

## **P3 Value for Money Assessment and Project Report**

Alberta Schools Alternative Procurement (ASAP) Project Phase 1



June 2010

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# Value for Money Assessment and Project Report on Public Private Partnership (P3) for 18 New Schools

June 2010

## 1. Summary: Using a P3 for 18 new schools - did it work?

By using a Public Private Partnership (P3) to design, build, finance and maintain 18 schools in Calgary and Edmonton, the Alberta government saved \$97 million over 32 years (in today's dollars) compared to a traditional approach (\$634 million instead of \$731 million, a 13% savings)<sup>1</sup>. It will also deliver the schools two years earlier than with traditional methods. The government chose a P3 to deliver the Alberta Schools Alternative Procurement Phase 1 project, known as ASAP 1. The following assessment shows that using a P3 delivered value for money and that it was the right way to procure the 18 schools.

In June 2007, the Minister of Education announced the ASAP 1 project as an innovative approach to new school construction by the government, the largest Kindergarten to Grade 9 (K-9) schools project in Canada.

The P3 project was developed to consolidate the design and construction of the new schools. They are built on a standard core design to allow for future expansion if needed. The 18 schools were identified by Edmonton and Calgary school boards as essential to meet demand for educational programming in outlying areas of the cities where students live.

The government signed the P3 contract, with a 32-year term, in September 2008 with BBPP Alberta Schools Limited (the contractor). The contract requires the schools to be ready for school boards in June 2010 so they can be available for students in September 2010, two years earlier than with traditional methods.

The cost savings and earlier completion were due to:

- economies of scale
- construction efficiencies
- building innovations
- risks shifted from government to the contractor
- fixed cost contract

This report explains what a P3 is and why it may be used, provides a value for money assessment of the P3 for 18 new schools, and provides a project report.<sup>2</sup>

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<sup>1</sup> This savings calculation is based on the amounts in the bids for the ASAP 1 Request for Proposals.

<sup>2</sup> This report was developed by Alberta Infrastructure and Alberta Education following the value for money methodology in the Government of Alberta's *Management Framework: Assessment Process*.

## 2. Background

### **What is a P3?**

A P3 is a different, non-traditional way for government to create capital assets (such as roads, schools, and other types of government facilities). In the case of ASAP 1, the government entered into one agreement with a contractor, responsible for designing, building, partially financing, and maintaining the schools over a 32-year period (2 years design and construction; 30 years maintenance).<sup>3</sup>

A P3 can save time, money and reduce risk to the government by having one contractor design, build, finance, and maintain a facility. For Alberta P3 projects, the public sector owns the facility and provides public services to Albertans, the same as it does with a traditional approach. In this P3, the school boards own the 18 schools and deliver education as they do in their other schools.

### **What is a traditional approach?**

In a traditional approach, the public sector hires an architect to design a school or other facility, and then hires a construction contractor to build it. Once the facility is built, the public sector operates it and maintains it, typically by awarding numerous individual contracts for repairs and renewal. The government pays for the construction of the facility by making progress payments (for its own infrastructure) or by making capital grants to entities such as school boards, health authorities, and post-secondary institutions. Grant funding is also used to operate and maintain the facility.

### **What does a Value for Money (VFM) Assessment do?**

A VFM assessment measures whether a P3 is the best option for a particular project. In the case of ASAP 1, it compared the cost of building and maintaining the same schools using the two different methods: traditional and P3. The VFM for a project is the difference between the two costs. The goal of a P3 is to provide value: to do so, the P3 must cost less – measured by net present value – than the traditional method over the life of the contract.

### **What is net present value?**

Net present value is the current value of a future sum of money. It is a standard method to compare the value of money over time (a dollar today is worth more than a dollar tomorrow because of interest and inflation) to assess long-term projects. It is produced by applying an interest rate and an inflation rate (collectively called the “discount rate”) to a future sum. The amount and timing of cash flows differ in the two options for producing the schools (traditional and P3) and the calculation of net present value accounts for those differences. The net present value of the cost to produce and maintain a facility using the traditional approach is called the Public Sector Comparator, or PSC.

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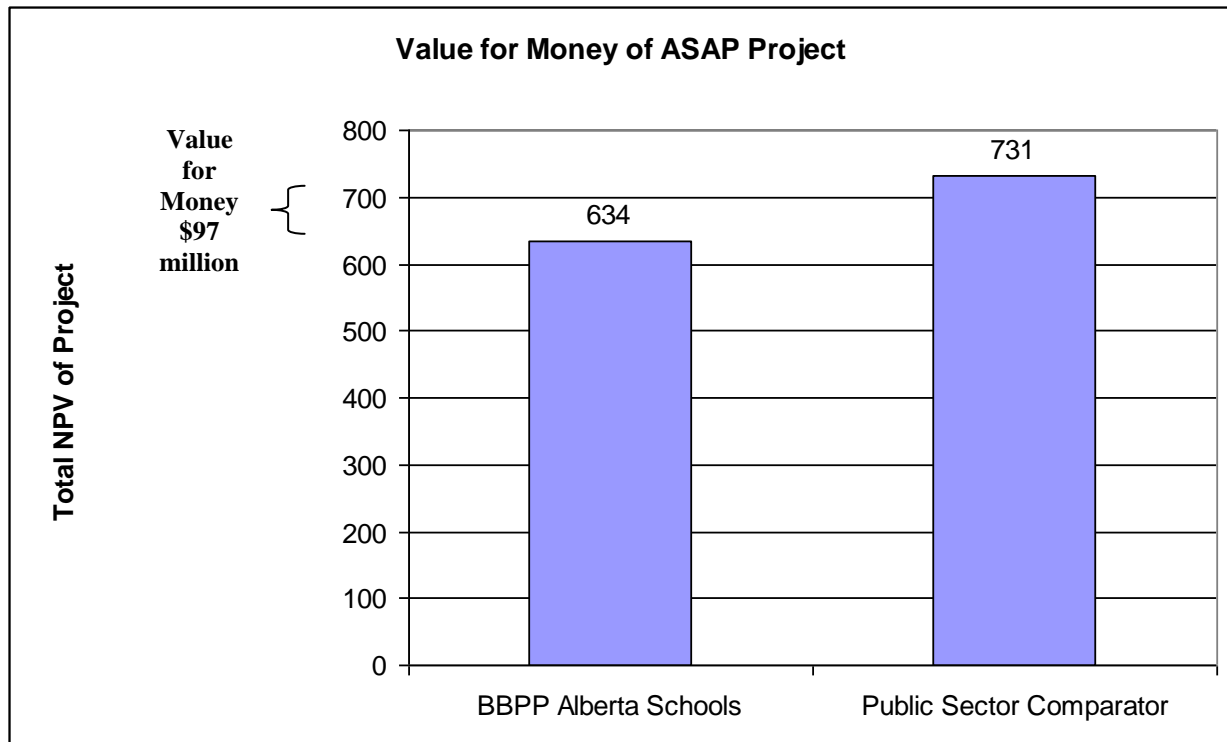
<sup>3</sup> For detailed discussion on P3s, see the Annual Report of the Auditor General of Alberta 2003–2004, at pages 49 to 72 ([www.oag.ab.ca/files/oag/ar2003-2004.pdf](http://www.oag.ab.ca/files/oag/ar2003-2004.pdf)).

### 3. VFM Assessment of the P3 used for 18 new schools

#### Money and time saved by using P3: Quantitative measures of value

This VFM assessment uses net present value as of July 4, 2008, when bids were received. It includes the costs to design, build, partially finance, and maintain the schools for the 32-year life of the contract. It also includes the impact of risk transfer (as discussed later in this section) but excludes costs common to both methods, such as broadband connections, land costs, and furniture and equipment.<sup>4</sup>

The government saved about \$97 million<sup>5</sup> in today's dollars (13%) by using this P3 (confirmed by PricewaterhouseCoopers – see Appendix A). The 18 schools are scheduled to be ready two years earlier than with the traditional method.



<sup>4</sup> Capital and renewal costs for both methods were developed by Tech-Cost Consultants Ltd. Inflation and discount rates were provided by the Ministry of Finance and Enterprise. PricewaterhouseCoopers LLP developed the financial model.

<sup>5</sup> Original VFM estimate of \$118m was \$21m too high because it included furniture and equipment for PSC but not for P3.

Private financing by the contractor costs more than public financing by government, but in the case of ASAP 1, that cost was more than offset by the following factors:

- 1. Allocating risks to the party who can best manage them** means that the contractor bore many of the costs that the government would have borne in the traditional approach. For example, the contractor paid for any changes needed during the construction period due to design errors. The contractor also bore any cost increases for labour and material during the construction period. In addition, for the 30-year maintenance and renewal term, the contractor will pay to replace any defective building parts or parts that have reached the end of their useful life. A list of some of the major risks that the P3 contract allocated to the contractor is on pages 7 and 8 of this report.
- 2. Using innovative building techniques and materials** will save the government money over the contract term. In the Request for Proposals (RFP) stage, the three proponents presented several innovations to meet stringent, long-term quality requirements set in the technical documents. The contractor incorporated many of these techniques into the final design. For example, each school was designed to meet the Canada Green Building Council LEED™ (Leadership in Energy and Environmental Design) Silver standard for sustainability by using state-of-the-art materials, systems and processes. The contractor used a high-performance roof membrane with a warranty available for the full term of the contract.

The members of the contractor's design, building, and maintenance team collaborated to develop innovations and efficiencies that reduced costs over the life of the contract.

- 3. Achieving economies of scale by designing and building 18 schools** in two large cities on a tight schedule. For example, it costs much less (per boiler) to buy 36 boilers at the same time than two. Similarly, key parts such as structural steel, brick and block, windows, doors, floor finishes, and electrical and mechanical equipment cost far less when bought and installed in bulk. Because the contractor had a guaranteed group of 18 schools, it could secure a supply of most parts early in the construction period, avoiding higher costs for labour, material, equipment and sub-trades later in the construction period.
- 4. Developing construction schedules that allow continuous and efficient workflow** between construction sites to minimize downtime between operations and reduce mobilization costs for work crews and equipment. For example, buying over 200 high-performance manufactured classrooms allowed manufacturing plants to schedule production runs well ahead of time. In turn, that allowed for timely delivery and installation of the classrooms.

#### **Qualitative measures of value**

- 1. Controlled scope.** By bundling 18 schools with standardized designs into one package, the government controlled the scope of the project and managed the risk of any potential scope changes. The government worked closely with each school board to ensure that their program needs were met early in the design process, and that these requirements were clearly expressed to proponents during the RFP phase. This ensured that all school

boards were treated equally, and that they each received schools with consistently high quality.

2. **Earlier opening.** The scheduling advantages explained earlier will let the 18 schools open in September 2010, two years earlier than if the government used the traditional method. Students in these schools will no longer have to take long bus rides to other communities; instead, they can spend more time in play and community based activities before and after school.
3. **30-year maintenance and renewal period.** This gives the government and school boards assurance that schools will be maintained in good condition for 30 years. The P3 contract transfers maintenance of the schools from the school board (government) to the contractor for the term of the contract. This effectively gives the government a 30-year warranty for all 18 schools, and schools with no deferred maintenance at the end of 30 years.
4. **Better workforce management.** The relatively long time to set up a P3 (just over five months) allows proponents to establish labour and equipment supply and to lock in contracts for materials supply. Traditional contracts, typically with a four- to six-week tender period, introduce a lot of risk into the process, as the bidding contractor has only a short time to negotiate scheduling of labour, materials and equipment to arrive onsite at the right time. The P3 results in a single contractor for all 18 schools; for traditional contracts, contractors could be bidding several jobs at the same time. The P3 contractor can offer continued, attractive employment to workers.

#### **Major risks allocated in P3 contract**

An important factor in the delivery of P3 projects is an acceptable allocation of risks to the party or parties best able to manage them. In some cases, the contractor is the appropriate party to manage a risk; in others, the government can better manage the risk; in yet a third case, the risk may be best shared between the two parties.

Table 1 (Appendix B) shows a sample of the risk allocation between the government and the contractor in the P3 contract and schedules. This list is not comprehensive. The P3 contract shows all the allocated risks.

**Cost overruns:** the contractor bears the risk of any construction costs above the bid price in the P3 contract. Maintenance and renewal payments are indexed based on the contract formula, so the contractor pays any increased maintenance costs above the index during the contract.

**Schedule certainty:** the contractor agreed to have the 18 schools available for use by the school boards by June 30, 2010 or receive reduced payments. The contractor has to manage the construction schedule to meet this date.

**Weather:** the contractor bears any costs of project delays caused by bad weather.

**Scope changes:** the government pays for any scope changes that it or a school board want during construction. The government will pay for this work in accordance with the change order process set out in the P3 contract.

During the maintenance and renewal period, the government or school boards may consider changes to schools. For example, changes in local demographics may require a school board to request approval from the government to add or remove high-performance classrooms. The government will pay for this work, as long as the contractor accepts competitive pricing based on a tendering process as specified in the P3 contract.

**Interest rates and financing:** during the maximum two-month period between notifying a preferred proponent (which becomes the contractor when it signs the P3 contract) and signing the contract, the government shares the risk of any changes in base borrowing rates with the preferred proponent.

The contractor has to arrange for partial financing for the whole term of the contract and is solely responsible for the impact of the financing arrangements. No matter how much rates increase during the contract, the contractor must pay any increased refinancing costs. Conversely, the contractor can benefit from any rate drops.

**Permitting:** in the project's procurement phase, the government worked with the two cities to ensure that development permits for all 18 schools were in place, with as few conditions as possible. Once the contractor signed the contract, it was responsible to have the cities transfer the development permits to it. The contractor assumed any schedule risks of not being able to obtain the building permits on time.

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## 4. Project report

### Project goals

- **Create 18 schools for K-4, K-6 and K-9 students in high-growth areas of Edmonton and Calgary for the school year starting September 2010.** Many young families are moving into new subdivisions in Edmonton and Calgary. With existing schools closer to the city centres, students must bus to school and many of these schools are overcrowded. The ASAP 1 project aims to put new schools in the areas that need them—quickly. Both Edmonton and Calgary will get nine new schools.
- **Ensure short-term cost certainty** for building the 18 schools and **long-term cost certainty** for maintaining them. Construction rates were increasing between 18 and 25% per year at the time this project was bid. The project shifts the risk of increased costs to the contractor.
- **Use innovative design, project delivery, and funding** to meet the need for schools in Edmonton and Calgary.
- **Ensure standard and consistent schools by using three standard core school designs with flexible student capacity.** The three designs (developed under a separate project) are of a consistent quality for all 18 schools. Flexible student capacity comes from high-performance classrooms that can be added to or subtracted from the core schools, as enrolments change over the life of the schools.

Table 2 (Appendix C) lists the 18 new schools in the project.

The project does not include daily building services (movement of desks, chairs and other furniture, usually done by a custodial team), cleaning, or routine, daily custodial work in schools. These services remain the responsibility of the school boards.

### Project outcomes

- **Cost certainty for the life of the schools**—shifting the risk of increasing construction rates and other financial risks to the contractor ensured cost certainty for the design, building, maintenance and renewal of the schools.
- **An innovative, repeatable, transparent, and accountable process to produce and maintain schools**—the same process can now be used for other projects in Alberta.
- **Less time and lower cost to produce schools**—to plan, design, and build from three to six schools is a significant undertaking for each school board. Using the traditional approach, it could take as long as five to six years for all the schools to be ready for students. In contrast, the P3's coordinated, comprehensive approach will produce 18 schools ready in only three years, at lower cost.
- **A 30-year “warranty” for each school**—the contractor is responsible for ongoing maintenance and renewal of building parts for the 30-year maintenance phase.

## Approaches considered

The government considered two alternative approaches to deliver the 18 schools:

1. **Traditional Design-Bid-Build approach**, with the usual “pay-as-you-go” financing by the government and delivery by school boards. Private-sector architects and consultants, hired by school boards, design the schools. Stipulated-price construction contracts are awarded through a traditional open-bidding process tendered by school boards to private-sector contractors, likely in six bundles of three projects. The province approves the contracts under the *School Buildings and Tendering Regulation*. Daily operations and maintenance, and infrastructure maintenance and renewal, are funded by provincial grants.
2. **Design-Build-Finance-Maintain approach** (the basis of the P3), with the winning private-sector proponent (the contractor) forming a consortium or group to handle the project from start to the end of the contract. Then the contractor is responsible for the ongoing maintenance of the schools for a set time (in this project, 30 years), and for having a renewal plan for school components to ensure they meet the performance requirements. School boards still handle daily cleaning and operations of the schools. The government makes monthly payments to the contractor during the 30-year maintenance phase of the contract. Payments start after the schools are ready to use and cover both capital and maintenance and renewal costs. The government can reduce payments based on criteria such as the whether the schools are available for use and whether the buildings meet certain standards.

## Selection process

The government’s selection process was open, competitive, timely, fair and transparent. A Fairness Auditor, Mr. Richard Innes, CA, prepared a report on the fairness of the process (Appendix D).

A Request for Qualifications was publicly issued on November 1, 2007. Four teams responded and were evaluated on experience, personnel qualifications, past performance and financial capability. The three teams asked to submit proposals were B&B Alberta Schools, New Alberta Schools, and Plenary Education Alberta.<sup>6</sup>

The Request for Proposal (RFP) process ran from February 1, 2008 to July 4, 2008. The “made-in-Alberta” approach to P3s ensures the process is competitive throughout. During the RFP process, the teams made financial and technical submissions to ensure that they met the project’s minimum specifications. The government issued a draft form of the contract during the RFP process. The teams provided comments on it. Before receiving financial bids, the government issued the final form of the contract that the successful proponent signed. There were no negotiations on this contract after financial bids were received.

Once the three teams provided RFP submissions, they all submitted financial bids based on the final form of the contract. These bids are summarized in Table 3 (Appendix E). B&B Alberta Schools submitted the lowest price, on a net present value basis, and won the

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<sup>6</sup> The companies that make up the teams are listed in Table 5 (Appendix G).

contract. B&B Alberta Schools then created a special purpose company, known as BBPP Alberta Schools Limited, to carry out the work of the contract.

### **Key terms of P3 contract**

**What the government must pay:** The total cost of the 32-year contract is about \$1.157 billion, or in 2008 dollars, about \$634 million.

If all 18 schools are ready by June 30, 2010, the government will pay to the contractor:

- \$125 million toward the capital cost of the schools;
- monthly amounts in three separate streams (capital, maintenance, and renewal) over the contract term; and
- An early completion bonus based on a daily rate per school, up to \$1 million.

Capital payments are fixed, while maintenance and renewal payments are indexed<sup>7</sup>.

If any school is not ready by June 30, 2010, the government will pay only that part of the \$125 million attributable to completed schools. It will pay the rest as the remaining schools become available. Additionally, the government will make monthly maintenance and renewal payments and 80% of the monthly capital payment only for completed schools, until all 18 schools are completed. The contractor will thus lose capital, maintenance, and renewal payments for every school not complete by the target date, plus 20% of the monthly capital payment for completed schools.

**What the contractor must do:** The 32-year contract between the government and the contractor has a two-year construction period and a 30-year maintenance period. It requires the contractor to:

- complete the design and construction of the 18 schools in Edmonton and Calgary; described in Table 2 (Appendix C) by June 30, 2010;
- partially finance the construction over the contract term;
- maintain the 18 schools to the standard specified in the contract;
- have a renewal plan for school components to ensure they meet the performance requirements; and
- hand back responsibility for maintenance and renewal of the 18 schools to the school boards in June 2040, in a condition prescribed in the contract.

**Payments reduced for non-performance:** The government can reduce all monthly payments (capital, maintenance, renewal) if the contractor does not meet performance standards in the contract. For example, if a roof does not meet performance criteria and the contractor does not repair it within the allowed time, the government can reduce monthly payments to the contractor.

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<sup>7</sup> Four indices are used to calculate maintenance and renewal payments: AUPE Maintenance Service Worker II published hourly salary; NAICS repair and maintenance hourly rate; Statistics Canada consumer price statistics (excluding food and energy); and Statistics Canada non-residential building construction price index for Edmonton and Calgary.

A detailed description of all the payment adjustments is in Schedule 15 of the P3 contract, and a sample appears in Table 4 (Appendix F). The final form of the P3 contract is at <http://www.infrastructure.alberta.ca/3865.htm>.

**School boards own the schools:** The contractor has a license from the government to access the schools for construction, maintenance, and renewal activities. The school boards can use the schools for education purposes and for community and other purposes as defined in long-standing joint use agreements between the cities and the respective school boards that apply to all schools. School boards remain publicly accountable for delivering education programs for all schools in their jurisdictions.

#### **Monitoring during and after construction**

During construction, the government is using ACI Architecture as its consultant to review the designs and ensure that construction standards have been met. The contractor has to provide monthly reports on design and construction issues.

In the maintenance and renewal period, the contractor will self-monitor and report on its compliance with the technical requirements. The government will also do its own inspections and testing to ensure the standards continue to be met. In addition, the contractor's lender has a consultant review its performance.

#### **Accounting treatment**

The accounting treatment for P3 projects follows generally accepted accounting principles set out by the Public Sector Accounting Board of the Canadian Institute of Chartered Accountants. The obligation is "on-book", so the province records the obligation as the schools are built and records the cost of building the schools as a capital expense because school boards own the schools.

#### **Project schedule**

The P3 contract was signed on September 10, 2008 and construction started on some sites by the end of September 2008. The contractor must deliver the 18 schools by June 30, 2010 or face a payment reduction. An independent certifier will certify when the schools are available for use. The 18 schools are due to open to students by September 1, 2010.

The maintenance period starts after the schools are available and continues until June 2040, when the license granted to the contractor to access the schools for maintenance and renewal activities will expire. The contractor must hand back the responsibility for maintenance and renewal of the 18 schools to the school boards in the condition specified in the contract. The government and the contractor will assess the schools to ensure they are in the condition specified in the contract when the contract expires. After the contract expires, the school boards will be responsible for operating, maintaining, and renewing the schools.

## Appendix A: Commentary by PricewaterhouseCoopers



Confidential  
April 8, 2010

John Gibson  
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Dear Mr. Gibson:

**Alberta Schools Alternative Procurement Initiative: revised Value for Money analysis April 8<sup>th</sup> 2010.**

PricewaterhouseCoopers LLP ("PwC") has prepared a Value for Money ("VfM") assessment of procuring the Alberta Schools Alternative Procurement Initiative ("ASAP Initiative") through a Public Private Partnership ("P3") arrangement compared to the traditional procurement arrangements.

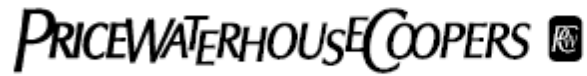
At the Financial Close stage of the procurement, our analysis indicates a projected VfM saving of 13% by using the P3 approach with the Preferred Proponent to deliver the ASAP Initiative compared to using the traditional delivery approach.

The VfM assessment is based on the comparison of the total estimated project costs<sup>1</sup> of delivering the ASAP Initiative under:

- 1) Traditional procurement arrangements, as reflected in the Public Sector Comparator model; and
- 2) P3 procurement arrangements, based on the profile of payments to the Preferred Proponent as reflected in the Form G1 as on July 4<sup>th</sup>, 2008.

The VfM analysis has been prepared based on estimated costs and various other assumptions provided by the ASAP Project Team and its advisors as well as the Preferred Proponent bid submission and the Form G1 that was agreed at Financial Close, (collectively the "Information").

<sup>1</sup> Calculated on a net present value basis, applying a base date of July 4<sup>th</sup>, 2008



We have not audited or attempt to independently verify the accuracy or completeness of the Information.

Please do not hesitate to contact me should you have any queries or wish to discuss further.

Yours truly,

Esther M. Tse  
Associate Partner  
Infrastructure and Project Finance

| NPV Prices (\$m's as at July 4, 2008)                                  | Total Cost | \$125m Provincial Contribution | Grand Total | Comments   |
|--|------------|--------------------------------|-------------|--|
|  | A          | B                              | C = A + B   |  |
| Public Sector Comparator   | 730.8      | -                              | 730.8       | Updated as at April 1, 2010 for removal of furniture costs |
| <b>Financial Close Position</b>  |            |                                |             |  |
| Preferred Proponent  | 521.0      | 113.0                          | 634.0       | Values based on July 4, 2008                               |
| <b>Comparison of 'Preferred Proponent' to Public Sector Comparator</b> |            |                                |             |  |
| Estimated savings:   | (209.8)    | 113.0                          | (96.8)      |  |
| Estimated % saving   |            |                                | 13.2%       |  |
| Applies discount rate of 5.05% to July 4, 2008                         |            |                                |             |  |

## Appendix B: Sample of risk allocations

Table 1: Sample of Risk Allocations between Government of Alberta and Contractor <sup>8</sup>

|   | Traditional |            | P3  |            |
|---|-------------|------------|-----|------------|
|   | GOA         | Contractor | GOA | Contractor |
| <b>Construction Risks</b>                     |             |            |     |            |
| Design interaction with site conditions       | •           |            |     | •          |
| Construction interaction with site conditions |             | •          |     | •          |
| Site safety                                   |             | •          |     | •          |
| Construction methodology                      |             | •          |     | •          |
| Construction costs                            | •           |            |     | •          |
| Unforeseen site conditions                    | •           |            | •   | •          |
| Labour issues                                 |             | •          |     | •          |
| Material issues                               |             | •          |     | •          |
| Design errors                                 | •           |            |     | •          |
| Schedule issues                               | •           | •          |     | •          |
| Construction quality issues                   |             | •          |     | •          |
| Scope changes                                 | •           |            | •   |            |
| Delayed site access                           | •           |            | •   |            |
| Material inflation                            | •           | •          |     | •          |
| Wage inflation                                | •           | •          |     | •          |
| Not meeting agreed milestone dates            |             | •          |     | •          |
| Adverse weather conditions                    | •           | •          |     | •          |
| Labour disputes                               | •           |            |     | •          |
| Fire during construction                      |             | •          |     | •          |
| Vandalism/theft/arson during construction     |             | •          |     | •          |
| Damage and/or injuries to third party         |             | •          |     | •          |
| Damage to work                                |             | •          |     | •          |
| Damage and/or loss to utilities               |             | •          |     | •          |
| Defective materials                           |             | •          |     | •          |
| Public interface                              | •           | •          |     | •          |
| Workplace health and safety                   |             | •          |     | •          |
| Insufficient performance bonding              | •           |            |     | n/a        |
| Subcontractor insolvency                      |             | •          |     | •          |
| <b>General Risks</b>                          |             |            |     |            |
| Land acquisition                              | •           |            | •   |            |
| Life cycle management                         | •           |            |     | •          |
| Stakeholders management                       | •           |            |     | •          |
| Coordination and approvals through users      | •           |            |     | •          |
| Third party objections                        | •           |            |     | •          |
| Patent infringement                           | •           | •          |     | •          |
| GOA supplied data – accuracy                  | •           |            |     | •          |
| GOA supplied data – sufficiency               | •           |            |     | •          |
| GOA supplied data – interpretation            | •           | •          |     | •          |
| Utilities hook up/connections                 | •           |            |     | •          |
| Concept approvals – environmental             | •           |            | •   |            |

|  | Traditional |            | P3  |            |
|--|-------------|------------|-----|------------|
|  | GOA         | Contractor | GOA | Contractor |
| <b>Approvals Risks</b>                             |             |            |     |            |
| Development permits                                |             | •          | •   | •          |
| Building permits                                   |             | •          |     | •          |
| Occupancy permits                                  |             | •          |     | •          |
| Environmental permits                              | •           |            |     | •          |
| Utilities crossing requirements                    | •           | •          |     | •          |
| Regulatory requirements                            | •           | •          |     | •          |
| Building Code compliance                           | •           |            |     | •          |
| Land Use approvals                                 | •           |            | •   |            |
| Utilities approvals                                | •           |            |     | •          |
| Municipal requirements                             | •           |            |     | •          |
| <b>Environmental Risks - Known</b>                 |             |            |     |            |
| Geotechnical                                       | •           |            |     | •          |
| Contamination                                      | •           |            |     | •          |
| Archaeological                                     | •           |            |     | •          |
| Flood plain analysis                               | •           |            |     | •          |
| <b>Environmental Risks - Unknown</b>               |             |            |     |            |
| Geotechnical                                       | •           |            | •   |            |
| Contamination                                      | •           |            | •   |            |
| Archaeological                                     | •           |            | •   |            |
| Flood plain analysis                               | •           |            | •   |            |
| <b>Technical Risks</b>                             |             |            |     |            |
| Core school design                                 | •           |            |     | •          |
| Modular design and performance                     | •           |            |     | •          |
| Structure safety                                   | •           | •          |     | •          |
| Design quality issues                              | •           |            |     | •          |
| Material behaviour                                 | •           |            |     | •          |
| Construction process innovation                    | •           |            |     | •          |
| Construction performance specification risks       | •           |            | •   |            |
| Operation performance specification risks          | •           |            | •   |            |
| Lack of building system integration                | •           |            |     | •          |
| Aggressive schedule                                | •           |            | •   | •          |
| Delayed schedule                                   | •           |            |     | •          |
| Future IT risk                                     | •           |            | •   |            |
| <b>Financial and Economic Risks</b>                |             |            |     |            |
| Sourcing of capital – construction                 | •           |            |     | •          |
| Allocation of capital – operations                 | •           |            |     | •          |
| Cash flow management – construction                | •           |            |     | •          |
| Cash flow management – operations                  | •           |            |     | •          |
| Inflation risks prior to financial close           | •           |            | •   |            |
| Exchange rate risks                                | n/a         |            |     | •          |
| Base interest rate changes before Agreement signed | •           |            | •   |            |
| Interest rate changes after closure                | •           |            |     | •          |
| Inflation on operations, maintenance and renewal   | •           |            | •   | •          |
| Inflation on construction                          | •           |            |     | •          |
| Insurance  | •           |            | •   | •          |



|  | Traditional |            | P3  |            |
|--|-------------|------------|-----|------------|
|  | GOA         | Contractor | GOA | Contractor |
| Change orders  | •           |            | •   |            |
| Government withdrawing from P3s                        | n/a         |            | •   |            |
| <b>Demand Risks</b>                                    |             |            |     |            |
| Modular additions above original projections           | •           |            | •   |            |
| Modular additions (escalation impact)                  | •           |            |     | •          |
| Growth in student population over design capacity      | •           |            | •   |            |
| Changes in school programming                          | •           |            | •   |            |
| Under-utilized school facilities                       | •           |            | •   |            |
| Appropriateness of schools                             | •           |            | •   |            |
| <b>Operations and Maintenance Risks</b>                |             |            |     |            |
| Changes in legislation                                 | •           |            | •   | •          |
| Damage to property                                     | •           |            | •   | •          |
| Increased maintenance costs                            | •           |            |     | •          |
| Performance issues                                     | •           |            |     | •          |
| Change in performance standards                        | •           |            | •   |            |
| Labour issues  | •           |            |     | •          |
| Material issues  | •           |            |     | •          |
| Non-availability of facility or portions thereof       | •           |            |     | •          |
| Vandalism during O&M period                            | •           |            | •   | •          |
| Fire damage  | •           |            | •   |            |
| Flood and other natural disasters                      | •           |            | •   |            |
| Water, air and/or soil pollution                       | •           |            |     | •          |
| Labour disputes  | •           |            | •   | •          |
| School security issues                                 | •           |            | •   |            |
| Unplanned major replacements                           | •           |            |     | •          |
| Soft maintenance issues                                | •           |            | •   |            |
| School Board labour relations                          | •           |            | •   |            |
| Consequential damage due to contractor non-performance |             | •          |     | •          |
| Facility condition risk at 20/25/30 years              | •           |            |     | •          |
| Third party damages risk                               | •           |            | •   |            |
| Liability insurance                                    | •           |            | •   | •          |
| <b>Business Risks</b>                                  |             |            |     |            |
| Bankruptcy of contractor                               | •           |            | •   | •          |
| Subcontractor default                                  | •           |            |     | •          |

<sup>8</sup> The project DBFM agreement should be consulted for a comprehensive allocation of risks between the parties. The final form of the project DBFM agreement is available at <http://www.infrastructure.alberta.ca/3865.htm>.

Appendix C: Schools included in the project

**Table 2: School jurisdictions and communities served**

| <b>School Jurisdiction (Board)</b> | <b>Project Community / Grade Structure</b> | <b>End (Full) Capacity of School</b> |
|------------------------------------|--|--------------------------------------|
| Calgary Board of Education         | Saddle Ridge / K-4                         | 550                                  |
| Calgary Board of Education         | Evergreen / K-4                            | 550                                  |
| Calgary Board of Education         | Bridlewood / K-6                           | 600                                  |
| Calgary Board of Education         | Cranston / K-4                             | 550                                  |
| Calgary Board of Education         | Royal Oak / K-4                            | 550                                  |
| Calgary Board of Education         | West Springs / K-4                         | 550                                  |
| Calgary Catholic Schools           | Evergreen / K-6                            | 600                                  |
| Calgary Catholic Schools           | Cranston / K-9                             | 840                                  |
| Calgary Catholic Schools           | Saddle Ridge / K-9                         | 840                                  |
| Edmonton Catholic Schools          | Rutherford East / K-9                      | 500                                  |
| Edmonton Catholic Schools          | The Hamptons/ K-9                          | 500                                  |
| Edmonton Catholic Schools          | Terwillegar Heights/ K-6                   | 500                                  |
| Edmonton Public Schools            | Carlton / K-9                              | 850                                  |
| Edmonton Public Schools            | Tamarack / K-9                             | 850                                  |
| Edmonton Public Schools            | Terwillegar Towne / K-9                    | 850                                  |
| Edmonton Public Schools            | Belle Rive / K-9                           | 850                                  |
| Edmonton Public Schools            | Rutherford West/ K-9                       | 850                                  |
| Edmonton Public Schools            | Hollick-Kenyon/ K-9                        | 850                                  |
| <b>TOTAL NUMBER OF STUDENTS</b>    |  | <b>12,230</b>                        |

## Appendix D: Commentary by Fairness Auditor

**R.B. (Dick) Innes, CA**  
17708 85<sup>th</sup> Avenue  
Edmonton, Alberta  
T5T 0N6

Tel: 780 487 2341  
Email: rbinnes@telusplanet.net

### **Personal and Confidential**

October 31, 2008

Diane Dalglish,  
Assistant Deputy Minister, Capital Projects  
Alberta Infrastructure  
2nd Floor, 6950 – 113<sup>th</sup> Street  
Edmonton, Alberta, Canada  
T6H 5V7

Dear Ms Dalglish;

### **Re: Fairness Auditor's Report upon completion and Financial Close of the Alberta Schools Alternative Procurement (ASAP I) Project.**

This Fairness Report is being provided to you as Chair of the Project Review Committee in accordance with the Fairness Auditor Terms of Reference

In order to ensure that the transaction is being conducted fairly and consistently, the following fairness principles are used as guidelines throughout the transaction process:

- All Interested Parties, Respondents and Proponents have the same opportunity made available to them to access information.
- The information made available to Interested Parties, Respondents and Proponents is sufficient to ensure that they have the opportunity to fully understand the opportunity.
- All Interested Parties, Respondents and Proponents have reasonable access to the opportunity.
- The criteria established in the invitation documents truly reflect the needs and objectives in respect of the project.
- The evaluation criteria and the evaluation process are established prior to the evaluation of submissions.
- The evaluation criteria, RFQ/RFP, and evaluation processes are internally consistent.
- The pre-established evaluation criteria and evaluation process are followed.
- The evaluation criteria and process are consistently applied to all submissions.

In carrying out my responsibilities as Fairness Auditor within the framework of the fairness principles set out above, I have:

- Reviewed transaction documents including the Request for Qualifications (RFQ), Request for Proposal (RFP), and the Design, Build, Finance, and Manage (DBFM) Agreement, Schedules, and Addenda thereto. I also reviewed the Process Framework, Submission Requirements, and the Evaluation Procedures used throughout the procurement.
- Reviewed Respondent and Proponent questions and answers thereto throughout the process.
- Attended all meetings between the Respondents, Proponents and the Project Team as well as weekly ASAP Team Meetings, DBFM review meetings, Project Review Committee meetings, Liaison Committee meetings, and Evaluation Team meetings,
- Observed and monitored the various selection activities throughout the process including attendance at the Financial Close with the Preferred Proponent.
- Reviewed meeting minutes, email, and reports of the various committees and teams involved in the process.
- Provided advice on fairness matters when required.
- Reported to the ASAP Team and Project Review Committee on a regular basis.

It is my opinion that the ASAP Team has dealt with all Respondents and Proponents in an open and transparent manner throughout the ASAP I process through to Financial Close and has carried out the selection process in an unbiased, fair and consistent manner.

Yours truly,



R.B.(Dick) Innes, CA  
Fairness Auditor  
ASAP I Project

## Appendix E: Summary of bids received

**Table 3: Financial bids received from proponents on July 4, 2008**

| Item  | Public Sector Comparator (\$million) | P3 Procurement (\$million) |                     |                           |
|---|--------------------------------------|----------------------------|---------------------|---------------------------|
|   |                                      | B & B Alberta Schools      | New Alberta Schools | Plenary Education Alberta |
| Total net present value of design, construction, finance and operations and maintenance | 731                                  | 634                        | 780                 | 682                       |
| Value for money of P3 procurement   |                                      |                            |                     |                           |
| \$  | Not applicable                       | 97                         | (49)                | 49                        |
| %   | Not applicable                       | 13.27%                     | (6.70)%             | 6.70%                     |

## Appendix F: Payment adjustments

**Table 4: Sample of key payment adjustments included in P3 contract**<sup>9</sup>

| Issue  | Payment Adjustment   |
|--|--|
| Failure to correct deficiencies identified by External Audit within specified time                                       | \$5,000 / week for first four weeks;<br>\$10,000 / week thereafter   |
| Failure to develop and provide 5 year Maintenance Plan on first day of school year                                       | \$1,200 / week   |
| Failure to develop and provide 5 year Renewal Management Plan on first day of school year                                | \$1,200 / week   |
| Failure to register each school with Canada Green Building Council (LEED™ Requirement)                                   | \$200 / day / school   |
| Failure to obtain LEED™ Silver Certification within 24 months from school availability                                   | \$100,000 / uncertified school   |
| Failure to deliver required construction schedules and submittals to province within time specified                      | \$1,500 / undelivered schedule   |
| Failure to rectify any default with respect to site requirements within time specified                                   | \$1,500 / day / default  |
| Failure to rectify any default with respect to maintenance and renewal waste disposal requirements within time specified | \$300 / day / default  |
| Failure to provide as-built drawings and updated operations and maintenance manuals to province within time specified    | \$2,000 / month / undelivered set  |
| School is inaccessible   | \$5,000 to \$20,00 per day or partial day<br>(\$30,000 during examination periods)   |
| Failure to make repairs within the repair period or install temporary protection and measures                            | Emergency failures - \$2,000 per day or partial day per school<br>Routine failures - \$500 per day or partial day per school |

<sup>9</sup> The project DBFM agreement should be consulted for details on all payment adjustments. The final form of the project DBFM agreement is available at <http://www.infrastructure.alberta.ca/3865.htm>.

## Appendix G: Proponent Teams

**Table 5: Composition of proponent teams invited to participate in RFP process**

| Team Component                   | B & B Alberta Schools <sup>10</sup>                     | New Alberta Schools                                | Plenary Education Alberta                               |
|----------------------------------|---|--|---|
| <b>Project Lead</b>              | Babcock & Brown ULC (75%)                               | Acciona S.A. (50%)                                 | Plenary Group (Canada) Ltd.                             |
|                                  | Gracorp Capital Advisors Ltd./GVest GP Inc. (25%)       | Carillion Canada Ltd. (50%)                        |   |
| <b>Design Build</b>              | Graham Design Builders, a JV                            | Acciona Infraestructuras, S.A.                     | Stuart Olson Constructors Inc.                          |
|                                  | Bird Construction Company, A Limited Partnership        | Chandos Construction Ltd.                          | Dominion Construction Inc.                              |
|                                  | Barr Ryder Architects and Interior Designers            | Clark Builders                                     | IBI Group Architects, Engineers                         |
|                                  | GEC Architecture  | Elan Construction Ltd.                             | Hemisphere Engineering Inc.                             |
|                                  | Protostatix Engineering Consultants Inc.                | Stantec Architecture Ltd.                          | Tomecek Roney Little & Associates Ltd.                  |
|                                  | MMP Engineering   |  | BPTEC-DNW Engineering Ltd.                              |
|                                  | A.D. Williams Engineering Inc.                          |  | Golder Associates Ltd.                                  |
|                                  |   |  |   |
| <b>Operation and Maintenance</b> | Honeywell Limited                                       | Carillion Canada Inc.                              | Johnson Controls LP                                     |
| <b>Financing</b>                 | Babcock & Brown ULC                                     | Carillion Canada, Inc.                             | Deutsche Bank, AG New York Branch                       |
|                                  | Gracorp Capital Advisors Ltd./GVest GP Inc.             | Acciona S.A.                                       |   |
| <b>Other Advisors</b>            | Davis LLP (lead team counsel)                           | Blake, Cassels & Graydon LLP (lead team's counsel) | Davies Ward Phillips & Vineberg LLP (lead team counsel) |
|                                  | Burnet, Duckworth & Palmer LLP (design-build's counsel) | McMillan Binch Mendelsohn LLP (lender's counsel)   | McCarthy Tétrault LLP (lender's counsel)                |
|                                  | Enermodal Engineering                                   |  |   |
|                                  | AON Canada  |  |   |
|                                  | NATIONAL Public Relations                               |  |   |

<sup>10</sup> B&B Alberta Schools was the proponent group that developed and submitted the successful proposal. Once the RFP process was completed, the project leads for B&B Alberta Schools formed a special purpose organization, BBPP Alberta Schools Limited, to carry out the work of the contract.