

Document Summary

FREEWAY MANAGEMENT AND OPERATIONS HANDBOOK

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Summary of the Work

This report is intended to be an introductory manual – a resource document that provides an overview of the various institutional and technical issues associated with the planning, design, implementation, operation, and management of a freeway network. Transportation is becoming increasingly customer-driven, with a need to view the network on a more regional scale. The handbook also discusses that freeway management and operations extend beyond ITS and electronic systems. Several processes have been instituted for developing transportation programs, planning and prioritizing potential improvements, and defining individual projects and strategies. In essence, motorists (and transit riders) want to know what to expect – such knowledge being a key attribute of “mobility.” Having accurate information about roadway performance significantly improves the perception of a trip because information allows motorists to make decisions that give them the perception of having more control over their life. Knowing the extent and duration of congestion not only gives the motorist better options, but it removes a significant stress point - the unknown. In order to achieve that, managing the elements of the network itself (e.g., asset management), and not just the traffic flow is a key component. Understanding how the public uses freeways and how operating agencies manage their use is crucial to maintaining operational efficiency.

This document states that the consequences of congestion are much more serious to a community than only local traffic impacts. Economic growth, quality-of-life, and environmental quality are some of the related issues. New construction may only moderate existing congestion rather than eliminate it because building sufficient capacity to meet existing levels of demand is not feasible. A variety of government- and employer-sponsored programs can be designed to reduce vehicle trips during congested periods and in congested locations. These include flexible work schedules that allow employees to travel off-peak (or work at home), amenities to improve the safety and efficiency of biking and walking, ride-matching services for vanpools and carpools, community-based car-sharing, employer-subsidized transit passes, guaranteed emergency rides home for transit users, and incentives to decrease employer-paid parking.

Applied to Practice

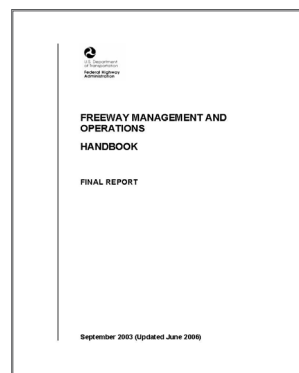
This document is a comprehensive guide on freeway operations with information related to ITS strategies. It can be useful to traffic engineers or agencies who are helping to deploy and evaluate such strategies.

Related Work

The Freeway Management and Operations Handbook relies heavily on other references for many of the concepts and some of the text included herein. As a general rule, the specific reference(s) is identified at the end of the associated sentence / paragraph / bullet list with a reference number in parenthesis.

Project Website

http://ops.fhwa.dot.gov/freewaymgmt/publications/frwy_mgmt_handbook/index.htm



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