



Board of Directors  
Operations Committee Meeting  
North Carolina Turnpike Authority  
September 14, 2017

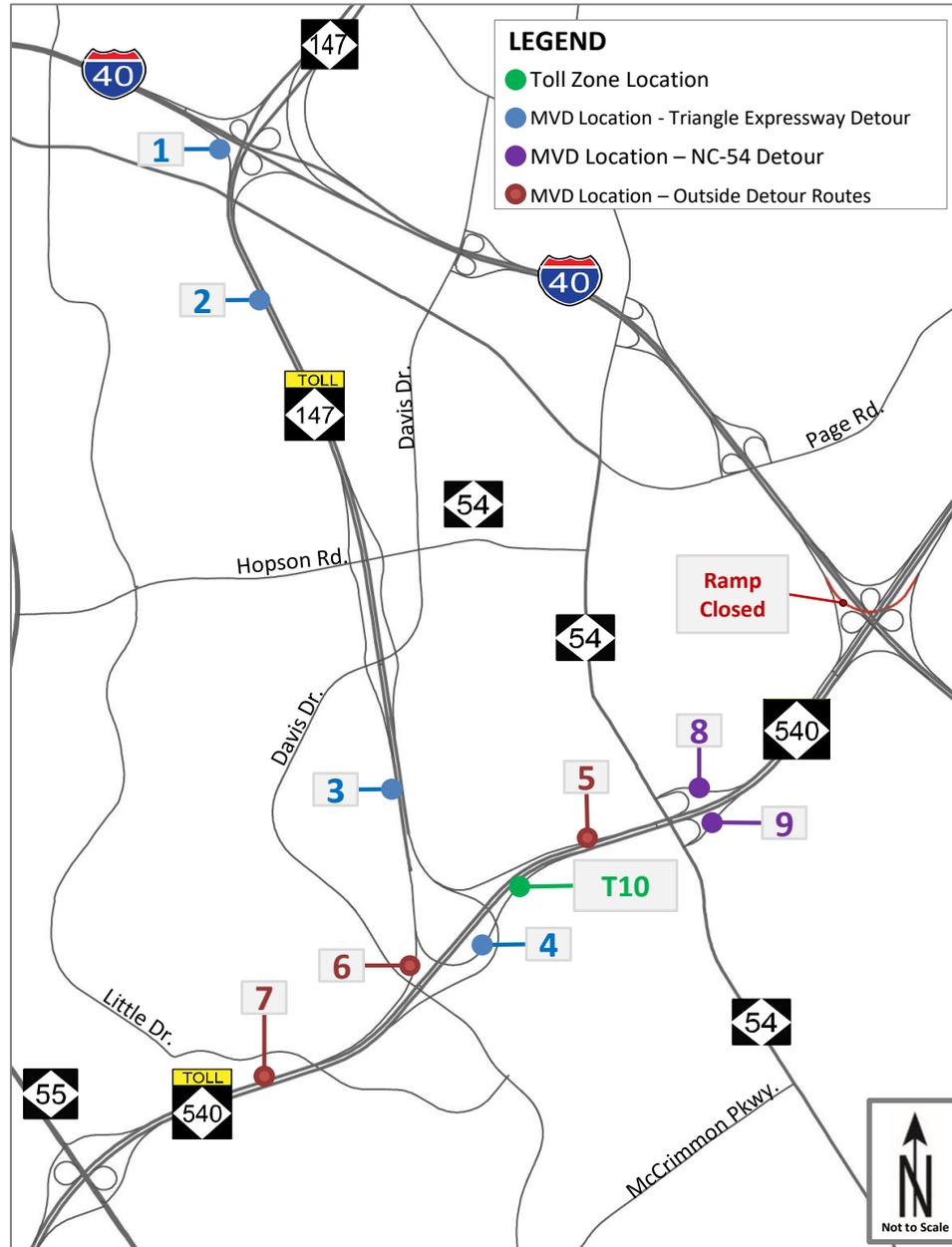
# I-540 Detour Update

**Dennis Jernigan, P.E.**

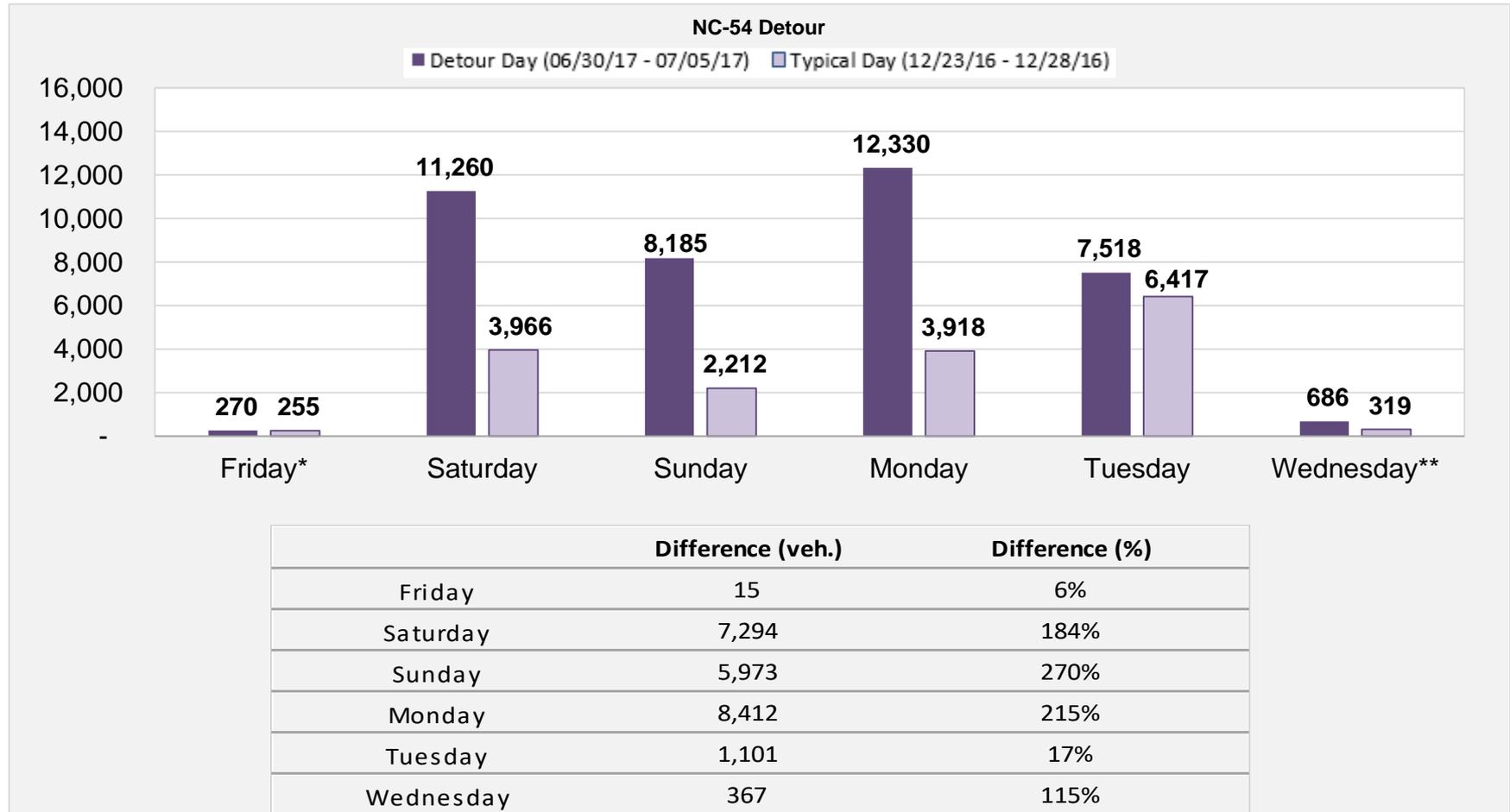
Director of Highway Operations



### Traffic Volume Comparison for the I-540 East Detour



# MVD 62 - NC-54 On-Ramp to I-540 East

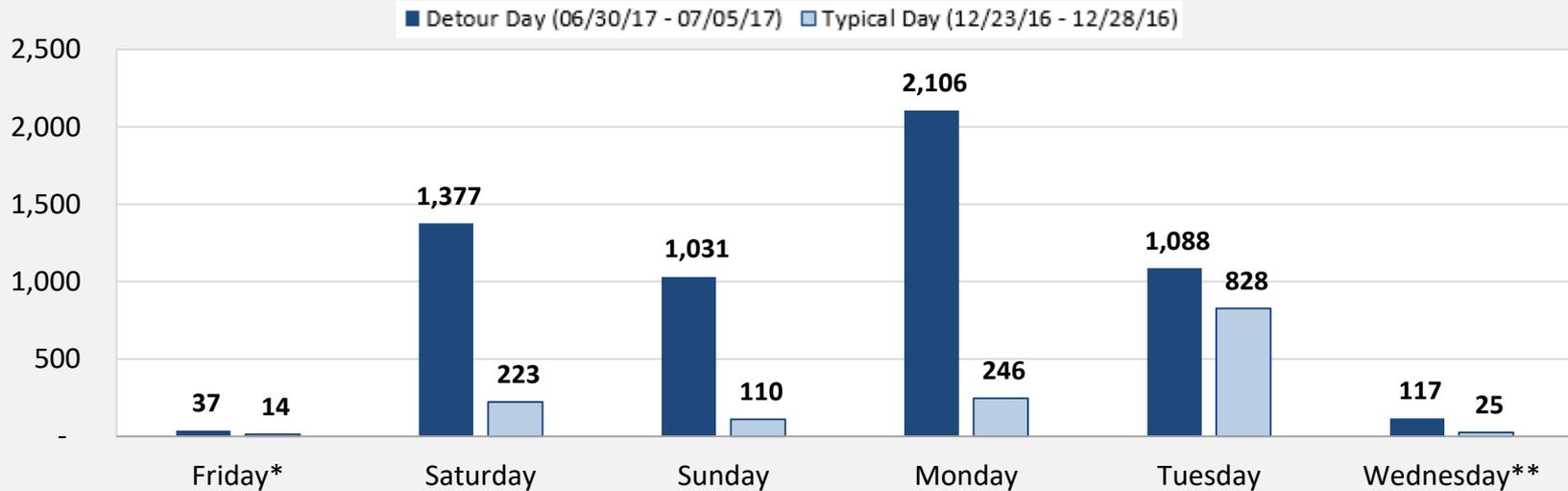


\* Weekday includes only data from 10:00 PM to 11:59 PM

\*\* Weekday includes only data from 12:00 AM to 7:00 AM

# MVD 51 – Toll NC-147 South Off-Ramp to Toll NC-540 East

Triangle Expressway Detour



	Difference (veh.)	Difference (%)
Friday	23	164%
Saturday	1,154	517%
Sunday	921	837%
Monday	1,860	756%
Tuesday	260	31%
Wednesday	92	368%

\* Weekday includes only data from 10:00 PM to 11:59 PM

\*\* Weekday includes only data from 12:00 AM to 7:00 AM

# I-540 Flyover Bridge Joint Repairs

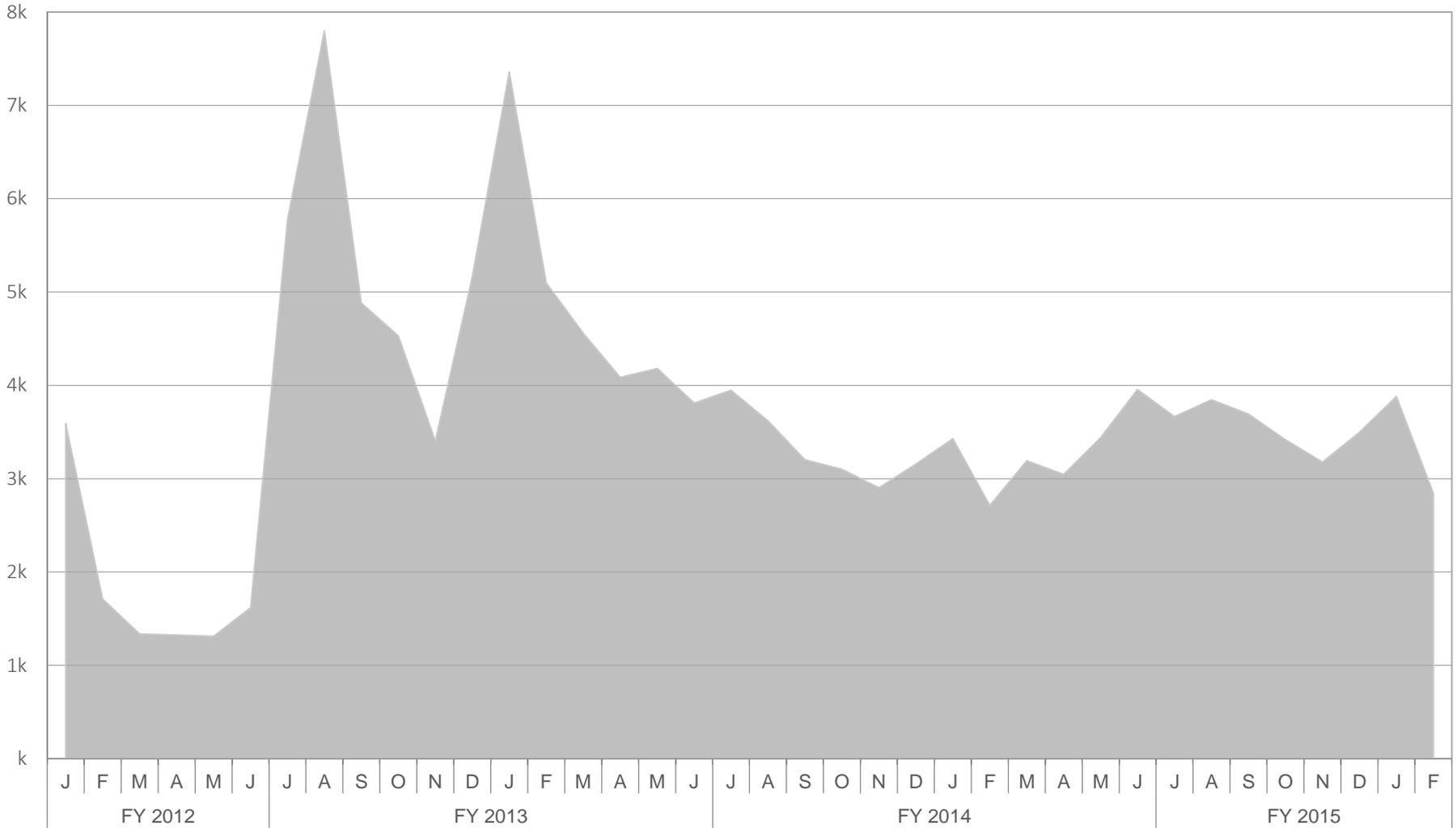
	Independence Day Detour	Labor Day Detour
Change Order Costs	\$7,910	TBD
Toll Collection	\$11,710	TBD
Total Collected from Div. 5	\$19,620	TBD

# Transponder Program Update

Andy Lelewski, PE

Director of Toll Operations

# MONTHLY TRANSPONDERS SOLD



## Leading up to March 2015...

- Reader Protocols: TDM (E-ZPass) & SeGo
- Customer Price vs. Cost to NCTA
  - Sticker Transponder: \$5.00 (Cost: \$9.37)
  - Hard Case Transponder: \$20.00 (Cost: \$23.67)
  - Exterior Transponder: \$25.00 (Cost: \$24.68)
- Transponder sales: 3,471 per month average

# Increased Marketing Efforts

**Save money and time.**

SAVE up to 35% and pay for tolls effortlessly!  
Products are available for NC/TX/GA and all EZPass® states.

Start using a transponder  
BILL BY MAIL account

You will need the following information:

- Credit Card Number
- Any Invoice Number
- License Plate Number—en

**SPECIAL Limited Time Offer\***

**SAVE 50%** on your NC Quick Pass hard case purchase!

With an NC Quick Pass Transponder, you'll save up to 35% and pay for tolls effortlessly! Your NC Quick Pass hard case transponder can be used in Georgia, Florida, and all E-ZPass® states.

Converting your Bill By Mail account to an NC Quick Pass Account is as EASY AS 1-2-3

- 1) Go to [ncquickpass.com](http://ncquickpass.com) and select the PAY YOUR BILL tab.
- 2) Enter your invoice number and license plate to access your current Bill by Mail account.
- 3) Make this month's payment, and on the payment confirmation page, select "CLICK HERE" CONVERT YOUR ACCOUNT. No balance due? No problem! Select "Get NC Quick Pass Transponder Account" from the menu bar on the left to start

(877) 769-7277.



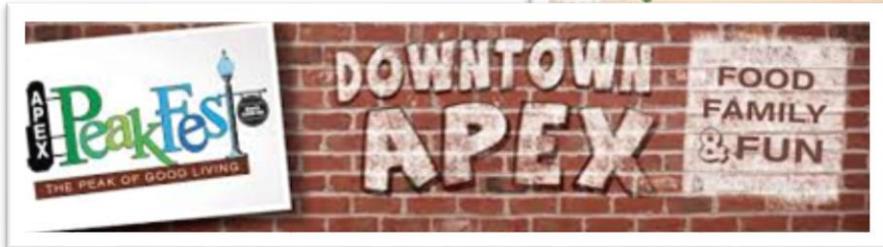
**NC QUICK PASS Limited Time Offer\***

**SAVE 50%** on your NC Quick Pass E-ZPass transponder purchase!

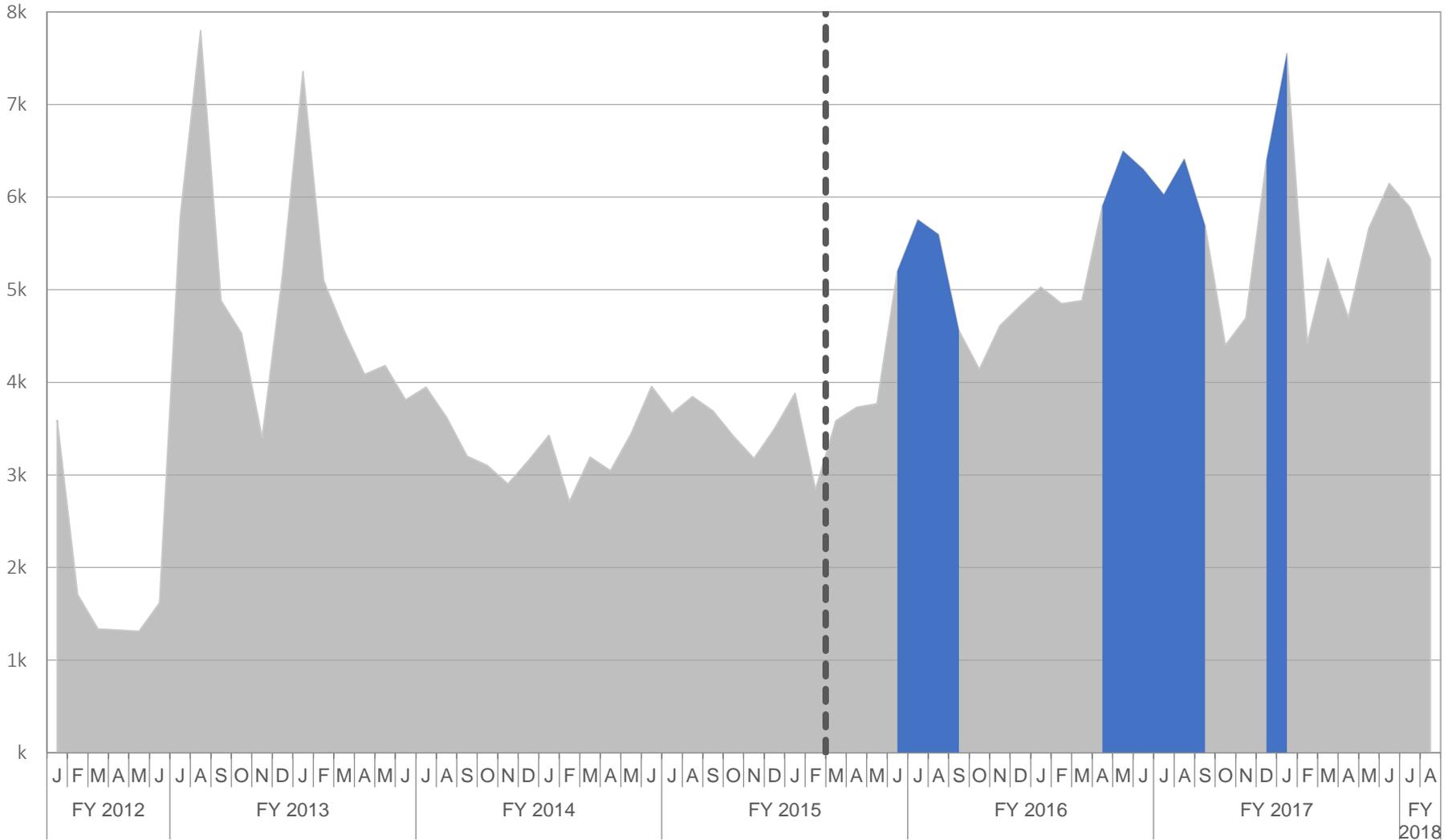
With a NC Quick Pass transponder, you'll save up to 35% on the Triangle Expressway and pay for tolls effortlessly! Your NC Quick Pass E-ZPass transponder can be used on the following toll facilities:

**EZPass**   **SUNPASS**   **PEACH PASS**

\*Promotion is valid through January 31, 2017 and is not valid on Sticker and Exterior transponders. Questions? Call (877) 769-7277.



# MONTHLY TRANSPONDERS SOLD



# Goals



Lower cost transponders



Implement ahead of Monroe Expressway and express lane projects



Maintain or expand interoperability



Increase transponder utilization

# Transponder & Roadside Reader Procurement

- Request for Information
  - October 2015
- Request for Proposals
  - RFP Structure (3 Categories)
    - A. Tri-Protocol Roadside Reader Equipment
    - B. E-ZPass / HOV Transponder
    - C. Low Cost Transponder
  - Procurement Process (August 2016 – February 2017)
  - Execution (March 2017)



**AUTOMATIC VEHICLE IDENTIFICATION  
(AVI) READERS AND TRANSPONDERS  
REQUEST FOR PROPOSALS**

Final Conformed Version

**Proposal Due Date**  
October 14, 2016, 4:00 p.m. EDT

**Physical Delivery Address:**  
North Carolina Turnpike Authority  
Transportation Building  
1 South Wilmington Street  
Raleigh, NC 27601  
Attn: Christina Poucher

**Mailing Address:**  
North Carolina Turnpike Authority  
1578 Mail Service Center  
Raleigh, NC 27699-1578

**Issue Date:** August 30, 2016

# Category A

## Tri-Protocol Roadside Reader Equipment

- Awarded to Kapsch
- Provision of Tri-Protocol reader equipment to read all NCTA transponders and the new low-cost NCTA 6C transponders
  - SeGo, TDM (E-ZPass), 6C
- Support to NCTA for the Triangle Expressway retrofit

# Category B E-ZPass Transponders

- Awarded to Kapsch
- Lower Cost
  - Base: \$7.40 (previously \$23.67)
  - Exterior: \$13.49 (previously \$24.68)
  - Switchable/HOV: \$16.49 (previously \$26.17)\*

\* Not previously utilized

# Category C

## Low-Cost Transponder

- Awarded to Kapsch
- Lower Cost
  - Interior Transponder: \$0.90 (previously \$9.37)
  - Exterior Motorcycle Transponder: \$1.99 (previously \$15.88)\*

# Back Office System Modifications

- Fast-track (7 months) process, including:
  - Modifications to Back Office System while continuing to maintain transponder sales
  - Update transponder types, along with price changes
  - Add new transponders into inventory
  - Website changes
  - Coordinate with Roadside Toll System to ensure transponder readability and smooth transition
  
- **Go Live: August 30th**

# Roadside Toll Collection System Modifications

- Fast-track (7 months) process, including:
  - Design
  - System Integration Testing (Crofton, MD)
  - Installation at 20 toll zones
  - Site testing and commissioning
- **Installation Completion: September 9<sup>th</sup>**

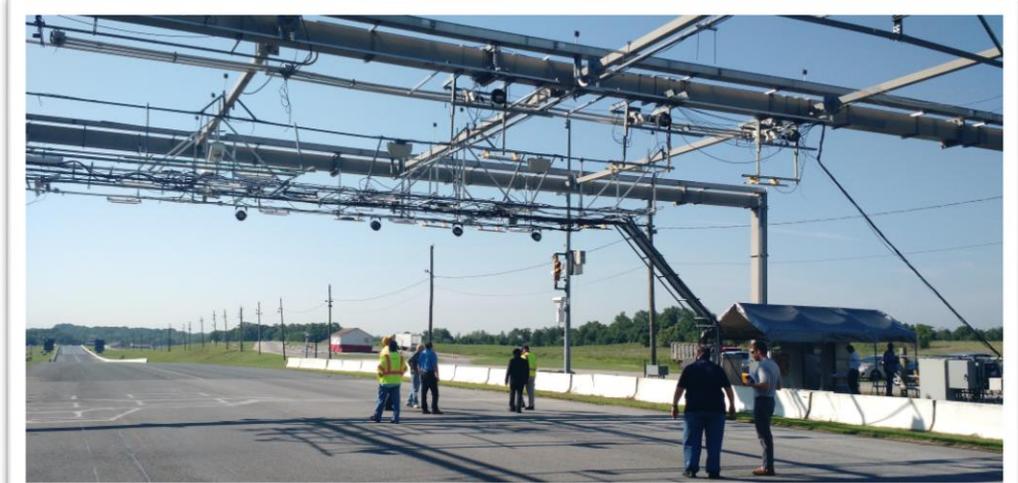


# System Integration Test (Crofton, MD)



NCTA equipment configuration is installed at toll system integrator's test site.

Multiple test scenarios are performed using vehicles with all transponder types and verified by the NCTA.



# On-Site Installation



Retrofit of overhead gantry equipment on Triangle Expressway performed during off peak hours

- To avoid loss of transactions
- To avoid interruption of traffic flow
- Maintained close coordination with Traffic Management Center

# Customer Service Center & Communications Modifications

- Customer Service
  - Preparations and training with service center agents
  - Reconfiguration of Service Center storefront
  - **Go Live: August 30<sup>th</sup>**
- New Transponder Customer Pricing:

	Before	Now
Interior	\$5.00	\$0.00
Hard Case	\$20.00	\$7.40 <sup>+tax</sup>
Exterior	\$25.00	\$13.49 <sup>+tax</sup>

- Public Outreach
  - Cary Lazy Daze (August 2017)
- Social Media Push



# Customer Service Center & Communications Modifications

**NC Quick Pass** @NC\_QuickPass · Sep 1  
Save another parsec on the Kessel Run with your FREE #NCQuickPass transponder! [ncquickpass.com](http://ncquickpass.com) #ForceFriday



♡ 1

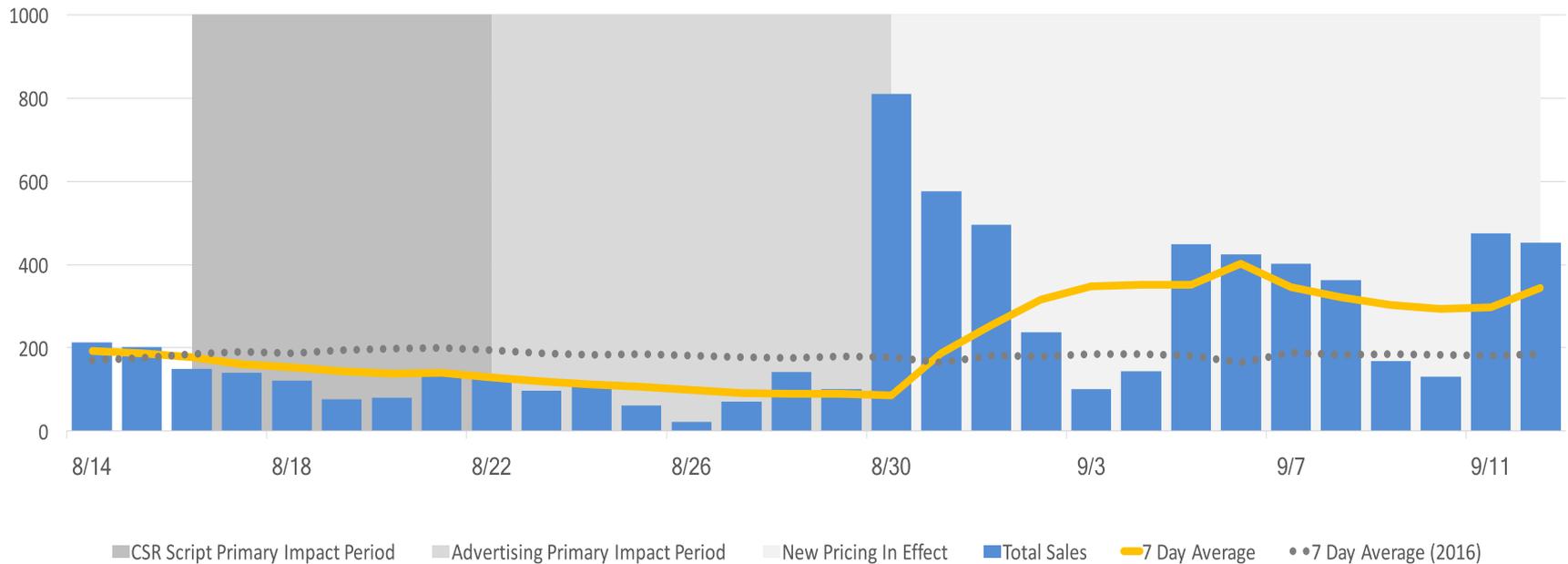


**Lower transponder prices!**

	
<del>\$5</del> <b>NOW FREE!</b>	<del>\$20</del> <b>NOW \$7.40 + tax</b>
WORKS IN 3 STATES	WORKS IN 18 STATES
Open an account: <a href="http://ncquickpass.com">ncquickpass.com</a>	

# Go-live and Results

Total Transponder Sales



- Emphasis on conversion of Bill by Mail accounts to NC Quick Pass transponder accounts
- Prepares NCTA for future projects and openings
- Additional protocol (6C) will improve future interoperability with other tolling agencies

Review of the Comprehensive Agreement between  
the North Carolina Department of Transportation  
and I-77 Mobility Partners LLC

# Draft Report for Public Comment

August 2017

# Overview

*NCDOT has initiated a review of the Comprehensive Agreement with I-77 Mobility Partners LLC. The objective is to identify and evaluate potential policy options that might address concerns expressed by members of the public regarding the implementation of the managed toll lanes concept and various provisions in the agreement.*

*This presentation highlights findings from the draft report and describes the policy options recommended for consideration.*

# Presentation Outline

- Contents of the Draft Report
- Key Findings and Observations
- Recommended Policy Options for Consideration
- Public Input

# Contents of the Draft Report

1. Purpose and Scope of the Review
2. I-77 Express Lanes Project
3. Express Lanes Project Development and Status
4. Risk Allocation Assessment
5. Public and Stakeholder Input
6. Key Findings and Observations
7. Policy Options Recommended for Consideration

# Contents of the Draft Report, *continued*

Appendix A – Illustrative Example of Termination for Convenience Calculation

Appendix B – 2017 Public Comments submitted to NCDOT website

Appendix C – 2016 Input from Local Jurisdictions

Appendix D – Committed Highway and Bonus Allocation Projects

**The information presented in the Draft Report is not legal advice and the report is not a market valuation or an appraisal review.**

**The views and opinions provided in the Draft Report are strictly those of the authors. The report does not represent the opinions or policies of NCDOT, its agents, officers, or employees.**

# Key Findings and Observations

- The Comprehensive Agreement is reasonable, but inconsistent public engagement has undermined confidence in the public-private partnership (P3) project delivery approach.
  - Limited public engagement before P3 procurement was initiated
  - P3 presented as only financially viable alternative
  - Insufficient response to public concerns and questions
- The planning process did not provide sufficient opportunities for the public to evaluate the relative merits of express lanes and alternatives without tolls.
  - Focus on “immediate travel time reliability along I-77 from Uptown Charlotte to the Lake Norman area” precluded the examination of additional general purposes lanes in the environmental assessment.
- Public opinion reflects uncertainty about the express lanes concept.

# Policy Options

Mercator has identified a range of options potential policy options that might address questions and concerns expressed by members of the public.

Additional time and resources would be required to generate reliable cost estimates, to prepare traffic and revenue analyses and to conduct the necessary legal and other due diligence that would be required to implement any option. In addition, some options may trigger additional environmental review.

The policy options recommended for consideration are not listed in order of preference and they may not be mutually exclusive.

# Policy Options, *continued*

- Terminate the Comprehensive Agreement and complete the Express Lanes Project using public funding or financing as it becomes available.

## *Key Challenges*

- Securing the public funds required to pay the termination compensation and to complete construction of the Express Lanes Project.
- Potential impact on other transportation projects and programs.

## *Potential Costs*

- The final termination payment would be determined by an independent appraiser plus the demobilization costs and other expenses incurred by the Private Partner and its subcontractors.
- Cost to stabilize the work zones along I-77 to ensure safe travel until construction is resumed
- Cost to complete construction of the Express Lanes Project

# Policy Options, *continued*

- Terminate the Comprehensive Agreement and allow CRTPO to determine whether express lanes should remain in the transportation plan or be replaced or supplemented with other improvements based on available resources.

## *Key Challenges*

- CRTPO would need time and resources to assess the impacts on regional transportation plans if the Express Lanes Project is not constructed.
- Potential impact on other transportation projects and transit programs.

## *Potential Costs*

- Cost to NCDOT will be the termination compensation, the demobilization expenses incurred by the Private Partner and its subcontractors, and the cost to stabilize the work zone along I-77.
- At this conceptual stage of analysis, it is not possible to identify or quantify the potential impacts on local jurisdictions if the Express Lanes Project were cancelled.

# Policy Options, *continued*

- Negotiate modifications to the project scope and/or the terms of the CA, such as:
  - Deferring or eliminating tolling of certain lanes,
  - Reducing the financial impact on frequent users,
  - Revising the truck restrictions to allow larger vehicles that can use the express lanes safely,
  - Encouraging greater use of the express lanes by allowing HOV-2 for some period of time, or
  - Modifying the compensation provisions for unplanned revenue impacting facilities.

# Policy Options, *continued*

## *Key Challenges*

- To reach agreement on changes to the project scope or the CA, NCDOT and the Private Partner would need to commit senior personnel and resources to the effort. In addition, some changes may require consent from the lenders.
- There is no assurance that the technical analysis will confirm the viability of any of the concepts or that the parties can reach agreement on the cost of any change.

## *Potential Costs*

- The cost to evaluate and implement the concepts cannot be determined until the options are refined.

# Policy Options, *continued*

- Work with CRTPO to identify and advance additional improvements to address mobility issues in the corridor.

## *Key Challenges*

- NCDOT and CRTPO would need to commit resources to work with local jurisdictions to identify and advance options that could have a meaningful impact on long-term congestion in the corridor.

## *Potential Costs*

- Cost will depend on the scope and location of the improvements.

Relevant examples include a \$11.6 million peak use shoulder lane added to a section of I-405 in Washington State that had two general purpose lanes and one express toll lane and the Georgia Direct Xpress Service Plan that includes development of new park-and-ride lots to enhance regional commuter bus service that uses tolled express lanes.

# Policy Options, *continued*

- Develop preliminary plans to negotiate and finance the purchase of the Express Lanes Project after completion.

## *Key Challenges*

- The feasibility of an acquisition after project completion would be driven by many variables beyond the control of NCDOT, such as the level of tax-exempt interest rates in the future.

## *Potential Costs*

- Costs to NCDOT to evaluate this option would include the expenses associated with outside professional services, including a traffic and revenue consultant and legal and financial advisors.
- Cost to acquire the Express Lanes Project will depend in large part on the operating performance of the express lanes and projected toll revenue.

# Public Review and Comment

Feedback, ideas and recommendations regarding the Draft Report can be emailed to [i77feedback@ncdot.gov](mailto:i77feedback@ncdot.gov)

Comments and suggestions can also be submitted on the I-77 Express Lanes project page on the NCDOT website:

<https://www.ncdot.gov/projects/I-77ExpressLanes/>

The public comments will be reviewed and incorporated in the final report, which is expected to be released in late summer.

To ensure comments are included in the final report, please submit them by Saturday, September 9, 2017.

# Toll Rate Schedule

David Roy

Director of Finance and Budget

# Toll Rate Schedule

- § 136-89.183 (Powers of the Authority)
- Toll Rate Policy adopted September 17, 2008
- Scheduled average toll rate increases:

<b>2017 – 2021</b>	<b>3.5%</b>
2022 – 2036	3.0%
After 2036	2.0% or less

- 3.5% increase scheduled to take effect: January 1, 2018

# 2018 Toll Matrix

NORTH CAROLINA  
**Turnpike Authority**



**TRIANGLE EXPRESSWAY TOLL SCHEDULE**

Effective January 1, 2018



TOLLS SHOWN\* REPRESENT A TRIP FROM ENTRY POINT TO EXIT POINT

		TO												
		Begin Toll 147- TOLL NC-147 at I-40	Exit 3/2- Hopson Road / Davis Dr	Begin Toll 540- TOLL NC-540 at NC-54	Exit 69 - Chapel Hill Rd/NC-54	Exit 66 - NC-55	Exit 62 - Green Level West Rd	Exit 59 - US-64	Exit 57 - Old US Hwy 1/S Salem St	Exit 56 - US-1	Exit 55 - Veridea Parkway	Exit 54 - NC-55		
FROM	TOLL 147													
	TOLL 540													
	Begin Toll 147 - TOLL NC-147 at I-40		\$0.37	\$0.81	\$0.81	\$1.01	\$1.82	\$2.27	\$2.83	\$2.83	\$3.11	\$3.25		
	Exit 3/2 - Hopson Road / Davis Dr	\$0.37		\$0.81	\$0.81	\$1.01	\$1.82	\$2.27	\$2.83	\$2.83	\$3.11	\$3.25		
	Begin Toll 540 - TOLL NC-540 at NC-54	\$0.81	\$0.81			\$0.65	\$1.46	\$1.91	\$2.47	\$2.47	\$2.75	\$2.89		
	Exit 69 - Chapel Hill Rd/NC-54	\$0.81	\$0.81			\$0.65	\$1.46	\$1.91	\$2.47	\$2.47	\$2.75	\$2.89		
	Exit 66 - NC-55	\$1.01	\$1.01	\$0.65	\$0.65		\$0.81	\$1.26	\$1.82	\$1.82	\$2.10	\$2.24		
	Exit 62 - Green Level West Rd	\$1.82	\$1.82	\$1.46	\$1.46	\$0.81		\$0.45	\$1.01	\$1.01	\$1.29	\$1.43		
	Exit 59 - US-64	\$2.27	\$2.27	\$1.91	\$1.91	\$1.26	\$0.45		\$1.01	\$1.01	\$1.29	\$1.43		
	Exit 57 - Old US Hwy 1 / S. Salem St	\$2.83	\$2.83	\$2.47	\$2.47	\$1.82	\$1.01	\$1.01		\$0.26	\$0.54	\$0.68		
Exit 56 - US-1	\$2.83	\$2.83	\$2.47	\$2.47	\$1.82	\$1.01	\$1.01	\$0.26		\$0.28	\$0.42			
Exit 55 - Veridea Parkway	\$3.11	\$3.11	\$2.75	\$2.75	\$2.10	\$1.29	\$1.29	\$0.54	\$0.28		\$0.42			
Exit 54 - NC-55	\$3.25	\$3.25	\$2.89	\$2.89	\$2.24	\$1.43	\$1.43	\$0.68	\$0.42	\$0.42				

\*Tolls shown for 2-AXLE vehicles with a transponder



TOLLS ARE 35% LESS THAN



TOLLS

Note:

Tolls for vehicles with 3 AXLES are two times (2x) the 2-AXLE vehicle toll

Tolls for vehicles with 4 or more AXLES are four times (4x) the 2-AXLE vehicle toll

NC QUICK PASS® CUSTOMER SERVICE CENTER  
877-7MY-PASS | ncquickpass.com  
200 Sorrell Grove Church Road, Suite A  
Morrisville, NC 27560  
Hours: 9 am - 5 pm (Monday - Friday)  
9 am - 2 pm (Saturday)