

# Technology Takes a Toll: *Advances in Georgia Tolling Operations*

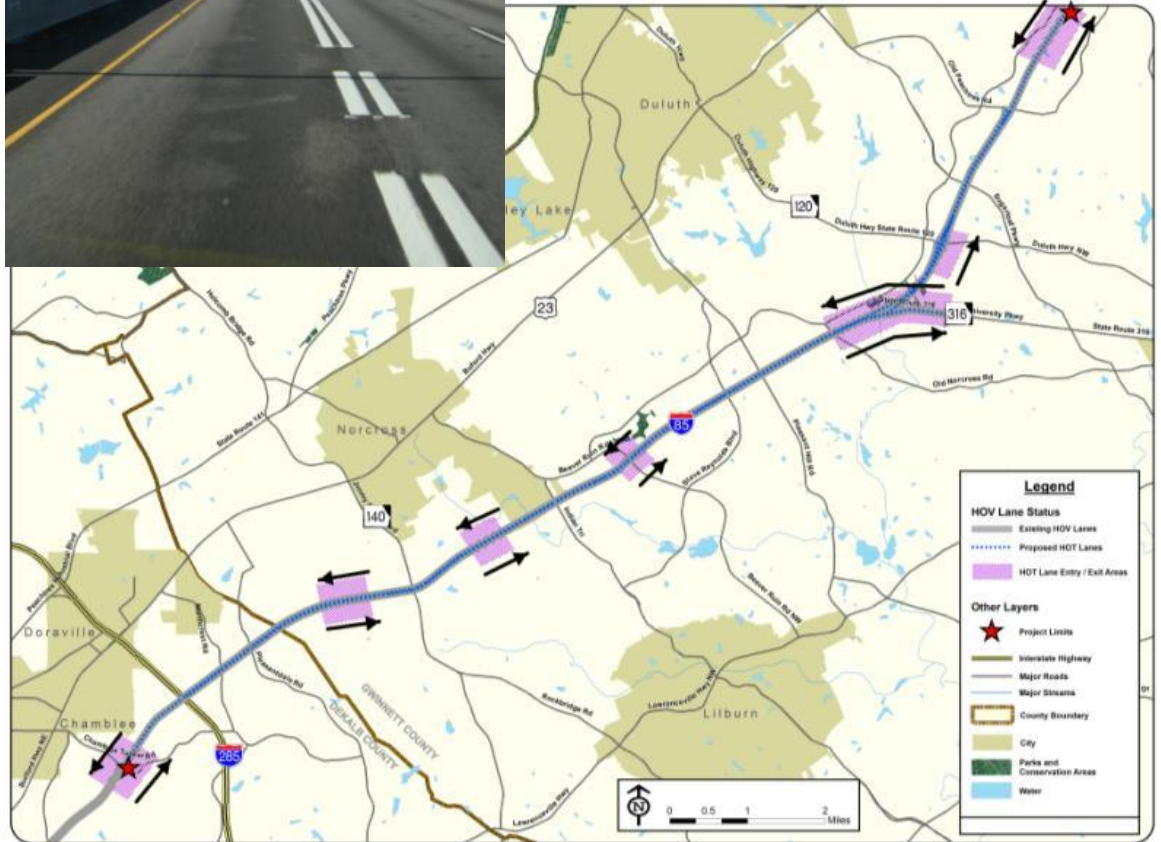
2014 SASHTO Annual Conference  
*New Orleans, LA*











Christopher Tomlinson  
*Executive Director*

# I-85 Express Lanes Overview

- 15.5 miles
- 1 lane in each direction
- painted buffer; no physical barriers
- 67 toll points, ½ mile apart
- Dynamically priced
- Lanes operate 24/7
- Registered lane, even for toll-exempt vehicles
- 2 axles; no more than 6 wheels



# I-85 Express Lanes Facts

-  Part of \$110 million Congestion Reduction Demonstration (CRD) Program grant awarded in Nov. 2008
-  Ground broken September 2010; lanes opened Oct. 2011
-  86% of customers paying toll; 14% non-tolled
-  More than 279,000 Peach Passes assigned
-  Approximately 500 new Peach Passes assigned each week
-  2/3 of users access the lanes less than 4 times per week
-  More than 225,000 different customers using roadway
-  Express Lanes providing reliable travel times

# I-85 Performance Data

## I-85 Express Lanes: By the Numbers

July 1, 2013 - June 30, 2014

**PEAK-of-PEAK**

AVERAGE SPEEDS

**44** MPH  
MORNING



**56** MPH  
EVENING

\*7:00-8:00 AM SOUTHBOUND;  
5:00-6:00 PM NORTHBOUND



NEARLY  
**14 MILLION**  
 TRIPS

**558,076**  
 TRIPS IN MAY 2014  
 (HIGHEST ONE-MONTH TOTAL)

**25,862**  
 TRIPS ON THURSDAY, MARCH 27, 2014  
 (HIGHEST ONE-DAY TOTAL)

**PEAK-of-PEAK**

AVERAGE TRAVEL TIMES

**23** MIN  
MORNING



**17** MIN  
EVENING

\*7:00-8:00 AM SOUTHBOUND;  
5:00-6:00 PM NORTHBOUND





# Tolling Operations Center (TOC)

## Primary Goals

1. Manage toll rates
2. Monitor tolling equipment
3. Monitor for traffic incidents and coordinate with GDOT TMC



## Onsite Operations Hours

Weekdays: 5:30 AM to 8:30 PM  
Weekends: 12:00 PM to 8:00 PM

## Full Remote Ops Capability

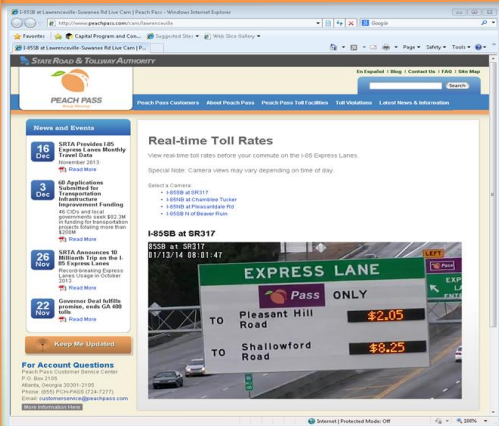
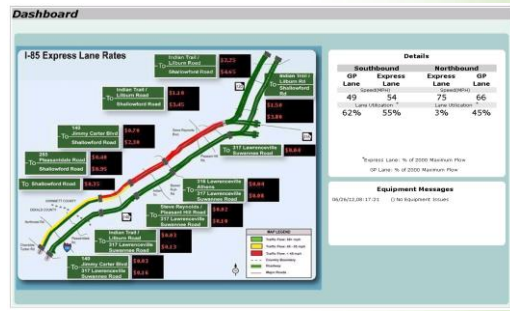
Remote Monitoring by staff outside TOC hours & during emergencies

## Roadway Monitoring Tools

- 12 Stationary Cams - fixed viewing Rate signs
- 15 CCTV PTZ distributed along corridor
- ETCC RITE system- toll rate and system
- GDOT's TMC NaviGator- ITS System
- Web-based Video Feed for redundant monitoring



## NAVIGATOR



## Transparency

- Live feeds of the toll rate signs are available to the public online at [www.PeachPass.com](http://www.PeachPass.com).
- Media and public can access toll rate signs to report on current rates.



# Innovative Mobile App-based Declaration

## Toll Mode/HOV Policy:

Registered Toll-paying and Registered non-toll-paying (HOV3+) users both allowed to use lane.

Mode	Occupants
TOLL	Less than 3
NON-TOLL	3 or more

- Change toll modes by phone, online, in person or mobile app
- Changes must be made 15 minutes in advance
- Toll mode Duration (4 options)
  - 4 hours
  - 1 day
  - Weekdays
  - Indefinite



# Innovative Enforcement

All users must have a Peach Pass and adjust toll mode (toll vs. non-toll) accordingly. Toll modes must be changed at least 15 minutes before using the roadway to allow for system processing.



Source: Atlanta Journal Constitution

**Unregistered Vehicle:**  
Use of Express Lane without a Peach Pass



Tolling video technologies detect unregistered vehicles and automatically send out violation notices.

**Occupancy:**  
Vehicle does not meet minimum occupancy requirements for toll-free use



Occupancy is enforced by law enforcement aided by Automatic License Plate Recognition (ALPR).

## DWL Improper Crossing:

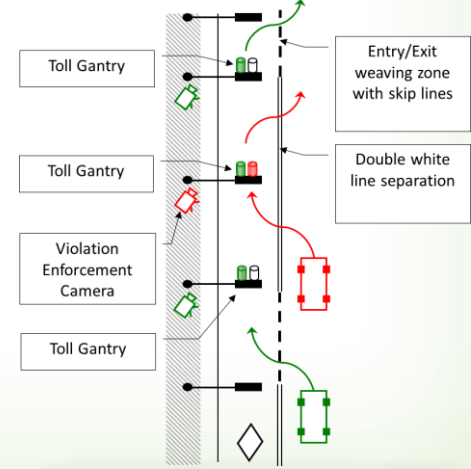
Physical roadway constraints prevented barrier separation of ELs from GPs.

Solid, double white lines are used instead to act as a barrier with dashed, double white lines denoting a "weave zone," or legal access area.



**Gantry Controlled Access (GCA)** deters improper crossing of solid, double white lines using entry/exit logic.

US Patent # 8,044,824





# Vehicle Occupancy Enforcement

- SRTA transmits list of registered vehicles in the 3+ non-toll mode
  - Full list downloaded daily
  - Incremental updates every 5-10 minutes throughout the day
- Automatic License Plate Reader (ALPR) scans license plate and notifies officer to check occupancy for vehicles registered with SRTA in the 3+ non-toll mode
- Officer's on board computer system will send "stop/citation" information back to SRTA





# Occupancy Alert - Example

LPR - Mobile Plate Hunter 900

Pending Alerts 0

Vehicle: Vostro-IT



Management Diagnostics

Hot list last update  
7/17/2012 07:58

Operations

Readers

RtFrnt BKT9298 G 0806:56

Alarm Last events

#9 NON-TOLL MODE(01/09/2012 07:37)

Accept Reject

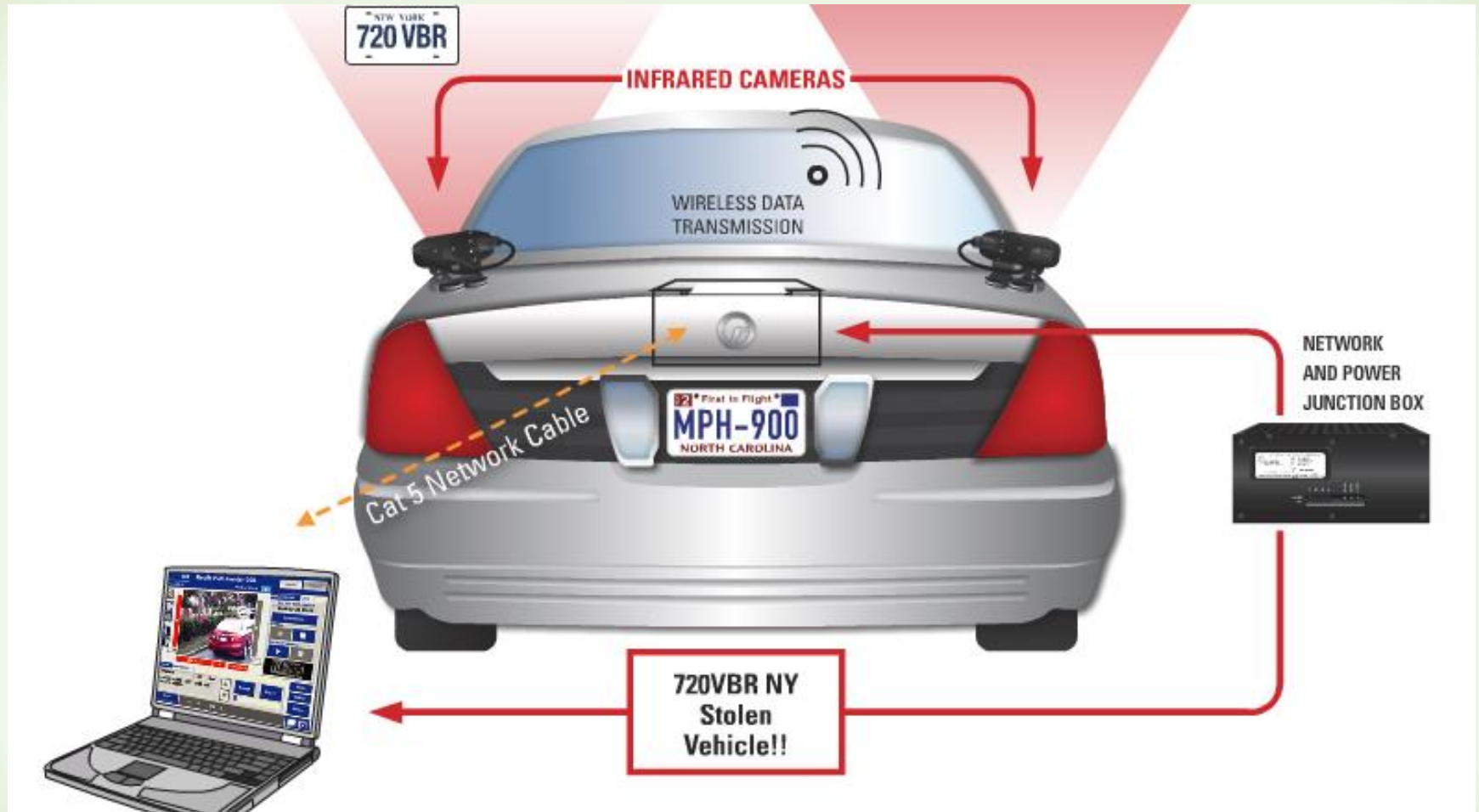
Info Setup Menu

ELSAF North America A Finmeccanica Company

LPR DB GPS COM

- Unique tone alert
- Unique text

# MLPR – Elsag MPH-900

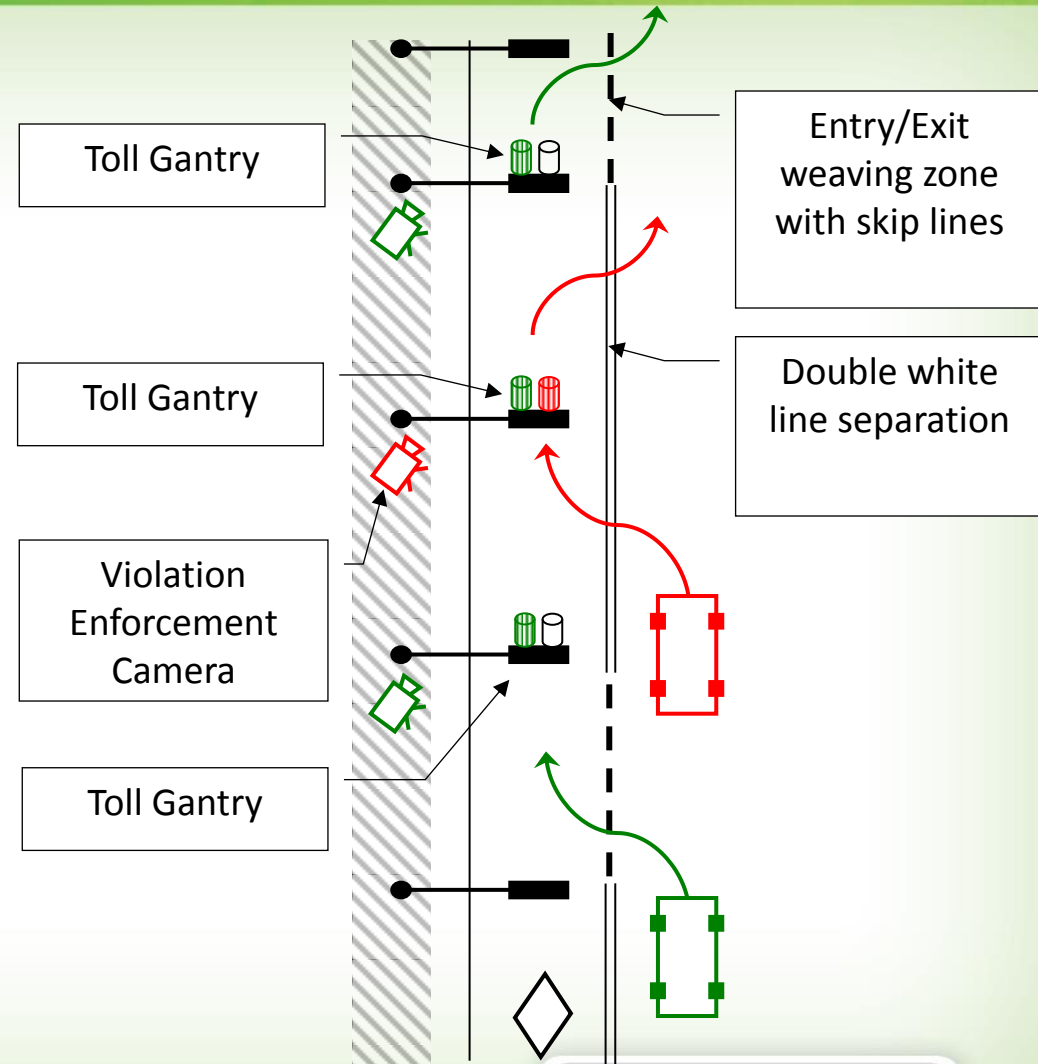


# Gantry-Controlled Access

US Patent # 8,044,824

## “Invisible Barrier” solution

- Overhead tolling system detects vehicle entry/exit
- Gantry spacing deters dodging into the HOT lane
- Gantry to gantry monitoring detects entry/exit violations
- Tolling system logic will issue toll violation notices, based on number of missed gantries
- Enforces double white line weaving





# GCA Benefits

- Automated Violations for Unregistered Vehicles
- Automated Violations for DWL Violations
- Toll payment and entry/exit point violators receive violation notice by mail
- 24/7 automated enforcement, allowing police to focus on other violations
- Mailed citations = less need to stop violators, disrupt traffic flow, or risk officer safety
- Less right-of-way required, less traffic disruptions, reduced design, engineering & construction costs
- Provides flexible options to create & expand toll facilities in congested, constrained urban corridors



# Pay n GO! Peach Pass

- ❑ No Credit or Debit Card needed to purchase & access Express Lanes.
- ❑ Similar to a prepaid gift card and includes convenience fees (\$2.50 Starter Kit and \$1.50 each reload)
- ❑ Available in local Walgreens and CVS stores
- ❑ Public Launch – June 2, 2014
- ❑ **Pay n Go Starter Kit** - includes a Peach Pass Transponder & Reload Card
- ❑ **Pay n Go Reload Card** - standalone card customers can use to add funds to their existing Peach Pass accounts or pay existing violations



# Customers Retail Experience – Starter Kit



1. Customer purchases Pay n Go Peach Pass Starter Kit at a participating retail location.
2. Cashier adds the requested value (*between \$20 and \$500*) to the card by scanning the card.
  - Customer properly affixes the fully activated transponder to vehicle (windshield or bumper mount)
  - Eligible to use SRTA's AVI toll lanes until funds are exhausted
3. ***No online or other account registration needed – An industry first!***

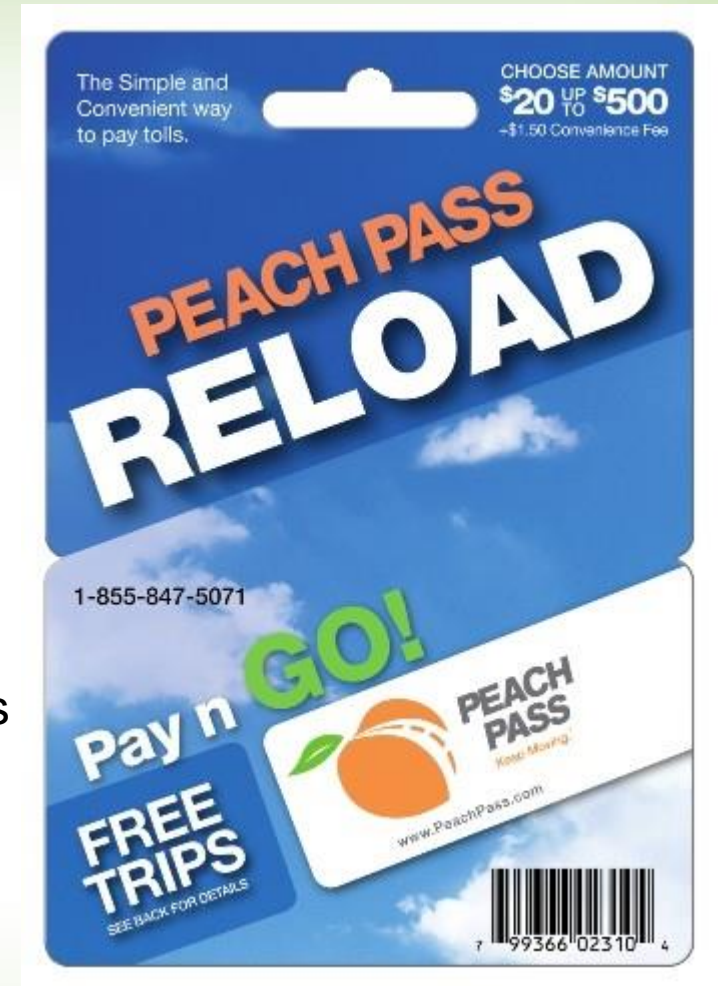


# Customers Retail Experience – Reload Card

1. **Customer purchases Reload Card at a participating retail location.**
2. **Cashier adds the requested value (*between \$20 and \$500*) to the card by scanning the card.**

## Prepaid Toll Account Replenishment

- a. Initial Transaction – Existing Account
  - After purchase, customer must associate reload card to the existing Personal Toll or Pay n Go Peach Pass account, via the InComm IVR.
  - Once the card is associated, all funds are transferred to the existing customer account. The card does not retain any value.



# Pay n GO! Features Checklist

Features	Pay n GO! Peach Pass	Standard Peach Pass
Access to I-85 Express Lanes (and future Peach Pass tolling facilities)	√	√
Convenience fee to set up or reload account	√	
No contact or vehicle information required	√	
Purchase and reload with cash at participating CVS and Walgreens stores	√	
Free trips (\$5) for converting Pay n Go Peach Pass to a standard Peach Pass account		√
Funds never expire		√
Online Peach Pass account access		√
Automatically reloads with credit or debit card tied to account		√
Link multiple transponders to one account		√
Switch to toll-free mode with 3+ occupants		√
Email alerts for low balance, violations, expired credit/debit cards		√
<i>Peach Pass Press</i> e-newsletter		√
Use on FL and NC toll roads (2015)		√



# Interoperability

- Georgia (Peach Pass) to be interoperable with Florida (Sun Pass) and North Carolina (Quick Pass) by the end of 2014
- Interoperability Steering Committee working on national interoperability (MAP 21 unfunded mandate)
- Florida and North Carolina currently Interoperable

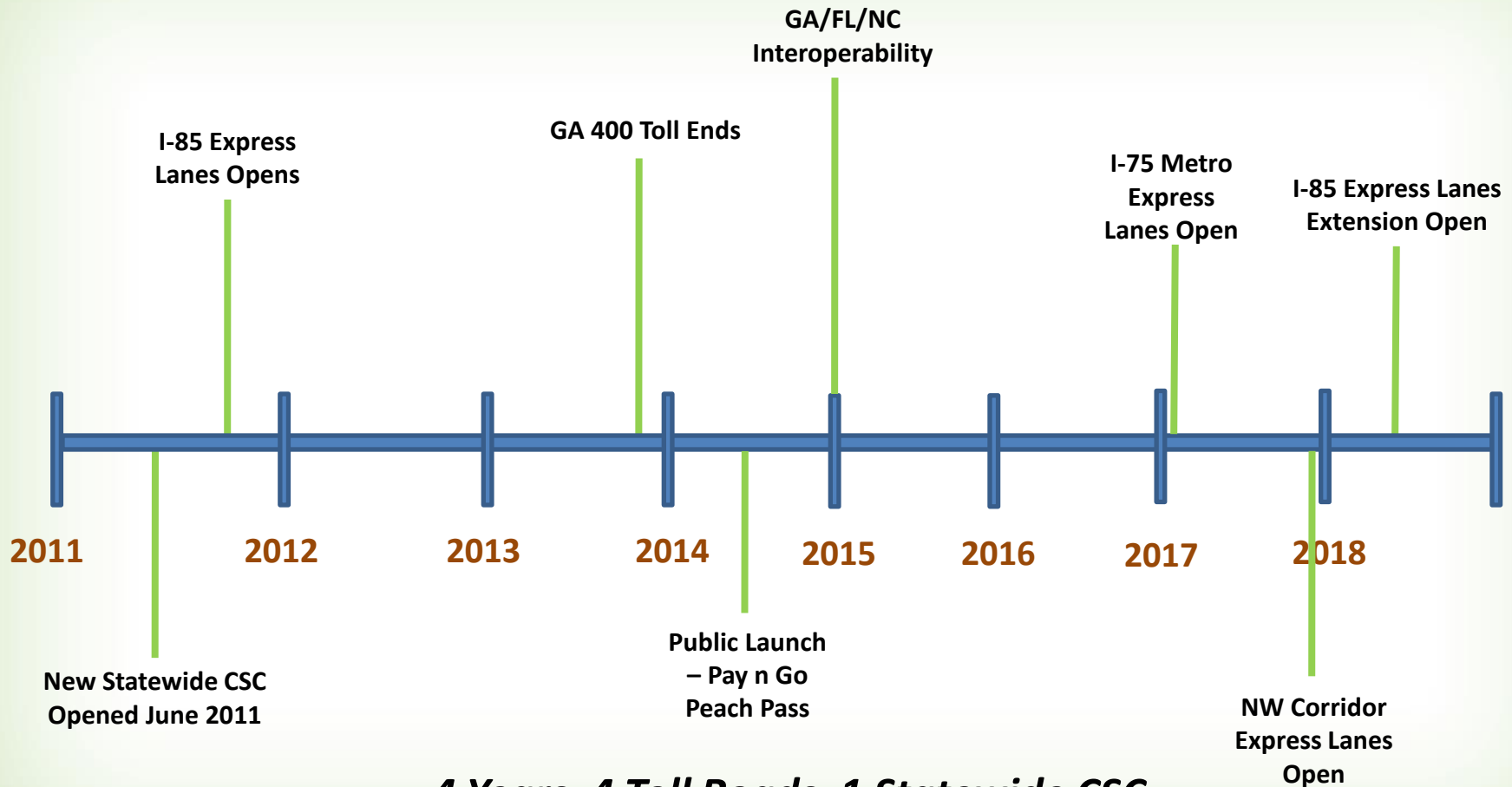


**PEACH PASS**  
*Keep Moving.*





# SRTA At-A-Glance



***4 Years, 4 Toll Roads, 1 Statewide CSC***

# Thank You!



Christopher Tomlinson, *Executive Director*  
[ctomlinson@georgiatolls.com](mailto:ctomlinson@georgiatolls.com)

GeorgiaTolls.com ♦ PeachPass.com



[www.PeachPass.com](http://www.PeachPass.com)