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# SANITARY SEWER INSPECTIONS AND ASSESSMENT CONSULTANT AWARD

**The Environmental Services Committee recommends the adoption of the recommendation contained in the following report dated May 10, 2011, from the Commissioner of Environmental Services.**

## 1. RECOMMENDATION

It is recommended that:

1. Regional Council authorize retaining consulting firm Andrews Infrastructure to provide engineering services for a three year sanitary sewer inspections and assessment program at a cost not to exceed $999,501.00 exclusive of HST.

## 2. PURPOSE

This report seeks authorization to retain the lowest cost responsive bidder, Andrews Infrastructure to support the Region's sanitary sewer inspections and assessment program.

The Purchasing By-law requires Council authorization to award Requests for Proposals when the recommended proponent does not have the lowest cost and for proposals over $500,000.

## 3. BACKGROUND

### 77.6 kilometres of sewers and 903 maintenance holes identified for inspection in Markham, Vaughan, Richmond Hill, Newmarket, Aurora, East Gwillimbury, Georgina and in Durham Region over a three year program

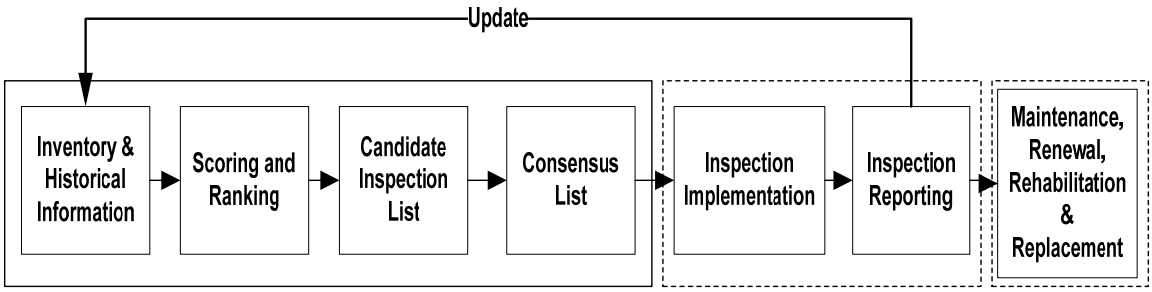
Environmental Services has a proactive infrastructure management program to monitor performance of the Region's water and wastewater infrastructure through comprehensive inventory, inspection, condition assessment, and maintenance initiatives. The focus of the program is to facilitate early identification of asset deficiencies to determine timely, optimized and cost-effective inspection, maintenance, renewal, rehabilitation, and replacement measures.

The intent of the sewer inspection program, which is a key component of the infrastructure management program, is to monitor performance of the Region's sewers through closed circuit television and sonar technology to identify current condition.

Approximately 10 per cent of the Region's gravity sanitary sewers are inspected each year.

As deterioration of sewers is an on-going process, a screening methodology has been established so that specific sewers can be prioritized and scheduled for timely inspection in a cost-effective manner. Deterioration of the overall sewer system is under close monitoring and control. This proactive screening process is outlined in Figure 1.

**Figure 1**
Asset Screening Process




Criteria included in this screening model are location of sewer, embedment soil type, pipe diameter, buried depth and sewer function. The 77.6 kilometres of large diameter gravity sanitary sewers and siphons listed in the scope of the 2011 to 2013 sanitary sewer inspection and assessment program have been identified using this screening methodology.

## 4. ANALYSIS AND OPTIONS

### Request for Proposal issued for sanitary sewer inspections and assessment services

In accordance with the Purchasing By-law, a Request for Proposal was issued and 18 companies picked up the Request for Proposal.

The following scope of services was identified in the Request for Proposals:

- Closed circuit television/sonar inspections of large diameter gravity sanitary sewers
- Closed circuit television/sonar inspections of sanitary sewer siphons
- Maintenance hole inspections
- Sanitary sewer inspection coordination and management, including quality assurance and quality control, site investigation/assessment and status report
- Sewer condition and assessment reporting
- Develop/prepare a safe work plan, traffic control plan and road occupancy permits

## Proposals were evaluated using the two envelope system

Five proposals were received and evaluated using the two envelope system with technical and financial information submitted in separate envelopes. Technical proposals were evaluated prior to any knowledge of financial information. Technical content was weighted at 70 per cent.

The Region's proposal evaluation team reviewed the five technical/management proposals based on the following criteria headings:

- Firm/project manager/key staff credentials, years of experience in project management and sanitary sewer inspections and assessment projects
- Quality of references
- Demonstrated understanding of Regional requirements
- Methodology for quality assurance and quality control
- Quality of methodology and approach
- Compliance with Request for Proposal

The financial evaluation composed the remaining 30 per cent of the total evaluation. Technical and financial results are summarized in Table 1. A technical score of 42 points, or 60 per cent was required to open the financial proposal.

**Table 1**
Consultant Proposal Evaluation Summary

| Name of Company | Technical Score (70%) | Financial Score (30%) | Total Score (100%) | Total Price Exclusive of HST ($) | Lowest Cost per Technical Point ($) |
|---|---|---|---|---|---|
| Andrews Infrastructure | 49.10 | 30.00 | 79.10 | 999,501.00 | 20,356.44 |
| D.M. Robichaud Associated Limited | 56.40 | 18.90 | 75.30 | 1,585,734.00 | 28,115.85 |
| Associated Engineering (Ont.) Ltd. | 35.10 | N/A | N/A | N/A | N/A |
| Aquacoustic Remote Technologies Inc. | 33.80 | N/A | N/A | N/A | N/A |
| Genivar Inc.* | _ | _ | _ | _ | _ |

*****(Disqualified due to bidding prohibition)

### Proposals were evaluated resulting in Andrews Infrastructure being selected

The "lowest cost per technical point" was utilized pursuant to the requirements of the Purchasing By-law because the top two highest scoring proponents (Andrews Infrastructure and D.M. Robichaud Associated Limited) were within five total overall points. Based on the outcome of the proposal analysis, staff recommend the contract be awarded to Andrews Infrastructure, who is the eligible proponent with the lowest cost per technical point.

Andrews Infrastructure's proposal demonstrated a clear understanding of the project's varied requirements as well as provided an experienced team committed to working with Environmental Services staff and other third parties as required.

## 5. FINANCIAL IMPLICATIONS

The upset limit fee for the proposed work is $999,501.00, excluding HST. Funding for the project is included in the Region's 2011 Capital Budget and 10-Year Capital Program.

This cost includes closed circuit television/sonar sewer inspections, project management, quality assurance and quality control, site investigations and assessments, sewer condition assessment and reporting.

## 6. LOCAL MUNICIPAL IMPACT

The sewer inspection program benefits all nine local municipalities by ensuring that their wastewater is properly conveyed when it reaches the Region's wastewater collection systems. With the use of closed circuit television and sonar sewer inspections, the Region can identify if there are any deficiencies which may affect the local municipal sewer systems. Sections of the Region's sanitary sewer system located within the Town of Markham, City of Vaughan, Town of Richmond Hill, Town of Newmarket, Town of Aurora, Town of East Gwillimbury, Town of Georgina and Durham Region will be inspected over a three year period (2011 – 2013). Table 2 below shows the length of the Region's sanitary sewer system to be inspected in each local municipality and Durham Region during the three year program.

**Table 2**
Location, Sewer Length and Maintenance Holes to be Inspected

| Local Municipality | Gravity Sewer Length (km) | Siphon Sewer Length (km) | No. of Maintenance Holes |
|---|---|---|---|
| Town of Markham | 26.7 | 0.2 | 230 |
| City of Vaughan | 24.2 | 0.2 | 353 |
| Town of Richmond Hill | 17.0 | - | 179 |
| Town of Newmarket | 4.3 | 0.2 | 77 |
| Town of Aurora | 0.6 | 0.2 | 23 |
| Town of East Gwillimbury | 0.2 | - | 4 |
| Town of Georgina | - | 1 | 19 |
| Durham Region | 2.8 | - | 18 |
| TOTAL | 75.8 | 1.8 | 903 |

The sewer inspection program is directly related to the York Region and Local Municipal Inflow and Infiltration Reduction Program, which provides direct benefit to the Region and all nine local municipalities.

## 7. CONCLUSION

Environment Services staff reviewed proposals for provision of engineering services for the Region's sewer inspections program in accordance with Regional procedures and the Purchasing By-law. It is recommended that the Region retain Andrews Infrastructure with the lowest cost per technical point, at a cost not to exceed $999,501.00, exclusive of HST.

For more information on this report, please contact Brett Bloxam, Director, Operations, Maintenance and Monitoring at (905) 830 4444 Ext 5320.

The Senior Management Group has reviewed this report.