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AUTHORIZATION OF CONSULTING SERVICES FOR 19TH AVENUE INTERCEPTOR LESLIE TRUNK SEWER PROJECT (YDSS INTERCEPTOR PROJECT) PROJECTS 76040 AND 76050

The Transportation and Works Committee recommends:

- 1. The presentation by Paul Jankowski, Director, Infrastructure Design and Construction be received; and**
- 2. The recommendations contained in the following report, November 16, 2004, from the Commissioner of Transportation and Works be adopted:**

1. RECOMMENDATIONS

It is recommended that:

1. Earth Tech Canada Inc. (Earth Tech) and their subconsultants be retained to carry-out the alternative route assessment, natural environment assessment, review of construction methodologies and detailed design and preparation of contract documents for the 19th Avenue Interceptor Lower Leslie Trunk Sewer Project as directed by the Minister of Environment on October 1, 2004 at an upset fee of \$2,709,920, excluding GST.
2. Ogilvie, Ogilvie & Company be retained as the facilitator and advisor for the public consultation services and stakeholder relationship management for the 19th Avenue Interceptor and Leslie Street Lower Sanitary Trunk Sewer, at an upset fee of \$90,700, excluding GST.
3. The Commissioner of Transportation and Works be authorized to issue separate purchase orders in order to retain the following services: geotechnical drillers, environmental specialists, hydrogeological three dimensional modellers, construction specialists, peer review experts, project planning consultants and communications consultants as required to expedite the procurement process for this critical project.
4. The provisions of the purchasing by-law be waived to authorize the Chief Administrative Officer and the Commissioner of Transportation and Works upon the review of the Regional Solicitor to procure all necessary consulting services as identified in all above recommendations.

2. PURPOSE

The purpose of this report is to obtain Regional Council approval to retain the engineering and environmental expert services to deliver the 19th Avenue Interceptor and Leslie Street Lower Sanitary Trunk Sewer Project. Additionally, this report is to obtain

authorization to expedite the procurement of services to carry out the expedited workplan for delivering this project.

3. BACKGROUND

3.1 Basis for Project

In 1997, the Regional Municipality of York completed the Master Plan study for the York Durham Sanitary Sewer (YDSS). This Master Plan was completed to identify and review current conditions and future alternatives necessary to meet population projections in the Region. This Master Plan identified several priority and strategic projects to be implemented. The Ninth Line, 16th Avenue, Highway 404, Lower Leslie Street, and 19th Avenue Trunk sewers were all identified as priority and strategic projects to be completed within ten years of the study. The completion of these projects would twin the existing YDSS through the towns of Richmond Hill and Markham, and provide relief for the existing sewer system. In 2002, the Region completed an update to the Master Plan for the YDSS to ensure continued timely decision-making on the infrastructure considering the most recent planning forecasts. This update confirmed the need for the lower Leslie Street and 19th Avenue Interceptor sewers and classified them both as priority projects, which are to be completed in the next five years. The Lower Leslie Street Trunk and 19th Avenue Interceptor Sewers will provide relief to the existing YDSS at Yonge Street and 19th Avenue (*see Attachment 1*).

Recent modelling work carried out by the Region has confirmed the immediate need for this sewer.

3.2 Project Status

3.2.1 Class Environmental Assessment

The 19th Avenue and Lower Leslie Sanitary Trunk Sewer project was undertaken as a Schedule B project in accordance with the Municipal Engineers Association's Class Environmental Assessment document (June 2000). Two Public Information Centres were held and a Schedule B Environmental Screening Report was prepared. The report described the problem, the assessment of alternatives and the preferred route alignment, as well as public and agency consultation programs and its results. The Notice of Completion for the Screening Report was filed on June 7, 2003 and no Part II Orders were received on this project prior to the closing date of July 7, 2003. Therefore the project proceeded to the detailed design phase.

3.2.2 Detailed Design Phase

Earth Tech was retained in November of 2003 through a competitive process to undertake the detailed design and contract administration services for the 19th Avenue Interceptor Leslie Street Trunk Sewer Project at an upset limit of \$794,655.00.

The location of the sewer and artesian conditions expected along 19th Avenue required that additional detailed hydrogeotechnical investigations be carried out as part of the

detailed design phase. In order to confirm the water levels and quantify the zone of influence, it would be necessary to conduct pump tests at strategic locations along the preferred alignment. Prior to installing the pumping wells, the Region initiated an enhanced public consultation program to inform residents about the project and the expected environmental field investigations. A public information session was held on June 8, 2004 to provide the local residents with an understanding of the project and the need for pumping tests to quantify potential impacts to local wells and environmental features.

The Region's recent experiences with the 16th Avenue Trunk Sewer project have highlighted new and emerging technical, hydrogeological, environmental and stakeholder concerns and issues which are also applicable to this project. Dialogue with a number of the regulatory agencies has identified that these agencies will now demand a much higher standard of study of numerous issues through the project.

Additional consultation with the agencies was necessary to understand the expected level of study, investigations and supporting documentation for both temporary Permit to Take Water (TPTTW) and construction PTTW for this project. A temporary PTTW is required if water takings beyond 50,000 Litres per day are expected for the pump tests. These pump tests are used to quantify the amount of water that will need to be pumped during construction. The pump tests also provide valuable information on quantifying the expected zone of influence or impact on area wells and the natural environment as it relates to the water takings. The TPTTW application was submitted on July 23, 2004.

3.2.3 Part II Order (Bump-Up) Request Denied with Conditions

On October 1, 2004, the Minister of the Environment formally notified the Region that they had received a Part II Order on all YDSS Projects. There were specific concerns with the proximity of the proposed 19th Avenue Interceptor Lower Leslie Sanitary Trunk Sewer Project to the Jefferson Forest, Oak Ridges Moraine and Rouge Headwaters Complex. Although the Minister denied the Part II Order for this project, a number of project specific conditions have been imposed and have resulted in significant changes in the scope of works for this project. The following provides a summary of the conditions specific to this project:

- Comprehensive review of alternative routing options and alternative sewer design and construction techniques.
- Pro-active, strategic, and ongoing stakeholder relationship management.
- Technical assessments sufficient for all permits and approvals.
- Analysis of "cumulative effects" of dewatering combined with other Regional projects.
- Independent peer reviews.
- Technical resource for individual well complainants.
- Additional monitoring and reporting requirements during and after construction.
- Public accessibility of York's documents.

4. ANALYSIS AND OPTIONS

The Project Team has been working diligently towards developing an aggressive workplan that satisfies and respects the conditions set forth by the Minister of Environment, as well as implements a solution in the most time effective manner.

4.1 Negotiation of Engineering Services

In an effort to expedite critical activities of the project, ensure continuity and quality of service, a negotiated procurement process with expedited approvals that delegate authority to the Commissioner of Transportation and Works is recommended for additional engineering services necessary to satisfy the conditions imposed by the Minister of the Environment.

The nature of these services is such that it is difficult to precisely quantify the scope at the onset of the work, so any process through which the Region may retain an engineering consultant(s) must have the flexibility and authorization to allow for quick adjustment of the scope of services and associated costs through future iterations with the regulatory agencies.

4.1.1 Proposed Workplan

4.1.1.1 Technical Studies

Prior to the decision by the Minister of the Environment, EarthTech together with their subconsultants, Beatty and Associates, Michalski and Parish had completed significant environmental investigations for the originally proposed route. Following the decision, the project team has worked together to develop a comprehensive workplan that addresses the conditions set forth for this project in the most time efficient manner.

Highlights from the workplan include:

- Establish expanded study area.
- Consultation with key stakeholders and agencies.
- Gathering of all available data within the expanded study area.
- Assessment of a long list of alternatives.
- Additional geotechnical investigations along alternative routes.
- Additional natural environment inventory for expanded study area.
- Assessment of shortlist of alternatives, including preliminary design and alternative construction methodologies for each alternative.
- Evaluation of alternatives.
- Establish preferred alignment and construction technique.
- Detailed design including detailed environment impact studies for preferred alignment.
- Submit permit applications and document reports.
- Prepare tender package.

Following receipt of the letter from the Minister of the Environment, Regional staff met Earth Tech representatives to discuss the expectations for this critical project. Earth Tech

assembled a partnership of first-class specialists to undertake this assignment and address all issues from the additional alternative assessment phase through to construction.

Earth Tech is the lead consultant providing overall project management, alternative route environmental assessment services, detailed design services, field compliance and certification. Earth Tech will utilize the technical strength and resources of the consulting firms, listed in Table 1, to augment its team thus providing the Region with comprehensive and effective services.

It is recommended that Earth Tech and their subconsultants be retained for the remainder of the project in order to maintain the continuity and expertise gained on the project to date. Key members have been selected based on their project experience and their successful relationships with York Region and the approval agencies.

4.1.1.2 Public Consultation and Stakeholder Relationship Management

The conditions imposed by the Minister of the Environment stipulated significant consultation requirements with the public and affected stakeholders. The Region recognizes the importance in improved stakeholder relationships and has thereby included a number of enhancements to the standard public consultation process. Such enhancements include the following:

- Outreach initiatives (door-knocking).
- Storefront drop-in centres.
- Web-sites that engage the stakeholders.
- Surveys, focus groups.
- Education programs to increase the stakeholder's knowledge of the issues.
- Training seminars and workshops.
- Downloadable maps, videos, other materials.
- Public forums.
- Advisory groups/committees.

In order to implement this unique constructive engagement process, it is recommended that the Region retain the services of Ogilvie, Ogilvie & Company as the facilitator and advisor to this project.

4.1.1.3 Additional Services

The critical nature of this project has identified the need for some additional services including Government Relations, Project Management Support Services and Peer Review Experts. A government relations expert will be necessary to manage both Federal and Provincial stakeholders and will provide a key role in helping to expedite this project. The role of the Project Management Support is to assist Regional Staff in developing the revised project plan, critical path scheduling and effective management of resources, costs and project risks. This service will operate independently of the Consultant Project Team to provide an unbiased view of the project status and will help to identify issues early as well as provide an effective strategy to minimize increasing costs and schedule delays.

The October 1, 2004 letter from the Minister of the Environment stipulated the following condition specific to peer review experts:

The Regional Municipality of York shall ensure that all technical studies prepared in support of this project be independently peer reviewed by appropriate experts, including, but not limited to, fishery biologists and hydrogeologists, and the review shall be documented in a report.

The Region sought further clarification on this condition with the MOE and understands that the panel of peer review experts should be primarily based on academia as opposed to additional consultants. This would ensure a truly independent role as the peer review experts with no particular vetted interest in the project.

5. FINANCIAL IMPLICATIONS

5.1 Consulting Fees

5.1.1 Technical Services

Earth Tech's original assignment was to undertake the detailed design and contract administration services for the 19th Avenue Interceptor Lower Leslie Trunk Sewer Project at an upset fee of \$794,655.00. Given the need to satisfy the conditions set out in the Minister of the Environments letter dated October 1, 2004 prior to proceeding with the detailed design phase, we recommend that authorization be given to retain Earth Tech and its team to complete the alternative route assessment and environmental investigations, detailed design and permitting and approvals as outlined above at a cost of \$2,709,920, excluding GST. The Region will negotiate the terms of the contract administration services once the detailed design and the permitting and approvals have been completed and the construction methodology identified. Regional Council's approval for the contract administration fees will be secured if significant additional fees are required in addition to the already authorized purchase order. Table 1 provides a listing of the fees required for the complete engineering services for this project.

5.1.2 Public Consultation or Stakeholder Relationship Management Services

The fees associated with this critical component to the project is summarized in Table 1.

5.1.3 Additional Services

The additional services and additional fees are provided in Table 2 on this report.

Table 1
Breakdown of Fee by Category

Technical Services	Workplan/ Evaluation of Alternatives/ Design/Project Management	Hydrogeo- technical Investigation/ 3 D Modeling	Natural Environment and Fluvial Assessment	Hydrogeo- technical/ Geotechnical
Earth Tech Team	\$1,344,075			
<i>Beatty Associates</i>		\$643,588		
<i>Parish Geomorphic Michalski</i>			\$61,250	
<i>Nielson Colin Alston</i>			\$61,250	
<i>Assoc. Drillers</i>				\$145,230
<i>Earthfx</i>		\$40,000		\$414,526
Subtotal Earth Tech & Subconsultants				\$2,709,920
Public Consultation or Stakeholder Relationship Management Services				
Ogilvie, Ogilvie & Company				\$90,700

Table 2
Additional Services

Government Relations ¹	\$100,000
Project Management Support Services ¹	\$100,000
Peer Review Experts ¹	\$250,000
TOTAL	\$3,250,620

Notes: Additional Services¹ are estimates.

5.2 Schedule

The following highlights the major milestones for the 19th Avenue Interceptor Lower Leslie Trunk Sewer Project.

Table 3
Major Milestones

Task	Completion Schedule
Finalize Workplan	October 2004
Initiate Public Outreach Program	Late October 2004
Initiate Pump Tests along 19 th Avenue	November 2004
Review of Alternatives	November 2004 - February 2005
PIS (to review alternatives)	January 2005
Identify Preferred Alignment	February 2005
Initiate Detailed Design	February 2005
Submit Permit to Take Water Application	March 2005
PIS (to review environmental impacts report)	April 2005
PIS after receipt of PTTW	June 2005
Tender Award	July 2005
Initiate Construction	August 2005
Complete Construction	August 2006

Given the critical nature of this project, Regional staff together with our Project Team has developed a schedule that delivers this project in the quickest timeframe. All activities or tasks within our control have been fast-tracked either by carrying out tasks in parallel and/or allocating additional resources including consultants and drillers to complete more work up-front. A time savings of approximately ten months has been realized by running tasks in parallel and allocating additional resources including consultants and drillers to complete more work up front.

6. LOCAL MUNICIPAL IMPACT

This sewer is required to accommodate future growth within York Region as well as alleviate constraints within the Yonge Street Sewer by intercepting the flows and diverting to the Leslie Street Trunk Sewer system. The trunk sewer expansion will continue to provide service to the Towns of Markham, Richmond Hill, Aurora, Newmarket, Whitchurch-Stouffville, the City of Vaughan and the communities of Holland Landing, Queensville and King City.

The 19th Avenue Interceptor Lower Leslie Trunk Sewer must be in place within a timely manner. This project is considered critical to the ability to provide wastewater service to the Region.

7. CONCLUSION

The Project Team is committed to the expedited schedule. However in order to accomplish this, an expedited procurement and approvals process that provides the

Commissioner of Transportation and Works the ability to retain engineering and environmental consultants as required is necessary.

The Senior Management Group has reviewed this report.

(The attachment referred to in this clause was included in the Agenda for the December 1, 2004 Committee meeting.)