



**REGIONAL TRANSPORTATION COMMISSION**


*Public Transportation · Streets and Highways · Planning*

May 20, 2011

**AGENDA ITEM 4.7**

**TO:** Regional Transportation Commission

**FROM:** Tina H. T. Wu, AICP  
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Executive Director

**SUBJECT: Automated Passenger Counting Reporting Software Request for Proposals**

**RECOMMENDATION**

Approve the Request for Proposal (RFP) for Automated Passenger Counting reporting software.

**SUMMARY**

RTC currently uses the Trapeze ITS TransitMaster™ software to dispatch its fixed-route and paratransit operations. The software functions extremely well for vehicle dispatching and daily operations; however, the reporting modules are inflexible and do not easily track key data used for transit planning purposes. For example, current TransitMaster reports do not provide peak passenger load by hour, by route, or dwell time at timepoints by segments. This data must be manually recorded through survey efforts or time consuming customized reports. An improved reporting system will easily allow staff to examine specific route segments in detail. The new software will provide improved data reporting and monitoring capabilities that will result in more efficient routing and scheduling of the fixed route system. This data will also be particularly useful in monitoring the new fixed-route contractor's performance in turn-key operations.

**FISCAL IMPACT**

The estimated fiscal impact of the automated passenger counting reporting software is \$50,000. Sufficient funds for this project were included in the FY 2011 RTC Budget.

**PREVIOUS ACTIONS BY BOARD**

This project was included in the FY 2011 Budget approved by the Board in May 2010.

### 3. SCOPE OF WORK

3.1 The Contractor shall install a statistical software package on a CITRIX server that is capable of reading GPS and APC data off the RTC RIDE's ITS network. The statistical package shall be set up to utilize a Graphical User Interface (GUI). The statistical software package shall be capable of filtering data by: Weekday/Saturday/Sunday/Holiday, a range of dates, and by a time range. Reports will be capable of export to Microsoft Excel, HTML, or text files.

3.2 The Contractor shall provide the following reports accessible using the GUI in the software package:

- a. Automated Passenger Counter (APC) sample report – Trip sampling status for input filter range.
- b. Ridership Reports:
  1. Stop Summary – Average boardings and alightings of APC observations for the input filter ranges, including latitude/longitude coordinates. Report must be capable of expanding data to “fill in” missing trips for the requested filter ranges.
  2. Ride Check – NTD ride check format.
  3. Trip Summary – For each trip: total passengers, total trip time, passengers per revenue hour, passenger miles, and maximum observed load.
  4. Ridership by Timepoints Segment – Ridership between timepoint segments.
  5. Load Factor by Timepoint Segment – Average load between timepoint segments.
  6. Running Time by Timepoint Segment – Average running time between timepoints.
  7. Vehicle Speed (MPH) by Timepoint Segment – Average mph between timepoints.
  8. Passenger Miles – Calculation of passenger miles per route and system.
- c. Productively Reports
  1. Route Ranking – Provide passenger count by route; rank routes by passenger per revenue hour.
  2. Trip Ranking – Provide passenger count by trip; rank trips by passengers per revenue hour.
  3. Stop Productivity – Provide boardings/alightings by stop; rank boardings/alightings by stop.
  4. Deadhead Trips – Running time and miles from garage to start of route and from end of line (EOL) returning to garage.
  5. EOL Actual vs. Scheduled Dwell Times – Provide a comparison between the actual dwell times at EOL with the scheduled dwell times.
  6. On-Time Performance – Percentage of timepoints meeting “on-time” criteria. Compare actual running times against scheduled running times between timepoints to identify possible improvements.
- d. Other Reports
  1. Unbalanced Load Report – Report where alightings do not equal boardings per trip.
  2. Uncorrelated Data Report – Data that could not be assigned to a stop, but and/or run/block.

3.3 NTD Reporting – The software package should provide the following NTD reports:

- a. Aggregate ridership
- b. Ridership per route
- c. Aggregate passenger miles, and
- d. Passenger miles per route

3.4 Training – The Contractor shall provide a training plan on use of the reporting package and IT administration.

3.5 Deliverables –

- a. Installation of a statistical software package capable of reading APC data from RTC's ITS network
- b. A set of specific reports accessible via GUI.
- c. National Transit Database acceptable sampling plan and reports to meet NTD reporting accuracy criteria
- d. Training.