ABSTRACT

Analyzing Non Signalized Intersection Into Signalized Intersection Using MKJI 1997 Method (Case Study: Duren Intersection, Ciputat)

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Duren intersection is connects of Menjangan Street - Ki Hajar Dewantara Street - Merpati Raya Street - Cendrawasih Bintaro Street. The capacity of the road at intersection cannot accommodate the flow of vehicles which gives rise to traffic density as evidenced by the Degree of Saturation of 0.98 ≈ 1.00 under existing conditions. This method is a quantitative with field survey method to obtain existing condition data which will be analyzed according to the Indonesian Road Capacity Manual 1997. Performance of Intersection is measured by the Level of Service based on the degree of saturation parameters and intersection delays. In the existing conditions, the level of service based on the degree of saturation is very bad, which is in the category "E", which means that the volume of traffic is approaching / being at an unstable current capacity, sometimes stopping. Optimization carried out by researchers focused on improving the performance of intersections (Level of Service) by providing several alternative handling intersections, namely: non-signalized intersections with widening of major and minor roads, adding 2 phase signals with existing geometric, adding 3 phases with existing geometric signals, adding 4 phase signal with existing geometric. After an analysis using MKJI 1997, the best alternative solution was obtained to improve intersection performance by adding 3-phase traffic signals, with a decrease in degree of saturation in the north, south and east approaches 0.80 and west approach 0.40. According to MKJI 1997, the degree of saturation has met the requirements, which is less than 0.85.

Keywords: *Traffic flow, Signal phase, Capacity, Intersection, Level of Service*

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