

ABSTRACT

The population of Karachi is enormously expanded and hence various transportation issues have been observed. Major solution to all these issues is introduction of mass transit. BRT is widely used phenomena that dedicates to public service.

This project mainly focuses on two main aspects of Green Line BRT Operational plan that are fleet management and station management. An algorithm is proposed based on ITS which implements the best usage of digital technology. Data collection techniques are extracted from different research papers and reports. The analysis of data is conducted through comparison real time survey data and the data through feasibility reports.

The field surveys conducted were sample survey to better understand and evaluate the factors estimated from them. Different types of surveys include: boarding and alighting survey, OD survey, travel time survey and traffic count survey. The analysis of traffic data helped us estimate frequency, corridor capacity, fleet size, headway and total fleet. For station management we concluded for the proposed design of BRT corridor to be of three types: staggered, non-staggered and elevated. The capacity of each bus on this particular corridor is of articulated category i.e. 133 passengers.

For ITS implementation an inquest was regulated for its worldwide applications. This study concluded the best functional plan for BRT Karachi. This plan implements advanced technological devices that provide smart conducted to travel activities for users, vehicles as well as for roads.

Major outputs of the project include. A well-designed algorithm for ITS implementation in BRT Karachi. The Fleet management elements were calculated as par the high demand of corridor. The design of stations was elaborated such that minimal time is taken during boarding and alighting.