes layouts where appropriate, and supports innovative and collaborative methods of working.
- **Adaptability, flexibility and expandability:** including the ability to respond to evolving changes in health care delivery.
- **Sustainability:** including how the design and construction will use design methods, building materials, operational practices, energy and life cycle considerations that promote sustainability.
- **Environmental quality:** including how the design addresses family and patient centered design, best practice infection control standards, safety for patients and staff, ergonomics, healing environment, universal accessibility and a simple, intuitive wayfinding system.

Scope

The Surrey Memorial Hospital Redevelopment and Expansion includes two components:

- **Renovations to the existing hospital** will add inpatient beds; create an expanded family birthing unit, including a second dedicated maternity operating room; and will expand the pharmacy and sterile processing unit. These renovations will be procured using the traditional delivery method and are required to support the new emergency department and critical care tower.
- **New construction** of an emergency department and critical care tower.

The focus of this project report is to provide information about the emergency department and critical care tower (the project). Other renovation components related to the redevelopment and expansion of Surrey Memorial Hospital are beyond the scope of this project report.

4. Project Delivery Options

The Ministry of Finance has mandated through its Capital Asset Management Framework (CAMF) that the following principles guide all public sector capital procurement:

- Fairness, openness and transparency;
- Allocation and management of risk;
- Value for money and protecting the public interest; and
- Competition.

Fraser Health engaged Partnerships BC, and in accordance with CAMF, a procurement options analysis was undertaken to determine an optimal procurement method for the project.

Methodology

The evaluation of procurement options is mainly concerned with identifying the method of delivering the project that will result in the greatest value for money on both a financial (quantitative) and qualitative basis. In financial terms, value for money is established by calculating the estimated cost of a project, based on a particular public private partnership (PPP) procurement method, and comparing it to the estimated cost if the project were procured entirely by the public sector using a traditional method.

The evaluation of procurement options involves two main steps. The first step identifies key procurement objectives, and provides a qualitative assessment of a wide range of available procurement options including both traditional and partnership methods. The assessment of these procurement options is intended to identify the most appropriate traditional and partnership methods, which then form the basis of comparison.

The second step in the assessment involves a more detailed, quantitative analysis that compares the partnership method to a traditional procurement method. To do this, a comprehensive risk analysis is conducted and financial models representing the two procurement methods are developed and compared. A financial model is developed for a project based on a traditional procurement method, also known as a public sector comparator (PSC), and is compared to a financial model created based on PPP procurement, also known as a shadow bid. It is called a shadow bid because it is an estimate based on an expected bid from the private partner. Both the public sector comparator and shadow bid consider detailed financial inputs that reflect key project components during the construction and operating periods, as well as associated public sector costs under each option.

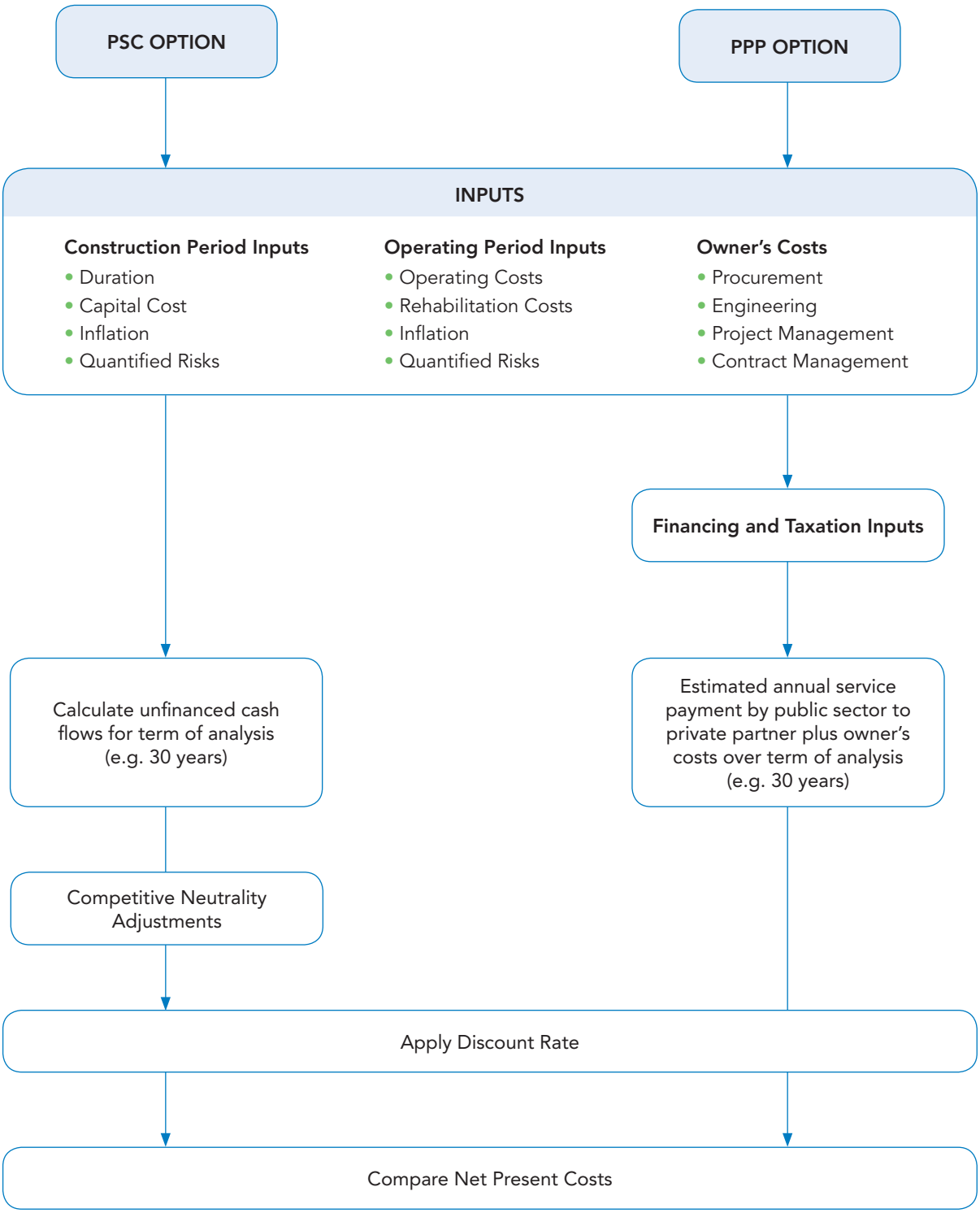
To ensure that a like-for-like comparison is being made, the analysis also considers inputs that address financing and taxation issues along with adjustments to ensure competitive neutrality that include items such as how each model accounts for insurance costs. Without these adjustments, the public sector comparator may be understated in some areas and consequently would not reflect the true cost to government of traditional procurement. A discount rate is applied to the projected future cash flows to facilitate an accurate comparison of the two approaches in present day dollars. Discounting allows procurement methods with different cash flow impacts—such as all payments made in the first year of a 30-year period versus payments spread over the 30 years—to be compared on a like-for-like basis. Comparing competing options in this way provides an objective means of determining the approach that provides the best value in terms of cost.

The discount rate applied to the cash flows results in a net present cost (NPC) for the project under both the public sector comparator and shadow bid financial models. Net present cost expresses future dollar amounts in today's dollars. It takes into account the time value of money. For example, a dollar received today is more valuable than a dollar received a year from now because the dollar received today can be invested and start generating a return immediately, whereas the dollar received a year from now cannot earn a return in the current year.

The results of this quantitative comparison between the public sector comparator and the shadow bid, together with the qualitative criteria, are used to determine the procurement method that is expected to provide the best potential value for money.

The following diagram illustrates the financial modeling approach used to compare a traditional procurement method (public sector comparator) and a public private partnership method (shadow bid).

DETERMINING THE NPC OF ALTERNATIVE PROCUREMENT APPROACHES - SUMMARY



Project Procurement Objectives

Procurement options were carefully considered through the development of procurement objectives based on the project objectives. The following procurement objectives were developed by Fraser Health and Partnerships BC to provide guidance in the selection and analysis of procurement options.

1. Timing and schedule certainty: Complete construction as soon as possible because of the urgent community need.
2. Cost certainty: Obtain a high degree of cost certainty for both construction and operational costs over time.
3. Quality facility: Construct a high-quality building that is well suited to Fraser Health's needs and is functionally appropriate.
4. Innovation in design: Maximize potential for innovative design solutions that incorporate modern models for effective and efficient care delivery.
5. Minimize operational impacts: Develop a flexible construction plan to accommodate clinical and operational considerations during construction.
6. Optimize risk transfer: Ensure the most efficient risk allocation between Fraser Health and the private sector.
7. Overall value for taxpayer dollars: Deliver the best quality facility for the best price.

Procurement Options Analyzed

Two procurement delivery options for the project were analyzed.

Construction Management (CM): This is a traditional delivery model where the owner, Fraser Health, contracts with a firm to manage the project's tendering and construction. A construction management firm may also be contracted earlier in the process to advise Fraser Health on construction-related design issues or construction processes and cost. The firm assumes the role that is typical of a prime contractor in a design-bid-build approach. The design and working drawings are developed to a certain level of completeness and bids obtained from the majority of the trade contractors. Fraser Health then contracts directly with trades, suppliers and the other contractors involved in the project. The firm acts as Fraser Health's agent, managing the contracts and the construction process. Long-term maintenance, repair and rehabilitation of the facility are managed as separate contracts at a later date.

Design Build Finance Maintain (DBFM): This is a partnership delivery method where the owner, Fraser Health, develops performance specifications and invites competitive proposals to design, build, finance and maintain the asset, and then remits an annual service payment (ASP) to the private partner after the asset is constructed in accordance with the project agreement. The private partner works collaboratively with user groups to finalize the design and is responsible for building and commissioning the asset, arranging the project financing for its portion of the capital cost, providing facilities management services, conducting life cycle maintenance and meeting hand-back requirements at the end of the project agreement term. The private partner assumes all construction (cost and schedule), design, long-term maintenance costs and operational cost risk.

Results of the Analysis

Based on the procurement options analyzed, the DBFM method was selected on the basis that it is expected to result in the lower project cost compared to the construction management delivery method. In addition, the partnership method was considered the best delivery method to support the qualitative objectives of the project and is expected to achieve additional benefits, including:

- Cost-effective risk transfer,
- Ability to meet desired completion schedules,
- Certainty around project cost,
- Expected innovation from the private partner, and
- A service contract based on payment-for-performance.

Achieving Value for Money

Value for money is a broad term that captures both the quantitative and qualitative benefits that are expected to be achieved by the decision to deliver the project using the partnership method. Quantitative value for money is achieved through the lower cost of a project resulting from a particular procurement method. Qualitative value is achieved when a particular procurement method is best able to support the qualitative objectives of a project.

PARTNERSHIP PROJECTS TYPICALLY PROVIDE THE FOLLOWING QUALITATIVE BENEFITS

- **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 and construction through to operations.
- **Schedule certainty:** The private partner receives a significant portion of their payment through monthly availability payments once the facilities are available for use, thereby providing a financial incentive to complete the project on time.
- **Cost Certainty:** The project agreement is a fixed-price contract.
- **Integration:** The private partner is responsible for the design and construction, long-term operations, maintenance and rehabilitation of the asset. This creates opportunities and incentives to integrate these functions 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 otherwise the annual service payment may be reduced.

Artist's rendering of a NICU Care Team station.

5. Competitive Selection Process and Results

A two-stage process was undertaken for the project, consisting of a request for qualifications (RFQ) and a request for proposals (RFP).[2] During the RFQ stage, respondents were asked to present their qualifications for the project. A shortlist of three teams was selected and invited to participate in the RFP stage of the competitive selection process.

The proponent teams and their members are identified in the table below.

TEAM LEAD	DESIGN	CONSTRUCTION	FINANCING	FACILITIES MANAGEMENT
BC Healthcare Solutions	• Kasian Architects	• Bouygues Construction • Bird Construction	• Bouygues Bâtiment International • HSBC Specialist Investment Ltd. • ETDE FM Canada	• Ecovert FM
ISL Health	• Cannon Design	• Lark Group • Acciona Infrastructures	• Innisfree Ltd. • Acciona S.A.	• H.H. Angus • ACML Management Western Limited • Acciona Facility Services S.A.
Integrated Team Solutions	• CEI Architecture Planning Interiors • Parkin Architects Ltd.	• EllisDon Inc.	• EllisDon Inc. • Fengate Capital Management Ltd.	• Honeywell Limited (Canada)

The RFP required each proponent to submit a proposal to design, build, finance and maintain the emergency department and critical care tower. A draft project agreement was issued with the RFP. During this stage, collaborative discussions were offered and proponents had the opportunity to discuss issues or concerns related to commercial, legal, design and construction and facilities management matters. Prior to the closing date for submissions, a final project agreement was issued and served as the common basis for all proposals.

The timeline of the competitive selection process is outlined in the table below.

PROCUREMENT STAGE	TIMING	OUTCOME
Request for Qualifications	July 23, 2009 to September 16, 2009	The project was marketed locally, provincially and nationally. Submissions from six respondents were evaluated and a shortlist of three teams was announced on December 17, 2009: • BC Healthcare Solutions • ISL Health • Integrated Team Solutions
Request for Proposals	February 15, 2010 to September 15, 2010	The three shortlisted teams submitted proposals.
Selection of Preferred Proponent	October 7, 2010	After evaluation of the proposals, Integrated Team Solutions was selected as the preferred proponent.
Project Agreement Finalization	December 15, 2010	A project agreement was signed by Fraser Health and Integrated Team Solutions.

[2] The RFQ and RFP procurement documents are publicly available at www.partnershipsbc.ca

Evaluation of Proposals

The overall objective of the evaluation was to select the best proposal, taking into account the expected value for money provided by the proposal. An evaluation committee was appointed to evaluate the proposals based on the criteria set out in the RFP, and recommend a preferred proponent. As part of the evaluation process, it was mandatory that the net present cost of a proposal not exceed the affordability ceiling (the affordability ceiling is the net present cost of the annual service payments over the term of the project agreement). Additionally, the cost of a proposal could not exceed the facility development and capital costs. Proponents were awarded points for proposals that were below the affordability ceiling. All three proposals were compliant with these requirements. The evaluation committee recommended to the Project Board that Integrated Team Solutions be identified as the preferred proponent; the Project Board accepted the recommendation.

Fairness Advisor

A fairness advisor, Joan M. Young of Lang Michener LLP, was engaged to monitor the competitive selection process and offer an assessment about the procedures and whether or not the selection process was carried out in a fair and reasonable manner. The fairness advisor was provided access to all documents, meetings and information related to the evaluation processes throughout both the RFQ and RFP stages. The fairness advisor issued reports for both the RFQ and the RFP stage of the competitive process. The report of the fairness advisor concluded that "the RFP procurement process associated with the Surrey Memorial Redevelopment and Expansion Project Procurement has been conducted in a fair manner in accordance with the procedures established in the Request for Proposals stage." The fairness advisor's report is publicly available at www.partnershipsbc.ca.

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 project from approval of the business case to financial close is $6 million, including partial compensation to each of the unsuccessful proponents of $500,000. The decision to offer partial compensation is made on a case-by-case basis and can be used to: encourage competition; ensure the quality of proposals submitted; secure access to intellectual property; and, mitigate costs incurred by proponents in developing their proposals. Other competitive selection expenses include the cost of developing performance specifications, preparing procurement documentation and obtaining advice from external advisors. Partnerships BC uses a library of guidance documents and templates to improve the efficiency and quality of the procurement process.

Artist's rendering of medical/surgical inpatient room.

6. The Final Project Agreement

QUICK FACTS	
Private partner	Integrated Team Solutions
Owner of the facility	Fraser Health
Provincial contributions during construction	$113 million (NPC)
Emergency Department construction complete	June 2013
Critical Care Tower construction complete	March 2014
Term of the project agreement	33 years including construction
Net present cost of final project	$386 million

Profile of the Private Sector Partner

Integrated Team Solutions is the private partner for the SMH Redevelopment and Expansion: Emergency Department and Critical Care Tower. Integrated Team Solutions is a joint venture between Fengate Capital Management and EllisDon Corporation, and includes the following team members:

- EllisDon Inc.: consortium lead, equity provider and constructor,
- Fengate Capital Management Ltd.: consortium lead and equity provider,
- CEI Architecture Planning Interiors: design,
- Parkin Architects Ltd.: design, and
- Honeywell Limited (Canada): facility management services.

Key Terms of the Project Agreement

Integrated Team Solutions is responsible for the following:

- Arranging a portion of the financing for construction and facility management services for a 33-year term (inclusive of the construction period);
- Designing and building the facility;
- Providing specified facility management services, including:
  - Plant services
  - Housekeeping and waste management services
  - Help desk services
- Maintaining the facility for the 30-year operating period and returning it in a fully-maintained condition at the end of project agreement term; and
- Obtaining LEED® Gold certification within 18 months following completion of construction.

Project Scope

Following the conclusion of the competitive selection process, Integrated Team Solutions will design, build, finance and maintain the following project components:

- A new, 5,350-square-metre emergency department that will create additional capacity and help reduce emergency room congestion;
- A neonatal intensive care unit comprised of 48 bassinettes to care for high-risk babies together with a dedicated pediatric pharmacy;
- An adult intensive care unit accommodating 25 beds;
- Three medical/surgical units that can accommodate up to 36 beds of which 20 are high-dependency beds;
- A clinical academic campus;
- A rooftop helipad;
- A new, 2,270-square-metre purpose-built laboratory; and
- A total of 444 parking stalls (surface and underground).

Performance-Based Payment Principles

During construction, the Province will make monthly progress payments based on a percentage of the eligible construction costs incurred by Integrated Team Solutions in that month as certified by an independent engineer.

Integrated Team Solutions is incented to perform through a payment mechanism that is based on the principles of performance, facility availability and service quality. Once construction is complete and service commencement has been achieved, Integrated Team Solutions will begin receiving an annual service payment from Fraser Health. These payments will be made monthly and are based on the availability of the facility to patients and staff and the quality of facility maintenance services provided by Integrated Team Solutions. The performance of Integrated Team Solutions will be continuously monitored based on key performance indicators; if the performance standards in the project agreement are not met, Fraser Health may apply deductions to the annual service payment.

Payment deductions are based on the severity of the failure to meet the performance indicator, the importance of the health care area affected and the level of unavailability. An unavailability deduction applies when a room or department fails to comply with the condition specified in the project agreement. For example, if an infant bed in the neonatal intensive care unit was unavailable for one day, the payment to Integrated Team Solutions would be reduced by $2,534.

Adjustments to Payments

The annual service payment may be adjusted to reflect specific circumstances as defined in the project agreement, including:

- **Indexation:** The capital component of the annual service payment will not be indexed. The facilities management component of the payment is indexed by the consumer price index (CPI) with periodic adjustments to the payment through benchmarking.

- **Variations:** if Fraser Health requires Integrated Team Solutions to make a physical change or amend the services, then Fraser Health can either make a lump sum payment or have the cost of the change financed by Integrated Team Solutions. If Fraser Health chooses to have the change financed, the cost will be reflected in an adjusted annual service payment. 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 annual service payment may be adjusted to leave Integrated Team Solutions in no better or worse position than if that change in law had not occurred.
- **Compensation Events:** If an event occurs that warrants compensation to Integrated Team Solutions, the amount may be provided by adjustment to the annual service payment.
- **Life Cycle:** the life cycle costs are not uniform throughout the term of the agreement and will fluctuate.

Risk Allocation Summary

The project agreement includes detailed risk allocation provisions over the 30-year operating term. This approach transfers key risks to Integrated Team Solutions—such as construction, cost and schedule—and adds value through design and private sector innovation.

Following is an overview of the risk allocation between Fraser Health and Integrated Team Solutions:

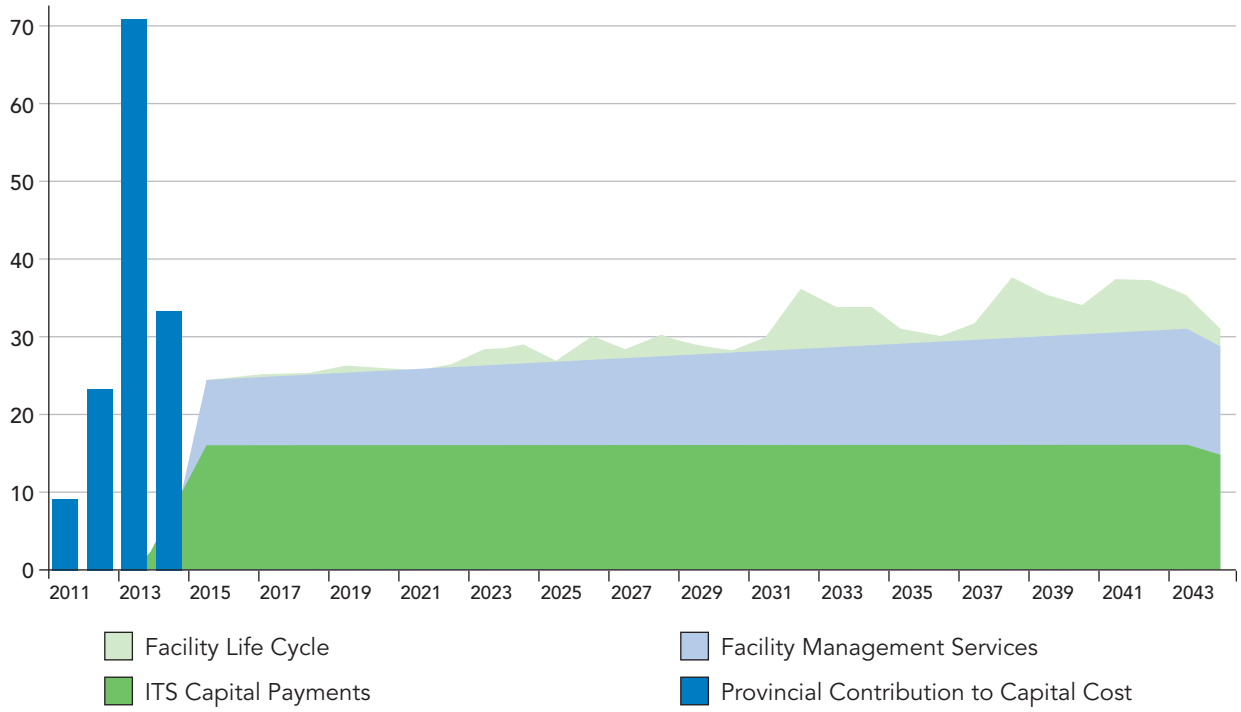
FRASER HEALTH	SHARED	INTEGRATED TEAM SOLUTIONS
Ownership of the asset	Force Majeure	Design
Program delivery	Labour costs during operations	Construction
Legislative change	Change in law	Financing
Existing site conditions		Schedule
Utility unit costs		Maintenance
Cost of equipment		Commissioning
Scope changes		Life cycle
		Geotechnical
		Utility volume
		LEED® gold certification

This risk allocation is supported by the following provisions in the project agreement:

- Integrated Team Solutions will start receiving service payments from Fraser Health when an independent certifier confirms that the conditions for service commencement have been achieved thus providing an incentive to complete the project on time and on budget.
- The expiry date of the project agreement is fixed, so any delays in completing construction will reduce payments to Integrated Team Solutions, providing them with a strong incentive for timely completion of the emergency department and critical care tower.
- Provisions are in place to reduce the annual service payment if Integrated Team Solutions does not meet the performance standards in the project agreement for facility availability and maintenance.

Financial Summary

The graph below demonstrates the cash flows to Integrated Team Solutions that meet the affordability ceiling as defined in the RFP. The graph is expressed in nominal dollars, which assumes two per cent inflation for facilities management services. Payment projections assume no penalties or deductions.



Quantitative Benefits

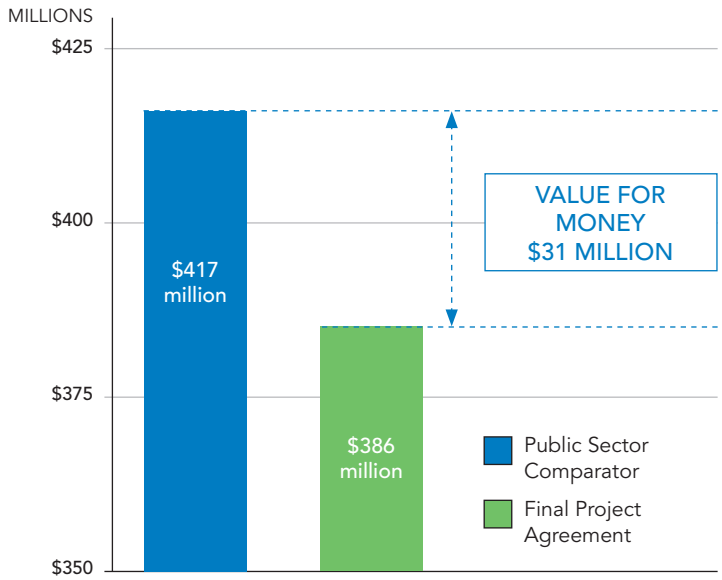
The estimated net present cost of the project delivered using traditional procurement is $417 million. The estimated total cost of the project delivered using partnership procurement has a net present cost of $386 million. A high-level comparison of these numbers is provided below. In financial terms, the final project is estimated to achieve value for taxpayers' dollars of $31 million (net present cost), when compared to the public sector comparator.

FINAL PROJECT COST	$Millions (Net Present Cost)
Annual service payments to Integrated Team Solutions	$ 251
Provincial Contribution to Capital Cost	$ 113
Risk Adjustment	$ 6
Project management costs including HST, insurance and procurement	$ 16
Total	**$ 386**

ESTIMATED PUBLIC SECTOR COMPARATOR	$Millions (Net Present Cost)
Capital Costs	$ 254
Life Cycle and Operating Costs	$ 119
Risk Adjustment	$ 35
Project management costs including HST, insurance and procurement	$ 9
Total	**$ 417**

Estimated Cost Differential[3]	**$ 31**
Estimated Percentage Savings from PSC	**7.4%**

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 value for money analysis was made following Partnerships BC's quantitative analysis methodology.[4] The net present cost 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.



VALUE FOR MONEY - COST COMPARISONS

[3] The discount rate used for the calculation of value for money (VFM) is 7.5 per cent. To test the impact of a change in the discount rate on the quantitative VFM proposition of the PPP model versus the PSC model, the modeling results were re-calculated assuming a discount rate 50 basis points higher and 50 basis points lower than the base discount rate. It should be noted that no change in the estimated value of risks was undertaken in conjunction with the change in discount rates used in the sensitivity analysis. A change in the discount rate, either higher or lower, would require a reassessment of the risks of the project. The results of the sensitivity analysis of the discount rate showed that the net present cost of the final project agreement would have been approximately $23 million less than the public sector comparator if the discount rate was 50 basis points lower, and about $38 million less if the discount rate was 50 basis points higher.

[4] Partnerships BC's Discussion Paper: Methodology for Quantitative Procurement Options Analysis is publicly available at www.partnershipsbc.ca

Additional Benefits

Integrated Team Solutions, the private partner, provided a proposal that was overall, superior to the other proposals received. The key strengths of Integrated Team Solutions' proposal included a number of qualitative and quantitative benefits that are expected to meet and exceed the project objectives identified by Fraser Health:

- Minimal travel distances for staff in clinical departments;
- Maximized visibility to patient rooms;
- Standardization of room sizes, shapes and locations;
- Clear separation of public, patient, staff and service flows;
- Organization of key adjacencies in the emergency department which will facilitate effective and efficient workflow;
- Well-defined wayfinding;
- Designed to accommodate future expansion of patient rooms;
- Well-established services lead with strong track record;
- Demonstrated understanding of the importance of infection control;
- Proactive energy management approach; and
- Robust systems support.

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 partnership projects. Based on accounting guidelines, the capital cost for the renovation and expansion of Surrey Memorial Hospital—including the renovation components and the emergency department and critical care tower—is about $512 million. These costs are accrued to the Province through the construction period as the costs are incurred.

Artist's rendering of the Surrey Memorial Hospital campus.

7. Ongoing Project Agreement Monitoring

The project agreement with Integrated Team Solutions includes specific provisions to ensure project delivery, performance and high-quality standards are met. Monitoring spans every phase of the project, from financial close through design and construction, facility operations and maintenance. There are a number of major phases in the project monitoring schedule, with roles and responsibilities assigned to project participants at each stage.

Design and Construction Phase

The project agreement stipulates that both Fraser Health and Integrated Team Solutions must appoint design and construction representatives. The Fraser Health representative has the authority to act on behalf of Fraser Health during the design and construction phase of the project, and to review, approve, accept or confirm Integrated Team Solutions' activities, in accordance with the project agreement. The Fraser Health representative will have full access to the construction site, drawings and specifications, and will report their observations to Fraser Health. In addition, both Fraser Health and Integrated Team Solutions will jointly appoint an independent certifier who will monitor and report on construction progress, and provide certification that the conditions for service commencement have been achieved.

Operations and Maintenance Phase

The project agreement stipulates that both Fraser Health and Integrated Team Solutions must appoint a representative to serve as a member of the Operations and Maintenance Committee over the 30-year operating term of the agreement. The committee is a formal forum for the parties to consult and cooperate on all matters related to the facility during the operational term.

Quality Management

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.

Integrated Team Solutions is required to have a performance monitoring program during the operating period that will monitor the delivery of services. All reports generated from this program and supporting data are readily available to Fraser Health at any time for audit purposes. Monthly reports delivered to Fraser Health will contain a variety of information, including:

- Summary of calls made to the facilities management help desk and their resolution,
- Summary of unavailability events and service failures,
- Calculation of the monthly service payment owed to Integrated Team Solutions, and
- A summary of all life safety actions and statutory testing (e.g. fire extinguisher inspections).

There are strict penalties if Integrated Team Solutions misrepresents the monthly report, potentially leading to contractor default.

Hand-Back Requirements

At the end of the 30-year operating term, the facility must be in a condition that is consistent with the services and maintenance specifications in the project agreement. For example, it would not be acceptable for the building fabric to be failing, the flooring to be worn or the general environment to be unkempt. Integrated Team Solutions and Fraser Health will jointly appoint and pay for an independent party to inspect and survey the condition of the facility; Integrated Team Solutions is responsible for meeting the hand-back requirements at the end of the project term.

Project Agreement Reviews

Fraser Health, the Ministry of Health and Partnerships BC will work together 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.

Project Board

A Project Board has been established to provide guidance and oversight for the implementation of the project, including the traditional capital components. Members of the Project Board include representatives from the Ministry of Health, the Ministry of Transportation and Infrastructure, Fraser Health and Partnerships BC.

Fraser Health has assembled an experienced Integrated Project Management Team that will be responsible for delivering the project under the direction of the Project Board. The project team reports through the project director to the Project Board.

Artist's rendering of the new emergency department and critical care tower.

8. Glossary of Terms

Annual Service Payment (ASP): The mechanism by which a private partner in a PPP arrangement is often compensated. According to performance standards specified in a project agreement, an ASP is paid to the private partner for capital and operating costs, as well as their required rate of return, over the term of the agreement.

Business Case: Document prepared in British Columbia by a project owner demonstrating the need and cost/benefit of a project, in addition to supporting a procurement method and providing an overview of the accounting impacts that a project may have.

Competitive Neutrality: A circumstance where competitive advantages that typically accrue to government as a result of public sector ownership are neutralized through a series of adjustments that permit a fairer comparison of non-public sector alternatives.

Discount Rate: A rate used to relate present and future dollars. Discount rates are expressed as a percentage and are used to reduce the value of future dollars in relation to present dollars. This equalizes varying streams of costs and benefits, so that different alternatives can be compared on a like-for-like basis.

Financial Close: The point in the procurement process where negotiations with a preferred proponent are finalized and a project agreement is executed, allowing construction to begin.

Independent Certifier: Independent, third-party certifiers engaged by the project owner to verify and certify whether the conditions of the project agreement are being satisfied.

Lean Health Care: A variety of process improvement methodologies designed to improve quality and efficiency in health care delivery.

Life Cycle: The long-term requirements to maintain and rehabilitate an asset.

Net Present Cost (NPC): NPC refers to the value of periodic future cost outlays when they are expressed in current, or present day, dollars by discounting them using the discount rate.

Operations: The ongoing processes or activities of a practical or mechanical nature that are involved in running a facility, such as janitorial services in a building or snow removal on a roadway.

Owner: Usually a provincial ministry, authority or agency that is undertaking a needs assessment and benefit analysis to determine if a project will satisfy service delivery requirements, and that will own the project and fund the annual service payments if a project proceeds as a PPP.

Partial Compensation: A payment made to unsuccessful shortlisted bidders in a request for proposals process as partial compensation for expenses incurred in submitting a compliant proposal.

Performance Specification: Specifications developed by the owner that define the output and performance levels required in relation to construction and life cycle performance of an asset, to ensure the completed project satisfies the objectives of a project with respect to meeting the owner's service delivery needs.

Preferred Proponent: A proponent selected from a shortlist of bidders to enter into negotiations with a project owner to reach financial close and deliver a project.

Procurement Decision: The decision by an owner to procure a project in a particular way in order to achieve value for money.

Project Agreement: The project agreement sets out the requirements for the delivery of an asset under a PPP in terms of cost, schedule and life cycle performance that typically govern the performance-based payment of the ASP to a private partner.

Project Board: The Project Board, typically comprised of representatives from the owner, the Ministry responsible, and Partnerships BC, has overall responsibility for the project. Working within the guidelines established by the Shareholder, the Project Board provides direction to the project team from the development of the business plan and procurement process through to the completion of the project.

Public Private Partnership (PPP): Public private partnership whereby public sector infrastructure is procured using a long-term performance-based agreement with a private sector partner to deliver and maintain an infrastructure asset, including significant, upfront capital investment.

Public Sector Comparator (PSC): The public sector comparator, which is a financial model of a hypothetical public sector reference concept used in quantitative procurement analysis to compare the risk adjusted, life cycle cost of traditional delivery with the cost of procuring the same project as a PPP.

Request for Proposals (RFP): Document issued by an owner for qualified proponents to submit formal proposals to deliver a project.

Request for Qualifications (RFQ): Document issued by an owner inviting parties interested in participating in an RFP, to submit their qualifications for delivering a project.

Retained Risk: Risks associated with delivering a project that are not transferred to the private partner under a PPP, representing a cost to the project regardless of the procurement approach.

Service Commencement: The date upon which the following activities have been achieved: the architect certifies substantial performance of the facility; an occupancy permit has been issued; the private partner has delivered to the owner the LEED® project checklist; and, all commissioning activities are complete.

Shadow Bid: A financial model developed to represent the procurement of a project using a PPP approach. The shadow bid is used to develop a cost estimate to be compared to the public sector comparator as a means of evaluating potential differences in the present value of the risk adjusted costs between traditional and PPP procurement.

Traditional Procurement: Methods by which the public sector has traditionally procured projects in B.C, through design bid build (DBB), or a combination of DBB and design build (DB) contracts.

Transferred Risk: Risk associated with delivering a project that is typically borne by the public sector under traditional procurement that is transferred to the private sector under a PPP.

Value for Money (VFM): Also commonly referred to as value for taxpayer dollars, VFM describes the benefits to the public expected to be realized through a particular procurement method, and can be quantitative and/or qualitative in nature. Quantitative value for money is achieved through the lower cost of a project resulting from the procurement method, whereas qualitative value is achieved when a particular procurement method better supports the goals and objectives of a project without necessarily costing less.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