



EMC SQUARED® System

Documenting High Strength of Stabilized Layers with Falling Weight Deflectometer Testing

Pictured here is a Falling Weight Deflectometer (FWD) testing apparatus* evaluating the strength of a stabilized heavy haul road at Fort Bliss after several months in service under heavy haul trucks and tracked military equipment. The FWD equipment is capable of simultaneously providing Resilient Modulus measurement of both the Stabilized Aggregate Surface Course layer and the Stabilized Soil Subgrade layer below in a non-destructive manner while testing the performance of many miles of road in a single day. The FWD produces a force impulse through the layers that closely simulates a moving wheel load, and it provides a means to determine the equivalency of various materials in relation to their ability to support dynamic or repetitive loading.

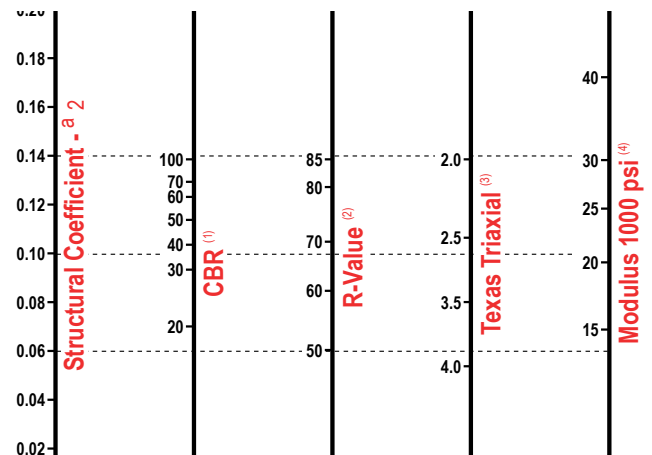
Regarding the stabilized heavy haul road structural section at Fort Bliss, the average layer moduli for the stabilized soil subgrade layer was 40,000 psi and the average layer moduli for the stabilized aggregate surface course layer was 165,000 psi.** Using the comparative chart provided by the American Association of State Highway Transportation Officials (AASHTO) for correlation with other standard index tests for additional perspective, the FWD testing demonstrated that the stabilized subgrade soil was significantly stronger than 30,000 psi, the Resilient Modulus value that correlates with a CBR of 100, an R-Value of 85, and a Texas Triaxial of 2.0. The measurements from this group of four test values are representative of high quality crushed aggregate base materials (and some aggregate base materials treated with conventional stabilizer products), so the higher moduli of the native soil material stabilized with the EMC SQUARED System stabilizer treatment (40,000 psi) and the far higher moduli of the aggregate materials stabilized with the same EMC SQUARED System

treatment (165,000 psi, or 5.5 times the referenced 30,000 psi strength) demonstrate in materials engineering measurements how this advanced, broad spectrum stabilization technology is producing an entirely new level of field performance and solving problems previously unaddressed. The stabilized heavy haul road system at Fort Bliss provides an excellent example.

* FWD field testing conducted April 7, 2011 by Fugro Consultants, Inc., Austin Texas.

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AASHTO Guide for Design of Pavement Structures Base Course



(1) Scale derived by averaging correlations obtained from Illinois.
 (2) Scale derived by averaging correlations obtained from California, New Mexico and Wyoming.
 (3) Scale derived by averaging correlations obtained from Texas
 (4) Scale derived on NCHRP project (3)