Abstract

Mataraman Bridge II, which is located in the between region of Malang Regency Panggungwaru - Mataraman ± 40.8 m in length with a width of ± 11 m with no footpaths. The bridge was originally designed with building standards for precast concrete I girder type, method of precast concrete (precast), this method was recommended for concrete bridge construction, because it was economically, shorten construction time and easy implementation. The bridge girder was designed with 1700 mm of height. From the data obtained, the bridge has a concrete quality precast concrete I girder K-500, fc' 415 kg/cm². The bridge across a river with a depth of ± 9.6 m from the floor of the vehicle bridge to the riverbed. The foundation used in this bridge was the welling foundation. Mataraman II Bridge, it used as the object of the final project redesign method with reinforced concrete girder. Reinforced concrete bridge method is recommended for use, due to durable, easy maintenance and a lot of use of domestic products, they were cement and steel reinforcement. The bridge was designed to build a new abutment, it has a distance of ± 2m from the old abutment so as not to interfere because the wide
mouth of the river, so the length of the bridge is 44.80 m. To use reinforced concrete of girders, the length of the bridge bigger than 25m is uneffective and therefore it was planned pillar on Mataraman II bridge ± 10m from the new abutment. The bridge will also be added footpaths along the bridge 2 x 1 m, because of the possibility of the bridge would frequently crossed by pedestrians. The wells abutment were planned to be supported foundation, because at a depth of 4 m - 5 m price of N (number of strokes) of the SPT experiment conducted in the field is obtained $N > 50$ (hard ground).

**Keywords:** Reinforced concrete, abutment, pillars, welling foundations