

Committee of the Whole (2) Report

DATE: Tuesday, November 9, 2021

WARD(S): ALL

TITLE: ACQUISITION OF A TRAFFIC DATA MANAGEMENT SYSTEM

FROM:

Zoran Postic, Deputy City Manager, Public Works

ACTION: DECISION

Purpose

To seek Council approval to negotiate a single source procurement of a traffic data management system and for annual support services.

Report Highlights

- At the March 10, 2021 Council meeting, Council endorsed the MoveSmart Mobility Management Strategy (MoveSmart). At the core of the strategy is the traffic data management program that includes implementing a traffic data management system.
- The Traffic Engineering Software package (TES), provided by TES Information Technologies, has an all-in-one solution for traffic and road safety data management and analysis.
- York Region, and many other prominent GTA municipalities, use TES. Working with TES will provide a harmonized data management system that integrates the traffic information along both the local and regional road network, and facilitates information sharing with strategic partners.

Recommendations

1. That staff negotiate a single source with TES Information Technology Ltd., for:
 - a. the purchase of a traffic engineering software (TES) in the amount of \$62,200 plus applicable taxes;
 - b. the initial data conversion and input costs of an estimated \$37,420; and
 - c. annual support services in an estimated amount of \$30,000 per annum.

Background

Efficient traffic data management allows the City to make evidence-based decisions and monitor traffic flows and trends. A traffic data management system has been identified as a foundational component of MoveSmart.

Council endorsed MoveSmart at the March 10, 2021 Council meeting. MoveSmart consists of four programs; 1. Road Safety, 2. Mobility Management, 3. Sustainable Mobility, and 4. Traffic Data Management, with 29 initiatives and a vision to create a safer, more efficient and sustainable transportation system. At the core of the strategy is the traffic data management program that includes implementing a traffic data management system.

Traffic data is critical to making informed decisions on the planning, design and modification of a transportation network. The City collects different types of traffic data to support its traffic engineering and transportation planning services. Data is currently located in various internal storage locations and is in multiple formats that prove challenging to synthesize, analyze and does not permit data sharing with other municipalities. Having a technologically advanced data management system with the ability to store, assess and analyze large amounts of data collections will improve the efficiency and effectiveness of traffic data management for decision making and monitoring of traffic flows and trends.

Previous Reports/Authority

[Extract from the Council Meeting of March 10, 2021 – Item 1, Report No. 10 of the Committee of the Whole \(Working Session\)](#)

Analysis and Options

TES Information Technologies has an all-in-one solution for traffic and road safety data management and analysis.

The Traffic Engineering Software package (TES) provided by TES Information Technologies Ltd. is an all-in-one solution for traffic and road safety data management that contains analytical tools that will equip the City with the most functional software for its traffic safety analysis. TES is designed to analyze traffic data, which includes speed, volume, collision, and safety data along road networks, and extrapolates the findings via a reporting and dashboard mechanism. TES is based on the Ontario Motor Vehicle

Accident Report form, consistent with the Ontario Ministry of Transportation (MTO) collision reporting system. TES Information Technologies Ltd. also provides support and maintenance, by providing continuous updates to the software. TES can be integrated with the City's GIS system and road infrastructure data. York Region, and other prominent municipalities, including the City of Markham, City of Brampton, and the Region of Peel, have all determined that TES has the functional software necessary to meet traffic safety business requirements. The software is user friendly and has excellent data management and analytical capability.

York Region and other municipalities are using TES. Working with TES will facilitate critical information sharing and collaboration and strengthen partnerships with York Region, Peel Region and other key municipalities.

York Region operates TES and is working on a TES enhancement project inclusive of the development of a road safety performance function, including updating the road network and the development of key functions, such as collision reporting and speed dashboards. By utilizing TES, the City will benefit from the development already completed by York Region. This will allow the City to connect to the York Region data management system and to integrate and exchange the traffic information pertaining to both the local and regional road networks.

TES is the most widely used traffic software in the Greater Toronto Area and is currently being utilized by York Region, City of Markham, City of Richmond Hill, Town of Newmarket, MTO, Peel Region, Town of Caledon, City of Ottawa, City of Hamilton, and the City of Mississauga. Utilizing the same software system as neighbouring municipalities, will be critical to facilitate data sharing between municipalities and integrate traffic safety initiatives.

TES will enable the City to readily analyze the data. TES, from TES Information Technologies Ltd., will support York Region's data management system and enable a coordinated traffic data management system and the implementation of integrated solutions. It will also strengthen partnerships and information sharing between other key partners and municipalities.

Staff have consulted the Office of the Chief Information Officer (OCIO) regarding the procurement of TES and is in support of the TES solution.

Financial Impact

The capital cost associated with the purchase of TES from TES Information Technologies Ltd is estimated to be \$62,200 plus applicable taxes and is funded from the approved capital project RP-6769-18. A data conversion service is required to convert and input the 2016 to 2021 data into the system. The cost of the initial data conversion and input is estimated to be \$37,420 and is supported in the approved 2021 Transportation and Fleet Management Services Operating Budget. The on-going cost to maintain the TES system and the service to convert traffic data into the TES system is estimated to be \$30,000 per annum and will be incorporated into future year operating budgets through the budget process. In accordance with the Corporate Procurement Policy, a single source procurement with a contract value greater than \$100,000, Council approval is required.

Table 1: TES Traffic Data Management System

Category Item	Estimated Cost
TES Data Management System (one-time)	\$62,200
Data conversion services (one-time)	\$37,420*
Annual Maintenance and technical support, data conversion (starting 2 nd year)	\$30,000**

Notes:

**Data conversion services will be subject to the number of data counts.*

***A data needs assessment will be undertaken in 2022 to establish baseline data across City street network. Future years maintenance and technical support and data conversion costs may be subject to indexing.*

Broader Regional Impacts/Considerations

City staff are working in collaboration with York Region to identify a harmonized traffic data management system to strengthen information sharing and improve coordination between the City and York Region's traffic management programs. York Region, the City of Markham, the City of Richmond Hill, the MTO, Peel Region, the City of Brampton, the City of Mississauga, and the Town of Caledon are all TES users. Utilizing the same data management system with neighbouring municipalities will not only strengthen partnerships and information sharing but will also allow for integrated traffic safety solutions to be implemented with strategic partners, such as York Region.

Conclusion

Staff recommends the negotiation of a single source to procure TES and the supporting technical services from TES Information Technologies Ltd. This will result in operational improvements and better data management, which will facilitate data driven decisions, improve efficiencies and result in improved traffic safety solutions for the City of Vaughan. As York Region and neighbouring municipalities are currently using TES, there will be strengthened partnerships and information sharing between municipalities and improve the implementation of road safety initiatives across the City.

For more information, please contact:

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Attachments

N/A

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