

UNIVERSITAS INTERNASIONAL BATAM

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COMPARATIVE STUDY OF HOSPITAL STRUCTURE BUILDING PLANNING USING SQUARE AND RECTANGULAR REINFORCED CONCRETE COLUMN STRUCTURES

(Case Study : Planning Nongsa Batam Hospital, Riau Island)

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Abstract

This study describes the planning of a hospital building in Nongsa Batam, Riau Islands by using square and rectangular reinforced concrete column structures. The implementation of this building structure has a reference to SNI 03-2847-2013, SNI 03-1726-2002, and PPPURG 1987 using the SAP2000 application to design and check the strength of its structure. There are several types of column structures for the implementation of multi-storey building construction, but in the implementation of many column structures use a square column system compared to a rectangular column system, because rectangular columns have the nature of collapse and cracks for building structures, then in this study the authors wanted to compare the structure building to be used.

The results obtained in this comparative study are that the use in a rectangular column structure requires more volume for concrete and requires more reinforcement for steel compared to a square column structure, so there is no collapse in the planned building.

Keywords: Building Planning, Hospital Building , SAP2000, Square, Rectangular Column Structure