Government of Alberta

P3 Value for Money Assessment and Project Report

Southeast Stoney Trail (SEST) Ring Road Project

Calgary, Alberta

September 2010

Alberta

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

September 2010

1. Summary: Using a P3 for Southeast Stoney Trail - did it work?

By using a Public Private Partnership (P3) to design, build, finance and operate Southeast Stoney Trail (SEST), the Alberta government saved $1.063 billion over 34 years (in today's dollars) compared to a traditional approach ($769 million instead of $1.832 billion, a 58% savings). It will also deliver SEST two years earlier than with traditional methods. The following assessment shows that using a P3 delivered value for money and that it was the right way to procure SEST.

The government signed the P3 contract, with a 34-year term in March 2010, with Chinook Roads Partnership (the contractor) for the design, construction, partial financing, operation and maintenance of SEST. The contract requires the road to be ready for public use by October 1, 2013, which is two years earlier than could be achieved with traditional methods. The cost savings and earlier completion can be attributed to:

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

The Government of Alberta uses P3s to deliver needed infrastructure to Albertans. The P3 procurement approach is used to provide benefits that can include an extended warranty, fixed pricing and earlier delivery of infrastructure compared to procuring the asset using a traditional approach. The government also requires P3 projects to deliver value for money. This report provides information to show that the Southeast Stoney Trail (SEST) indeed delivered value for money through P3 procurement.[1]

The Calgary Southeast Stoney Trail ring road segment along with the recently completed Northeast Stoney Trail will provide a complete eastern bypass around the city, alleviating congestion along Deerfoot Trail through Calgary.

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

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[1] This report was developed by Alberta Transportation 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 SEST, the government entered into one agreement with a contractor responsible for designing, building, partially financing, operating and maintaining the road over a 34-year period (four years design and construction; 30 years operations and maintenance). [2]

A P3 can save time and money and reduce risk to the government by having one contractor design, build, finance, operate and maintain a road. For Alberta P3 projects, the public sector owns the facility and provides public services to Albertans, the same as it does with a traditional design-bid-build approach.

What is a traditional approach?

In a traditional approach, the public sector hires an engineering firm to design a road, bridge, or other related facilities, and then hires a construction contractor through a public tender process to build them. Once the infrastructure is built, the public sector operates and maintains it typically by awarding numerous individual contracts for routine repairs and rehabilitation. The government pays for the construction of the infrastructure 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. Government 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 SEST, the estimated costs of the traditional and P3 options were compared. 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 road (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.

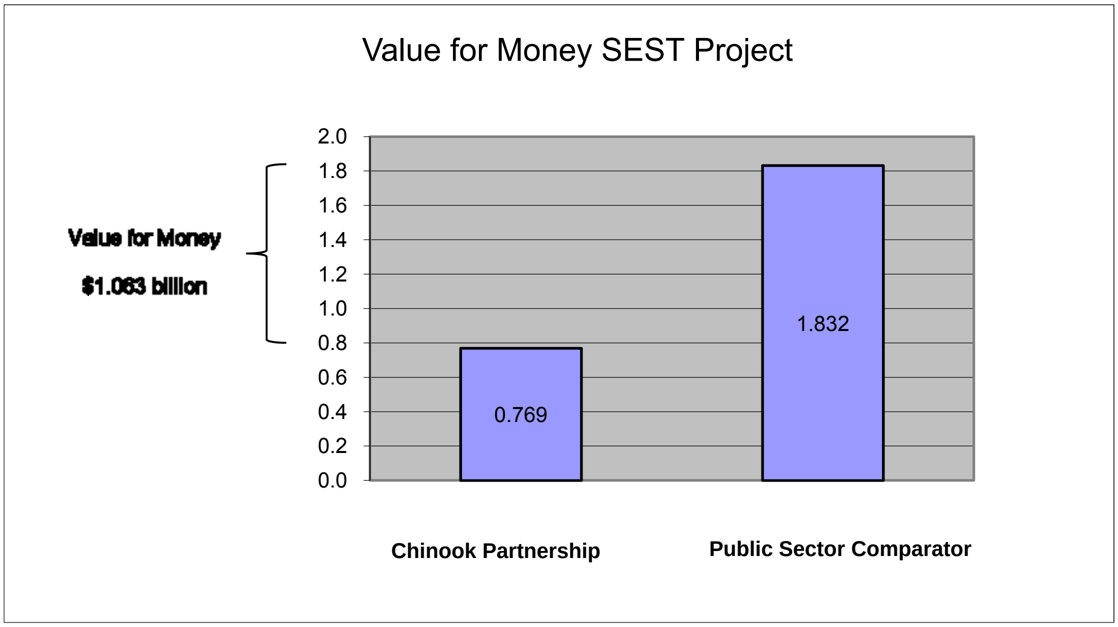
[2] For detailed discussion on P3s, see the Annual Report of the Auditor General of Alberta 2003–2004, at pages 49 to 72 (www.oag.ab.ca/files/oag/ar2003-2004.pdf).

3. VFM Assessment of the P3 used for SEST

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

This VFM assessment uses net present value as of January 27, 2010, when bids were received. It includes the costs to design, build, partially finance, operate and maintain the road over the 34-year agreement term. It also includes the impact of risk transfer (as discussed later in this section) but excludes costs common to both methods, such as land. [3]

The low bid received for this project was $769 million and the PSC was estimated at $1.832 billion (both in 2010 dollars). The VFM is therefore $1.063 billion or 58% of the PSC. A Value for Money Analysis prepared by the financial advisor, Deloitte & Touche LLP, retained for this project is attached in Appendix A.



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

1. **Earlier Completion** – Completing the project two years earlier than could be achieved using traditional delivery can equate to savings on cost escalation. Market forces continually drive up costs related to labour, equipment, fuel, construction materials, etc. Earlier completion reduces the exposure to this phenomenon. Earlier completion also provides savings to the road users in travel time and fuel costs over the 2 years of earlier completion.

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[3] Capital and rehabilitation costs for both methods were developed by CH2M HILL Canada Ltd. Inflation and discount rates were provided by the Ministry of Finance and Enterprise. Deloitte & Touch LLP developed the financial model.

2. **Economies of Scale** – Given the 365 lane kilometers of road construction and 27 bridge structures, the contractor is able to secure large volume long term contracts for material such as asphalt, concrete, and steel which are significantly discounted relative to the smaller quantities secured in traditional contracts.

3. **Risk Allocation** – Allocating risks to the party best able to manage them means the contractor bears 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 changes and errors. The contractor will also bear any cost increases for labour and material during the construction period. In addition, for the 30-year operation and maintenance term, the contractor will pay to rehabilitate or replace any defective component of the infrastructure. A list of some of the major risks that the P3 contract allocated to the contractor is on pages 6 and 7 of this report.

Qualitative measures of value

1. **Long Term Warranty** – The P3 effectively gives the government a 30-year warranty by transferring responsibility for operation and maintenance of the road to the contractor for the term of the contract. The 30-year operation and maintenance period gives the government assurance that the road will be maintained in good condition with no deferred maintenance at the end of 30 years.

2. **Life Cycle View** – By linking the design, construction, operation and maintenance obligations into a single contract ensures that there is a high degree of discipline in achieving a quality product. For example, any compromise in quality would result in a more substantive maintenance obligation for the P3 contractor. Therefore the combination of design, construction, and operation and maintenance of the infrastructure is highly optimized to suit the infrastructure's entire life cycle.

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 referenced in Appendix B shows all the allocated risks.

Schedule certainty – The contractor agrees to have the road available for traffic by October 1, 2013 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 requests during construction. The government will pay for this work in accordance with the change order process set out in the P3 contract. During the operation and maintenance period the government may consider changes to road. For example, continued residential growth in the area may require the government to add another interchange or more freeway lanes. The government will pay for this work as long as the contractor provides 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.

4. Project report

Project goals

The SEST project assists in meeting a number of Alberta Transportation and Government of Alberta (GoA) goals and strategic priorities, referenced in Alberta Transportation's Business Plan 2010-13 [4], as follows:

1. **Government of Alberta Strategic Business Plan Goal 1: "Alberta will have a prosperous economy"** – SEST will contribute to growth in the Gross Domestic Product, provide job opportunities, enhance movement of goods, and strengthen tourism.

2. **Alberta Transportation Strategic Priority 2: "Develop the provincial transportation system to support Alberta's regional and provincial economic development**" – SEST is a major addition to the City of Calgary road network and a major connector of the north-south trade corridor. Connectivity with the regional highway network will be improved with new interchanges at Highway 1A (17 Avenue SE), Highway 22X (Marquis of Lorne), and Highway 2 (Deerfoot Trail). With the completion of SEST, a high standard north-south bypass of Calgary will be provided thus alleviating traffic congestion on Deerfoot Trail.

3. **Alberta Transportation Strategic Priority 5 "Continue to implement a provincial Traffic Safety Plan to reduce the number of collisions, injuries and fatalities on Alberta roads"** – SEST will reduce traffic, especially truck traffic, on key arterial roads within the city. The free-flow SEST mainline will permit a safer and more efficient route for both local commuters and through-traffic.

Appendix C provides a drawing showing the project route and lists the associated interchanges and crossings.

Project outcomes

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

- **Cost certainty for the life of the road** – Shifting the risk of increasing construction costs and other financial risks to the contractor ensured cost certainty for the design, construction, operation and maintenance of the new road.

- **An innovative, repeatable, transparent, and accountable process to produce and maintain roads –** The same process can be used for other projects in Alberta.

- **Less time and lower cost to build**– To plan, design, and build this amount of infrastructure using the traditional approach would take at least six years before being available to the travelling public. In contrast, the P3's coordinated and comprehensive approach will produce SEST in only four years and at a lower cost.

[4] Transportation Business Plan 2008-11:
http://www.finance.alberta.ca/publications/budget/budget2010/transportation.pdf

- **A 30-year warranty** – The contractor is responsible for ongoing operation, maintenance and rehabilitation for the 30-year operation and maintenance phase.

Approaches considered

The government considered two alternative approaches to deliver SEST:

1. **Traditional Design-Bid-Build approach**, with the usual pay-as-you-go financing by the government and delivery by Alberta Transportation. Private-sector engineering consultants hired by Alberta Transportation design the roads and bridges. Construction contracts are awarded through a traditional open-bidding process tendered by Alberta Transportation to private sector contractors, typically in work packages of unique tasks (such as grading, paving, bridge construction, lighting, etc.) and/or of geographically distinct sections. A project of this size under a traditional procurement would involve up to 20 separate construction contracts. Upon construction completion, operations, maintenance and infrastructure rehabilitation responsibility is tendered through a traditional open-bidding process to private sector contractors specializing in this type of work.

2. **Design-Build-Finance-Operate-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 end of the contract. The contractor is responsible for the ongoing operation and maintenance of the road for a set time (in this project, 30 years), and for having a rehabilitation plan to ensure performance requirements are met. The government makes monthly payments to the contractor during the 30-year maintenance phase of the contract. Payments start after the road is ready to use and cover capital, operations, maintenance and rehabilitation costs. The government can reduce payments based on criteria such as whether the roadway remains available for use and whether the performance of the infrastructure meets certain standards.

Selection process

The government's selection process was open, competitive, timely, fair and transparent. A Fairness Auditor, Mr. Gary Campbell, QC, prepared a report on the fairness of the process (Appendix D).

A Request for Qualifications was publicly issued on March 11, 2009. Five teams responded and were evaluated on experience, personnel qualifications, past performance and financial capability. The three teams asked to submit proposals were Southeast Calgary Connector Group, SEConnect, and Chinook Partnership as shown in Appendix E.[5]

The Request for Proposal (RFP) process ran from May 19, 2009 to January 27, 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 would sign.

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[5] The companies that make up the teams are listed in Table 2 (Appendix E).

Once the three teams provided RFP submissions, they all submitted financial bids based on the final form of the contract. There were no negotiations on this contract after financial bids were received. These bids are summarized in Table 3 (Appendix F). Chinook Partnership submitted the lowest price, on a net present value basis, and won the contract. Chinook Partnership then created a special purpose company, known as Chinook Roads Partnership, to carry out the work of the contract.

Key terms of P3 contract

What the government must pay: The sum of the payments for the 34-year contract is approximately $1.226 billion or in 2010 dollars, about $769 million.

The Alberta government will pay $232 million for construction costs during the construction phase while the federal government is providing $100 million through the Major Infrastructure Component of the Building Canada Plan for a total of $332 million. Once the road opens to traffic, the Alberta government will make monthly payments over the remaining 30 years of the contract. Of this monthly payment, capital payments are fixed, while operation, maintenance and rehabilitation payments are indexed.[6] This is the same index that is used for Alberta Transportation's traditionally delivered provincial highway maintenance contracts.

If the contractor fails to achieve traffic availability by the October 1, 2013 target date, the contractor will incur severe penalties, achieved by reduction in the overall capital payments payable by the government. The penalty is loss of the full amount of the monthly capital payment that would otherwise become due, except that during December 2013 through May 2014 the penalty is one-third of the capital payment.

What the contractor must do: The 34-year contract between the government and the contractor has a four-year construction period and a 30-year operation, maintenance, and rehabilitation period. It requires the contractor to:

- complete the design and construction of the SEST as described in Appendix C by October 1, 2013;
- partially finance the construction over the contract term;
- operate, maintain, and rehabilitate the road to the performance standards specified in the contract;
- operate and maintain (but not rehabilitate) a portion of existing highway infrastructure already constructed by Alberta Transportation. The existing infrastructure includes a specific segment of Highway 2 (Deerfoot Trail) between SEST (currently Highway 22X) and the Highway 2A junction, which is adjacent to SEST; and
- hand back the roadway to Alberta Transportation in September 2043 in a condition as prescribed in the contract.

[6] Four indices are used to calculate operation and maintenance payments: Manpower, Consumer Goods, Construction, and Diesel Fuel. Additional detail can be found in Schedule 10 of the P3 Agreement.

Payments reduced for non-performance:

The government can reduce all monthly payments (capital, operation and maintenance, and rehabilitation) if the contractor does not meet performance standards in the contract. For example, if pavement 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.

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

The Government owns the road

The contractor has a licence from the government for the term of the P3 agreement, subject to the paramount obligation to keep the road open for the free use by the public (except for specifically permitted lane closures due to accidents, emergencies, repair work, etc.). Tolls are expressly prohibited, as are commercial signage and any other commercial use of the road.

Monitoring during and after construction

During construction, the government is using CH2M HILL Canada Ltd. 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 operation, maintenance, and rehabilitation 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 the contractor's 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 asset.

Project schedule

The P3 contract was signed on March 30, 2010 and construction started in earnest on June 7, 2010. The contractor must deliver SEST by October 1, 2013 or face a payment reduction. An independent certifier will certify when SEST is available for use.

The operation, maintenance, and rehabilitation period starts after the road is made available to traffic and continues until September 2043, when the license granted to the contractor to access the road for operation, maintenance, and rehabilitation activities will expire. The contractor then must hand back the road in the condition specified in the contract. The government and the contractor will assess SEST to ensure it is in the condition specified in the contract when the contract expires. After the contract expires, the Alberta government will be responsible for operating, maintaining, and rehabilitating the road.

Appendix A: Commentary by Deloitte & Touche LLP

Deloitte.

Southeast Stoney Trail P3

Comparison of Financial Offers and Calculation of Final Value for Money

Confidential

January 28, 2010

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Introduction

Scope of Report

This report presents the comparison of the Financial Offers received from SEST 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

The assumptions and cost estimates that form the basis of the Public Sector Comparator (PSC) were updated by Alberta Transportation ("TRANS") on November 18, 2009. The debt rate only was further updated on January 8, 2010. The PSC was finalized prior to receipt of the Proponents' proposals, and was deposited with the Deputy Minister of Justice on January 8, 2010.

The PSC was recalculated on January 25, 2010, using the discount rate and inflation rate that were 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 referred to herein is this recalculated value.

The Financial Offers from Proponents were received on January 27, 2010.

Limitations

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Deloitte's scope of work related to the PSC was limited to the review and updating of a PSC spreadsheet model provided by TRANS. The PSC's financial assumptions and cost estimates are those of TRANS. 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 TRANS' methodology.

This Report relies on certain information provided by TRANS 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.

Comparison of Financial Offers

Method

The Financial Offers consist of the following payments:

- Monthly payment stream over the operating period (October 2013 to September 2043 inclusive), consisting of:
  - Capital Payments (identical monthly payments stated in nominal dollars)
  - O&M Payments (monthly payments for O&M, stated in 2010 dollars)
  - Major Rehabilitation Payments (monthly payments with timing as needed for Major Rehabilitation, stated in 2010 dollars)
- Total Provincial Funding, calculated by multiplying the amount of one full month's Capital Payment by 257.

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 January 27, 2010) of:

- the Capital Payments;
- the O&M Payments, after first adjusting each payment for inflation using a fixed estimated inflation rate of 2.40% per annum determined by Alberta Finance;
- the Major Rehabilitation Payments, after first adjusting each payment for inflation using the fixed estimated inflation rate of 2.40% 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 Provincial Funding commencing in January 2011[1].

The discount rate used to calculate net present values is 4.95% 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.

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[1] Since actual progress payments will be made according to the Contractor's verified progress in the field, which cannot be known in advance, an assumed schedule is required in order to evaluate the bids. The same schedule is used for all three because Proponents do not bid an enforceable construction schedule. The Preferred Proponent's schedule of Progress Payments as evidence in its financial model may be used for calculating the book value and for budgeting purposes.

The bid comparison spreadsheet calculates the NPV of the cashflows to the Proponents as of January 27, 2010, which is the basis for determination of the Preferred Proponent. The results are as follows:

Determination of Preferred Proponent

Net Present Values for Offer Comparison *(NPVs to 27-Jan-2010)*	PSC	CP	SEC	SCC
Total Cost on Net Present Value Basis	$1,831,577,325.74	$769,149,796.85	$1,133,940,752.10	$1,162,648,393.53

CP=Chinook Partnership, SEC=SEConnect, SCC=Southeast Calgary Connector Group

The result as indicated in the above table is that Chinook Partnership (CP) has the lowest NPV, and absent any SR3 submission compliance concerns, Chinook Partnership 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	$ 1,832
Preferred Proponent's Financial Offer	$ 769
Difference	$ 1,063

The VfM is therefore $ 1,063 million, or 58% of the PSC.

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Appendix B: Sample of risk allocations

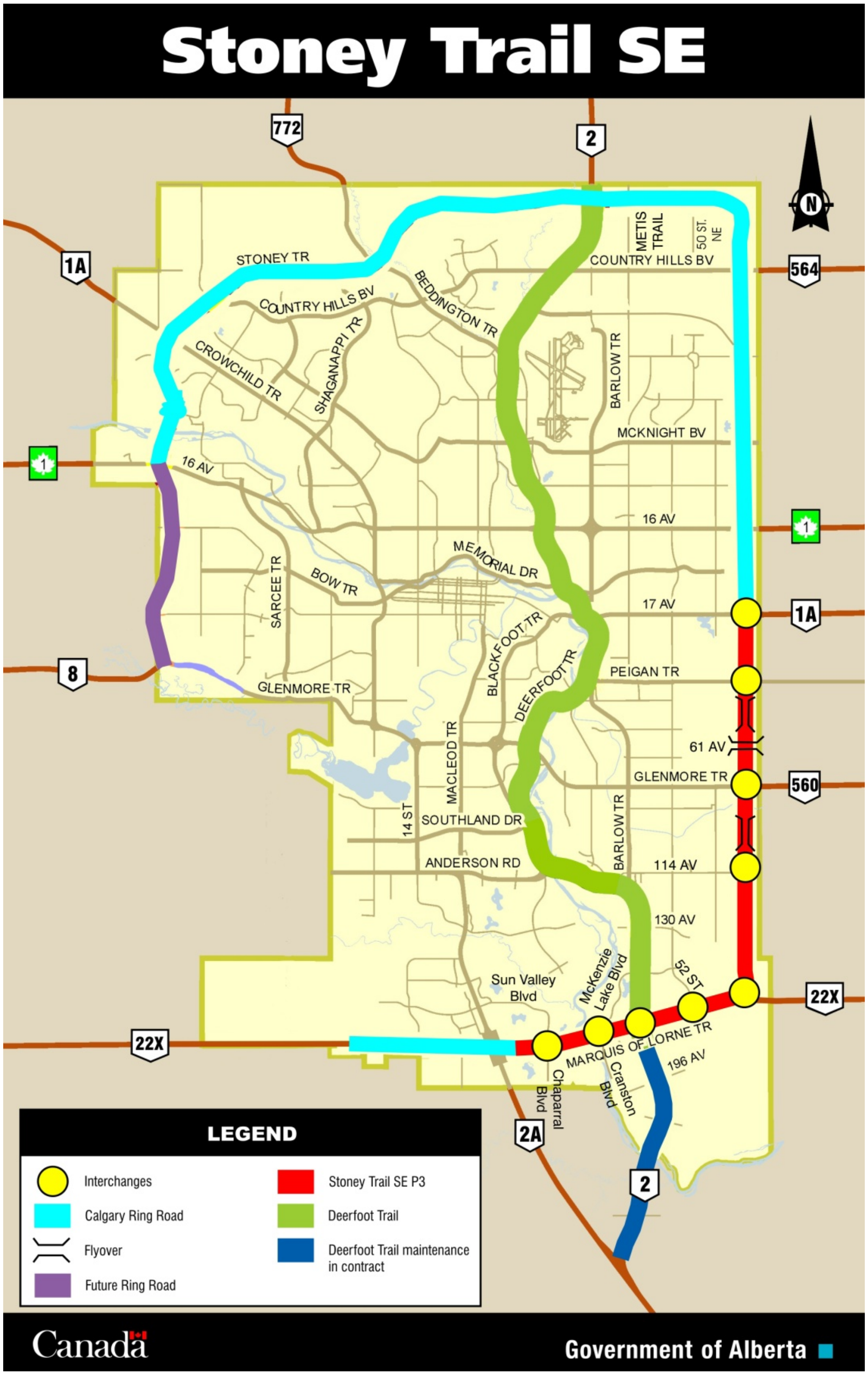
Table 1: Sample of Risk Allocations between Government of Alberta and Contractor [7]

	Traditional		P3	
	GoA	Contractor	GoA	Contractor
DEVELOPMENT, DESIGN AND CONSTRUCTION RISKS				
Concept approvals – environmental – Alberta Environmental Referral	●		●	
Concept approvals – environmental – Federal CEAA (assumes CSIF funding)	●		●	
Bridge crossing and/or watercourse alteration				
Environmental permits	●			●
Environmental				
Environmental Contamination (known)	●			●
Environmental Contamination (unknown)	●		●	
Archaeological				
Archaeological finds (known)	●			●
Archaeological finds (unknown)	●		●	
Land acquisition	●		●	●
Delays by outside agencies (utilities and permitting)	●		●	●
Delays by the Province	●		●	
Minimum insurance and bonding requirements	●		●	
Adequacy of insurance and bonding requirements	●			●
Confirmation of insurance and bonding		●		●
Sub-contractor insolvency		●		●
Design error	●			●
Changes in standards	●		●	
Alberta Transportation supplied data – accuracy		●		●
Alberta Transportation supplied data – sufficiency	●			●
Alberta Transportation supplied data – interpretation		●		●
Traffic volume and vehicle mix	●			●
Patent infringement	●	●		●
Weather	●			●
Labour disputes	●			●
Fire		●		●
Vandalism		●		●
Damage to works		●		●
Traffic accidents		●		●

[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.transportation.alberta.ca/eastgp.htm

	Traditional		P3	
	GoA	Contractor	GoA	Contractor
Damage/injury to third parties		●		●
Damage/loss to utilities		●		●
Defective materials		●		●
Water/air/soil pollution – unknown pre-existing	●		●	
Water/air/soil pollution – known pre-existing or arising from work	●	●		●
Quality assurance/quality control	●	●		●
Quality audits	N /A	N/A	●	
Public interface	●	●		●
Workplace Health and Safety		●		●
Utilities	●	●	●	●
FACILITY EXPANSION RISK				
Traffic congestion due to signalization	●			●
Traffic growth	●			●
Future interchanges or additional lanes	●		●	
OPERATION AND MAINTENANCE RISKS				
Changes in standards and legislation	●		●	
Weather	●			●
Labour disputes	●			●
Traffic – volume and vehicle mix	●			●
Traffic – deterioration	●			●
Actual maintenance costs higher than anticipated	●			●
Damage/injury to third parties		●		●
Damage to works	●		●	
Water/air/soil pollution		●		●
Vandalism	●		●	
Condition after 30 years	●	N/A		●
Performance	●			●
FINANCING RISKS				
Interest rates – before Agreement closure	●		●	
Interest rates – after closure	●			●
Inflation on Construction Agreement		●		●
Inflation on operation, maintenance, rehab.	●		●	●

Appendix C: Project Scope



Roadway
25 km of six-lane divided highway

Bridges
27 total bridge structures

Interchanges
17 Avenue SE
Peigan Trail SE
Glenmore Trail SE
114 Avenue SE
Highway 22X
52 Street SE
Deerfoot Trail SE
McKenzie Lake Blvd/Cranston Blvd
Sun Valley Blvd/Chaparral Blvd

Flyovers
61 Avenue SE
Canadian Pacific Rail
Canadian National Rail

Maintenance
Contract includes maintenance of Stoney Trail SE and 12 km of Deerfoot Trail between Stoney Trail SE (currently Highway 22X) and Highway 2A junction.

Appendix D: Commentary by Fairness Auditor

GGC CONSULTANTS INC.
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Personal & Confidential

January 28, 2010

Mr. Tom Loo, P. Eng.
Executive Director, Major Capital Projects
Alberta Transportation
3rd Floor, Twin Atria Building
4999 – 98th Avenue
Edmonton AB T6B 2X3

Dear Tom:

Re: Fairness Auditor's Report on the Completion of the RFP Evaluation and Recommendation of the Preferred Proponent for Calgary's South East Stoney Trail Ring Road ("SEST").

This Report is being provided to the Executive Director/Project Steering Committee of the above-noted, as stipulated in the Alberta Infrastructure and Transportation Terms of Reference for the Fairness Auditor.

Further to our Letter of Opinion dated May 19, 2009, the Fairness Auditor has familiarized himself with the appropriate documentation in this matter, including the ***Request for Qualification***, ***Instructions to Proponents***, ***Transaction Process Framework***, terms of the ***Request for Proposal, Agreement to Design, Build, Finance and Operate North West Anthony Henday Drive Ring Road*** **("*DBFO Agreement*"),** and the appropriate minutes and memoranda pertaining to this process.

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

1. The Proponents in this matter were given the same opportunity for the availability to access information.

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2. The information made available to the Proponents was sufficient to ensure that they had the opportunity to fully understand the opportunity.

3. All the Proponents had reasonable access to the opportunity.

4. The criteria established in the invitation documents truly reflect the needs and objectives of the project.

5. The evaluation criteria and the evaluation process were established prior to the evaluation of submissions.

6. The evaluation criteria, and evaluation processes were internally consistent.

7. The pre-established criteria and evaluation process were followed.

8. The evaluation criteria and process were consistently applied to all submissions.

The Fairness Auditor attended several Evaluation Committee Meetings, and in addition reviewed the evaluation criteria used by that group.

The Fairness Auditor attended the Selection Committee Meetings, Working Committee Meetings, and was present for interviews between the Selection Committee/Working Committee and the RFP Proponents. It was observed that the interface with each group was open, unbiased, transparent, consistent in approach, and ultimately a fair process in my opinion. In addition, at every meeting with any of the RFP Proponents, the Fairness Auditor asked the Proponent whether there were any fairness issues and the response in every case was that there were no fairness issues.

As the Fairness Auditor in this procurement, I hereby certify that, in my opinion, the selection process in this matter conducted by Alberta Transportation, to the completion of its recommendation of the Preferred Proponent, was open, consistent in approach, and fair.

Yours truly,

GGC CONSULTANTS INC.

PER:

GARY G. CAMPBELL, Q.C.

GGC/wd

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Appendix E: Proponent Teams

Table 2: Composition of proponent teams invited to participate in RFP process

Team Component	Southeast Calgary Connector Group (SCC Group)	SEConnect (SEC)	Chinook Partnership (CP) [8]
Project Lead	Bilfinger Berger Project Investments Inc.	HOCHTIEF PPP Solutions North America Inc.	SNC-Lavalin Inc.
		Macquarie Capital Group Ltd.	Acciona S.A.
Design-Build	Kiewit Management Co.	Flatiron Constructors Canada Ltd.	SNC-Lavalin Constructors (Pacific) Inc.
	Parsons Overseas Company of Canada Ltd.	Graham Building Services	Acciona Infraestructuras S.A.
	McElhanney Engineering Services Ltd.	Ledcor CMI Ltd.	Stantec Consulting Ltd.
	Delcan Corporation Ltd.	Carmacks Enterprises Ltd.	Golder Associates Ltd.
	Applied Research Associates Inc.	AECOM	
	Brybil Projects Ltd.	Dillon Consulting Ltd.	
	Urban Systems	EBA Engineering Consultants Ltd.	
	Terracon Consultants	Spencer Environmental Management Services Ltd.	
	DMD & Associates Ltd.	Patching Associates Acoustical Engineering Ltd.	
	Opus International Consultants	CTMS Engineering Inc.	
	Patching Associates Acoustical Engineering Ltd.		
	Conestoga-Rovers & Associates		
	ARUP Canada Inc.		

[8] Chinook Partnership was the proponent group that developed and submitted the successful proposal. Once the RFP process was completed, the project leads for Chinook Partnership formed a special purpose organization, Chinook Roads Partnership to carry out the work of the contract.

Team Component	Southeast Calgary Connector Group (SCC Group)	SEConnect (SEC)	Chinook Partnership (CP) [8]
	Halcrow Group Ltd.		
	Thurber Engineering Ltd.		
Operation and Maintenance	Volker Steven Contracting Ltd.	Carmacks Maintenance Services Ltd.	SNC-Lavalin ProFac Inc.
			Acciona S.A.
Financing	Bilfinger Berger Project Investments Inc.	Hochtief PPP Solutions North America Inc.	SNC-Lavalin Capital Inc.
	Scotia Capital	Macquarie Capital Group Ltd.	Royal Bank of Scotland
			BNP Paribas
Other Advisors	Davis LLP	CIT Group Securities (Canada) Inc.	
	Wylie Crump Ltd.		
	Jardine Lloyd Thompson Ltd.		
	Stikeman Elliot LLP		
	PKF (UK) LLP		

Appendix F: Summary of bids received

Table 3: Financial bids received from proponents on January 27, 2010

Item	PSC ($ million)	P3 Procurement ($ million)		
		Chinook Partnership	SE Connect	Southeast Calgary Connector Group
Total net present value of design, construction, finance and operations and maintenance	1,832	769	1,134	1,163
Value for money of P3 procurement				
$	Not applicable	1,063	698	669
%	Not applicable	58%	38%	37%

Appendix G: Payment adjustments

Table 4: Sample of key payment adjustments included in P3 contract [9]

Issue	Payment Adjustment
If an external audit has not been completed within the specified time:	$2,400/week or any partial week, for the first four weeks and $6,000/week or any partial week, thereafter
If any deficiencies identified by the Environmental Management System external auditor have not been corrected within the specified time:	$6,000/week or any partial week, for the first four weeks and $12,000/week or any partial week, thereafter
If the contractor fails to undertake roadway inspections:	• $2,500 for the first occurrence; • $5,000 for the second occurrence; • $10,000 for the third occurrence; and • $20,000 for the fourth occurrence and each occurrence thereafter.
If during the Operating Period, the roadway superelevation and cross-slope rates are measured and are found not to be maintained within ±1.0% of the design rates:	• $3,600/week or any partial week, for the first four weeks the deficiency is not remedied; then • $11,000/week or any partial week, thereafter.
If localized pavement repairs (e.g. for spalling, roughness, cracking, or potholes), permanent or otherwise, are not completed within the stipulated time period:	$600/localized repair for each seven day period or any partial week, until the deficiency is corrected.

[9] The project agreement should be consulted for details on all payment adjustments. The final form of the project agreement is available at http://www.transportation.alberta.ca/eastgp.htm

Issue	Payment Adjustment
If lamps or components of the roadway lighting system are not adjusted, maintained, repaired/replaced within the stipulated time:	• Lamp repair/replacement, $120/lamp/day or any partial day, that the lamp remains in need of repair/replacement; and • Repair or adjustment of any pole, base or other lighting system component, $120/component/day or any partial day, that the component needs adjustment.
If grass is in excess of the specified maximum height:	$120/hectare or any partial hectare/month or any partial month,
If the contractor fails to commence work within 60 days of identification of a structural or operational deficiency on bridges:	$1,200/day or any partial day, per deficiency shall be assessed until the contractor commences and diligently pursues completion of the work.
If the contractor is non-compliant with respect to snow clearing and ice control:	• $12,000 for each occurrence of non-compliance during a Storm Event (to a maximum of $72,000 total for the Infrastructure); • $24,000 for each occurrence of non-compliance during a subsequent Storm Event in any consecutive 12 month period (to a maximum of $145,000 total for the Infrastructure); and • The third occurrence of any non-compliance within a consecutive 12 month period but in a separate third Storm Event shall be a potential Termination Event for the purposes of and having the consequences set out in section 16.8(k) of the DBFO Agreement.