ANALYSIS OF BRT (BUS RAPID TRANSIT) IMPLEMENTATION WITH PARTIAL BUSLANE CONSTRUCTION IN SURABAYA NORTHERN – SOUTHERN CORRIDOR

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ABSTRACT

Surabaya, the capital of East Java and center of trade and economics for East Indonesia, is a city with extreme high traffic activity. The worst traffic jam occurred to the main streets related to the city’s CBD (Central Business District), especially on morning and evening jam sibus. One of solution to solve this problem is providing a modern and practical of public mass transportation such as BRT (Bus Rapid Transit). However, some obstacle for example existing traffic jam and different ownership of several crucial streets held back the implementation of BRT today.

This thesis evaluated whether BRT in Surabaya North – South Corridor can be implemented partially, and which part of streets that possible or impossible to be built buslane construction. Then the analyzes are including the performance of Partial BRT, such as average speed, headway and frequency, performance of streets and major signalized intersections that the system passed through. The final analysis is to compare the advantages and disadvantages of Partial BRT with Full BRT and existing bus vehicle. All datas had been used in this thesis is secondary data from year of 2007, then being forecasted to the present.

The result is that buslane can still be feasible to be implemented partially in most part of the corridor, with some exception for 4 main roads in which BRT will take place in mix traffic as another vehicles. As for the 2 major signalized intersections, buslane construction must be disconnected at 100 meters distance before traffic light because the queue length is too long. The reason of this action is to shorten queue length of vehicles during red light periods. Partial BRT has 24.6 km/hr average speed which is higher than recent bus vehicle’s speed. One of 3 advantages with Partial BRT implementation is reduced density of some major street and intersection. Therefore this thesis recommended that Partial BRT should be able to be implemented immediately so that Surabaya has an alternative of modern public mass transportation with a good quality performance and quite fair price.

Key words : traffic jam, BRT (Bus Rapid Transit), buslane, partial, Surabaya North-South Corridor