

**A COMPARATIVE STUDY ON COST OF CONSTRUCTION OF
DIFFERENT TYPES OF FOOTINGS IN ILOILO CITY**

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ABSTRACT

This study compared the cost of construction of different types of footings in Iloilo City. This further examined the cost implication of depth of excavation to attain the desired soil bearing capacity used in the design of shallow foundation, and the cost implication of the depth of penetration of piles for footing on piles. Alternate design method (ADM) was used to design the different types of footings and the corresponding cost estimate was based on the August 2003 materials price and labor cost. Design calculation and cost estimate were facilitated by the use of MS Excel 2000 spreadsheet templates specifically formulated for the purpose. With the same design column load, material properties and soil bearing capacity, results showed that isolated spread footings were still more economical than mat footing, combined footing, buoyant foundation and the footing on piles. The cost for floating foundation with wall was the most expensive type of footing while the cheapest footing is the stepped footing. The labor cost of shallow foundation is less than that of the deep foundation because of high cost of pile driving in Iloilo City. The study also validated the 25% ratio of labor cost to material cost used by cost engineers in Iloilo City. Lastly, it was found out that the relationship of the cost with depth of excavation, and with depth of pile penetration was linear in nature. This study recommended that a further research be conducted on the cost of different footings in relation to other design parameters, such as variable soil bearing capacity, variable column loads, variable pile capacity and variable construction method.