ABSTRACT

PT XYZ is a company established in 1998 and engaged in construction. PT XYZ has handled several national and international projects. While PT XYZ is working on the Solid Waste Disposal construction project. Solid Waste Disposal is a project that is being carried out by PT XYZ which started from the beginning of 2019 and is targeted to be completed in 2021. However, the Solid Waste Disposal project experienced delays which resulted in this project still on going the executing stage because there are still activities that are still running and not even running at all. The delay was due to work delays due to the lockdown policy in Indonesia which resulted in the project being hampered in its work, besides that there were several other factors, namely the determination of the duration was inaccurate because the project team did not pay attention to other external factors that occurred.

With the occurrence of these factors, an acceleration of a project is carried out so that the project does not experience project delays. In this design, calculations are carried out using the Crashing Project method and Cost Recapitulation Calculation After Crashing Project. Crashing Project method is carried out in order to obtain Crash Duration and Crash Cost from a project activity that is exposed to the critical path. And the analysis of The Calculation of Cost Recapitulation After Project is used to show the Direct Cost, Indirect Cost, and Total Cost of a project in each of its activities. The acceleration of this schedule is carried out using two alternatives, namely the addition of working hours and the addition of labor. The project works normally 8 hours a day from Monday to Saturday starting at 08.00 - 17.00. In the alternative, the addition of working hours is carried out with the scheme of adding 1 hour, 2 hours, 3 hours, and 4 hours or 24 hours of additional working hours in each day and in the alternative of adding manpower carried out in each activity affected by the critical trajectory. After doing the Crashing Project, a Cost Recapitulation Calculation after the Project is carried out by calculating Direct Cost, Indirect Cost, and Total Cost which will later be carried out to find the optimum point in each activity is on a critical path and is subject to crashing calculations.

This project has a normal duration of work of 170 days with a total project cost of Rp77,566,123,186. In the alternative, additional working hours are carried out by doing 24 hours of overtime which is divided into each day. Activities affected by crashing perform 24 steps of work so as to get the optimum duration and point which will later be presented using direct cost, indirect cost, and total cost graphs. This crashing project contains calculations of crash duration, crash cost, and cost slope. Next, it will calculate the cost by calculating direct cost, indirect cost, and total cost. The design results of this final project design are in the form of an acceleration schedule by attaching duration and cost. In addition, this design will use spreadsheets to make it easier for Project managers to monitor or pre-calculate crashing again.

The benefits of this design will be useful for the company because this design helps the company in carrying out an acceleration schedule, besides that this design will also be useful for project managers who can later do calculations more easily with spreadsheets if this project will do the same thing, the project manager can also see easily based on the graph displayed in the spreadsheet. With this crashing, the project will experience an accelerated schedule in terms of duration which will later be completed in accordance with the expected contract.

Key word — [**Project Scheduling, Schedule Accelerate, Critical Path Method, Crashing Project, Direct Cost, Indriect Cost**]