ABSTRACT

The condition of Signalized Section in 1 Jl. Embong Malang - Jl. Tidar and Jl. Blauran - Jl. Kedung Doro and Section 2 Jl. Blauran - Jl. Bubutan and Jl. Praban - Jl. Kranggan have high level of density because of the existence of shopping center and lots of traffic violation between those Sections. In addition, the construction of Tunjungan Plaza 6 Surabaya (operates in 2016) which will give influence to the current traffic volume. To solve such problem, an evaluation is needed to optimalized the work of it as the cause of the construction of Tunjungan Plaza 6.

The Analysis of signalized intersection for the current condition in 2014 and for the next 5 year from 2016 until 2021 will be held with the formulation MKJI 1997 with KAJI Assisted Program. For the data collection of the growth number of vehicle and population are obtained from BPS Surabaya and Department of Transportation Surabaya.

Based on the result of existing condition analysis, in 2014 the Peak Day of Work in the morning, midday, afternoon for
Section 1 reached LOS C with DI around 18.61 – 24.63 sec/pcu. However in Section 2 reached LOS D with DI around 27.36 – 38.60 sec/pcu. In the year of 2016 post operation of Tunjungan Plaza 6 Section 1 the Peak Day of Work in the morning, midday and evening reached between the number of 19.33 – 25.71 sec/pcu. For Section 2 Peak Day of Work in the morning, midday and evening reached LOS D until LOS E with DI around 28.03 – 43.37 sec/pcu. With the Alternatif cycle time repair for Section 1 Morning and Midday Peak with LOS C which able to stand until 5 years and Afternoon Peak that only holds for 3 years. Meanwhile, Section 2 in the Morning Peak has the Level of Service is LOS D which stands for 5 years but the DI value decreased. For Midday Peak Service LOS C can hold for 2 years. In these both Sections do not require a coordination between sections, because the distance in between is more than the 1997 MKJI requirement (200m) which is 271m. Also the Queue Length is not more than the distance of both Sections.

Keyword: Signalized Intersection, MKJI 1997-KAJI, LOS, Queue Length