

## ABSTRACT

In General, the highways tend to decline the condition, indicated by the number of vehicles passing on the road exceed the capacity of the planned road. Repairs necessary to keep the road conditions to fit the age of the planned road. Department Of Public Works (DPU) Bina Marga is a government agency that carries out routine repairs of roads and bridges. Allocated budget of the provincial government which covers over the existence of a limited determination of priority improvements to roads in the region of 2 Sukabumi. In the process of priority improvements to roads in The Region of 2 Sukabumi part The Office of Highways (Dinas Bina Marga) Sukabumi consider the factors of quantitative and qualitative based on certain criteria and subcriteria.

In this research, we discussed a settlement method for the case of prioritizing road improvement in The Region of 2 Sukabumi using Fuzzy Analytical Network Process (Fuzzy ANP) method for weighting. Weighting was done in several stages the weighting between criteria and the final weight of the priority first. The Office of Highways (Dinas Bina Marga) Sukabumi set four criteria, and four alternative based on survey data of January 2017. Results weighting on Raya Baros street and Pembangunan street indicate the order of priority by the method of Stationary (STA). This indicates the priority road improvement score first with an average ride on parts STA 3 on the street of Pembangunan with weights the value of 308,849 and STA 37 on the street of Raya Baros with weights the value of 363,252. The results of weighting indicate that the sequence of categorical scale criteria is very important with STA 37 on the street of Raya Baros, pretty important with STA 16 on the street of Raya Baros, and not important with STA 12 on the street of Pembangunan.

**Keywords:** Fuzzy Analytical Network Process, weighting, road improvement, priority order, priority score, sequence criteria categorical scale.