

**Metro**

February 15, 2006

**TO:** BOARD OF DIRECTORS

**THROUGH:** ROGER SNOBLE  
CHIEF EXECUTIVE OFFICER

**FROM:** JOHN B. CATOE, JR.  
DEPUTY CHIEF EXECUTIVE OFFICER

**SUBJECT:** ONE-DAY TOTAL PASSENGER CHECK ON ALL RAIL  
LINES

**ISSUE**

Director Burke requested an evaluation of the impact of a one-day (work day) total passenger count on all rail lines.

**DISCUSSION**

Each day, Metro staff counts boardings on randomly sampled service for all bus and rail lines. The samples required for this analysis are collected by Schedule Checkers who are members of the United Transportation Union. These samples are used to scientifically estimate monthly, quarterly, and annual ridership on the Metro system. Over the course of one year, the total samples collected are sufficient to produce boardings estimates that comply with Federal Transportation Authority requirements. The Federal Transportation Authority requires a survey methodology with a minimum precision of plus or minus 10%. The methodology used by staff is designed to provide a precision of plus or minus 2%, far surpassing Federal Transportation Authority requirements.

Based on this methodology, for the month of December 2005, weekday rail boardings are listed below by rail line:

- Red Line – 113,825
- Blue Line – 75,177
- Green Line – 32,383
- Gold Line – 14,417

A complete one day count of boardings on the rail system would require a Schedule Checker to ride in every rail car during the entire operational day. Such an effort would require a staff of 300 people working a full-time shift on the given day. Without special dispensation from the United Transportation Union, the required staffing must be pulled from the ranks of employees who

normally operate trains or buses. Based on this consideration, the direct labor for this effort would be approximately \$75,000.

In addition to the direct labor for the one-day check, labor must also be planned for training and supervision of the temporary Schedule Checkers. Labor for administrative work must be planned to accumulate and summarize the data collected by the temporary Schedule Checkers. These efforts are estimated to add \$25,000 to the cost of the project.

Cost considerations aside, there are practical concerns with the information resulting from a one-day count on all rail lines. One factor to consider is the fact that there is no such thing as a typical work-day. It is known that weekday boardings vary by day of week. Friday ridership is lower than Monday ridership; Wednesdays are higher than Tuesdays. Seasonal factors also affect the ridership; August is normally lower than October. Good weather increases ridership and bad weather suppresses it. Because of these factors, the information collected will only be representative of the day the sample was collected. Weekly, monthly, or yearly results could not be inferred from the analysis.

Because of the accuracy of current rail ridership estimation methods, the potential impact to manpower availability, and the limited application of any data derived from this passenger counting methodology, staff does not recommend undertaking a one-day rail passenger count. However, if authorized by the Board, staff will prepare a plan to execute a one-day total passenger count on all rail lines.