PM Challenges: Public Infrastructure in GTHA



2024-04-12 Eilidh McGregor, P.Eng., Env SP



Discussion Topics

- Economical Challenges and Procurement Trends
- Procurement Overview
- Resourcing and Behaviours
- Overview Role of the PM
- Scope, Schedule, Quality and Budget
- Stakeholder Engagement & Risk Management
- Focus on property related challenges for Design and Construction



Economical Challenges

- Slowing economy, high interest rates;
- Uncertain market;
- Capital spending high, downturn may occur;
- Transit projects busier than ever;
- Shortage of qualified workers;
- Contractors more risk adverse:
 - Withdrawing from bids
 - Less competitive bid pricing
- Need for increased bid competition.





Metrolinx, IO share changes to contracts and delivery coming GOVERNMENT **Procurement Perspectives:** down the pipeline Allocating risk to construction

Angela Gismondi February 12, 2021

ECONOMIC, PROJECTS, US NEWS

P3 2020: Collaborative models needed to ensure post-COVID projects proceed smoothly, says Panel OVERNMENT

Angela Gismondi November 23, 2020

uld April 6, 2021

projects is subjective

Legal Notes: P3 risk strategies for a post-COVID world

John Bleasby March 31, 2021

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Recent News

Request for Qualifications Issued for Eglinton Crosstown West Extension – Stations, Rail and Systems

March 25, 2024

Ontario Line guideway and stations contract awarded

By Metro Report International | 5 March 2024

Ontario to issue RFPs for Garden City Skyway twinning this spring

Construction of multimillion-dollar span is to begin in 2025

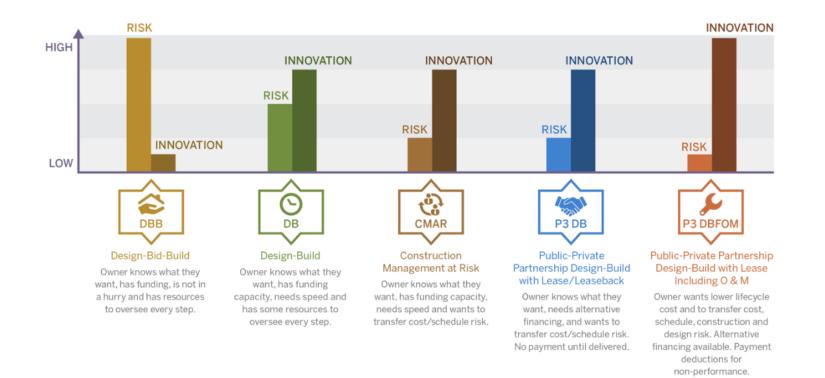
Hatch to design the East Harbour Transit Hub for Metrolinx

January 8, 2024

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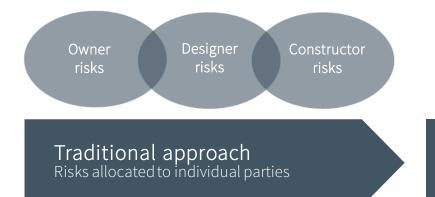
By **Kevin Werner** Niagarathisweekcom Wednesday, February 7, 2024 Ö 1 min to read

Traditional Procurement Selection



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Alliance/IPD Procurement Approach



Collective risk/benefits/Equitable and pre-agreed sharing

Alliance approach Collective sharing of all risks/benefits

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Resourcing and Behaviours

- Shortage of Qualified Resources
- Transient Workforce
- Need Competitive Edge
- Remote/Hybrid Work
- Collaborative Behaviour

Opinion: The Ontario Infrastructure Bank may hurt more than it helps

Province's real infrastructure problem is shortages of construction workers and project managers. New financing won't solve that

Brian Lewis, Special to Financial Post Published Mar 07, 2024 • Last Updated 1 week ago • 3 minute read



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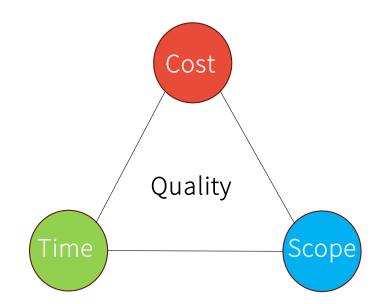
Overview - Role of the Project Manager

- Resource management;
- Awareness of scope, schedule, quality & budget;
- Stakeholder Engagement;
- Risk identification and management.



Scope, Schedule, Quality and Budget Control

- Thorough Scope Understanding
- Define Objectives, Deliverables and Limits
- Optimize Resources Engaged
- Avoid Scope Creep
- Change Control Processes
- Realistic Schedule + tracking
- Quality Control Processes
- Cost Control



Stakeholder Engagement

- Communication + Collaboration is key;
- Diverse Interests and Expectations;
- Keep stakeholder informed;
- Involve stakeholders in decision-making process; and
- Build trust and gain support.



Risk Management

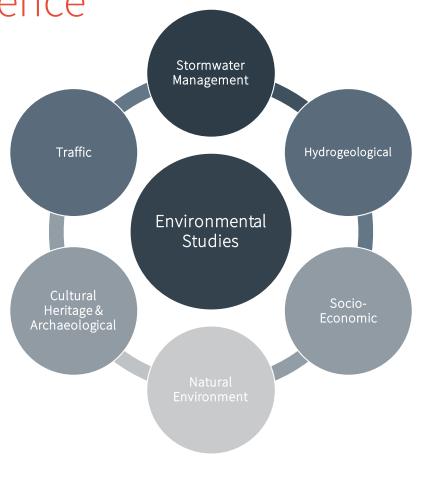
- Site & Environmental Conditions
- Property & Land Access
- Permitting & Approvals
- Stakeholder & Community
- Self Performed Utility Relocations

	Negligible	Minor	Moderate	Significant	Severe
Very Likely	Low Med	Medium	Med Hi	High	High
Likely	Low	Low Med	Medium	Med Hi	High
Possible	Low	Low Med	Medium	Med Hi	Med Hi
Unlikely	Low	Low Med	Low Med	Medium	Med Hi
Very Unlikely	Low	Low	Low Med	Medium	Medium



Risk Transfer & Due Diligence

- Complete necessary due diligence
- Mitigates inflated pricing
- Share reports to inform pricing in bids + Avoid unbiddable outcomes



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Property Challenges – Design

- Involve Property Professionals Early in Design;
- Minimize Property Impacts while Maximizing Design;
- Allowance in Schedule for:
 - Due Diligence;
 - Opportunity for Amicable Negotiations; and
- Avoid Expropriation Too Early in the Design.



Design Case Study – Corridor Widening PTEs

- Corridor widening project;
- 100's of PTEs for investigative work;
- 5% intrusive; and
- Design change control.



Image Source: www.google.com, March 17th, 2024

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Detailed Design Case Study – Encroachments and Boundaries

- Corridor Widening;
- Encroachment Search;
- Boundary Tree Survey;
- Identification of impacted properties;
- Communications with owners.



Image Source: <u>www.land-search-online.co.uk</u>, March 17th, 2024



Detailed Design Case Study – Future Proofing

- Corridor widening project
- Noise wall construction
- Consideration for future O&M
- Additional Land identified late in design



Image Source: <u>www.reinforcedearth.com</u>, March 17th, 2024



Property Challenges - Construction

- Constructability Reviews
- Other Contractor awareness
- Durations for Commitment of Land to Contractors.



The pedestrian bridges run parallel to the new rail bridge. (Metrolinx photo)



Importance of Constructability Reviews



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Construction Case Study – Constructor Issues

- Commitment of Land to Contractors;
- Time and Space Separation;
- Construction Issues for Client.

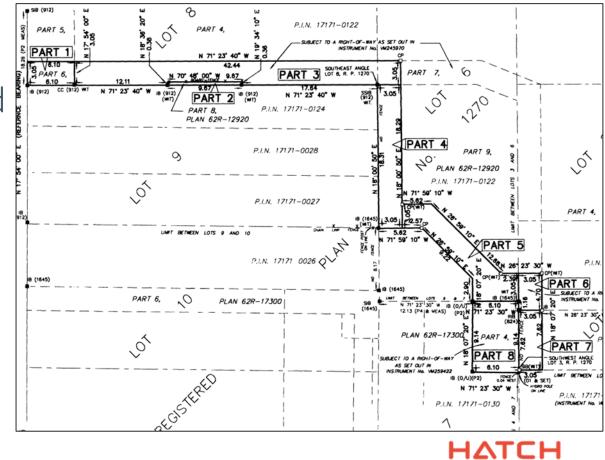


Image Source: www.moduloc.ca, March 17th, 2024

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Construction Case Study – Property Right of Way

- Identification of access through parking lot during in-market period
- Addenda prepared to limit contractor use of space
- Communication protocol put in place for 3 weekend closures



F Thank you.



Eilidh McGregor Senior Project Engineer at Hatch





