

ABSTRAK

PERENCANAAN GEOMETRIK DAN TEBAL PERKERASAN LENTUR RUAS JALAN MUARA ENIM - LAHAT STA 12+800 – STA 18+100 PROVINSI SUMATERA SELATAN

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Penelitian ini membahas perencanaan geometrik dan struktur perkerasan lentur pada ruas jalan Muara Enim – Lahat, STA 12+800 hingga STA 18+100 di Provinsi Sumatera Selatan. Tujuan utama dari perencanaan ini adalah untuk meningkatkan kualitas infrastruktur jalan guna menunjang konektivitas antar wilayah serta mendukung kegiatan ekonomi dan mobilitas masyarakat. Perencanaan geometrik mengacu pada *Manual Desain Jalan*, dengan mempertimbangkan kecepatan rencana, jari-jari tikungan, kemiringan, dan jarak pandang. Sedangkan perencanaan struktur perkerasan lentur menggunakan metode *Manual Desain Perkerasan Jalan 2024* yang berbasis kinerja (*performance-based design*), dengan parameter utama meliputi Lalu Lintas Harian Rata-rata (LHR), umur rencana 20 tahun, serta kondisi tanah dasar. Nilai CBR tanah dasar yang berada di 6% menunjukkan bahwa daya dukung tanah tergolong rendah, sehingga diperlukan perkuatan atau stabilisasi pada lapisan subgrade. Hasil perencanaan menunjukkan susunan perkerasan terdiri dari lapisan aus (AC-WC, AC-BC, DAN AC-BASE), lapisan pondasi agregat kelas A, dan lapisan tanah dasar yang diperbaiki. Rencana ini diharapkan mampu memberikan daya tahan struktural yang memadai serta menjamin kenyamanan dan keselamatan pengguna jalan sepanjang umur layanannya.

Kata Kunci: perkerasan lentur, geometrik jalan, CBR 6%, Manual Desain 2024, umur rencana 20 tahun.

ABSTRACT

GEOMETRIC PLANNING AND THICKNESS OF THE BENDING PAVEMENT OF MUARA ENIM STREET - LAHAT STA 12+800 – STA 18+100 SOUTH SUMATRA PROVINCE

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This research discusses the geometric planning and flexible pavement structure on the Muara Enim - Lahat road section, STA 12+800 to STA 18+100 in South Sumatra Province. The main purpose of this planning is to improve the quality of road infrastructure to support connectivity between regions and support economic activities and community mobility. Geometric planning refers to the Road Design Manual, taking into account the planned speed, radius of bend, slope, and visibility. While the planning of the flexible pavement structure uses the performance-based 2024 Road Pavement Design Manual method (performance-based design), with the main parameters including Average Daily Traffic (LHR), 20 years of the plan, and ground condition. The CBR value of the subsoil that is 6% shows that the soil bearing capacity is classified as low, so that reinforcement or stabilization of the subgrade layer is needed. The planning results show that the pavement arrangement consists of a wear layer (AC-WC, AC-BC, AND AC-BASE), a class A aggregate foundation layer, and a repaired subsoil layer. This plan is expected to be able to provide adequate structural durability and ensure the comfort and safety of road users throughout their service life.

Keywords: flexible pavement, road geometry, CBR 6%, Design Manual 2024, plan life is 20 years.