DECISION-MAKING GUIDELINE TO DETERMINE ECONOMIC CONSTRUCTION COST OF STONE MASTIC ASPHALT (SMA) PREMTX

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LAPORAN AKHIR PENYELIDIKAN: "DECISION-MAKING GUIDELINE TO DETERMINE ECONOMIC CONSTRUCTION COST OF STONE MASTIC ASPHALT (SMA) PREMIX"

Adalah dengan hormatnya merujuk kepada perkara di atas. Bersama-sama ini disertakan 2 (dua) naskah Laporan Akhir Penyelidikan bertajuk "Decision-making Guideline to Determine Economic Construction Cost of Stone Mastic Asphalt (SMA) Premix". Tujuan penyelidikan ini adalah untuk mendapatkan pengesahan jawatan pensyarah. Penyelidikan ini telah dijalankan dengan pembiayaan sendiri.

Sekian, terima kasih.

Yang benar,

SRROffIMAHKHOI RIYAH BT. MOHD. ARIFIN HARAHAP
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ABSTRACT

Stone Mastic Asphalt (SMA) technology has been introduced to Malaysian construction industry since the 1990s. Since then, several trial lay projects had been initiated for purpose of studying this alternative surface course material. However, the acceptability of SMA is still quite discouraging among the local road authorities. This setback is due to the report of previous studies on the high initial cost of SMA. A survey conducted on premix manufacturers in 2005 indicated that the construction cost of SMA is higher 61% than ACW20. Hence, the study aims to propose a decision-making guideline to determine the economic construction cost of SMA. This is done by identifying the significant cost elements of SAM and ACW20 via multiple regression analysis. A population study was carried out on all the quarries in Selangor. 27. Cost data was collected via personal interviews using a standardized questionnaire. The result indicates the construction cost of SMA can be comparable to its conventional counterpart if the Material cost is less than or equal to RM 102/ton and the thickness of the wearing course layer does not exceeds 35 mm. Finally, the study recommended that an economic construction cost of SMA is achievable if the cost of material and thickness of the laid surfacing are properly managed.