

## **COMMITTEE OF THE WHOLE - NOVEMBER 29, 2004**

### **PAVEMENT MANAGEMENT SOFTWARE SYSTEM**

#### **Recommendation**

The Commissioner of Engineering and Public Works in consultation with the Director of Purchasing Services, the Director of Information Technology Services and the Director of Reserves and Investments recommends:

1. That the proposal received from Deighton Associates Ltd. in the amount of \$241,829.13 (applicable taxes included) be accepted, and;
2. That Council authorize the Clerk and Mayor to sign related documents.

#### **Purpose**

To seek approval of computer software for a Pavement Management System in order to assist City staff in the coordination, planning and implementation of its Capital Works Program for roadway maintenance and rehabilitation.

#### **Background - Analysis and Options**

The Infrastructure Management Systems section of the Engineering and Public Works Department is responsible for infrastructure records, data and data management and strategic analysis related to the City's civil infrastructure.

The purpose of a Pavement Management System is to assist City staff in the coordination, planning and implementation of its roadway maintenance and rehabilitation programs. The system will also assist Staff to identify the needs of our road network through:

- Complementing the technical expertise, knowledge and data within the City;
- Promote self sufficiency and reduced dependency on external professional services with the exception of arising special needs or studies;
- Ranking, Prioritization and Optimization Analysis of road sections based on user-definable parameters for funding, life-cycle costs, treatment strategies and pavement performance models for pavement maintenance and rehabilitation at various network levels such as all roads, maintenance districts, political regions, functional classes, etc.;
- Developing multi-year maintenance and rehabilitation programs that complement longer term, strategic philosophies and goals;
- Calculate and analyze overall network condition;
- Predict future overall network and road section specific condition and performance;
- Analyze economic benefit and re-investment required to sustain and/or improve a given network condition over a period of time;
- Calculate Life Cycle costing on road sections;
- Produce Graphs and Reports on the data and analysis results.

We seek to obtain a completely generic and flexible asset management and strategic analysis software tool that can seamlessly combine data management and asset analysis components together. The system shall maximize use of the Ontario Road Inventory Management System (RIMS) data, historical information, knowledge and experience of City personnel and City policy for the implementation towards a new software platform to effectively and efficiently manage our road asset.

A Request for Proposal (RFP04-142) was issued on Wednesday July 28, 2004 and was advertised on the ETN (BidNavigator) and Daily Commercial News. A total of 18 RFP Documents were issued with 5 proposals received. Of the 5 proposals received, 2 were determined to be non-compliant with the RFP's terms and conditions.

An evaluation meeting was held with the review committee comprising of Denny Boskovski, Infrastructure Management Systems Supervisor, Tom Ungar, P. Eng., Design Engineer, Pat Marcantonio, Senior Engineering Assistant and Paul Cook, C.P.P., Supervisor of Supplies and Services attending as an advisor, to evaluate the 3 compliant proponents being Applied Geologics Inc., Deighton Associates Ltd. and Hansen Information Technologies Canada Inc.

Based on the proposals and information provided by Engineering Services, Information Technology Services provided a technical review and assessment to ensure that corporate technology policies and standards are met.

The proposal from Deighton Associates Ltd. has the highest evaluation. The evaluation scoring reflects the consultant's ability to address the requirements and objectives of the RFP's Terms and Conditions.

Deighton's dTIMS CT software is widely used in Ontario for Pavement Management by the following authorities:

Regional Municipality of York	City of Brampton
Regional Municipality of Peel	City of Cornwall
Regional Municipality of Durham	City of Oshawa
The Greater City of Sudbury	City of St. Catharines
Municipality of Clarington	Town of Whitby

dTIMS CT software is used world wide. New Zealand for instance, which is considered a leader and pioneer in Infrastructure Management and Strategic Assessment, have made dTIMS CT the standard Asset Management and Strategic Analysis Software Tool for all Provinces, Territories, Regional and Municipalities Authorities.

dTIMS CT fulfills the Engineering and Public Works Department's immediate and long term goals to have one generic tool to strategically assess all civil infrastructure. With a generic foundation in place, we will expand our use of this tool to strategically assess effective maintenance and rehabilitation needs for bridges, watermains, sewers, street lighting, traffic appurtenances, etc. The advantage to using a common platform is that we can further assess these various asset categories amongst each other. This permits the City to better identify not only common needs and trends but impacts to one asset class when another asset is provided with more resources over another. This type of information is key to planning more effective and efficient Capital Programs while understanding the ultimate effect decisions made today will have on our future.

dTIMS CT will assist the City to address regulatory requirements such as those under the Sustainable Water and Sewage Systems Act, 2002 by developing a management plan for infrastructure maintenance and replacement.

The base data required for the Pavement Management System is generated as a regular function of the Infrastructure Management Systems Section and will be fully integrated with the Enterprise G.I.S. Database. On a general note, the application complies with the policies, standards and procedures as defined through the Corporate G.I.S. initiative.

The necessary financial provisions in the Engineering and Public Works Department's budget have been previously established and approved by Council. Those previously approved projects of similar scope have been consolidated into Capital Project Number 1536-0-04 Pavement Management Software System and there is sufficient funding available.

### **Relationship to Vaughan Vision 2007**

This report is consistent with the priorities previously set by Council and the necessary resources have been allocated and approved.

#### *Service Delivery Excellence*

The Pavement Management Software System will assist Staff to develop service levels that are attainable and measurable and communicate the service levels to Council and the Community.

#### *Technology and Innovation*

The proposal meets the requirements for Technology and Innovation based on conformance with the policies, standards and procedures as defined through the Corporate G.I.S. Initiative.

### **Conclusion**

Requests for Proposal (RFP04-142) for Pavement Management Software System and related services have been received and evaluated by City of Vaughan stakeholder departments in an effort to reach consensus in the selection process.

The proposal from Deighton Associates Ltd. in the amount of \$241,829.13 (applicable taxes included), received the highest evaluation scoring and is qualified and compliant. It is recommended by Staff that this proposal be accepted.

The necessary provisions in the Engineering and Public Works Department's budget have been made and approved by Council.

### **Attachments**

None

### **Report prepared by:**

Denny S. Boskovski, Infrastructure Management Systems Supervisor, ext. 3105

Respectfully submitted,

Bill Robinson, P. Eng.  
Commissioner of Engineering and Public Works

Gary Carroll, P. Eng.  
Director of Engineering Services

DSB/mc