

**Client: Denver RTD  
Location: Denver, CO**

The Denver RTD is in the process of implementing a multi-year comprehensive plan (FasTracks) that includes high speed rail lines, bus rapid transit service, and expansion and improvements to bus service and park-and-ride lots. CTG staff has provided assistance to RTD planning staff with various FasTracks-related operations and O&M planning tasks through a multi-year general consultant services contract that began in 2006. Tasks undertaken to date include:



- *Development of a Transit Operating Statistics Model.* A critical element in RTD's long-range transit planning efforts is the calculation of bus operating statistics. These statistics are needed to generate accurate estimates of bus O&M costs. Our staff developed a new spreadsheet model for RTD that simplifies the calculation of bus and rail operating statistics. The RTD Operating Statistics Spreadsheet Model was developed as a means to automate the process of converting TransCad ridership model output data into reasonable estimates of bus and rail operating statistics. This model was recently updated and recalibrated in 2009 for use in RTD's various corridor projects.
- *Development of an O&M Cost Model for FTA New Starts Submittals.* Using NTD data, we developed a variable O&M cost model for estimating project-related O&M cost impacts for FasTracks corridor projects. Cost estimates are identified by function (vehicle operations, vehicle maintenance, non-vehicle maintenance and general administration) and by type of cost (labor, materials/supplies, services, etc.). This model was recently updated and recalibrated in 2009 for use in RTD's various corridor projects.
- *Refinement of Service Plans and Development of O&M Cost Estimates for the West, East and Gold Line Corridors.* We have also been providing general service planning support in RTD's planning efforts for the West, East and Gold Line Corridors. Work tasks have included the documentation of transit service plan assumptions, the estimation of bus and rail operating statistics (using the Transit Operating Statistics Model described above), and the generation of O&M cost estimations (using the O&M Cost Model described above). These tasks were summarized in operating plan reports prepared as part of RTD's New Starts submittals to FTA. We have also assisted in the associated Bus Fleet Management Plans as required under the FTA New Starts program.
- *Rail Systems Plan Analysis.* CTG staff has also developed systems rail operating plans, generating estimates of rail fleet requirements and operating statistics, and have allocated rail fleet and O&M costs by corridor.

Work completed under this service planning support contract follows a long history of service plans and O&M cost estimation work that has been completed for the Denver RTD by CTG staff for various corridor projects since 1994.