DESIGN OF TOLL ROAD BY USING RIGID PAVEMENT INTERNODE MOJOKERTO – KERTOSONO STA 0+000 – STA 5+500
MOJOKERTO DISTRICT, EAST JAVA

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Abstract

Mojokerto - Kertosono toll road is an alternative way which the function is very important as a connecting road between Mojokerto until Kertosono which is a main path for the transportation vehicle, industrial vehicle, or personal vehicle, then the capacity and the service of road need to be improved. In this final project, the rigid pavement of Mojokerto – Kertosono toll road STA 0+000 – STA 5+000 is planned along 5.0 km.

In the analysis of capacity planning for road widening needs using “Manual Kapasitas Jalan Indonesia (MKJI) 1997”, for pavement thickness design using guidance “Perencanaan Perkerasan Kaku (Beton Semen) DPU Badan Penelitian dan Pengembangan PU Pusat Balitbang Jalan 2003”, and for the planning of roadside channel (drainage) using Planning Procedures for Road Surface Drainage (SNI 03-3424-1994). Analysis result of road capacity in accordance with 20-year design period (2032) obtained the value of $DS = 0.75$ with $21$
m wide road. Construction analysis use continuously reinforced concrete pavement with 29 cm thick plate using concrete shoulder and using reinforcement ø16-120 mm for longitudinal direction and ø16-750 mm for transverse direction. For the planned channel dimensions using a square shape with masonry materials with a finishing time obtained by the following dimensions b = 100cm, d = 50cm, w = 50cm. Needed funds to construct this project is Rp 71,523,700,000.00 - (Amount Seventy One Billion Five Hundred Twenty Three Million Two Hundred Thousand Rupiahs Go).

From the planning result of road above expected could overcome and serve heavy traffic load according to design period which have been planned.

Key word : Rigid Pavement Thickness, Reinforcement, dimension of channel RAB.