

**Government
of Alberta** ■

P3 Value for Money Assessment and Project Report

Alberta Schools Alternative Procurement (ASAP) Project Phase II



September 2010

Alberta ■

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Value for Money Assessment and Project Report on Public Private Partnership (P3) for ASAP II

September 2010

1. Summary: Using a P3 for 10 new schools - did it work?

By using a Public Private Partnership (P3) to design, build, finance and maintain 10 schools in Edmonton and the Calgary region, the Government of Alberta saved \$105 million (in today's dollars) over 32 years compared to a traditional approach (\$253 million instead of \$358 million, a 29% savings).¹ These schools will also be delivered about two years earlier than with the traditional method. The government chose a P3 approach to deliver the Alberta Schools Alternative Procurement Phase 2 project, known as ASAP II. The following assessment shows that using a P3 delivered value for money and that it was the right way to procure the 10 schools.

Following the success of the ASAP I project, the government, on January 30, 2008, announced the building of 14 new schools in the Edmonton and Calgary regions. The project was later split to deliver 10 K-9 schools as a P3 and four high schools as a design-bid-build project. This report addresses the procurement of the 10 K-9 schools only, to be delivered through a P3. Knowledge gained from and the business structures used for ASAP I served as a basis for the procurement of the ASAP II project.

The P3 project will utilize core school designs that provide equitable facilities meeting provincial school standards and guidelines and will support the Alberta curriculum. This standardized approach will provide a high degree of equality for all school boards involved in the project.

The government signed the P3 contract, with a 32-year term, in April 2010 with B2L Partnership (the Contractor) to design, build, finance, and maintain the 10 new schools. The contract requires the schools to be ready for school boards on June 30, 2012 so they can be available for students in September 2012, about two years earlier than with the traditional method.

The cost savings and earlier completion were achieved due to:

- economies of scale
- allocation of risks to the sector best able to manage them
- fixed cost contract
- construction process efficiencies

This report explains what a P3 is and why it may be used, provides a value for money assessment of the P3 for 10 new schools, and provides a project report.²

¹ This savings calculation is based on the amounts in the bids for the ASAP II Request for Proposals

² 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 non-traditional way for government to create capital assets (such as roads, schools, and other types of government facilities). In the case of ASAP II, 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 of design and construction; 30 years of maintenance).³

A P3 can save time, money and reduce risk to the government by having one contractor design, build, finance, and maintain a facility, which is why the abbreviation “DBFM” is sometimes used. 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 10 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, then hires a construction contractor to build it. Once the facility is built, the public sector operates 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 the ASAP II project, 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.

Nominal payment reflects the total payments made over the life of the asset at face value (unadjusted for interest and inflation).

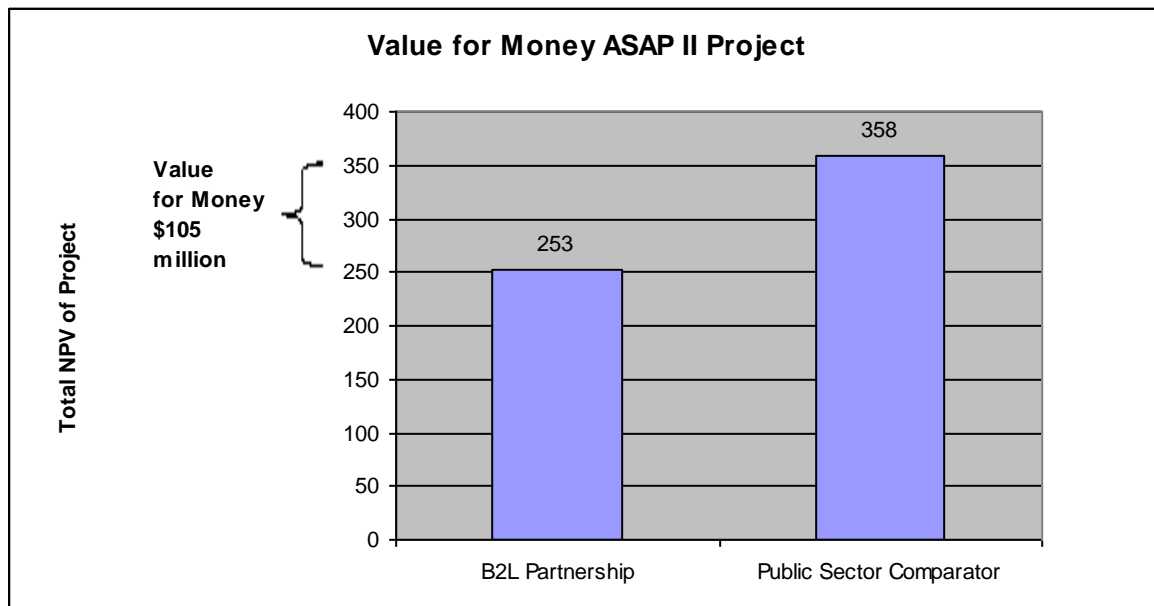
³ For detailed discussion on P3s, see the Annual Report of the Auditor General of Alberta 2003–2004, at pages 49 to 72 (www.oag.ab.ca/files/oag/ar2003-2004.pdf).

3. VFM Assessment of the P3 used for 10 new schools

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

This VFM assessment uses net present value as of March 1, 2010, when bids were received. It includes the costs to design, build, partially finance and maintain the schools over 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 furniture and equipment, broadband connections and land costs.⁴

The cost of doing the project through P3 delivery method is tendered at \$253 million, saving Alberta taxpayers \$105 million (29%) in today's dollars (confirmed by Deloitte & Touche LLP – see Appendix A). The 10 schools are scheduled to be ready about two years earlier than with the traditional method. As a result, the Alberta government entered into the contract to design, build, and finance the 10 new schools and maintain them for a 30-year term. The P3 selection process is based on the net present value of the project or the total value of all aspects of the project over the life of the agreement, expressed in today's dollars.



⁴ 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. Deloitte & Touche LLP developed the financial model.

Private financing by the contractor costs more than public financing by government but in the case of ASAP II 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 will pay for any changes needed during the construction period due to design errors. The contractor will also bear any cost increases for labor 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 in Table 1 (Appendix B) of this report and discussed on pages 17, 18 and 19.
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.

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 10 schools** in different locations on a tight schedule. For example, it costs much less (per boiler) to buy 20 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 would have a guaranteed group of 10 schools, it could secure a supply of most parts early in the construction period, avoiding higher costs for labor, 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 100 high-performance manufactured modular classrooms allows manufacturing plants to schedule production runs well ahead of time resulting in timely delivery and installation of the classrooms.

Qualitative measures of value

1. **Controlled scope.** By bundling 10 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 the government's equal treatment of school boards, with each receiving schools of consistently high quality.
2. **Earlier opening.** The scheduling advantages explained earlier will have the 10 schools open in September 2012, about 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 10 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 six months) allows proponents to establish labor and equipment supply and to negotiate 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 labor, materials and equipment to arrive onsite at the right time. The P3 results in a single contractor for all 10 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 10 schools available for use by the school boards by June 30, 2012 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 wants 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 the preferred proponent (which became the contractor when it signed the P3 contract) and signing the contract, the government shared the risk of any changes in base borrowing rates with the preferred proponent.

The contractor had 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: during the procurement phase of the project, the government worked with the four municipalities to ensure that development permits for the schools were in place, with as few conditions as possible. Once the contractor signed the contract, it was responsible to have the municipalities transfer the development permits to it. The contractor assumed any schedule risks of not being able to obtain the building permits on time.

4. Project report

Project goals

1. **Deliver ten K-4, K-9 and Grades 5-9 schools in high-growth areas in Edmonton and Calgary regions** and adapt to the particular program needs of the individual boards. The ASAP II project aims to put new schools in the areas that need them—quickly, while also providing flexibility in planning to accommodate jurisdictions' individual learning priorities. Edmonton will receive three new schools, Calgary will receive five, and Langdon and Okotoks each get one new school.
2. **Use efficient and environmentally sustainable (LEED Silver) school design** as part of a new approach to construction. Core school designs for K-4, K-9 and Grades 5-9 school configurations will be used to build the 10 new schools in Edmonton, Calgary, Okotoks and Langdon. High-performance modular classrooms can be added or removed from the core building as needed, allowing schools greater flexibility to respond to changes in student enrolment. The designs will also be easily adaptable to different sites across the province.
3. **Equality of facilities** where standard core elementary, –middle and elementary/junior high schools will be designed and constructed for the school boards to be of a consistent standard and configuration across the project bundle. This standardized approach will provide a high degree of equality for all school boards involved in the project.
4. **Ensure short-term cost certainty** for building the 10 schools and **long-term cost certainty** for maintaining them. Construction rates had increased between 18 and 25% and then decreased by 15 – 18% per year in recent years. As the project shifts the risk of increased construction costs to the contractor any increase in construction rates is borne by them. The cost of maintenance and renewal is adjusted according to a prescribed process; any increases above the rate prescribed by the process will be borne by the contractor.

Table 2 (Appendix C) lists the 10 new schools in the project

The school boards remain responsible for services such as daily custodial work, which includes movement of desks and other furniture and cleaning.

Project outcomes

The following outcomes will be achieved by delivering ASAP II as a P3:

- **Cost certainty over 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 and accountable process for school facility project delivery:** the successful implementation of the P3 process resulted in a project delivery mechanism that leverages innovation and can potentially be repeated in various locations and with different types of infrastructure around the province.

- **Less time and lower cost to produce schools:** to allow the K-4, K-9, and 5-9 middle schools to open in September 2012, enabling full school operations at the beginning of the school year. To plan, design, and build from three to five schools is a significant undertaking for each school board. Using the traditional approach, it could take as long as five years for all the schools to be ready for students. In contrast, the P3's coordinated, comprehensive approach will produce 10 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 which is, in effect, a 30-year “warranty” for each school.

Approaches considered

The alternative procurement approaches considered to deliver the 10 schools in this project proposal are shown below:

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. 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. Although, this approach is most familiar for the government and school boards, it is probable that all schools would not be completed until 2014 and could be subject to “scope creep” and budget overruns.
2. **Design-Build-Finance-Maintain approach**, the basis of the P3, follows the procurement of the 10 K-4, K-9 and Grade 5-9 schools utilizing similar principles and processes to the ASAP-I procurement. The winning private-sector proponent (the contractor) forms 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 and transparent. A fairness Auditor, Mr. Richard Innes, CA, oversaw the process to ensure it was fair and provided an independent report by observing and reviewing the process (Appendix D).

A Request for Qualifications was publicly issued on May 1, 2009. Four teams responded and were evaluated on experience, personnel qualifications, past performance and financial capability. The three teams asked to submit proposals were Alberta Public-Private Learning Experience (APPLE) Group, Build II Learn and Plenary Lend Lease Education Alberta.⁵

The Request for Proposal (RFP) process ran from July 2, 2009 to March 1, 2010. 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 passed all submissions, they all submitted financial bids based on the final form of the contract. These bids are summarized in Table 4 (Appendix F). Build II Learn submitted the lowest price, on a net present value basis, and won the contract. Build II Learn then created a special purpose company, known as B2L Partnership, 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 \$415 million in nominal dollars, or \$253 million in 2010 dollars.

The contractor will be paid about 50% of the construction cost as progress payments. Once all schools are complete, the government will pay the contractor monthly amounts in three separate streams: capital, maintenance and renewal, over the life of the contract.

Capital payments are fixed, while maintenance and renewal payments are indexed.⁶

If any school is not ready by June 30, 2012, the government will pay only that part of the progress payment attributable to completed schools. The rest of the payment will be made upon school availability. Additionally the government will make monthly maintenance and renewal payments and 80% of the monthly capital payment only for completed schools, until all 10 schools are completed. The contractor will thus lose capital, maintenance, and renewal payments for every school not completed 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 10 schools in the Edmonton and Calgary regions described in Table 2 (Appendix C) by June 30, 2012;

⁵ The companies that make up the teams are listed in Table 3 (Appendix E).

⁶ 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.

- Partially finance the construction over the term of the contract;
- Maintain the 10 schools to the standards specified in the contract;
- Have a renewal plan for school components to ensure they meet the performance requirements; and
- Hand back responsibilities for maintenance and renewal of the schools to the school boards in June 2042, ensuring facilities are turned over in the 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 specifications in the contract. For example, if a boiler does not perform efficiently and the contractor fails to repair or replaced it within the allowed time, the government can reduce monthly payments to the contractor.

A detailed description of all the payment adjustments is in schedule 15 of the DBFM contract, and a sample appears on Table 5 (Appendix G) of this report. A final form of the DBFM contract is at <http://www.infrastructure.alberta.ca/3867.htm>.

School Boards own the schools: Ownership of the facilities rests with the school boards while the contractor has a license from the government to access the schools for construction, maintenance, and renewal activities. The school boards will be responsible for day-to-day operations of the facilities, including ongoing custodial services, lighting, heating, and all other ongoing traditional operational 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. The boards can also lease excess space for education related purposes such as day-care and assume the related risks. School boards will remain publicly accountable for delivering education programs for all schools in their jurisdiction.

Monitoring during and after construction

During construction, the government is using Barr Ryder Architects 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 specifications. The government will also perform 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 asset is built and records the cost of building the asset as a capital expense because school boards own the schools.

Project schedule

The P3 contract was signed on April 15, 2010 and construction is expected to start on some sites by the end of summer 2010. The contractor must deliver the schools by June 30, 2012

or face a payment reduction. An independent certifier will certify when the schools are available for use. The schools are due to open to students by September 2012.

The maintenance period starts after the schools are available and continues until June 2042, when the license granted to the contractor to access the schools for maintenance and renewal activities will expire and all payments cease. The contractor must hand back the responsibility for maintenance and renewal of the schools 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 schools boards will be responsible for operating, maintaining, and renewing the schools in their jurisdiction.

Appendix A: Commentary by Deloitte & Touche LLP

Amended March 2, 2010

Introduction

Scope of Report

This report presents the comparison of the Financial Offers received from ASAP II Proponents in their SR3 submissions to determine the Preferred Proponent. It also calculates the Value for Money realized by the Preferred Proponent's Financial Offer. The purpose of this report is to provide a concise summary of the bid evaluation process to identify the Preferred Proponent and to facilitate the notification of the Preferred Proponent.

Timing and PSC Updates

The cost estimates that form the basis of the Public Sector Comparator (PSC) were updated by Alberta Infrastructure on January 5, 2010. The financing assumptions were updated by CIBC on January 18, 2010. Using the updated assumptions, the PSC was finalized prior to receipt of the Proponents' SR2B submissions, and was deposited with the Deputy Minister of Justice on January 27, 2010. The PSC expressed as a net present value (NPV) as of January 1, 2010 was \$352.98 million.

The PSC was recalculated on February 25, 2010, using the discount rate and inflation rate that was determined by Alberta Finance as the basis for calculating the net present value of the Proponents' Financial Offers. None of the other input assumptions (costs, etc.) were altered. The PSC expressed as an NPV as of January 1, 2010 based on the updated discount rate and inflation rate was \$355.83 million.

The Financial Offers from Proponents were received on March 1, 2010.

For purposes of evaluation, the NPV of the PSC was recalculated to a base date of March 1, 2010 to match the date that financial offers were received. None of the other input assumptions (costs, discount rate, inflation rate, etc.) were altered. The PSC expressed as an NPV as of March 1, 2010 is \$358.59¹ million. The PSC referred to herein is this recalculated value.

Limitations

This Report was prepared for the exclusive use of Alberta Infrastructure, and is not to be reproduced or used without written permission of Deloitte with the exception of its use with regard to the procurement process for the ASAP II P3 project. No third party is entitled to rely, in any manner or for any purpose, on this Report. Deloitte's services may include advice or recommendations, but all decisions in connection with the implementation of such advice and recommendations shall be the responsibility of, and be made by, Alberta Infrastructure.

Deloitte's scope of work related to the PSC was limited to the review and updating of a PSC spreadsheet model provided by Alberta Infrastructure. The PSC's financial assumptions and cost estimates are those of Alberta Infrastructure. Deloitte's scope of work related to the VfM was limited to development of a spreadsheet to calculate and compare the net present value of the financial offers using Alberta Infrastructure's methodology.

This Report relies on certain information provided by Alberta Infrastructure and the Project's Proponents, and Deloitte has not performed an independent review of this information. It does not constitute an audit conducted in accordance with generally accepted auditing standards, an examination or compilation of, or the performance of agreed upon procedures with respect to prospective financial information, an examination of or any other form of assurance with respect to internal controls, or other attestation or review services in accordance with standards or rules established by the CICA or other regulatory body.

¹ The previous version of this report dated March, 1, 2010 which was in draft form and under review stated the recalculated PSC as \$360.79 million. The value of \$358.59 million in this report is based on final review of the draft report and underlying calculations.

Method

The Financial Offers consist of the following payments:

- Monthly payment stream over the operating period July 1, 2012 to June 30, 2042 inclusive), consisting of:
 - Capital Payments (identical monthly payments stated in nominal dollars)
 - Maintenance Payments (monthly payments for Maintenance, stated in 2010 dollars)
 - Renewal Payments (monthly payments with timing as needed for Renewal, stated in 2010 dollars)
- Total Provincial Funding, calculated by multiplying the amount of one full month's Capital Payment by 137.

The total cost of the Financial Offers on a net present value basis was determined by calculating the sum of the net present values (as at the SR3 submission date of March 1, 2010) of:

- the Capital Payments;
- the Maintenance Payments, after first adjusting each payment for inflation using a fixed estimated inflation rate of 2.45% per annum determined by Alberta Finance;
- the Renewal Payments, after first adjusting each payment for inflation using the fixed estimated inflation rate of 2.45% per annum determined by Alberta Finance; and
- the Provincial Funding, after first distributing the amount into a number of separate progress payments using a pre-determined schedule of payment dates and payment amounts (with each amount defined as a percentage of Provincial Funding). The schedule of payment dates and amounts is taken from the Shadow Bid, which has monthly payments of an average of 0.71% of Provincial Funding commencing in July 31, 2012².

The discount rate used to calculate net present values is 4.9% per annum, determined by Alberta Finance based on the Province's borrowing costs.

Process and results

To determine the Proponent that provided the Financial Offer with the lowest total cost on a net present value basis, the Proponent's Form G1 cashflows (Columns B, D, and E) were value-copied into the bid comparison spreadsheet that was developed in advance.

The payment cashflows as copied into the bid comparison spreadsheet were compared to and spot-checked against each Proponent's Form G1 (paper version) to confirm agreement between the Proponent's electronic and paper financial offers and the accuracy of the value-copy process. The sum of each cashflow in the bid comparison spreadsheet was also compared to the sum of the cashflow in the Proponent's Form G1 spreadsheet to again ensure the accuracy of the value-copy process. These comparisons confirm that the NPVs of each bid have been calculated according to the payments indicated on the paper version of each Proponent's Form G1.

The bid comparison spreadsheet calculates the NPV of the cashflows to the Proponents as of March 1, 2010, which is the basis for determination of the Preferred Proponent. The results are as follows:

Net Present Values for Offer Comparison (NPVs to 01-Mar-2010)	PSC	APPLE	Build II Learn	Plenary
Total Cost on Net Present Value Basis	\$358,591,853.55	\$273,460,772.90	\$253,241,536.77	\$296,454,547.45
		Rank: 2	Rank: 1	Rank: 3

The result as indicated in the above table is that B2L has the lowest NPV, and absent any SR3 submission compliance concerns, B2L would be the Preferred Proponent.

Calculation of final value for money

Overview

Value for Money (VfM) is determined by comparing the Preferred Proponent's Financial Offer to the PSC and is defined by Alberta Infrastructure and Transportation's P3 Management Framework as follows:

... net present value comparison of the comparable costs and risks of the proposed P3 project with the conventional project delivery over the same life cycle

The cost of conventional project delivery for the Project is established as the PSC. The cost of P3 project delivery is estimated at several points in the project development process with a Shadow Bid, allowing VfM to be estimated and refined as project information improves. The final VfM analysis replaces the Shadow Bid's estimated cost with the cost of the Preferred Proponent's Financial Offer (i.e. the actual bid rather than the Shadow Bid).

Calculation

The VfM compares the cost of the Preferred Proponent's Financial Offer to the cost of the PSC. The VfM is therefore as follows:

	NPV (in millions)
Public Sector Comparator	\$358.59 million
Preferred Proponent's Financial Offer	\$253.24 million
Difference	\$105.35 million

The VfM is therefore \$105.35 million, or 29.38% of the PSC.

Appendix B: Sample of risk allocations

Table 1: Sample of Risk Allocations between Government of Alberta and Contractor ⁷

	Traditional		P3	
	GoA	Contractor	GoA	Contractor
Construction Risks				
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	•	•		•
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 and/or loss to utilities		•		•
Public interface	•	•		•
Workplace health and safety		•		•
Insufficient performance bonding	•			n/a
Subcontractor insolvency		•		•
General risks				
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	•			•

⁷ The project agreement should be consulted for a comprehensive allocation of risks between the parties. The final form of the project agreement is available at <http://www.infrastructure.alberta.ca/3867.htm>.

GOA supplied data – interpretation	•	•		•
Utilities hook up/connections	•			•
Concept approvals – environmental	•		•	
Approvals Risks				
Development permits		•	•	•
Building permits		•		•
Occupancy permits		•		•
Environmental permits	•			•
Utilities crossing requirements	•	•		•
Regulatory requirements	•	•		•
Building Code compliance	•			•
Land Use approvals	•		•	
Utilities approvals	•			•
Municipal requirements	•			•
Environmental Risks - Known				
Geotechnical	•			•
Contamination	•			•
Archaeological	•			•
Flood plain analysis	•			•
Environmental Risks - Unknown				
Geotechnical	•		•	
Contamination	•		•	
Archaeological	•		•	
Flood plain analysis	•		•	
Technical Risks				
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	•			•
Financial and Economic Risks				
Sourcing of capital – construction	•			•
Allocation of capital – operations	•			•
Cash flow management – construction	•			•
Cash flow management – operations	•			•

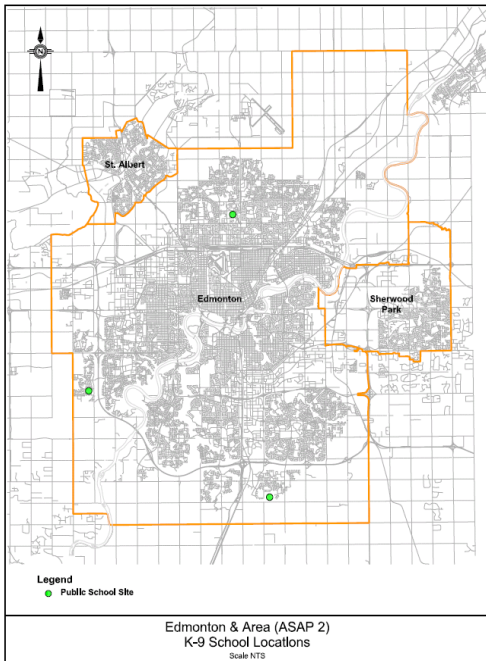
Inflation risks prior to financial close	•		•	
Base interest rate changes before Agreement signed	•		•	
Interest rate changes after closure	•			•
Inflation on operations, maintenance and renewal	•		•	•
Inflation on construction	•			•
Insurance	•		•	•
Change orders	•		•	
Government withdrawing from P3s	N/A		•	
Demand Risks				
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	•		•	
Operations and Maintenance Risks				
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	•			•
School security issues	•		•	
Unplanned major replacements	•			•
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	•		•	•
Business Risks				
Bankruptcy of contractor	•		•	•
Subcontractor default	•			•

Appendix C: Schools included in the project

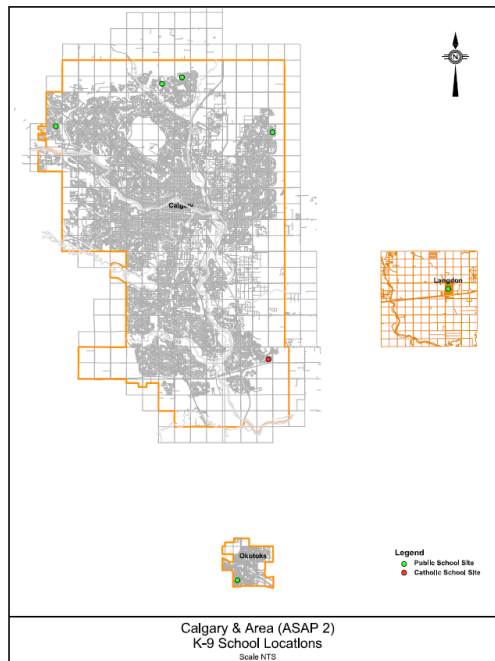
Table 2: School jurisdictions and communities served

School Jurisdiction (Board)	Project Community / Grade Structure	End (Full) Capacity of School
Calgary Board of Education No. 19	Coventry Middle School / 5-9	900
Calgary Board of Education No. 19	Tuscany Middle School / 5-9	900
Calgary Board of Education No. 19	Taradale Middle School / 5-9	900
Calgary Board of Education No. 19	Panorama Middle School / 5-9	900
Calgary Roman Catholic Separate School District No. 1	Copperfield Elementary School / K-9	900
Edmonton School District No. 7	Ellerslie Elementary School / K-9	850
Edmonton School District No. 7	Griesbach School / K-9	600
Edmonton School District No. 7	The Hamptons School / K-9	850
Foothills School Division No. 38	Okotoks School / K-9	700
Rocky View School Division No. 41	Langdon School / K-4	450
TOTAL NUMBER OF STUDENTS		7,950

Edmonton and Area School Sites



Calgary Area School Sites



Appendix D: Commentary by Fairness Auditor

June 24, 2010

Barry Day
Deputy Minister
Alberta Infrastructure
3rd Floor, 6950 – 113th Street
Edmonton, Alberta, Canada
T6H 5V7

Dear Sir

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

This Fairness Report is being provided 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 were used as guidelines throughout the transaction process:

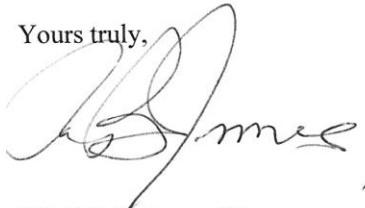
- All Interested Parties, Respondents and Proponents have the same opportunity made available to them to access information.
- The information made available to Interested Parties, Respondents and Proponents is sufficient to ensure that they have the opportunity to fully understand the opportunity.
- 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, the Evaluation Procedures used throughout the procurement as well as information provided on the Sharepoint site.
- Reviewed Respondent and Proponent clarifications, 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, Deputy Minister meetings, Evaluation Team meetings, and Selection Committee meetings.
- Observed and monitored the various selection activities throughout the process including attendance at the Financial Close with the Preferred Proponent.
- Reviewed meeting minutes 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 II Team has dealt with all Respondents and Proponents in an open and transparent manner throughout the ASAP II 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 II Project

Appendix E: Proponent Teams

Table 3: Composition of proponent teams invited to participate in RFP process

Team Component	Build II Learn	Alberta Public-Private Learning Experience (APPLE) Group	Plenary Lend Lease Education Alberta
Project Lead	HOCHTEIF PPP Solutions North America Inc.	Bilfinger Berger Project Investments Inc.	Plenary Group (Canada) Ltd.
	Gracorp Capital Advisors Ltd.		Lend Lease Americas Inc.
Design Build	Graham Design Build Services, a JV	Stuart Olson Constructors Inc.	Lend Lease Americas Inc.
	Bird Construction Company, A Limited Partnership	Dominion Construction Company Inc.	Lear Construction Management Ltd.
	GEC Architecture	IBI Group Architects Engineers	Krawford Construction Inc.
	Gibbs Gage Architects	MechWave Engineering Ltd.	Jen-Col Construction Ltd.
	Terrain Group	Read Jones Christofferson Ltd.	Delnor Construction Ltd.
	BSEI Municipal Consulting Engineers Inc.	Stebnicki + Partners Consulting Electrical Engineers	Group2 Architecture Engineering Ltd.
	TRL & Associates		ACI Architecture Inc./Zeidler Partnership Architects Joint Venture
	Wiebe Forest Engineering		BPTEC-DNW Engineering Ltd.
	FFA Consultants		Kellam Berg Engineering and Surveys Ltd.
			Hidi Rae Consulting Engineers Inc.
			Al-Terra Engineering Ltd.
			Hukalo Oberg Engineering Ltd.
			KSJ Engineering Ltd.
		Thurber Engineering Ltd.	
Operation and Maintenance	Honeywell Limited	Ainsworth Inc.	Johnson Controls LP
Financing	HOCHTEIF PPP Solutions North America Inc.	Bilfinger Berger Project Investments Inc.	Plenary Group (Canada) Ltd.
	Gracorp Capital Advisors Ltd.		Lend Lease Americas Inc.
	Investec North America Limited		

Appendix F: Summary of bids received

Table 4: Financial bids received from proponents on March 1, 2010

Item	Public Sector Comparator (\$million)	P3 Procurement (\$million)		
		Alberta Public-Private Learning Experience (APPLE) Group	Build II Learn ⁸	Plenary Lend Lease Education Alberta
Total net present value of design, construction, finance and operations and maintenance	358	273	253	296
Value for money of P3 procurement				
\$	Not applicable	85	105	62
%	Not applicable	23.7%	29.4%	17.3%

⁸ Build II Learn was the proponent group that developed and submitted the successful proposal. Once the RFP process was completed, the project leads for Build II Learn formed a special purpose c, B2L Partnership to carry out the work of the contract.

Appendix G: Payment adjustments

Table 5: Sample of key payment adjustments included in P3 contract ⁹

Issue	Payment Adjustment
Failure to correct a deficiency or deficiencies identified by an External Audit within the specified time	\$5,000/week for the first four weeks and \$10,000/week thereafter
Failure by the Contractor to develop and provide the Province with an annually updated 5-year Maintenance Plan on or before the first day of each School Year	\$1,200/week
Failure to provide the Province with an updated Emergency Response Plan by October 1 of every year for each School following School Availability of a School	\$1,200/week
Failure to register each school with Canada Green Building Council for LEED™ Silver Certification within the time stipulated	\$200/day/school
Failure to deliver to the Province any of the schedules indicated regarding construction schedules and submittals	\$1,500/day
Failure to rectify any default of its obligations under M&R waste disposal requirements	\$300/day/default
Failure to provide an updated “as-built” drawings and updated Operation and Maintenance Manuals to the Province within the time stipulated	\$2,000/month/undelivered set
Failure to comply with any requirement referenced in Security Clearance and School Access Protocol	\$4,000/incident
Failure to make repairs to exterior doors or windows within the repair period or install temporary protection and measures	Emergency failures - \$2,000/day or partial day/school Routine failures - \$500/day or partial day/school
Failure to make repairs within the repair period or install temporary protection and measures to the fire prevention equipment and Fire Alarm system	Emergency failures - \$4,000/day or partial day/school Routine failures - \$1,000/day or partial day/school
Failure to provide access to a School Building	\$5,000 to \$20,00/day or partial day (\$30,000 during examination periods)

⁹ The project agreement should be consulted for details on all payment adjustments. The final form of the project agreement and schedules is available at <http://www.infrastructure.alberta.ca/3867.htm>.