

Comparing pavement response from a single rolling wheel with FWD

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The Greenwood Traffic Speed Deflectometer (TSD) has been developed as an alternative to the Falling Weight Deflectometer (FWD), at both project and network level. However most historic archives consist of FWD measurements, since this tool is the industry standard for bearing capacity measurement. Direct comparison of TSD and FWD data is difficult and should be done with great care. The TSD's deflection basin is not just impacted by the two wheels next to the sensors, but also the six other wheels located under the trailer, whereas the FWD's basin is impacted by just one load. To make the comparison of the two easier Greenwood has recently developed a model, that based on measurements taken with the TSD, can simulate the equivalent pavement response to a single rolling wheel, which will more closely resembles the response of an FWD.