

## **CONSIDERATIONS OF AREA PARAMETER OF THE DEFLECTION BASIN ON THE STRUCTURAL EVALUATION OF FLEXIBLE PAVEMENTS**

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### *ABSTRACT*

By using the concept of modified structural number (SNC) and deflection measurements, a simplified calculation methodology, that permits the structural condition evaluation of an existing pavement, is being proposed. The values of SNC and the curvature parameters were first determined through simulations using the ELSYM-5 software. Deflection measurements were carried out in experimental segments of Brazilian highways. The resilient moduli of each layer were determined from backcalculation using the ELMOD program for a three layer system. Theoretical correlation models between SNC and the basin deformation parameter were determined and later, calibrated with the results of experimental sections. Utilizing the studied models, a good correlation was found between SNC, area parameter and maximum deflection, enabling the determination of SNC through deflection measurements and assisting in the diagnostic of structural condition of asphalt pavements.

*KEY WORDS:* Structural Evaluation, SNC, Deflection Basin, FWD.