ABSTRACT

Title : Evaluation of Performance Signalized Intersection and Roads with MKJI Methods in Rs. Bella Intersection (Ir. H. Juanda Street) Bekasi City, Name : Anjar Ahmad Rizzal Fawzi, NIM : 41114310018, Lecturer : Widodo Budi Dermawan ST, M.Sc, 2018.

Latest data from the Badan Pusat Statistik (BPS) in 2016 concerning the number of motor vehicles according to the type seen in the previous 3 years, namely 2014, 2015, 2016 in total number of motorized vehicles, namely 114,209,260 vehicles in 2014, 121,394,185 vehicles in in 2015, 129,281,079 vehicles in 2016, and will likely increase every year. The city of Bekasi with its current population of > 3 million, including 40 percent of cars and 60 percent of motorbikes. The vehicle moves every day in the city of Bekasi. In urban areas, especially in the city of Bekasi, which in fact is a city that is quite dense and busy, many intersections are the source of congestion which causes very long lines. One of them is the intersection of Rs. Bella. This study aims to determine the performance of the Rs.Bella intersection and Ir. H. Juanda at this time. The data needed in the process of analyzing the performance of signalized intersections and road segments is primary data in the form of data on traffic flow conditions, road geometrics, and environmental conditions. As well as secondary data in the form of a map of location and population. And using the procedure for urban road analysis and signalized intersections that refer to (MKJI 1997).

From the survey results in the field and the results of the calculation of the data analysis that has been carried out, the results of the road segment of Ir. H. Juanda obtained the peak volume on Friday afternoon period with the degree of saturation (DS) of 0.73 including the level of service C. The highest traffic volume at the intersection of Rs. Bella on Friday 18.00-19.00 WIB. The results of the existing data analysis, obtained Level of Service (LOS) F, which means high delay value, shows a long cycle time and a high vehicle ratio is shown from the length of the cycle time is 114 seconds with 3 phases of traffic with a degree of saturation (DS) the biggest reached 1.60 which already exceeded the figure indicated by MKJI 1997, which was less than 0.85. There are three alternative problem solving used in the study, namely alternative problem solving by reducing side barriers reduction and traffic light cycle time changes. Indicator in assessing intersection performance seen from intersection delay. Of the three alternatives it turns out that it can change the level of service to be quite good than before.

Keyword : Signalized Intersections, Roads, Degree of saturation, MKJI 1997