

**ANALYSIS OF MAINTENANCE AND UPKEEP COSTS FOR  
FLEXIBLE PAVEMENT ROADS IN BENGKALIS REGENCY  
(Case Study: Pambang - Teluk Lancar Road, from STA 00+000 to  
STA 00+363)**

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**ABSTRACT**

*Along with the increasing population in Bengkalis Regency, especially on Jalan Pambang Teluk Lancar. Therefore, safe, comfortable, and efficient road conditions are needed to support the economic needs of the community. Jl. Pambang - Teluk Lancar is a road that connects settlements with city centers, with these conditions, good pavement conditions are needed so as not to disturb the comfort of road users. The method used in calculating maintenance over the life of the plan, which is 10 (ten) years in the future, is Life Cycle Cost. Life Cycle Cost is a method used to obtain alternatives to various possibilities in decision making and describe the present and future value of a road construction development, namely by calculating and considering inflation and interest rates. The initial construction cost or initial cost incurred is Rp2,440,000,000.00. Routine maintenance costs amounted to Rp13,816,000 and periodic maintenance costs amounted to Rp380,817,000 which have been validated by road maintenance and road maintenance experts. The maintenance cost of the LCC is Rp1,180,613,953.72. The total life cycle cost of LCC is Rp3,620,613,953.72. At the lowest bank interest rate NPV calculation (3.5%), the NPV is Rp2,886,093,243.78. At the average bank interest rate (4.5%), the NPV is Rp2,935,225,326.60. Meanwhile, at the highest bank interest rate (5.6%), the NPV reached Rp3,040,275,561.42.*

**Keywords:** *Analysis, Cost, Life Cycle Cost, Road Maintenance*