

## **ABSTRACT**

*PT. DCM is a partner of PT. Telekomunikasi Indonesia's company, which is engaged in network construction as a provider of services and materials. As a company that has been handling network construction projects for 17 years, one of the projects handled by PT. DCM is Ducting Fiber Optic. This Ducting Fiber Optic Project is located in Summarecon Bandung Housing, precisely in the Ruby Cluster. As is known, in a network construction project has several risks that have an impact on the completion of the project. When working on the Ducting Fiber Optic project, there are design changes in manhole and handhole work. This is one of the causes of project delays. The impact of the risk that is the cause of project delays, namely in terms of time, cost, quality and safety & security. To overcome the risk is to provide the right risk response for each risk variable that has been identified. In this study using 2 methods, namely qualitative and quantitative to analyze risk as a whole. The qualitative method used is Probability Impact Matrix, where this method is used to measure and prioritize risks based on existing categories, namely low, medium and high. While for the quantitative method used is Sensitivity Analysis, where this method is used to see the sensitivity of the risk of costs arising from priority risks. After that the cost risk that has a risk threshold above 10% (as needed to estimate the costs that can be received by the company) is given a contingency reserve of time and costs to become an optimal risk response plan to avoid the risk of a large project. In the end, for the overall risk an appropriate response will be given and become a Updated Risk Register as a result of this research.*

**Keywords :** *Ducting Fiber Optic, Probability Impact Matrix, Sensitivity Analysis, Risk Response, Risk Threshold, Contingency Reserve.*