

ABSTRACT

Title: Analysis of Performance Signalized Intersections and Roads with MKJI 1997 Methods at Kelapa Dua Intersection (UI Access Road) Depok City, Name: Jansen Caesar Bonaventura, NIM: 41117310064, Lecturer: Widodo Budi Dermawan ST, M.Sc, 2018.

Considering that Depok City is a city located in the southern part of the City of DKI Jakarta, Depok City indirectly functions as a buffer city of life and economic activities of the City of Jakarta or commonly called sub-urban areas. Therefore, many people choose to live in this suburban area. One of them is the UI Access Road intersection or Kelapa Dua intersection. This study aims to determine the performance of Kelapa Dua intersection and the current UI Access Road. The data needed in the process of analyzing the performance of signal intersections and roads 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 maps of location and population. And using the procedure for analyzing urban roads and signalized intersections referred to (MKJI 1997).

From the survey results in the field and the results of data analysis calculations that have been done, the results of the performance of the UI Access Road in the West can be obtained at peak volume on Tuesday afternoon with a degree of saturation (DS) of 0,706, including at service level C. East, peak traffic volume on Tuesday afternoon with a degree of saturation of 0,703 including the service level C. The results of the existing data analysis, obtained Level Of Service (LOS) F, which means a high delay value, indicating a long cycle time and ratio a high vehicle is shown from the length of the cycle time which is 170 seconds with 3 phases of traffic with the highest degree of saturation (DS) reaching 1,14 which has exceeded the number indicated by MKJI 1997, which is less than 0,85. There are three alternative problem solving used in the research, namely alternative problem solving by reducing side barriers, a combination of reducing side barriers and changes in traffic light cycle times, and phase changes. Indicator in assessing intersection performance seen from the intersection delay. Of the three alternatives it turns out that it can change the level of service to be quite good than before.

Keywords: Signalized Intersection, Roads, Degree of Saturation, MKJI 1997