INTERNATIONAL SYMPOSIUM PAPER

TRIP GENERATION ANALYSIS USING MULTIPLE LINEAR REGRESSION METHOD ON BUMI ESTATE MUKTISARI AND TAMAN GADING HOUSING JEMBER REGENCY

Presented at:

The 15th International Symposium of Indonesian Inter University Transportation Studies Forum

Theme: "Enhancing Transportation Research and Technology to Improve the Performance of Freight Transportation and Logistics"

The School of Land Transportation - Bekasi, November 24th, 2012

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THE SCHOOL OF LAND TRANSPORTATION AND INDONESIAN INTER UNIVERSITY TRANSPORTATION STUDIES FORUM

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Re: Paper Acceptance for the 15th FSTPT International Symposium

Dear Sir/Madam,

Please kindly let me inform you that the following paper:

TRIP GENERATION ANALYSIS USING MULTIPLE LINEAR REGRESSION METHOD ON BUMI ESTATE MUKTISARI AND TAMAN GADING HOUSING JEMBER REGENCY
1) Sonya Sulistyono (Civil Engineering Departement, Engineering Faculty, Jember University)
2) Akhmad Hasanuddin (Civil Engineering Departement, Engineering Faculty, Jember University)
3) Yurike Ogi Adrisyanti (Civil Engineering Departement, Engineering Faculty, Jember University)

is accepted for presentation in the 15th FSTPT International Symposium to be held in School of Land Transport (STTD), Bekasi, Indonesia on November 24, 2012. Furthermore, presentation schedule will be announced in www.fstpt.or.id and www.fstpt-sttd.org on November 10, 2012.

It is suggested that author registers his/her attendance to the symposium through the local committee website (www.fstpt-sttd.org) and prepares presentation material.

Thank you for your kind attention.

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15th **FSTPT**

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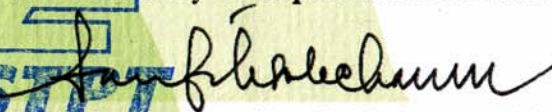
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on

"Enhancing Transportation Research and Technology

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Bekasi, November 24 th 2012

Inter University Transport Studies Forum

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ABSTRACT

By increasing the population in Jember, also increase the need for housing. BWK IV (Tegal Besar Region) is one of the rapidest growing residential areas. There are 18 new housings in this region. So, trip generation studies of some housing in BWK IV need to be done to estimate the number of trips. Bumi Estate Muktisari and Taman Gading Housing is one of highest number of housing, and have a dependency on J1. Letjen Suprapto as the main access road to the central part of Jember. The number of occupancy in two housing reached 2,355 units (Bumi Estate Mutisari is 1,237 units and Taman Gading is 1,228 units). Trip generation analysis based on household that apply the step by step type-2 on those housing. The best trip generation model is $Y = -0.439 + 0.174X_2 + 0.741X_3 + 0.797X_4 + 0.484X_6$. Independent variables that affect the production of trips include: the number of family members (X_2), the family member who worked (X_3), the family member who get school (X_4), and vehicle ownership (X_6). The R^2 value is 0.74 which means that 74% of production is influenced by the free variables on that model.

Keywords: multiple linear regression, trip generation, home-based trip

INTRODUCTION

Jember area is 3,293.34 km^2 or the third largest area after Banyuwangi and Malang regency. Based on the results of the census on 2010, the population growth in Jember is second highest after Surabaya. It is 2,329,929 inhabitants. The population density average is 707 inhabitants/km^2 (BPS, 2010). Jember, one of the areas in the eastern province of East Java, has evolved into a center of various activities such as a government service centers, an education development center and a regional economic service centers (districts) and local (city). This condition causes Jember developed rapidly. By the increasing of population growth, the need for housing also increased. The high price of land in urban centers led to residential land has increasingly shifted to the suburban. While the location of employment and education tend to be more concentrated in urban centers. This is one of the reasons that led to the expansion of the city.

One form of the expansion of the city in Jember is the emergence of new residential housing in BWK IV (Tegal Besar). There are 18 housings with multiple developers. The emergence of these estates will surely cause trip generation that will affect the performance and intersections of roads. Related research ever done is a review of the trip attraction (Soetjipto and Sulistyono, 2006). This study reviewed the trip attraction that occurred in