

## Attachment 4 - Risk Registry Q4 2018

<b>Low</b>	Willing to accept and monitor these risks since they have low likelihood of occurrence with minor consequences.
<b>Medium</b>	Recognizes these risks will probably occur and will have moderate consequences. Management will monitor and manage risks by implementing contingency plans to reduce the likelihood and impact of their occurrence.
<b>High</b>	Recognizes these risks are top priorities of critical importance to the organization. Management is spending more effort to manage and monitor these risks by implementing risk mitigation strategies to reduce the likelihood and impact of their occurrence.

Risk Category	#	Potential Risk Identified	Risk Rating	Mitigation	Risk Rating
			11/30/2018		
<b>Financial</b>	F1	The City of Calgary is unable to finalize the Ultimate Recipient Agreement with the Province of Alberta with terms that are acceptable to The City of Calgary.	<b>Medium</b>	Negotiate with Province and escalate as required.	
	F2	Final project will be delivered over budget.	<b>Medium</b>	Establish cost estimation, procurement, and cost control protocol to ensure budget is controlled.	
	F3	Other orders of government do not fulfill funding obligations for enabling works currently underway.	<b>Low</b>	Constant communication with other orders of government to discuss current status of projects and	
<b>Technical</b>	T1	Shallow utility companies lack of resources to meet the demands of relocates in centre city.	<b>Medium</b>	Administration to develop a joint construction plan with utility owners; identify resource needs for earliest completion. Prioritize the required relocates in advance of the main contract.	
	T2	Technical requirements necessitate the change to previously planned station location/ entrances if the single bore option is chosen.	<b>Medium</b>	Station Integration framework to be developed informing of the criteria required to achieve station integration, communication and engagement plan, expectation setting.	
	T3	Geotechnical ground conditions must be investigated using specific methodology based on single or twin boreholes.	<b>High</b>	A safety and technical risk assessment will be conducted with contractor and City BU's including experienced GL management, fire department and EMO.	
	T4	Significant disruption to traffic, businesses, and communities during construction.	<b>High</b>	Ensure that specifications clearly outline acceptable traffic impacts. Develop Taking Care of Business strategy.	
	T5	Tunneling under the Bow River and below/through downtown infrastructure has not been performed to this scale ever before in the City of Calgary.	<b>High</b>	Collaborative safety and technical risk assessment with contractor and City BU's including experienced GL management, fire department and EMO.	

## CITY SECRETARIAT RISK REGISTER (PUBLIC)

OPC2018-1137

Risk Profile

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Legal	L1	Expiry of agreement(s) for relocation of utilities stopping utility relocation work.	High	The City is in the process of negotiating amending agreements with utility provider(s) to extend expiry dates.	
	L2	Due to the scale and complexity of the Green Line project The City anticipates more conflicts of interest will arise due to scarcity of resources for individual specialists or due to multiple contractors performing work that overlaps in regard to both time and geography.	Medium	A Conflict of Interest Protocol – Green Line LRT Project has been developed. In accordance with the Protocol, a committee has been established to hear and determine conflicts of interest issues. The committee has set and complied with tight deadlines for providing decisions (3 days), unless it requires additional information from the parties affected by the conflict of interest.	
Procurement	P1	Scale of procurement contract minimizes meaningful competition from the construction market.	Medium	Market sounding and industry feedback coupled with procurement analysis to validate scale and risk transfer of specific procurement.	
	P2	Protracted procurement process that frustrates the market and increases cost.	Medium	Maintain consistency with recent procurement timelines and market sensitivities to contract negotiations.	
Access	A1	Required land is not available for contractor on financial close.	Medium	Acquisition program for all confirmed property requirements underway and Council approved delegated authorities in place to allow for timely approvals and expedient closing dates, wherever possible. Technical team advancing with finalizing design through tunnel section to confirm outstanding property requirements. Documenting all specific property requirements/exceptions to be included in the land	
	A2	Opportunities for station integration may be limited due to technical and financial barriers.	High	Ensuring technical solutions are identified and provided, wherever possible, to enable station integration in the immediate/near and future terms. Targeted communication and engagement plan, exploratory research and expectation setting.	

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<b>Safety</b>	S1	The magnitude of the project will require a fast pace of construction integrated within several public communities carrying on with their daily routines. This inherently increases public exposure to construction hazards even with safety measures in place.	<b>Medium</b>	GL SMT and supporting resources to collaboratively participate in the development all aspects of safety in each of the respective areas to address stakeholder interaction with planned construction activities; and, participate in construction safety inspections to ensure public is aware of and following safety mitigative	
<b>HR</b>	H1	The majority of City personnel are not experienced in underground tunnel and station construction to this scale which will present a steep learning curve and increased safety risks.	<b>Medium</b>	Ensure Managing Director is experienced in this scale tunnel construction contract management and has supporting resources to effectively manage the prime contractor for the project.	
<b>QA</b>	Q1	Insufficient Quality Control and Assurance Program is in place impacting the design and construction of the project.	<b>Low</b>	Develop Quality Control and Assurance Protocol and require all stages of the project to adhere to the Protocol.	

Note: Specific legal and financial risk are not included in the public register as the procurement process is competitive and confidential in nature.