

Urban Corridor Management Strategy Based on Intelligent Transportation System

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Abstract : Intelligent Transportation System (ITS) is the application of technology for developing a user-friendly transportation system for urban areas in developing countries. The goal of urban corridor management using ITS in road transport is to achieve improvements in mobility, safety, and the productivity of the transportation system within the available facilities through the integrated application of advanced monitoring, communications, computer, display, and control process technologies, both in the vehicle and on the road. This paper attempts to present the past studies regarding several ITS available that have been successfully deployed in urban corridors of India and abroad, and to know about the current scenario and the methodology considered for planning, design, and operation of Traffic Management Systems. This paper also presents the endeavor that was made to interpret and figure out the performance of the 27.4 Km long study corridor having eight intersections and four flyovers. The corridor consisting of 6 lanes as well as 8 lanes divided road network. Two categories of data were collected on February 2016 such as traffic data (traffic volume, spot speed, delay) and road characteristics data (no. of lanes, lane width, bus stops, mid-block sections, intersections, flyovers). The instruments used for collecting the data were video camera, radar gun, mobile GPS and stopwatch. From analysis, the performance interpretations incorporated were identification of peak hours and off peak hours, congestion and level of service (LOS) at mid blocks, delay followed by the plotting speed contours and recommending urban corridor management strategies. From the analysis, it is found that ITS based urban corridor management strategies will be useful to reduce congestion, fuel consumption and pollution so as to provide comfort and efficiency to the users. The paper presented urban corridor management strategies based on sensors incorporated in both vehicles and on the roads.

Keywords : congestion, ITS strategies, mobility, safety

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