

**APPLYING VALUE ENGINEERING IN SLOPE FAILURE ON ROAD EMBANKMENT
REMEDIAL WORK**

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ABSTRACT

Indonesia has a plan to develop more than 1300 kilometers toll road in the future. Due to soil and topographic condition of its route, many of them will be built in high embankment which has potential vulnerable to slope failure. When such failure occurs, toll road cannot delivers vehicle. Therefore, time is very essential for remedial works which involves design process. However, value of design has to be improved. The famous method for its improvement is value engineering (VE). VE involves a creative search of the design so that we can choose a design that has an expected value.

The purpose of this study is to establish designs of slope failure in road embankment remedial work and to develop future VE application of its work. One of the methods to achieve this purpose is by applying VE in three location of slope failure in Purbaleunyi Toll Road Indonesia to provide designs which is proper with client's expected value. Therefore, client has an option in choosing a design.

The result of applying VE in such locations is two general designs for its remedy. The first design is bored pile with or without modification and secondly is counter weight with or without modification. Difference cost of its designs has a range from RM 20,000 to RM 1,700,000.

VE can be applied in slope failure remedial work. It can develop designs with various costs to be decided by owner. Therefore, owner can has an alternative design which proper to their objective.