

# PLANNING AND DESIGNING OF THE STRUCTURAL ELEMENTS OF A DOUBLE STORIES RESTAURANT BUILDING

Prepared by: Teoh Chin Sheng

## ABSTRACT

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The purpose of giving this kind project is applying all the theories that we are already learn in the class to the real structures.

The total length of the restaurant building is 6.5m and the total width is 3.2m. The roof of this building is designed as a flat roof which slope is between 1 to 3.

The slab on all floor are designed as spanning in one direction, because it satisfies the continuous of one way slab. The beams used in this building are continuous L – Beams and T – Beams. They are all used to support the slabs and loads.

The columns are designed to be short and braced. The columns are involved in this buildings axially and uniaxially loaded columns. Columns are used to support the loads which are transferred from the slabs and beams.

For the foundation design, I used the pad footing because it is more economical and more suitable than other types of foundations.

The staircase design is one kind of stair slabs which spanning longitudinally and slab is located on both ends of the building.

The design of the structures are used the characteristic strength of concrete is 30 N / mm<sup>2</sup> and characteristic steel strength is 460 N / mm<sup>2</sup>.