

DEPARTMENT OF TRANSPORTATION 1401 EAST BROAD STREET RICHMOND, VIRGINIA 23219-2000

Stephen C. Brich, P.E.

August 21, 2018

The Honorable Charles W. Carrico, Sr. Chair, Senate Transportation Committee Virginia General Assembly P.O. Box 1100 Galax, VA 24333

The Honorable Thomas K. Norment, Jr. Co-Chair, Senate Finance Committee Virginia General Assembly P.O. Box 6205
Williamsburg, VA 23188

The Honorable Emmett W. Hanger, Jr. Co-Chair, Senate Finance Committee Virginia General Assembly P.O. Box 2 Mount Solon, VA 22843

The Honorable S. Chris Jones Chair, House Appropriations Committee Virginia General Assembly P.O. Box 5059 Suffolk, VA 23435

The Honorable David E. Yancey Chair, House Transportation Committee Virginia General Assembly P.O. Box 1163 Newport News, VA 23601

Dear Gentlemen:

I am forwarding to you the report required by Item 455 D. of Chapter 836 of the 2017 Acts of Assembly. The Virginia Department of Transportation was directed, in consultation with various stakeholders, to provide "its recommendations regarding reporting to the General Assembly toll transaction data, including total toll road violation charges and administrative fees, levied and collected, as well as the

The Honorable Charles W. Carrico, Sr. The Honorable Thomas K. Norment, Jr. The Honorable Emmett W. Hanger, Jr. The Honorable S. Chris Jones The Honorable David E. Yancey August 21, 2018
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feasibility of providing such information on an annual, facility-wide basis for all toll facilities in the Commonwealth."

Should you have any questions or need additional information, please contact me.

Sincerely,

Stephen C. Brich, P.E. Commissioner of Highways

Attachment



Toll Transaction Data Feasibility Report

Pursuant to:

Item 455 D. of the 2017 Appropriation Act

Virginia Department of Transportation 1401 East Broad Street Richmond, Virginia 23219

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Toll Transaction Data Feasibility Report Item 455 D. 2017 Appropriation Act – LEGISLATIVE REPORT

1. EXECUTIVE SUMMARY

Item 455 D of the 2017 Appropriations Act requires the Department of Transportation, in consultation with various stakeholders, to provide recommendations on the feasibility of reporting to the General Assembly the following information on an annual, facility-wide basis for all toll facilities in the Commonwealth:

- toll transaction data
- total toll road violation charges levied
- total toll road violation charges collected
- total administrative fees levied
- total administrative fees collected

Within the Commonwealth, there are fifteen different toll facilities comprised of public and private operators. This distinction, along with the toll collection methodology and applicable statutory law, governs facility business rules and operational processes as well as the public availability of information related to the facilities' operations.

Regarding the feasibility of providing tolling data, VDOT has access to certain tolling data through the E-ZPass system. Further, toll collection statistics, such as the number of transactions on a notice/invoice, the number of individuals receiving summonses, and the value of administrative fees invoiced and collected, will be available for publicly operated facilities. Gathering such information from private toll operators presents challenges, however, in that the data is considered confidential and proprietary in nature. Moreover, such operators are parties to Comprehensive Agreements with the Commonwealth that include specific reporting requirements. As a result, any efforts to mandate disclosures that are inconsistent with, or in addition to, the reporting requirements of the applicable agreements could result in contractual disputes or claims.

Section 4 of this report provides the format of the data that could be provided to the General Assembly on an annual basis, which would include data from publicly operated facilities and to a lesser extent, data from privately operated facilities.

2. E-ZPASS/VIOLATION PROCESSING OPERATIONS

2.1. Overview

The fifteen toll facilities located in the Commonwealth use a variety of business rules and methods to collect toll payments. The toll industry as a whole has progressed technologically over the last 30-40 years, moving from manual toll collection by toll collectors in booths to open-road high-speed electronic toll collection (ETC) where travelers pay tolls at highway speed. All toll lanes in Virginia have the capability to accept E-ZPass as a convenient way for customers to pay tolls electronically with little or no effort. The collection method for non-E-ZPass customers varies among facilities. Before summarizing these methods for each of Virginia's toll facilities, the following section will explain the three key toll collection methods and some of the important characteristics of each.

2.2. Toll Collection Methodologies

2.2.1. In-lane Toll Payment

In-lane toll payment, which requires customers to stop their vehicle and make payment, ranges from staffed toll collection booths to fully automated toll payment machines (ATPMs). Customers pay their tolls as they go, on a trip-by-trip basis, using cash or, in some places, credit cards.

For staffed toll collection lanes, toll collectors accept cash and make change (and on some roads accept credit cards). Automated coin machine lanes often accept exact change only for payment of the toll. Fully automated lanes with ATPMs usually make change and may also accept credit card payment.

Many toll facilities have been minimizing their in-lane toll payment options to improve safety and reduce operating and maintenance (O&M) costs. However, some toll facilities, because of customer demand for the pay-as-you-go cash solution or a need for human interaction continue to offer inlane toll collection. Facilities offering in-lane toll payment also accept E-ZPass (see next section) as a payment method, often with E-ZPass only lanes, either at toll plazas or through physically separated high-speed lanes.

2.2.2. E-ZPass Electronic Toll Collection

Electronic Toll Collection (ETC) is the method of paying tolls electronically using a radio frequency based transponder (or tag) mounted in the vehicle which communicates a unique ID number to the tolling system. This unique ID is used to identify an account from which funds are transferred to the toll facility. The transponder can also be equipped with a switch to enable the customer to indicate

to the toll facility whether or not their vehicle satisfies High Occupancy Vehicle (HOV) requirements for that specific trip.

In the northeast US, the E-ZPass brand and interconnected network of account operators allows customers to seamlessly use an E-ZPass transponder to pay tolls anywhere in the region. Each area or state operates its own E-ZPass administrative office which is responsible for distributing/issuing transponders to customers and managing the associated accounts. These E-ZPass administrative offices, pursuant to written agreements, exchange toll transactional information and payments from customer account funds, thereby providing for reciprocity in toll collection/payment amongst states.

The E-ZPass program was designed as a prepaid program, minimizing administrative office costs. Generally, transactions are only accepted at the toll point if the account associated with the transponder has funds to cover the transaction. This has allowed E-ZPass to be the most efficient way for an agency to collect tolls, while minimizing unpaid tolls.

VDOT operates Virginia's E-ZPass administrative office, which serves all Virginia toll facilities. The Virginia office receives toll transactions from each Virginia toll facility, posting Virginia E-ZPass customer transactions to local accounts and distributing transactions from out-of-state E-ZPass customers to their administrative offices throughout the E-ZPass region. The VDOT/Virginia administrative office tracks, administers and distributes funds to the toll facilities where the transactions were generated.

2.2.3. Image-Based Toll Collection

Image-based toll (IBT) collection (also referred to as video billing, pay-by-plate or pay-by-mail) uses pictures of the license plate to pursue a customer for toll payment. Typically, the license plate characters and state are extracted and used to find the customer address via that state's motor vehicle registration database. Originally used only for toll violation processing, this technique is now also used as a toll payment option/method (video billing) at All Electronic Tolling (AET) facilities where in-lane toll payment is not available. These two processes (violation enforcement and video billing) have different characteristics as described below:

Violation processing

This process uses images to identify vehicles that did not pay when traveling through a toll point and sends a notice of violation to the vehicle owner. Examples are a customer who fails to make payment at a coin machine or who drives through an E-ZPass only toll lane without an E-ZPass to make payment. Violation transactions are subject to a per-transaction administrative fee as outlined in the Code of Virginia. If left unresolved by the registered owner of the vehicle, as permitted by law, the administrative fee will escalate as the collection efforts proceed through the multiple notice phases.

Video billing

In the Video billing process, used exclusively at AET facilities, customers are identified by means of license plate images and are sent an invoice for their toll transactions after using the facility. Since customers often have multiple image transactions over a relatively short period of time, invoicing processes accumulate transactions for a specified timeframe to

reduce operating costs and provide a more customer-centric billing approach. AET facilities are allowed by law to charge a processing fee in addition to the toll to recover the costs associated with the invoicing process. Video billing accounts for 20 to 30 percent of the transactions on the three AET facilities in Virginia.

2.3. Toll Collection Approaches

Most toll facilities use a combination of the toll collection methods described above depending on their physical constraints, customer demographics, type of service offered, collection philosophy, and legislative constraints. The most common combinations and those utilized in Virginia are described as follows:

- Traditional modern toll collection this approach combines in-lane toll collection, E-ZPass and violations processing. For E-ZPass customers, high-speed, dedicated E-ZPass lanes with image-based violations processing may be provided alongside the in-lane collection. Instead of image-based violations processing, a toll facility with in-lane toll collection may use physical automated gates or barriers to prevent passage of vehicles who have not paid the toll.
- All-electronic tolling (AET) this approach combines E-ZPass and video billing without
 in-lane opportunities to pay the toll. Typically, all traffic uses high-speed lanes and their
 toll is registered at full highway speed with no disruption to traffic flow.
- Restricted access E-ZPass only tolling for facilities that are restricted to certain kinds of traffic, such as High Occupancy Tolling (HOT) or Express Lanes, toll payment may be restricted to E-ZPass only combined with violations processing.

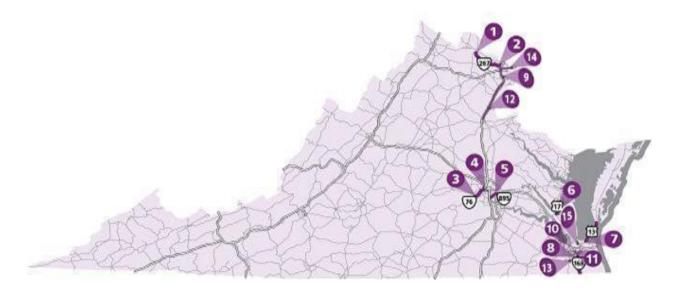
2.4. Virginia Toll Facilities

The fifteen Toll Facilities in Virginia (shown in Figure 1) are owned and operated by a variety of public and private contractors and agencies. Public entities that own and operate toll facilities in the Commonwealth include VDOT, the Chesapeake Bay and Bridge Tunnel District, the City of Chesapeake, the Metropolitan Washington Airports Authority and the Richmond Metropolitan Transportation Authority. Private toll facilities are generally located on publicly-owned right of way but operated by a private entity under a Comprehensive Agreement with the public owner as permitted by the Virginia Public Private Transportation Act (PPTA). Examples of these facilities include the 495 Express Lanes, 95 Express Lanes and the Elizabeth River Tunnels projects. In addition, there are two other private facilities, the South Norfolk Jordan Bridge, which is owned and operated outright as a private facility, and the Dulles Greenway, which is operated by a private entity pursuant to the Highway Corporation Act (HCA).

Public toll facility operators are at the state, regional and local level, with varying degrees of elected and/or appointed official governance. All public facilities are subject to the various Commonwealth statutes that regulate the operation of public entities, such as the Virginia Freedom of Information Act and the Virginia Public Procurement Act. However, private operators are not directly subject to such laws, but rather, their operations are governed primarily by the laws relating to tolling, and if

the facility is established under either the PPTA or HCA, by that Act and the terms and conditions established in the Comprehensive Agreement. Public versus private differences, as reflected in governance, oversight, applicable statutory laws, and a fundamental profit versus break-even objective, can and do lead to differences in how various toll operators evaluate and approach the regulatory framework for toll operations and the information related to their operations.

Figure 1



- 1. Dulles Greenway (Route 267)
- 2. Dulles Toll Road (Route 267)
- 3. Powhite Parkway Extension (Route 76)
- 4. RMA Expressway System
- 5. Pocahontas 895 (Route 895)
- 6. George P. Coleman Bridge (Route 17)
- 7. Chesapeake Bay Bridge Tunnel (Route 13)
- 8. Chesapeake Expressway (Route 168)

- 9. 495 Express Lanes (Interstate 495/Capital Beltway)
- 10. Elizabeth River Crossings (Downtown and Midtown Tunnels)
- 11. South Norfolk Jordan Bridge
- 12. 95 Express Lanes
- 13. Dominion Boulevard (US 17)
- 14. I-66 Inside the Beltway
- 15. I-64 Express Lanes

All Virginia toll facilities accept E-ZPass and use the VDOT E-ZPass customer service center to process their E-ZPass transactions. VDOT also provides violation processing services for several facilities whereas others operate their own violation processing or video billing back office. The following table provides information on each toll facility including the payment methods accepted and an indication of which agency is responsible for any violation or video billing operations.

No.	Toll Road Name	Road Details	Ownership/Operation	Types of Payment Accepted	Violation / Video Billing Party
1	Dulles Greenway	14-mile-long highway that extends from Loudoun County in the vicinity of Dulles International Airport to Leesburg, Virginia	Private (under the Highway Corporation Act of 1988)	E-ZPass Credit Card Cash (limited locations and hours)	Self-performed violations processing
2	Dulles Toll Road	14-mile-long facility with, 8 lanes (4 lanes in each direction) that extends from Dulles Airport to the Capital Beltway, connecting with the Dulles Greenway	Public - Metropolitan Washington Airport Authority (MWAA)	E-ZPass Cash	VDOT performed violations processing
3	Powhite Parkway Extension	· I Pilplic - VDOI I			VDOT performed violations processing
	Downtown Expressway	7-mile highway network that extends from	Public - Richmond	E-ZPass	VDOT performed violations processing
4	Interstates 95 and 195 in	Interstates 95 and 195 in Richmond to Powhite Parkway Extension	Metropolitan Transportation Authority (RMTA)	Cash	VDOT performed violations processing
	Boulevard Bridge				None
5	Pocahontas Parkway	I southeast of Richmond Pocahontas 895 connects I		E-ZPass Cash Credit Card	Self-performed violations processing

No.	Toll Road Name	Road Details	Ownership/Operation	Types of Payment Accepted	Violation / Video Billing Party
6	George P. Coleman Bridge	Coleman Bridge provides a crossing of the York River for U. S. Route 17 between Gloucester and York Counties	Public - VDOT	E-ZPass Cash	VDOT performed violations processing
7	Chesapeake Bay Bridge Tunnel	23-mile bridge and tunnel structure that creates a connection for Route 13 across the entrance to the Chesapeake Bay	Public - Chesapeake Bay and Bridge Tunnel Commission	E-ZPass Cash Credit Card	None
8	Chesapeake Expressway	10-mile long, four-lane divided highway that connects I-64 in Chesapeake to North Carolina	Public - City of Chesapeake	E-ZPass Cash Credit Card	Self-performed violations processing
9	495 Express Lanes	14 miles of HOT lanes on I-495 between Springfield and Tyson's corner	Private (under Virginia Public Private Transportation Act)	E-ZPass	Self-performed violations processing
10	Elizabeth River Crossing	Two tunnel crossings of the South Branch of the Elizabeth River, Downtown Tunnel and Midtown Tunnel	Private (under Virginia Public Private Transportation Act)	E-ZPass Video bill	Self-performed video billing and violations processing

No.	Toll Road Name	Road Details	Ownership/Operation	Types of Payment Accepted	Violation / Video Billing Party
11	South Norfolk Jordan Bridge	A privately funded toll bridge that crosses Elizabeth River's Southern Branch between Portsmouth and Chesapeake	Private	E-ZPass Video bill	Self-performed video billing and violations
12	95 Express Lanes	29-miles of HOT lanes on I-95 between the Edsall Express Lanes Road area on I-395 in Fairfax County to Garrisonville Road in Stafford County		E-ZPass	Self-performed violations processing
13	Dominion Boulevard			E-ZPass Video bill	Self-performed video billing and violations
14	I-66 Inside the Beltway provides dynamically-priced High Occupancy Toll (HOT) lanes during rush hours in the peak directions between the Dulles Toll Road and 495 to the DC Line		Public - VDOT	E-ZPass	VDOT performed violations processing
15	I-64 Express Lanes	8- miles, provides dynamically-priced High Occupancy Toll (HOT) or Express Lanes during rush hours from the Interstate 264/64 Interchange to Interstate 564.	Public - VDOT	E-ZPass	VDOT performed violations processing

2.4.1. E-ZPass Program Description

VDOT, as the E-ZPass administrative office for Virginia, has provided transponder issuance and account management for Virginia toll facilities, as described in section 2.2.2., since 1996. The VDOT E-ZPass administrative office currently processes nearly \$500 million in E-ZPass toll revenues annually and manages over 1.3 million accounts. In addition to accommodating the significant growth of the operation, VDOT has also undertaken a program of continual improvement, enhancing the services provided to the traveling public as well as the toll facility customers that utilize the services of the administrative office. Because of VDOT's management of E-ZPass for Virginia, the agency has access to E-ZPass transactional information and related statistics for all toll facilities in the Commonwealth. Furthermore, as with toll-related data from public facilities, this information is subject to public disclosure under the Virginia Freedom of Information Act and thus could be reported on an annual basis.

3. RECOMMENDATIONS AND ANNUAL REPORT CONTENT

3.1. Introduction

In 2017, pursuant to item 455 D. of the 2017 Appropriations Act, the Virginia General Assembly directed the Department of Transportation, in consultation with various stakeholders, to provide recommendations regarding reporting to the General Assembly toll transaction data, including total toll road violation charges and administrative fees, levied and collected, as well as the feasibility of reporting such information on an annual, facility-wide basis for all toll facilities in the Commonwealth. The following sections outline the opportunities and constraints that have been considered in developing these recommendations relating to data to be included in such a report, and the overall methodology that can be employed to provide the report within the constraints outlined.

3.1.1. Constraints

While VDOT's administrative office has access to all E-ZPass transactions that occur at the fifteen toll facilities in the Commonwealth, data and information relating to violation and video toll processing is not currently available from all of those facilities. Given the wide variety of toll facilities in Virginia, the decentralized nature of much of the violation and video toll processing and the limited visibility into these public and private systems for data validation, reporting on statewide data could lead to inaccuracies. Further, the specific collection rates for non E-ZPass tolls will vary by facility depending upon their local business rules and operational processes and are an important factor in the financial viability of a project or facility and thus could be deemed sensitive or confidential and proprietary. Since Virginia has benefited from private sector investment in toll facilities, both directly and through public private partnerships, any recommendation as to this collection of data needs to be sensitive to the confidential and proprietary nature of much of the tolling information relating to private facilities. Gathering or publishing such proprietary data presents issues and concerns relating to a private entity's competitiveness. The private operators will look to their specific Comprehensive Agreement as to whether they must provide this information. The establishment of a Comprehensive Agreement is an extensive legal process with significant negotiations between the public and private sectors. Any post-agreement legislative requirement from the General Assembly could: (1) lead to significant confusion and/or delay to established projects; (2) adversely impact previously negotiated Comprehensive Agreements, with resulting adverse consequences, (3) lead to a potential reopening of

previously negotiated contracts and (4) create a reluctance in potential future investment in Commonwealth projects.

3.1.2. Recommended report contents and methodology

The goal of this report is to provide a snapshot of toll activity in the Commonwealth including processes, transaction volumes and E-ZPass and video/violation billing and payment related data, to the extent such information is legally available and subject to public disclosure. As mentioned previously, private toll facility data will be subject to and determined by the various Comprehensive Agreements between the Commonwealth and the private toll facilities with tolling related data, other than E-ZPass data, being deemed confidential and proprietary by the private operators and unavailable for public release. Complete data relating to violation charges levied and collected would be available only for the four VDOT operated facilities. Finally, for purposes of an annual report, VDOT could compile all the data available from VDOT's E-ZPass administrative office system, including data relating to Virginia E-ZPass customer alerts implemented pursuant to Chapter 753* (2016 Acts of Assembly), for both public and private toll facilities.

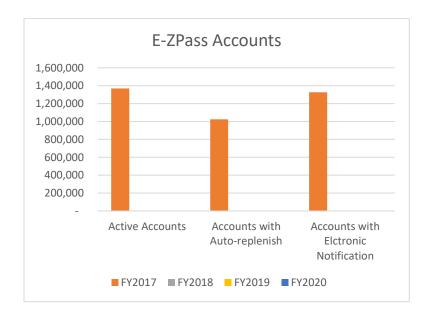
To the extent the General Assembly directed VDOT to produce an annual report conveying tolling information for all toll facilities throughout the Commonwealth, it is proposed that the following information be included in said report in a manner similar to that set forth in the following pages:

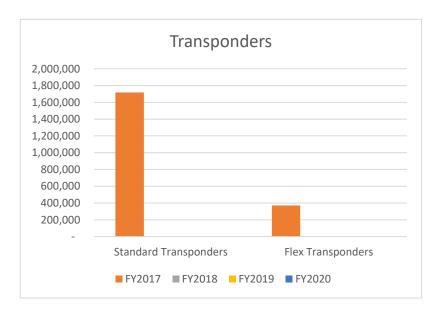
DATA	DATA FROM VDOT OPERATED FACILITIES ONLY		
VIRGINIA E-ZPASS STATISTICS	*HB1069 (Chapter 753, 2016 Acts of Assembly) STATISTICS	TOLL FACILITY STATISTICS	TOLL COLLECTION STATISTICS
 Active accounts Transponders in circulation by type Accounts with autoreplenish Accounts with electronic notifications enabled Insufficient account notifications sent due to failed transaction posting Total transactions processed Total revenue processed 	 Number of E-ZPass accounts that went insufficient Email alerts Text alerts Percentage of transactions that enter a 10 day retry process and post prior to a notice Reduction in Admin Fee Exposure due to Alerts 	 E-ZPass transactions by facility E-ZPass revenue by facility HOV transactions for applicable facilities 	 Transactions sent on notices/invoices Violation notices sent Administrative fees invoiced Administrative fees collected Percentage of violations that enter collections and are resolved prior to issuing a summons Transactions sent on summonses Summons issued Number of individuals receiving a summons

4. TOLL TRANSACTION STATISTICS (TEMPLATE WITH SAMPLE GRAPHS)

4.1. General E-ZPass Stats

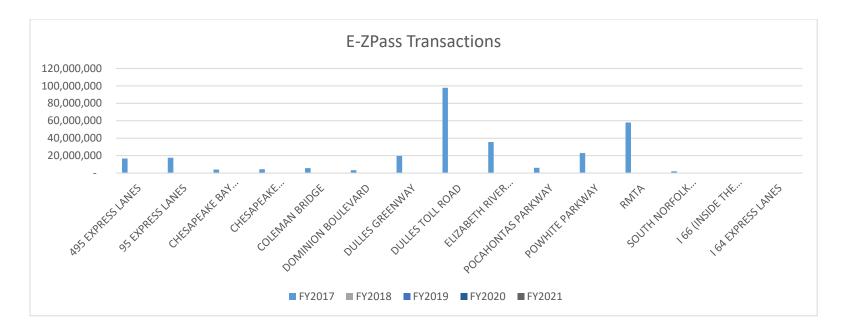
GENERAL EZP STATISTICS FY2017				
Active E-ZPass Accounts				
Transponders on Active E-ZPass Accounts				
Standard (incl. Bumper and Roof)				
Flex				
Accounts with Auto-Replenishment	# (%)			
Accounts with Electronic Notifications (Emails/Text)	# (%)			

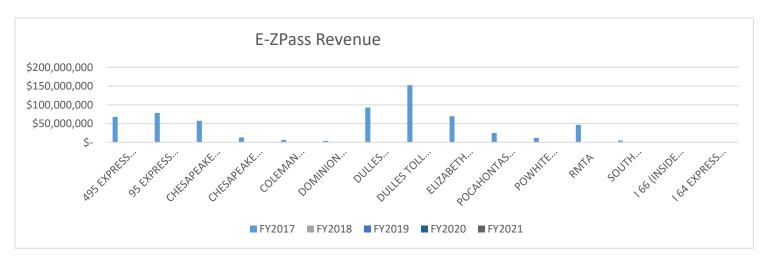




4.2. Tolling Statistics by Facility

	E-ZPass Toll Revenue	E-ZPass Transactions	HOV Transactions
64 Express Lanes			
66 Express Lanes			
495 Express Lanes			
95 Express Lanes			
Chesapeake Bay Bridge Tunnel			
Chesapeake Expressway			
George P. Coleman Bridge			
Dominion Boulevard			
Dulles Greenway			
Dulles Toll Road			
Elizabeth River Crossings			
Pocahontas Parkway			
Powhite Parkway Extension			
Richmond Metro. Transportation Auth.			
South Norfolk Jordan Bridge			





4.3. HB1069¹ STATISTICS

Number of E-ZPass accounts that went insufficient				
# Times the account went Insufficient (last 12 months)	# Accounts			
1				
2				
3				
4				
5				
>5				

HB 1069 STATISTICS (FY2017)				
Average daily alerts sent to VA E- ZPass account holders				
Email		Average daily from Jan 2017 onwards		
Text		Average daily from Jan 2017 onwards		
Reduction in Admin Fee Exposure due to Alerts		Average Monthly		

TRANSACTION RETRY PROCESS (FY2017)						
		Transactions Entering Retry Process	Transactions Posted using Retry Process	% POSTED To ALL E-ZPass Accounts	% Posted to Active E-ZPass Accounts	
All Facilities	COUNT					
All Facilities	AMOUNT					

¹ Chapter 753, 2016 Acts of Assembly

4.4. Toll Collection Statistics (VDOT Operated Facilities)

4.4.1. Violation Statistics

VIOLATION STATISTICS FY2017				
	Number of Notices	Number of Transactions		
Violations Reported by Toll lanes				
Violation Transactions that reach notice level				
Total				
Monthly Average				
Number of Violation Transactions that reach summons level				

SUMMONS STATISTICS	
Number of individuals receiving a summons	

4.4.2. Admin Fee Statistics

Administrative fees (\$) collected	
Total amount	
Average monthly	
Transactions with admin fees added	
Total amount	
Average monthly	

4.4.3. Collections Statistics*

COLLECTIONS STATISTICS			
	Violations	Violators	
Number entering Collections (Average Monthly)			
Percent resolved before entering Summons			

^{*}Violations enter Collections if not resolved during the Notice phase.