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Enbridge Energy, Limited Partnership
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U.S.

April 30, 2019

Mackinac Straits Corridor Authority
C/O Gregory M. Losch - MDOT Director Designee
Innovative Contracting Manager
Van Wagoner Building
425 W. Ottawa Street
P.O. Box 30050
Lansing, MI 48909

Dear Mr. Losch:

Attached please find the April 2019 Line 5 Tunnel Project Monthly Progress Report. In addition to updating the Authority on key activities progressed over the past month and highlighting activities planned for April, the report also includes a DRAFT Procurement and Contracting Execution Plan, as set forth in Article 7, Section 7.5 (a), of the Tunnel Agreement between Enbridge Energy, Limited Partnership and the Mackinac Straits Corridor Authority dated December 19, 2018.

Sincerely,

Amber Pastoor

Amber Pastoor
Project Manager
Line 5 Tunnel

Enclosures (2): April 2019 Progress Update

CC: Brad Shamla - VP US Operations; Lisa Wilson - Associate General Counsel;
Peter Holran - Director State Gov Relations; Dave Lawson – VP Major Projects; Mike Bagale – Project Director

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Line 5 Tunnel Project: Monthly Status Report

STATUS THROUGH: APRIL 30, 2019

MILESTONES & DELIVERABLES	DUE DATE	STATUS
Preliminary Engineering Activities Work Plan	February 4, 2019	Completed
Identify Project Specifications Team	March 1, 2019	Completed
Procurement and Contracting Execution Draft Plan	April 30, 2019	Completed
Procedures for Establishing Escrow Accounts	September 16, 2019	Not started
Geotechnical Data Report	December 31, 2019[1]	Not started
Submit Request for Proposals (Draft) and Complete Preliminary Engineering Activities (as described in the Work Plan)	April 30, 2020[2]	Not started
File Government Approvals and Permits for Tunnel Construction	Within 180 days after Geotechnical Baseline Report	Not started
Commence Construction	No later than 180 days after receiving Government Approvals and Permits	Not started
Tunnel Completion Report	Upon substantial completion of the Tunnel	Not started
Tunnel Operations and Maintenance Plan	Upon substantial completion of the Tunnel	Not started

MAJOR ACCOMPLISHMENTS & ITEMS OF NOTE

- The U.S. Army Corps of Engineers (Corps) issued the final required permit to begin the 2019 geotechnical investigation program.
- As of March 29, Enbridge secured the final parcel of land required for construction activities on the south shore. Given the current tunnel and portal design, all land rights to construct and operate the tunnel have been acquired on the south shore. In the process of securing the final north shore easement; on plan to be completed in the next several months, at which time all land rights will be secured given the current design.
- The project team completed development of a draft procurement and contracting plan that leverages early construction contractor involvement in the design process and optimizes cost certainty, risk manageability and project delivery time.Refer to the attached *Draft Procurement and Contracting Execution Plan* for more details.
- Project leadership met with two tunnel owners and attended an industry-wide tunnel forum, affording the team an opportunity to engage tunnel owners and tunnel design engineering and construction firms in discussions around their

1 This date could be extended if it is determined that more extensive Geotechnical Investigations are needed, as per 7.3 of the Tunnel Agreement.
2 Or 120 days after completion of the Geotechnical Instigations, whichever is later.

experiences and lessons learned related to procurement and contracting strategies, key risks, and best design and construction practices.

PLANNED ACTIVITIES FOR MAY

- Coordination of field readiness activities with the geotechnical contractors is underway in anticipation of beginning the on-shore geotechnical work the third week of May; the near-shore work with the jack-up barge in mid-June; and the deep-water work, utilizing a dynamically positioned vessel, commencing in mid-July.
- Key members of the project team are slated to attend addional industry events in the coming months with the objective of creating opportunities to engage tunnel owners, engineering and construction contractors and key equipment suppliers in face-to-face discussions on key issues and lessons learned related to procurement and contracting approaches; geotechnical challenges; and risks and opportunities associated with the design and construction of tunnels.
- The project team continues to advance the request for proposal (RFP) process for selection of an Owner's Engineer (OE). The range of OE services currently being contemplated by the team includes: oversee/monitor geotechnical investigation activities and review of the geotechnical data report; undertake preliminary tunnel design activities; support the construction permit application process; develop design criteria input for the construction RFP; provide design oversight during the design and build phase of the project.

Line 5 Tunnel Project: Draft Procurement & Contracting Execution Plan

Deliverable #3 - Tunnel Agreement
30 April 2019

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Line 5 Tunnel Project: Draft Procurement and Contracting Execution Plan

Meeting the key milestones identified in the Tunnel Agreement signed between the Mackinac Straits Corridor Authority (Authority) and Enbridge on December 19, 2018 is a top priority for Enbridge. The information contained in this document describes the activities Enbridge has undertaken to meet the key milestone in the Agreement associated with the following deliverables:

> *7.5 Request for Proposals and Contracting Strategy*
>
> *(a) Enbridge shall, by* ***April 30, 2019****, prepare for the Authority's review a Draft Procurement and Contracting Execution Plan, including, without limitation:*
>
> *(i) The applicable Contract execution model(s) to complete design and construction of the Tunnel;*
>
> *(ii) Enbridge Procurement and Quality processes that include a general description of the RFP and bid solicitation process, contractor qualification process, and contractor proposal evaluation and selection criteria; and*
>
> *(iii) Timeline for the execution of each applicable Request for Proposals (RFP) package.*

Determining the Procurement and Contracting Strategy

In order to determine the optimal procurement and contracting strategy for the Line 5 Mackinac Straits Tunnel Project, Enbridge evaluated a number of contract execution models that could be utilized to complete the design and construction of the tunnel. Central to its evaluation of these models was determining which contracting approach would best achieve an optimal blend of schedule expediency, cost certainty and risk manageability. The contract models Enbridge determined merited further analysis in this context were:

- Design-Bid-Build
- Design-Build
- Progressive Design-Build
- Construction Manager-General Contractor

To assess the pros and cons of each of these contracting models and better understand how the different approaches are viewed through the experiential lenses of tunnel design engineering and construction firms, the Enbridge project team performed a number of due diligence activities, including:

- Hosting market sounding sessions with seven tunnel construction companies and five engineering firms with recent tunnel design experience.
- Orchestrating one-on-one meetings with three tunnel owners to discuss lessons learned from their recent contracting and project execution exploits.
- Engaging two subject matter experts with extensive geotechnical, design and construction experience to provide guidance and advice to the project team around contracting strategies and best tunnel design and construction practices.
- Participating in an industry-wide tunnel forum that included two days of discussions with tunnel owners and tunnel design engineering and construction firms on contracting strategies, execution risks and opportunities, and industry best practices.

After weighing the pros and cons of each of the four contracting models, in conjunction with decomposing the intelligence data gained from its due diligence activities, Enbridge concluded the optimal contracting strategy for the Line 5 Tunnel Project is the **Construction Manager-General Contractor (CM-GC)** model. The following section provides an overview of this contract model, along with Enbridge's rationale for selecting this particular approach.

The Construction Manager-General Contractor Model (CM-GC)

The CM-GC is a project delivery approach where the Project Owner (Enbridge in this case) sets prime contracts in place with two separate parties: a Design Engineering firm – the DE – and a Construction firm – the CM-GC (Figure 1). Both engineering and construction services are retained early in the project lifecycle, affording the project team and its designer an opportunity to obtain valuable constructability input and construction risk intelligence from the CM-GC in real time. This collaborative contracting approach, introduced early on in the project lifecycle, provides a number of advantages related to the quality and expediency of design, risk management and overall project delivery time by way of:

- Promoting a fast-tracking of design and construction activities by eliminating time lags associated with sequential sourcing phases that are intrinsic to other contract models.
- Providing an ability to split out early work packages, long lead procurements and site mobilization activities.
- Establishing a single point of accountability for construction work.
- Allowing for design optimization/innovation, value engineering and incorporation of constructability recommendations early in the detailed design process.
- Ensuring the project execution team retains significant control of engineering activities throughout the design evolution.
- Reducing risks associated with permitting uncertainty and allowing more flexibility to mitigate construction impacts caused by permitting delays.
- Promoting early identification of execution risks and mitigation strategies.

As an integral part of its Procurement and Contracting Execution Plan, Enbridge will engage the services of an Owner's Engineer (OE) tasked with providing the Enbridge Project Team an added measure of assurance that the design, construction and commissioning of the tunnel and pipeline is in alignment with Enbridge's specifications and are being performed in a manner compliant with good engineering and operating practices (GEOP).

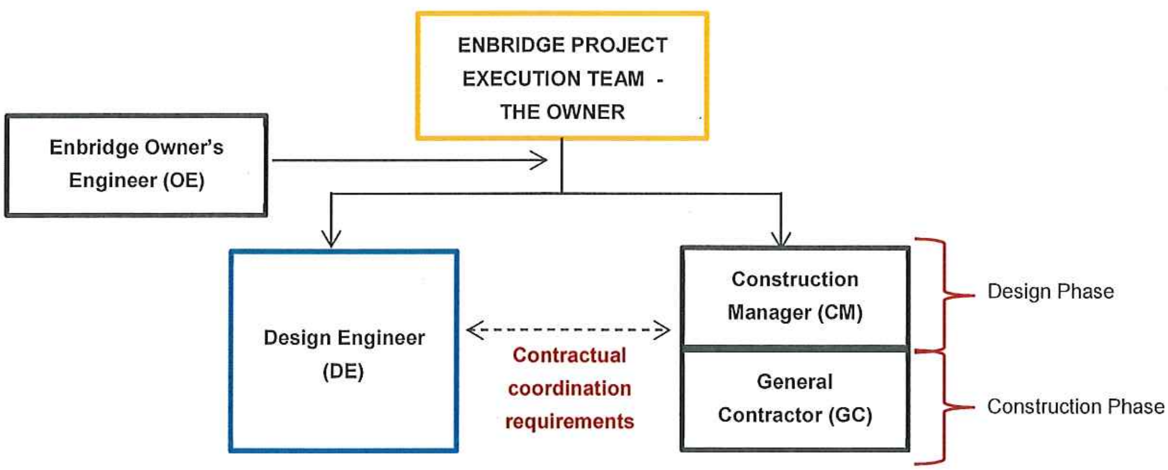

Figure 1: The Enbridge CM-GC Model

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Qualification Process, Selection and Evaluation Criteria

To ensure the best qualified firms are hired to support the design and construction of the Mackinac Straits Tunnel Project a thorough qualification, selection and evaluation process will be followed. As described above, Enbridge will be hiring three key firms – an OE, DE, and CM-GC. Each firm will primarily be selected based on its qualifications and ability to demonstrate proficient knowledge and experience with the following:

- Hard rock tunneling;
- High water pressure tunneling;
- Light oil/high pressure natural gas pipeline design and installation within a tunnel; and
- Key personnel (including prime or sub-consultants) with experience that closely matches or most similar match to the anticipated ground conditions and the CM-GC delivery method.

QUALIFICATION/SELECTION PROCESS

Enbridge will solicit proposals for a DE and CM-GC firms utilizing two separate RFPs. Evaluation and award of each contract will follow a two-phase process:

Phase I: Submission and Evaluation of Written Proposals

- Interested and qualified applicants will be required to submit a written response describing their qualifications and experience in executing work of similar type, scale and complexity of the Mackinac Straits Tunnel Project.
- The responses will be ranked and a short list of around three firms will be determined.

Phase II: In-Person Interview Process

- Short-listed applicants from Phase I will be invited to participate in interviews where applicants will present and elaborate on their qualifications, experience, and approach executing their respective scopes of work.

Enbridge will use this forum to observe the interactions of the applicants' proposed teams as they make their presentations, and afford the project team an opportunity to pose questions to the applicants' teams, in order get a better understanding of the capability, hands-on experience, and the "chemistry" of the proposed team's attributes that Enbridge appreciates as being a key component in being able to safely and successfully deliver major capital projects.

EVALUATION CRITERIA

As shown in the section Procurement and Quality Process and Timeline on page 5 of this document, Enbridge will develop RFPs for both DE and CM-GC contractors which will contain a robust list of weighted selection criteria for the evaluation of responses. The table below outlines a draft list of evaluation criteria that may be considered during the RFP development:

DRAFT EVALUATION CRITERIA	Examples of information applicant needs to describe to support criteria evaluation
Project Approach	• Key issues and constraints associated with constructing the proposed facilities. • How applicant believes the ground will behave during tunneling; type of tunnel boring machine applicant proposes to use. • A cost proposal/level of effort for the pre-construction and construction services. • Overall construction schedule. • Approach for completion of the design phase including a description of how staff will transition between the design phase and construction phase of the project. • Summary of the most significant challenges applicant believes Project must overcome.
Key Project Personnel	• Proposed staff and their associated roles and responsibilities of all key staff for the design and construction phases. • Resumes for all key individuals and approximate percentage of the time this person will be working on the project.

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DRAFT EVALUATION CRITERIA	Examples of information applicant needs to describe to support criteria evaluation
Project Management Plan/ Approach To Collaborating/ Coordinating	• Overall plan to manage the project, for example, approach to managing costs and schedule during design and construction phases; approach to outreach and utilization of subcontractors in the execution of the work. • How applicant sees the partnering process working to address such issues as meeting the required delivery date, keeping the estimated cost within budget, maintaining the quality and service life expected and the handling of contingencies.
Risk And Safety Approach	• Proposed safety program approach and how safety will be managed during design phase and construction services. • Approach for managing and sharing project risks. • Construction risks to schedule and budget.

Enbridge's Procurement and Quality Process and Timeline

Enbridge has a well-defined and robust RFP and proposal evaluation process. The RFP solicitation and award process for the OE, DE and CM-GC firms will follow the two-phase process illustrated in the figure below. RFPs will be issued to a pre-determined list of qualified design engineering and construction firms.