

## MDX, Other Toll Agencies Embracing Open Road Tolling

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MIAMI – Open Road Tolling (ORT) is the future of toll collection and Miami Dade Expressway Authority (MDX) is on the fast track of implementing the latest technology in South Florida.

“Open Road Tolling will give motorists the freedom to drive straight through a toll collection point without having to stop or slow down. There is no need to search for change to pay the toll or decrease your speed as you approach the tolling area,” said Maggie Cortez Kirkpatrick, MDX spokesperson. “The future of tolling is an open road expressway that automatically deducts your user fee without you have doing to anything beyond driving straight through it,” she said.

Just imagine:

- 400 cars can pass through a manned toll booth per hour
- 600 cars can pass through an exact change lane per hour
- 1200 cars can pass through a SunPass dedicated lane per hour
- 2200 cars can pass through an Open Road Tolling lane per hour

MDX opened its first open road tolling lanes on SR 836 eastbound, also known as the Wing, which is the first ORT application for any urban setting in Florida. SunPass users can go through the open road tolling lane's collection points at normal traffic speed and the electronic payment is automatically deducted.

Additional open road tolling pilot projects are currently being designed as part of the on-going SR 836 extension project and the SR 874 improvement project.

“It is just a matter of time before all toll plazas move to this technology,” said Kirkpatrick. “We will have tolling points throughout the system without any tollbooths or congested toll plazas. Not only will this system-wide effort make travels on the expressways more free-flowing, motorists will save money by only tolling you for the portion of the road they travel,” she added.

Kirkpatrick said all of MDX's expressways will have gantries that will span the roadway at predetermined points (before each exit ramp for example) and only toll motorist for the sections of the expressway they use.

MDX and other toll agencies will discuss ORT and other toll-related issues at the TEAMFL meeting Jan. 4-5 in Orlando. The TEAMFL meeting is being held in conjunction with a Florida Transportation Commission meeting.

ORT is viewed by many as the “holy grail” of the toll industry. ORT allows drivers to travel just as they would any other highway, unfettered by lane restrictions, toll plazas, and reduced speeds. But as with any new technology or service, implementation presents challenges, and one by one, these challenges are being addressed and resolved.

#### *Vehicles without Transponders*

One of the biggest hurdles to ORT implementation is answering the question: What happens when vehicles are not equipped with an appropriate transponder, or when the number of entrance and exit ramps makes it impractical to limit access to a toll facility?

According to Tom Knuckey, P.E., a PBS&J associate vice president and tolls expert, “The first thing is simply to minimize the problem by increasing ETC usage. This can be done by publicizing its benefits, making it easy to obtain transponders and set up accounts, and creating incentives, such as opening more ETC-only lanes and reducing tolls for those who pay electronically.”

Knuckey has assisted Florida’s Turnpike Enterprise (FTE) in the implementation of its SunPass ETC program for the Sawgrass Expressway and its self-imposed challenge of growing transponder usage to 75 percent of its customer base by 2008. FTE is targeting the retrofitting of one of its entire expressways to ORT by 2008, the first such retrofit ever attempted.

But what about those drivers who are newcomers or visitors to an area or who are unwilling or unable to purchase a transponder? One solution is to move toll plazas off of the main expressway. Drivers with transponders travel under open, gantry-type systems that span the roadway, while those that need to pay cash exit off the system briefly to pay and merge back into mainstream traffic. Day passes—available through rental car agencies, a web site, or other means—could be another option for those drivers who want to use a toll road, but don’t have a transponder.

Another potential solution is using overhead cameras to record the license plates of those vehicles without registered transponders. The license plates are matched to entries in the department of motor vehicles’ (DMV) database to obtain billing information. While simple on the surface, there may be



some snags to this approach.

“Statistics show that much of the information found in DMV databases may be corrupt or unusable. In situations like that, it may be possible to expand the search for billing information by searching water and phone company databases,” explains Kevin Hoeflich, P.E., a vice president in PBS&J’s Transportation Services group who has worked extensively on ORT and express lane projects. “The goal is to retrieve as much information as possible from existing databases so that customers can be moved to a form of electronic billing.”

It’s essential for toll agencies to let their clients know how to access and use the system to achieve the greatest degree of success. However, if billing information still can’t be found, or if a system user refuses to pay the bill, “it may be necessary to institute penalties such as uniform traffic citations or vehicle registration suspensions,” says Hoeflich.

#### *Maintenance Without Closures*

Another challenge to toll agencies regarding ORT is having access to ETC system devices to perform maintenance in live traffic situations. For this reason, most of the gantries used to support transponder and violation enforcement systems on ORT systems around the world are walk able, and video-imaging equipment can be easily maintained or repaired by unplugging components and plugging in new ones when necessary. Under these conditions, the goal becomes placing equipment in protected areas and making repairs during off-peak hours, limiting issues related to system maintenance.

#### **What Lies Ahead**

The lure of ORT is substantial. Less congestion at toll plazas means happier toll road customers, improved safety, less impact on air quality, and the ability of toll agencies to process tolls on their systems more quickly. As each challenge of ORT implementation gets addressed and toll agency experiences are shared, ORT will become more prevalent and toll road facilities—now recognized by many in the public sector as a fiscally necessary approach to road building—will become a more appealing transportation option for the public.

For more information about open road tolling, visit the ITS America web site at [www.ITSA.org](http://www.ITSA.org), or the International Bridge, Tunnel and Turnpike Association's web site at [www.IBTTA.org](http://www.IBTTA.org).