



INFORMATION REPORT

TO:	Mayor and Members General Issues Committee
COMMITTEE DATE:	March 28, 2017
SUBJECT/REPORT NO:	Light Rail Transit (LRT) Procurement Model (PED17030) (City Wide)
WARD(S) AFFECTED:	City Wide
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SIGNATURE:	

Council Direction:

Council has requested that information be provided by staff on the procurement model for the Hamilton Light Rail Transit (LRT) project.

Information:

For light rail transit (“LRT”) projects built in communities where there is no existing rail operation, the projects are usually delivered by way of a Design-Build-Finance-Operate-Maintain (“DBFOM”) model. The City of Toronto, given that they have an existing rail operator in the Toronto Transit Commission, is procuring its LRT projects through a Design-Build-Finance-Maintain (“DBFM”) model. These are the only two different construction delivery models that have been contemplated by Metrolinx for LRT delivery, and after consulting with experts, City staff understands that the DBFM model is only used in light rail projects where there is an existing operator.

The key difference between the DBFOM and DBFM models is whether the successful LRT proponent (“Project Co”) will be responsible for operating the LRT within defined contractual parameters.

Beginning with the announcement of Hamilton’s LRT project, the DBFOM model has been assumed as the delivery of the Hamilton LRT.

On January 25, 2016, the LRT Sub-Committee approved a Memorandum of Agreement with Metrolinx, which among other things, reiterated that the LRT project may be delivered by way of a DBFOM model.

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Although a DBFM model would allow the City of Hamilton's Transit Division to have direct accountability for the day-to-day operations of the LRT, there are additional impacts and associated risks, the most significant of which are as follows, see also "Appendix A" to Report PED17030.

1. **Additional City Resources needed to Complete Project Agreement:** Under a DBFM model, a team of one to three operations experts would be needed immediately to clearly define and specify the role and responsibilities of the operator under the Project Agreement. Without doing so, there will be ongoing confusion as to what is within the scope of operations versus maintenance. The addition of rail experts to City staff would require an immediate enhancement to the current budget of the Transit Division. It is unlikely that Metrolinx would fund these positions and, therefore, there would be a net levy impact.

Even with the immediate introduction of rail experts to define the scope of operations, there is still a risk that the scope of operations written into the Project Agreement will not adequately reflect actual operations once the LRT is built. In fact, the DBFM model is only used where existing rail operations are already well established. To effectively delineate an interface between the scope of two parties is a challenging activity that will introduce risks, and potential liabilities.

Under a DBFOM model, however, Project Co would be responsible for operations and maintenance of the LRT. As such, the coordination and exact roles and responsibilities of the operators and maintainers do not need to be specified in the Project Agreement, as they are Project Co's responsibility to organize.

2. **Additional City Resources need to be retained during design and build phases:** Under a DBFM model, rail experts would also need to be retained during the design and build phases to ensure that the interests of the City, as the LRT operator, were incorporated into the project. It is understood by City staff from experts that a team of approximately five people would be required. Again, it is understood by City staff that these costs would not be covered by Metrolinx and would therefore have a net levy impact.
3. **No significant increase in control over LRT:** Control over many of the significant aspects of LRT operations will be controlled through the Project Agreement – such as the abilities to set fares, to set service frequencies, to specify passenger loading levels, to specify branding and signage, to specify levels of service information, and to specify all other public-facing activities.

If the City were to retain operations, it would have more day-to-day control over operations of the LRT, but it will also have increased levels of responsibility and potential liability.

4. **Coordination, Communication and Disputes between Operations and Maintenance Teams may become an issue:** Under a DBFOM model, the operations and maintenance teams are in the same organization, ultimately managed by a single project director accountable to the owner through the Project Agreement. Coordination and communication issues between the operators and maintainers are resolved by Project Co. In other words, one entity assuming responsibility for both operations and maintenance provides singular accountability in the event of non-performance of obligations.

Under a DBFM model, the operators and maintainers need to resolve any coordination or communication issues using the Project Agreement. Accordingly, there are increased risks of error, inefficiency, and disagreements between the operators and maintainers as well as, ultimately, legal disputes to which the City, if it were the operator, would be a party.

5. **Increased Likelihood of Legal Claims for Minor Changes:** As discussed above, since the exact roles and responsibilities of the operators and maintainers need to be specified in a DBFM delivery model, it is difficult to make minor changes to operations without risking a breach of contract claim. As a result, the City's Transit Division may be locked into an inefficient mode of delivery that does not coordinate with bus operations. In contrast, the Project Agreement for a DBFOM provides mechanisms for flexibility in many areas. Under a DBFOM model, the operations and maintenance teams are in the Project Co, such that minor changes to the day-to-day operations can be made without risk of contract breach.
6. **Collective Bargaining Rights are Materially Maintained:** Under a DBFOM model, there would be no practical labour implications, because the City is not an employer in this relationship. Still, LRT operators could, and likely would choose to organize and be represented by a union, under existing labour laws. Under a DBFM model where the City operated the LRT through its Transit Division, it is foreseeable that future LRT operators and other LRT staff would become a part of the City's existing transit union, the Amalgamated Transit Union, Local 107.
7. **Assuming Operations without an existing rail system in operation in Hamilton would be unusual (if not unprecedented):** In speaking with Metrolinx and consultants, staff have not been able to identify any transit agencies that have deliberately set up a new rail operating team in-house so that they can procure a Light Rail project by way of a DBFM. Transit agencies without a rail operations team use a DBFOM model. The additional staff, costs, risk retention, organizational coordination and communication interfaces, as well as all the extra effort involved, practically means that a DBFM model is only chosen by organizations that already have a rail operations team. If the City's Transit Division were to assume operation of the LRT, it would not only need to recruit drivers, but also supervisors, trainers, operations experts, safety experts, dispatching / control staff with LRT expertise.

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8. **DBFOM provides an opportunity to incentivize good service by Project Co's Operations Team:** A Project Agreement with a DBFOM model would customarily contain financial incentives for good operations. It is also possible to include additional disincentives under a DBFOM model to maintain consistently good operations, such as retaining the ability to replace Project Co as an operator after a period of time. This mechanism is used by the Region of Waterloo, and could be incorporated into the Project Agreement for Hamilton.
9. **Potential to increase the Overall Project Cost:** Due to uncertainty regarding risks and potential inefficiencies noted above, bidding consortia will be challenged to accurately price aspects of a DBFM, and will add bid contingencies. This could push total project costs up, when the costs of third party operations are included with the DBFM costs. In a DBFOM format, bidding teams retain management of all operation and maintenance risks which eliminates coordination and communication challenges, and consequently, the bid premiums associated with such risks, which ultimately lower overall project costs.

Historically, the City has entered into a number of agreements for operations. The upcoming biosolids wastewater project is being procured by way of a DBFOM. As another example, the City contracted out the operations of its HECFI entertainment facilities to Spectra and Carmen's Group.

Staff reviewed the delivery models for other LRT Projects as part of its analysis. Like Hamilton, the Region of Waterloo has an existing bus system, but does not have an existing rail system, and, as such, opted for a DBFOM model in the delivery of their LRT. The Hurontario LRT project is also being delivered by DBFOM as there is no existing rail operation in Mississauga or Brampton. In contrast, the City of Toronto, because it has an existing rail and subway operator, the Toronto Transit Commission, opted for the DBFM model for their new LRT projects including the Eglinton and Finch projects.

Notably, the Region of Waterloo's project agreement contains a clause that allows the Region to take over operations of its LRT after ten years. If it opts to remain with the current operator, the right to take over operations re-occurs every five years. Hamilton could take a similar approach to the Region of Waterloo and push to include such terms into the Project Agreement between Metrolinx and Project Co as well as the Operations and Maintenance Agreement between the City of Hamilton and Metrolinx.

In preparing this report, staff consulted with a number of City of Hamilton staff, including the Transit Division, as well as Metrolinx, CH2M, and the LRT Offices in the Region of Waterloo and the City of Toronto.

APPENDICES AND SCHEDULES ATTACHED

Appendix “A” – DBFOM and DBFM Comparison Chart

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