**Enhancing Pavement Design Life – Back to Basics.**

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| Trucks and buses are continually hammering our pavements. These loads are transmitted down through the pavement, potentially deforming and damaging the integrity of the subgrade below. How the subgrade reacts under load is therefore of great interest to the pavement designer, with the Part2 of the Austroads pavement design guide going so far as to state that the evaluation of the Subgrade is one of the most important factors in determining the pavement’s structural thickness, composition and ultimate performance. The principal objectives of the investigation, testing and evaluation of subgrade for pavement design purposes is to determine four primary factors relating to the subgrade, being bearing capacity, sensitivity, variability, and the long-term in-service moisture content. If the subgrade is poorly characterised as having a higher strength than in reality, such as with dry clays, the subgrade cannot resist the high traffic-related stresses during its service life, and the pavement will deform and rut. This presentation illustrates a number of case studies from recent pavement design reviews and premature pavement investigations have revealed a number of anomalies in the pavement investigation and test practices that have led to poor pavement design outcomes, contributing to premature pavement failure, and additional construction costs.  |