
REPORT TITLE: **Request for Additional Funds, Forensic Inspection and Rehabilitation, Hanlan Feedermain Capital Project, City of Mississauga, Ward 3**

FROM: Kealy Dedman, Commissioner of Public Works

RECOMMENDATION

- 1. That the contract (Document 2023-190N) for the Forensic Inspection and Rehabilitation of Pipe 11-58, Hanlan 2400mm Feedermain, be awarded to Ground Breakers Contracting Ltd. in the estimated amount of \$1,500,000.00 (excluding applicable taxes), under Capital Project 18-422; and**
- 2. That the General Manager of the Water and Wastewater Division and the Director of Procurement be authorized to approve any further contract increases, as required, in order to complete the contract, all in accordance with Procurement By-law 30-2018, as amended.**

REPORT HIGHLIGHTS

- The Hanlan 2400mm Feedermain is the largest pipe in the Region of Peel's water system. The Feedermain is approximately 14.5 km long and has more than 2,300 segments of pipe.
- The Region's real time monitoring system on the Hanlan 2400mm Feedermain has identified deterioration in a small section, prompting a need for immediate inspection and repair.
- Completing this work on the Hanlan 2400mm Feedermain is required to ensure coordination with other major water transmission capital projects to ensure continuity of service Region wide.
- The inspection and rehabilitation of the Hanlan 2400mm Feedermain is planned for April 2023 in advance of the summer high water demand period, which does not provide sufficient time for the traditional Request for Tender procurement process.
- As time is of the essence, staff is recommending the award of a contract under Direct Negotiation (DN) to Ground Breakers Contracting Ltd. to undertake the forensic inspection and rehabilitation of the Hanlan 2400mm Feedermain based on their successful performance on a similar large-scale emergency rehabilitation.

DISCUSSION

1. Background

The Hanlan 2400mm Feedermain is the largest pipe in the Region of Peel's transmission system and has the largest individual impact on Peel's ability to move bulk volumes of water through the water transmission system. The Hanlan 2400mm Feedermain was installed in

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four contracts over a length of approximately 14.5 km between 2015 to 2018 using open cut and tunnelling methodologies.

Given the criticality of the Hanlan 2400mm Feedermain, the Region installed an Acoustic Fibre Optic (AFO) monitoring system as part of the original project to monitor for potential deterioration during the pipelines operation. The information gathered from the AFO system allows the Region to perform real time asset condition monitoring of the Hanlan 2400mm Feedermain. Since the system was activated in Fall 2019, it has been recording distress in various pipes segments, primarily along the Dixie Road portion of the pipeline.

In Spring 2022, after investigation of deterioration identified by the AFO system, the Region completed a forensic inspection of one pipe segment located under Dixie Road near Bloor Street to validate the AFO findings. A 6m section of pipe was found to be in a distressed condition. Given the immediate need for repair, the Region completed an external carbon fibre polymer (CFRP) repair of the section of pipe using the contractor, Ground Breakers Contracting Ltd., who assisted the Region with pipeline excavation.

Subsequent to the 2022 repair, staff are similarly tracking distress in a number of additional pipe segments. The Region plans to proceed with additional forensic inspection and CFRP repair of a second 6m pipe segment also showing advanced signs of deterioration, located under Dixie Road, north of Winding Trail. As the specific cause for the advanced deterioration is not known at this time, the Region is undertaking additional investigations to determine the cause of failure.

It is worth noting that these pipes in question represent a relatively small portion of the overall Hanlan 2400mm Feedermain, which contains over 2,300 6m pipe segments.

2. Procurement Process

Given the foregoing, a Direct Negotiation process is being proposed to hire a contractor for the rehabilitation of the Hanlan 2400mm Feedermain. Ground Breakers Contracting Ltd. (Ground Breakers) has been identified as the preferred vendor based on the following:

- Ground Breakers is an experienced water and sewer contractor, having successfully completed several large infrastructure projects in the Region of Peel in the past including a similar large-scale emergency rehabilitation. They assisted the Region with the 2022 investigation and subsequent repair under a direct negotiation.
- Ground Breakers has extensive knowledge working in the Region of Peel and will be able to expedite many tasks (road occupancy permits, coordination of work with regulatory or municipal partners, etc.) thus assisting and advancing the schedule where possible to complete the work in as timely a manner as possible.
- They currently have available the equipment and resources needed to manage a repair of this magnitude and can supply the necessary resources to ensure the schedule for the repair work is expedited as much as possible. The timeline for rehabilitation is critical to ensure continuity of water service during high summer demand periods.

In accordance with Procurement By-law 30-2018, as amended, and specifically that the recommended vendor possesses special skills, knowledge, expertise and experience,

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Regional Council approval is requested for the award by Direct Negotiation to Ground Breakers Contracting Ltd.

RISK CONSIDERATIONS

Key risk factors to be considered for the decision making, include:

- The repair of the Hanlan 2400mm Feedermain must be completed during April 2023 in advance of the summer high water demand period.
- With the planned three-year isolation of the existing Hanlan 2100mm Feedermain starting in Fall 2023, the reliable operation of the Hanlan 2400mm Feedermain throughout the duration of this isolation will be of critical importance to ensure the security of water supply.
- Staff will continue to monitor the Hanlan 2400mm Feedermain, perform on-going investigations as to the cause for the premature distress, and report back to Council on findings and further recommendations, if required.

FINANCIAL IMPLICATIONS

Sufficient funding is available under Capital Project 18-1422.

CONCLUSION

Staff recommend that Ground Breakers Contracting Ltd. be awarded the contract for Forensic Pipe Repair and Rehabilitation of Pipe Section 11-58 of the Hanlan 2400mm Feedermain in the estimated amount of \$1,500,000.00 (excluding applicable taxes) in order to maintain the integrity of Peel's water system.



Kealy Dedman, Commissioner of Public Works

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