ABSTRACT

THE CONSTRUCTION COST AND DURATION PLANNING OF GEOMATICS BUILDING – SEPULUH NOPEMBER INSTITUTE OF TECHNOLOGY SURABAYA

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Geomatics Faculty building – Sepuluh Nopember Institute of Technology occupied area of ± 1886.42 m² with reinforced concrete construction. This final project uses this building design to plan its construction cost and duration.

In construction stage, every type of work must be known its productivity and resources required. Reference used in construction planning is very rare to find out. This final project uses reference from Ir. Sudrajat in Modern Analysis of Construction Cost and construction data from several contractors. If each activity in construction can be described its movement, both man power and equipment(s), then duration and productivity capacity can be determined. Construction cost is a total of resources cost during the construction duration and combined with material cost. Method of construction that will be used, depends on interrelated activities that involved in construction. Hence, chosen method of construction in building reinforced concrete...
multi stories building needs a knowledge of those interrelated activities, so that it can be determined whether an activity will be sequence or parallel to the other activity. The determination of a sequence or parallel activity is the basis in designing construction method for the whole activities involved in the construction stage.

Construction cost can be determined based on price list from HSPK (Unit price of main activity) 2013 and price list available in the market. Total cost of the construction can be established by using an application software MS Project 2010 with input of each activity including its construction method. MS Project 2010 yielded a total construction time is eight month four days or 243 days with cost of IDR 4,095,618,834. The difference of cost construction with total estimation cost based on HSPK 2013 is IDR 914,944,792 or 18.16 % lower. This difference in construction cost is an advantage.

Key word: Construction method, construction cost and time implementation, modern analysis of construction cost.