TRIP ASSIGNMENT ANALYSIS WITH ALL OR NOTHING ITERATION FOR ALTERNATIVE OF REALLOCATION AHMAD YANI ROAD SURABAYA

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Abstract
Traffic volume of Surabaya city has increased every year caused by the increasing number of vehicle ownership, the high rates of burnout, reduced of effectiveness levels and performance in along the way of Ahmad Yani, is the one of the traffic growth effects with quite high in that area. This analysis has done by taking into account the condition of the road geometry, traffic volume, existing corridors, and other variables. In this thesis aims to find a solution by analyzing several alternative development scenarios the best way to tackle congestion on the Ahmad Yani roads.

The analysis was done the pattern of development plans frontage road, non-toll highways, as well as the application of special bus lanes, each of them will be calculated the feasibility of performing impact analysis. The process of the development analysis performed on Ahmad Yani start to pass survey and data collection were then performed calculation gradual on the each form development patterns using trip assignment iterative all or nothing and than results in each segment is used to determine the performance of each segment in each segment in each Ahmad Yani modeling scenario.

The result from the analysis of Ahmad Yani pattern development based on several scenarios modeled are roads
volume, degree of saturation, travel time, and forecasting to find out about when the roads on each scenario modeling will be saturated. In scenario 1 arterial lane produces 1.129 maximum degree of saturation and a maximum travel time was 2.95 minutes than saturated flow since 2010. In scenario 2 arterial and frontage lane yield 0.887 maximum degree of saturation on the frontage and maximum 3.1 minutes of travel time at the frontage road than the current will be saturated in 2017 at frontage side and 2036 at arterial side. In scenario 3 arterial and frontage lane yield 0.988 maximum degree of saturation at arterial side and 3.1 minutes of maximum travel time on the frontage road than the current will be saturated in 2017 at frontage side and 2019 at arterial side. In scenario 4 arterial and frontage lane yield 0.926 maximum degree of saturated at arterial side and 3.2 minutes of maximum travel time on the frontage road than the current will be saturated in 2026 at frontage side and 2015 at arterial side. In scenario 5 arterial and frontage lane yield 0.887 maximum degree of saturated and 1.6 minutes of travel time at frontage road than the current will be saturated in 2017 at frontage side, 2164 at arterial side, and 2033 at non-toll highways side.

**Keyword**: Ahmad Yani street, frontage road, highway overpass, performance, travel time.