Minute No. 31
Report - Executive Policy Committee - November 12, 2008

Item No. 1 **Chief Peguis Trail Extension Project – Construction using a Design/Build/Finance/Maintain Model**
(North Kildonan Ward)
eFile SB-23

COUNCIL DECISION:

Council concurred in the recommendation of the Executive Policy Committee and adopted the following:

1. That the Winnipeg Public Service be authorized to proceed with the Chief Peguis Trail Extension Project based on a Design/Build/Finance/Maintain delivery model and that the Chief Administrative Officer be authorized to approve and issue the Request for Qualifications and the Request for Proposals for the Project.

2. That the Director of Planning, Property and Development be authorized to negotiate the acquisition of land required for the Chief Peguis Trail Extension Project.

3. That the Proper Officers of the City be authorized to do all things necessary to implement the intent of the foregoing.

Report - Executive Policy Committee - November 12, 2008

DECISION MAKING HISTORY:

Moved by His Worship Mayor Katz,

That the recommendation of the Executive Policy Committee be adopted.

The motion for adoption of the item was put.

Councillor Gerbasi called for the yeas and nays, which were as follows:

Yea: His Worship Mayor Katz, Councillors Browaty, Fielding, Nordman, O'Shaughnessy, Steeves, Swandel, Wyatt and Lazarenko. 9

Nay: Councillors Gerbasi, Smith, Thomas and Vandal 4

and the motion for the adoption of the item was declared carried.

EXECUTIVE POLICY COMMITTEE RECOMMENDATION:

On November 12, 2008, the Executive Policy Committee concurred in the recommendation of the Winnipeg Public Service and submitted the matter to Council.

RE: CHIEF PEGUIS TRAIL EXTENSION PROJECT – CONSTRUCTING USING A DESIGN/BUILD/FINANCE/MAINTAIN MODEL

FOR SUBMISSION TO: **EXECUTIVE POLICY COMMITTEE**

ORIGINAL REPORT SIGNED BY: **CHIEF FINANCIAL OFFICER**
DIRECTOR OF PUBLIC WORKS

REPORT DATE: **October 15, 2008**

RECOMMENDATION:

1. That the Public Service be authorized to proceed with the Chief Peguis Trail Extension Project based on a Design/Build/Finance/Maintain delivery model and that the Chief Administrative Officer be authorized to approve and issue the Request for Qualifications and the Request for Proposals for the Project.

2. That the Director of Planning, Property and Development be authorized to negotiate the acquisition of land required for the Chief Peguis Trail Extension Project.

3. That the Proper Officers of the City be authorized to do all things necessary to implement the intent of the foregoing.

Report Summary

Key Issues:

- The City of Winnipeg engaged Deloitte & Touche LLP (Deloitte) through RFP 222-2007 to review several projects identified in the City's 2008 Capital Budget, including the Chief Peguis Trails Extension Project.

- A business case and preliminary value for money (VfM) analysis was carried out for the Chief Peguis Trail Extension Project.

- Deloitte advise that the Chief Peguis Trail Extension Project is suitable for a Design/Build/Finance/Maintain (DBFM) project delivery model. They also advise that the Outline Business Case shows that value for money is favoured by this model. This value for money calculation is sensitive to numerous estimates of the costs of risks that the City retains under the traditional Design/Bid/Build (DBB) procurement, and the assumptions about the acceptance of those risks by the private sector.

- The preliminary VfM compares favourably with other Canadian transportation infrastructure projects completed using this delivery model.

- On the basis of the information and detailed analysis of the project carried out by Deloitte, they recommend that the project should be delivered using a DBFM model if there is favourable market interest.

- Both Corporate Finance and Public Works Departments concur with this recommendation based on the cost submitted by the Public Works Department in the 2008 Capital Budget. A market sounding indicated that there is favourable market interest.

Implications of the Recommendation(s):

General Implications

( ) None

(X) For the organization overall and/or for other departments

( ) For the community and/or organizations external to the City

(X) Involves a multi-year contract

Comment(s): Delivered using a DBFM model, it is expected that the successful proponent would expect payments over a 30 year period.

Policy Implications

(X) No

( ) Yes

Comment(s): Departs from the traditional method of project delivery historically used by the City of Winnipeg.

Regulatory Implications

(X) None

( ) Eliminates or reduces regulatory impact

( ) Proposes regulatory impact

Comment(s):

Environmental Implications

(X) No

( ) Yes

Comment(s): No environmental impact is anticipated at this time. Evaluation criteria for the selection of the successful proponent will include a review to ensure that their methodology will minimize any environmental impact.

Human Resources Implications

(X) No

( ) Yes

Comment(s):

Financial Implications

(X) Within approved current and/or capital budget

( ) Current and/or capital budget adjustment required

Comment(s): The outline business case shows that value for money is favoured by the DBFM model. The Public Service is recommending to deliver this project as presented in the 2008 Capital Budget.

Report

REASON FOR THE REPORT:

To recommend a suitable procurement strategy for the delivery of the Chief Peguis Trail Extension Project. This is in accordance with Recommendation No. 4 in the approved 2008 Annual Capital Budget and the 2009 to 2013 Five-Year Capital Forecast.

HISTORY:

The preliminary design of the Chief Peguis Trail Extension from Henderson Highway to Lagimodiere Boulevard was approved in the 2007 Capital Budget with forecasted amounts in 2008 and 2009 for construction under a Conventional Delivery Model.

In the 2008 Capital Budget Cash to Capital funding was approved for procurement and administration under a Private Public Partnership Model. The procurement process includes the determination of the specific type of Private Public Partnership delivery model to be used. Construction is forecast over a two year period with project completion in 2010 and with lease payments starting in 2010.

DISCUSSION:

Traditional Construction Delivery Model

The City has traditionally delivered projects using a Design/Bid/Build (DBB) model in which the design and construction are done separately. In this model the City retains all the project risks which sometimes result in significant cost and time overruns on City projects.

Methodology to Review Construction Delivery Models

The procurement strategy for the delivery of the Chief Peguis Trail Extension Project has been assessed and an Outline Business Case has been prepared by Deloitte. The process which they followed to establish that there is a sound business case for the use of DBFM for the delivery of the Chief Peguis Trail Extension Projects is considered to be industry best practice. The process is summarized as follows;

- Deloitte completed a thorough and detailed review of the Chief Peguis Trail Extension Project using the documentation available from the Public Works Department and the conceptual design work carried out by the City's engineering consultant.

- A qualitative risk workshop was conducted with the aim of obtaining the City's view on the risks the project faces, and the ability of four delivery models to mitigate those risks. This workshop was attended by members of the Public Service's P3 committee and staff from the Public Works Department. It was identified through the risk analysis that a DBFM model presented the best risk profile for the project.

- During the risk assessment, the project size was examined in detail. There was concern that the project may be too small to generate sufficient interest for prospective proponents as the project value is less than $100M which is considered by many to be the minimum threshold for a one-off infrastructure project.

- Case studies were carried out to identify similar projects that identify a stream of successful DBFM construction projects.

- Based on Deloitte's analysis of all the information collected the project delivery options were evaluated and compared against the City's objectives and the preferred option was identified to be the DBFM model.

- To reinforce the Outline Business Case for the preferred option an indicative value for money analysis (VfM) was derived from the available information. This indicated that VfM would be achieved using a DBFM model.

- The recommendation of the Outline Business Case prepared by Deloitte is that subject to there being a favourable level of market interest, it is recommended that the City pursue a DBFM for the delivery of the Chief Peguis Trail Extension

- A selection of market participants were consulted and the feedback from them was that the value of the Chief Peguis Trail Extension Project is sufficient to attract proponents who are looking for smaller value DBFM projects and a low risk market .

Design/Build/Finance/Maintain Construction Model

In the DBFM delivery model the proponent provides a complete turnkey solution. Normally the proponent is a consortium consisting of a financier, designer, contractor and maintenance provider. The consortium is responsible for financing, designing, constructing and maintaining the project over a specific period.

Using this model the City transfers the design, construction and maintenance risks as well as market and time related risks to the consortium which provides greater cost certainty to the City.

The City pays a premium, for the risk transferred, to protect against the significant costs associated with the risks, much like an insurance policy.

Preliminary Value for Money Analysis

To reinforce the Outline Business Case for the preferred option a preliminary value for money analysis (VfM) was carried out using the information collected and Deloitte's experience on similar value projects. To do so, a risk adjusted public sector comparator (PSC) is calculated. What this entails is taking the anticipated discounted cash flows associated with the traditional construction model, including estimates of the cost of risks associated with this method. For this particular case, the PSC was derived from the estimated cost developed by the City's engineering consultant during the conceptual design. It was then adjusted for the risk retained under this model, based on the current project estimated probable cost plus an addition for risk relating to Policy, Design, Construction and Lifecycle. Each of these risks was subdivided and an estimated value and probability of occurrence for each of the subdivided risks was input into a Monte Carlo Simulation program.

The risk adjusted PSC is then compared against the discounted cashflows associated with the DBFM model to determine the preliminary VfM. For this particular project, the preliminary VfM favours the DBFM model. The preliminary VfM for this project is estimated to result in cost savings of between 7% to 16%.

The conclusion of the Outline Business Case prepared by Deloitte is that it is recommended that the City pursue a DBFM for the delivery of the Chief Peguis Trail Extension Project. This should be achieved through a two stage procurement process starting with the issue of a Request for Qualifications to select the three or four best qualified proponents to be issued the subsequent Request for Proposal.

The Outline Business Case has primarily been established from analysis of documentation, discussion with City staff and workshop feedback, which established that DBFM model should be pursued.

The use of a DBFM model for the Chief Peguis Trail Extension Project delivery is not expected to have any direct impact on City staff.

The Outline Business Case identifies that the use of a DBFM model will provide value for money to the City. During the development of the project, and as part of the project plan, the business case and preliminary VfM must be updated at key points. This will provide transparency and ensure that VfM is being achieved, particularly when bids are

received and the VfM can be recalculated using real costs in place of estimates, and when the associated costing of project risks are quantified by an expert panel. It is likely that the VfM will vary from the amount indicated in the Outline Business Case as the input information is refined. It is, however, unlikely that it will change to the extent that VfM is not being achieved.

In the current volatile construction market and bearing in mind the City's previous experience with significant budget overruns on multi-year capital projects, along with the Public Works Department's limited technical/engineering resources, it is probable that the final project cost if constructed using the traditional approach, will be more than originally budgeted and at risk for timely delivery. This is a significant risk that justifies the premium for using a DBFM model.

It should be noted that this infrastructure investment will be made up of a combination of private sector equity and debt financing. In the preparation of the Outline Business Case, different financing structure for the project were considered to produced the VFM to account for the developing issues within current global capital markets.

If the City were to construct this under a traditional approach and debt finance this project on its own requiring the City to borrow in two to three years time, the rate that the City could borrow at is estimated to be 6%. This compares with the 5.4%, which is the most recent cost of long term borrowing that the City obtained on the Water Treatment Plant earlier this year.

The Outline Business Case acknowledges the fact that the City can finance this project for a lower cost under traditional methods than the proposed DBFM. However, this assessment cannot be made in isolation and must consider the positive impacts on the Outline Business Case of a private sector financier. A significant part of the VfM is because the private sector financier has a vested interest in delivering the project on time and on budget. The Outline Business Case indicates that the value associated with this risk transfer exceeds the additional financing costs associated with this proposal.

Public Works and Corporate Finance Departments' Recommendation

Corporate Finance and Public Works Departments recommend that the City pursue the DBFM model for the project delivery and subsequent maintenance of the Chief Peguis Trail Extension Project. This recommendation is predicated on the information contained in the Outline Business Case and preliminary VfM which identifies that the City would likely achieve savings using the DBFM model.

Financial Impact Statement Date: October 15, 2008

The outline business case shows that value for money is favoured by the DBFM model. The Public Services is recommending to deliver this project as presented in the 2008 Capital Budget.

Original signed by
Carrie Erickson
Manager of Finance & Administration

IN PREPARING THIS REPORT THERE WAS:

Internal Consultation With and Concurrence By:

Corporate Finance Department

Public Works Department

Internal Services Department, Legal Services Division (as to legal issues)

External Consultation With:

Deloitte and Touche LLP.

THIS REPORT SUBMITTED BY:

Department	Corporate Finance	Public Works
Division.	Corporate Controller's	Engineering / Project Delivery
Prepared by:	Henry. S. Hunter P.Eng.	Neil Myska P.Eng.
	Manager, Capital Projects	Project Manger

File No.

ATTACHMENT

Deloitte and Touche LLP., Analysis of Private Sector Involvement for the Chief Peguis Trails Extension Project.



Cheif Peguis Trail Extension Executive S

Deloitte.

MMM GROUP

Financial Advisory

City of Winnipeg

Analysis of Private Sector involvement in the Chief Peguis Trail Extension Project

Executive Summary

September 18, 2008

Background

The Chief Peguis Trail Project

Chief Peguis Trail was identified as part of the City of Winnipeg's (the "City") Inner Ring Route in the 1968 Winnipeg Area Transportation Study. Phase I of Chief Peguis Trail linking Main St. and Henderson Hwy, including the Kildonan Settlers Bridge, officially opened in October 1990. In March 2007, Winnipeg City Council directed that all access points to Lagimodiere Blvd. be reviewed as part of the Project.

Rationale for Project

There are significant deficiencies in the street network between Henderson Hwy and Lagimodiere Blvd. More than 26,000 daily trips are made over the Kildonan Settlers Bridge, but a lack of east-west arterial streets east of Henderson Hwy results in high traffic volumes on residential streets in North Kildonan. Springfield Road, a residential collector street, carried approximately 5,900 vehicles per day before the bridge opened in 1990 and now carries more than 18,000 vehicles per day. Springfield Road also serves as a Truck Route east of the Kildonan Settlers Bridge, carrying approximately 1,000 trucks per day.

Project Scope

The City of Winnipeg ("the City") has committed to developing the Chief Peguis Trail with sustainability in mind. The Project includes the following elements that have been designed to minimize environmental impacts, improve safety and encourage alternative modes of transportation:

- 4-lane divided roadway from Henderson Hwy to Lagimodiere Blvd with synchronized traffic signals;
- Intersection improvements to improve safety and reduce delays;
- Paved multi-use path to encourage walking, cycling and in-line skating;
- Transit Park & Ride at Henderson Hwy as an alternative to single occupant vehicle use; and
- Noise walls and berms next to residential areas to reduce traffic noise.

The preliminary budget estimate for the Chief Peguis Trail Project is approximately $70M and it has been identified as a candidate for a public-private partnership delivery model. Upon Council approval, proposals will be solicited to complete the detailed design and to construct and finance the Project.

Purpose of This Report

Studying the Possible Role of the Private Sector in the Extension of the Chief Peguis Trail

Deloitte & Touche LLP ("Deloitte") and the MMM Group ("MMM") were engaged (the "Assignment") to advise the City on the suitability of utilizing private sector expertise (the "private sector") for the Chief Peguis Trail Project through the use of a Public-Private-Partnership ("PPP"). The results of this Assignment are provided in the detailed report titled *"Analysis of Private Sector Involvement in the Extension of the Chief Peguis Trail, Final, September 2008"* (the "Chief Peguis Trail PPP Report"). This Executive Summary provides a summary of the Chief Peguis Trail PPP Report.

Methodology Used to Complete the Assignment

Figure 1 presents the three step methodology that was used in the Chief Peguis Trail PPP Report.

Figure 1: Methodology



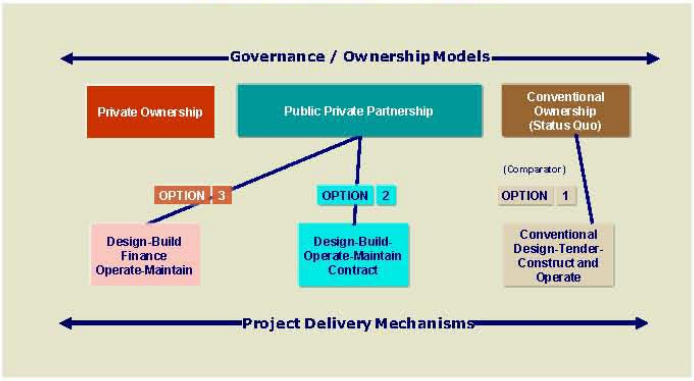
The results of each of the above noted steps are summarized in the sections that follow.

Step 1 - Identifying the PPP Options

Identified PPP Options

As shown in Figure 2, three PPP options were initially identified for the Chief Peguis Trail Project - Conventional delivery, Design-Build-Operate and Finance-Design-Build-Operate. These three potential delivery options for the Project were identified based on Deloitte's experience with PPP projects, insights into municipal government infrastructure planning and delivery and the needs of this particular infrastructure asset class.

Figure 2: Selection of PPP Options



High-Level Overview of the Options

The roles and key responsibilities of the City and the private sector under each of the options are presented in Figure 3.

Figure 3: Overview of the Options

Option	Party	Components							
		Ownership		Financing		Operational	Oversight	Design &	Operation &
		Land	Highway	Construction	Term	Funding		Construction	Maintenance
1	City	●	●	N/A	●	●	●	●	●
	Private Sector								
2	City	●	●		●	●	●		
	Private Sector			●				●	●
3	City	●	●			●	●		
	Private Sector			●	●			●	●

The major differences among the options are that the private sector provides construction financing for Options 2 and 3 and private sector equity is provided in Option 3 to support private term financing for the Project.

PPP Partnership Structures – General Introduction

The most common contractual forms used for PPPs are a License, Concession or Lease, where the private sector partner is granted authority to design, build and maintain (and sometimes operate) an asset to the performance standards stipulated in a Project Agreement. The Project Agreement is the document in which the contractual terms between the public sector and private sector partners are specified.

The License, Concession or Lease expires at the termination of the contract. The term of a contract can be anywhere from 10 to 99 years depending on the asset involved, the nature of the service or program being enabled by the asset and the degree of risk transfer from the public sector to the private sector partner.

PPP Partnership Structures – Introduction to Private Sector Financing

In a PPP structure, the private sector partner will typically finance a project with a mix of its own equity and debt raised from financial institutions, the capital markets or private placements. The goal of any PPP structure is to obtain an 'investment grade' rating under a non-recourse or project financing structure - this requires the project to 'stand on its own' under all conditions. There are three key requirements to securing an 'investment grade' rating: (i) quality and reputation of the public and private sector partners; (ii) the equitable transfer of risk; and (iii) the private partner's equity contribution.

- **Quality and Reputation of Partners:** The foundation of any 'investment grade' rating is the public and private sector partners' track record of meeting contractual obligations on past projects. This is why most PPPs undergo a two step process - a Request for Qualifications ("RFQ") followed by a Request for Proposals ("RFP") - with the RFQ being the means by which 'investment grade' private sector partners are pre-screened.

- **Risk Transfer:** In addition to the strength of the partners, lenders will look to ensure that risk is equitably shared and transferred to the party best able to manage each risk under the terms of the Project Agreement.

- **Equity:** The partnership and risk transfer elements of a project are assessed with the level of the private sector partner's equity commitment to the project. Lenders will require the private sector partner to provide security for the financing, usually in the form of equity to ensure that all obligations are met before any return is earned. The private sector partner's equity contribution is also a vote of confidence in the project's viability. Typically a form of a 'bridge' or credit facility is used to support the amount of equity required, up and to the point when substantial completion is reached (e.g. certification that construction is completed), at which time the private sector partner's equity is injected and used to secure a long term loan from the lender.

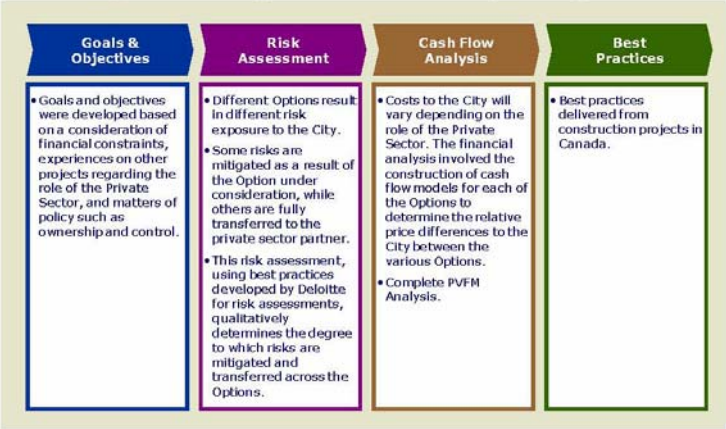
Private sector financing can be more expensive than public sector financing. The reason for this is that the covenants on the loans and the need for equity investors to obtain a return on their investment combine to form the basis of a 'risk premium' - that is the cost that the private partner charges to meet the risk transfer obligations of the Project Agreement. In return for this 'risk premium' the benefit is that the public sector partner is assured that the private partner will meet its obligations

under the Project Agreement. If the private partner does not uphold its obligations, it risks default and loss of its equity. This concept is the core upon which value for money is achieved under a PPP structure and acts like insurance. The higher degree of oversight and rigorous performance requirements results in assets that are built on time, on budget and maintained to a standard that is significantly greater that an asset delivered under a conventional structure (residual value is typically greater under a PPP).

Step 2: Analysis of the PPP Options

The appropriate role of the private sector was assessed based on the four components of analysis outlined in Figure 4.

Figure 4: Summary of Criteria Used to Analyze the Options



Goals and Objectives

A workshop was held in the fall of 2007 with senior City staff to discuss the overall objectives related to PPP projects and to identify any specific constraints that may exist. The results (presented in the Figure below) of this workshop have been used to inform this report.

Figure 5: City of Winnipeg PPP Goals and Objectives

Overall Objectives	• **Primary Benefits Sought from PPP Structures:** – Cost certainty on construction and life-cycle maintenance; – Private Sector innovation to improve overall performance of the facility; – Provide the City with the opportunity to advance Capital Plan through alternative Private Sector Financing approaches; and – Transfer of significant lifecycle risks from the City to the Private Sector.
Suitability of Roles	• **Role of the Private Sector:** – Financing, design, construction, operation and maintenance of infrastructure. • **Role of the City:** – Setting standards to conform with key public policy on safety, economic growth and environmental protection.
Possible Constraints	• **Flexibility:** Ensure that PPP does not cause City to lose control of the facility and jeopardize integration of /management with/ other infrastructure assets. • **Statutory Authority:** Ensure that any PPP structure does not contravene existing statutes or regulations. • **Successor Issues:** Ensure that any PPP approach duly considers rights of existing City Employees. • **Public Opinion:** Proactive communications is required to ensure public support.

Project Risk Assessment

An early step in the development of this analysis was to conduct a risk assessment to assess the degree of risk exposure to the City under each Option. A three-phased approach was used for the risk assessment as shown in Figure 6 below. This approach is consistent with best practices used by Deloitte with other organizations that specialize in procurement and the assessment of private sector delivery options.

Figure 6: Project Risk Assessment Methodology



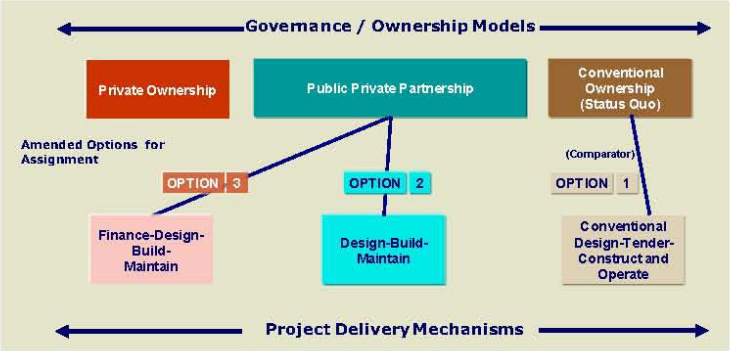
The first step in this analysis was to develop a thorough risk register that contained the risks applicable to The Chief Peguis Trail Extension Project. The second step was to conduct a risk workshop where the risks in this risk register were reviewed and the impact of these potential risks quantified. The last step was to take the results of the risk workshop and assess how the impact of the various risks to the City changed across the three delivery options and develop a preliminary value for money assessment.

The Risk Workshop

A total of 79 risks were considered for the risk assessment, of which 34 risks were selected for analysis in the risk workshop because of their importance in the identification of the appropriate role of the private sector in the delivery of the Chief Peguis Trail Extension Project.

The risk workshop was successful in fostering a robust dialogue on the appropriate role of the private sector in the Project – particularly with respect to the role of the private sector in operations. During discussions at the risk workshop among City staff and its financial and technical advisors, it was determined that it would not be economical to include the operations component of this Project in the deal structure. It was determined that the City has the operational scale to maintain operations, while asking the private sector to provide these services for a relatively small works project would add cost to the Project. This resulted in the elimination of six risks from consideration during the risk workshop. These risks included: (i) Summer Maintenance; (ii) Winter Maintenance; (iii) Vehicle Removal; (iv) Policing Operations; (v) Unanticipated Operating Costs; and (vi) Pavement Structure. With the City retaining the responsibility, and the associated risks, for operating the Project, the PPP options under consideration were further refined from Design-Build-Operate and Maintain and Finance-Design-Build-Operate-Maintain to Design-Build-Maintain and Finance-Design-Build-Maintain.

Figure 7: Revised Project Delivery Models



Results of the Risk Assessment

The risk workshop conducted with the City resulted in an analysis of the impacts of the risks under each delivery option. The Figure below shows the key risks that varied across the three delivery options under consideration by City and it is clear that the overall risk profile of the Project from the City's perspective improves from the Conventional Delivery option (Option 1) to the Finance-Design-Build-Maintain (Option 3).

Figure 8: Risk Profile

City of Winnipeg - Chief Peguis Trail Risk Workshop Results

ID	Policy / Strategy	Option 1	Option 2	Option 3
1.0 Project Budget				
1.2	Changes in Government Funding Policies			
3.0 Site Conditions/ Construction				
3.3	Geotechnical			
3.4	Environmental Condition of Site			
3.8	Construction Delays			
3.12	Construction Cost			
3.27	Design Co-Ordination/Completion (Change Order Risk)			
3.34	Inflation Risk			
4.0 Land Acquisition, Permit and Approvals				
4.1	Municipal Approvals			
6.0 Life Cycle and Residual Risk				
6.1	Lifecycle Maintenance Performance			
6.4	Major Reconfiguration and Improvements			
6.6	Life-Cycle Maintenance Costs			
7.0 Operational				
7.14	Labour Supply Risk			

The Overall Risk Profile Improves from Option 1 (the worst) to Option 2 and 3 (the best)

Policy / Strategy : Typically PPP options have greater controls that provide improved results on budget control.

Site Conditions / Construction: Typically, common best practices indicate that Option 3 would have less risk than Option 2 due to substantial performance payments associated with PPP.

Municipal Approvals: Municipal approval would likely be retained by the City under all options.

Life cycle and Residual: Are high under the traditional option. However, these risks switch to low and warning risks as more risks are transferred to the private sector under the more advanced procurement options.

Operational: Resource risks become low once the City becomes less involved with the construction.

The results from the risk workshop are a key input in arriving at a recommendation on the PPP option that delivers the best value for money to the City for the Chief Peguis Trail Extension Project. The other key input is an assessment of the three delivery options against established evaluation criteria. The results of this analysis are presented in the section of this Executive Summary titled Comparison of Options.

Cash Flow Analysis and Preliminary Assessment of Value for Money (PVFM)

Deloitte constructed a cash flow analysis for each of the delivery options under consideration to arrive at a present value cost for each of the options. The present value cost of Option 1 on a life-cycle basis is $65.5 million. The present value cost of Option 3 on a life-cycle basis is $73.6 million. The results of the risk workshop were then applied to these costs from the cash flow analysis in order to determine a PVFM analysis. The PVFM results produced a range of 7% to 16% in reduced Project costs when the Project is delivered using a PPP delivery model.

The delivery of the Project under a DBFM PPP structure should achieve value for money of between 7% to 16%, as compared to Conventional delivery.

The above results compare favourably to other value for money results achieved from other DBFM road projects such as:

- Sea-to-Sky Highway Improvement (British Columbia): 11%; and
- Kicking Horse Canyon (British Columbia): 10%

This PVFM should be used by the City together with the other work done by Deloitte to determine the suitability of delivering the Project under a PPP structure.

Should the City decide to proceed with a PPP, a detailed Value for Money assessment should be completed based on the RFP & Project Agreement (and the associated Final Output Specifications). The results of the detailed VFM assessment may vary from this PVFM.

Best Practices Analysis

The PPP options were also analysed within the context of best practices for similar projects in the Canadian market. The best practice case studies selected for this report were those that best related to the Assignment. A variety of projects were chosen, each of which was assessed to determine the: (i) role of the private sector; (ii) role of the public sector; (iii) deal parameters; and (iv) key findings. The best practice case studies selected for this report and the associated analysis are presented in the Figure below.

Figure 9: Best Practice Comparators

Project:	Rationale For Inclusion:	Characteristics: Similar Asset Class	Major Refurbishment	Availability Based PPP
Calgary Ring Road (Calgary)	• Involves new road construction with long-term life-cycle maintenance by private sector. • Currently under construction under a Finance-Design-Build-Operate model.	●		●
Sea to Sky Highway (Vancouver)	• Involves major upgrades to existing highway • Currently under construction under a Finance-Design-Build-Operate model.	●	●	●
Anthony Henday Drive (Edmonton)	• Involves new road construction with long-term life-cycle maintenance by private sector. • South East Section completed in October 2007.	●		●
Build-Finance Hospitals (Ontario)	• Involves major renovations to existing hospitals. • Introduced innovative Build-Finance approach, where constructor is required to fund construction works from 3rd financier and is paid only at substantial completion. • Does not include any operational elements.		●	●

Based on the comparative assessment presented below, a PPP delivery model is appropriate for the Project and is consistent with the approach taken by other jurisdictions for like investments. Lessons learned from these projects should be used by the City in executing its procurement if it chooses a PPP model to deliver the Project.

Figure 10: Best Practice Analysis



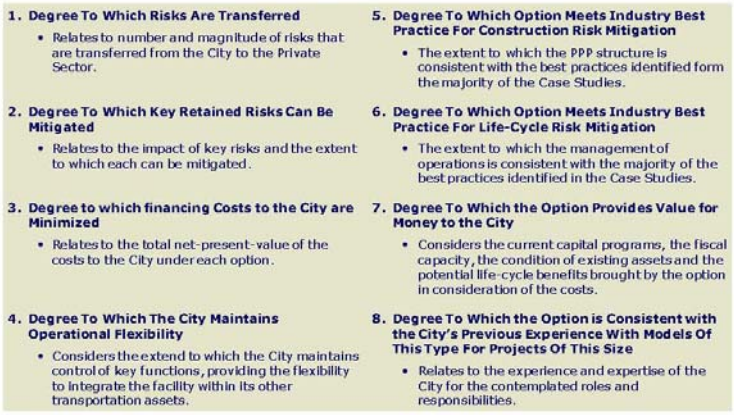
Role of Private Sector	Role of Public Sector	Key Findings
• The role varies according to the level of risk that can be accepted. • The role will also vary depending on the public sector's ability to transfer risk. • Inherent risks, such as the environmental approvals, or economic factors (e.g. revenue risk) can be too large to transfer to the private sector.	• The level of public sector involvement increases when inherent risks cannot be transferred. • Payments to contractors could be guaranteed if high inherent risk, and performance based when most risks can be transferred to the private sector. • Public sector is often required to contribute some construction financing.	• Risk mitigation is typically addressed through performance based payments. • In most cases, risk transfer is achieved by bundling long term financing requirements through the operating life cycle. • Minimum payments may have to be guaranteed when there are significant inherent risks. • Most are "Greenfield" or new projects similar to Chief Peguis Trail.

Step 3 - Comparison of PPP Options

Selection of the Preferred Option

In addition to undertaking a risk workshop and conducting a PVFM analysis on the three PPP options under consideration, a qualitative analysis was completed using the criteria listed in Figure 9.

Figure 9: Criteria for Analysis of PPP Options



1. **Degree To Which Risks Are Transferred**
   - Relates to number and magnitude of risks that are transferred from the City to the Private Sector.
2. **Degree To Which Key Retained Risks Can Be Mitigated**
   - Relates to the impact of key risks and the extent to which each can be mitigated.
3. **Degree to which financing Costs to the City are Minimized**
   - Relates to the total net-present-value of the costs to the City under each option.
4. **Degree To Which The City Maintains Operational Flexibility**
   - Considers the extend to which the City maintains control of key functions, providing the flexibility to integrate the facility within its other transportation assets.
5. **Degree To Which Option Meets Industry Best Practice For Construction Risk Mitigation**
   - The extent to which the PPP structure is consistent with the best practices identified form the majority of the Case Studies.
6. **Degree To Which Option Meets Industry Best Practice For Life-Cycle Risk Mitigation**
   - The extent to which the management of operations is consistent with the majority of the best practices identified in the Case Studies.
7. **Degree To Which the Option Provides Value for Money to the City**
   - Considers the current capital programs, the fiscal capacity, the condition of existing assets and the potential life-cycle benefits brought by the option in consideration of the costs.
8. **Degree To Which the Option is Consistent with the City's Previous Experience With Models Of This Type For Projects Of This Size**
   - Relates to the experience and expertise of the City for the contemplated roles and responsibilities.

The application of the criteria yielded a result that favored Option 3.

Figure 10: Results of Qualitative Analysis of PPP Options

Criteria	OPTION 1	2	3
1. Degree To Which Retained Risks Are Reduced	○	◑	●
2. Degree To Which Key Retained Risks Can Be Mitigated	○	◑	●
3. Degree to which financing Costs to the City are Minimized	●	◑	○
4. Degree To Which The City Maintains Operational Flexibility	●	●	●
5. Degree To Which Option Meets Industry Best Practice For Construction Risk Mitigation	○	◑	◑
6. Degree To Which Option Meets Industry Best Practice For Life-Cycle Risk Mitigation	○	◑	◑
7. Degree To Which the Option Provides Value for Money to the City	○	◑	●
8. Degree To Which the Option is Consistent with the City's Previous Experience With Models Of This Type For Projects Of This Size	◑	◑	◑

○ Lowest Benefit ◑ Medium Benefit ● Highest Benefit

Options 3 Produced The Best Result

The results of this analysis along with the results from the risk workshop show that Option 3 is the Preferred Option because it provides the greatest opportunity for the City to obtain overall value for money. The key factor which influences this finding is the benefits of the risk transfer that will be achieved by bundling long term financing requirements through the operating life cycle, with payments made on availability and performance. This will ensure that the City will have a higher quality facility with a higher residual value as compared to the other options.

Market Soundings

The Canadian PPP market has rapidly matured over the course of the last decade. Strong and well-informed markets have been developed for PPP projects with values in excess of $100M.

The Canadian market's capacity to deliver large-scale public infrastructure projects has not yet translated into a further segmentation of the market for projects with values less than $100M. While a number of smaller scale public infrastructure projects have been successfully undertaken using a PPP delivery model (see below), a critical mass of smaller project precedents does not exist to confirm the market's willingness and capacity to deliver smaller projects using PPP.

It is recommended that the City of Winnipeg proceed to test the market's interest in delivering the Chief Peguis Trail Project as a PPP by consulting with interested bidders (eg. information session). Undertaking this important step will be critical to assisting the City in assessing the most appropriate delivery model for the Project and ensuring that project planning and transaction resources are prudently managed.

Not undertaking this consultation step would risk the time and financial resources put into a procurement process not being matched by a robust market response to the Project.

Figure 11: Small Capitalization Projects in the Canadian PPP Market

Sample of Recent Canadian Small Capitalization Projects

Project	Market	Asset class	Project value (capital cost)	Project value (NPV)	Payment mechanism	Delivery model	VFM assessment
Charles Jago Northern Sport Centre	BC	Community athletic facility	$29M	--	Lump-sum payment	DB	--
Sierra Yoyo Desan resource upgrade project	BC	Road & bridges	$40M	$60M	Payments from industrial road users benchmarked at $8M/yr	DBFM	--
Britannia Mine Water Treatment Plant	BC	Municipal water treatment plant	$15.5M	$27.2M	Performance payments once construction is complete	DBFO	$10M (25% savings)
Academic Ambulatory Care Centre project	BC	Health care facility	$95M	--	Performance payments once construction is complete	DBFO	$17M (21% savings)
Quebec Service Centre project	QC	Commercial accommodations	$30M+	--	--	DBFMO	--
Archives of Ontario Head Office	ON	Special Purpose Government Accommodations	$50M	--	Performance payments once construction is complete	DBFO	--

If these consultations do not yield the desired response from the marketplace, the City may wish to explore bundling suitable road and bridge works to achieve the deal size and scale that may increase the interest of the market in participating in these projects and raise the willingness of potential bidders to assume additional project risks.

There are few examples of project bundling in the Canadian marketplace. The most notable bundling transactions in Canada would be the Highway Service Centre projects in Quebec and Ontario and the bundling of 32 school facility projects in Alberta.

- The Quebec transaction resulted in a selected vendor that will take on the design, construction, financing, operation and maintenance of seven Highway Service Centres over a 30 year period.
- The Ontario transaction is still in the market, but a deal structure similar to the Quebec model is being sought for 23 Ontario Highway Service Centres.
- In 2007, Alberta bundled 18 schools as a P3 transaction and in 2008 announced another transaction with 14 schools.

The bundling of projects has been used successfully in other jurisdictions, such as the UK, to create deals with sufficient size and scale to attract private sector interest required to accelerate needed investments in smaller sized facilities such as schools and social housing units.

Recommendations

The Design-Build-Finance-Maintain delivery model would be the most appropriate if the City of Winnipeg decides to pursue the Chief Peguis Trail Project as a PPP project. Therefore, it is recommended that City staff:

1. Seek Council approval to consult with bidders to determine the level of market interest in delivering the Chief Peguis Trail Extension Project through a PPP delivery model.

- If this consultation for the Chief Peguis Trail Extension Project does not yield the desired response from the market, City staff should explore and advise Council on the possibility of bundling suitable road and bridge projects for a P3 transaction.

2. Seek Council approval to proceed with the following two step procurement process if there is a satisfactory response from the market through the consultation process and value for money can be achieved through a PPP model:

   a) Prepare and issue a Request for Qualifications ("RFQ").

   b) Prepare and issue a Request for Proposals ("RFP") to Qualified Proponents that includes a Project Agreement and will allow for commercially confidential meetings during the RFP process to capture the proper level of risk allocation to the private sector to ensure value for money is achieved.

3. Consult with other Canadian jurisdictions that have undertaken highway projects using a PPP delivery model to obtain "lessons learned" that can be applied to strengthen the City of Winnipeg's transaction and procurement process for the Chief Peguis Trail Project.

4. Develop a resource plan to manage the Chief Peguis Trail Design-Build-Finance-Maintain PPP project throughout the entire lifecycle of the Project including the identification of needs for internal project management and external advisor services.

5. Develop and implement an effective stakeholder management and communications plan that targets multiple audiences (Provincial and Federal governments, media, and local citizens). This plan should promote an open and transparent forum to facilitate the transfer of information, which can be achieved through the development of a Web Page that profiles the Chief Peguis Trail Project.



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