Appendix - Meeting Book Board of Directors Meeting March 26, 2020

Appendix

Appendix A

Presentation - Capital Approval (Lake Shore Bridge Alternative Case Phase 1 Pre-Construction Works)  Page 3
D. Kusturin
Port Lands Flood Protection and Enabling Infrastructure

Lake Shore Blvd East – Bridge and Public Realm Phase 1- Pre Construction works Request for Capital Approval

Board of Directors
March 26, 2020
Objectives

• Briefing on Lake Shore Blvd East – Bridge and Public Realm Project (the “Project”).

• To provide an update on the current status of the Lake Shore Blvd East – Bridge and Public Realm Project.

• To obtain the Board of Directors approval to proceed with the Lake Shore Blvd East – Bridge and Public Realm Project Phase 1 – Pre Construction Works. Approval to be granted subject to Delivery Agreement between City of Toronto and Waterfront Toronto.

• To also obtain Board approval to add the Project to the Rolling Five Year Strategic Plan.
Background

• This Project is not included in the Board approved Rolling Five Year Strategic Plan

• At the Finance, Audit and Risk Management Committee February 26, 2020 meeting, the Project was approved for recommendation to the Board of Directors for approval. The Committee approved adding the Project to the Rolling Five Year Strategic Plan
Background – Existing Configuration
**Background**

**Port Lands Flood Protection**

**Goal:**
- Provide flood protection

**Requirements:**
- Don River widening and deepening
- Sediment and debris removal
- Relocation of primary dredging operations (to north Lakeshore Bridge)
- Lengthening of Lakeshore Bridge over Don River
- Construction of flow control weirs/systems
- Complete by December 2023

**Gardiner East EA**

**Goals:**
- Improve connectivity to City’s waterfront
- Support Don Mouth Naturalization and Port Lands Flood Protection Project
- Balance modes of transportation in the corridor

**Requirements:**
- Realignment and reconstruction of Gardiner Expressway east of Jarvis
- Removal of Gardiner ramps from Cherry Street to Logan
- Construction of a realigned Gardiner East and Lakeshore Blvd East from Cherry St. to Don Roadway
- Widening of Lakeshore Bridge over Don River allows for replacement of pedestrian bridge removed by Sediment and Debris Management Area
- Public Realm Improvements and storm water management plan along Lakeshore Blvd
Background

Lake Shore Bridge Required Modifications

- PLFP lengthens Lakeshore Bridge to the West for flood water conveyance

- Gardiner East EA (Hybrid 3) widens Lakeshore Bridge to better manage traffic flow, improve public realm, and add a pedestrian and cycling connection
Background

Lakeshore Bridge Base Case

PLFP Project Scope
• Extension of the Lakeshore Bridge with Gardiner Ramps in-place
• Underpinning of the Gardiner Ramp piers

Gardiner Hybrid 3 Project Scope

City of Toronto Scope
• Widening of the Lakeshore Bridge, including replacement of pedestrian / bike lanes, upon eventual removal of the Gardiner Piers.
• Public Realm Improvement from East of the Lakeshore Bridge to Carlaw.

Lake Shore Blvd East – Bridge and Public Realm Project – Proposed

Combined Scope under PLFP Project
• Extension of Lakeshore Bridge with Gardiner Ramps not in-Place
• Widening of the Lakeshore Bridge, including replacement of pedestrian / bike lanes
• Demolition of Gardiner Ramps from West of the Bridge to Logan
• Reconstruction of the Existing two bays of Lakeshore Bridge
• Public Realm Improvement from East of Lakeshore Bridge to Carlaw.
## Background

<table>
<thead>
<tr>
<th>Risk Description</th>
<th>Potential Impact</th>
<th>Mitigation Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gardiner Pile and Pile Cap Rehab</td>
<td>May require extensive / costly repair</td>
<td>Initiate investigation as soon as possible</td>
</tr>
<tr>
<td>Gardiner Settlement</td>
<td>Settlement of Gardiner during river bed excavation</td>
<td>Implement a comprehensive monitoring plan that includes remedial measures when excessive settlements are observed</td>
</tr>
<tr>
<td>Difficulty in constructing in a confined space.</td>
<td>Damage to the existing Gardiner Ramp structure. Increased construction duration and cost and decreased efficiency.</td>
<td>Restrict equipment permitted for construction. Maintain specified clearances from existing structure. Use specialized launching techniques for construction of superstructure.</td>
</tr>
<tr>
<td>Variance to Gardiner Bent Clearance may be required.</td>
<td>Delay flood protection if approval of variance takes longer than expected.</td>
<td>Work with the City to obtain the variance as soon as possible and discuss temporary signage implementation. Consider bridge jacking as an alternative construction option.</td>
</tr>
</tbody>
</table>
Background

Lakeshore Bridge Gardiner EA - Widen the 4 bays to Accommodate Public Realm elements

Utility Corridor for relocating/extending existing utilities

Lakeshore Bridge Gardiner EA - Rebuild existing eastern 2 bays

Gardiner EA Scope
PLFP Scope
Background

Demolition of Gardiner Ramps over Lake Shore Bridge

Demolition of Gardiner Ramps West of Lake Shore Bridge

Demolition of Gardiner Ramps East of Lake Shore Bridge

Roadwork - Raise grade of Lakeshore Blvd west of Lakeshore Bridge

Roadwork - Reconstruct Lakeshore Blvd east of Lakeshore bridge to Carlaw
Background

The Project is split in two phases:

Phase 1 – Pre Construction Works (August’19 to December’20)

➢ Scope
  • 100% Design
  • 100% Traffic Modelling
  • 100% Traffic Mitigation design
  • Risk Identification and Quantification
  • Subtrade Procurement (EllisDon remains Construction Manager)
  • City Council Approvals
  • Secure approvals to commence construction

Phase 2 – Construction Works (January 2021 – March 2024)
Status

- Phase 1 Delivery Agreement between Waterfront Toronto and the City of Toronto is being finalized and is anticipated to be executed April 2020
- Waterfront Toronto is preparing to obtain key approvals that impact design and construction including:
  - Design Review Panel Approval
  - Department of Fisheries and Oceans - Aquatic Habitat Compensation
  - Transport Canada - Navigation Protection Act Approval
- Key Consultants include the PLFP Project Team, including:
  - Bridge Design and Engineering (Entuitive)
  - Risk Management (HDR)
  - Cost Estimating (Altus)
  - Construction Manager (EllisDon)
  - Traffic Modelling, Mitigation and Analysis Consultant (Wood)
  - Geo-Environmental Investigation
  - Survey Works
Capital Approval

Capital Approval is required in order to complete the Lake Shore Blvd East – Bridge and Public Realm Project Phase 1 - Pre Construction Works

- Waterfront Toronto’s policies and procedures provide for Capital Approvals to be obtained:
  1. After design has reached 30% completion in accordance with standard industry practice
  2. When planned investments exceed $5 Million
- Capital Approval is required as Phase 1 of the project is estimated to be $16 Million as illustrated on the following slide
## Capital Budget & Sources of Funding

<table>
<thead>
<tr>
<th>Budget Allocation</th>
<th>Anticipated Project Cost for Phase 1 ($ Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hard Construction Costs</td>
<td>$ 0</td>
</tr>
<tr>
<td>Soft Costs (design, consulting, project management and approvals)</td>
<td>$ 14.97</td>
</tr>
<tr>
<td>Contingency (including risk and escalation)</td>
<td>$ 0.75</td>
</tr>
<tr>
<td>Non-recoverable Harmonized Sales Tax</td>
<td>$ 0.28</td>
</tr>
<tr>
<td><strong>Total Estimated Capital Cost</strong></td>
<td><strong>$ 16</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source</th>
<th>Funding ($ Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Toronto Delivery Agreement</td>
<td>$ 16</td>
</tr>
<tr>
<td><strong>Total Sources of Funds</strong></td>
<td><strong>$ 16</strong></td>
</tr>
</tbody>
</table>
## Project Risks – Pre Construction works

<table>
<thead>
<tr>
<th>Risk Description</th>
<th>Potential Impact</th>
<th>Mitigation Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulatory Approvals for Traffic Mitigation</td>
<td>Project delays</td>
<td>Process to be formulated with City for the expedited approvals.</td>
</tr>
<tr>
<td>Gardiner EA Amendment</td>
<td>Project delays and additional costs</td>
<td>Team is coordinating with City to determine the need to an amendment to the Gardiner EA.</td>
</tr>
</tbody>
</table>
Project Risk Tolerance

• This Corporation’s Risk Appetite Statement establishes that its tolerance for risk is “moderate”

• This project is consistent with the Corporation’s level of risk tolerance because it alleviates risk in the PLFP project scope.

• The PLFP Base Case includes extension of the Lakeshore Bridge with Gardiner Ramps in place. Technical and safety concerns arise when making changes to existing live expressway ramps.

• This project is an improvement over the Base Case because extension of the Lakeshore Bridge is accomplished with Gardiner Ramps not in place.
Resolution

ON MOTION duly made, seconded, and carried, be it RESOLVED that the Board of Directors approves:

• the Capital expenditure of $16M to complete the Lake Shore Alternative Case Phase 1 – Pre-Construction Works (the “Project”), subject to execution of a funding agreement with the City of and

• the project being added to a Corporation’s Rolling Five-Year Strategic Plan (2020/21 – 2024/25).