

**PEKERJAAN *DETAIL ENGINEERING DESIGN* (DED)
JALAN PROVINSI GUGUK CINO – SAWAH LUNTO (P.038)**

LAPORAN TEKNIK

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PROGRAM STUDI PENDIDIKAN PROFESI INSINYUR

SEKOLAH PASCASARJANA

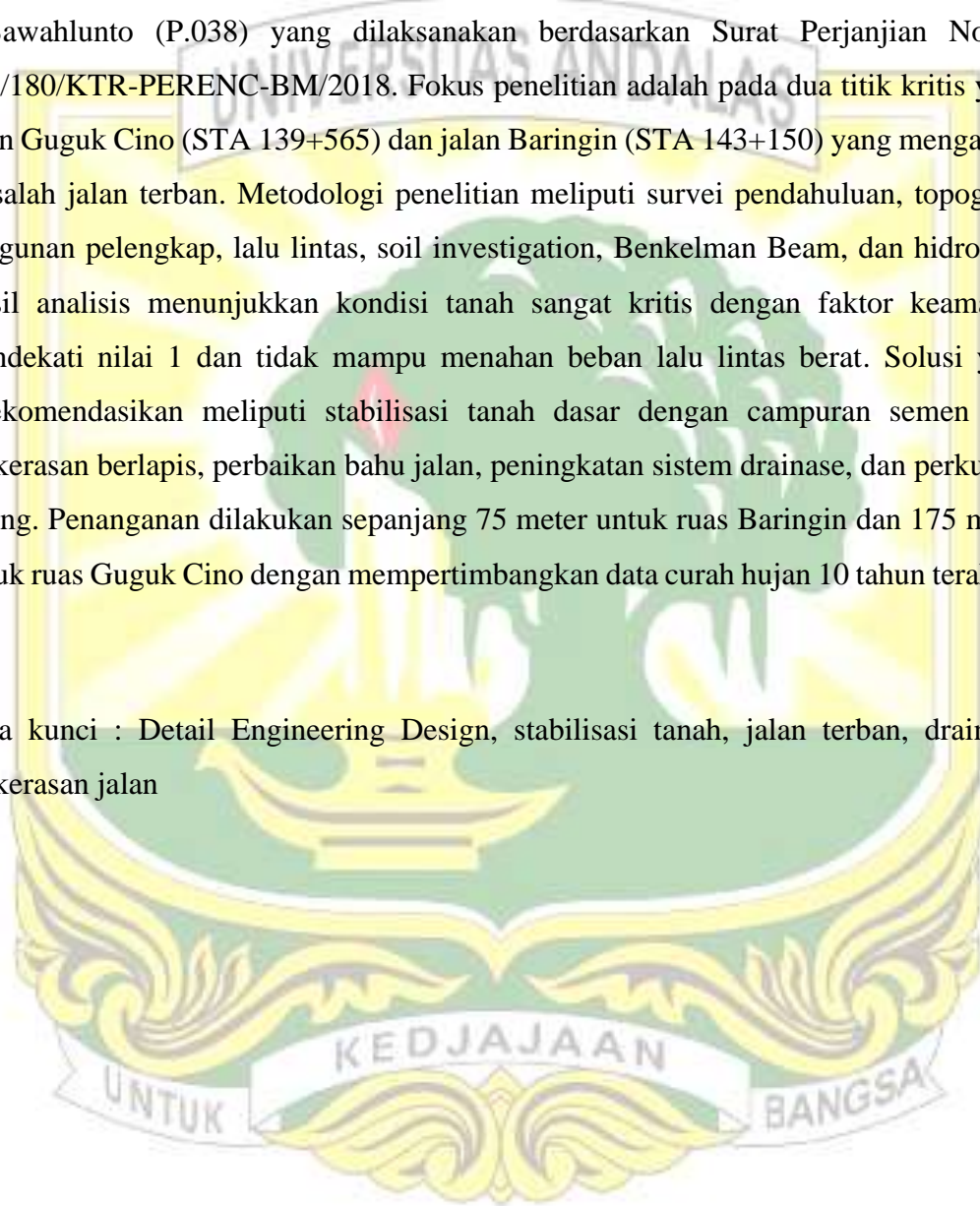
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ABSTRAK

Penelitian ini mengkaji Detail Engineering Design (DED) Jalan Provinsi Guguk Cino - Sawahlunto (P.038) yang dilaksanakan berdasarkan Surat Perjanjian Nomor 620/180/KTR-PERENC-BM/2018. Fokus penelitian adalah pada dua titik kritis yaitu jalan Guguk Cino (STA 139+565) dan jalan Baringin (STA 143+150) yang mengalami masalah jalan terban. Metodologi penelitian meliputi survei pendahuluan, topografi, bangunan pelengkap, lalu lintas, soil investigation, Benkelman Beam, dan hidrologi. Hasil analisis menunjukkan kondisi tanah sangat kritis dengan faktor keamanan mendekati nilai 1 dan tidak mampu menahan beban lalu lintas berat. Solusi yang direkomendasikan meliputi stabilisasi tanah dasar dengan campuran semen 4%, perkerasan berlapis, perbaikan bahu jalan, peningkatan sistem drainase, dan perkuatan tebing. Penanganan dilakukan sepanjang 75 meter untuk ruas Baringin dan 175 meter untuk ruas Guguk Cino dengan mempertimbangkan data curah hujan 10 tahun terakhir.

Kata kunci : Detail Engineering Design, stabilisasi tanah, jalan terban, drainase, perkerasan jalan



ABSTRACT

This research examines the Detail Engineering Design (DED) of the Guguk Cino - Sawahlunto Provincial Road (P.038) which was carried out based on Agreement Letter Number 620/180/KTR-PERENC-BM/2018. The research focuses on two critical points, namely the Guguk Cino road (STA 139+565) and Baringin road (STA 143+150) which are experiencing landslide problems. The research methodology includes preliminary surveys, topography, complementary buildings, traffic, soil investigation, Benkelman Beam, and hydrology. Analysis results show very critical soil conditions with safety factors approaching 1 and unable to withstand heavy traffic loads. Recommended solutions include subgrade stabilization with 4% cement mixture, layered pavement, shoulder repairs, drainage system improvements, and slope reinforcement. Treatment is carried out along 75 meters for the Baringin section and 175 meters for the Guguk Cino section, taking into account rainfall data from the last 10 years.

Keywords : Detail Engineering Design, soil stabilization, landslide road, drainage, road pavement

