**Using LTPP Data in Evaluating the Effectiveness of Pavement Smoothness**

State Highway Agencies (SHAs) in the United States use smoothness specifications to insure that they are providing the public with quality roads. Monetary incentives/disincentive policies based on the initial roughness values are used by SHAs to encourage contractors to build smoother roads. To justify the extra costs associated with smoothness specifications, it is important to demonstrate that smoother roadways do stay smooth over time.

Obtain IRI measurement data from the Long Term Pavement Performance (LTPP) program using LTPP InfoPave, by the following steps:

1. Determine which LTPP Sections are in the vicinity of the Highway Network:
	1. MAP 🡪 View LTPP Sections by Location
	2. Using the filters on the left, narrow down the search parameters
2. Retrieve yearly IRI measurement data relevant to the sections identified above:
	1. DATA 🡪 Table Export
	2. Expand the “Performance” Tab
	3. Select “Profilometer Master Table”
	4. Click “Add to Selection”
3. Download selected data
	1. Select which Export File Format you prefer
	2. Click “Submit Data Bucket for Extraction”
	3. MY LTPP 🡪 My Data Extractions 🡪 click “Download”

Regression and Chi-Square statistical analysis can then be performed on the LTPP IRI measurement data to identify construction practices that will improve pavement smoothness, and if it can be shown that future roughness values of pavements depend on the initial roughness values, then it would be cost effective to spend more money on building smoother pavements.

**REFERENCES**

1. Dr. Khaled Ksaibati and Shahriar Al Mahmood. *Utilizing the Long-Term Pavement Performance Database in Evaluating the Effectiveness of Pavement Smoothness*. Department of Civil and Architectural Engineering, The University of Wyoming, Laramie, Wyoming, March 2002
2. Long Term Pavement Performance. *LTPP InfoPave*. [www.infopave.com](http://www.infopave.com).