

The Evaluation of Signal Timing Optimization and Implement of Transit Signal Priority in Intersections and Their Effect on Delay Reduction

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Abstract : Since the intersections play a crucial role in traffic delay, it is significant to evaluate them precisely. In this paper, three critical intersections in Tehran (Capital of Iran) had been simulated. The main purpose of this paper was to optimize the public transit delay. The simulation had three different phase in three intersections of Tehran. The first phase was about the current condition of intersection; the second phase was about optimized signal timing and the last phase was about prioritized public transit access. The Aimsun software was used to simulate all phases, and the Synchro software was used to optimization of signals as well. The result showed that the implement of optimization and prioritizing system would reduce about 50% of delay for public transit.

Keywords : transit signal priority, intersection optimization, public transit, simulation

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