Florida Department of Transportation Research

Assessing the Appropriate Construction Quality Index for Florida
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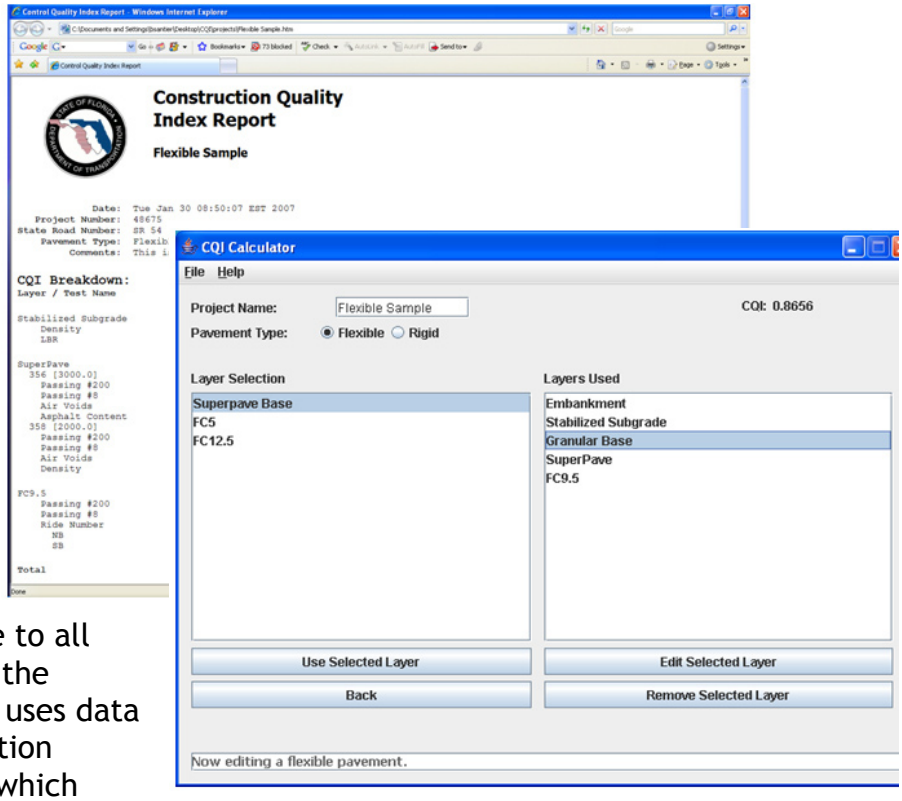
Roadway pavement projects in Florida are built in accordance with construction specifications mandated by the FDOT. The specifications define the minimum requirements for quality construction. The projects must undergo an evaluation of the construction quality before they are accepted as completed by FDOT.

FDOT needed a practical and effective pavement construction quality index (CQI) tool that could evaluate each component of a pavement project and link the results to provide a composite quality index for the entire project. The CQI would need to (1) be compatible with FDOT's current test and measurement system, (2) be applicable to material, structural, and pavement smoothness characteristics present in both new and rehabilitation projects, and (3) include standards for soils, bound and unbound granular base materials, asphalt, and concrete.

Researchers developed CQI Calculator, a stand-alone, user-friendly application that runs in the Windows environment. Its flexible structure makes it applicable to all projects, from the simple to the complex. The CQI Calculator uses data from the Laboratory Information Management System (LIMS), which serves as FDOT's enterprise database system for all construction quality data.

Researchers tested the CQI Calculator application on six completed pavement projects that had been previously evaluated by FDOT. As additional LIMS data becomes available, further testing of and refinements to this tool will be possible. When fully functional, the CQI Calculator will be useful to FDOT for evaluating contractor performance and, consequently, selecting contractors that can provide the best quality product.



Screen captures from CQI Calculator

Project Manager: Bouzid Choubane, State Materials, bouzid.choubane@dot.state.fl.us
Principal Investigator: Michael I. Hammons, Applied Research Associates, Inc., Gainesville, mhammons@ara.com