



Florida Department of Transportation Research

Development of a Large Bus/Small Bus Decision Support Tool (Phase II)
BD549-39

When purchasing new buses, transit system managers want to choose vehicles that will improve efficiency and customer service in a cost effective manner. Transit agencies in recent years have begun to put into service buses that are smaller than the traditional 40-foot size. Agencies opt for the smaller buses because they appear to be more economical to buy, operate, and maintain, especially for routes with variable ridership and schedules. However, a software-based method for calculating the potential long-term costs of bus fleet vehicles has not been available until now.



Smaller buses are needed to serve more variable routes.

Researchers from the University of South Florida Center for Urban Transportation have developed a Bus Size Evaluation Tool (BSeT) that is designed to assess the relative long-term costs of a transit system's small and large buses. The Excel-based BSeT is designed to be

a user-friendly, easily-modified application to help agencies make bus purchase and deployment choices.

The researchers used data from five transit agencies in north, central, south, and Gulf coast Florida to create a representative composite fleet consisting of 562 large and 303 small diesel buses. The composite fleet data provided default values for average annual usage costs, including fuel, parts, and labor. BSeT users input data on the numbers of large and small buses in their fleets, vehicle passenger capacities, and current ridership numbers. BSeT can incorporate an agency's unique service needs and mandates.

BSeT analyzes the data and provides several trial fleet configurations for transit managers to compare and evaluate. A step-by-step user guide makes BSeT a flexible, easy-to-use tool that can help transit agencies of all sizes achieve cost savings.

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For more information, visit: <http://www.dot.state.fl.us/research-center>