

Better bridges



UNIVERSITY OF KENTUCKY
College of Engineering

The University of Kentucky College of Engineering will help you get where you want to go. That's a good message for students, but it's also true if you're traveling on Kentucky's highways.

Teams of researchers and students headed by civil engineering Professor Issam Harik are known as the "Bridge Doctors," a title given them in an Ashland *Daily Independent* story in 2001. Thanks to their work, bridges across the state are safer and will last longer.



Dr. Issam Harik

In Carter County, the team applied Carbon Fiber Reinforced Polymer (CFRP) fabric to repair a bridge over the Little Sandy River. The material, which is applied like wallpaper, is eight times stronger than steel. The CFRP application saved the state almost \$500,000 compared to the original repair estimate, and it was completed without closing the bridge to traffic. No additional cracking has been detected since the job was completed in October 2001.



Scaffolding was put in place so that repairs to a Carter County bridge could be monitored monthly.

Other similar projects are under way in Washington, Nelson and Franklin Counties, and on I-65 in the Louisville area. A Clark County project involved aluminum bridge decks, which are more costly initially, but eliminate long delays. The aluminum decks were placed on the bridge and ready for traffic in three hours.

Dr. Harik and his teams have inspected and evaluated more than 500 bridges on Kentucky's parkway and interstate system in western Kentucky. Wherever you drive in Kentucky, chances are good that the "Bridge Doctors" have been there — and their work will help you get where you want to go.



Carbon Fiber Reinforced Polymer is applied like wallpaper.

***Innovation with impact. Research with results.
The UK College of Engineering works for Kentuckians.***