Rolling toward tomorrow

For the past two decades, much of the work on the Turnpike has been about adapting to meet the increasing demands of time and traffic.

From radio communications and landlines that linked troopers and work crews in the early days to today's PC-managed ticket system, fiber-optic and cellular communications, and weather-tracking and reporting systems, the Turnpike has readily and regularly updated its technology.

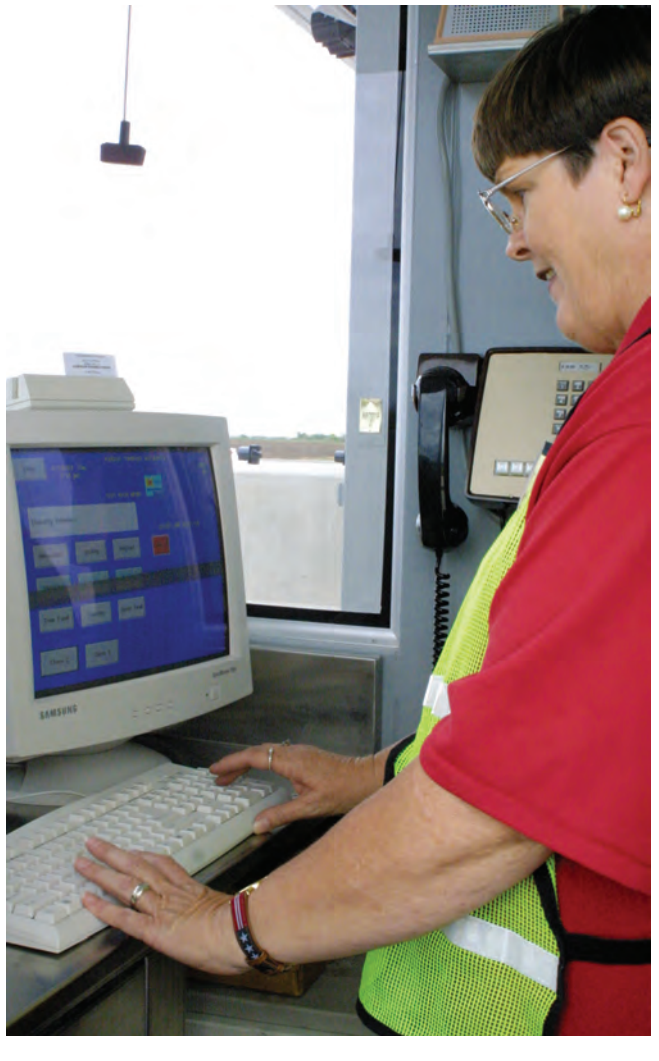
There's no greater example of that commitment than the development of the K-TAG electronic toll collection system in the mid-1990s. With an electronic tag on the windshield, motorists and truckers can quickly use special lanes at toll plazas, with the technology tracking where they entered and exited the Turnpike, then automatically deducting the toll from a prearranged account. No longer do drivers have to wait in line to pay. It's simple and quick.

Its installation wasn't so simple and so quick for the Authority, with the 1995 annual report noting that "The K-TAG program has proven to be the most technically demanding project undertaken since the construction of the facility."

Johnston remarked at the opening ceremonies for the program, "From the outside, it looks very simple and uncomplicated, but K-TAG is an extremely advanced electronic toll collection system. We have experienced relatively minor problems considering a project of this magnitude and complexity."

The technology on which it's based, utilizing radio frequency identification, was fine-tuned in the early 1990s and evolved from, fittingly enough, a system originally designed to track cattle. Installing the system on the Pike required utilizing the technology and also a great deal of construction at existing toll plazas to accommodate dedicated K-TAG lanes.

Personal computers were placed in the booths in 1990 to manage toll collection duties.



Many KTA departments, under the direction of Information Services, assisted with the implementation of the K-TAG program in 1994 and 1995. Here, KTA employees drive vehicles through the new K-TAG lane at the K-96 interchange to test equipment and various usage scenarios.

The Authority's decision to purchase the electronic toll collection system and install it virtually "in-house" is a first, since most toll companies award a "turn key" contract allowing a vendor or group of vendors to design and install the entire system. The K-TAG program was essentially designed by the staff of the Turnpike, installed completely by Authority personnel and is maintained by Turnpike staff. This implementation and work method saved the Authority a substantial amount of money in installation and ongoing operating costs.

As with K-TAG, other developments have smoothed travel for KTA customers.

A SCAN weather system was inaugurated in 1991 with highly accurate pavement sensors relaying local ground temperatures. "We now have contracted with a private weather reporting company that is issuing us flash-flood warnings, high-wind warnings, any kind of warning of an unusual weather occurrence, milepost specific," Tom Wurdeman said. "All our superintendents get these warnings."

Emergency assistance cellular phone service — just call "*KTA" — became available along the entire length of the highway in the mid-1990s as well. More recently, in an effort visible through 22 new signs that declare "Urgent Message When Flashing," the Turnpike updated its 1610 AM radio broadcast system used to communicate road construction or emergency information to travelers.

And, in a more hands-on form of service, a Motorist Assist Program has been operated during the peak seasons of Memorial Day to Labor Day, with roaming technicians offering stranded motorists roadside help.

Meeting new Challenges

Because the Turnpike was built prior to the advent of the Interstate

in Kansas, federal planners chose not to spend money constructing parallel roads. Instead, they designated portions of the Turnpike as part of the Interstate with the understanding that this roadway would be kept in similar condition to the rest of the system.

The 1980s and 1990s also saw the Turnpike expand the number of interchanges from 15 to 21. Many of them — Mulvane, Haysville-Derby, K-96, Andover, Lecompton — met the traffic needs of growing communities.

The demands placed on the Turnpike may be clear, but they're not always simple to satisfy.

Proposed interchanges must meet several criteria, including economic feasibility and safety, before plans are finalized.

In early 1995, Michael Johnston, a former state senator and cabinet member in the Finney administration, took the reins of leadership. With his arrival, Johnston felt a KTA mission statement was warranted: "The mission of the Kansas Turnpike Authority is to provide safe, high-quality highway transportation service to our customers for the lowest reasonable cost."

As part of accomplishing that mission, the Authority had been taking a hard look at future traffic and technical issues. The Authority's consulting engineering firm, HNTB Corp., prepared the 1994 Long-Term Needs Study, a report 11 months in the making. It identified vital projects for the next 10 to 20 years, and anyone driving the Turnpike in the last few years has seen the initial results.

One was the massive rebuilding of the East Topeka interchange, to realign I-70 and straighten Turnpike access in that area. It was a multi-jurisdictional project involving the Turnpike, the Kansas Department of Transportation, the City of Topeka and Shawnee County. Design and construction plans were

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KTA Mission Statement

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>
> **Jerry Niebaum**
> KTA customer

finalized in 1997, and the project, at a 1999 cost of $98.6 million, was the “largest single project in the history of KTA and KDOT,” explained the Turnpike’s 1998 annual report. Under budget and ahead of schedule, the massive reconfiguration of roads, exits, tollbooths and service area opened in 2001.

A series of smaller but highly visible projects involved the rebuilding — and in Topeka’s case, the relocation — of service areas along the Turnpike. Restaurants and gas stations, with convenience stores and other businesses, were concentrated in new, modern facilities.

The 1994 Long-Term Needs Study also recommended adding extra east and west lanes for the busy Kansas City to Topeka Turnpike segment, a need further detailed in the 1998 Kaw Connect Study of the I-70 corridor. The study “showed again that if we wanted to maintain a level of service that is acceptable from a toll agency, we needed to go ahead and widen [to six lanes] between Topeka and Lawrence. It has been under construction and will be done in 2007,” Wurdeman said.

Typically, big road projects are created to meet the demands of growing traffic and congestion. In one case on the Pike, a project was designed to get out of their way. With Kansas Speedway, a NASCAR venue, scheduled to open in 2001 in rapidly expanding western Kansas City, Kan., the Pike’s Eastern Terminal toll plaza was moved west several miles to minimize congestion.

Other projects on the horizon include a new, six-lane Kansas River Bridge near Lawrence, as well as rebuilding both Lawrence interchanges and possibly creating one in Leavenworth County. The traffic at the I-335, U.S. 50 and I-35 interchange at Emporia engaged Authority engineers’ thinking for improvement of the interchange, where ramps and tollbooths can be tight and congested. With a plan in

Travelers enjoy six lanes of roadway between Topeka and Lecompton.

hand, this reconstruction project began in 2006, subsequently improving traffic flow within the next decade.

"Traffic volume's going to be an issue forever," Wurdeman insisted. "Lawrence continues to build, and Kansas City continues to move out. All of those things affect us."

Driving Success

In its first year in operation, the Turnpike served 3.6 million customers; in 2005, more than 32.3 million vehicles hit the road. Those kinds of numbers drive home why projects are needed. And, just the way the Pike was initially built, they've been paid for and will continue to be paid for by bond issues paid off not by taxes but by user fees. Today, just as it did when first built 50 years ago, the Turnpike helps drive the Kansas economy. And that economy, and the scale of roadwork, is ever larger.

"The difference has been that we've rebuilt a lot of our facilities to handle larger capacities," Wurdeman said. "There's not a lot different about them, but they're larger in scale, larger in magnitude. We rebuilt all the service areas, we rebuilt the toll plazas to be more what a customer

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Michael L. Johnston
KTA President/CEO

expects in this day and age.”

And that’s fine with one of its long-time customers.

“Oh, I got my money’s worth and I think it is still a bargain,” said Niebaum, the former KU administrator. “Occasionally, I would take one of the two-lane roads just for the scenery, but I really enjoyed the convenience of having the Turnpike as a fast way to get to and from work. Having the Turnpike is an incredible convenience.”

When it was first envisioned, the Kansas Turnpike was the road of the future. It still is.

“I don’t know if the Turnpike is going to change much in the future. We have a pretty singular, well-defined objective: manage this road. And, I don’t see much that is going to change that anytime soon,” Johnston said.