

**REDESIGN OF THE SUPERSTRUCTURE OF THE BUILDING
WITH SPECTRUM RESPONSE ANALYSIS BASED ON SNI
1726:2019 and SNI 1729:2020
(Case Study : Amadeo Duri Ballroom Building)**

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ABSTRACT

The Amadeo Duri Ballroom Building is the first business hotel in Duri with a friendly welcome and service standards according to its motto "The Friendly's Hotel" located in Bengkalis Regency, Riau, Indonesia. The Amadeo Duri Ballroom building is intended as lodging and meeting rooms. The Amadeo Duri Ballroom Building was inaugurated in 2016, during the initial planning of the Amadeo Duri Ballroom Building it still used the old SNI. The Amadeo Duri Ballroom building will be re-planned using the latest SNI, namely SNI 1726:2019 (Procedures for implementing earthquake resistance for building and non-building structures), SNI 2847:2019 (Structural concrete requirements for buildings and explanations), SNI 1729:2020 (Specifications for Structural Steel Buildings), and SNI 1727:2020 (Minimum design loads and related criteria for buildings and other structures).

The modeling of the Amadeo Duri Ballroom Building was analyzed using the ETABS 2016 application and for planning reinforcement and steel profiles it was analyzed using a moment-bearing frame system. Based on the calculation of the superstructure, the results obtained with beams 350 x 650 mm, 300 x 500 mm, 200 x 400 mm, 250 x 450 mm, cantilever beams 300 x 500 mm, 250 x 450 mm, steel profile beams WF 900.300.16.20, WF 588.300.12.20, Column 500 x 500 mm, 700 x 700 mm, 400 x 400 mm, Steel profile column WF 300.300.10.15, Plate 120 mm and 150 mm. Based on the results of structural research, reinforcement must be carried out so that it is able to carry the load on the structure.

Keywords : *Planning, Moment Bearer, Superstructure, ETABS 2016*