



STAFF REPORT INFORMATION ONLY

Dufferin Street Bridges Rehabilitation – Proposed Cost Sharing Arrangement

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| Date: | September 21, 2011 |
| To: | Public Works and Infrastructure Committee |
| From: | General Manager, Transportation Services |
| Wards: | Ward 14: Parkdale – High Park Ward 19: Trinity-Spadina |
| Reference Number: | P:\2011\Cluster B\TRA\TIM\PW11007tim |

SUMMARY

The Public Works and Infrastructure Committee, at its meeting on May 26, 2011, in considering the staff report titled "Dufferin Street Bridges Rehabilitation – Class Environmental Assessment Study" (PW4.2) requested the General Manager, Transportation Services, to report back on the cost sharing negotiations between the City of Toronto and other agencies relating to the Dufferin Street Bridges Rehabilitation.

The Environmental Assessment Study (ESR) for the replacement of the Dufferin Street bridges over the Metrolinx Lakeshore West rail corridor and the Gardiner Expressway, which was undertaken by the City in consultation with Metrolinx and the Toronto Transit Commission (TTC), was approved by City Council at its meeting on June 14 and 15, 2011. Accordingly, the ESR was filed with the Ministry of Environment for the 30-day review period and no objections were filed. As a result, the Class EA is approved and we can proceed with the rehabilitation. Staff of the three affected agencies have met and have established general principles regarding the responsibility for funding all of the various components of the Dufferin Street Bridge Rehabilitation project which has been estimated to cost approximately \$17 million in total. The principles build upon a combination of precedent, legal requirements, and pronency.

This report, which is submitted in response to the request from the Public Works and Infrastructure Committee, presents the principles to be considered in a draft agreement. The draft agreement will need to be finalized and formally developed by the respective legal counsel of the three involved parties.

Financial Impact

The receipt of this report, which is for information only, will have no financial impact beyond what has already been approved in the Transportation Services 2011 capital budget and 10-year capital plan.

Any future City financial responsibilities will be allocated from Transportation Services future capital budget and capital plans from the Bridge Rehabilitation Program.

DECISION HISTORY

The Public Works and Infrastructure Committee, at its meeting on May 26, 2011 meeting, recommended that City Council grant authority to the (Acting) General Manager, Transportation Services, to issue a Notice of Completion and to file the Environmental Study Report for the Dufferin Street Bridges Class Environmental Assessment Study in the public record for 30 days in accordance with the requirements of the Municipal Class Environmental Assessment. City Council, at its meeting on June 14 and 15, 2011, adopted this recommendation.

The PWI Committee, in considering this report, also requested that the (Acting) General Manager, Transportation Services, report back to PWIC on the cost sharing negotiations between the City of Toronto and other agencies relating to the Dufferin Bridges Bridge Rehabilitation.

ISSUE BACKGROUND

The recommended plan for the replacement of the Dufferin Bridges over the Metrolinx Lakeshore West rail corridor and the Gardiner Expressway, as illustrated in Attachment 1, involves the removal and reconstruction of both bridges. The new bridges will be longer, wider, and provide increased rail clearance, in order to accommodate current and planned needs for freight train, passenger train, auto, TTC, bicycle, and pedestrian movement. The principles governing the responsibility for sharing the replacement cost and subsequent maintenance of this work between the City, Metrolinx, and the Toronto Transit Commission (TTC) need to be defined and agreed to by all parties.

The century-old rail bridge is severely deteriorated and requires immediate replacement. The Gardiner Expressway structure is newer and requires only rehabilitation at this time. It will, however, ultimately need to be replaced as part of the TTC's Waterfront West LRT plan. For reasons of simplicity, efficiency, consistency, impact mitigation, and cost-effectiveness, the EA study recommended that both bridges be replaced at the same time.

The TTC has, however, indicated that the Waterfront West LRT plan is unfunded and that it is prepared to contribute funding only to the rail bridge work at this time.

Given the immediate need to proceed with the rail bridge replacement, it is urgent that a cost-sharing agreement be finalized and that the scope of the immediate near-term project be defined. Staff of the City, Metrolinx, and TTC have met twice and corresponded frequently in an effort to establish cost-sharing principles for the various components of this project.

COMMENTS

Rail Crossing Funding Agreements

Board Order #10169 of The Board of Railway Commissioners for Canada, dated December 8, 1909, is the original agreement governing the sharing of cost and responsibility for various grade separations along the Grand Trunk Railway in Toronto, including the Dufferin Street crossing of what is now the Metrolinx Lakeshore West line. The agreement at that time essentially stated that the City of Toronto would contribute one-third of the cost of constructing the grade separation and that Grand Trunk will pay the remainder. Thus the City and the railway company established a shared responsibility for the grade separation.

Current practice is governed by The Canadian Transportation Agency (CTA), the successor to the Board of Railway Commissioners. The CTA has published "Guidelines on Apportionment of Costs of Grade Separations" in which the costs for the reconstruction of an existing grade separation "where both parties have responsibility" were reviewed. As a result of this review, the costs, which supersede the cost-sharing contained in the previous Board Order, are normally apportioned as follows:

- i) On projects due primarily to road development: 85 % road authority / 15 % railway company
- ii) On projects where both road and railway development have contributed largely to the need for the project: 50 % road authority / 50 % railway company
- iii) On projects due primarily to railway development: 15 % road authority / 85 % railway company.

GO Transit (Metrolinx) has already completed some grade separations, funding for which has been based on these cost-sharing formulas.

The CTA guidelines apply only to rail crossings and, in this case, would not apply to the Gardiner Expressway bridge except for modifications that are required to the south approach to the rail structure. The CTA guidelines apply only to replacement, rather than expansion, components. It is not reasonable to allocate costs to the railway company for a substantially enlarged road structure (e.g. widening a crossing from two lanes to four lanes). Similarly, the CTA guidelines state that "the costs of construction and maintenance of additional facilities in excess of the costs of the basic grade separation are normally to be paid by the party requesting the additional facilities." This provision would apply to things like enhanced architectural treatments, decorative lighting, streetscaping, medians, bicycle lanes, etc.

Scope and Cost Allocation

The Dufferin bridges replacement involves several components rather than a single "project". Based on the respective responsibilities and the agreements in place for such work, the following table summarizes the proposed allocation of funding responsibilities:

| Component | | Rationale | Responsibility | | |
|-----------|--|--|---|-----------|-----------------------|
| | | | City | Metrolinx | TTC |
| 1 | Basic replacement of the existing rail bridge (17 m wide x 20.1 m span), including associated utility ducts and lighting but not water main replacement | Structural deterioration | 85 % | 15 % | - |
| 2 | Increase the vertical clearance of the rail bridge including associated cost of grading, retaining walls, and reconstruction of north and south approaches (assuming Gardiner bridge remains in situ) | To reflect current design standards and legal requirements | 85 % | 15 % | - |
| 3 | Increase the span of the rail bridge by 12.3 m including incremental cost for grading and retaining walls on north and south approaches due to the increased road grade stemming from the greater structural depth to cross the longer span. | To accommodate Metrolinx expansion plans | - | 100 % | - |
| 4 | Increase the width of the (longer span) rail bridge by 8 m | To accommodate TTC's expansion plans | - | - | 100 % |
| 5 | Replace existing water main (strapped under both bridges) | Bridge replacement requires water main replacement | 100 % | - | - |
| 6 | Any enhancements to the rail crossing beyond City standard structural requirements | Improvements to the public realm | 100 % | - | - |
| 7 | Replace the adjacent Gardiner Expressway bridge | To accommodate TTC's expansion plans (allowing the future Waterfront West LRT profile to work with the higher rail bridge profile) | Pro-rated value of avoided rehab / replacement cost | - | 100 % less City share |
| 8 | Increase the width of the Gardiner Expressway bridge by 8 m | To accommodate TTC's expansion plans (LRT link with Dufferin St.) | - | - | 100 % |
| 9 | Relocation of the Dufferin Arch | To accommodate the changes to the Gardiner Expressway bridge | - | - | 100 % |
| 10 | Alteration to the south road approaches | To match the new Gardiner bridge profile | - | - | 100 % |
| 11 | Any enhancements to the Gardiner crossing beyond City standard structural requirements | Improvements to the public realm | 100 % | - | - |

Noting that components 3 and 4 overlap (the portion of the new rail bridge that is both longer and wider than at present), allocation for that portion between Metrolinx and TTC remains to be agreed on. Pending an agreement, a 50/50 split may be proposed. In either case, that portion of the work will not be a City responsibility.

The above allocation has been agreed upon in principle by the affected parties at the staff level.

Cost Sharing Implications of Potential Two-Stage Implementation

It is the project engineers' view that the replacement of the rail crossing structure need not trigger the replacement of the Gardiner Expressway crossing. The existing Gardiner Expressway structure could remain in situ and accommodate the asphalt padding needed to match the grade of the adjacent new railway bridge. Other staging or deferral options may also be available to accommodate uncertain LRT timing.

However, given that the TTC's approved plans for the Waterfront West LRT involve extending streetcar tracks over both structures in the future, it is viewed as cost-effective and functionally sensible to reconstruct the Gardiner Expressway bridge at the same time as the rail crossing. This would take advantage of contract efficiencies, avoid future traffic disruption (Dufferin Street would need to be closed for one construction season), and provide TTC with a platform that would allow near-term implementation of its LRT plan. The investment would also replace a fifty-year-old bridge and eliminate the need for the City to budget for its rehabilitation or replacement within the foreseeable future.

It is a concern, though, that the Gardiner bridge replacement cost amounts to almost half the cost of the whole Dufferin Bridges project, and there is neither funding allocated to the work by TTC nor is the implementation of the Waterfront West LRT line currently a high priority within the TTC capital program. TTC is willing to contribute funds to the widening of the rail bridge only at this point, and wishes to defer the expense of the Gardiner bridge replacement until such time as it can be funded through the Waterfront West project budget.

In any case, the above cost-sharing principles will apply whether the project is built at one time or in several stages.

CONCLUSION

Although there are some details to be resolved and agreements still to be finalized, the railway bridge requires immediate replacement. With the approval of the Environmental Assessment, we are in position to proceed with the detailed design and bridge replacement.

CONTACT

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SIGNATURE

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ATTACHMENT

Attachment 1 – Key Plan

Attachment 1
Key Plan

