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Comparison between Stability and Flow Value Using Aggregates With Require Gradation and Aggregates Failed In Flakiness and Elongation (40 % Flaky Particles)

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Abstract: This study has been undertaken to investigate the determination of Comparison between stability and flow value using Marshall Mix design method with required gradation and the aggregates which are failed in specify gradation range. This study has been carried out in DBM layer. Dense Bituminous Macadam (DBM) is a binder course / base course and profile corrective course of pavement subjected to moderate traffic loads. That will gives long lasting performance as part of pavement structure. The work shall consist of construction in single or multilayers of DBM on a previously prepared base or sub-base. The thickness of the single layer shall be 50mm to 100mm. looking to the past records there is not much work carried out on use of Flaky and Elongated aggregates in the Hot Mix. This report will enhance the research in saving of natural resources by using the discarded aggregates which are not confirming to the shape requirement. The grading of aggregates used to prepare the DBM mix should fall within the limits specified in MORTH. The present study is taken to evaluate the marshal properties of DBM mix prepared using the aggregate having different grading within the grading limits specified by MORTH. and comparison between gradations performing with range of MORTH and aggregates not confirming to the shape criteria of the MORTH. The report also covers the realistic view in respect to Stability, flow value, Voids in Mix (VIM) and Voids filled with bitumen (VFB).

Index Terms – Bituminous Mix, Marshall mix Design Method, Comparison, Flaky Particles, MORTH