

THE EVALUATION OF SIGNALIZED INTERSECTION BY USING MKJI 1997 AND PTV VISSIM

(Case Study: Bumi Ayu intersection in Dumai City)

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Abstract

Dumai city which currently has a population of more than 350 thousand people, has also experienced an increase in the tourism development sector and other infrastructure, this has an impact on the growth of traffic at the Bumi Ayu 4 intersection, a performance evaluation is carried out which is expected to increase traffic flow in the future. The results of the analysis using the MKJI 1997 method obtained the largest capacity is on Sudirman road of 2040 pcu/hour and the smallest capacity is on Bumi Ayu road of 710 pcu/hour. From this capacity, the highest degree of saturation value is produced on Bumi Ayu road has a capacity value of 710 pcu/hour resulting in DJ worth 0.78 with an Level Of Service (LOS) is B and an average intersection delay is 36.14 sec/smp. It is concluded that there are almost problems with the existing conditions at peak hours, so improvements or other solutions need to be made to increase capacity.

Keywords: MKJI 1997, PTV Vissim, Degree of Saturation, LOS (Level OF Service), Capacity, Delay, Queue.