

# COST COMPARISON BETWEEN DIFFERENT TYPES

Prepared by: Kelvin Yeoh Pui Keat

## ABSTRACT

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The design of my 4 storey carpark consists of slabs, beams, columns and foundation at a pile cap system. The carpark have 3 types where the layout of the beams is different but with a fixed dimensions at 8550mm from column to column. The external beams such as beam-1 and beam-3 are supporting the brickwall of 0.9m high.

Type-1 is shown in figure 1 with the dimension of beams from one column to another is 8550mm which is fixed. Two beams are provided at 2850mm from left column and 2850mm from right column.

In figure 2, type are shown with the dimension of beams, which is also fixed with 8550mm from one column to another. But 1 beam is provided in between the two columns. Therefore from left to right, the beam is 4275mm way to another.

In figure3, the beams supporting the slabs load is 8550mm spanning from each other. Hence, no beams are in between the 8550mm distance from column to column.

Finally, the type of different layout of beams is analyzed. Then the calculation and design of slabs columns and foundation is also analyzed. Hence, the cost is compared between the 3 types of layout of structure by comparing the quantities of concrete, reinforcement, formwork and excavation. Later producing a structure diagram of beams, slabs and foundation.