Implementation of Congestion Management Strategies on Arterial Roads: Case Study of Geelong

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Abstract : Natural disasters are inevitable to the biodiversity. Disasters such as flood, tsunami and tornadoes could be brutal, harsh and devastating. In Australia, flooding is a major issue experienced by different parts of the country. In such crisis, delays in evacuation could decide the life and death of the people living in those regions. Congestion management could become a mammoth task if there are no steps taken before such situations. In the past to manage congestion in such circumstances, many strategies were utilised such as converting the road shoulders to extra lanes or changing the road geometry by adding more lanes. However, expansion of road to resolving congestion problems is not considered a viable option nowadays. The authorities avoid this option due to many reasons, such as lack of financial support and land space. They tend to focus their attention on optimising the current resources they possess and use traffic signals to overcome congestion problems. Traffic Signal Management strategy was considered a viable option, to alleviate congestion problems in the City of Geelong, Victoria. Arterial road with signalised intersections considered in this paper and the traffic data required for modelling collected from VicRoads. Traffic signalling software SIDRA used to model the roads, and the information gathered from VicRoads. In this paper, various signal parameters utilised to assess and improve the corridor performance to achieve the best possible Level of Services (LOS) for the arterial road.