

Clause 6 in Report No. 15 of Committee of the Whole was adopted, without amendment, by the Council of The Regional Municipality of York at its meeting held on November 16, 2017.

6

Amendment to the Agreement for Winter Maintenance  
Automated Vehicle Location System

Committee of the Whole recommends adoption of the following recommendations contained in the report dated October 18, 2017 from the Commissioner of Transportation Services:

1. Council authorize that the current agreement between the Region and DM&T Services Ltd. for equipment, hosting fees and implementation services be amended to increase the original agreement price from \$963,810 by the following amounts, excluding taxes:
  - a) \$137,755 for roads patrol system equipment;
  - b) \$202,140 for equipment on contractor-owned winter maintenance vehicles; and
  - c) \$320,525 for on-going hosting and maintenance fees for a total agreement price of \$1,624,230.
2. Council authorize the Commissioner of Transportation Services to execute the necessary amendment to the current agreement.

---

Report dated October 18, 2017 from the Commissioner of Transportation now follows:

1. Recommendations

It is recommended that:

1. Council authorize that the current agreement between the Region and DM&T Services Ltd. for equipment, hosting fees and implementation services be amended to increase the original agreement price from \$963,810 by the following amounts, excluding taxes:

Amendment to the Agreement for Winter Maintenance  
Automated Vehicle Location System

- a) \$137,755 for roads patrol system equipment;
- b) \$202,140 for equipment on contractor-owned winter maintenance vehicles; and
- c) \$320,525 for on-going hosting and maintenance fees for a total agreement price of \$1,624,230.

2. Council authorize the Commissioner of Transportation Services to execute the necessary amendment to the current agreement.

## 2. Purpose

This report seeks Council approval to amend the current agreement with DM&T Services LTD. (DM&T) for additional equipment, hosting fees and implementation services for a roads patrol system. The amendment is also required for the automatic vehicle location (AVL) system installed on contractor-owned winter maintenance vehicles. Ownership of equipment, compatibility and integration of the roads patrol system with the existing equipment and system is a key consideration for the proposed amendment. As per the Purchasing Bylaw 2017-30, Council approval is required as costs associated with the proposed amendments are greater than the available scope and contingency under the current agreement.

## 3. Background

Road maintenance standards are set out by the Province of Ontario

Ontario municipalities are required to maintain roadways to the minimum maintenance standards defined in Ontario Regulation 239/02. Automated vehicle location and road patrol systems provide improved vehicle monitoring and tracking capabilities that can be used to demonstrate compliance with the regulation. Compliance with the standards protects the Region against liability claims associated with road conditions. The onus is on the Region to provide evidence that Regional roads are maintained as per the standards.

## Amendment to the Agreement for Winter Maintenance Automated Vehicle Location System

In August 2016, DM&T Services LTD. was awarded the contract for an AVL system for winter maintenance vehicles

The AVL system allows tracking and monitoring of winter maintenance activities such as plowing, salting and sanding, which ensures compliance with minimum maintenance standards. A request for proposal for implementation of an AVL system on roads winter maintenance vehicles was issued in April 2016. In [August 2016](#), DM&T Services LTD. was awarded the contract following a competitive process as per the Purchasing Bylaw. The contract included equipment, software licensing, hosting, implementation services and maintenance support. Provisions were also made to install the AVL system on contractor-owned winter maintenance vehicles, based on high level estimates.

In October 2016, in anticipation of the winter season, staff accelerated deployment of the AVL system to include contractor-owned winter maintenance vehicles to enable tracking and monitoring of all Regional snow plowing activities. Implementation costs for the AVL system on contractor-owned winter maintenance vehicles were higher than the provisions made in the DM&T agreement.

The AVL system is operational on all Regional and contractor-owned winter maintenance vehicles, providing many benefits to the Region

The Region now tracks and monitors winter maintenance activities using the AVL system. Operational data is captured in a central system and includes information such as vehicle location, speed, plow position, spreader rate, road temperature and dash camera photos. Some of the expected system benefits include the ability to:

- Verify contractors are meeting contractual obligations, including the Region's minimum maintenance standard
- Monitor and analyze the operational activities and identify areas for improvement
- Archive data that may protect the Region against future claims based on past incidents

#### 4. Analysis and Implications

Amendment to the agreement is required to cover the costs of AVL system (equipment and hosting fees) installed on contractor-owned winter maintenance vehicles beyond the estimated costs

The agreement with DM&T included an estimate for installation of the AVL system on contractor-owned winter maintenance vehicles. Installation costs were higher than estimated costs. An amendment is required to cover the additional costs of equipment and hosting fees.

The Region will retain all AVL system equipment installed on contractor-owned winter maintenance vehicles at the end of their current contract.

The Region has been exploring options for an automated tracking and monitoring system for their roads patrol activities

The roads patrol system will allow tracking and monitoring of maintenance activities and ensure compliance with minimum maintenance standards. Maintenance activities include:

- Capture of roadway deficiencies
- Daily patrol log recording
- Service request and work order creation
- Management of work order status and resource time
- Video capture using forward-facing dash-mounted cameras on all patrol vehicles

The roads patrol system will provide the following benefits to the Region:

- Ease of demonstrating compliance with minimum maintenance standards, as data will be electronically available; staff currently review paper-based records to provide information when needed
- Provide evidence of patrol activities and hence, compliance with minimum maintenance standards to protect the Region against claims
- Optimise road patrol routes and fleet operations using historical data

## Amendment to the Agreement for Winter Maintenance Automated Vehicle Location System

- Single integration with the Region's asset management system for both the winter maintenance and roads patrol systems
- Reduce time required for operators to manually update work order details at the yard location

DM&T also supplies a roads patrol system which meets the operational needs of the Region

DM&T is also the supplier of a roads patrol system. As part of the current DM&T winter maintenance AVL agreement, staff conducted a two-week pilot of the roads patrol system and found Regional operational needs could be met. The roads patrol system also provides the benefits described above.

The costs of similar solutions were reviewed, but software licensing and equipment costs revealed the DM&T solution provided better value because the existing AVL equipment can be used and the base software costs are already included in the current agreement.

An amendment of the current agreement to implement the roads patrol system is recommended as it is compatible with existing equipment and central management software

Consideration was given to other roads patrol systems. It is recommended that the roads patrol system supplied by DM&T be implemented on Regional patrol vehicles. The following benefits and cost savings to the Region would be realized:

- One system for tracking and monitoring both winter maintenance and roads patrol activities with consistency and efficiency
- One set of equipment installed by the same vendor, optimizing use of available space for installation of equipment in the operator area and associated cost savings
- Consistent user interface for operator interaction with both systems
- Operational costs savings due to the use of one SIM card for the data communication network
- Operational costs savings as the Region will have to maintain only one central system and one set of spare parts for maintenance

Amendment to the Agreement for Winter Maintenance  
Automated Vehicle Location System

- A consolidated data source for roads operations to minimize additional data preparation required for analysis

5. Financial Considerations

Table 1 provides a summary of the estimated costs for the equipment, hosting fees and implementation services.

**Table 1**  
**Additional Equipment and Hosting Costs for 2017-2021**

Description	Costs
Equipment for roads patrol system	\$ 137,755
Equipment for contractor-owned winter maintenance vehicles	202,140
Additional hosting and maintenance fees	320,525
Total	\$ 660,420

Staff has researched similar systems installed elsewhere. The proposed costs for implementation of a roads patrol system are reasonable and comparable. Considering the benefits and cost-savings of an integrated system, staff believes the proposed system will bring good business value to the Region.

Sufficient funds for the project are included in the 2017-2018 approved capital budget and outlook. Beyond 2018, costs will be included and addressed as part of the annual budget process.

6. Local Municipal Impact

Monitoring and tracking of winter maintenance and patrol activities will allow staff to ensure that minimum maintenance standards, as set out by the Province, are met.

Amendment to the Agreement for Winter Maintenance  
Automated Vehicle Location System

7. Conclusion

DM&T has been providing reliable and consistent services since implementation of the automated vehicle location system on winter maintenance vehicles last year. It is recommended that the current agreement with DM&T Services LTD. be amended to implement a roads patrol system and the AVL system installed on contractor-owned winter maintenance vehicles for a total cost of \$660,420, excluding taxes.

For more information on this report, please contact Rajeev Roy, Director, Business Planning and Technology at 1-877-464-9675 ext. 75682.

The Senior Management Group has reviewed this report.

October 18, 2017

7935056

Accessible formats or communication supports are available upon request