

Memorandum

TO: Fox Cities Transit Commission, City of Appleton Common Council

FROM: Ron McDonald, General Manager

DATE: January 17, 2023

RE: Award Recommendation for Computer Aided Dispatch/Automatic Vehicle Location (CAD/AVL) System

BACKGROUND

Valley Transit's fixed-route bus service has utilized CAD/AVL system technology since 2011. A CAD/AVL system is comprised of onboard hardware and software providing vital service data to multiple audiences and platforms. The hardware installed on every vehicle includes a rugged tablet installed near the driver and communication cabling connecting the tablet to onboard systems (destination sign, farebox, automatic passenger counters, interior LED sign and announcement system). The CAD/AVL system is also connected to mobile cellular networks to send and receive data from a cloud-based server. CAD/AVL systems also include a software component. The software includes a web-based interface providing Valley Transit staff with vehicle location maps, access to operational data and other service oversight tools that help to maintain safe and effective service. The software also provides service data and other travel information to applications used by transit riders.

A significant benefit of a CAD/AVL system is access to real-time service data for riders and Valley Transit staff. This data includes accurate vehicle location (updating every 4 seconds); ADA-required onboard stop announcements; boarding & alighting data at each bus stop location; schedule and predictive bus stop arrival times; and various types of operation data (miles, hours, etc.) needed for reporting. The CAD/AVL system also serves as a central hub in the vehicle and ties together multiple onboard systems to ensure coordination of different functions. For example, the onboard tablet accesses current route and bus stop sequence information from a server using onboard cellular data and combines this with geographic coordinates from GPS. This layered data is relayed to onboard equipment, like onboard bus stop announcements, fare collection and destination sign messaging, and end-user applications.

Drivers interact with the CAD/AVL system from the supplied touch screen rugged tablet. Drivers use the tablet to login, logout, select route work, receive info from dispatch and receive schedule adherence feedback to aid on-time performance.

Valley Transit purchased and installed its first CAD/AVL system in 2011 from a vendor called Trapeze. In 2018, the contract was awarded to DoubleMap (current vendor). The full DoubleMap product is being discontinued by the vendor and will no longer be supported after 12/31/2023, which necessitated the search for a replacement system.

In preparation for this procurement, Valley Transit staff developed a request for proposal (RFP) document to solicit proposals from vendors. As part of this process, staff reviewed existing products in the market and other transit properties' RFP documents. City of Appleton IT staff also reviewed the project in the planning stages and provided feedback.

The RFP document was sent directly to vendors who were known suppliers; posted on the State of Wisconsin's Vendornet system; and advertised in print and online with the *Post-Crescent*, *Green Bay Press Gazette* and the *Oshkosh Northwestern*. Proposals were due on December 15, 2022. Five proposals were received prior to the required deadline: Equans (Sandy Springs, GA), TransLoc (Durham, NC), Strategic Mapping, Inc (Tampa, FL), GMV (Los Angeles, CA) and Passio (Atlanta, GA).

ANALYSIS

Each proposal was evaluated based on the vendor's compliance with the stated specifications, product capabilities, experience, qualifications, training, support & price. GMV proposal was rated highest after the written proposal evaluation and was subsequently moved forward in the evaluation process. GMV was then invited to provide a product demonstration on January 11, 2023. After consideration of the written proposal, cost proposal and product demo, the evaluation team unanimously concluded GMV's proposal provided the greatest overall benefit for Valley Transit.

GMV's written proposal clearly described the system capabilities in relation to the scope of work, implementation, system support and training process. GMV's product utilizes the same rugged tablet model currently in service for Valley Transit, which provides a cost savings for the project. By utilizing the same tablet, the driver will interact with the same display and input similar data on the touchscreen. All other proposers required the purchase of a new logic unit (onboard computer) and mobile data terminal (driver display) for each vehicle. This new equipment added expense and was often supplied solely by the proposer, which would limit competition for hardware replacement. This was a significant concern for the evaluation team.

All GMV references provided positive feedback on the system's reliability, functionality, training, and support. GMV's current customer base focuses small to mid-size transit systems, which should benefit Valley Transit as the product evolves.

A key factor in selecting the next CAD/AVL system was integration with existing onboard equipment and other third-party software used by Valley Transit. GMV provided ample examples of successive integration with current systems onboard Valley Transit vehicles and other software products used by Valley Transit, like Optibus (scheduling & planning) and TransTrack (data management system).

GMV's system includes a multi-channel notification system, where staff can formulate messaging in the software and instantly share it with several connected platforms (twitter, transit app, Google, website message widget, onboard signage and onboard annunciation). The evaluation team found this feature to be a great benefit when communicating service changes or detours. The new system also includes: a bus tracking public website; automatic voice announcement system; automatic passenger counting system; GTFS Real-Time feed generation (data needed for Google Transit); live video streaming for dispatch; driver messaging; schedule adherence feedback for drivers and dispatchers; cloud-based administrative software; and access to data in reports or raw format.

GMV proposed a 6-month timeline for implementation. Depending on contract execution, Valley Transit anticipates full system roll-out in the third quarter of 2023.

FISCAL IMPACT

The project will have a total year-one fiscal impact of \$366,510. This amount includes \$331,420 in system set-up and capital costs, as well as, \$35,090 for an annual software licensing fee. In contract years 2-5, GMV's annual software fee is \$35,090. Valley Transit requests an additional 10% contingency for unknown costs expected during implementation. This brings the total 5-year project cost to \$557,557.

Existing federal grants would cover 80% of the system set-up and capital costs. The remaining cost would be expensed from Valley Transit's annual budget. Ongoing software maintenance fees in contract years 2-5 are included in Valley Transit's annual budget and are paid for by State and Federal grants (60%) and local share (40%).

RECOMMENDATION

Staff recommends authorization for Valley Transit to enter into a contract with GMV to provide a Computer Aided Dispatch/Automatic Vehicle Location System.