## ABSTRACT

### ARRANGEMENT OF THE KEBON ROJO PARK INTERSECTION MODEL JL. RAYA KH. WAHID HASYIM JOMBANG DISTRICT

M. HAFIS ROFI'UD DAROJAT (182322201003)

Intersections are a part that must be considered in order to smooth the flow of transportation in urban areas because the existence of intersections is unavoidable in the urban transportation system. The existence of intersections must be managed carefully so that a good intersection is obtained. The placement of the intersection is determined by its location, planning, and role in the regulation and control of the movement of traffic. Delays in Taman Kebon Rojo, Jombang Regency, cannot be avoided, especially at intersection points, both on main roads and on small roads. To find out the performance at the Taman Kebon Rojo intersection, surveys and data calculations are needed. The data calculations here use the Indonesian Road Capacity Guidelines (PKJI 2014).

The calculation results obtained (1) show that the geometric condition of the North Approach intersection is 15.20 m wide, the South Approach is 15.20 m wide, the West Approach is 8 m wide, and the East Approach is 8 m wide. (2) The total known volume of the North Approach is 350 cu ft/hour, the South Approach is 454 cu ft/hour, the West Approach is 317 cu ft/hour, and the East Approach is 327 cu ft/hour. (3) After analyzing the volume, it is known that the degree of saturation in the north approach is 0.36, the south approach is 0.60, the west approach is 0.65, and the east approach is 0.67. (4) The degree of saturation is still below 0.85, so it can be concluded that the performance is still decent and stable, but the degree of saturation is close to 0.85, so it is recommended to redesign. To maximize the performance of the intersection, changes to the turning radius, cycle time, and stop line at the intersection are focused on reducing delays, reducing queue length, reducing the degree of saturation, and maximizing performance.



Keywords: *Delay, Survey, Arrangement Model.*