

ABSTRACT

The road is one of the important means of land transportation in connecting various places, besides the road is also used as a means of distribution of goods and services as a means of expanding the country's economy. The road is also used as a boundary of an area with another region. Therefore roads must meet technical and economic requirements according to their function. As you get older, the road will be damaged. Road management requires an adequate budget. Public Works Department Bina Marga is the department responsible for the construction and maintenance of roads throughout Indonesia. However, some of the roads that have been built lacked care and repair. Improvements made are usually not on target. One of the problems is that the allocated budget does not meet the needs. Therefore, to overcome the problem of road improvement, a system is needed that determines the priority order of which roads will be improved first, thus optimizing the limited budget.

To determine the order of priority of road improvement, the method used is Analytic Hierarchy Process (AHP) and COPRAS-G. The AHP method is used to determine the weight for each criterion, ie road damage condition, vehicle volume, vehicle speed, road classification, and land use. While COPRAS-G method is used to calculate the weight of alternatives or roads that will be prioritized by taking into account the weight of the criteria that have been determined. So that obtained the order of priority of road segment that will be repaired, that is street code of J53 is Manis 2 street KM 1 with importance level of N_i equal to 100%, second order is by street code J55 is Kasir 2 street KM 1 with importance N_i equal to 90,96% and the third priority order is on the street code J67-5 Imam Bonjol street KM 5 with the importance of N_i of 86,5%.

Keywords: priority, repair, road, highway, analytic hierarchy process, AHP, COPRAS-G