

ABSTRAK

PERANCANGAN GEDUNG MEETING ROOM DAN PREFUNCTION PADA CONVENTION HALL POLITEKNIK PARIWISATA KOTA PALEMBANG

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Perancangan bangunan merupakan tahap awal dalam proses konstruksi yang mencakup aspek desain arsitektur, perhitungan struktur, dan pemilihan material guna menciptakan bangunan yang aman, fungsional, dan efisien sesuai kebutuhan pengguna serta peraturan yang berlaku. Laporan ini membahas perancangan Gedung Meeting Room dan Prefunction pada Convention Hall Politeknik Pariwisata Kota Palembang. Bangunan dirancang untuk menampung kegiatan berskala besar dengan struktur beton bertulang mengacu pada SNI 2847-2019 dan SNI 1727-2020. Material utama yang digunakan adalah beton mutu $f_c' = 25$ MPa dan 30 MPa, serta baja BjTP (280 MPa) dan BjTS (420 MPa), didapatkan pondasi tiang pancang Spun Pile ukuran D500 dengan kedalaman 18 m ; dimensi *pilecap* PC 1 1500 x 1500 x 1000 mm, PC 2 3000 x 1500 x 1000 mm ; dimensi sloof 400 x 600 mm ; 3 jenis kolom terdiri dari Persegi, KL dan KT dengan dimensi 500 x 500 mm, dimensi balok anak 250 x 500 mm ; balok induk 350 x 700 mm ; Tangga tinggi optrade 175 mm, lebar antrade 300 mm ; tebal pelat 120 mm. Analisis struktur dilakukan menggunakan perangkat lunak ETABS v18 dengan mempertimbangkan kombinasi beban hidup, mati, dan angin. Hasil perhitungan struktur digunakan sebagai dasar dalam penyusunan Rencana Anggaran Biaya sebesar Rp. 16.643.797.000,00 dan estimasi waktu pelaksanaan proyek 152 hari.

Kata kunci: Perancangan bangunan, struktur beton bertulang, biaya, jadwal, material

ABSTRACT

DESIGN OF MEETING ROOM AND PREFUNCTION BUILDING AT THE CONVENTION HALL OF PALEMBANG CITY TOURISM POLYTECHNIC

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Building design is the initial stage in the construction process, encompassing architectural design, structural analysis, and material selection to create a safe, functional, and efficient structure that meets user needs and complies with applicable regulations. This report presents the design of the Meeting Room and Prefunction Building at the Convention Hall of the Palembang City Tourism Polytechnic. The building is intended to accommodate large-scale events and utilizes reinforced concrete structures designed in accordance with SNI 2847-2019 and SNI 1727-2020. The materials used include concrete with strengths of $f_c' = 25$ MPa and 30 MPa, and reinforcement steel with BjTP (280 MPa) and BjTS (420 MPa). The foundation system uses D500 spun piles with a depth of 18 meters. Pile cap dimensions are: PC 1 = 1500 x 1500 x 1000 mm, and PC 2 = 3000 x 1500 x 1000 mm. Sloof beam dimensions are 400 x 600 mm. There are three types of columns: Square, KL, and KT, each with dimensions of 500 x 500 mm. Secondary beams are 250 x 500 mm, while the main beams are 350 x 700 mm. Stair dimensions consist of 175 mm riser height and 300 mm tread width. The slab thickness is 120 mm. Structural analysis was carried out using ETABS v18 software, considering combinations of live loads, dead loads, and wind loads. The structural analysis results are used as the basis for preparing the Budget Plan (RAB) amounting to Rp. 16,643,797,000.00 and for estimating the project implementation duration of 152 days.

Keyword: Building design, reinforced concrete structure, cost, schedule, material