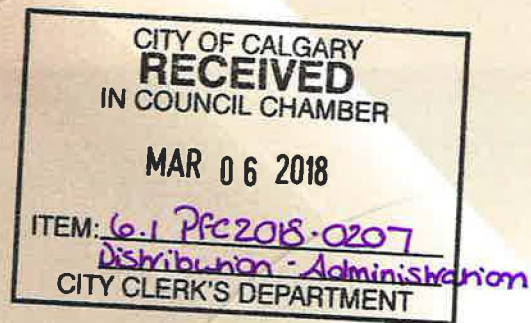
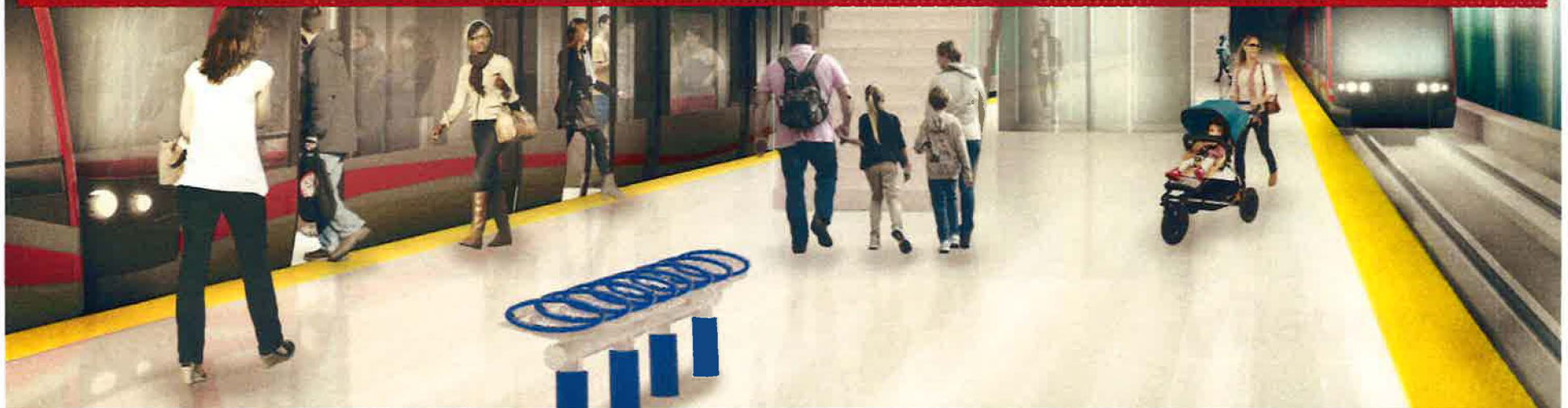


Calgary



Priorities and Finance
Committee
6 March 2018

PFC2018-0207 Green Line Light Rail Transit Project Delivery Model Recommendation





Agenda

Background

Policy, Evaluation, and Results

Delivery Model Recommendation

Q&A

In Camera

Q&A

Background



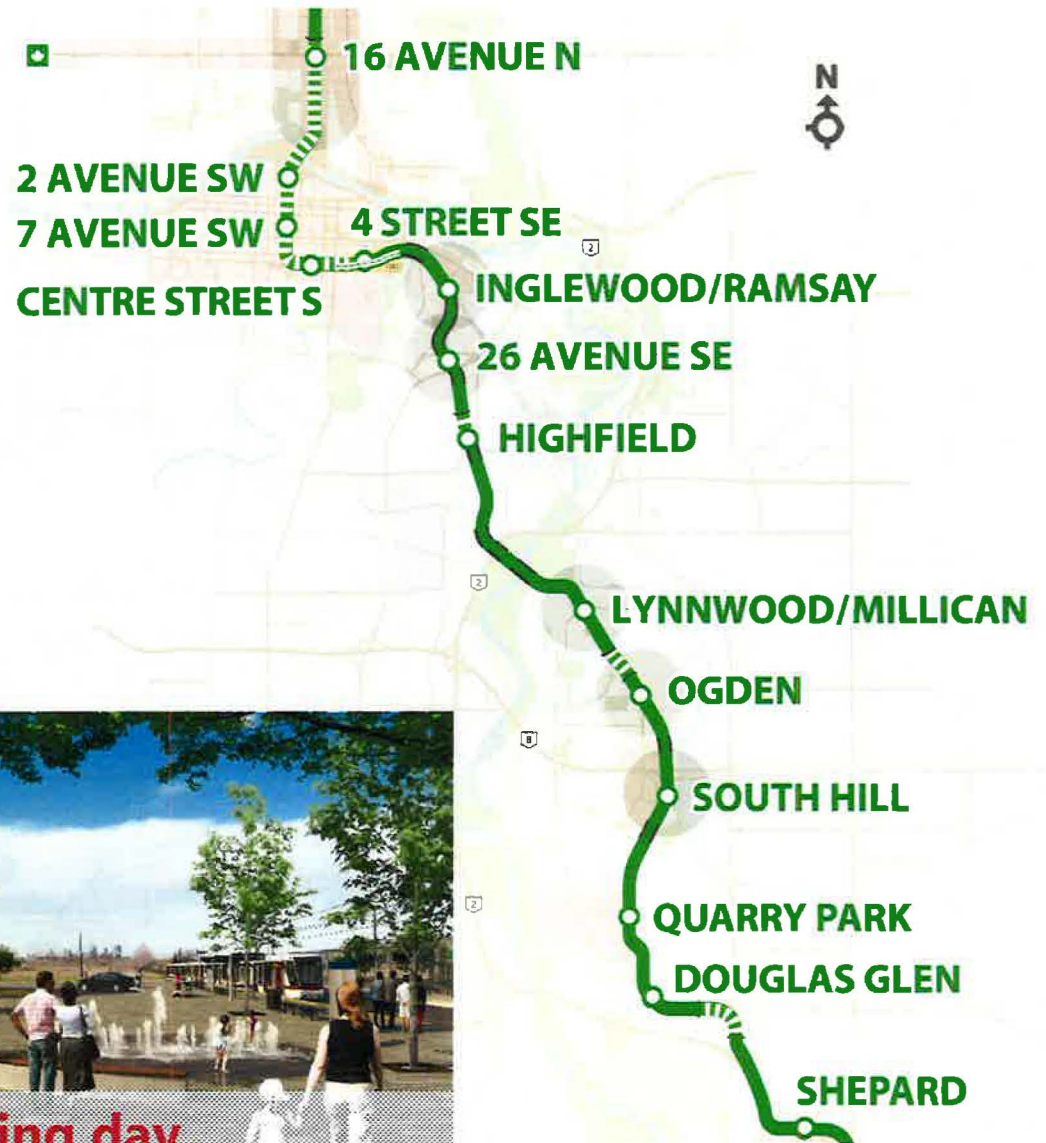
Previous Council direction

May 15, 2017

Council approves
16 Avenue N to
126 Avenue SE for stage
1 construction

June 26, 2017

Council approves the
long-term vision, setting
the alignment and
stations



Today

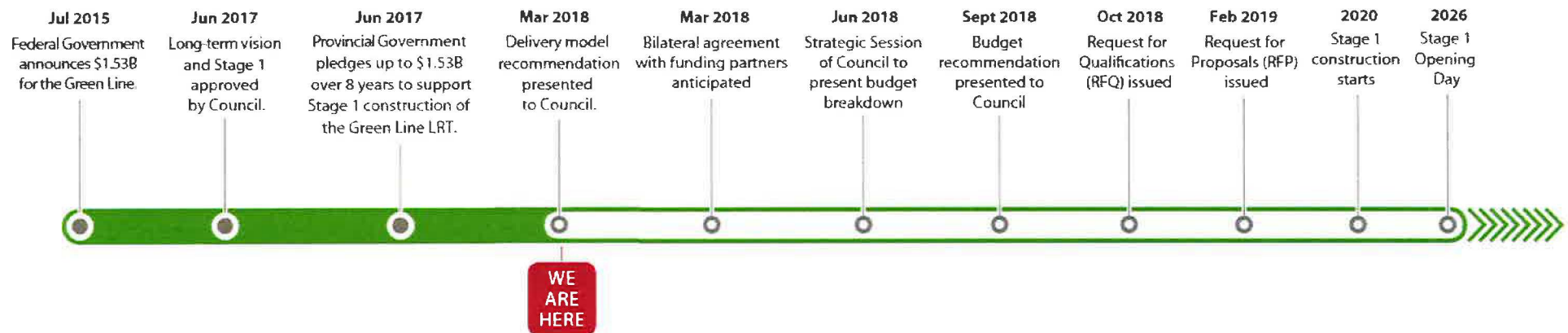


Opening day



Project timeline

Att. 2



Funding Update

- Negotiations between The City, the Federal and Provincial governments well underway
- Bi-Lateral agreements between Federal government and Province expected by March 31
- Funding agreements will be Administrations focus once bi-lateral agreements are in place



Policy, Evaluation, and Results





Council Policy CFO011 – Public-Private Partnerships (P3) Policy

Att. 1

- The P3 Policy ensures that large projects are planned and procured in the best interest of The City.
- The P3 policy applies to capital projects exceeding \$100 Million
- Objective is to evaluate the project's potential to be pursued as public-private partnership.



THE CITY OF
CALGARY
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PFC2018-0207
Item #6.1 ATTACHMENT 1

COUNCIL POLICY

Policy Title: Public-Private Partnerships (P3) Policy
Policy Number: CFO011
Report Number: FCS2008-29, FCS2008-47
Approved by: City Council
Effective Date: 2008 December 16
Business Unit: Finance & Supply

BACKGROUND

Public-Private Partnerships (P3s) are increasingly being pursued by all orders of government as an alternative financing source and delivery model for infrastructure and services. The City of Calgary 10-year Capital plan (2008-2017) has identified over \$10 billion in unfunded capital needs. This has prompted The City to consider financing arrangements beyond traditional methods. One financing alternative that The City would like to explore is the use of P3s as a means to take advantage of potential private financing sources and spread costs over the useful life of the assets. As well, in some cases, access to grants from the other orders of government may be contingent on the project considering a P3 as a method of delivery.

The P3 policy will assist in achieving innovation in customer service and enhance The City's risk management perspective in the implementation of large capital projects and consideration of whether these risks are better managed internally or externally.

Not all infrastructure and services are suited to P3s, and other factors such as market conditions will impact the viability of P3s for that infrastructure and services which would normally provide opportunities for successful P3s. Great care needs to be taken in the evaluation and structure of any P3 The City undertakes in order to ensure the maximum benefit accrues to The City, while minimizing the risks.

The following definition for P3s was adopted by Council on 2008 September 22 (FCS2008-29):

A Public-Private Partnership is a contractual agreement between a public authority and a private entity for the provision of infrastructure and/or services in which:

- i. The private sector participant assumes the responsibility for financing part or all of the project; and/or*
- ii. The City seeks to transfer risks that it would normally assume, based on the private sector participant's ability to better manage those risks; and/or*
- iii. The arrangement extends beyond the initial capital construction of the project.*



The Evaluation Process

**Phase 1: Initial
Screen**
Q3 2015

**Phase 2: Strategic
Assessment**
Q2 2017

**Phase 3: VFM
Assessment**
Q1 2018

**Phase 4: Delivery
Model
Recommendation**
Present



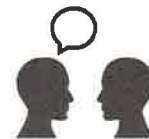
Projects

13



Market
Sounding
Firms

24



Participants

40+



Workshops

8

Att. 3

Strategic Assessment Objectives

Brings together multiple considerations, shortlisting the options down to those that continue to demonstrate strong potential for P3.

- Case study investigation of precedent projects (13 projects)
- Market capacity and market sounding (24 firms)
- Key assessment criteria are established and the delivery model options are qualitatively compared

Strategic Assessment Key Criteria

- System expansion
- Total project cost certainty and efficiency
- Lifecycle approach
- System-wide operation integration
- User perspective
- Operational flexibility





Strategic Assessment Shortlist

The Delivery Model evaluation began with ten options...

DBB
Design-Bid-Build

DBF
Design-Build-Finance

DBFM
Design-Build-Finance-Maintain

DBFVM
Design-Build-Finance-Vehicle Supply-Maintain

DB
Design-Build

CM
Construction Management

DBFOM
Design-Build-Finance-Operate-Maintain

IPD
Integrated Project Delivery

CM@Risk
Construction Management (at-risk)

DBFVOM
Design-Build-Finance-Vehicle Supply-Operate-Maintain

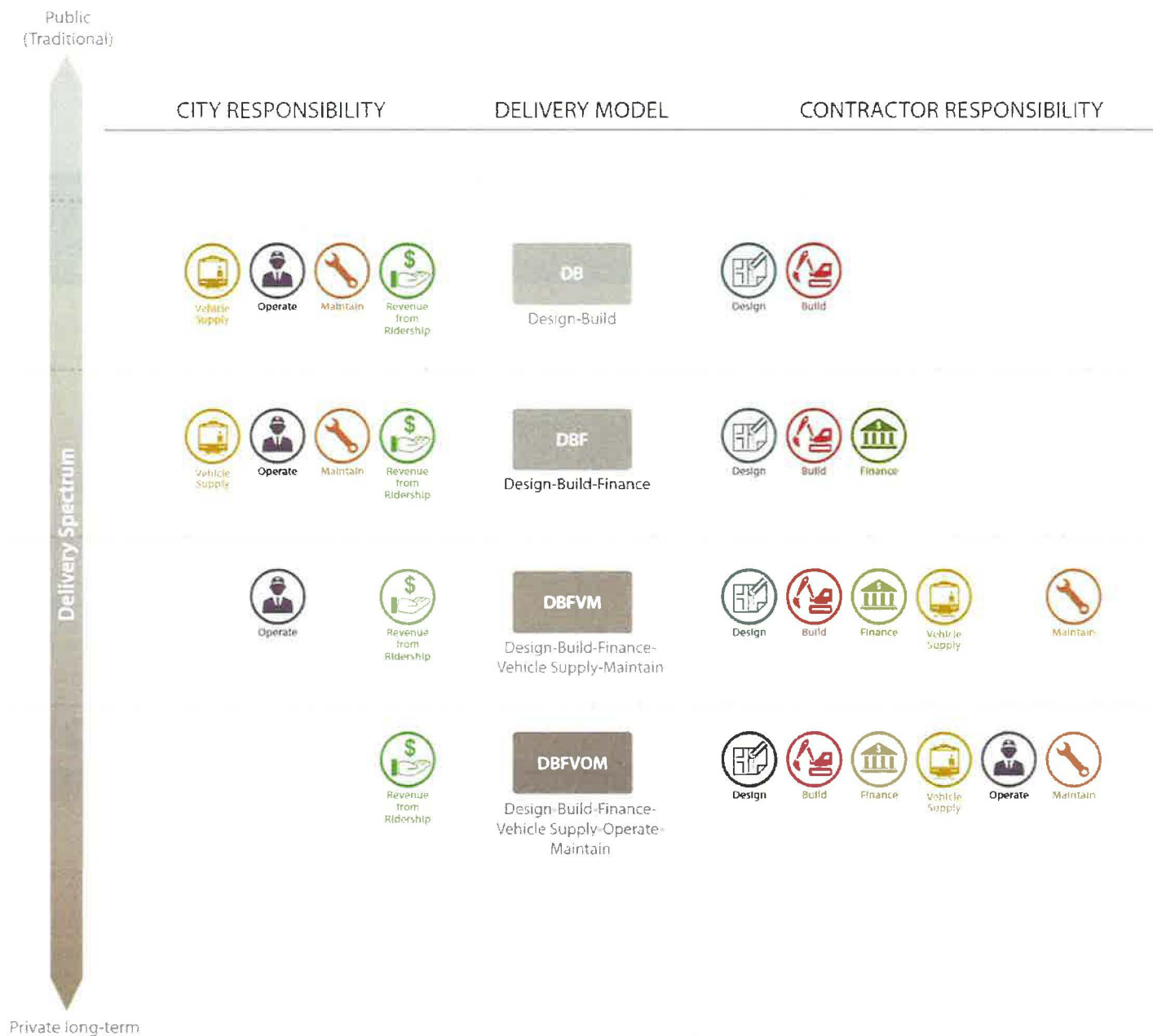
DB

DBF

DBFVOM

DBFVM

How the delivery models compare?



What is a Value for Money (VFM) Assessment ?

Comparison of the total risk adjusted project costs for each delivery model. Costs include:

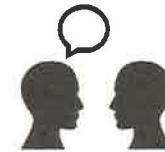
- Design and Construction
- Operations and Maintenance
- Major Rehabilitation and Renewal
- Financing

Objective: To determine risk adjusted project costs between a traditional model and P3 Model

Quantifying the Risks for the VFM

Step 1: Comprehensive risk assessment

- Participants: Independent industry experts and cross-departmental subject matter experts
- Workshops: identification and validation of risks



Participants



Workshops

40+

8

Step 2: Quantification of risk

- Magnitude and probability of various risks determined
- Comparison of how different delivery models affect The City's risk adjusted costs
- All costs analyzed on a net present value basis using The City's cost of funds.



Quantitatively Comparing Delivery Models

Comparison of the total risk adjusted project costs for each delivery model:

Non-P3 Delivery Model

DB

Referred to as the
Public-Sector Comparator (PSC)

Compared to:

P3 Delivery Model(s)

DBF

DBFVOM

DBFVM

Referred to as the
Shadow Bids

Note: A supplemental analysis was undertaken to further compare the two long-term delivery models and the Design-Build-Finance-Vehicle -Maintain (DBFVM) model was eliminated from further consideration.

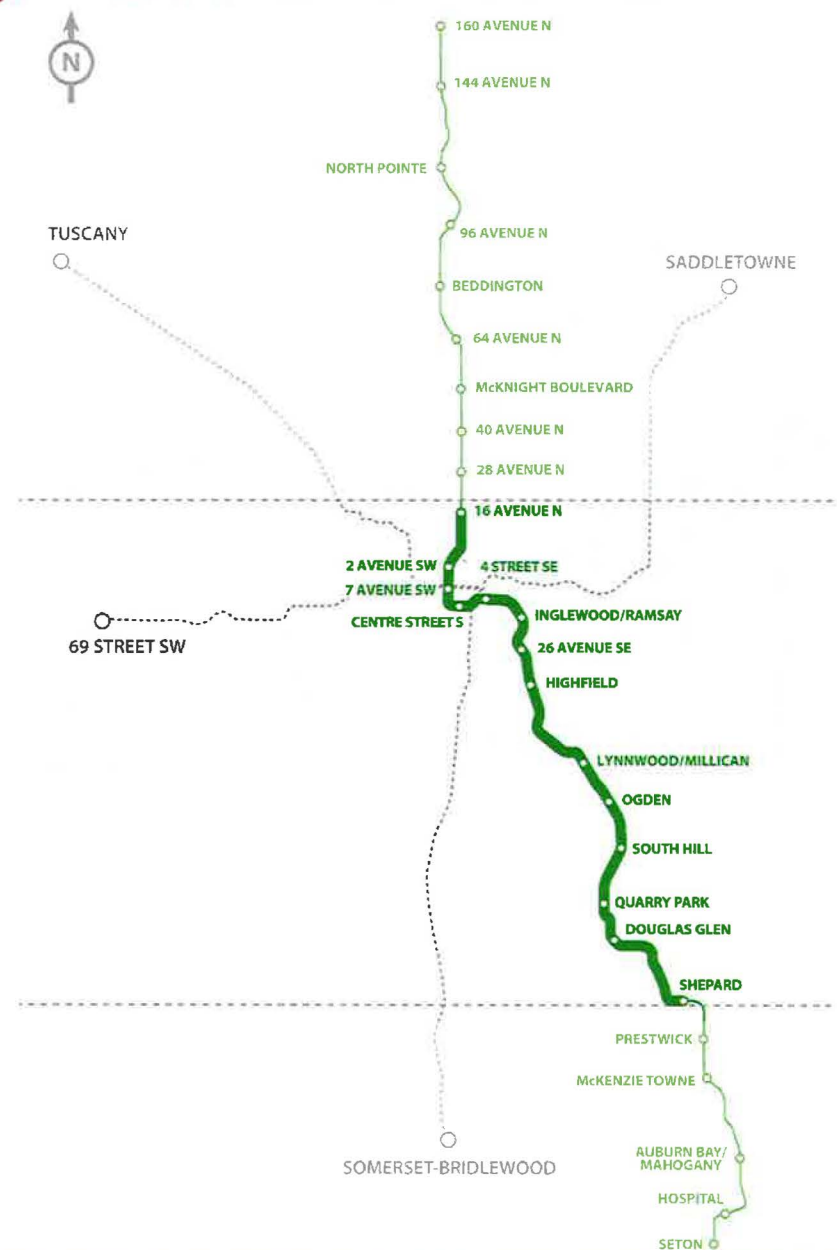
Value for Money Assessment Results

Key criteria differentiating models:

- Expansion
- Integration
- Interface
- Scope change
- Operational flexibility
- Disputes
- Long-term maintenance
- Construction quality
- Financing

VFM Results:

DBF model demonstrates value for money over the PSC



Delivery Model Recommendation



Recommended Delivery Model

DBF

Design-Build-Finance

City responsibility:



Vehicle
Supply



Operate



Maintain



Revenue
from
Ridership

Contractor responsibility:



Design



Build



Finance

SUPPORTING CONTRACTS

- Enabling Works
- LRV Procurement
- Other minor works

CITY RESPONSIBILITIES

- LRT Operations, Maintenance and Rehabilitation
- Business support program
- City Shaping and TOD initiatives

Note: construction financing is contractor responsibility, other financing is City responsibility

Benefits of the DBF delivery model

DBF | Design-Build-Finance



Benefits of Design-Build (DB)

- Cost and schedule certainty
- Flexibility for operations and future expansions

Plus by adding the short-term financing (F)

- Additional oversight by the contractors lenders anchor the design and construction risk transfer
- Short-term financing is relatively inexpensive



Q&A





In Camera

Att. 4

Administration Recommendations:

That Priorities and Finance Committee recommends that Council:

1. Approve Design-Build-Finance ("DBF") as the delivery model for the Green Line LRT project from 16 Avenue North to 126 Avenue Southeast;
2. Authorize the General Manager, Transportation to negotiate all funding agreements with the federal and provincial governments, and the General Manager, Transportation and the City Clerk to execute the funding agreements and any other agreements necessary to advance the procurement process. The General Manager, Transportation and the City Solicitor will also sign off on the funding agreements as to content and form, respectively;
3. Direct that Attachment 4 remain confidential pursuant to section 23, 24 and 25 of the Freedom of Information and Protection of Privacy (FOIP) Act (Alberta) until the agreements for the Project considered in this report are awarded and financial close is achieved, with the exception of information Administration needs to share with funding partners, which will be shared in confidence;
4. Direct Administration to bring this report forward to the 2018 March 19 Regular Meeting of Council; and
5. Direct Administration to report back no later than Q4 2018 to the Priorities and Finance Committee of Council with the recommended budgets including financing and confirmation of funding from the other orders of government for the Project for approval.



Q&A





Priorities and Finance
Committee
6 March 2018

Thank You

