



## REPORT FOR ACTION

## Contract Award for the F.G. Gardiner Expressway Rehabilitation Project: Section 1 – Jarvis Street to Cherry Street, Request for Tenders 1-2018, Contract No. 18ECS-TI-01GE and Amendments to Purchase Orders for Owner Controlled Insurance and External Legal Services

**Date:** June 4, 2018  
**To:** Public Works and Infrastructure Committee  
**From:** Chief Engineer and Executive Director, Engineering and Construction Services  
 Chief Purchasing Officer  
 Acting Executive Director, Corporate Finance  
**Wards:** Ward 28 (Toronto Centre-Rosedale) and Ward 30 (Toronto-Danforth)

### SUMMARY

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The purpose of this report is to: (a) advise of the results of Tender Call 1-2018 issued for Contract No. 18ECS-TI-01GE for the rehabilitation of the F.G. Gardiner Expressway (Expressway) between Jarvis Street and Cherry Street, and to request the authority to award this contract to Aecon Construction and Materials Limited in the amount of \$280,840,287 which represents the "A" bid price including HST. An additional \$60,000,000 plus HST will be available to the Chief Engineer and Executive Director, Engineering and Construction Services for the Project as may be required; (b) request authority to amend Purchase Order No. 6041404 with Marsh Canada Limited, for the procurement, maintenance and payment of insurance premiums associated with an Owner Controlled Insurance Program (OCIP) for Contract No. 18ECS-TI-01GE, for rehabilitation of the F. G. Gardiner Expressway Section 1 – Jarvis Street to Cherry Street, by an additional amount of \$1,680,057 net of all taxes (\$1,814,462 including PST); and, (c) request authority to amend Purchase Order No. 6045739 with Blake, Cassels and Graydon LLP, by \$1,000,000 in order to provide ongoing external expert legal services required to successfully execute and administer Contract 18ECS-TI-01GE, and in respect of the F.G Gardiner Expressway Rehabilitation Project: Sections 2 and 3.

Contract No. 18ECS-TI-01GE is the first contract for the rehabilitation of the Expressway using the implementation approach approved by City Council in December 2016. There is an urgent need to award this contract because the "elevated" section of the Expressway between Jarvis Street to Cherry Street is at the end of its service life and is an immediate first priority for rehabilitation.

The scope of work for Contract No. 18ECS-TI-01GE involves replacing the 1.1 kilometres of concrete deck and girders of the Expressway between Jarvis Street and Cherry Street, replacing the westbound off-ramp at Sherbourne Street and the eastbound on-ramp at Jarvis Street, rehabilitating the westbound off-ramp leading to Yonge, Bay and York Streets, and installing new street lighting along the Expressway and ramps. Construction is planned to commence in the Fall of 2018 and be completed by the end of 2020.

Amending Purchase Order No. 6041404 with Marsh Canada Limited, the City's Insurance Broker, allows the City to institute an Owner Controlled Insurance Program for Contract No. 18ECS-TI-01GE. This provides the City with direct control over the terms and conditions of insurance coverage, including developing and imposing the most appropriate and comprehensive clauses needed to effectively and prudently manage and minimize the risks associated with the project.

Amending Purchase Order No. 6045739 with Blake, Cassels and Graydon LLP allows the City to continue to rely on expert external legal advice and litigation support with the execution and administration, including claims, of Contract 18ECS-TI-01GE and the tender process, including preparation of tender documents and agreements, and execution and administration, including claims, of the required agreements in respect of the upcoming F.G Gardiner Expressway Rehabilitation Project: Sections 2 and 3.

## **RECOMMENDATIONS**

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The Chief Engineer and Executive Director, Engineering and Construction Services, the Chief Purchasing Officer, and the Acting Executive Director, Corporate Finance, recommend that:

1. The Public Works and Infrastructure Committee, in accordance with Section 195-8.4A of Toronto Municipal Code Chapter 195 (Purchasing By-Law), grant authority to award Contract 18ECS-TI-01GE, Tender Call 1-2018, for the construction of the F.G. Gardiner Expressway Rehabilitation Project: Section 1 – Jarvis Street to Cherry Street to Aecon Construction and Materials Limited in the amount of \$308,531,227 net of all applicable taxes and charges (\$313,961,377 net of HST recoveries) having submitted the lowest compliant bid and meeting the specifications in conformance with the Tender requirements. The award amount includes a contingency allowance of \$60,000,000.

2. The Public Works and Infrastructure Committee, in accordance with Section 71-11.1.C of the City of Toronto Municipal Code Chapter 71 (Financial Control By-Law), grant authority to amend Purchase Order No. 6041404 with Marsh Canada Limited by an additional amount of \$1,680,057 net of all applicable taxes and charges (\$1,814,462 including PST), and authorize the procurement of an Owner Controlled Insurance Program specific to Contract No. 18ECS-TI-01GE for the rehabilitation of the F.G. Gardiner Expressway between Jarvis Street and Cherry Street.

3. The Public Works and Infrastructure Committee, in accordance with Section 71-11.1.C of the City of Toronto Municipal Code Chapter 71 (Financial Control By-Law), grant authority to amend Purchase Order No. 6045739 with Blake, Cassels and Graydon LLP, by an amount of \$1,000,000, net of all applicable taxes and charges (\$1,017,600 net of HST recoveries), revising the current value from \$500,000 to \$1,500,000, net of all applicable taxes, to allow for the continued provision of legal services as required to provide ongoing advice and litigation support on the execution and administration, including claims, of Contract 18ECS-TI-01GE and the tender process, including preparation of tender documents and agreements, and execution and administration, including claims, of the required agreements in respect of the planned F.G Gardiner Expressway Rehabilitation Project: Sections 2 and 3.

## FINANCIAL IMPACT

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The total value of the construction contract award for Contract 18ECS-TI-01GE, Tender Call 1-2018, for the F.G Gardiner Expressway Rehabilitation Project: Section 1 - Jarvis Street to Cherry Street, including a contingency amount of \$60,000,000, is \$308,531,227 net of all applicable taxes and charges, \$348,640,287 including HST (\$313,961,377 net of HST recoveries).

Funding is available within the 2018-2027 Approved Capital Budget and Plan for Transportation Services in the F. G. Gardiner project (CTP122-08), and the projected cash flow is summarized in Table 1 (all values are net of HST recoveries):

Table 1: Projected Cash Flow for the Gardiner Expressway Rehabilitation Project Section 1 Jarvis Street to Cherry Street

WBS Element	2018	2019	2020	Total
CTP122-08	40,000,000	136,980,689	136,980,688	313,961,377

Note: Cash flow values include contingency allowance and are net of HST recoveries

Amendment to Purchase Order No. 6041404 with Marsh Canada Limited, by an additional amount of \$1,680,057 net of all applicable taxes and charges (\$1,814,462 including PST).

Funding is available within the 2018-2027 Approved Capital Budget and Plan for Transportation Services in the F. G. Gardiner project (CTP122-08), and the projected cash flow is summarized in Table 2 (all values include PST):

Table 2: Projected Cash Flow for the Owner Controlled Insurance Program (OCIP)

<b>WBS Element</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>Total</b>
CTP122-08	\$386,688	\$713,887	\$713,887	\$1,814,462

Note: Cash flow values include PST

Amendment to Purchase Order No. 6045739 with Blake, Cassels and Graydon LLP, by an additional amount of \$1,000,000, net of all applicable taxes and charges, \$1,130,000 including HST (\$1,017,600 net of HST recoveries)).

Funding is available within the 2018-2027 Approved Capital Budget and Plan for Transportation Services in the F. G. Gardiner project (CTP122-08), and the projected cash flow is summarized in Table 3 (all values include HST):

Table 3: Projected Cash Flow for External Legal Services (Blake, Cassels and Graydon LLP)

<b>WBS Element</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>Total</b>
CTP122-08	\$500,000	\$300,000	\$217,600	\$1,017,600

Note: Cash flow values are net of HST recoveries

The Interim Chief Financial Officer has reviewed this report and agrees with the financial impact information.

## **DECISION HISTORY**

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### **Strategic Rehabilitation Plan for the F.G. Gardiner Expressway**

At its meeting on December 13, 14 and 15, 2016, in consideration of the report on the New Implementation Approach for the F.G. Gardiner Expressway Revised Strategic Rehabilitation Plan, City Council authorized the Executive Director, Engineering and Construction Services, to proceed with the new approach for the implementation of the Revised Strategic Rehabilitation Plan for the F.G. Gardiner Expressway; and directed the General Manager, Transportation Services, to include the revised cash flows associated with the new approach for the implementation of the Revised Strategic Rehabilitation Plan for the F.G. Gardiner Expressway within the Transportation Services 2017-2026 Capital Budget. The report presented the proposed phasing for the rehabilitation for the Gardiner Expressway based on the current structural condition of the Expressway and incorporating proven techniques for mitigating the anticipated

traffic congestion associated with this scale of construction. The Council decision can be found at:

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2016.EX20.14>

At its meeting on March 28 and 29, 2017 City Council authorized the Executive Director, Engineering and Construction Services to negotiate and enter into a non-competitive agreement with MMM Group for the detailed engineering design and construction liaison for the Deck Replacement of the F.G. Gardiner Expressway from Jarvis Street to Cherry Street. The Council decision can be found at:

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2017.PW19.2>

### **Application of Cost plus Time Tendering**

At its meeting of July 7, 8, and 9, 2015, City Council authorized the Executive Director, Engineering and Construction Services and the Director, Purchasing and Material Management Division, to pilot the application of a cost plus time tender process, for construction projects within the municipal right of way, where traffic disruption is expected to be significant. The Council decision can be found at:

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2015.PW6.2>

### **Award to Marsh Canada Limited for Insurance Broker Services**

At its meeting of December 14, 2017, Bid Award Panel granted authority to award the contract for Insurance Broker Services for the City of Toronto to Marsh Canada Limited, being the highest scoring Proponent meeting the requirements of Request for Proposal (RFP) No. 9105-17-7180. The services provided by the City's Broker include the procurement and maintenance of the City's annual corporate insurance policies, consulting on construction and surety matters, placement of non-routine insurance policies and insurance procurement for Division-specific purposes, such as the Gardiner Expressway Rehabilitation Project: Section 1 – Jarvis Street to Cherry Street. The scope of the Insurance Broker Services allows City Divisions to acquire insurance that is in addition to the City's usual suite of annual corporate insurance policies. Requests for project specific insurance coverage are reviewed by the City's Insurance and Risk Management staff in consultation with the City's Insurance Broker on a case by case basis, and when additional coverage is warranted, the funding for the insurance premiums associated with the additional coverage are the responsibility of the City Division requiring the coverage. The Bid Award Panel decision can be found at:

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2017.BA55.1>

Purchase Order No. 6041404 was issued to Marsh Canada Limited, based on the 2015-2016 Insurance Program Renewal (insurance premiums) for the period from June 1, 2015 to May 31, 2016. City Council on May 5, 6 and 7, 2015 adopted on consent GM3.23, the March 18, 2015 report from the Deputy City Manager and Chief Financial Officer on the 2015-2018 Insurance Program Renewal. The report recommended that City Council delegate authority to the Deputy City Manager and Chief Financial Officer to renew the City's program of property and casualty insurance on an annual basis, throughout the duration of the current City Council term (June 1, 2016, June 1, 2017

and June 1, 2018) provided that the terms, conditions, limits and deductibles are, in the opinion of the Deputy City Manager and Chief Financial Officer, substantially the same as outlined in the report (March 18, 2015). The resulting Purchase Order No. 6041404 was created following City Council authorization to pay insurance program renewal premiums, and is the purchasing document to be used for payment of all other separately authorized insurance premiums procured by the City. The Government Management Committee decision can be found at:

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2015.GM3.23>.

## COMMENTS

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### Background

The City of Toronto owns and operates the F.G. Gardiner Expressway, a major arterial roadway that runs parallel to the Lake Ontario shoreline in the downtown core. The Expressway, which is shown in Figure 1, is 18 kilometres long, comprising an “at grade” section that is 11 kilometres long and an “elevated” section that is 7 kilometres long.

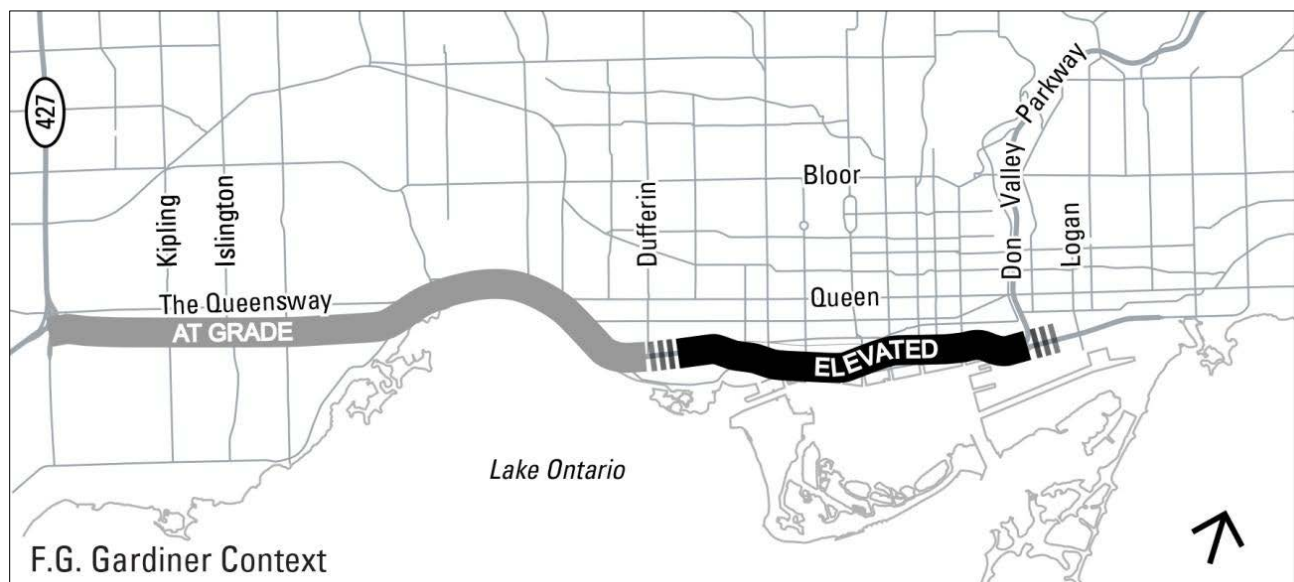


Figure 1. Map showing the F.G. Gardiner Expressway.

The Expressway was constructed over an 11-year period from 1955 to 1966, and has been in service for over 60 years. The effects of weathering, salt, and increasing traffic loads have had an impact, and the concrete deck for the elevated section of the Expressway is approaching the end of its original design life. Details about the Expressway are presented in Table 4.

Table 4. Features of the "At Grade" and "Elevated" Sections of the F.G. Gardiner Expressway.

Feature	At Grade Section	Elevated Section
Length and Location	11 kilometres long, extending from Highway 427 to about 300 metres east of Dufferin Street	7 kilometres long, from just east of Dufferin Street to Logan Avenue
Structures	32 structures (e.g., bridges and culverts)	335 bridge spans
Driving Lanes	6 to 10 driving lanes west of the Humber River 6 driving lanes east of Humber River	6 to 8 driving lanes and 17 ramps
Total Surface Area of Paved Traffic Lanes	Approximately 370,000 square metres	Approximately 300,000 square metres
Posted Speed Limit	100 km/h west of the Humber River 90 km/h east of the Humber River	90 km/h

The "elevated" section of the Expressway has 3 main components, shown in the typical cross-section in Figure 2:

- The "deck", which is the road surface and is composed of a layer of asphalt and waterproofing on top of reinforced concrete;
- "Girders", which support the deck; and,
- A series of 334 steel reinforced concrete "bents", which consist of a steel reinforced concrete pier cap that sits on top of steel reinforced concrete columns.

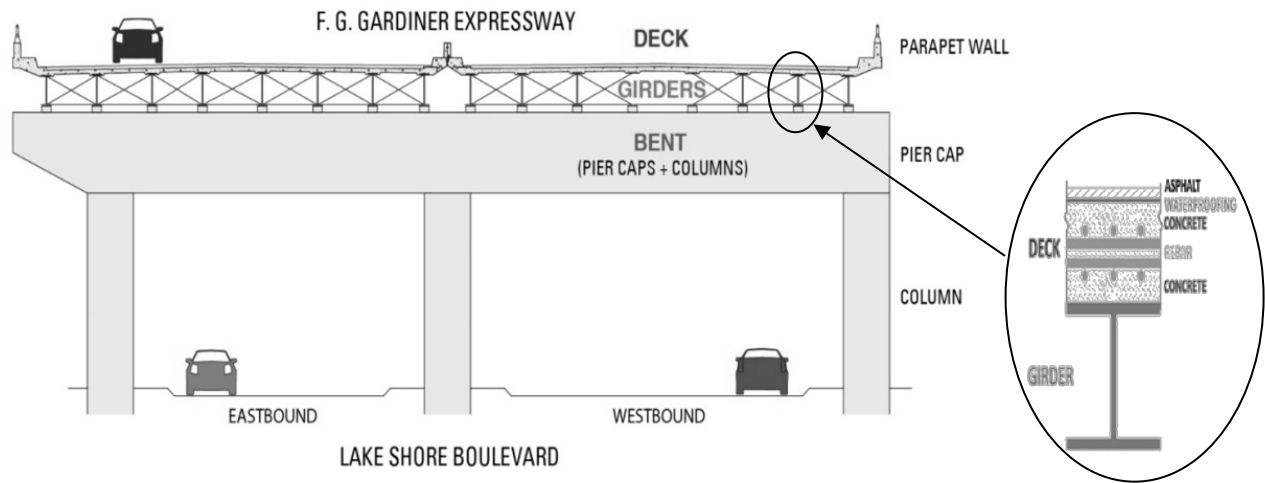


Figure 2. Typical cross-section of the "elevated" section of the F.G. Gardiner Expressway showing deck, girders, and bents supported by columns and pier caps, and providing an enlarged cross-section of the deck composition showing the asphalt, waterproofing and rebar on top of the concrete base.

Drawing on detailed investigations and available condition assessment data for both the "at-grade" and "elevated" sections, a Strategic Rehabilitation Plan for the F.G. Gardiner Expressway was developed. The implementation approach for the Plan was adopted by Council in December 2016 and the work is being phased based on a prioritization of the rehabilitation needs of the Expressway and with a view to minimizing traffic and transit disruption.

Figure 3 is a schematic diagram showing the planned timing of construction works along the length of the Expressway and was originally presented in the December 2016 report on the implementation approach (refer to Council decision 2016.EX20.14).



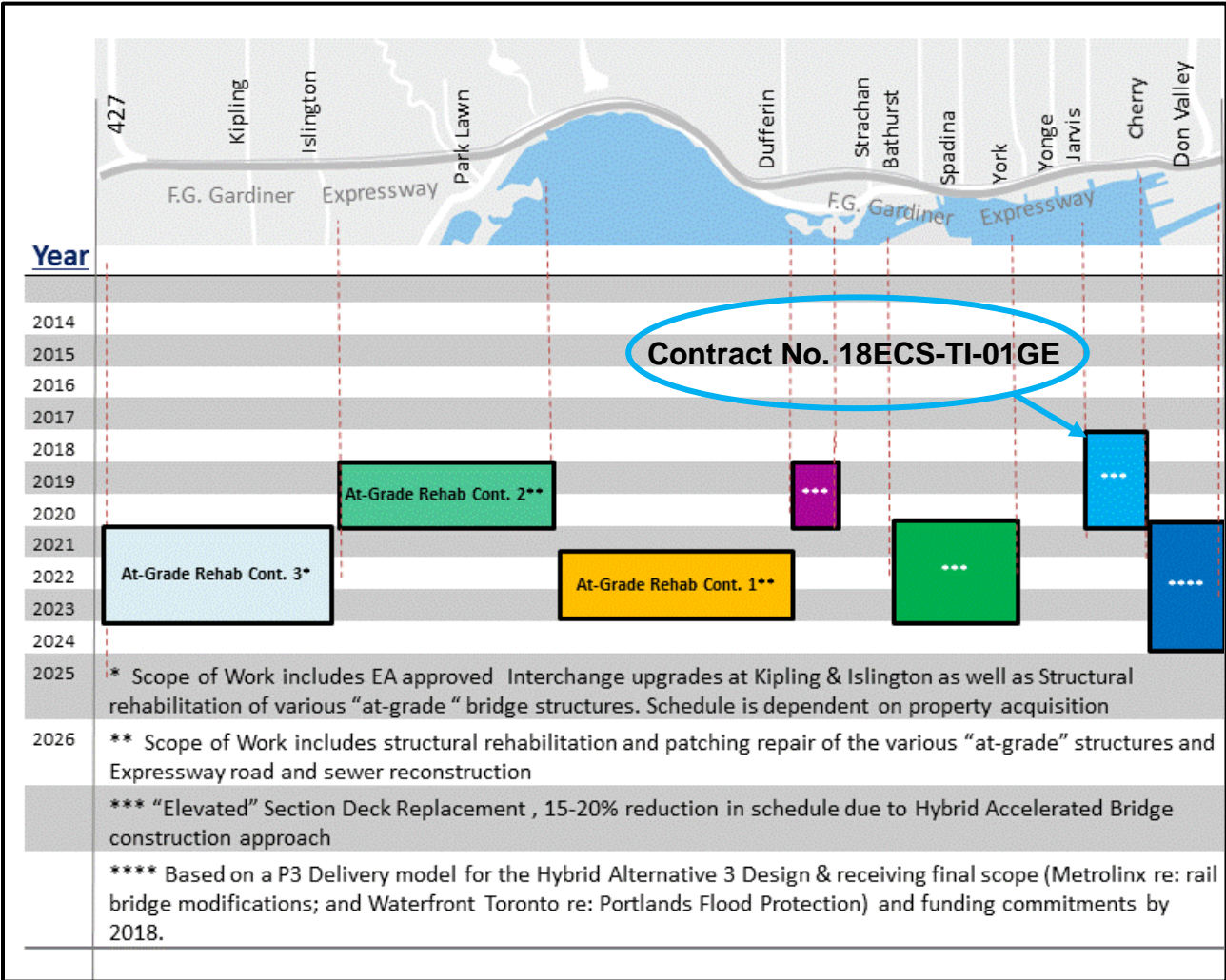


Figure 3. Implementation Schedule for the F.G. Gardiner Expressway Revised Strategic Rehabilitation Plan (2018-2024), showing the location and timing of construction works along the Expressway and highlighting Contract No. 18ECS-TI-01GE.

As shown in Figure 3, the F.G. Gardiner Expressway Rehabilitation Project: Section 1 – Jarvis Street to Cherry Street, Contract No. 18ECS-TI-01GE, is the first contract of the multi-phase Gardiner Strategic Rehabilitation Plan. Subsequent contracts will be initiated to address the remaining rehabilitation needs of the Expressway. In addition, a Public Realm Phasing and Implementation Plan will be prepared for the Gardiner and Lake Shore Boulevard East Environmental Assessment study area (i.e. Jarvis Street to Logan Avenue), consistent with Council direction and Ontario Ministry of the Environment and Climate Change approval conditions. The plan will be developed by Waterfront Toronto, working with City Divisions, and in consultation with local stakeholders. The proposed public realm improvements will reflect City best practices with respect to road reconstruction.

The Gardiner and Lake Shore Boulevard East EA study area will undergo significant growth and change during the next ten or more years, presenting a challenge in the implementation of the public realm improvements. A phased implementation is therefore proposed, with components of the plan delivered over time through a number of initiatives, including: the Gardiner Strategic Rehabilitation Plan; other City infrastructure projects; other public agency infrastructure projects (e.g. led by Metrolinx and Waterfront Toronto); and private land development projects. The implementation of these components will require extensive coordination.

### **Scope of Work for Contract No. 18ECS-TI-01GE**

The implementation approach for the Strategic Rehabilitation Plan identified the rehabilitation of the "elevated" section of the Expressway between Jarvis Street and Cherry Street as the immediate first priority because this section is at the end of its service life.

Contract No. 18ECS-TI-01GE addresses the urgent rehabilitation needs of this section of the Expressway and involves:

- Replacing the entire 1.1 kilometre concrete deck and steel girders of the Expressway between Jarvis Street and Cherry Street;
- Replacing the entire westbound off-ramp at Sherbourne Street and the entire eastbound on-ramp at Jarvis Street;
- Rehabilitating the westbound off-ramp leading to Yonge, Bay and York Streets which will include a new concrete overlay, replacement of the parapet walls, expansion joints, signs, and lighting;
- Installing new street lighting along the Expressway and ramps; and,
- Upgrading existing Road Emergency Services Communication Unit (RESCU) plant (intelligent traffic management system, including traffic cameras and sensors) along the entire rehabilitated section of the Gardiner Expressway.

As shown in Figure 3, Contract No. 18ECS-TI-01GE will take approximately 2.5 years to complete, assuming construction starts in Q3 of 2018. This is an aggressive schedule for the scope of work covered by Contract No. 18ECS-TI-01GE and is necessary to (1) ensure that future rehabilitation works can proceed as planned so that the Expressway remains in a safe and operable condition at all times; and, (2) minimize traffic and transit (e.g., GO Bus) impacts that will result from traffic lane closures on both the Expressway and on Lake Shore Boulevard, directly underneath the Expressway, during construction.

The aggressive construction schedule is based on the use of an Accelerated Bridge Construction (ABC) approach for the replacement of the concrete deck and ramps. This approach involves the construction of prefabricated sections, containing new girders and deck segments, constructed in advance at a remote facility and then transported to the site. The existing deck would be cut into sections and each deck section, together with the supporting girders, would be removed, and the new prefabricated deck and girder segments would be hoisted into place. This approach reduces the time needed for construction by approximately 40% in comparison to the conventional, build-in-place approach to bridge deck rehabilitation. An added benefit of the ABC approach is that it

can also result in a superior final product because the replacement components are fabricated in a quality and climate controlled facility.

Bridge replacements or rehabilitation using this type of ABC approach have become more widely employed in recent years in order to mitigate traffic delays during construction. Recent examples in Canada include:

- Hwy 417 Bridge (Ottawa);
- Jacques Cartier Bridge (Quebec); and,
- Mercier Bridge (Quebec).

## **Procurement Strategy**

City Staff recognize the need to prudently manage this contract to ensure its completion within budget and planned timelines, and to mitigate to the extent possible the construction-related traffic and transit disruption. To help the City achieve these goals, Blake, Cassels and Graydon LLP ("Blakes") was retained to provide external legal advice and assistance. Specifically, Blakes assisted with the identification of terms and conditions to be included in the tender specifications and project agreement for Contract No. 18ECS-TI-01GE (and in future similar construction contracts), provided advice on the approach to the procurement of the contractor, and assisted with the development of the procurement documents and related project agreements.

A two stage procurement strategy was adopted, involving:

- (1) a qualification process, using a formal Request for Qualifications; and,
- (2) an "A+B" tender evaluation strategy, whereby the tender cost submitted by the qualified contractors that were eligible to bid on the contract included two components, namely, "A", the capital construction costs for the project; and, "B" the dollar value for the total number of days that the contractor would close lanes on the Gardiner Expressway and/or Lake Shore Boulevard in order to complete the contract (i.e. Lane Closure Value).

Details about the two stages are presented below.

### ***(1) Request for Qualifications***

Given the scale and complexity of the Gardiner Expressway Rehabilitation Project: Section 1, a contractor qualification process was undertaken to ensure that the contractors invited to bid on the tender had the necessary experience, expertise and equipment to successfully deliver the project within the prescribed timelines. The qualification process was developed in consultation with Purchasing and Materials Management Division (PMMD), Legal Services, Transportation Services, and the external legal services provider, Blakes.

The qualification criteria that all prospective bidders were required to demonstrate included:

- The technical expertise appropriate to the scope and scale of work, and evaluated on the basis of previous successful delivery of \$100 million in total for similar projects within the past five (5) years;
- Extensive bridge removal and experience using the Accelerated Bridge Construction (ABC) approach to bridge construction;
- Experience in hoisting and transporting large sections of bridges;
- Experience in the construction of pre-fabricated bridge units;
- Extensive experience in road and highway/expressway construction, including traffic management;
- A proven track record for Health and Safety and Quality Control Management; and
- The financial capacity to complete a project of this size where:
  - Payments are made on the basis of quarterly milestones (i.e. they will have to self-finance on a quarterly basis), rather than the conventional monthly invoicing;
  - Additional financial holdbacks are imposed, and;
  - Liquid security is required in addition to the conventional 50/50 performance and material bonds.

## ***(2) "A+B" (Cost plus Lane Closure Value) Tendering Strategy***

Minimizing the duration of road occupancy for City-led construction projects on roads with high volumes of vehicular traffic, cyclists, pedestrians and commercial operations helps to minimize traffic congestion and travel delays. Achieving timely completion of construction is a key goal for all construction projects, and is especially true for roads carrying high traffic volumes, such as the Expressway, where the impact of lane closures is greater.

To mitigate delays in the delivery of Contract No. 18ECS-TI-01GE, and to promote expeditious project completion, an "A+B" or "Cost plus Lane Closure Value" tendering strategy was used, whereby the tender cost submitted by the bidders included two components:

- "A" - the capital construction costs (Cost) for the project; and,
- "B" - the dollar value for the total number of days when lanes on the Gardiner Expressway and/or Lake Shore Boulevard would be closed to support the construction (Lane Closure Value). The Tender document for Contract No. 18ECS-TI-01GE defined daily costs for traffic lanes on the Gardiner Expressway, ramps and Lake Shore Boulevard, respectively, which would be closed to traffic during the period of construction.

Using this strategy, the bids are evaluated and the contract awarded to the bidder with the lowest total "A+B" value. However, the contract award value is "A", the capital construction cost only; and the value of "B" is used for ranking purposes only and is not included in the contract award value. Therefore, using this approach, it is possible that the successful bid may not represent the lowest capital cost.

"Cost plus Lane Closure Value" bidding encourages contractors to plan how the works will be completed and estimate the number of lanes and days of lane occupancy needed to complete the works as part of the tender submission. Contractors may consider opportunities to apply additional resources, such as extended hours, additional crews and equipment, to reduce the lane closure requirements, which would be reflected in their bid prices for "A" and "B".

Through extensive traffic modelling, staff were able to determine the anticipated traffic queues and travel time delays during construction. This information, along with an assumed average hourly wage of \$26.82 per hour per vehicle within the Greater Toronto Area (obtained from Statistics Canada) was used to develop comprehensive Lane Closure Cost estimates for the Gardiner Expressway, ramps, and Lake Shore Boulevard.

Typical Lane Closure Values were assessed as follows:

- Cost per 24 hour weekday on the Gardiner Expressway
  - \$55,000 for one (1) lane
  - \$325,000 for four (4) lanes
- Cost for weekday off peak (10 am to 3 pm or 10 pm to 5 am) on Lake Shore Boulevard
  - \$10,000 for one (1) lane

In addition to the use of Cost plus Lane Closure Value, the tender document prescribed minimum traffic management requirements, specifically that:

- Construction would take place in two (2) stages, beginning with the entire north side of the Expressway first, followed by the entire south side;
- Two (2) lanes must be maintained in each direction on the Gardiner Expressway during weekdays periods from 5:00 am to 10:00 pm; and,
- Only one (1) ramp can be closed at a time.

The allowable parameters for lane closures took into consideration the planned annual events within the downtown core with provisions that would permit the City to preclude additional lane closures for new events (beyond the traditional annual events) over the course of the construction contract.

## **Contract No. 18ECS-TI-01GE Terms and Conditions**

Several facets of Contract No. 18ECS-TI-01GE are not typical of traditional City municipal infrastructure construction contracts:

(1) A specific Project Agreement that incorporates new terms and conditions has been developed to best manage the contract risks and promote and encourage efforts by the successful contractor to complete the contract as expeditiously as possible while at the same time adhering to the project specifications and minimizing traffic-related disruptions.

(2) Owner Controlled Insurance Program (OCIP) has been identified as being a more appropriate approach to protect the City against the possibility of adverse financial impact due to accidental loss and damage as a result of Contract No. 18ECS-TI-01GE, given the large scale, complexity, contract value, specialized equipment and requirements, and duration of the contract.

(3) This contract was selected for the further application of the City's Social Procurement Policy.

### ***(1) New Terms and Conditions***

The following terms and conditions have been developed specifically for, and are included in, a Project Agreement for Contract No. 18ECS-TI-01GE:

#### *Unique Construction Payment Framework based on Quarterly Milestones*

For Contract No. 18ECS-TI-01GE, a payment framework will be used whereby the City will make milestone payments on a quarterly basis according to prescribed milestones, proposed by the contractor and agreed to by the City and the contractor at the time the contract is signed. The payments will only be made once the contractor has completed all the necessary works. If the works are not completed by the milestone date, the payment will be deferred until such time as the agreed works are completed. This ensures that the contractor is motivated to complete the works and adhere to the schedule, as payments are no longer a "pay as you go" system but are linked to completed milestone performance.

#### *Increased Holdback Provisions*

Contract No. 18ECS-TI-01GE contains a "City Holdback" provision whereby the City will withhold a percentage of the payment from each Milestone Payment until Final Acceptance. This is in addition to the Statutory Holdback of 10% required through the Construction Lien Act. From the start of the contract to the mid-point, the City will hold back an additional 10% (in cash or Letter of Credit); after the mid-point, the City will reduce the holdback to 5% until final acceptance.

#### *More Robust Liquidated Damages*

Contract No. 18ECS-TI-01GE stipulates a contract completion date that is 912 days (two and a half years) from the time the contractor is notified of the contract award. If the contractor fails to complete the contract within the specified timeframe, liquidated damages valued at \$100,000 will be applied for each day beyond the scheduled completion date. The value of the liquidated damages was assessed by the City as being representative of all the costs that the City would incur if the contract completion was delayed, and should further motivate the contractor to adhere to the project schedule.

### *Liquidity Added to Bonding Requirements*

Typical City of Toronto construction projects require contractors to provide the City with "50/50" bonds: (1) a Performance Bond (50% of the contract value) to ensure work is performed as prescribed and to protect City in the event the contractor defaults on the contract; and, (2) a Labour and Materials Payment Bond (50% of the contract value) to ensure payment to first tier subcontractors.

For this contract, a "Liquid Component" has been added to the bonding requirements. This permits the City to immediately access funds to rectify a construction-related impact or deficiency without the typical delays that are currently experienced from sureties.

The successful contractor will be required to provide the City with a Liquid Component in the form of a letter of credit from a financial institution or a liquid bond from a surety. The Liquid Component will begin at 10% of the contract value, which will be reduced to 5% at the mid-point of the contract, and 2.5% at substantial completion of the contract.

### *Cost Adjustments for Additional Lane Closures*

Contract No. 18ECS-TI-01GE assigns prescribed daily costs to traffic lanes on the Gardiner Expressway, ramps and Lake Shore Boulevard, respectively, which are taken out of use during the period of construction. At the time the contract is signed, the contractor will have to provide a breakdown of planned monthly lane closures (and their associated value), over the duration of the contract. The City will be instituting a robust monitoring and tracking protocol to ensure that the actual lane closures are reconciled against the original monthly estimate. If the contractor exceeds their estimated value of lane closures by more than 10% on a monthly basis, the City will require a remediation plan that shows how the contractor intends to achieve the milestones for lane closures previously estimated. If the contractor fails to achieve the approved remediation plan targets, the City will holdback the difference between the actual value of lane closures and the original forecast, from the quarterly milestone payment.

### *Dispute Resolution Procedure*

The contract includes provisions for a more robust dispute resolution procedure to resolve disputes during construction. A Project Steering Committee will be formed soon after contract execution, comprising of senior representation from both the City and the contractor. A "Referee" will be appointed jointly by the City and the contractor to address any disputes that the Project Steering Committee has been unable to resolve. The Referee will be an individual with specialized knowledge or expertise with respect to the dispute and will maintain a position of independence and impartiality. The use of a Referee is a common industry practice for construction of large scale and complex projects. The overall intent in using a Referee is that the parties resolve disputes quickly and thereby reduce

the risk of impacts on the project schedule, precluding the need for litigation. The contract contemplates a cost of \$500,000 in fees for the Referee, with the cost to be shared equally by the City and Contractor.

### *Innovation and Value Engineering*

The contract provides for the contractor, subsequent to signing the contract, to propose an innovation in either means or methods of construction which could accelerate the construction schedule and/or save the City significant costs. The City will have the right to accept or refuse the proposal. Where the City accepts the proposal, the City and the Contractor will share the cost savings 50/50.

## **(2) Owner Controlled Insurance Program (OCIP)**

Consideration of the type of insurance coverage is a critical component in any construction contract in order to protect against the adverse financial impact of accidental loss and damage. Typically, the City requires that its Contractors and professional services providers purchase their own insurance policies, in accordance with the requirements specified by the City in the tender documents, and include the cost for the insurance as part of their bid price. This is referred to as a Contractor Controlled Insurance Program (CCIP).

For the F.G. Gardiner Expressway Rehabilitation Project: Section 1 – Jarvis Street to Cherry Street contract, staff from the City's Corporate Finance, Insurance and Risk Management, have determined that purchasing an Owner Controlled Insurance Program (OCIP) is more appropriate, given the scale, complexity, contract value, specialized equipment and requirements, and duration of the contract.

The determination was made in consideration of the numerous benefits of an OCIP in comparison to the traditional construction project insurance approach when undertaking a large-scale construction project such as the F.G. Gardiner Expressway Rehabilitation Project.

Under this arrangement, the City, as the Owner, will purchase a master insurance program to protect against the possibility of adverse financial impact due to accidental loss and damage as a result of Contract No. 18ECS-TI-01GE, for rehabilitation of the F. G. Gardiner Expressway Section 1 – Jarvis Street to Cherry Street. The OCIP will provide coverage for all aspects associated with the bridge rehabilitation work, including coverage for work undertaken by contractors, subcontractors, engineers, architects and consultants working on design and construction of the project.

The benefits of an OCIP include ensuring the quality and financial stability of the selected insurer; that appropriate policies are obtained that provide full ("gap-less") coverage; and establishing a claims procedure which is satisfactory to the City. As with their own insurance, contractors would be responsible for paying insurance policy deductible amounts on all claims incurred.



#### *Quality of coverage*

- An OCIP provides the Owner (City) with direct control over the terms and conditions of coverage, allowing the Owner to develop and impose the most appropriate and comprehensive clauses according to the specific contract.
- It eliminates gaps in coverage between what a contractor and their subcontractors might have under their own insurance policies (i.e., under the CCIP approach) and the insurance coverage needs of the City.
- All participants of the project are equally insured, thus apportioning project risk more equitably.

#### *Financial stability*

- An OCIP allows the City to control the selection of insurance companies to meet specific financial strength ratings.

#### *Contractor accountability*

- Contractors remain responsible for paying insurance policy deductible amounts on all claims incurred.

#### *Claims procedure*

- The claims settlement process responds directly to the City rather than having the insurance companies report to the contractor. This allows the City direct communication with the insurers and greater control over the project timeline by reducing the likelihood of disruption due to insurance claims, and facilitates more effective and timely customer service in the event that any constituents are affected by accidental damage resulting from the F.G Gardiner Expressway Rehabilitation Section 1 - Jarvis Street to Cherry Street contract.
- An OCIP would reduce or eliminate cross claims and coverage disputes between different insurance companies providing coverage on the same project because all parties would be covered under the same blanket insurance policies.

The following insurance policies would be included within the OCIP for the F.G. Gardiner Expressway Rehabilitation Section 1 - Jarvis Street to Cherry Street contract:

- All Risk Builders' Risk: which will protect the City, contractor, subcontractors and consultants engaged in the Project against physical loss or project property damage while the project is under construction due to an insured peril such as fire, flood, windstorm, earthquake and theft of materials.
- Commercial General Liability (Wrap-Up): this will protect the City, contractor, subcontractors and consultants engaged in the Project against liability arising from bodily injury and property damage to third parties during construction, including bodily injury and / or property damage that occurs after the Project is completed and up to the time when the bridge becomes operational.
- Single Project Contractors Pollution Liability: this will protect the City, contractor, subcontractors and consultants engaged in the Project against legal liability arising from either gradual or sudden and accidental pollution events that arise from the Project and that cause damage or injury to third parties.

- **Project Specific Professional Liability:** this will provide coverage to all consultants endorsed on the policy from negligent acts, errors or omissions in the performance of their professional services on the Project.

Specific insurance policy terms and conditions for the OCIP, as well as a listing of the insurance companies approached for quotations and resultant responses, are on file at both Insurance and Risk Management and Engineering and Construction Services.

### ***(3) Social Procurement Development Plan***

The F.G. Gardiner Expressway Rehabilitation Project: Section 1 – Jarvis Street to Cherry Street was selected as a project for the further development of the Social Procurement Policy as directed by City Council in May 2013.

The Contract contains provisions that require the Contractor to provide a draft Workforce Development Plan to the City's Social Procurement Team that:

- Includes a designated contractor liaison for the term of the Contract that will work with the City's Social Procurement Team;
- Provides a mechanism for monitoring, tracking and reporting on the progress and outcomes of the Workforce Development Plan; and,
- Includes Workforce Development Strategies for customized recruitment, training and work-based skills development and use of social enterprise within their supply chain.

The provisions of the Contract's Workforce Development Plan includes the requirement that the Contractor will:

- Source at least three (3) positions of qualified candidates through existing City-endorsed Workforce Development programs Training and Work-based Learning Skills Development;
- Provide at least one (1) paid internship or work-based learning opportunity per year through City-endorsed programs;
- Provide for opportunities for Registered Apprenticeships during Construction;
- Devote a minimum of 10% of all construction trade and construction craft worker hours needed for the Project to registered apprentices participating in "Construction Connections";
- Make use of Social Enterprise in the Supply Chain;
- Provide one (1) subcontracting opportunity per year to a Social Enterprise for required components of the Works or services; and,
- Participate in a minimum of one (1) City-endorsed employment-related activity per year that serves those with low incomes and/or from an Equity-seeking Community in Toronto.

## Procurement Process and Outcomes

As described above, the procurement process for Contract No. 18ECS-TI-01GE involved a pre-qualification followed by a formal Request for Tender.

### ***Fairness Monitor***

The City retained the services of a Fairness Monitor to ensure that the entire procurement process provided equal opportunities to all parties both during the qualification process and throughout the tender process as well. The report of the Fairness Monitor on the Request for Qualifications and the Request for Tender process is contained in Attachment 1.

### ***Request for Qualifications (RFQ) No. 9117-17-5076***

Request for Qualifications (RFQ) No. 9117-17-5076 was issued by the City's PMMD on November 3, 2017, and closed on December 11, 2017. A total of four (4) submissions were received. All were evaluated and three (3) submissions were deemed to have met the pre-qualification requirements, as follows:

- 1) Aecon Construction and Materials Limited
- 2) Kiewit Dufferin Joint Venture
- 3) Grascan Construction Ltd / Torbridge Construction Ltd.

### ***Request for Tender (RFT) 1-2018***

Request for Tender (RFT) 1-2018 for the F.G. Gardiner Expressway Rehabilitation Section 1 - Jarvis Street to Cherry Street contract was issued by the PMMD to the three pre-qualified contractors, and was advertised on the City's Website on February 12, 2018. A mandatory site visit was held on February 26, 2018. The tender closed on May 18, 2018.

PMMD, at its Public Opening held on May 18, 2018, opened the following tender submissions inclusive of HST:

<b>Bidder</b>	<b>Bid Price for "A"</b>	<b>Bid Price for "B"</b>	<b>Total Bid Price (A+B)</b>
Aecon Construction and Materials Limited	\$280,840,287	\$80,005,000	\$360,845,287
Kiewit Dufferin Joint Venture	\$328,586,296	\$132,985,000	\$461,571,296
Grascan Construction Ltd / Torbridge Construction Ltd	\$343,645,000	\$220,155,000	\$563,800,000

The Tender documents submitted by the recommended bidder for Tender 1-2018, Contract No. 18ECS-TI-01GP for construction of the Gardiner Rehabilitation Project Section1 were reviewed and evaluated by staff from PMMD and Engineering and Construction Services, and were found to be in conformance with the Tender requirements.

Engineering and Construction Services staff compared the bids to the engineering estimate of \$275,000,000 and found the price of the recommended bidder of \$280,840,287 including all taxes and charges, to be within the range of the pre-tender engineering estimate.

The Fair Wage Office has reported that the recommended Bidder has indicated it has reviewed and understands the Fair Wage Policy and Labour Trades requirements and has agreed to comply fully.

The Tender submission from Aecon Construction and Materials Limited in response to Tender Call 1-2018, Contract No. 18ECS-TI-01GP includes the Project Agreement to complete the works within 912 days from the date of the "Notification of Award". The planned completion date is December 15, 2020

Consistent with City practice, a contingency allowance of \$60,000,000 on the base scope of work is included to cover additional work and/or services under the construction contract to address any unforeseen conditions which may arise during construction, resulting in a total contract price of \$348,640,287 including HST. The contingency will be utilized at the sole discretion of the City.

The City will enter into a Project Agreement with Aecon Construction and Materials Limited in the amount of \$280,840,287 which represents the "A" bid price including HST, with funding from the Transportation Services 2018 Approved Capital Budget and 2019 to 2027 Approved Capital Plan for the part of the contract related to the F.G. Gardiner Expressway Rehabilitation Project: Section1 - Jarvis Street to Cherry Street. An additional \$60,000,000 + HST will be available to the Chief Engineer and Executive Director, Engineering and Construction Services for the Project as may be required.

### **Amendment to Purchase Order No. 6041401 for Marsh Canada Limited for Payment of OCIP Insurance Premium and Broker Commission Fees**

An Owner Controlled Insurance Program (OCIP) is recommended by the City's Corporate Finance, Insurance and Risk Management, as the most advantageous arrangement for the Gardiner Expressway Rehabilitation Section 1 - Jarvis Street to Cherry Street contract.

Purchase Order No. 6041404, was issued to Marsh Canada Limited for Insurance Broker Services for the City of Toronto, following their selection through a competitive Request for Proposal (RFP). The services provided by the City's Broker include the procurement and maintenance of the City's annual corporate insurance policies, as well

as consulting on construction and surety matters, and placement of non-routine insurance policies for Division-specific purposes. Although the terms of the contract with Marsh Canada Limited permits City Divisions to use the City Broker to place insurance policies outside of the City's usual roster of annual corporate insurance policies, it is necessary to seek authorization for the procurement of additional Divisional insurance policies and insurance premium expenditures.

This report recommends the Divisional insurance procurement of an OCIP for the F.G. Gardiner Expressway Rehabilitation Project: Section 1 – Jarvis Street to Cherry Street contract and the subsequent amendment to the existing Purchase Order No. 6041404 with Marsh Canada Limited to process insurance premium and commission fee payments, which are not to exceed standard market commission rates and do not exceed the commission rates submitted by Marsh in response to the City's RFP No. 9105-17-7180 for Insurance Broker Services.

An amendment to Purchase Order No. 6041404 with Marsh Canada Limited, in the amount of \$1,680,057 net of all taxes (\$1,814,462 including PST), is therefore required to allow the City to purchase an Owner Controlled Insurance Program specific to the Project. These funds represent an upset limit for the payment of insurance premiums and commission fees related to the OCIP for the Gardiner Expressway Rehabilitation Project: Section 1 – Jarvis Street to Cherry Street.

It is the opinion of City staff that the costs for the Gardiner Expressway Rehabilitation Section 1 - Jarvis Street to Cherry Street contract OCIP insurance premiums, including commission rates, are fair, reasonable and consistent with the terms and conditions of RFP No. 9105-17-7180 for Insurance Broker Services.

### **Amendment to Purchase Order No. 6045739 for Blake, Cassels and Graydon LLP for Provision of Legal Services**

Authority is also sought to amend Purchase Order No. 6045739 with Blake, Cassels and Graydon LLP, by an increase of \$1,000,000 to the legal retainer in order to encompass the legal services required to provide ongoing advice and litigation support, if necessary, with respect to the execution and administration, including claims, of Contract 18ECS-TI-01GE and the tender process, including preparation of tender documents and agreements, and execution and administration, including claims, of the required agreements in respect of the F.G Gardiner Expressway Rehabilitation Project: Sections 2 and 3.

This report was prepared by staff from Engineering and Construction Services, in consultation with Transportation Services, Legal Services, Insurance and Risk Management, Purchasing and Materials Management, and Corporate Finance.

## **CONTACT**

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## **SIGNATURE**

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Michael D'Andrea, M.E.Sc., P.Eng.  
Chief Engineer and Executive Director, Engineering and Construction Services

Michael Pacholok, JD  
Chief Purchasing Officer

Robert Hatton  
Acting Executive Director, Corporate Finance

## **ATTACHMENT**

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Attachment 1. Fairness Monitor Report

## Attachment 1. Fairness Monitor Report

May 31, 2018

Joanne Kehoe  
Manager, Construction Services  
Purchasing and Materials Management Division  
City Hall, 19th Floor, West Tower  
100 Queen Street West  
Toronto, Ontario M5H 2N2

Dear Ms. Kehoe:

Re: RFQ 9117-17-5076 (Prequalification Stage) & Tender Stage # 1-2018 Gardiner Expressway Rehabilitation Project Section 1- Jarvis to Cherry

HKA was retained to act as Fairness Consultant for the captioned procurement. Our responsibilities included but were not limited to the following:

- Review of the RFQ and RFT to identify inconsistencies and lack of clarity
- Review of the evaluation criteria with respect to clarity and consistency
- Oversight of communications during the RFQ and RFT open period, including addenda
- Ensuring that selection committee members (evaluators) were briefed on best practices with respect to principles and duties of fairness; confidentiality of vendor submissions; conflict of interest; undue influence; scoring procedures; and, the retention of documents.
- Attendance at selection committee consensus evaluation sessions
- Monitoring and reporting of any deviations from the process established in the RFP, conflicts of interest or the exercise of undue influence over the process
- Assessment of the procurement evaluation process

The report is based on our first hand observations of the process used and information provided by the procurement project team. Any other person who wishes to review this report must first obtain the written permission of the City of Toronto. HKA and the individual author of this report bear no liability for opinions that unauthorized persons may infer from this report.

The Gardiner Expressway project was issued in two (2) stages. The first stage was to issue a pre-qualification request to qualify bidders for the second stage tender. The RFQ was issued on November 3, 2017. The RFQ was strictly a technical evaluation and no pricing was required.

The RFQ clearly stated the mandatory requirements, process and the technical requirements as well as the evaluation criteria and points allocation, including minimum scores in several categories. It designated a single point of contact and explained the process for communication during the open period. It stated the closing time and established the following steps in the evaluation process:

1. Review of each proposal by procurement staff to determine whether it met the mandatory process and technical requirements set out in the RFQ.
2. Evaluation of the proposals against scored evaluation criteria set out in the RFQ.

The RFQ closed on December 11, 2017 and Proposals were received from four (4) proponents before the closing time. All proposals received were reviewed for the mandatory requirements stated in the RFQ and all four (4) proposals were declared compliant with the mandatory requirements

As a result, the RFQ evaluation team was asked to review the RFQ technical submissions and grade each proposal in accordance with the evaluation criteria specified. Upon completion of the technical evaluations, the entire evaluation team including representatives from Purchasing and Materials Management and HKA met on December 29, 2017 to conduct a final consensus grading of the RFQ technical submissions. In accordance with the RFQ evaluation criteria, three (3) proponents were successful in reaching the required threshold of 75% in the technical review.

As a result the three (3) qualified proponents were eligible to participate in the next stage of the project. The next stage was the RFT itself. The RFT document was prepared and issued on February 12, 2018.

The City held a pre-bid meeting on February 26 as well as one (1) Commercial Confidential Meeting session on March 20, 2018, and a site visit on March 22. An additional Commercial Confidential Meeting was held on May 1, 2018. The RFT closed on May 18, 2018 with three (3) bids received before the closing time. Since the RFT was solely based on price, there was no need for further evaluation other than the pricing elements. Prices were reviewed by PMMD and reported to the evaluators for their information and final approval.

As fairness monitors, we can attest to the following:

- Care was taken to develop selection criteria that objectively reflected the legitimate needs of the City and to produce an RFQ and RFT that was clear and consistent.



- Communications during the RFQ and RFT open period and after closing were conducted through a single point of contact and in accordance with the RFQ and RFT.
- Selection committee members brought a broad range of knowledge and experience to their work and were qualified to evaluate the proposal.
- The selection committee was briefed on best practices with respect to principles and duties of fairness; confidentiality of vendor submissions; conflict of interest; undue influence; scoring procedures; and, the retention of documents. The City's procurement staff provided an evaluation process workbook to each evaluator to guide their conduct during the evaluation.
- The evaluators performed their work diligently and made appropriate reference to the fairness consultant and PMMD.
- Evaluators viewed the RFQ and RFT documents objectively and adhered to the criteria established in the RFQ and RFT as well as the detailed scoring guide developed for the purpose.
- Discussion during consensus scoring sessions was fulsome and a free exchange of views took place.
- No evaluator or other individual exerted undue influence over the process.
- The procurement and evaluation processes were conducted in accordance with the information published to the proponents in the RFQ and RFT.

Yours truly,

HKA Global  
Paul Cook, CSCMP  
Fairness Consultant