

Clause 12 in Report No. 6 of Committee of the Whole was adopted, without amendment, by the Council of The Regional Municipality of York at its meeting held on April 21, 2016.

12

Consultant Selection for Engineering Services for Rehabilitation
of the Existing Southeast Collector

Committee of the Whole recommends adoption of the following recommendation contained in the report dated March 9, 2016 from the Commissioner of Environmental Services:

1. Council approve the award of contract for engineering services for detailed design, contract administration and site inspection for rehabilitation of the existing Southeast Collector to CH2M Hill Canada Limited, pursuant to Request for Proposal P 15-184 at a total cost of \$4,250,171.00, excluding HST and authorize execution of the contract on behalf of York Region. The fee includes contract administration and site inspection services based on estimated construction duration of 78 weeks.

Report dated March 9, 2016 from the Commissioner of Environmental Services now follows:

1. Recommendation

It is recommended that:

1. Council approve the award of contract for engineering services for detailed design, contract administration and site inspection for rehabilitation of the existing Southeast Collector to CH2M Hill Canada Limited, pursuant to Request for Proposal P 15-184 at a total cost of \$4,250,171.00, excluding HST and authorize execution of the contract on behalf of York Region. The fee includes contract administration and site inspection services based on estimated construction duration of 78 weeks.

2. Purpose

This report seeks Council authorization to retain engineering services for detailed design, contract administration, site inspection and related services for rehabilitation of the existing Southeast Collector.

The Region's Purchasing Bylaw requires Council authorization to award Request for Proposals over \$2,000,000 or when the recommended proponent is not the lowest cost. In this case, the recommended proponent has submitted the lowest cost; however, their bid is greater than \$2,000,000.

3. Background

Newly constructed Southeast Collector Trunk Sewer provides a window of time to perform assessment of the existing system

The York-Durham Sewage System is a trunk sanitary sewer system that services both York and Durham Regions. The York-Durham Sewage System collects and conveys sanitary flows to the Duffin Creek Plant located in the City of Pickering.

This Southeast Collector portion of the York-Durham Sewage System was constructed during the 1970s. Periodic inspections were performed on the live sewer over its years of use but no remedial work was necessary. Completion of the new Southeast Collector Sewer Trunk in 2015 provided opportunity to divert the majority of flow from the existing Southeast Collector into the new sewer. This allowed the Region to undertake a preliminary condition assessment of the existing Southeast Collector with closed circuit television and multi-sensor inspection equipment. Inspections recorded the interior of the existing Southeast Collector sewer and maintenance holes from MH 37-1 at Ninth Line and Rouge Bank Drive in the City of Markham, to Chamber No. 8 at Finch Avenue and Valley Farm Road in the City of Pickering. (See Attachment 1.)

Preliminary Condition Assessment confirmed sewer requires typical rehabilitation measures after 40 years in service

Several types of deficiencies were identified during condition assessment and the following rehabilitation measures are required to improve overall safety and prevent further deterioration:

- Removal and full replacement of six of twenty-five existing maintenance hole and chamber structures
- Installation of structural or protective liners at all drop structure maintenance holes and chambers

Consultant Selection for Engineering Services for Rehabilitation of the Existing Southeast Collector

- Complete installation of fibreglass reinforced plastic ladders, platforms, and safety railing for maintenance holes and chambers
- Potential slip lining or cured-in-place pipe (CIPP) lining or spiral wound liners for sections between all drop structures

Condition assessment findings confirm that the existing Southeast Collector is due for its first life-cycle rehabilitation after 40 years of uninterrupted service. Construction is anticipated to start in early 2018 and last for 78 weeks. This will be confirmed through the detailed design process and subject to change as required. It is anticipated that these works will support the existing Southeast Collector in attaining its full service life of 80 to 100 years.

4. Analysis and Options

Consultant required to analyze preliminary inspection and condition assessment to complete detailed design for existing Southeast Collector rehabilitation works

Findings from preliminary inspection and condition assessment will be the basis for further investigations under this assignment which include an inflow and infiltration study, geotechnical investigation and environmental site assessments. This information will be used to inform the detailed design of rehabilitation works to extend the life of the existing Southeast Collector.

Request for Pre-qualification issued to pre-qualify four consulting firms

Request for Pre-qualification (RFPQ) P-15-149 for consulting services for detailed design, contract administration and site inspection services for rehabilitation of the existing Southeast Collector was issued on September 15, 2015. This RFPQ was advertised in the *Daily Commercial News* and through the Region's Bids and Tenders notification system, and closed on October 15, 2015. Of the 32 firms that received the RFPQ documents, eight submitted a formal response.

Four consulting firms were pre-qualified and invited to participate in the Request for Proposal process:

- Hatch Mott MacDonald Limited
- CH2M HILL Canada Limited
- Parsons Inc.
- Black and Veatch Canada Company

Consultant Selection for Engineering Services for Rehabilitation of the Existing Southeast Collector

Request for Proposal issued to four pre-qualified consulting engineering firms

In accordance with the Region's Purchasing Bylaw, Request for Proposal P-15-184 for consulting services for detailed design, contract administration and site inspection services for rehabilitation of the existing Southeast Collector was issued to four pre-qualified engineering firms in January 2016.

Request for Proposal P-15-184 detailed the scope of work required, which included the following services:

- Project management, planning and control
- Additional sewer inspections, quantify current inflow and infiltration volumes, geotechnical investigation and environmental site assessments
- Preliminary design, value engineering, detailed design and tendering
- Procurement of approvals
- Contract administration and site inspection services during construction
- Quality assurance and quality control

Three of the four pre-qualified consulting firms submitted proposals for this assignment.

Proposals evaluated using two-envelope system

Proposals were evaluated using the two-envelope system with technical and financial information submitted in separate envelopes. The overall proposal score was evaluated based on a weighting of 80 points for the technical proposal and 20 points for the financial proposal. Technical proposals were evaluated prior to any knowledge of financial information.

The Region's proposal evaluation team reviewed technical proposals based on criteria listed in the Request for Proposal that included:

- Project team experience and qualifications
- Corporate experience in similar projects
- Project director/project manager's experience and qualifications
- Experience on projects of similar size and scope
- Technical support staff experience and qualifications, including sub-consultants' staff
- Understanding of project and services to be provided
- Understanding of deliverables to be provided

Consultant Selection for Engineering Services for Rehabilitation of the Existing Southeast Collector

- Viability of approach methodology
- Project schedule, work plan and deliverables
- Project management approach
- Quality Assurance/Quality Control approach and methodologies
- Value added services, innovative concepts/ideas
- Approach to health and safety

Technical components of the proposal must achieve a minimum technical score of 60 per cent (48 points out of the potential 80 points) to have the financial portion of the proposal considered. If a proponent does not achieve this minimum technical score, their financial proposal is returned unopened. Technical and financial results are summarized in Table 1.

Table 1
Consultant Proposal Evaluation Summary

Consulting Engineering Firm	Technical Score (out of 80)	Total Fee (\$) excluding taxes	Financial Score (out of 20)	Total Score (out of 100)
CH2M HILL Canada Ltd.	64.00	\$4,250,171.00	20.00	84.00
Hatch Mott MacDonald Ltd	48.95	\$4,998,898.00	17.00	65.95
Parsons Inc.	50.25	\$9,573,578.25	8.88	59.13

Evaluation of proposals revealed CH2M Hill Canada Limited achieved highest ranked proposal

CH2M Hill Canada Limited achieved the highest overall technical score and their financial proposal was the lowest total cost.

The proposal submitted by CH2M Hill Canada Limited demonstrated a clear understanding of project requirements and a well-thought-out project approach and methodology to complete the assignment.

Supplies and Services Branch reviewed the evaluation summary and issued its report confirming that CH2M Hill Canada Limited be recommended as the successful overall proponent to undertake detailed design, contract administration, site inspection and related services for the Rehabilitation of the existing Southeast Collector.

Link to key Council-approved plans

The project aligns with the Region's *2015 to 2019 Strategic Plan* objectives of optimizing critical infrastructure systems capacity.

Multiple locations of infiltration are located within project limits. Study of inflow and infiltration to be carried out as part of this assignment will include quantifying inflow and infiltration volume, and preparation of feasibility study and cost estimates to identify the best available long-term solution for reduction of inflow and infiltration.

This is in keeping with the long-term Council-adopted *Vision 2051* and the *Regional Official Plan*, which envision livable cities and complete communities.

5. Financial Implications

10 Year Capital Plan has adequate capital spending authority for rehabilitation of existing Southeast Collector

Fee for the proposed work is \$4,250,171, excluding HST. The 2016 approved budget and 10 year plan estimated a total project budget of \$121,500,000 to be funded from wastewater reserves for rehabilitation of this section of existing Southeast Collector. Total project costs will be further refined as the detailed design progresses and rehabilitation requirements are better understood. There is adequate Capital Spending Authority for this assignment in the *2016 10 Year Capital Plan*.

6. Local Municipal Impact

Rehabilitation of the existing Southeast Collector provides increased redundancy, serviceability and reliability. This project benefits upstream local municipalities (Towns of Aurora, East Gwillimbury, Newmarket, Richmond Hill and Whitchurch-Stouffville, Township of King, and Cities of Markham and Vaughan) as the existing Southeast Collector collects and conveys sanitary flows for treatment to the Duffin Creek Plant in the City of Pickering.

Implementation of this project is in City of Markham, City of Toronto and City of Pickering. To ensure smooth project implementation, city staff will be consulted to better understand potential construction concerns during design and construction phases. Stakeholder engagement will continue throughout detailed design and construction phases. A construction risk management strategy will be

Consultant Selection for Engineering Services for Rehabilitation of the Existing Southeast Collector

developed to minimize impacts to residents and businesses in the general vicinity of the work

7. Conclusion

Three proposals from consulting firms were received and evaluated for this project in accordance with the Region's Purchasing Bylaw. The Proposal received from CH2M Hill Canada Limited represents the best value for money to the Region.

It is recommended that CH2M Hill Canada Limited be engaged to undertake detailed design, contract administration, site inspection and related services for rehabilitation of the existing Southeast Collector.

For more information on this report, please contact Mike Rabeau, Director, Capital Planning and Delivery, Environmental Services at ext. 75157.

The Senior Management Group has reviewed this report.

March 9, 2016

Attachment

#6690767

Accessible formats or communication supports are available upon request