TORONTO

REPORT FOR ACTION

State of Good Repair Design-Build Contract Award for the F.G. Gardiner Expressway Rehabilitation Section 2 – Dufferin Street to Strachan Avenue, Request for Proposals RFP-22ECS-BE-01GE, Contract Number 22ECS-BE-01GE

Date: October 16, 2023
To: General Government Committee
From: Chief Engineer and Executive Director, Engineering and Construction Services and Chief Procurement Officer, Purchasing and Materials Management
Wards: Ward 10 (Spadina-Fort York)

SUMMARY

The purpose of this report is to advise of the results of Request for Proposals RFP-22ECS-BE-01GE, Contract Number 22ECS-BE-01GE for the rehabilitation of the F.G. Gardiner Expressway between Dufferin Street and Strachan Avenue ("Gardiner Section 2") and request the authority to enter into an agreement with Grascan Construction Limited in the amount of $260,250,000 net of all taxes and charges ($264,830,400 net of Harmonized Sales Tax recoveries). An additional $40,000,000 net of all taxes and charges ($40,704,000 net of Harmonized Sales Tax recoveries) will be available to the Chief Engineer and Executive Director, Engineering and Construction Services for the Project as may be required.

The F.G Gardiner Expressway has been in service for over 60 years and with the effects of weathering, salt, and increasing traffic loads, is approaching the end of its original design life. To address this state-of-good-repair challenge, a Strategic Rehabilitation Plan, consisting of six complex projects, was adopted by City Council in December 2016. Section 1 construction work was completed in 2021.

The subject of this report is the selection of the contractor for Section 2, to rehabilitate the elevated section of the Expressway between Dufferin Street and Strachan Avenue. There is an urgent need to award this contract because this section is in poor condition and at the end of its design life.

The scope of work for Gardiner Section 2 involves replacing 700 metres of concrete deck and girders, rehabilitating the associated substructure, and installing new street

lighting. Construction is planned to commence in late 2023 and is anticipated to be completed by mid-2027.

There are a number of complexities to this project as this is both an elevated and very narrow section of the Expressway that is expected to manage a high volume of traffic. This will necessitate a significant amount of work being done from the underneath of the roadway. It also severely limits the construction staging and work zone areas.

There are also significant complexities in relation to the need to tightly align and closely coordinate with Metrolinx Ontario Line construction at Exhibition Station along with plans for the FIFA World Cup 2026™ Soccer Tournament. For example, construction on the deck will pause from May 1 to July 31, 2026, in order to allow three lanes of traffic open in each direction to accommodate tournament traffic. Pausing a project of this magnitude and safely reopening all traffic lanes is a substantial endeavour and it will be critical to reach a certain stage of the project on time to ensure this pause can be provided.

Given the number of complexities associated with this project, several risk mitigation measures have been built in. These include processes such as the use of a Design-Build project delivery method and a two-stage procurement strategy that included consideration of the proponent's traffic and construction management strategies. Risk management is also integrated into the recommended contract, with features such as an indexing regime to manage price fluctuations for certain commodities, the use of a Third-Party Quality Assurance Firm, a full-time, onsite Technical Advisor, as well as a neutral “Referee" to address any disputes that cannot be resolved by the Project Steering Committee.

RECOMMENDATIONS

The Chief Engineer and Executive Director, Engineering and Construction Services, the Chief Procurement Officer, Purchasing and Materials Management, recommend that:

1. The General Government Committee, in accordance with Section 195-8.4A of Toronto Municipal Code Chapter 195 (Purchasing By-Law), grant authority to the Chief Engineer and Executive Director, Engineering and Construction Services to negotiate and enter into an agreement with Grascan Construction Limited, being the highest scoring pre-qualified supplier, to provide Design and Construction Services for construction of the F.G. Gardiner Expressway Rehabilitation Project: Section 2 – Dufferin Street to Strachan Avenue in the amount of $300,250,000 net of all taxes and charges ($305,534,400 net of Harmonized Sales Tax recoveries). The award amount includes a contingency allowance of $40,000,000 net of all taxes and charges ($40,704,000 net of Harmonized Sales Tax recoveries).

FINANCIAL IMPACT

The total value of the award of Contract 22ECS-BE-01GE, Request for Proposal RFP-22ECS-BE-01GE, for the F.G Gardiner Expressway Rehabilitation Project: Section 2 - Dufferin Street to Strachan Avenue, including a contingency amount of $40,000,000, is $300,250,000 net of all taxes and charges ($305,534,400 net of Harmonized Sales Tax recoveries). This Contract is categorized as State of Good Repair and is generally in line with the pre-tender estimate.

Funding is available within the 2023 Approved Capital Budget and 2024-2032 Approved Capital Plan for Transportation Services, as summarized in Table 1 below (net of Harmonized Sales Tax recoveries). Funding estimates for the remaining segments of the Gardiner Rehabilitation project will be updated through future budget processes based on further assessment and analysis on future contract award requirements.

Table 1: Financial Impact Summary

WBS Element	Description	Year	Total (Net of HST Recoveries)
CTP122-08-38	F.G. Gardiner Rehabilitation	2023	$15,518,400
CTP122-08-38	F.G. Gardiner Rehabilitation	2024	$72,504,000
CTP122-08-38	F.G. Gardiner Rehabilitation	2025	$72,504,000
CTP122-08-38	F.G. Gardiner Rehabilitation	2026	$72,504,000
CTP122-08-38	F.G. Gardiner Rehabilitation	2027	$72,504,000
Total (Net of Harmonized Sales Tax Recoveries)			$305,534,400

The contract includes provisions for engagement of an independent Referee to resolve disputes between the City and the Contractor during construction, with costs being split equally. A Cash Allowance of $250,000 for the City's portion of any Referee costs is included in the bid award price.

The Interim Chief Financial Officer and Treasurer has reviewed this report and agrees with the financial implications as identified in the Financial Impact section.

DECISION HISTORY

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 (a) 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; (b) directed the General Manager, Transportation Services, to include the revised cash flows associated with the new approach to the implementation of the Revised Strategic Rehabilitation Plan for the F.G. Gardiner Expressway within the Transportation Services 2017-2026 Capital Budget. The report provided the proposed phasing of the rehabilitation for the Gardiner Expressway based on the current structural condition of the Expressway, incorporated proven techniques for mitigating the anticipated traffic congestion associated with this scale of construction, and provided the necessary additional technical information required to fully assess project risks and opportunities to advance the construction of other projects within the work zone of the eastern section of the Gardiner Expressway as one integrated project. The Council decision can be found at: http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2016.EX20.14

At its meeting on February 2 and 3, 2022, City Council authorized the Chief Engineer and Executive Director, Engineering and Construction Services and the Chief Procurement Officer, Purchasing and Materials Management to apply Proposal Fees and Break Fees to the Design-Build procurements for the Gardiner Expressway Rehabilitation Contract 2 (Dufferin Street to Strachan Avenue) and Contract 3 (Highway 427 to Humber River) based on the conditions set out in Appendix A and Confidential Attachment 1 to the Report. A copy of the City Council Decision Document may be found at:
http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2022.IE27.3

COMMENTS

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 is 18 kilometres long, comprised of an at-grade section that is 11 kilometres long, from Highway 427 to Dufferin Street, and an elevated section that is 7 kilometres long, from Dufferin Street to the Don Valley Parkway.

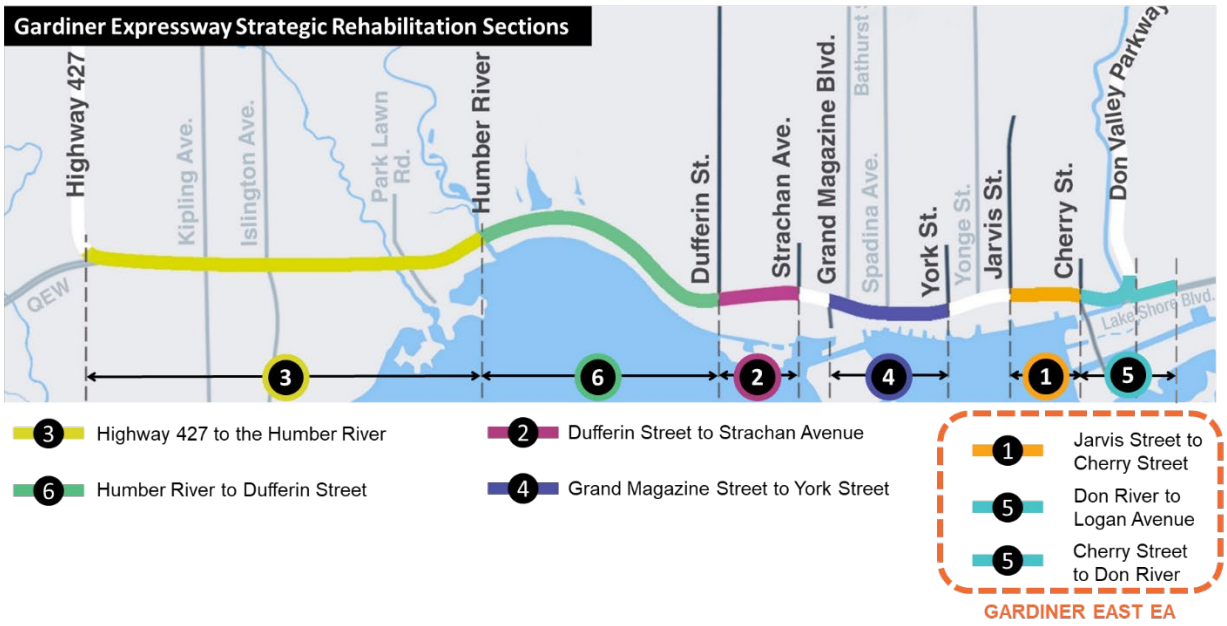
The Expressway was constructed over an 11-year period from 1955 to 1966 and has been in service for more than 60 years. The effects of weathering, salt, and increasing traffic loads have had an impact. The concrete deck, particularly for the elevated section of the Expressway, as well as many other elements are approaching the end of their original design life.

Drawing on detailed investigations and available condition assessment data for both the at-grade and elevated sections of the Expressway, a Strategic Rehabilitation Plan,

consisting of six complex projects, was adopted by City Council in December 2016. The six projects include Section 1 and Section 5, which were the subject of the Gardiner East Environmental Assessment. Section 1 rehabilitation was completed in 2021, while Waterfront Toronto is currently implementing the eastern end of Section 5. Engineering and design for the remaining part of Section 5, including relocating and then rebuilding the link from the Don Valley Parkway to the Gardiner Expressway and realigning Lakeshore Boulevard East commenced in 2019 and is approximately 30% complete. Construction is currently targeted to begin in 2026.

Figure 1 is a schematic diagram showing the six projects which are included in the Strategic Rehabilitation Plan. The contract award sought in this report is for Gardiner Section 2 – Dufferin Street to Strachan Avenue, Contract No. 22ECS-BE-01GE.

Figure 1: Gardiner Expressway Strategic Rehabilitation Plan Sections



Scope of Work for Contract No. 22ECS-BE-01GE

The Strategic Rehabilitation Plan identified the elevated section of the Expressway between Dufferin Street and Strachan Avenue as a high priority because this section is at the end of its service life.

Contract No. 22ECS-BE-01GE addresses the urgent rehabilitation needs of Section 2 of the Expressway and involves:

- Replacing the 700-metre length of concrete deck and all concrete and steel girders;
- Rehabilitating the supporting substructure from the west abutment (approximately 340 metres east of Dufferin Street) to Bent 35 (approximately 280 metres west of Strachan Avenue);
- Installing new street lighting; and
- Building a new Road Emergency Services Communication Unit (RESCU) traffic management system consisting of traffic detection loops in the asphalt roadway,

closed circuit video cameras, non-intrusive traffic sensors and a travel-time estimate system.

Construction of Contract Number 22ECS-BE-01GE is expected to commence in late 2023 and be completed by mid-2027. Construction works have been closely coordinated with Metrolinx Ontario Line construction at Exhibition Station along with plans for the FIFA World Cup 2026™ Soccer Tournament. Construction on the deck will pause from May 1 to July 31, 2026, with three lanes of traffic open in each direction to accommodate tournament traffic.

Procurement Strategy

This project is being procured utilizing a Design-Build project delivery method with the goals of accelerating the start of construction, providing opportunities for innovation by the selected design-builder, and limiting construction-related risks for the City. External legal counsel was obtained from Blake, Cassels and Graydon LLP ("Blakes"), a firm with extensive experience in Design-Build projects, to provide advice and assistance on the approach to the procurement and the development of the procurement documents and related project agreements.

A two-stage procurement strategy was adopted involving: (1) a pre-qualification process using a formal Request for Qualifications; and (2) a Request for Proposals from the pre-qualified proponents which was composed of separate technical and financial submissions.

The City retained the services of a Fairness Monitor to ensure that the entire procurement process provided equal opportunities to all parties. The Fairness Monitor's Report on the Request for Proposal process is contained in Attachment 1.

Request for Qualifications

A pre-qualification process was implemented to verify that the entities who would be invited to submit proposals on Gardiner Section 2 possessed the requisite experience, expertise, and resources to effectively execute the project within the specified timelines. The qualification process was developed collaboratively with key stakeholders, including the Purchasing and Materials Management Division, Legal Services, Transportation Services, and external legal counsel.

The mandatory qualification criteria for proponents included the following:

- Technical expertise appropriate to the scope and scale of the project, as demonstrated by prior successful completion of three (3) comparable large-scale projects;
- Considerable expertise in bridge removal and utilization of the Accelerated Bridge Construction methodology for bridge design and construction;
- Proficiency in hoisting and transporting substantial bridge sections;
- Proficiency in the design and construction of pre-fabricated bridge units;
- Extensive experience in the design and construction of roads, highways, and expressways, including traffic management;

- A proven track record in Health and Safety and Quality Control Management; and
- Financial capacity to undertake a project of this magnitude, including the ability to procure Construction Act performance and labour & material payment bonds for 50% of the contract price.

Request for Qualifications 22ECS-BE-01GE was issued by the Purchasing and Materials Management Division on February 22, 2022. A total of three (3) submissions were received. The submissions were evaluated and two (2) were determined to be compliant with the qualification criteria. On July 26, 2022, the following two teams were identified as Prequalified Proponents under the terms of the Request for Qualifications:

1) Aecon Infrastructure Management Incorporated
2) Grascan Construction Limited

Request for Proposal 22ECS-BE-01GE

The Request for Proposal process consisted of separate technical and financial submissions. Each of the submissions was evaluated and scored by City staff with assistance from subject matter experts (including the City's Owner's Engineer and Technical Advisor for the technical submission, and the City's Financial Consultant for the financial submissions). The technical submission and financial submissions were evaluated by separate teams to ensure the results of either submission component did not bias the evaluation of the other. Evaluations and scoring were completed in accordance with the requirements and methodology established in the Request for Proposal.

The technical submissions were composed of several components as follows:

- General Technical: including project management plan, permits & approvals, environmental approach, access management, and stakeholder relationship and engagement;
- Quality Management: including a general quality management approach, quality process, quality personnel and a resource strategy;
- Design: including a design management plan, structural, roadway/traffic, drainage, street lighting, and Road Emergency Services Communication Unit system design;
- Construction Submissions: including construction management plan, health and safety management plan, traffic and transit management plan, construction staging & sequencing and lane closures and traffic impact strategy; and
- Schedule Submissions: including contractor's project schedule and strategy.

The proponents' financial submissions were evaluated based on the financial information submitted for each on a for pass/fail basis and then scored based on comparative contract prices submitted by each.

The contract prices of each proponent were compared against an Affordability Threshold for the project of $240 Million (excluding tax), based on the engineering estimate for the project. The Affordability Threshold in the Request for Proposal was used in the evaluation process as follows:

- if all proponents' Contract Prices were at or below the Affordability Threshold, the contract would be awarded to the proponent with the highest combined technical and financial score (total score);
- if only one proponent's Contract Price was at or below the Affordability Threshold and the Proposal met technical requirements, that would be the successful proponent;
- if all proponents' financial submissions were above the Affordability Threshold, City staff would then have the option to follow the Affordability and Re-Scoping process set out in the Request for Proposal that would either:
    - remove specific project scope components identified in the Request for Proposals to attempt to obtain one or more contract prices at or below the Affordability Threshold and use the Re-Scoping prices for financial evaluation; or
    - decline to carry out any Project Re-scoping and elect to identify a Negotiations Proponent based on the Proponents' Proposals as submitted at a price exceeding the Affordability Threshold.

Request for Proposals RFP-22ECS-BE-01GE was issued by the Purchasing and Materials Management Division to the two Prequalified Proponents on October 11, 2022. A mandatory site visit was held on October 27, 2022, and the Request for Proposals closed on July 20, 2023.

Several rounds of Commercially Confidential Meetings and Design Presentation Meetings were held with each proponent during the Request for Proposal open period between November 2022 and June 2023, with the Fairness Monitor in attendance. During the Commercially Confidential Meetings proponents raised commercial and contractual issues on the project agreement documents. During the Design Presentation Meetings proponents presented their proposed design approach and raised design issues.

Various amendments to RFP-22ECS-BE-01GE were issued by Purchasing and Materials Management based on the feedback from the Commercially Confidential Meetings and Design Presentation Meetings.

The Proposal submissions from both pre-qualified proponents were reviewed and evaluated by staff from Purchasing and Materials Management and Engineering and Construction Services and were found to be in conformance with the Request for Proposal requirements.

Having met the required minimum score in the technical submissions, the financial submissions for both pre-qualified proponents were reviewed and evaluated. Both proponents received a "pass" following a review of their financial information submission (relating to the financial ability of the proponents to perform the work). The contract prices submitted by both proponents were then reviewed, and both exceeded the Affordability Threshold. The most significant element of work considered for Re-scoping was to defer the pier bent rehabilitation. However, the condition of pier bents and life cycle analysis indicates that the pier bent rehabilitation on this section of Gardiner Expressway will be required within five years of the current contract completion in 2027. The construction cost for this work is anticipated to be greater than the value submitted to descope the work now, due to the advancement of the deterioration, additional

mobilization & demobilization, additional scaffoldings/supports, access platforms and site restoration. Future disruption of the lands adjacent to Exhibition Place and Exhibition Station were also considered as factors in decision making. The City therefore declined to carry out any Project Re-Scoping and is recommending award on the base scope of work.

The contract price of the highest scoring proponent without Re-Scoping is $260,250,000 submitted by Grascan Construction Limited. This is within 10% of the Affordability Threshold of $240,000,000. Staff found this price to be within the acceptable range of the pre-tender engineering estimate. The difference between the Affordability Threshold and the submitted contract price does not feasibly or technically justify the rescoping to remove and defer the pier bent rehabilitation.

Staff selected Grascan Construction Limited as the First Negotiation Proponent based on their Proposal submitted with the highest total score and meeting the requirements of the Request for Proposal (including completing the works by June 30, 2027).

Staff have completed negotiations with the First Negotiations Proponent and subsequently identified Grascan Construction Limited as the Preferred Proponent. This report recommends that Contract 22ECS-BE-01GE be awarded to Grascan Construction Limited.

Consistent with City practice, a contingency allowance of $40,000,000 net of all taxes and charges on the base scope of work is included in the Recommendation for award to cover additional work and/or services under the design-build contract which may be required to address any unforeseen conditions that arise during construction. This results in an internal total Purchase Order value of $300,250,000 plus Harmonized Sales Tax, while the initial contract price will be $260,250,000 plus Harmonized Sales Tax. The contingency will be utilized at the sole discretion of the City.

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

Traffic Impacts and Schedule Adherence

Assessment of the Proposal submissions included evaluation of the planned lane closures and Traffic Impact Strategy for the project. Submissions were awarded a higher number of points if they demonstrated the least possible impact on the ongoing operation of the Gardiner Expressway, in terms of duration and physical disruption to traffic, throughout the duration of construction. The Preferred Proponent included a proposed lane closure strategy that minimized the impact on the Gardiner traffic operations by limiting the closures to one lane in each direction for over most of the construction duration and limiting any additional lane closures.

If the Contractor fails to complete the contract within the specified timeframe, it may incur liquidated damages for each day beyond the scheduled completion date.

Community Engagement and Communications

Some limited community engagement efforts are already underway and will be increased, following the award of the contract and in advance of disruptive work beginning. Engagement efforts will be undertaken leveraging the expertise of the Liberty Village Construction Hub and with resources provided through the Owner's Engineer Technical Advisor Consulting Firm and the successful contract proponent.

The engagement work will actively facilitate inclusive and meaningful two-way communication about the project, ensuring that affected parties have a comprehensive understanding of the project and its impacts, receive construction notifications in a timely manner, are able to share feedback or concerns and receive prompt answers to any questions about the project.

In addition to locally focused engagement efforts, there will be broader communications to ensure the travelling public is aware of the work, the traffic impacts and the imperative for the timely completion of the project.

Contract Price Indexing Regime

The construction industry has seen significant cost fluctuations in commodities, resulting in difficulties in estimating fixed prices in Proposals for materials that will not be ordered until the contract is executed. To address this issue, this contract has included a price indexing regime to manage price escalations and de-escalations for certain commodities. The escalation and de-escalation approach will support the City to mitigate risks associated with these fluctuations and the process will help ensure only legitimate escalations and de-escalations are processed. If the City requires additional funds because of material price index escalations that cannot be managed within the contingency budget, then a Purchase Order Amendment request may be processed to adjust the contract price.

Quality Management

In order to ensure the quality management and quality processes for this project, the City has specified that the successful Design Builder retains the services of an independent Third-Party Quality Assurance Firm to be responsible for Construction Quality Management and the Inspection and Testing Plans. In addition, the City has retained an Owner's Engineer and Technical Advisor Consulting Firm to be the City representative, with full-time presence during construction, to oversee the construction activities, provide compliance and quality auditing services and provide services for the administration of the Design Build contract and site inspections of the work. The City has elected to maintain full oversight during construction, beyond the reduced oversight that is more typical for Design Build Projects. This approach is to ensure the highest standards of quality management for all stages of design and construction.

Dispute Resolution Procedure

The contract includes provisions for a dispute resolution procedure to resolve disputes during construction. A Project Steering Committee will be formed soon after contract execution, comprised 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 is unable to resolve. The Referee will be an individual with specialized knowledge and 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. The costs of the Referee will be shared equally by the City and the Contractor. The City's portion of those potential costs is carried as a Cash Allowance of $250,000.

Social Procurement

The Preferred Proponent has agreed to participate in the City of Toronto's Social Procurement Program. As part of the program, the Preferred Proponent is encouraged to develop an active supplier diversity policy.

The Contractor is required by the Project Agreement to work with City staff to develop and implement a Workforce Development Plan. The detailed requirements of the Workforce Development Plan are contained in Attachment 2.

Under Gardiner Public Realm Plan

The Bentway Conservancy has been working on an Under Gardiner Public Realm Plan in partnership with City Divisions including Transportation Services, Parks Forestry and Recreation, Economic Development and Culture, and City Planning (Urban Design and the Waterfront Secretariat). The draft plan is in its final stages of review and a joint staff report will be brought to the Infrastructure and Environment Committee. The Under Gardiner Public Realm Plan will provide a “roadmap” for renewing public spaces beneath the Gardiner to advance the City’s strategic goals of removing barriers to the waterfront and making new connections. The plan will identify specific areas of opportunity, and improvements that could be made over time once the Gardiner rehabilitation work is complete. The plan will include an implementation strategy, phasing, costing and operational considerations. The plan will be a long-term plan that can be implemented by public or private groups as funding and opportunities become available.

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

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ATTACHMENTS

Attachment 1. Fairness Monitor's Report
Attachment 2. Workforce Development Plan Requirements