Abstract

The Sidoarjo-Krian Roads is a road which connects between Sidoarjo regency and Mojokerto regency. From the other point of view there is Porong highway which is an artery road that connects some areas such as Surabaya, Sidoarjo, Pasuruan, Mojokerto, and Malang. So if there is an assumption that the access of the traffic which pass Porong highway is closed because of mud disaster, so one of the solutions is it needs diversion some load traffics to Sidoarjo-Krian roadway.

This final project intents to find the widening road in condition before and after the diversion and also choose the ideal planning by using “Manual Kapasitas Jalan Indonesia” method 1997; to find a pavement thick at widening road by using “Petunjuk Perencanaan Tebal Kekerasan Lentur Jalan Raya” with component analysis method, Bina Marga 1987; to count the thickness of the additional layer of roads construction by using manual “Pemeriksaan Perkerasan Jalan Dengan Alat Benkleman Beam” and using “Petunjuk Perencanaan Tebal Perkerasan Lentur...
Jalan Raya” with component analysis method 1987; to decide the drain dimension by using SNI-03-342-1994 method (planning procedures of road surface drainage); controlling the road geometric by using “Manual Kapasitas Jalan Indonesia (MKJI) (urban road), 1997 “; and calculating the cost estimate planning which is needed use HSPK (Harga Satuan Pokok Kegiatan) Sidoarjo town.

The Design of Betterment Sidoarjo-Krian Roads with 10-years design life, form road capacity analysis be found requirement the road expansion before the diversion are 12m with the type road 4/2 UD and requirement after the diversion assumption is until 19,5 m with the road type 6/2 D from 7-9 m existing road, so the effect planning of diversion not ideal to be realized. Pavement thick for base course 24 cm by using sirtu class A (CBR min. 70%), sub base course 30 cm by using agregat class A (CBR min. 90 %), surface course 8 cm ATB Laston (MS 590) and 3 cm AC laston (MS 590). The roads geometric control, for horizontal alignment be result 14 point which occur the change of alignment type and curve planning radius; vertical alignment is flat alignment type. Drainage which has square form is made from river stone. RAB which is needed amount 13.156 billion rupiahs (amount thirteen billion one hundred fifty six million rupiahs).

Keyword : Sidoarjo-Krian Roads, Road diversion, Pavement thickness, Drainage.