

EXECUTIVE SUMMARY

Billings MET Transit contracted with the Western Transportation Institute, located at Montana State University-Bozeman (WTI/MSU), to assist in an analysis of the technology currently used in MET Transit's paratransit operations, MET Specialized Transit (MST).

Billings MST currently utilizes Intellitrans software to schedule rides for paratransit clients and to create reports to track the system. Unfortunately, this software is no longer supported. The Western Transportation Institute reviewed documents, talked to transportation providers, and selected three vendors to make presentations to MET Transit. The software vendors that were selected for presentations were: RouteMatch, StrataGen and Trapeze.

Staff from the Western Transportation Institute participated in the demonstrations, and inquired about the technical aspects of the software, such as routing algorithms utilized, and other aspects of the software that might affect its ability to provide a feasible solution to MST.

In addition to the software analysis, MST also asked WTI to review the benefits of adding automatic vehicle location (AVL) and Mobile Data Communications (MDC) or Mobile Data Terminals (MDT). To review the benefits of these additional technologies, the Western Transportation Institute performed a literature review and incorporated those findings into this report.

The purpose of this project was not to select a specific vendor to supply software or AVL/MDT technology, but to provide general recommendations to MET Transit. WTI has compiled general cost information, based on specification supplied to the vendors by WTI. Further, WTI has listed in this report specific references for each vendor, and encourages MET Transit to call these references, using the questions developed by WTI (Appendix B).

It is the recommendation of the author that MET Transit pursue acquiring new computer-aided dispatching and scheduling software. This recommendation is based on the following factors: MST's current software is no longer supported, and the software's automated scheduling function has never performed adequately. In addition, the number of ride requests has increased to a point where the current software is no longer able to efficiently process the requests.

Further, new software could reduce the number of vehicles in-service by as much as ten percent, and incorporating AVL and MDC technology could increase the number of shared rides, further increasing savings (1). This increase in efficiency would allow MST to provide more rides for the same cost. This fact is important, as there is an increasing demand for MST's services, and annexation of new land into the city leads to an increased service area for MST. These technologies should also improve on-time performance, leading to increased customer satisfaction.

The Western Transportation Institute looks forward to its partnership with MET Transit, and hopes to be involved in the process of selecting software and AVL/MDT vendors, implementation of the new technologies, and an evaluation of the new system.