ABSTRACT

Highway construction projects Nusa Dua - Ngurah Rai - Benoa has length of 2 kilometers above ground land and 10 kilometers above the shallow ocean. Rain fall and wind speed is the bottleneck of the development of Nusa Dua - Benoa. There are many other risk factors that have the potential to interfere with the implementation of the project so that the application of risk management is necessary for the smooth running and success of project.

In this study phases will include identification, risk analysis and risk response. Identification is performed to find risk factors that are relevant to this project. This stage is done by studying the literature on risk in highway construction projects that are then validated by a preliminary survey by interview. While risk analysis aimed to determine some of the highest risk factors influence the review of aspects of time and cost. Risk analysis carried out on the main survey as follow-up of preliminary surveys. The method used in the analysis combined with the Severity Index Probability-Impact Matrix. Risk Response
made to the highest risk variable influence on aspects of time and cost. Overall, the survey will be conducted through interviews and questionnaires involving several contractors who are selected in the Highway Development Project Nusa Dua - Ngurah Rai - Benoa.

This research resulted in the risk of tidal sea water as the highest risk and the impact on future cost. Response is to make the schedule and plan the implementation of ocean circulation area and the pontoons added cost of common ground.

**Keywords**: risk analysis, highway construction project Nusa Dua - Ngurah Rai - Benoa, Probability-impact matrix, severity index.