

Regular Bus Service or Regular Plus Express Bus Service?

Analysis of Mode Succession in a Public Transit Corridor

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Many transit corridors experience significant delays and are often operating at or near capacity; A single mode may not be able to provide either the required capacity or improved Level of Service (*LOS*) in major, heavily traveled corridors. As a result the transit modes may not be well *accepted by the travelling public*. Transportation improvements are needed in order to meet growing travel demands, sustain mobility and reduce congestion in developing corridors.

The concept explored in this paper is a mode evaluation for transition from low performance to high performance transit technologies. The basic alternative transportation modes, Regular Bus, and Regular plus Express Bus, are realized through an elementary analytical model for evaluation of transit modes which can be further applied for other higher order transit modes. The characteristics of transit modes such as speed, capacity, dynamic properties, operating costs, loading/unloading times and feeder systems are mathematically assessed. This model optimizes the mode selection and evaluates the best possible transition point in terms of transit system requirements for both the users (in terms of waiting and riding time), and operator for a given corridor over time. It encourages transit users and operators to select a better mode of service with significant impacts on level of service, capital and operating costs, and transit market development.

Key words: *Transit Modes, Transit Corridors, Mode Selection, Transit decision Criteria, Capacity, Travel Time*

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