A Collaborative Effort

A number of organizations were involved in developing this brochure, including the Alliance for Toll Interoperability (ATI); American Association of Motor Vehicle Administrators (AAMVA); Council of State Governments' Eastern Regional Conference (CSG-ERC); E-ZPass Group; Florida's Turnpike Enterprise (operators of SunPass); International Bridge, Tunnel and Turnpike Association (IBTTA); and the I-95 Corridor Coalition.

The I-95 Corridor Coalition is an alliance of transportation agencies, toll authorities, enforcement, safety and related organizations from the State of Maine to the State of Florida, with affiliate members in Canada. The states comprising the I-95 Corridor Coalition rely more heavily on tolls to fund their transportation needs than counterparts in other areas of the country. Each year, the Coalition states' toll-supported roads, bridges, and tunnels process over 4 billion transactions, representing over $8 billion in toll revenue. These facilities provide vital support for the region's $4.7 trillion economy.

> The I-95 Corridor Coalition and the Alliance for Toll Interoperability (ATI) are working on a pilot project to enable customers to pay tolls with a single account, based on customer-authorized exchange of license plate data even where toll operators use incompatible transponders.

> For a comprehensive glossary of toll terms, visit the Resource Center at: **www.ibtta.org**
>
> For additional details and background information, visit: **www.i95coalition.org**

Meeting Customer Demands…

What's Needed

Collaboration among multiple entities and across state lines is needed to improve today's electronic tolling and lay the foundation for the future. With critical institutional infrastructure in place, the full capabilities and benefits of toll technology can be realized. Reciprocity among states would also ensure that adequate tools for collection and enforcement are available. Here is a list of what states could consider doing to enhance mobility in toll collection and strengthen the financial viability of toll operators:

✔ Look at existing state-specific systems to determine efficiencies which could improve access to vehicle registration information at minimum cost to both DMVs and toll operators

✔ Consider practices that could make collection and enforcement less complicated or less costly, and decrease the risk of a violation notice or toll invoice being sent to the wrong customer, such as:

❑ The issuance of non-duplicate numbers for different plate types or classes of vehicles

❑ Consolidation of license plate look-ups for multiple toll transactions or violations for the same vehicle

❑ The use of materials in the manufacture of license plates such as coatings and certain colors or fonts that make it less difficult to obtain clear images

❑ Potential use of both back and front license plates

❑ Regular database updates for such things as address changes

✔ Establish broad minimum guidelines for privacy, security and protection of personal information while preserving sufficient flexibility for different tolling business rules, data sharing among toll operators and across state lines, and reuse of protected data for extended periods where critical to revenue collection

✔ Enhance, enforce, and educate to ensure that penalties for toll violators are effective

✔ Ensure that laws supporting electronic tolling are enacted and understood by law enforcement and the court systems

✔ Authorize compacts or other forms of agreement to enable financial reciprocity among toll operators and across state lines and to recognize stronger sanctions (e.g., vehicle registration suspensions), that may currently be administered only by the DMV in the vehicle owner's home state

ELECTRONIC TOLLING: Benefits, Challenges, and What's Needed

Drivers on the nation's tolled roads, tunnels and bridges expect non-stop, reliable, safe and convenient travel. Toll operators are striving to deliver these benefits to toll-paying customers. This brochure, developed collaboratively by public agencies and related associations, provides a brief overview of electronic tolling and introduces "what's needed" to meet ever-increasing customer demands.

Serving the Customer...

Toll Collection Is Evolving

As transportation agencies work to meet the needs of travelers, technology offers many solutions. For example, technology has transformed toll facilities in recent decades, allowing drivers to pay electronically without stopping at a toll plaza. The stress and delay of traffic congestion at toll booths are being eliminated; vehicle emissions are reduced; travel is safer and more convenient; and customer satisfaction is increased.

Today's Electronic Tolling in Action

Traveling at prevailing speeds, a vehicle with a small device (toll "tag") on board can transmit a unique number to a tag reader at the toll collection site. That number links to the customer's established toll account, allowing the toll to be deducted from the account. For vehicles without toll tags, many of today's electronic toll systems classify the vehicle as a toll violator and cameras capture an image of the license plate so that a customer service center can contact the registered owner of the vehicle about the toll amount due.
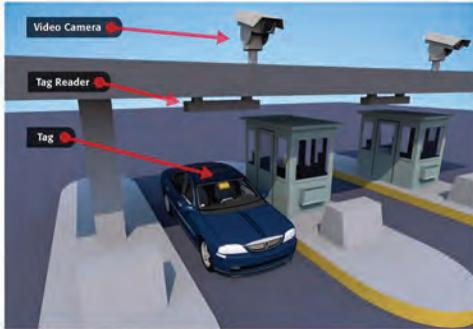
Open Road Tolling

To increase traffic flow and travel speeds at electronic toll collection points, Open Road Tolling may be implemented where traffic patterns and physical conditions permit the safe separation and diversion of vehicles which still must stop to pay tolls in traditional cash lanes. Shown to the left, tag readers and cameras are frequently mounted on overhead gantries in open road Express Toll Lanes.

Electronic Tolling in Transition

Electronic Tolling is now commonplace, but there still remain travelers without toll tags, or who may want to use toll facilities which do not operate with the customer's existing toll tags. For example, an E-ZPass® tag cannot currently be processed on a SunPass® toll road in Florida, and vice versa. All-Electronic Tolling, or AET, is an emerging business model which offers the potential to solve these issues and provide interoperability to all existing tagholders, as well as give all drivers – even those without toll tags – access to the same travel conveniences.

AET combines electronic tolling with robust imaging technologies to enable non-stop toll collection for all. Toll tag customers continue to pay tolls just as they do today. Cash typically remains as a payment option, but is paid through new payment channels rather than at the toll plaza at the time of travel. Vehicles having incompatible tags, or with no tag at all, can pay tolls through video tolling, oftentimes called "plate-based tolling." Similar in concept to the current way toll operators issue violation notices to toll evaders, plate-based tolling captures an image of the vehicle's license plate if a toll tag is not detected. The toll operator then obtains contact information from the pertinent state motor vehicle department ("DMV") to identify the vehicle's registered owner, and issue toll invoices periodically. For those traveling among different regional toll systems with currently incompatible tags, broader interoperability can be achieved by linking to the customer's toll account through the customer-authorized sharing of license plate information among those regional systems.

Benefits of All-Electronic Tolling

- Improved **SAFETY** with less weaving to access toll lanes
- Better **AIR QUALITY** with no idling and smaller toll facility footprints
- Greater **MOBILITY** with non-stop travel for all drivers
- Reduced **OPERATING COST** with fully automatic toll collection

Electronic Tolling...

Real-World Challenges

Toll operators face a common need to ensure that the administrative processes and institutional relationships to identify registered vehicle owners from license plate images are cost-effective and efficient. Toll violations enforcement and new video tolling operations depend on these processes to ensure electronic tolling remains fair (everyone pays) and toll revenue is secure for agency bond requirements, as well as for operations/maintenance investments.

There are several real-world challenges already experienced with license plate "look-ups" used to obtain vehicle registration data for toll violations. Video tolling depends even more on the ability to read the license plate and then obtain accurate registered owner information. Video tolling and enforcement challenges include:

- Ever-increasing variety of license plates
- Altered or obstructed license plate
- Costs of license plate look-ups
- Multiple agreements, procedures, and data formats required for look-ups
- Up-to-date name and address data at DMVs
- Organizational relationships between toll operators and DMVs
- Resource constraints at DMVs
- Insufficient consequences for non-payment of tolls
- No reciprocity across state lines for toll infractions, like there is for traffic infractions
- Need for sufficient adjudication processes

Future migration to broader interoperability and All-Electronic Tolling will only increase the magnitude of these challenges. Since the demands from the toll industry for license plate look-ups will increase significantly as more tolling relies on that process, the importance of efficient and cost-effective access to state departments of motor vehicle databases cannot be overstated.