



City of Eagan Automated Vehicle Location

Project Title City of Eagan Automated Vehicle Location

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Problem Maintenance managers in the City of Eagan have historically been challenged to allocate and reallocate resources during winter snow and ice control operations. Assigned drivers and snow routes depend upon problem-free operations to ensure that resources are spread evenly and safely throughout the community's streets, sidewalks, and trails. When problems occurred, managers were forced to depend on radio and telephone communication to obtain status information and reallocate workers and equipment.

Solution The city equipped part of the winter vehicle fleet with automated vehicle location (AVL) technology, allowing managers to observe real-time operations from any computer terminal and adjust resources immediately via telephone and radio communications.

Procedure The City of Eagan implemented a prototype AVL program during February of 2008, and 12 permanently mounted units were installed in half of the city's winter vehicle fleet. After the equipment vendor indicated the software could track additional real-time and reportable information, the permanent installations were removed and modified into interchangeable portable units. The equipment vendor then created "button boxes" that drivers could use while in the field. Transmitter/receiver units were used to send a signal to the software program, creating accurate GPS data points at locations where the buttons were pressed.

Results Maintenance operations managers successfully used the AVL equipment to monitor plow progress and allocate resources to maximize efficiency and public safety. Throughout the prototype period, city staff also discovered numerous additional uses for the system, particularly using the button boxes. For example, AVL equipment allowed snow route employees to gather data about potholes and sightline issues instead of sending staffers out in early spring to identify problem areas. The system was also used to identify winter parking violations and map their locations.

Approximate Cost \$8,000

Implementation Due to budget restrictions, the City of Eagan is proposing to continue funding for the year-round use of only four AVL units. If funding is available, the units will be used for many data point collection uses and partial management of snow and ice operations. The system will also be used in emergency response situations, such as wind storms, to gather real-time damage information.

Status Complete

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