

**PERENCANAAN GEOMETRIK DAN PERKERASAN KAKU  
(RIGID PAVEMENT) PADA JALAN HAULING BATU BARA  
STA 0+000 – STA 8+400 PT. DIZAMATRA POWERINDO  
SITE PATRA TANI GELUMBANG MUARA ENIM**

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**ABSTRAK**

Proyek perancangan teknis Jalan Hauling Batu Bara PT Dizamatra Powerindo di Site Patra Tani, Kecamatan Gelumbang, Kabupaten Muara Enim, dirancang untuk mengakomodasi kendaraan berat dengan kapasitas muatan besar serta frekuensi lalu lintas yang tinggi. Jalan sepanjang 8.400 meter ini diklasifikasikan sebagai jalan *hauling* dengan total panjang penanganan 8,4 km dari STA 0+000 hingga STA 8+400. Desain geometrik meliputi alinyemen horizontal dengan 8 tikungan (4 tikungan *Full Circle* dan 4 tikungan *Spiral-Circle-Spiral*), serta alinyemen vertikal mengikuti kontur optimal lahan tambang. Struktur perkerasan menggunakan sistem perkerasan kaku (*rigid pavement*) dengan mutu beton FC 30, terdiri dari tebal pelat beton 330 mm, *lean mix concrete* 150 mm, dan Lapis Fondasi Agregat (LFA) Kelas A 500 mm. Sistem drainase menggunakan saluran samping pasangan batu kali berbentuk trapesium dengan lebar atas 1,908 m, lebar bawah 0,306 m, tinggi total 0,80 m, serta didukung 4 unit *box culvert* untuk pengendali air limpasan. Pekerjaan tanah menghasilkan volume galian (*cut*) sebesar 278308,12 m<sup>3</sup> dan timbunan (*fill*) sebesar 164506,44 m<sup>3</sup>. Estimasi total biaya pembangunan (RAB) adalah sebesar Rp 125.170.254.488,98 dengan rencana durasi pengerjaan adalah 319 hari kerja berdasarkan analisis *Network Planning* (NWP) dan Kurva S.

**Kata Kunci:** Geometrik, Perkerasan Kaku, Batu Kali, Drainase Trapesium, *Cut and Fill*, Rencana Anggaran Biaya

# **GEOMETRIC AND RIGID PAVEMENT DESIGN OF THE COAL HAULING ROAD STA 0+000 – STA 8+400 AT PT DIZAMATRA POWERINDO SITE PATRA TANI GELUMBANG MUARA ENIM**

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## **ABSTRACT**

*The technical design project of the Coal Hauling Road for PT Dizamatra Powerindo at Site Patra Tani, Gelumbang District, Muara Enim Regency, is designed to accommodate heavy vehicles with large cargo capacities and high traffic frequencies. This 8,400-meter road is classified as a hauling road with a total handling length of 8.4 km from STA 0+000 to STA 8+400. The geometric design includes horizontal alignment with 8 curves (4 Full Circle curves and 4 Spiral-Circle-Spiral curves), as well as vertical alignment that follows the optimal contour of the mining area. The pavement structure utilizes a rigid pavement system with an FC 30 concrete grade, consisting of a 330 mm concrete slab thickness, 150 mm lean mix concrete, and 500 mm Class A Aggregate Base Course (LFA Kelas A). The drainage system uses trapezoidal masonry side channels made of river stone (pasangan batu kali) with a top width of 1.908 m, a bottom width of 0.306 m, a total height of 0.80 m, and is supported by 4 units of box culverts for runoff water control. Earthworks generate a cut volume of 278308,12 m<sup>3</sup> and a fill volume of 164506,44 m<sup>3</sup>. The estimated total construction cost (RAB) is Rp 125.170.254.488,98, with a planned execution duration of 319 working days based on Network Planning (NWP) and Kurva S analysis.*

**Keywords:** *Geometric, Rigid Pavement, River Stone, Trapezoidal Drainage, Cut and Fill, Bill of Quantities (RAB)*