

Applicability of HCM 2000 & 1986 to Determine the Level of Service in Urban Arterial Roads, Sri Lanka

*Dr. W.K.Mampearachchi¹, W.W.C.Jayasuriya², S.A.M.A.N.I.Senaratne³and
R.P.P.Sumanathissa⁴*

The objective of this research is to identify the applicability of Highway Capacity Manual (HCM) to determine the Level of service in urban minor arterial roads in Sri Lanka.

HCM has been developed by the transport research board, USA. Currently most of the local road development agencies use HCM for capacity analysis of roads. There have been no researches carried out to identify the applicability of HCM to the Sri Lankan condition. To depict the quality of service of the roads quantitative measures of a traffic stream are required. Level of Service (LOS) is a quality measure describing operational conditions within a traffic stream, generally in terms of service measures such as speed and travel time, freedom to maneuver, traffic interruptions and comfort.

Six LOS are defined based on service flow rates of roads. Letters designate each level from A to F with LOS A representing the best operating conditions and LOS F the worst. Though the local roads have acceptable LOS, the results obtained from both HCM 2000 and 1986 have not reflected it.

It is required to identify the factors which affect the LOS. For that a sample of two way - two lane roads were selected. For the selected sample flow vs. density curves have been developed by considering traffic data and speed survey data. Based on the literature findings and data collected from the field, six LOS for the urban minor arterial roads have been defined.

Keywords:

Authors Details;

1. Senior Lecturer, Department of Civil Engineering, University of Moratuwa, Sri Lanka, Tel: +94112650568(Ext.2024) , wasantha@uom.lk
2. ³ Undergraduate Student, Department of Civil Engineering, University of Moratuwa, Sri Lanka, Tel: +94 71 8053124, nrdsenaratne@yahoo.com
3. Undergraduate Student, Department of Civil Engineering, University of Moratuwa, Sri Lanka, Tel: +94 77 5436984, prageethran@yahoo.com
4. Undergraduate Student, Department of Civil Engineering, University of Moratuwa, Sri Lanka, Tel: +94 712782172, chamindijayasuriya@gmail.com