

Congestion Mitigation on an Urban Arterial through Infrastructure Intervention

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Abstract : Pakistan had experienced rapid motorization in the last decade. Due to the soft leasing schemes of banks and increase in average household income, even the middle class can now afford cars. The public transit system is inadequate and sparse. Due to these reasons, traffic demand on urban arterials has increased manifold. Poor urban transit planning and aging transportation systems have resulted in traffic congestion. The focus of this study is to improve traffic flow on a section of N-5 passing through the Rawalpindi downtown. Present efforts aim to carry out the analysis of traffic conditions on this section and to investigate the impact of traffic signal co-ordination on travel time. In addition to signal co-ordination, we also examined the effect of different infrastructure improvements on the travel time. After the economic analysis of alternatives and discussions, the improvement plan for Rawalpindi downtown urban arterial section is proposed for implementation.

Keywords : signal coordination, infrastructure intervention, infrastructure improvement, cycle length, fuel consumption cost, travel time cost, economic analysis, travel time, Rawalpindi, Pakistan, traffic signals

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