Abstract

We need to pay attention to the oprit construction design in order to get a safe oprit design until reach design life. Beside we also need to consider the cost of construction because this building use fee from country fund. So the oprit design will be secure, economics, and efficient according to valid standard. And it can make a saving for the country fund.

What will discuss in this final project is to designing an oprit with pile on slab construction as an alternative construction from embankment construction that have been used a lot. With pile on slab design, we can get the estimate cost and realization method. So, it can be used as an advice for another oprit construction.

Fly over oprit that used in this final project study is Kali Porong fly over for arterial road of Siring-Porong relocation project in Sidoarjo (Sta 5+282.44 until 6+086.01). There are three kind of span that used for slab in this final project. They are 4m, 5m, and 6m. ang there are two kind of diameter concrete pile, 0.5m and 0.6m. So, there are six combination of design pile slab construction with different span and diameter concrete pile.

From that several combinations design, we found that slab with 6m of span and 0.6m diameter of pile is an optimum design with cheaper cost than another combination. That used Rp
73,085,446,000 (Seventy three billion eighty five million four hundred fourty six rupiah).

Key words: oprit, Siring-Porong main road relocation, pile slab, fly over.