What Drives PPPs?

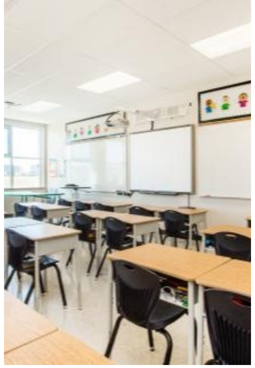
April 2014

GRAHAM

GRACORP CAPITAL

Contents

Background



Background

Market Drivers for PPPs

- Urbanization + Growing Populations
- Condition of Existing Infrastructure
  - American Society of Civil Engineering graded overall condition of U.S.'s infrastructure – "D"
- Investment Required
  - U.S. DOT reported infrastructure spending needed in U.S.:
    - **$124bn to $146bn/yr** to maintain and improve **roads** and **bridges**
    - **$24.5bn/yr** to improve condition of **transit rail** and **bus systems**

With Public Finances Stretched, PPPs are a Way of Delivering Infrastructure to the Communities that Need it

Background

What is a PPP?

- Long-term contract between the government and private partners to deliver assets and/or services in exchange for right to future payments.
  - Private Partner provides combination of:
    - design, build, finance and maintenance
    - life cycle and asset management
  - Public sector
    - retains ownership and control of ROW; and
    - transfers key project risks to private partner.

Form of Procurement for the Delivery of Major Public Infrastructure Projects

Background

When to Choose PPP?

- Opportunity is the greatest for projects with
  - Strong public support
  - Technical challenges and/ or numerous interfaces
  - Long construction periods
  - Tight schedules
  - Challenging traffic management
  - Significant private-sector interest
  - Reliable revenue source

Project Size Considerations

- Size of investment needs to provide returns that justify procurement costs
  - Investment impacted by public funding through construction (i.e. large substantial completion payment reduces investment required over the long term)
  - Large projects limit competition
  - **Min. Investment Typ. = $200m**
  - Successful Examples:
    - York Viva Bus Rapid Transit Expansion (DBFM, $250m)
    - Union-Pearson Express (DB, $128.6m)
    - Chief Peguis Trail Ext. (DBFM, $179m)

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Understanding PPPs

Understanding PPPs

Success Drivers

- PPPs are a form of project finance and involve 2 main elements:
  - Debt and Equity
- Investors look to project's future earnings to repay debt and equity
- To realize benefits, transactions must be structured properly. Thus public authorities need to understand the:
  - Key participants and their motivations
  - Cost of risk allocation
  - Perceived benefits and barriers of various compensation structures

Project Success Relies on Well-Organized Procurement and Properly Structured Risk Allocation

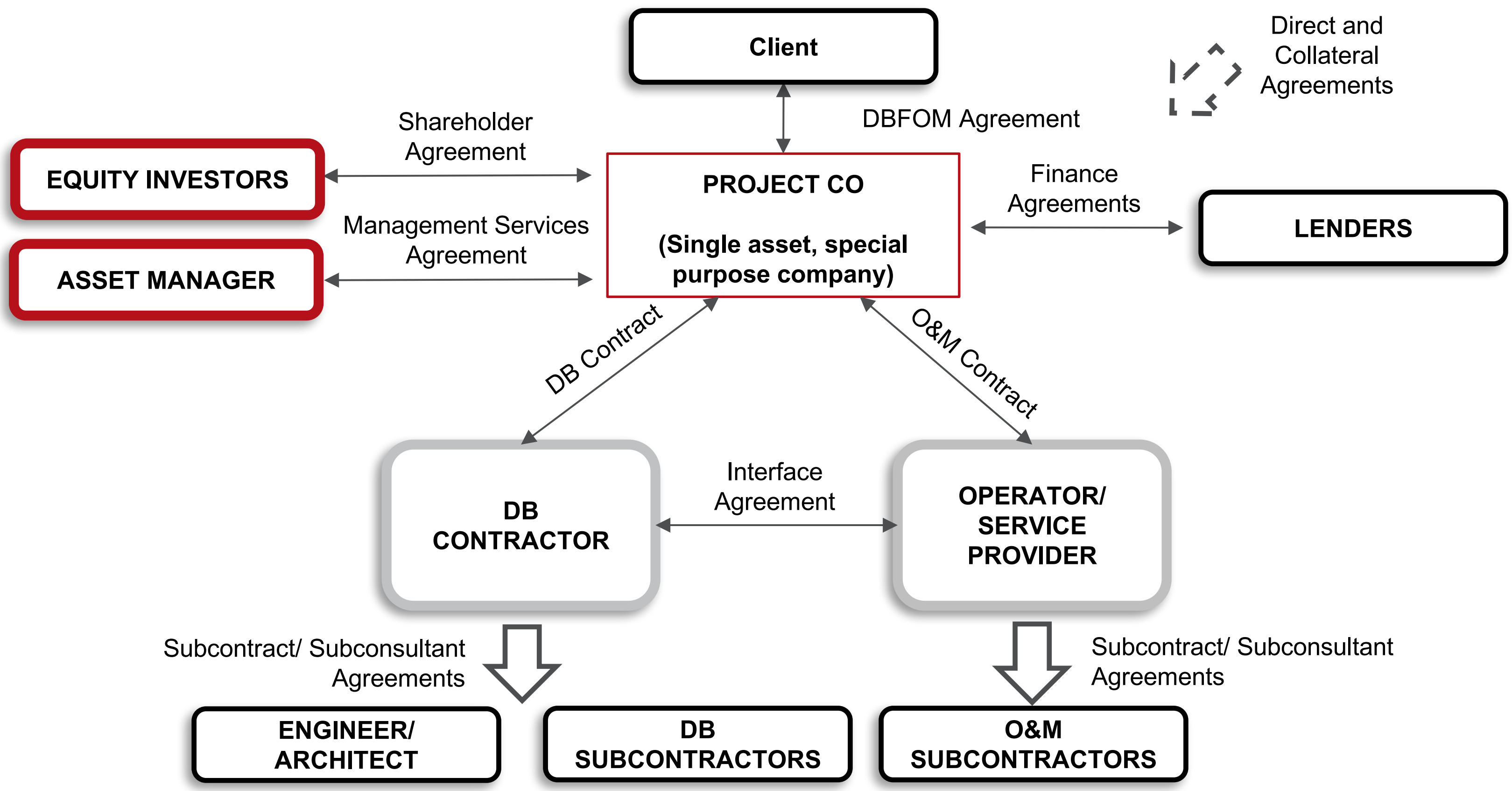
Understanding PPPs

Key Participants' Motivations

Participant	Primary Motivations
Public Authority/ Client	• Leverage public funding to meet public commitments • Resolve network issues (i.e. congestion, safety, reliability, etc) • Enhance quality of public services • Transfer financial and technical risks to private sector
Equity Investors/ Project Co	• Long-term stable source of revenue • Diversify investment portfolio • Enter new markets or jurisdictions
Lenders	• Long-term source of interest "spread" from creditworthy loan • Earn up-front financing fees • Enhance relationships with public authorities/ clients, equity investors, etc.
DB Contractors	• Increased risk = increased profitability • Competing against fewer bidders (typically 3 bidders in RFP Stage) • Competing against companies with similar profit metrics
Operators/ Service Providers	• Long-term contract with similar risks to those currently managed • Flexibility to increase profit through life-cycle efficiencies

Understanding PPPs

Key Participants' Contractual Relationships



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Cost of Risks

- Private partner does not accept risks for free
  - Risk Premium (Built into Private Partner ROI): Quantification of the likelihood and perceived cost impact of risk, and ability to mitigate risk
  - Best value: **Risk Premium < Cost of Client Managing Risk**
    - Uninsurable, high/ unlimited impact risks, that cannot be mitigated by private partner, carry high risk premium
      - E.g. Undisclosed, unforeseeable ground conditions → Some clients cap risk transfer (i.e. Port of Miami Tunnel, where FDOT shared cost exposure with private partner)

Best Value Obtained where Private Partner can Quantify Risks

Understanding PPPs

Compensation Structures

- **One Size Does Not Fit All:** transfer of demand/ revenue risk is not inherent in PPPs
  - 500+ PPPs initiated in UK and North America using Availability/Performance or Hybrid model
- Four main structures used to compensate private partner
  1. Toll/ Revenue Collection
  2. Shadow Tolls
  3. Availability/ Performance-Based Payment
  4. Hybrid

Selecting Appropriate Compensation Structure Depends on Project Goals and Constraints

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Understanding PPPs

1. Toll/ Revenue Collection

- Private partner manages tolling of users + directly paid based on usage

	Public Authority/ Client Perspective	Private Partner Perspective
Pros:	• Cost of project paid by users • Provides fiscal space to fund other projects	• Incentivizes investors to promote usage • Opportunity to achieve higher ROI
Cons:	• Inc. potential for private sector windfall or default under finance agreements • High transaction costs due to challenging due diligence and legal arrangements • Limits road usage by lower income users • May divert traffic onto free, publicly managed alternative routes • Less competitive tension, due to fewer market participants	• Risk of repayment results in: − More expensive financing, higher DSCR − Less favourable lending terms • Cost/ risk of collecting & enforcing tolls • Higher procurement costs built into project returns • Increased due diligence costs • Increased usage impacts long-term life-cycle planning

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Understanding PPPs

2. Shadow Toll

- Private partner is paid based on usage, but general public not tolled for usage

	Public Authority/ Client Perspective	Private Partner Perspective
Pros:	• Zero cost to travelling public • Private partner paid on usage without imposing tolls on a disapproving public	• Incentivizes investors to promote usage • Opportunity to achieve higher ROI
Cons:	• No revenue generated as source to pay for project • Inc. potential for private sector windfall or default under finance agreements • No budgetary certainty • Less competitive tension, due to fewer market participants • High transaction costs due to challenging due diligence and legal arrangements	• Risk of repayment results in: − More expensive financing, higher DSCR − Less favourable lending terms • Increased due diligence costs • Higher procurement costs built into project returns • Increased usage impacts long-term life-cycle planning

Understanding PPPs

3. Availability/ Performance

- Private partner is paid based on the asset being available for use, with deductions for non-performance

	Public Authority/ Client Perspective	Private Partner Perspective
Pros:	• Long-term budget certainty (client obligations are capped) • Simplified due diligence and negotiations • Inc. emphasis of asset performance • Ongoing performance, life-cycle and safety cost fully funded from outset • Transparent project costs from outset • No private sector windfall • Inc. competitive tension, more market participants	• Payment subject only to risks within private partner's control: − Lower financing costs − Improved lender terms • Long-term incentive to improve service quality and asset performance • Less equity required in transaction • Aligned goals with client (i.e. payments begin when construction certified + deductions for non-performance)
Cons:	• Inc. importance on contractual provisions • Inc. importance on deduction regime (too high = not bankable, too low = no pain) • No revenue generation mechanism (public pays for full cost of project) • No incentive for private partner to increase traffic usage	• ROI is locked-in from outset • No dedicated source or funding for payments – usually payments are subordinate to existing debt obligations

Understanding PPPs

4. Hybrid

- Public sector responsible for tolling + Private Partner paid through availability-performance based regime

	Public Authority/ Client Perspective	Private Partner Perspective
Pros:	• Long-term budget certainty (client obligations are capped) • Public sector is recipient of toll benefits • Provides fiscal space to fund other projects • Simplified due diligence and negotiations • Inc. emphasis of asset performance • Ongoing performance, life-cycle and safety cost fully funded from outset • Transparent project costs from outset • No private sector windfall	• Payment subject only to risks within private partner's control: − Lower financing costs − Improved lender terms • Long-term incentive to improve service quality and asset performance • Less equity required in transaction • Aligned goals with client (i.e. payments begin when construction certified + deductions for non-performance)
Cons:	• Inc. importance on contractual provisions Inc. importance on deduction regime (too high = not bankable, too low = no pain) • No incentive for private partner to increase traffic usage	• ROI is locked-in from outset

Understanding PPPs

Understanding Investor Land

Equity

- committed at the start of a project
- first source of funding if things go wrong
- Investors want to reduce risks retained at Project Co level
- Investors want to ensure DSCR is robust enough to manage project challenges

Cost of Equity Reflects Risks Retained

Lenders

- providing a significant % of investment
- limited recourse if things go wrong
- upside limited to interest rate and upfront fees
- driven by market precedent more than rational analysis
- want to reduce risk exposure and ensure 99% confidence that debt will be repaid

Pricing of Debt Reflects Perceived Riskiness of Repayment

A Place Where Everything That Can Go Wrong, Will Go Wrong

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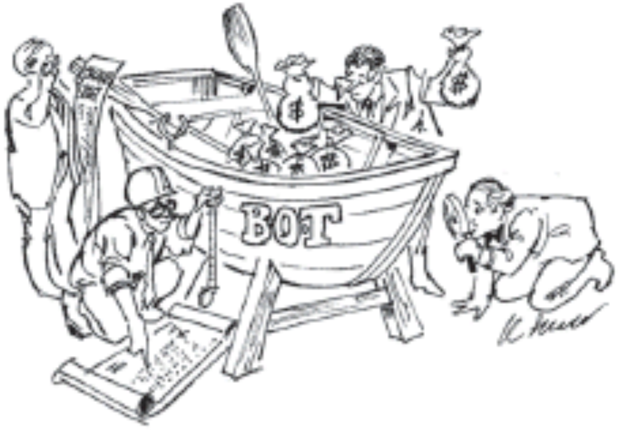
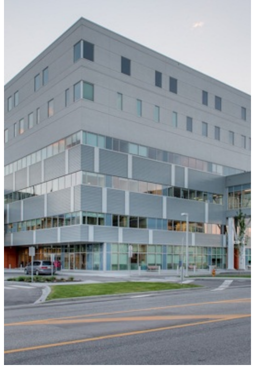
Understanding PPPs

Key Considerations

- Private financing typically more expensive than public debt
  - Properly accounting for federal tax subsidies for municipal bonds may level the playing field before accounting for risk transfer benefits
- Financing options exist in U.S. to help close the gap between public and private cost of debt:
  - TIFIA credits (sourced from USDOT for max 49% of eligible costs)
  - Tax-exempt Private Activity Bonds (“PABs”)



Benefits of a PPP



Benefits and Barriers of PPPs

Why Choose PPP Procurement?

- Key Advantages
  - Cost-effective risk transfer
  - Certainty of budget and schedule
  - Technical innovation for complex projects
  - Economies of scale and construction efficiencies
  - Optimized life-cycle costs and improved service delivery
  - Leverage public sector funding
  - Economic development
  - Guaranteed supply/ availability of asset
  - Investors' and Lenders' due diligence

PPPs Delivered 3.4% Ahead of Schedule, according to Australian Study

Benefits and Barriers of PPPs

Value-for-Money:

Project		Capital Costs ($CAD million)	Value for Money ($CAD million)	Value for Money (%)
BC	South Fraser Perimeter Road (DBFM)	666	34	5.1
	Sea-to-Sky Highway (DBFM)	539	66.9	14.5
	Canada Line (DBFM)	1,412	93	6.6
	Charles and Leslie Diamond Health Care (DBFM)	64	17	21
	Kelowna and Vernon Hospitals (DBFM)	442.7	25.4	5.4
	Evergreen Line (DBFM)	889	134	10.1
AB	Northeast Anthony Henday Drive (DBFM)	1,809 (EV)	371	20.5
ON	Hwy407 East Extension (DBFM)	1,240	309.1	18.5
	Centre for Addition and Mental Health	293	51.2	14.9

Historically 5 ~ 20% value-for-money realized (regardless of project size)

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Benefits and Barriers of PPPs

Challenges for U.S. Clients

- **Learning Curve**

  PPPs are relatively new to many U.S. jurisdictions

  - Select experienced advisors and private partners

- **Funding**

  Current sources of funds (e.g. gas tax) do not meet funding requirement

  - PPPs help governments to leverage their existing capacity
  - Government controlled tolls allow authorities to use revenues to finance additional projects

- **Additional Costs**

  Increased procurement and financing costs

  - U.S. Financing Options – TIFIA & PABs or reduce private capital through public payments during construction
  - Added procurement and financing costs countered by increased **transparency** into costs and **service** delivery, schedule and budgetary **certainty**, improved project **due diligence**, and protection against **risks transferred**.

Over 50 PPP Projects Planned or in Procurement in U.S. Demonstrates Benefit of Framework

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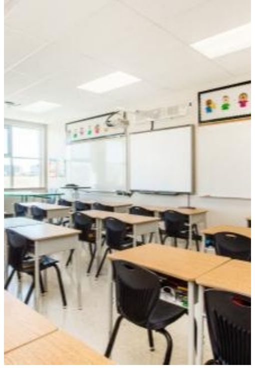
Our Profile



Our organization

Graham Group

- Established in 1926
- Full-service constructor; a top 50 best-managed company; 100% employee-owned
- 15 offices in North America, over 1,300 staff, and over 5,000 trades people
- Graham is financially stable: over $2B in annual revenues and over $300m in tangible equity
- 6 successful PPPs in North America

Active in PPP market – 2 ring roads (over 342 single-lane miles), 5 LRT projects, 28 schools, and 4 hospitals

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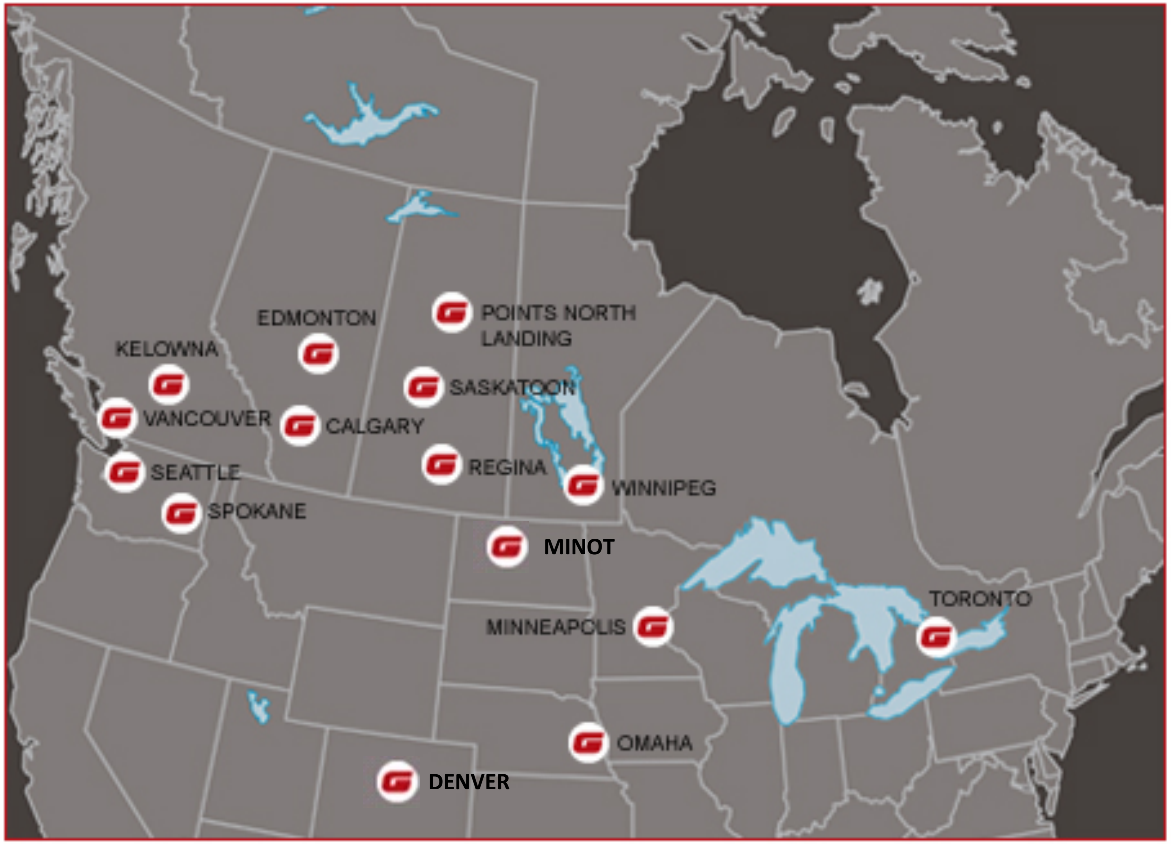
Our organization

Graham Group

Locations



Substantial Experience in the US, with over 600 projects delivered, Backed by Deep PPP Expertise

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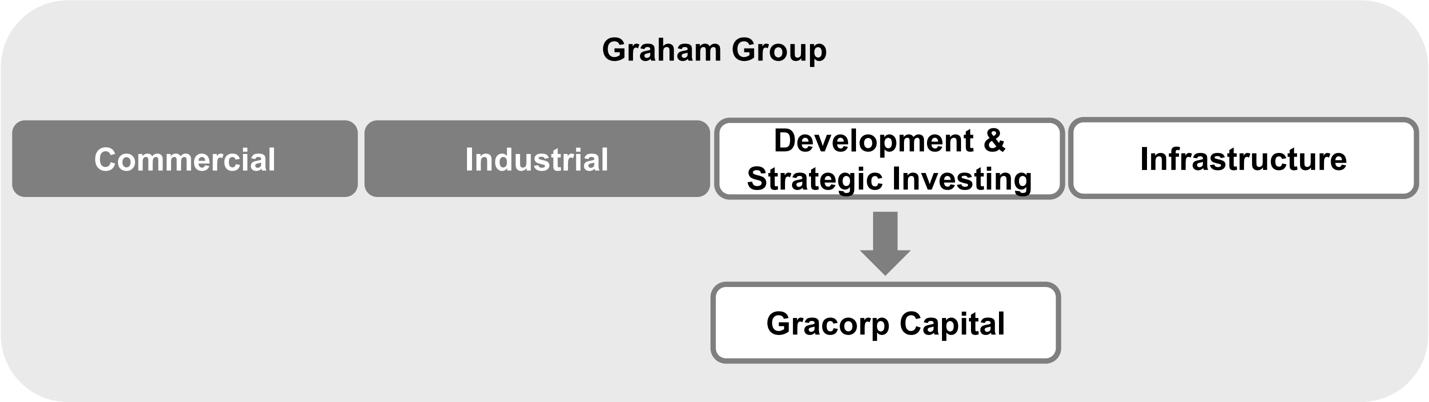
Our organization

Graham Group

- 4 operating divisions: Commercial (buildings), Industrial (process plants and mining), Infrastructure (roads, transit, bridges, water treatment and energy), Development and Strategic Investing
- Wholly-owned subsidiary, Gracorp Capital, provides development, investment, financial advisory and asset management services



Vertically Integrated Group - Graham Employees are Shareholders in Equity Investment of PPPs

Our service

Gracorp Capital Advisors

- North American-based developer and asset manager of real estate and P3 projects across the continent

- Fully integrated, multi-disciplinary team with depth of experience across technical and commercial disciplines and project experience over a broad spectrum of asset classes

- Manages three equity funds targeting infrastructure and real estate development, with investments totaling $1.33 billion in Enterprise Value – backed by Graham employees personal investment

- Successful proponent on ASAP I (25%), ASAP II (50%) and North Island Hospitals (50%)

North American-Based Team Focused on Developing and Managing P3 Projects

Our experience

Gracorp and/or Graham Projects:

Denver North Metro Denver, CO	**Gracorp**	**Graham**
• $340 million DB • 13 miles of commuter rail with 8 stations; scope includes the installation of train control and other systems; and system testing and commissioning • Notice to Proceed: December 2013 • Construction Completion: 2018		✓

Evergreen Line Vancouver, BC	**Gracorp**	**Graham**
• $889 million DB • design, build and finance the 6.8 mile guideway, including 1.2 miles of tunnel and 7 stations; install the automatic train control and other systems; and testing and commissioning • Financial Close: April 2010 • Construction Completion: May 2012 • Concession Term: 32 years	✓	✓

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Our experience

Gracorp and/or Graham Projects:

Alberta Schools Alternative Procurement I Calgary/ Edmonton, AB	**Gracorp**	**Graham**
• $643 million (NPV) DBFM • 25% of equity invested through funds managed by Gracorp • DBFM of 9 new schools in Edmonton and 9 new schools in Calgary • Financial Close: September 2008 • Construction Completion: Spring 2010 • Concession Term: 32 years	✓	✓

Alberta Schools Alternative Procurement II Calgary/ Edmonton, AB	**Gracorp**	**Graham**
• $253 million (NPV) DBFM • 50% of equity invested through CC&L GVest • DBFM of 3 new schools in Edmonton and 7 new schools in Calgary • Financial Close: April 2010 • Construction Completion: May 2012 • Concession Term: 32 years	✓	✓

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Our experience

Gracorp and/or Graham Projects:

Northwest Anthony Henday Drive Edmonton, AB	**Gracorp**	**Graham**
• $1,420 million (NPV) DBFM • 13 mile, 6-lane freeway circling the city, including additional basic and auxiliary lanes, 29 bridges, 8 interchanges, 5 flyovers, 2 rail crossings; and additional pre-grading for future interchanges • Financial Close: July 29, 2008 • Construction Completion: October 31, 2011		✓

Calgary West LRT Extension Calgary, AB	**Gracorp**	**Graham**
• $380 million DB • 5 mile LRT line in Calgary's city, including a 2.5 mile at-grade guideway, 1 mile of elevated guideway, 1.6 miles of tunnel and trench guideway, and construction of the structures for four stations, including the City's first underground station, and four substations • Commercial Close: November 2009 • Construction Completion: August 2014		✓

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Our experience

Gracorp and/or Graham Projects:

Edmonton North LRT Extension Edmonton, AB	**Gracorp**	**Graham**
• $300 million DB • 2.1 mile LRT extension, including 4 new LRT stations and a 0.5 mile tunnel • Commercial Close: March 2011 • Construction Completion: December 2013		✓

Northeast Stoney Trail Calgary, AB	**Gracorp**	**Graham**
• $650 million (NPV) DBFM • 13 mile, 4 and 6-lane freeway circling the city, including 23 bridges, 6 interchanges, 2 new railway bridge structures and 8.7 miles of off-corridor road construction • Financial Close: February 16, 2007 • Construction Completion: November 1, 2009 • Concession Term: 33 years (incl. construction)		✓

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