

DESIGNING AND PLANNING OF A CHURCH BUILDING

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ABSTRACT

This project involves planning and designing of a doubly-storey church building which sits about 300-400 people comfortably. Besides that, it is also a main objective to analyze the structure of the building based on the limit state design which recommended by BS8110 and BS5950. To ensure the safety of the design, economical and maintaining an acceptable appearance for its specific life span, will be part of this project.

This double-storey building is designed as 13m high with a clear floor area of 22m wide x 30m long. The building consists of a high rise worship hall with rooms of size at both sides.

Both steel roof truss and flat roof will be used to design for the roof in this project. All relevant safety factors are derived from BS8110 and BS5950. Loads acted on the truss are calculated by using the method of joint and for the flat roof will be designed as flat roof slab.

All the beams in this design will be in simply supported. A minimum of two steel bars are applied in each beam. A gain BS codes will be used to check for the area of reinforcement, spacing between the steel bars and also spacing of links accordingly.

Size of column from every floor is assumed differently and will be designed as short and braced columns as the lateral stability to the structure is provided by brick walls where 215mm x 102.5mm x 65mm bricks will be employed.