

THE IMPACT ANALYSIS OF BUSWAY BUILDING PLAN TO THE TRAFFIC JAM OF NORTH – SOUTH LANE WITH SYSTEM DYNAMICS APPROACH

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Abstract

Surabaya is one of the big cities in Indonesia, which has a dense population. Many life activities have occurred because of it. Therefore the increasing daily life activity has an impact on the development as a means of transportation used to conduct these activities. And the result is the current city of Surabaya is experiencing congestion. As a result of this congestion is caused Surabaya city government plans a mass transportation called the Bus Rapid Transit or better known as the busway. Busway is an alternative transportation that more secure and convenient built to reduce congestion that occurs primarily for users of personal vehicles such as cars and motorcycles. To determine the impact of this busway development plans for traffic jams that occurred in Surabaya, the dynamic systems approach is used. In this dynamic system approach it will be described a causal relationship between variables that affect the traffic system in Surabaya. Existing bottlenecks in this research is a person who uses such as transportation of private cars, motorcycles, lyn, buses and other public transport to perform various activities of life. In this modeling, the variables are all factors supportive of this system include the number of users of personal vehicles, lyn, buses and other public transportation. Busway passengers candidate

variables, the variable effects of pollution, the variable operating costs and some other supporting variables. From this research, the results of the impact from the development plans for congestion busway scenario are generated. Based on research results the best policy is to re-routing the lyn and bus routes and restrictions on the use of motorcycles and private cars. With this policy, traffic congestion has decreased and the people who use the busway have increased every year.

Key Words: Traffic Jam, Busway, System Dynamics