ABSTRACT

NUMBER OF COLLISIONS CHANGES DUE TO DIFFERENCES IN MARSHALL PARAMETERS IN ASPHALT CONCRETE – WEARING COARSE (AC-WC) GRADING SMOOTH

By

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This study was conducted to see the changes in the value of the parameter values marshall after the number of collisions in the standards vary the amount of the collision then analyzed the number of collision and then analyzed the number of collisions are most effective assessed on the value of the characteristic marshall. In the Marshall planning standard for the number of collisions of heavy traffic conditions compaction test specimen as 2x75 collision with a mixture cavity boundary between 3.5-5%.

This study uses gradation Asphalt Concrete - Wearing Course (AC-WC) smooth gradations for middle and upper limits. From the data obtained aggregate gradation and asphalt aggregate demand needs are used to find the optimum bitumen content that is used in the manufacture of test specimens for variations in the number of collisions is 2x55, 2x65, 2x75, 2x85, and 2x95. Marshall then test to see the number of collisions are most effective against the characteristics of asphalt mixture.

Based on the analysis of the data processing is obtained that the value content of asphalt is used to limit the middle that is 5.7% and the upper limit of 6.5%. Total Collision 2x75 and 2x85 that meets all the parameters marshall. For the number of collisions 2x55 and 2x65 obtained small stability, voids In The Mix (VIM) is great and does not make the specification, to the number of collisions 2x95, obtained great stability and voids In The Mix (VIM) is small and does not get in the specification.

Keywords: Collision, Marshall, Asphalt Concrete - Wearing Course (AC-WC), Smooth Gradation