Maryland Transportation Authority

BOARD MEETING

THURSDAY, JANUARY 26, 2023

MARYLAND TRANSPORTATION AUTHORITY
2310 BROENING HIGHWAY
BALTIMORE, MD 21224

IN-PERSON AND LIVESTREAM

MARYLAND TRANSPORTATION AUTHORITY
BOARD MEETING

2310 Broening Highway * Training Room – 2nd Floor * Baltimore, MD 21224

JANUARY 26, 2023 9:00 AM

This meeting will be livestreamed on the MDTA Board Meeting Page

NOTES:

- This is an In-Person Open Meeting being conducted via livestreaming.
- The public is welcomed to watch the meeting at the link above.
- ***If you wish to comment on an agenda item please email your name, affiliation, and the agenda item to nhenson@mdta.state.md.us no later than 5:00 p.m. on Tuesday, January 24. You MUST pre-register and attend the meeting in person in order to comment.*** Once pre-registered, all pertinent information will be emailed to you.

AGENDA

OPEN SESSION – 9:00 AM

Call Meeting to Order

1.	**Approval** – Open Session Meeting Minutes of December 15, 2022	Chairman	5 min.
2.	**Approval** – Conveyance – Kane Street (MC # 22-7048)	John Wedemeyer	5 min.
3.	**Approval** – New Section (Section 200) of the I-95 Express Toll Lanes (ETL) Northbound and I-695 Ramps –		
	• Request Approval of Updated Toll Proposal	Deb Sharpless	5 min.
	• Update on the Public Hearing Dates, Public Hearing Materials, and the Opening of the Public Comment Period	Carl Chamberlin	15 min.
4.	**Update** – Legislative Reports Submitted to the Legislature		
	• SB59 Report	Mary O'Keeffe	10 min.
	• JCR Report – Tolling Accuracy	Deborah Sharpless	10 min.
5.	**Update** – Legislative Session – Verbal	Bradley Ryon James Kittleman	10 min.
6.	**Update** – Executive Director's Report – Verbal	William Pines	15 min.

Vote to go into Closed Session

CLOSED SESSION – Expected Time 10:15 AM

7.	To Discuss Public Security	Col. Kevin Anderson	15 min.
8.	To Discuss Pending Litigation – Update on Status of Pending Litigation Matters	Kim Millender, Esq.	15 min.

Vote to Return to Open Session

Vote to Adjourn Meeting

TAB 1

MARYLAND TRANSPORTATION AUTHORITY
BOARD MEETING

THURSDAY, DECEMBER 15, 2022
9:00 A.M.

2310 BROENING HIGHWAY, BALTIMORE MD 21224
VIRTUAL & LIVESTREAMED OPEN MEETING

OPEN SESSION

James F. Ports, Jr., Chairman

MEMBERS ATTENDING:
Dontae Carroll
William H. Cox, Jr.
William C. Ensor, III
W. Lee Gaines, Jr.
Mario J. Gangemi
Cynthia D. Penny-Ardinger
Jeffrey S. Rosen
John F. von Paris

STAFF ATTENDING:
Col. Kevin Anderson
Carl Chamberlin
Percy Dangerfield
Jeffrey Davis
David Goldsborough
Chantelle Green
James Harkness
Natalie Henson
Selena McKissick
Kimberly Millender, Esq.
Mary O'Keeffe
William Pines
Tia Rattini
Joseph Sagal
Timothy Sheets
Christina Thompson
Paul Trentalance
Melissa Williams

OTHERS ATTENDING:
Ebony Moore, MDOT TSO

At 9:00 a.m. Chairman James F. Ports, Jr. called the meeting of the Maryland Transportation Authority (MDTA) Board to order. The meeting was held virtually and was livestreamed on the MDTA Board Meeting web page.

APPROVAL – OPEN SESSION MEETING MINUTES OF NOVEMBER 17, 2022

Upon motion by Member Mario J. Gangemi and seconded by Member William H. Cox, Jr., the open session meeting minutes of the MDTA Board meeting held on November 17, 2022 were unanimously approved.

APPROVAL – OPEN SESSION MEETING MINUTES OF NOVEMBER 30, 2022

Upon motion by Member Mario J. Gangemi and seconded by Member W. Lee Gaines, Jr., the open session meeting minutes of the MDTA Board meeting held on November 30, 2022 were unanimously approved.

RESOLUTION – YEARS OF SERVICE RECOGNITION

Mr. William Pines read the Years of Service Recognition Resolution to Ms. Christina M. Thompson.

On the occasion of Ms. Thompson's retirement from her distinguished career of service, the Chairman and Members of the Maryland Transportation Authority hereby express to her their most sincere appreciation for their excellence and commitment.

APPROVAL – CANTON RAILROAD

Mr. William Pines requested approval from the Maryland Transportation Authority (MDTA) Board of the proposed Canton Development Corporation, Inc. (Canton) Board of Directors and designation of the Chief Financial Officer, or designee, as proxy to attend the Special Board Meeting of stockholders of Canton on January 25, 2023 to vote to approve the election of the Canton Board of Directors.

Mr. Pines explained that the MDTA is the sole stockholder of Canton and the day-to-day operations of Canton are managed by Mr. John Magness, the President and CEO, with the oversight of a Board of Directors. Per the Corporate By-Laws, the stockholders are to gather annually and elect the members of the Board of Directors. Additionally, the By-Laws of Canton permit the stockholders to be represented by a proxy.

He further explained that the MDTA's practice has been to approve at least two directors during the Annual Meeting of the stockholders. Each Director serves a three-year term. During the MDTA Board meeting on October 27, 2022, the Board approved the reappointment of Mr. Stephen Kauffman and since that time, an additional qualified Board Member, Ms. Sarah Klein, has been identified.

Mr. Pines stated that the MDTA recommends the appointment of Ms. Sarah Klein. Ms. Klein is well known in the Harford and Baltimore County communities and is highly recommended. Information regarding Ms. Klein's qualifications was included as an attachment. Canton's By-Laws provide the MDTA, as the stockholder, the ability to add an additional Director by requesting a special meeting of the Board of Directors.

Upon motion by Member Mario J. Gangemi and seconded by Member William H. Cox, Jr., the Members unanimously approved the Canton Railroad Board of Directors and the designation of the Chief Financial Officer as proxy to attend the Special Board Meeting of stockholders of Canton on January 25, 2023 to vote.

APPROVAL – CONTRACT AWARDS

- **MR-3035-0000 – On-Call Upgrade and Replace Metal Traffic Barriers and Attenuators**

Mr. Jeffrey Davis requested approval from the MDTA Board to execute Contract No. MR-3035-0000 – On-Call Upgrade and Replace Metal Traffic Barriers and Attenuators with L.S. Lee, Inc. in the amount of $5,446,400.00.

Mr. Davis explained that this contract provides for the replacement and maintenance of traffic barrier w-beams, end treatments, attenuators, and related hardware on an as-needed basis. The work on this contract is intended to be executed via on-call. The contract will cover three years of replacement and maintenance of traffic barrier w-beams and end treatments/attenuators and will be performed at all MDTA facilities with the exception of Point Breeze.

Upon motion by Member W. Lee Gaines, Jr. and seconded by Member William H. Cox, Jr., the Members unanimously gave approval to execute Contract No. MR-3035-0000 – On-Call Upgrade and Replace Metal Traffic Barriers and Attenuators.

- **SV-3104-0000 (SV-00210783) – Internal Auditing Services**

Mr. Jeffrey Davis requested approval from the MDTA Board to execute Contract No. SV-3104-0000 (SV-00210783) – Internal Auding Services with BD & Company in the amount of $1,275,259.50.

Mr. Davis explained that this Contract is to provide for internal auditing services to include assurance consulting services, providing expertise in critical areas through guidance and augmenting existing MDTA staff, and/or fully conducting audits. These services will assist the MDTA's Board Members, Executive Director, and the Office of Audits in accomplishing their objectives by bringing a systematic and disciplined approach to evaluate and improve the effectiveness of the organization's risk management, control, and governance process.

Upon motion by Member John F. von Paris and seconded by Member Mario J. Gangemi, the Members unanimously gave approval to execute Contract No. SV-3104-0000 (SV-00210783) – Internal Auding Services.

APPROVAL – NEW SECTION OF THE I-95 EXPRESS TOLL LANES (ETL) NORTHBOUND AND I-695 RAMPS

Mr. William Pines, Mr. Carl Chamberlin, and Ms. Chantelle Green requested approval from the MDTA Board to proceed with public hearings for the I-95 Express Toll Lanes (ETL) Northbound Extension (Section 200) and I-695 Ramps Toll Rate Range Setting.

They explained that in 2014, the I-95 ETL opened the limits of Section 100 to traffic. As a continuation to the success of Section 100 of the I-95 ETL program, MDTA is building the next segment of the popular managed lane system. Construction is ongoing to extend the ETLs in the Northbound direction only from MD 43 to north of MD 24, within the Section 200 limits of the I-95 Master Plan. Additionally, as part of the project, MDTA is connecting the I-695 ramps into the new I-95 ETL northbound lanes. MDTA in Calendar Year (CY) 2023 must engage in a new toll rate setting process to establish toll rate ranges for this section of the I-95 ETL Northbound Extension project (Section 200). The toll rate setting process is anticipated to establish the toll rate range for three different time periods (peak, off-peak, and overnight) used on the ETL facility, which is in line with the existing ETL toll structure. During their presentation they outlined the toll rate setting process, proposed public hearing schedule, toll rate range proposals, financial implications, and public outreach efforts.

Chairman Jim Ports emphasized to the MTDA Board that today they are only voting to proceed with public hearings for the I-95 ETL Northbound Extension (Section 200) and I-695 Ramps Toll Rate Range Settings; they are not voting on the proposal.

Upon motion by Member William H. Cox, Jr. and seconded by Member Mario J. Gangemi, the Members unanimously approved to proceed with public hearings for the I-95 ETL Northbound Extension (Section 200) and I-695 Ramps Toll Rate Range Settings.

**** Member Dontae Carroll excused himself from the remainder of the meeting at 10:06 a.m. ****

UPDATE – MAJOR PROJECTS UPDATE

Mr. Jim Harkness updated the MDTA Board on the status of Major Projects in the Capital Program. Mr. Harkness explained that as of December 15, 2022, there are eleven major projects in the Capital Program. Seven of the projects are under construction, two are under procurement, and two are under design. This update includes projects funded for construction in the current Consolidated Transportation Program and includes five projects valued in excess of $100 million. There are three projects from the $1.1 billion I-95 ETL Northbound Expansion program.

UPDATE – DIVISION OF INFORMATION TECHNOLOGY (DOIT) MAJOR PROJECTS UPDATE

Mr. David Goldsborough updated the MDTA Board on the Division of Information Technology (DoIT) major projects. He explained that as of December 15, 2022, the Division of Information Technology maintains an active portfolio of 19 projects. Post-go-live support of the third generation tolling system (3G) continues and will stay in place until a transition can be made to the new Program Manager position currently in recruitment. DoIT has received the final report from the State of Maryland Department of Information Technology for the cybersecurity readiness engagement completed in May 2022 and are reviewing the report and waiting for an exit conference to be scheduled.

Some of the significant initiatives that DoIT continues to work on include the following:

- Cybersecurity measures – will be aligning to the State's framework for monitoring, detection, and remediation/recovery.
- Post-go-live support of 3G.
- E-forms platform.
- Maximo spatial implementation has kicked off with IBM to support our asset management initiative.
- RFID re-tagging for inventory tracking is still in progress.
- We completed our Salesforce Supervisor recruitment and will be onboarding.
- Active recruitment is underway for a replacement for our Assistant Director of the PMO. Interviews will be scheduled in the coming weeks.

UPDATE – CIVIL RIGHTS AND FAIR PRACTICES (CRFP) SOCIOECONOMIC PROGRAMS STATUS

Ms. Tia Rattini updated the MDTA Board on MDTA's progress toward achieving the legislatively mandated socioeconomic program goals for the 1st Quarter of Fiscal Year (FY) 2022, which covers the performance period of July 1, 2022 to September 30, 2022 (Q1 FY 2022).

Disadvantaged Business Enterprise (DBE) Program

CRFP is responsible for monitoring the Nice-Middleton Bridge and the newly awarded I-95 Interchange at Belvidere Road projects federally funded contracts to ensure compliance with nondiscrimination and affirmative action requirements.

Minority Business Enterprise (MBE) Program

The MBE participation for Q1 FY 2023 is calculated by dividing the total MBE contract award dollars by the total contract award dollars. During this period, MBE firms received $34.8 million (20.61%) of the $169.1 million in total contract awards.

These amounts represent contract awards in six Procurement Categories: Construction, Architectural & Engineering (A&E), Maintenance, Information Technology (IT), Services, and Supplies/Equipment.

The MBE classification breakdown during this period was African American firms received approximately $9.9 million (5.86%) of the nearly $169.1 million MBE contract awards this year. Hispanic American firms received over $460 thousand (0.27%), Asian American firms received $4.8 million (2.85%), Women-owned firms received $19.6 million (11.61%), Native American firms received over $4 thousand (0.00%), and Disabled firms received over $36 thousand (0.02%).

Small Business Reserve (SBR) Program

The SBR firms' utilization for Q1 FY 2023 is calculated by dividing the total SBR designated payments by the total procurement payments. An SBR-designated payment is a payment made to a vendor for an SBR-designated procurement. During this period, SBR-designated firms received over $2 million (0.87%) of the $233.7 million in procurement payments. Non SBR-designated payments for this quarter were $1.9 million (0.84%). MDTA's SBR utilization was $3.9 million (1.71%) for all SBR payments (designated and non-designated).

Veteran-Owned Small Business Enterprise (VSBE) Program.

The VSBE participation for Q1 FY 2023 is calculated by dividing the total contract award dollars to VSBE firms by all contract awards. During this period, VSBE firms received $890 thousand (0.53%) of the $169.1 million in contracts awarded by the MDTA.

UPDATE – AUDIT COMMITTEE

Member Cynthia D. Penny-Ardinger presented an update on the Audit Committee meeting that took place on December 14, 2022. The Audit Committee Members were given an update on the Fiscal Year 2023 Audit Plan which is currently on track to complete twelve the audits with one audit currently completed and three audits currently in process.

The Validation of Waivers for Video-Tolls and Civil Penalties Audit was presented and the Committee was satisfied with the result of this audit.

The Executive Director also gave a verbal update on the status of the ongoing OLA audit.

UPDATE – EXECUTIVE DIRECTOR'S REPORT

Mr. William Pines gave the Executive Director's Report. He reported that on December 3, 2022 he signed and approved the ETL Holiday Toll Pricing Schedule for Calendar Year 2023 (attached). He also updated the Board on the upcoming dedication of MD 155 Bridge over I-95 to SP4 Ronald A. Spudis and the conclusion of the Customer Assistance Plan.

Mr. Pines ended his remarks by mentioning some of MDTA's Notable 2022 Accomplishments. This including various MDTA Division Accomplishments, Division and Employee Awards, newly established committees, newly established leadership positions, employee engagement, employee generosity, and notable projects such as the Nice/Middleton Bridge.

VOTE TO ADJOURN MEETING

There being no further business, upon motion by Member W. Lee Gaines, Jr. and seconded by Member William C. Ensor, III, the Members unanimously voted to adjourn the meeting at 11:16 a.m.

The next MDTA Board Meeting will be held on Thursday, January 26, 2023 at 9:00 a.m. at MDTA, 2310 Broening Highway, Baltimore MD and will be livestreamed on the MDTA Board webpage.

APPROVED AND CONCURRED IN:

_____

James F. Ports, Jr., Chairman

MDTA BOARD SUMMARY SHEET

SUBJECT: I-95 Express Toll Lanes
Calendar Year 2023 Holiday Schedule

DATE: November 29, 2022

PREPARED BY: Melissa Williams, Director
Division of Planning and Program Development

PURPOSE

To update the MDTA Board on the approved calendar year 2023 holiday schedule for the I-95 Express Toll Lanes.

SUMMARY

As part of the MDTA Board approved tolling plan for the I-95 Express Toll Lanes, the MDTA Board established that the MDTA Executive Director would approve a holiday schedule which resets the toll schedule on certain holidays to a Saturday or Sunday toll schedule based on traffic patterns for the holiday. This approval occurs each December for the upcoming calendar year and is shared with the MDTA Board at their December meeting.

ANALYSIS

See the attached Approved I-95 Express Toll Lanes Calendar Year 2023 Holiday Schedule.

ATTACHMENTS

Approved I-95 Express Toll Lanes Calendar Year 2023 Holiday Schedule

ETL Holiday Toll Pricing Schedule CY 2023

Holiday	Date	Weekday	Pricing Period Schedule
New Year's Day	January 2	Monday	Sunday
Martin Luther King, Jr. Day	January 16	Monday	Sunday
President's Day	February 20	Monday	Sunday
Memorial Day	May 29	Monday	Saturday
Juneteenth	June 19	Monday	Weekday
Independence Day	July 4	Tuesday	Sunday
Labor Day	September 4	Monday	Sunday
Columbus Day	October 9	Monday	Weekday
Veterans' Day	November 10	Friday	Weekday
Thanksgiving Day	November 23	Thursday	Saturday
American Indian Heritage Day	November 24	Friday	Sunday
Christmas Day	December 25	Monday	Saturday

Approved: Will N. Pine
Executive Director

Date: 12/3/2022

TAB 2

MEMORANDUM

TO: MDTA Board
FROM: Director of Planning and Program Development Melissa Williams (MDTA's Modal Clearance Representative)
SUBJECT: Conveyance - Kane Street (MC #22-7048)
DATE: January 26, 2023

PURPOSE OF MEMORANDUM

To seek recommended approval from the Maryland Transportation Authority (MDTA) Board for the conveyance of property located in Baltimore City, Maryland, near the I-95 Interchange with Eastern Avenue. These items were presented to the Capital Committee at the January 5, 2023 meeting and recommended for approval by the full MDTA Board.

SUMMARY

In 2015, MDTA acquired the subject property from Baltimore City. At that time, both the City and MDTA incorrectly thought the Canton Railroad Company (CRC) was owned by the State of Maryland. MDTA owned 100% of the stock in the Canton Development Company (CDC), parent company to CRC. Recently, clarity was provided as to the duties, obligations, or other possible responsibilities for MDTA as the sole stockholder of CDC and its subsidiaries from the perspective of MDTA. As noted in the corporate bylaws of CDC, MDTA's primary duty as the sole stockholder of CDC is to elect the Board of Directors. The CDC is not, however, a public corporation. The ultimate use of the property would be a propriety in nature because the CRC functions and operates as a for-profit business entity. Moreover, the property is not being utilized as an operating railroad pursuant to 23 CFR 646.

On September 6, 2022, MDTA Real Estate Services received a letter from MDOT SHA's Office of Real Estate which is FHWA's Stewardship Liaison. It provided guidance on whether or not MDTA could convey the subject property below fair market value (FMV) to Canton RR. It was determined that MDTA could not sell the property to CRC for below the FMV and should the property not be used for a public transportation purpose, that sale of the property is subject to the reversionary condition written in the agreement of sale dated May 7, 2014.

On October 20, 2022, Canton RR agreed to purchase the property for the fair market value. An appraisal has since been ordered to determine what that value is. MDTA received a review of the appraisal dated January 10, 2023 and it noted a rounded amount of $344,000.00.

MDTA plans to convey a total of 7.886 acres, plus or minus, to Canton RR (Parcel 1 and Parcel 2 on the attached plat) for Fair Market Value. MDTA will retain a perpetual aerial easement in the Pedestrian Overpass from Kane Street to Quinton Street, as shown on plat I-95-101A.

MDTA Real Estate is requesting the approval from the Authority Board to convey the land.

ANALYSIS

The recommended course of action would be to seek the approval of the BPW to surplus and dispose of the property.

ATTACHMENTS

- Salient Fact Sheet
- Aerial Map
- Conveyance Plat 62015

MEMORANDUM

TO: Executive Director William Pines, P.E.
FROM: Director of Planning and Program Development Melissa Williams
(MDTA's Modal Clearance Representative)
SUBJECT: Conveyance - Kane Street
(MC #22-7048)
DATE: January 26, 2023

PURPOSE OF MEMORANDUM
(Declaration of Extra Land Memorandum)

Per MDOT Policy DOT 654.1, the Maryland Transportation Authority (MDTA) shall determine the real property which is extra to its needs by a memorandum from the Executive Director (or designee). This memorandum referred to as the Declaration of Extra Land Memorandum (DELM), designates the end of the MDTA Internal Clearance. MDOT will review the DELM and determine if the property is "excess to the needs of the MDTA". The DELM is required for all proposed MDTA dispositions, and the property must be deemed "excess to the needs of the MDTA" before MDTA-owned real estate can proceed through the Modal Clearance Process.

By virtue of this DELM and the supporting documentation, I am hereby requesting your approval to deem the subject property as being "excess to the needs of the MDTA".

SUMMARY

In 2015, MDTA acquired the subject property from Baltimore City. At that time, both the City and MDTA incorrectly thought the Canton Railroad Company (CRC) was owned by the State of Maryland. MDTA owned 100% of the stock in the Canton Development Company (CDC), parent company to CRC. Recently, clarity was provided as to the duties, obligations, or other possible responsibilities for MDTA as the sole stockholder of CDC and its subsidiaries from the perspective of MDTA. As noted in the corporate bylaws of CDC, MDTA's primary duty as the sole stockholder of CDC is to elect the Board of Directors. The CDC is not, however, a public corporation. The ultimate use of the property would be a propriety in nature because the CRC functions and operates as a for-profit business entity. Moreover, the property is not being utilized as an operating railroad pursuant to 23 CFR 646.

On September 6, 2022, MDTA Real Estate Services received a letter from MDOT SHA's Office of Real Estate which is FHWA's Stewardship Liaison. It provided guidance on whether or not MDTA could convey the subject property below fair market value (FMV) to Canton RR. It was determined that MDTA could not sell the property to CRC for below the FMV and should the property not be used for a public transportation purpose, that sale of the property is subject to the reversionary condition written in the agreement of sale dated May 7, 2014.

On October 20, 2022, Canton RR agreed to purchase the property for the fair market value. An appraisal has since been ordered to determine what that value is. MDTA received a review of the appraisal dated January 10, 2023 and it noted a rounded amount of $344,000.00.

A request was made to the other divisions within MDTA to determine if there were any current or future needs for the subject property. It was determined and confirmed that there were no needs for this property.

MDTA plans to convey a total of 7.886 acres, plus or minus, to Canton RR (Parcel 1 and Parcel 2 on the attached plat) for Fair Market Value. MDTA will retain a perpetual aerial easement in the Pedestrian Overpass from Kane Street to Quinton Street, as shown on plat I-95-101A.

MDTA Real Estate is requesting the approval from the MDTA Board to convey the land.

ANALYSIS

The recommended course of action would be to seek the approval of the BPW to dispose of the property.

RECOMMENDATION

APPROVED:

_____
William Pines PE, Executive Director

_____
Date

DISAPPROVED:

_____
William Pines PE, Executive Director

_____
Date

NEXT STEP

Following your approval delegated to you by the MDTA Board, the property will then proceed through the modal clearance process.

ATTACHMENTS

- Salient Fact Sheet
- Aerial Map
- Conveyance Plat 62015

Salient Fact Sheet

Conveyance of Real Property
Maryland Transportation Authority
Division of Planning and Program Development

Date of Preparation: November 2, 2022 **Refer to MC#:** 22-7048

Property Name: Kane Street

Property Item/Reference # N/A **Internal Clearance:** November 15, 2022

Plat No: 62015 **Dated:** January 13, 2022

Location: Baltimore City, Maryland, Near the I-95 interchange with Eastern Avenue

SDAT Property Tax Information: Parcel 1 - Accnt # Ward- 26 Section -17 Block - 6345D Lot - 9

County:	Baltimore City	***Tax Map #:***	0026	***Parcel:***	
Grid:		***Block:***	6345D	***Lot***	9

SDAT Property Tax Information: Parcel 2- Accnt # Ward- 26 Section -17 Block - 6345D Lot - 13

County:	Baltimore City	***Tax Map #:***	0026	***Parcel:***	
Grid:		***Block:***	6345D	***Lot***	13

Type of Transaction: Conveyance

Acreage: Parcel 1: 314,352 square feet or 7.217 acres of land, plus or minus
Parcel 2: 29,140 square feet or 0.669 acres of land, plus or minus

Improved: N/A

Description of Improvements: N/A

Consideration: TBD

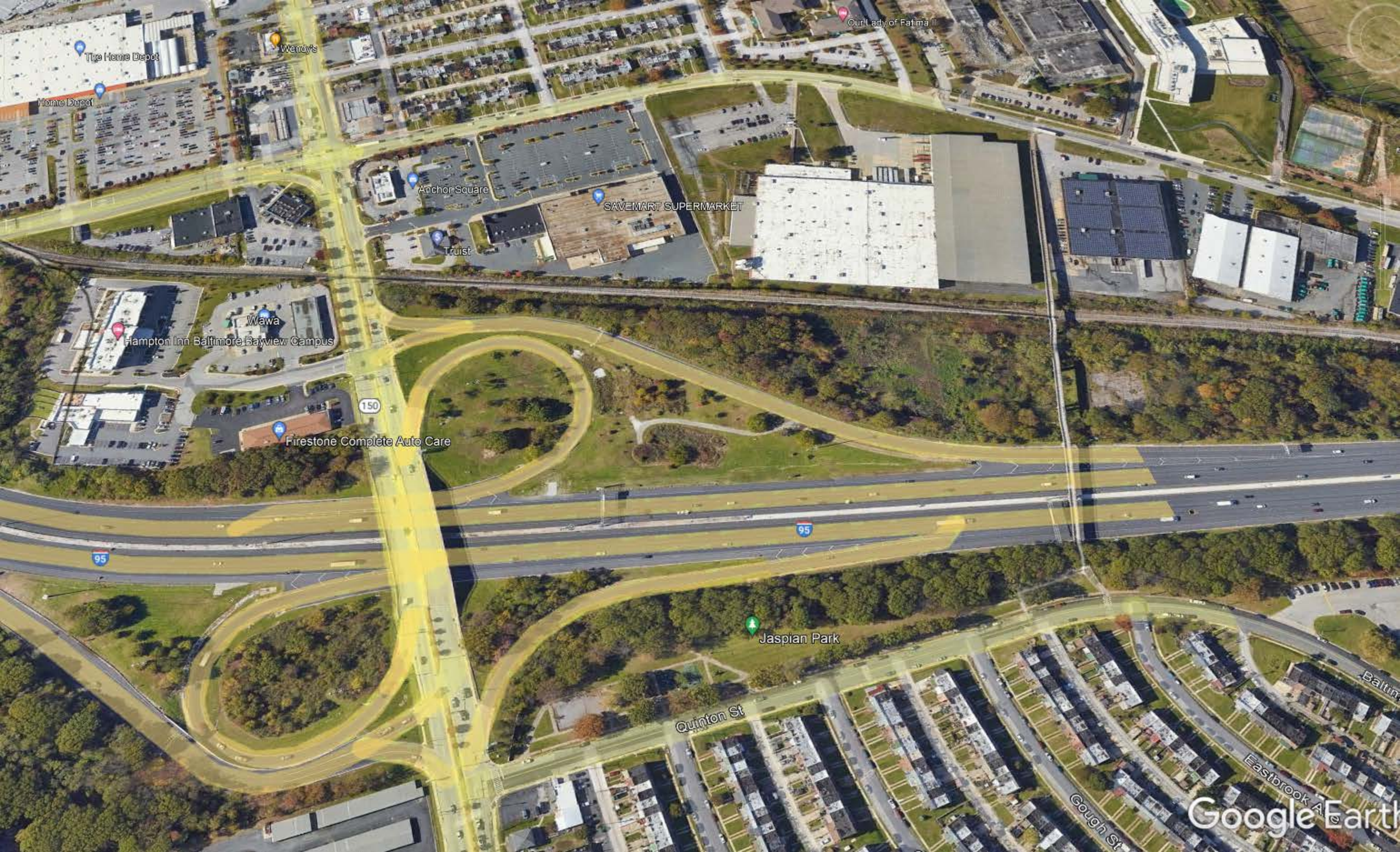
Federal Approval: Yes

Additional Notes/Info: MDTA will retain a perpetual aerial easement in the Pedestrian Overpass from Kane Street to Quinton Street, as shown on plat I-95-101A.

The following information is provided subject to Appraisal and is in no way warranted:

Assumed Zoning: Industrial
Utilities Available: Recorded sewer easements on site
Estimated Market Value: TBD

Prepared by:
Bethany Howard
Real Property Specialist III, Division of Planning and Program Development
Maryland Department of Transportation MDTA
2310 Broening Highway
Phone: 410.537.7898
Fax: 410.537.7899Baltimore, MD 21224
email: bhoward@mdta.state.md.us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Home Depot
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Our Lady of Fatima II
Anchor Square
SAVEMART SUPERMARKET
Truist
Wawa
Hampton Inn Baltimore Bayview Campus
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Firestone Complete Auto Care
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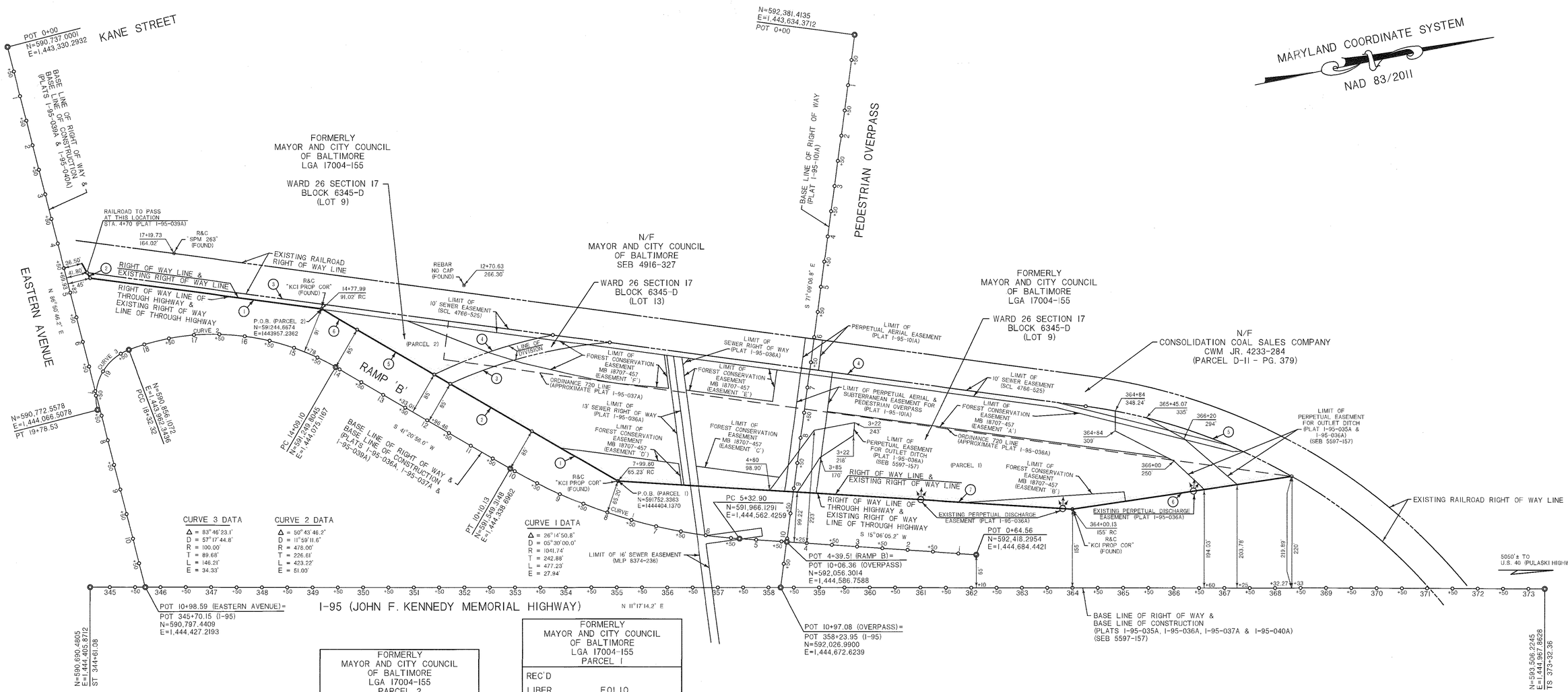


CURVE 3 DATA

Δ	= 83°46'23.1"
D	= 57°17'44.8"
R	= 100.00'
T	= 89.68'
L	= 146.21'
E	= 34.33'

CURVE 2 DATA

Δ	= 50°43'46.2"
D	= 11°59'11.6"
R	= 478.00'
T	= 226.61'
L	= 423.22'
E	= 51.00'

CURVE 1 DATA

Δ	= 26°14'50.8"
D	= 05°30'00.0"
R	= 1041.74'
T	= 242.88'
L	= 477.23'
E	= 27.94'

FORMERLY MAYOR AND CITY COUNCIL OF BALTIMORE LGA 17004-155 PARCEL 2

REC'D LIBER	FOLIO	
1	S 18°45'31" W	460.69'
2	S 71°58'14" W	12.48'
3	N 18°50'46" E	928.07'
4	R = 970.37'	L=247.33'
	CHD. S 07°08'00" E	246.66'
5	S 41°20'56" W	176.09'
6	S 41°25'06" W	81.73'

CONVEYANCE AREA
29,140 SQ. FT. OR 0.669 ACRES±
SHOWN THUS: ☐

FORMERLY MAYOR AND CITY COUNCIL OF BALTIMORE LGA 17004-155 PARCEL 1

REC'D LIBER	FOLIO	
1	S 41°20'58" W	195.65'
2	S 41°20'56" W	186.33'
3	R = 940.37'	L=326.08'
	CHD. N 03°14'56" W	324.45'
4	N 18°50'46" E	948.40'
5	R = 1110.00'	L=431.98'
	CHD. N 29°59'34" E	429.26'
6	S 02°45'00" W	437.12'
7	S 14°45'46" W	899.60'

CONVEYANCE AREA
314,352 SQ. FT. OR 7.217 ACRES±
SHOWN THUS: ☐

(PARCEL 1)
AREA CONVEYED OR TO BE CONVEYED BY THE MARYLAND TRANSPORTATION AUTHORITY
314,352 SQ. FT. OR 7.217 ACRES+/- SHOWN THUS: ☐

(PARCEL 2)
AREA CONVEYED OR TO BE CONVEYED BY THE MARYLAND TRANSPORTATION AUTHORITY
29,140 SQ. FT. OR 0.669 ACRES+/- SHOWN THUS: ☐

GENERAL NOTES:
1) THE MAYOR & CITY COUNCIL OF BALTIMORE OWN ALL SEWER EASEMENTS & ALL PERPETUAL AERIAL & SUBTERRANEAN EASEMENTS FOR PEDESTRIAN OVERPASS.

2) THE DEPARTMENT OF NATURAL RESOURCES OWN ALL THE FOREST CONSERVATION EASEMENTS.

COORDINATES AND BEARINGS SHOWN HEREON ARE IN REFERENCE TO THE MARYLAND COORDINATE SYSTEM, AS DEFINED BY THE NORTH AMERICAN DATUM OF 1983, ADJUSTED IN 2011 (NAD 83/2011) AND ARE BASED ON THE FOLLOWING CONTROL STATIONS:

DESIGNATION	NORTH	EAST	SOURCE	POINT DESCRIPTION
JMT 1	591,567.8724	1,444,472.9383	RTN (SMARTNET)	R&C
JMT 2	591,080.0296	1,444,380.6874	RTN (SMARTNET)	R&C

SURVEYOR'S CERTIFICATION

THE RIGHT OF WAY LINES AND LINES OF DIVISION SHOWN HEREON WERE ESTABLISHED FROM DEEDS AND PLATS OF RECORD AND FIELD SURVEYS. THE UNDERSIGNED WAS IN RESPONSIBLE CHARGE OF THE PREPARATION OF THIS PLAT AND THE SURVEYING WORK REFLECTED ON IT. THIS PLAT WAS DEVELOPED IN COMPLIANCE WITH THE REQUIREMENTS SET FORTH IN COMAR REGULATION 09.13.06.

JONATHAN DERR
PROFESSIONAL LAND SURVEYOR MD REG. NO. 21255
EXP. DATE 06-20-2023
DATE 1-11-2022

STATE OF MARYLAND · JONATHAN DERR · 21255 · PROFESSIONAL LAND SURVEYOR

LEGEND OF PROPOSED EASEMENTS

- TEMPORARY CONSTRUCTION EASEMENT FOR SPECIAL PURPOSE AS INDICATED BY NOTATION ON THIS PLAT.
- REVERTIBLE EASEMENT FOR SUPPORTING SLOPES.
- PERPETUAL EASEMENT FOR SPECIAL PURPOSE AS INDICATED ON THIS PLAT.
- PERPETUAL EASEMENT FOR DRAINAGE FACILITY AS INDICATED BY NOTATION ON THIS PLAT.
- PERPETUAL EASEMENT TO DISCHARGE FLOW OF WATER FROM OR INTO AN EXISTING WATERWAY OR NATURAL DRAINAGE COURSE.
- PERPETUAL EASEMENT TO DISCHARGE FLOW OF WATER UPON EXISTING GROUND.

THIS IS AN EXPRESSWAY AND NO ACCESS, EITHER VEHICULAR, PEDESTRIAN, OR ANIMAL WILL BE PERMITTED ACROSS THE LINES DESIGNATED "RIGHT OF WAY LINE OF THROUGH HIGHWAY" EXCEPT BY MEANS OF SUCH PUBLIC ROAD CONNECTIONS AS ARE AUTHORIZED BY LAW.

100' 0 100' 200'
SCALE: 1" = 100'

SENT TO RECORD OFFICE _____ 20____
APPROVED BY:
STATE ROADS COMMISSION CHAIRMAN _____ 20____

NO.	DATE	REVISION
4		
3		
2		
1		

BOOKS	PART OF PLATS
	BALTIMORE CITY DPW I-95-035A I-95-036A I-95-037A I-95-039A I-95-040A I-95-101A

LOCATED IN BALTIMORE CITY

PREPARED BY: JOHNSON, MIRMIRAN & THOMPSON

ADDRESS: 40 WIGHT AVENUE, HUNT VALLEY, MD 21030

CONSTRUCTION PROJECT:

CONSTRUCTION PROJECT NO: _____

MARYLAND TRANSPORTATION AUTHORITY
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
STATE ROADS COMMISSION

RIGHT OF WAY PROJECT: PROPERTY CONVEYANCE BETWEEN KANE STREET, I-95 & EASTERN AVENUE

RIGHT OF WAY PROJECT NO. MA232M8N

ISSUED January 13 2022 FEDERAL AID PROJECT NO. _____

Jonathan D. Derr
CHIEF, PLATS & SURVEYS DIVISION

SCALE: 1" = 100'

CONVEYANCE **PLAT No. 62015**

X=1445126
Y=590198

DRAWN BY: CPH DIRECTORY: S:\ CADD\ PSD\ Plats\ 2016\ 16-3155\ p62015r0.dgn

COMPED BY: CPH CHECKED BY: JMD DIRECTORY: S:\ CADD\ PSD\ Plats\ 2016\ 16-3155\ KANE_STREET.xml

X=1445772
Y=593435

TAB 3

MEMORANDUM

TO: MDTA Board
FROM: Project Manager Carl Chamberlin
SUBJECT: I-95 ETL Northbound Extension (Section 200) & I-695 Ramps Toll Rate Range Setting Update
DATE: January 26, 2023

PURPOSE OF MEMORANDUM

MDTA staff is seeking the Board's approval to proceed with the updated proposal for the I-95 ETL Northbound Extension (Section 200) & I-695 Ramps toll rate range setting. The MDTA Board is not voting on a proposal today, rather just voting to continue the toll rate range setting process with the updated proposal.

Enclosed in your mailout materials, you will find the "I-95 ETL Northbound Extension (Section 200) & I-695 Ramps Toll Rate Range Setting" information that includes, but is not limited to, the updated proposal, proposed public hearing schedule, and public hearing materials.

Board Meeting: Proposal for 2023 I-95 ETL Northbound Extension Project (Section 200) & I-695 Ramps Toll Rate Setting Public Hearings

Agenda

I.	Introduction	Will Pines
II.	Updated Toll Proposal	Deb Sharpless
III.	Public Hearing Schedule	Carl Chamberlin
IV.	Public Hearing Materials	Carl Chamberlin
V.	Approval to Accept the Updated Toll Proposal	Jim Ports

I. Introduction

At the December 2022 MDTA Board Meeting, the Board approved a motion to proceed with public hearings for the I-95 ETL Northbound Extension (Section 200) & I-695 Ramps toll rate range setting. Since the December meeting, MDTA staff has been working on preparing the materials necessary to open up the public comment period and schedule the hearing dates. During the process, MDTA staff reported that the proposal presented matched the existing toll rate ranges already set for the open/existing ETL facility (Section 100). During the development of the hearing materials, MDTA staff recognized that certain aspects of the existing toll structure (e.g., the early payment discount for video tolls, etc.) were not explicitly stated, and therefore we have updated the proposal to ensure clarity that the proposed toll proposal matches all aspects of the existing toll rate ranges. Additionally, the proposal was updated to clarify that the existing toll zones will remain unchanged.

The purpose of today's meeting is to provide the Board Members with this minor update to the proposal that was approved in December, provide the additional materials that will be open to review by the public during the hearing process, and provide an updated schedule. The other aspects of the materials presented at the December 15, 2022 Board meeting (e.g., communications plan, etc.) remain unchanged and are incorporated into this updated proposal by reference.

MDTA staff is seeking the Board's approval to proceed with the updated proposal for the I-95 ETL Northbound Extension (Section 200) & I-695 Ramps toll rate range setting. The MDTA Board is not voting on a proposal today, rather just voting to continue the toll rate range setting process with the updated proposal.

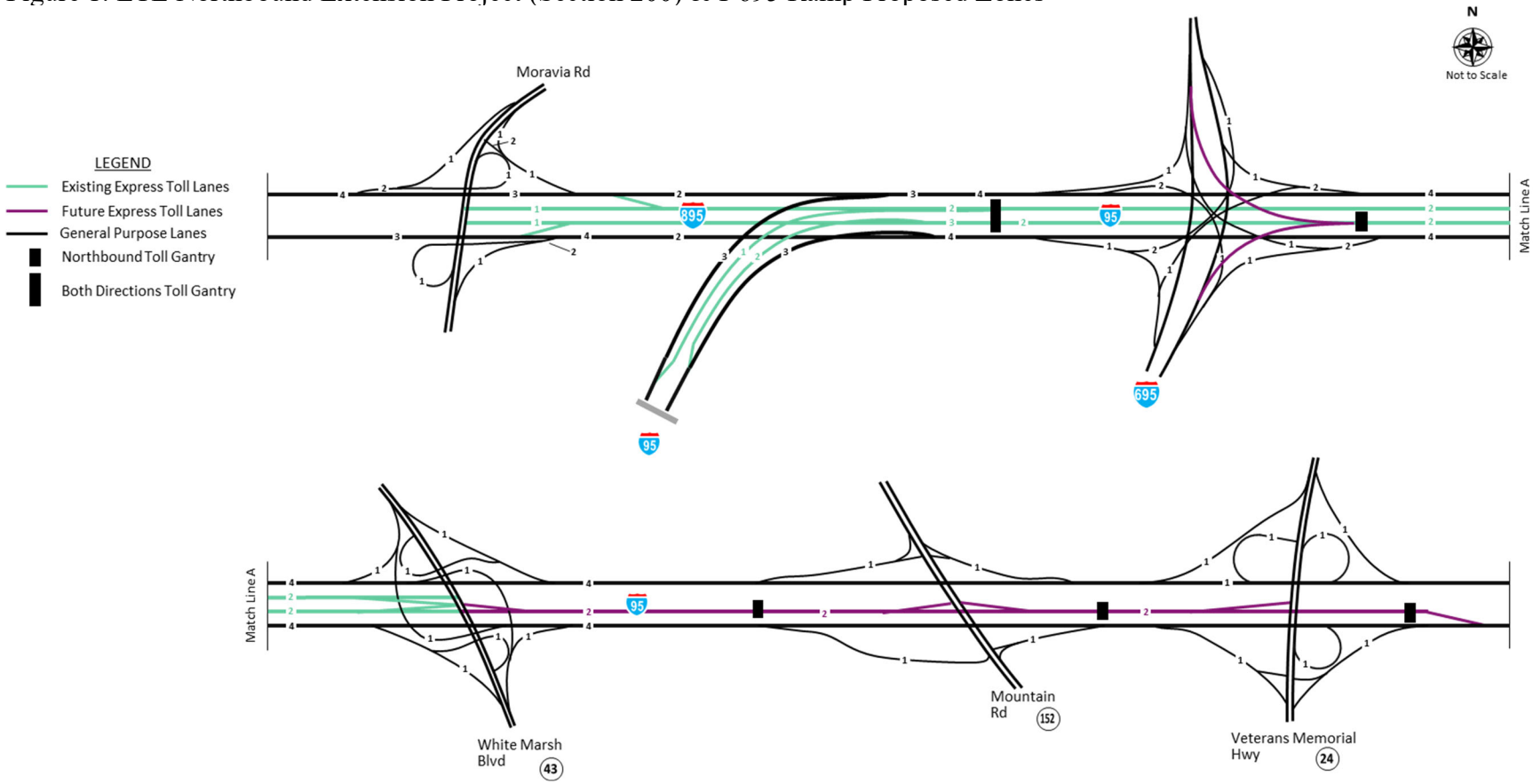
II. Updated Proposal

In the process of developing the material, MDTA staff found two parts of the proposal that needed to be updated in order to better clarify that the proposal fully matches the existing toll structure for Section 100.

- Figure 1: The figure has been updated from the December Board Book to mirror the actual current limits of tolling in the existing ETL facility (Section 100) and the proposed limits in the new toll proposal to reflect no changes to the existing Section 100 toll zones.
- Toll Rate Range Proposal Table: Everything listed in the toll rate range proposal table (shown in page 5 of this section) is still accurate, and there are no changes to the information in the table. Notes and footnotes have been added and updated next to the table from the December Board book.

It is important to note that MDTA staff is not changing the original toll rate ranges that were presented at the December meeting. The proposal continues to match the existing toll rate ranges already set for the open/existing ETL facility (Section 100). The other aspects of the materials presented at the December 15, 2022 Board meeting (e.g., communications plan, etc.) remain unchanged and are incorporated into this updated proposal by reference.

Figure 1: ETL Northbound Extension Project (Section 200) & I-695 Ramp Proposed Zones



Note: Proposed gantry locations are illustrative only. The actual gantry locations are subject to change and to the approval of the Executive Director.

Proposed Toll Rate Ranges

2023 I-95 ETL Northbound Extension (Section 200) & I-695 Ramps Toll Setting Public Hearings Proposed Per-Mile Toll Rate Ranges

Motorcycle	Peak	Off-Peak	Overnight
E-ZPass	$0.11 to $0.18	$0.09 to $0.15	$0.04 to $0.15
Pay-by-Plate	$0.14 to $0.22	$0.11 to $0.19	$0.04 to $0.19
Video	$0.17 to $0.26	$0.13 to $0.23	$0.05 to $0.23

2-axle	Peak	Off-Peak	Overnight
E-ZPass	$0.22 to $0.35	$0.17 to $0.30	$0.07 to $0.30
Pay-by-Plate	$0.28 to $0.44	$0.21 to $0.38	$0.09 to $0.38
Video	$0.33 to $0.53	$0.26 to $0.54	$0.11 to $0.45

3-axle light	Peak	Off-Peak	Overnight
E-ZPass	$0.33 to $0.53	$0.26 to $0.45	$0.11 to $0.45
Pay-by-Plate	$0.41 to $0.66	$0.32 to $0.56	$0.13 to $0.56
Video	$0.50 to $0.79	$0.38 to $0.68	$0.16 to $0.68

3-axle-heavy	Peak	Off-Peak	Overnight
E-ZPass	$0.44 to $0.70	$0.34 to $0.60	$0.14 to $0.60
Pay-by-Plate	$0.55 to $0.88	$0.43 to $0.75	$0.18 to $0.75
Video	$0.66 to $1.05	$0.51 to $0.90	$0.21 to $0.90

4-axle light	Peak	Off-Peak	Overnight
E-ZPass	$0.55 to $0.88	$0.43 to $0.75	$0.18 to $0.75
Pay-by-Plate	$0.69 to $1.09	$0.53 to $0.94	$0.22 to $0.94
Video	$0.83 to $1.31	$0.64 to $1.13	$0.26 to $1.13

4-axle heavy	Peak	Off-Peak	Overnight
E-ZPass	$0.66 to $1.05	$0.51 to $0.90	$0.21 to $0.90
Pay-by-Plate	$0.83 to $1.31	$0.64 to $1.13	$0.26 to $1.13
Video	$0.99 to $1.58	$0.77 to $1.35	$0.32 to $1.35

5-axle	Peak	Off-Peak	Overnight
E-ZPass	$1.32 to $2.10	$1.02 to $1.80	$0.42 to $1.80
Pay-by-Plate	$1.65 to $2.63	$1.28 to $2.25	$0.53 to $2.25
Video	$1.98 to $3.15	$1.53 to $2.70	$0.63 to $2.70

6+-axle	Peak	Off-Peak	Overnight
E-ZPass	$1.65 to $2.63	$1.28 to $2.25	$0.53 to $2.25
Pay-by-Plate	$2.06 to $3.28	$1.59 to $2.81	$0.66 to $2.81
Video	$2.84 to $3.94	$1.91 to $3.38	$0.79 to $3.38

Pricing Periods

Peak Periods:
- Southbound:
  - Monday - Friday, 6:00 a.m. - 9:00 a.m.
  - Saturday, 12:00 p.m. - 2:00 p.m.
  - Sunday, 2:00 p.m. - 5:00 p.m.
- Northbound: Monday - Friday, 3:00 p.m. - 7:00 p.m.
  - Saturday, 12:00 p.m. - 2:00 p.m.
  - Sunday, 2:00 p.m. - 5:00 p.m.

Overnight Periods:
- Southbound and Northbound:
  - Monday - Sunday, 9:00 p.m. - 5:00 a.m.

Off-Peak Periods: All other times

Per COMAR 11.07.05.04, "The Executive Director may set or adjust the time of day pricing mileage rate, pricing period, or toll zones consistent with the toll rate range established by the Authority."

- Total unregistered video surcharge (difference between E-ZPass® toll and unregistered video toll amount) cannot exceed $15 per trip.
- The minimum trip toll (not per mile) by payment type for all vehicle types would be $0.40 for customers using E-ZPass, $0.50 for customers using Pay-By-Plate (Registered Video), and $1.00 for customers using Video Tolling (Unregistered Video).
- Video Tolling customers can save 15% (maximum of $5 per transaction) by paying their Video Tolls before the notice is mailed.

Note: The proposed ETL Northbound Extension (Section 200) & I-695 Ramps rate ranges match the existing ETL rate ranges (Section 100).

III. Public Hearing Boards

Welcome

Public Hearing for the I-95 Express Toll Lanes (ETL) Northbound Extension (Section 200) and I-695 Ramps Toll Rate Plan

Purpose of Hearing

The purpose of the hearing is to:

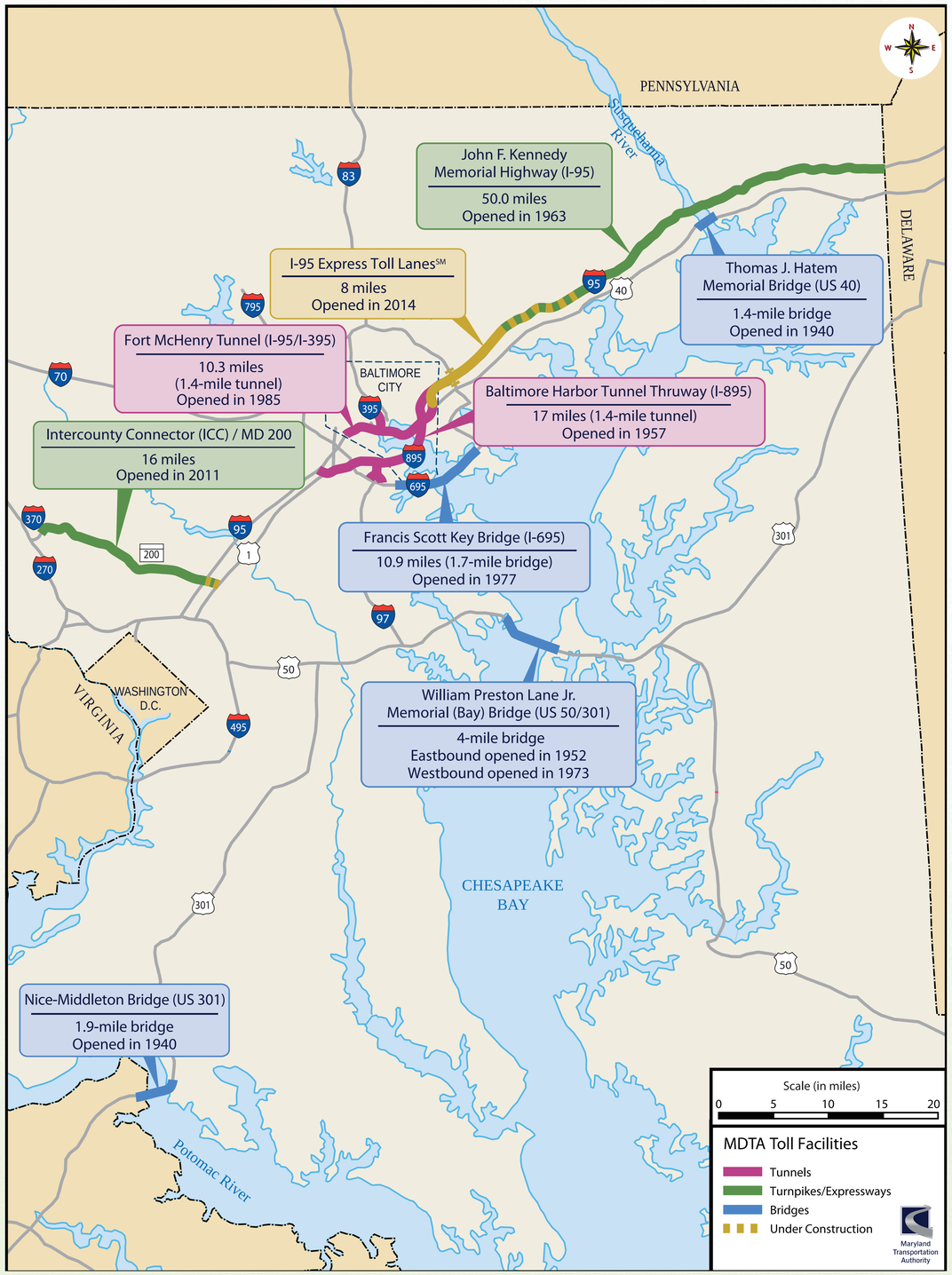
- Notify the public that the proposed toll rate range for the I-95 ETL Northbound Extension (Section 200) and I-695 ramps match the existing toll rate ranges already set for the open/existing I-95 ETL facility (Section 100).
- Provide an opportunity to discuss the proposed toll rate ranges for Section 200 and I-695 ramps with Maryland Transportation Authority (MDTA) Staff.
- Provide an opportunity to comment for the official record, which will be considered by the MDTA Board Members as part of their final decision making process.

Who is the MDTA

- **The Maryland Transportation Authority (MDTA) is the State agency responsible for:**
  - Financing, constructing, operating, maintaining, protecting, and improving the State's eight toll facilities, including the I-95 Express Toll Lanes, with toll revenues paid by customers using those facilities.
  - The MDTA is self-sufficient and receives no gas tax, motor vehicle fees, or other revenue from the Transportation Trust Fund.
  - MDTA is governed by citizen Board Members appointed by the Governor, and confirmed by the Senate, and chaired by the Secretary of Transportation
    - Dontae Carroll
    - William H. Cox, Jr
    - William C. Ensor, III
    - W. Lee Gaines, Jr.
    - Mario J. Gangemi, P.E.
    - John F. von Paris
    - Cynthia D. Penny-Ardinger, CPA, Esq.
    - Jeffery S. Rosen, CPA, CGMA, MBA
  - William Pines, PE, PMP, CCM, Executive Director of MDTA

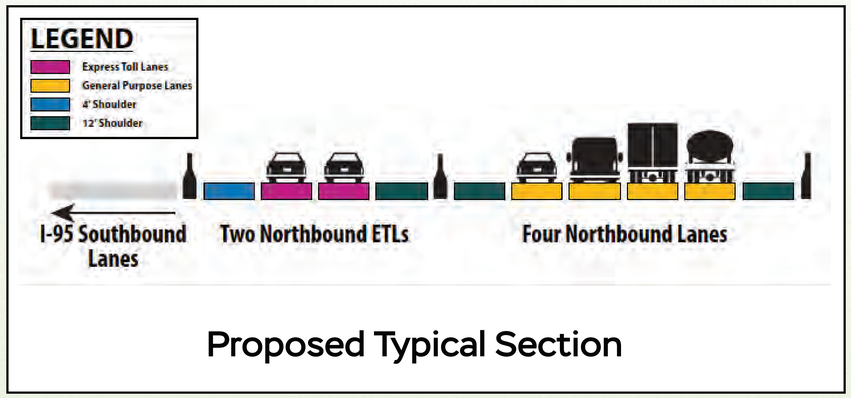
I-95 EXPRESS TOLL LANES (ETL) NORTHBOUND EXTENSION

MDTA Facilities

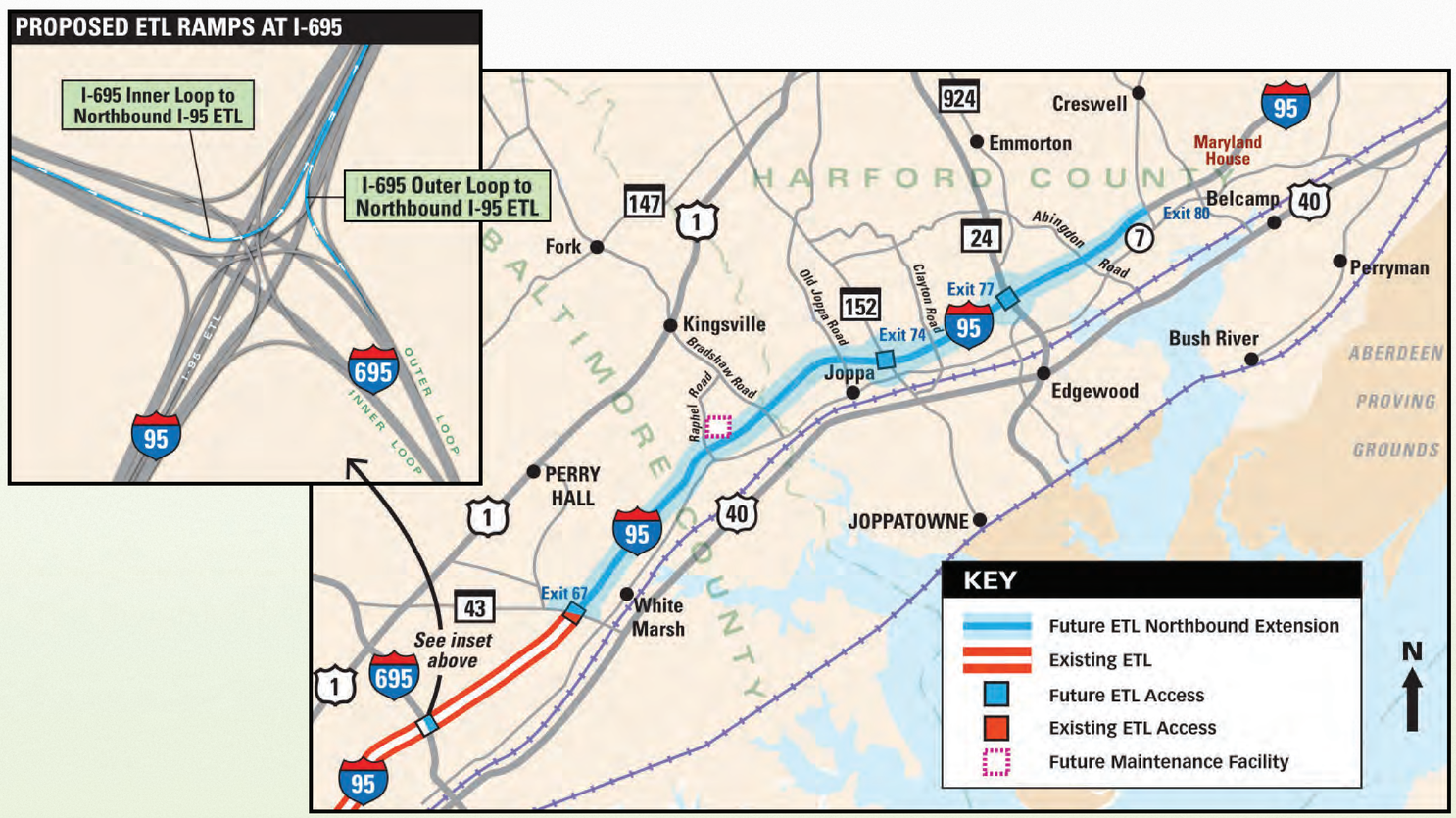


What are the limits of the I-95 ETL Northbound Extension (Section 200)?

- Construction is ongoing to extend the I-95 ETL in the Northbound direction from MD 43 to north of MD 24, within the Section 200 limits of the I-95 Master Plan.
- The extension is expected to be open to traffic by Winter 2024/2025 to MD 152, with the full extension to north of MD 24 open to traffic by Winter 2027/2028.
- In addition, the project includes connecting the I-695 ramps into the new I-95 ETL northbound lanes.



Proposed Typical Section



Project Benefits of the ETL Program

- **Congestion Relief: Reduces the traffic congestion providing a more reliable commute time and removes the I-95/MD 24 interchange from the bottleneck list.**
- **Jobs: Improves connections to Trade Point Atlantic supply chains, supporting jobs.**
- **Freight Mobility: I-95 is the highest freight corridor in Maryland and the backbone for freight traffic for the East Coast.**
- **Park & Ride (P&R): Includes two P&R facilities for enhanced carpooling (MD 152 & MD 24/MD 924).**
- **Transit: Provides new transit connections with new lines already opened:**
  - MD 24/924 P&R: Harford Transit stop added, Tour bus lines added, and sidewalk access added to the MTA 410 bus stop
  - MD 152 P&R: MTA adding a bus stop and coordinating with Harford Transit
- **Safety: Prior to the ETL Program, I-95 experienced crash rates higher than the statewide average. The ETL facility also provides a better access for EMS service in times of emergency.**
- **Environmental: Provides water runoff treatment, stream enhancements, wetland creation, and tree planting.**
- **Maintenance: Provides a safer and less impactful opportunity for facility maintenance and replaces several 50-year-old bridges.**

Provides new transit connections

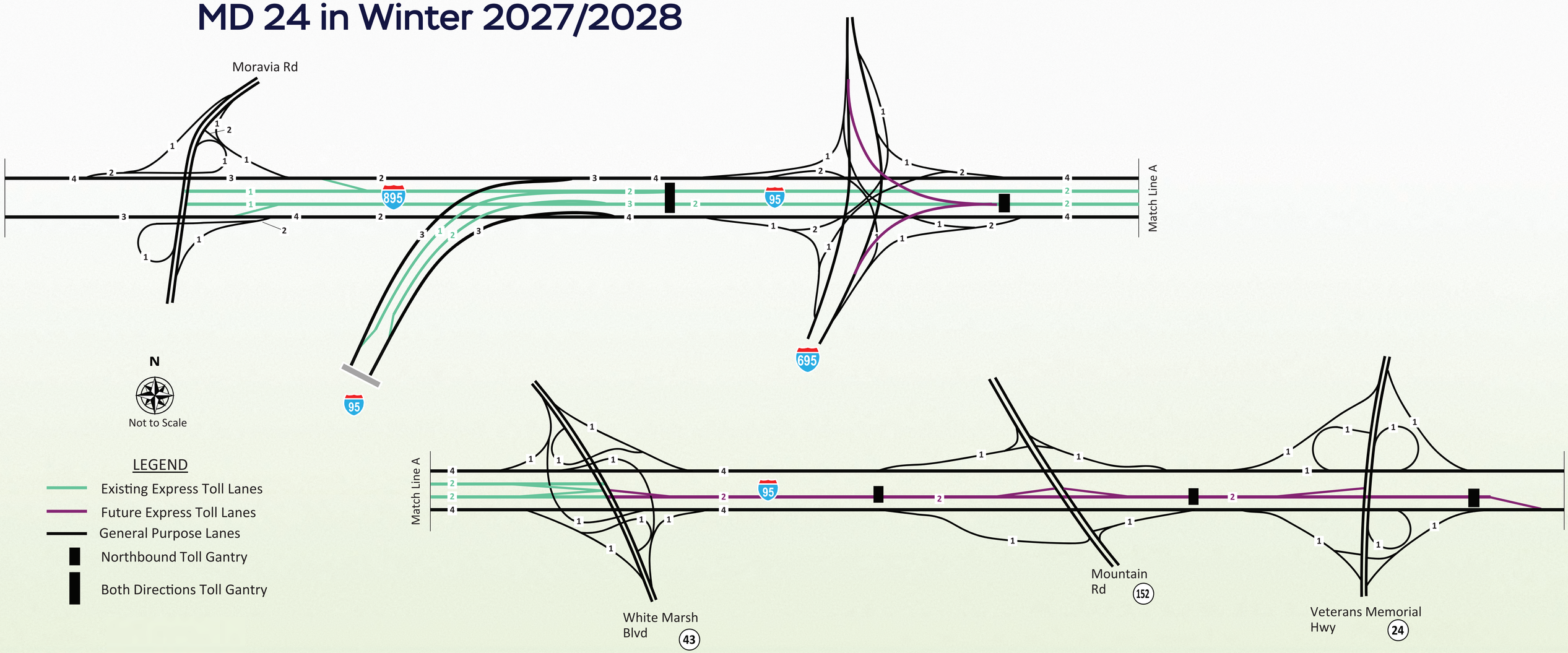
Environmental Enhancements

Replaces 50 year old bridges

I-95 EXPRESS TOLL LANES (ETL)
NORTHBOUND EXTENSION

Opening by Winter 2027/2028

- **The I-95 Northbound ETL improvements will open on:**
  - I-95 Northbound ETL to MD 152 in Winter 2024/2025
  - I-695 Ramps to I-95 Northbound ETL and I-95 Northbound ETL to north of MD 24 in Winter 2027/2028



Maryland Transportation Authority

Informational

Why Will the ETL be Tolled?

- Section 200 is an extension of an existing toll road and is being extended to offer a relatively free-flowing travel choice, especially during peak travel periods, by varying toll rates.
- Toll revenue will be used to construct the Facility.

Where do Toll Dollars Go?

- All toll dollars collected at MDTA toll facilities go directly back into the operation, maintenance, and improvement of all MDTA facilities.
- Toll dollars are NOT shared with the State's General or Transportation Trust Funds or with other state government agencies.

What is the toll rate proposal for the I-95 ETL Northbound Extension (Section 200) and I-695 Ramps?

- **The proposed toll rate ranges for Section 200 and I-695 Ramps match the existing I-95 Express Toll Lane rate ranges.**
- **Existing toll rates ranges applied to the Northbound Extension are projected to continue high speed operations on I-95 through 2035.**

Motorcycle	Peak	Off-Peak	Overnight
E-ZPass	$0.11 to $0.18	$0.09 to $0.15	$0.04 to $0.15
Pay-by-Plate	$0.14 to $0.22	$0.11 to $0.19	$0.04 to $0.19
Video	$0.17 to $0.26	$0.13 to $0.23	$0.05 to $0.23

2-axle	Peak	Off-Peak	Overnight
E-ZPass	$0.22 to $0.35	$0.17 to $0.30	$0.07 to $0.30
Pay-by-Plate	$0.28 to $0.44	$0.21 to $0.38	$0.09 to $0.38
Video	$0.33 to $0.53	$0.26 to $0.54	$0.11 to $0.45

3-axle light	Peak	Off-Peak	Overnight
E-ZPass	$0.33 to $0.53	$0.26 to $0.45	$0.11 to $0.45
Pay-by-Plate	$0.41 to $0.66	$0.32 to $0.56	$0.13 to $0.56
Video	$0.50 to $0.79	$0.38 to $0.68	$0.16 to $0.68

3-axle heavy	Peak	Off-Peak	Overnight
E-ZPass	$0.44 to $0.70	$0.34 to $0.60	$0.14 to $0.60
Pay-by-Plate	$0.55 to $0.88	$0.43 to $0.75	$0.18 to $0.75
Video	$0.66 to $1.05	$0.51 to $0.90	$0.21 to $0.90

4-axle light	Peak	Off-Peak	Overnight
E-ZPass	$0.55 to $0.88	$0.43 to $0.75	$0.18 to $0.75
Pay-by-Plate	$0.69 to $1.09	$0.53 to $0.94	$0.22 to $0.94
Video	$0.83 to $1.31	$0.64 to $1.13	$0.26 to $1.13

4-axle heavy	Peak	Off-Peak	Overnight
E-ZPass	$0.66 to $1.05	$0.51 to $0.90	$0.21 to $0.90
Pay-by-Plate	$0.83 to $1.31	$0.64 to $1.13	$0.26 to $1.13
Video	$0.99 to $1.58	$0.77 to $1.35	$0.32 to $1.35

5-axle	Peak	Off-Peak	Overnight
E-ZPass	$1.32 to $2.10	$1.02 to $1.80	$0.42 to $1.80
Pay-by-Plate	$1.65 to $2.63	$1.28 to $2.25	$0.53 to $2.25
Video	$1.98 to $3.15	$1.53 to $2.70	$0.63 to $2.70

6+-axle	Peak	Off-Peak	Overnight
E-ZPass	$1.65 to $2.63	$1.28 to $2.25	$0.53 to $2.25
Pay-by-Plate	$2.06 to $3.28	$1.59 to $2.81	$0.66 to $2.81
Video	$2.84 to $3.94	$1.91 to $3.38	$0.79 to $3.38

- Total unregistered video surcharge (difference between ETC/*E-ZPass*® toll and unregistered video toll amount) cannot exceed $15 per trip.
- The minimum trip toll (not per mile) by payment type for all vehicle types would be $0.40 for customers using *E-ZPass*, $0.50 for customers using Pay-By-Plate (Registered Video), and $1.00 for customers using Video Tolling (Unregistered Video).
- Customers can receive an early payment discount of 15% off their toll up to $5 for unregistered video trips if paid before notice is mailed.

ETL Pricing Periods
(Same as the Existing ETL Pricing Periods)

- **Per COMAR 11.07.05.04, the Executive Director may set or adjust the time of day pricing mileage rate, pricing period, or toll zones consistent with the toll rate range established by the Authority in accordance with §A of this regulation. The Authority shall post notice of such action by the Executive Director on the Authority's official website at least 10 days prior to the effective date.**

- **Peak Periods:**
  - Southbound: Monday - Friday, 6:00 a.m. - 9:00 a.m
    Saturday, 12:00 p.m. - 2:00 p.m.
    Sunday, 2:00 p.m. - 5:00 p.m.
  - Northbound: Monday - Friday, 3:00 p.m. - 7:00 p.m.
    Saturday, 12:00 p.m. - 2:00 p.m.
    Sunday, 2:00 p.m. - 5:00 p.m.
- **Overnight Periods:**
  - Southbound and Northbound:
    Monday - Sunday, 9:00 p.m. - 5:00 a.m.
- **Off-Peak Periods:** All other times

Time of Day Pricing & How it Works

- **Per COMAR 11.07.05.04, the MDTA Executive Director is authorized to:**
  - Set the per mile rate within the approved toll rate ranges with at least 10 days notice to the public posted on the MDTA's official website.
  - Adjust the start and end of the pricing periods by up to 60 minutes based on observed traffic patterns.
  - Make adjustments on certain holidays and the days immediately before or after.
- **When the I-95 ETL open in Winter 2024/2025 and Winter 2027/2028, the toll rate range will vary based on the time of day.**
  - Tolls will be higher during peak-travel times and lower when traffic volumes are lower during off-peak and overnight periods.
  - Traffic volumes, toll rate ranges, and per mile rates will be reviewed periodically.
  - Changes to the overall tolling rate ranges, once approved by the MDTA Board, require public hearings and a public-comment period.

What Could a Trip on the I-95 Express Toll Lanes Cost?

- **Examples of sample trip costs:**
  - Car traveling the entire distance of I-95 ETL on Section 100 and 200, 18.7 miles: $4.11
  - 5-axle Truck traveling the entire distance of I-95 ETL on Section 100 and 200, 18.7 miles: $24.68
  - Car traveling from I-695, east or west bound, to MD 24, 12.7 miles: $2.79

Note: These example sample trips assume peak-period travel and payment with E-ZPass using the minimum per mile toll in the toll rate range.

How to Pay

The ETL is an All-Electronic Toll facility, where tolls will be collected at highway speeds as vehicles pass under overhead tolling structures.

There are multiple ways to pay*:

- **Pay with *E-ZPass***
  - The toll is automatically paid from your *E-ZPass* account.

- **Pay with Pay-By-Plate**
  - Pay-By-Plate is an alternative payment system where you register your license plate and tolls are automatically billed to your credit card each time you use Maryland's facilities.

- **Pay with Video Tolling**
  - The license plate is used to identify the vehicle owner with the Motor Vehicle Administration.
  - A toll is calculated and you are mailed a Notice of Toll Due (NOTD). Video Tolls are 150% of the base toll (*E-ZPass*), with a minimum charge of $1 and a maximum of $15. Note, Customers can receive an early payment discount of 15% off their toll, up to $5, for unregistered video trips if paid before notice is mailed.
  - Customers will have 30 days to pay from the NOTD date.

- **Pay with 3rd Party Mobile Tolling Apps** GoToll UPROAD

**Note: There will be no cash toll collection on the I-95 ETL.*

Summary

- The proposed toll rate ranges for Section 200 and I-695 ramps match the existing I-95 Express Toll Lane rate ranges.
- The proposed pricing periods match the existing periods.
- Existing per mile toll rate ranges, if applied to the Northbound Extension, are projected to continue high speed operations on I-95 through 2035.

I-95 EXPRESS TOLL LANES (ETL) NORTHBOUND EXTENSION

Schedule

December 2022

- Board approval to commence toll rate setting public hearings

January - March 2023

- Advertisement of proposal and public hearings

March 2023

- 2 in-person and 1 virtual public hearing

We Are Here

April 2023

- 30-day comment period ends
- Publish Final Report for 30-day comment period

May 2023

- 2nd Comment Period ends

June 2023

- Final Board Approval

Fall 2023 - Fall 2027

- Ongoing Construction

Winter 2024/2025

- Northbound ETLs open to MD 152

Winter 2027/2028

- I-695 ramps open to Northbound I-95 ETL system
- Northbound ETLs open to north of MD 24

How to Comment

- **We want to hear from you**
  - Provide public or private testimony at this hearing
  - Fill out a comment card and leave it at the comment table
  - Submit a comment online at mdta.maryland.gov/I95ETLNB-Section200
  - Take a comment card with you and mail it back to the address on the card
  - Public comments will be accepted through April 13, 2023

Sample QR code for comment card

- **Stay Connected**
  - Keep up-to-date on the I-95 Improvements with Express Toll Lanes:
    - Twitter.com/TheMDTA
    - Facebook.com/TheMDTA
    - mdta.maryland.gov/I95ETLNB/Projects
    - mdta.maryland.gov

Title VI Compliance

- **What is Title VI?**
  - Title VI, 42 U.S.C., * Section 2000d et seq., was enacted as part of the Civil Rights Act of 1964. Title VI-related statutes and regulations provide that no person shall on the ground of race, color, national origin, sex, English proficiency, or disabilities be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity.

- **Why is Title VI Important?**
  - Title VI ensures that public services, including transportation, are provided in an equitable and nondiscriminatory manner.
  - Title VI provides opportunities for public participation in decision-making without regard to race, color, or national origin, including populations with Limited English Proficiency (LEP).

- **Filing a Complaint / Seeking Assistance**
  - Should you need LEP assistance or if you believe MDTA is not meeting the expectations of Title VI, you may direct questions, concerns, or file a complaint with:

Adrianne Munroe
Lead EEO/Title VI
Compliance Officer

Maryland Transportation Authority
Division of Civil Rights & Fair Practices
EEO Office
2310 Broening Highway
Baltimore, MD 21224

410-537-1051 (office)
410-537-1044 (Fax)
amunroe@mdta.state.md.us
http://www.mdta.maryland.gov

IV. Schedule

December 15, 2022	MDTA Board Presentation
January 26, 2023	MDTA Board update, public hearings notification and comment period #1 begins
February 27, 2023	In person public hearing at Perry Hall High School with quorum of MDTA Board Members and Chairman or Designee
March 2, 2023	Virtual public hearing with quorum of MDTA Board Members and Chairman or Designee
March 6, 2023	In person public hearing at Joppatowne High School with quorum of MDTA Board Members and Chairman or Designee
April 13, 2023	Close public comment period #1
April 27, 2023	Toll Hearing Final Report for public comment #1 and Board review; open public comment period #2
May 11, 2023	Close comment period #2
May 25, 2023	Present Toll Hearing Final Report for comment period #2
June 29, 2023	Final Recommendation and vote at MDTA Board Meeting
Fall 2023	Toll collection programming starts followed by equipment install
Winter 2024/2025	Northbound ETL open up to MD 152
Winter 2027/2028	I-695 ramps open to Northbound ETL system
Winter 2027/2028	Northbound ETL open to north of MD 24

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V. Approval to Continue with the Updated Proposal

The proposal presented is to set the I-95 ETL Northbound Extension (Section 200) & I-695 Ramps toll rate ranges for three different time periods (peak, off-peak, and overnight). The existing per mile toll rates are estimated to still result in highspeed operations of the express lanes with the Northbound Extension and I-695 direct connectors even by 2035. Therefore, the proposed toll rate ranges for the I-95 ETL Northbound Extension (Section 200) and I-695 Ramps are the same as the existing toll rate ranges for the existing ETL.

We are seeking the Board's approval to continue to proceed with the updated proposal for the I-95 ETL Northbound Extension (Section 200) & I-695 Ramps toll rate range setting.

TAB 4

MEMORANDUM

TO: MDTA Board
FROM: Chief of Staff Mary O'Keeffe
SUBJECT: Senate Bill 59 Report
DATE: January 26, 2023

PURPOSE

To provide the Maryland Transportation Authority (MDTA) Board a summary of the legislatively mandated report in response to language contained in Senate Bill 59 (Chapter 448, Act 2022) which was signed into law on May 16, 2022. The language states:

> *"That on or before December 1, 2022, the Maryland Transportation Authority shall report to the General Assembly, in accordance with § 2-1257 of the State Government Article on the number of individuals who paid a civil penalty in error under the Authority's Customer Assistance Plan as approved on February 24, 2022; and what notification of reimbursement eligibility and reimbursement was provided to individuals who paid a civil penalty in error under the Plan."*

SUMMARY

On February 24, 2022, at its monthly public meeting, the MDTA Board approved a temporary Customer Assistance Plan that included a civil penalty waiver grace period to waive corresponding civil penalties for customers that pay their unpaid tolls in full by 11:59 p.m. on November 30, 2022. The Board approved a two-week extension of the Customer Assistance Plan thus effectively ending it on December 14, 2022 at 11:59 p.m.

As of January 17, 2023, $182 million in civil penalties had been waived for approximately 837,000 drivers and businesses that paid their outstanding Video Tolls. Please note that these figures are not final.

Senate Bill 59 required that the MDTA submit a report on the number of individuals who paid a civil penalty in error under the Customer Assistance Plan as approved on February 24, 2022; and what notification of reimbursement eligibility and reimbursement was provided to individuals who paid a civil penalty in error under the Plan. The Plan was not retroactive to civil penalties already appropriately paid prior to the effective date.

As of September 27, 2022, a total of 55,633 accounts were identified where a civil penalty was paid in error by the customer under the Customer Assistance Plan. The reimbursements were applied in the same way the civil penalties were paid. Customers eligible for reimbursement received a letter explaining the type of reimbursement they would be receiving. Full reimbursements were provided to customers who paid a civil penalty and who had no other outstanding toll debt owed to the MDTA. Partial reimbursements were provided to customers for any remaining balance after resolving all outstanding toll debts owed to the MDTA.

In order to meet the reporting requirement to the General Assembly, data beyond September 27, 2022, was not included in this report. Another query will be performed to capture any residual customers between September 28, 2022, and December 1, 2022 (the due date of the report).

ATTACHMENT

- A Report to the Maryland General Assembly – Maryland Transportation Authority's Temporary Customer Assistance Plan (Senate Bill 59, Chapter 448, Act of 2022) MSAR #14266, November 2022

Maryland Transportation Authority's

Temporary Customer Assistance Plan

(Senate Bill 59, Chapter 448, Acts of 2022)

A Report to the Maryland General Assembly

Maryland Department of Transportation

Maryland Transportation Authority

MSAR #14266
November 2022

The Maryland Department of Transportation (MDOT) and the Maryland Transportation Authority (MDTA) prepared this report in response to language contained in Senate Bill 59, (Chapter 448, Act 2022). The language states:

> *"That on or before December 1, 2022, the Maryland Transportation Authority shall report to the General Assembly, in accordance with § 2-1257 of the State Government Article on the number of individuals who paid a civil penalty in error under the Authority's Customer Assistance Plan as approved on February 24, 2022; and what notification of reimbursement eligibility and reimbursement was provided to individuals who paid a civil penalty in error under the Plan."*

Customer Assistance Plan

On February 24, 2022, at its monthly public meeting, the MDTA Board approved a Customer Assistance Plan that included a civil penalty waiver grace period to waive corresponding civil penalties for customers that pay their unpaid tolls in full by 11:59 p.m. on November 30, 2022. As part of the Customer Assistance Plan, effective February 24, 2022, the MDTA also ceased referring toll bills to the Central Collection Unit (CCU) and the MDOT Motor Vehicle Administration (MDOT MVA) temporarily.

The Customer Assistance Plan is not toll forgiveness, nor is it an elimination of tolls owed, which are prohibited by the MDTA's Trust Agreement. During the civil penalty waiver grace period, the MDTA continued to mail Notices of Toll Due (NOTD) and citations/civil penalties if the NOTD was not paid by the due date. Drivers are responsible for paying the outstanding toll amounts they owe. Customers who choose not to pay their Video Tolls before 11:59 p.m. November 30, 2022, will be responsible for the full amounts of all unpaid tolls and all civil penalties, which are based on the printed due dates on NOTDs provided to the customer. Beginning December 1, 2022, toll debt referrals to the CCU for collections actions and the MDOT MVA for vehicle registration suspensions will resume.

As of October 15, 2022, $86.2 million in civil penalties have been waived for approximately 558,000 drivers and businesses that have paid their outstanding Video Tolls.

Public Awareness/Outreach Initiatives

Since the beginning of the Customer Assistance Plan on February 24, 2022, the MDTA has engaged in an extensive public awareness campaign to spread awareness of the opportunity for customers to have their civil penalties waived. The MDTA attended numerous public events; issued monthly "countdown" news releases - which were shared with all members of the General Assembly and local elected officials; and sent direct mailers to customers.

In February 2022, the entire Maryland General Assembly received information via email regarding the Customer Assistance Plan, including the news release and Frequently Asked Questions, during which it was also requested this information to be shared with constituents. In September 2022, State and county elected officials received a letter through the mail, requesting their help in reminding constituents about the upcoming end of the civil penalty waiver grace

period. During each of the Statewide Fall MDOT Consolidated Transportation Program tour meetings, the Customer Assistance Plan was discussed at length, including what it was, how it worked, and when the waiver grace period was ending.

The MDTA also mailed approximately 1.3 million "Act Now" letters to customers who had not made any payments on outstanding tolls during the civil penalty waiver grace period, urging them to make a payment before the grace period ended.

The MDTA's monthly Customer Assistance Plan news releases were shared through social media, where the MDTA has garnered more than 59,000 Facebook followers and more than 40,000 Twitter followers. The news releases are also distributed to subscribers of MDTA's GovDelivery email/text alerts, which has more than 706,000 subscriptions. A daily countdown began in the Fall on Twitter, mdta.maryland.gov, baybridge.com, and DriveEzMD.com alerting customers of the grace period ending at 11:59 p.m. on November 30, 2022. In addition, broadcast media ran multiple stories on their programming about the Customer Assistance Plan. Further, media availabilities were provided for further broadcasting interview opportunities.

In April 2022, the MDTA launched a media campaign to educate tolling customers about the 15 percent Video Toll savings when customers pay before the toll notice is mailed, the civil penalty waiver grace period, and *E-ZPass* Maryland account management. The campaign included 32 billboards in proximity to the MDTA's toll facilities; radio ads that aired in English and Spanish on 20 broadcast radio stations as well as on streaming platforms Pandora and Radio.com; and print ads in 10 news publications. Targeted digital display ads were placed with the Amazon Demand Side platform using the top 100 zip codes with the highest density of NOTDs and a 10-mile radius of toll facilities. Digital ads also ran on BaltimoreRavens.com.

Throughout the Customer Assistance Plan, full details were prominently displayed on the MDTA and Drive*Ez*MD websites. On the homepage of both websites, a large banner displayed: "Need More Time to Pay Tolls? Civil Penalty Waiver Grace Period Now in Effect Ending 11:59 p.m. November 30, 2022". On the DriveEzMD.com "Pay Tolls Now" page, there was a pop-up which alerted customers that a temporary civil penalty waiver grace period was in effect, ending at 11:59 p.m. on November 30, 2022. Additionally, when customers contacted the call center, a message on the Interactive Voice Response (IVR) system informed callers about the civil penalty waiver grace period. The MDTA's in-person Customer Service Centers had notices displayed. Also, inserts about the waiver grace period were included in the NOTDs mailed to customers.

Shortly following the launch of the Customer Assistance Plan, MDTA's call center and web chat wait times were within normal service levels, allowing customers convenient contact to discuss the Customer Assistance Plan. Additionally, the MDTA expanded in-person services to make tolling resolution easier.

Notification, Eligibility, and Reimbursement

As of September 27, 2022, a total of 55,633 accounts were identified where a civil penalty was paid in error under the Customer Assistance Plan.[1] An account belongs to an individual or business and one or more license plates may be associated with an account, but all license plates are associated with the same registered owner. Some business accounts are child accounts to larger parent businesses.

Five types of reimbursement were identified for those individuals who paid a civil penalty in error under the Customer Assistance Plan: full refund by check, partial refund by check, credit card refund, credit card partial refund, and Video Toll refund.

The below tables depict the notifications by reimbursement types and reimbursed amounts. The reimbursements were applied in the same way the civil penalties were paid. Customers eligible for reimbursement received a letter explaining the type of reimbursement they would be receiving. Full reimbursements were provided to customers who paid a civil penalty and who had no other outstanding toll debt owed to the MDTA. Partial reimbursements were provided to customers who had outstanding toll debt owed to the MDTA. In these instances, the reimbursement owed was applied to unpaid Video Tolls associated with the registered vehicle and any remaining reimbursement amount was returned to the customer. With a Video Toll Reimbursement, the reimbursement amount was less than the unpaid Video Toll balance owed and as such, was applied toward the outstanding toll debt. For example, if a customer owed $100 in unpaid Video Tolls but was eligible for a $25 reimbursement for a paid civil penalty, the $25 credit was applied to the customer's $100 outstanding toll debt, resulting in the customer still owing $75. In these circumstances, no reimbursement was due to the customer directly.

Reimbursement Type	Count of Reimbursement Type	Reimbursement Amount
Check Full	16,177	$781,869.04
Check Partial	3,470	$201,854.51
Credit Card Full	26,444	$1,663,724.39
Credit Card Partial	5,983	$484,023.52
Video Toll	3,559	$0.00
Grand Total	55,633	$3,515,100.82

Correspondence Type	Count of Correspondence
Full Reimbursement Letter	42,621
Partial Reimbursement Letter	9,453
Video Toll Reimbursement	3,559
Grand Total	55,633

[1] The review of accounts and eligible reimbursements will continue through December 2022; however, in order to meet the December 1, 2022, reporting requirement to the General Assembly, data beyond September 27, 2022, is not included in this report. Another query will be performed in December 2022 to capture any residual customers between September 28, 2022, and December 1, 2022.

MEMORANDUM

TO: MDTA Board
FROM: Chief Financial Officer Deb Sharpless
SUBJECT: Legislative Report on MDTA Tolling Equipment
DATE: January 26, 2023

PURPOSE OF MEMORANDUM

To provide the Maryland Transportation Authority (MDTA) Board with a summary of the Joint Chairmen's Report (JCR) issued by the MDTA on Tolling Equipment.

KEY TAKEAWAYS

- The MDTA's tolling equipment is performing accurately and within industry standards.
- The MDTA's Third Generation Electronic Toll Collection System (Tolling System) properly classifies vehicles and imposes tolls appropriately.
- The Tolling System consistently detects/reads transponders when a transponder is present in the vehicle, properly mounted, and with an active transponder battery.
- The Tolling System accurately translates the license plate image and reports the correct vehicle information to the Back-office Toll System.

SUMMARY

During the 2022 legislative session of the Maryland General Assembly, the budget committees adopted language requiring the submission of a report on the accuracy of the MDTA's tolling equipment. The language states:

> *"The committees are concerned about the ongoing issues concerning the accuracy of the tolling equipment at the Maryland Transportation Authority's (MDTA) tolling facilities. The budget committees request that MDTA provide a report that addresses these concerns. It should include an accuracy study of the tolling equipment at its tolling facilities that covers a one-week period and details the occurrences of overbilling of drivers and cause of said overbilling. The report should also include details on MDTA's processes to ensure that significant tolling issues are identified, stopped, and fixed."*

The MDTA conducted a study that covered trips and/or transactions from September 22-28, 2022. During this week, the MDTA processed 2,445,523 trips, in the amount of $10,763,192.53, net of discounts. To evaluate tolling accuracy at MDTA facilities, the study utilized tolling industry standard approaches using a combination of analysis/trending, system controls, and sample transaction testing. The study results demonstrated accurate transactions and consistent patterns for all study areas at each MDTA facility, thereby confirming that the MDTA's state-of-the-art Tolling System is performing accurately and within industry standards.

ATTACHMENT

- Report to the Maryland General Assembly, Senate Budget and Taxation Committee, and House Appropriations Committee on MDTA Tolling Equipment (2022 JCR, p.81) January 2023.

Maryland Transportation Authority

Tolling Equipment

(2022 JCR, p. 81)

A Report to the Maryland General Assembly

Senate Budget and Taxation Committee

and

House Appropriations Committee

January 2023

The Maryland Department of Transportation

Maryland Transportation Authority

The Maryland Department of Transportation (MDOT) and the Maryland Transportation Authority (MDTA) submit the following report in response to committee narrative contained in the 2022 *Joint Chairmen's Report* (JCR). The language states:

> *The committees are concerned about the ongoing issues concerning the accuracy of the tolling equipment at the Maryland Transportation Authority's (MDTA) tolling facilities. The budget committees request that MDTA provide a report that addresses these concerns. It should include an accuracy study of the tolling equipment at its tolling facilities that covers a one-week period and details the occurrences of overbilling of drivers and cause of said overbilling. The report should also include details on MDTA's processes to ensure that significant tolling issues are identified, stopped, and fixed.*

Executive Summary

Since 1971, the MDTA has been responsible for constructing, managing, operating, and improving the State's toll facilities, as well as for financing new revenue producing transportation projects. The MDTA is self-sufficient and receives no gas tax, motor vehicle fees, or other revenue in the Transportation Trust Fund. MDTA facilities are fully financed, operated, maintained, improved, and protected with toll revenues paid by customers using those facilities. All eight[1] MDTA facilities are cashless all electronic tolling (AET). With AET, drivers do not stop or slow down to pay tolls; instead, they are collected through *E-ZPass*®, Pay-By-Plate, and Video Tolling. The MDTA's Third Generation Electronic Toll Collection System (Toll System) is a state-of-the-art system that captures, classifies, calculates, and records tolling transactions; it was designed, tested, and deployed to, not only meet, but to exceed industry standards.

The study covered trips and/or transactions for the seven-day period of September 22-28, 2022. During this week, the MDTA processed 2,445,523 trips, in the amount of $10,763,192.53, net of discounts. To evaluate tolling accuracy at MDTA facilities, the study utilized tolling industry standard approaches using a combination of analysis/trending, system controls, and sample transaction testing. When relying upon analysis/trending, transactional data for the prior and/or subsequent week is shown for demonstration purposes.

The study results demonstrated accurate transactions and consistent patterns for all study areas at each MDTA facility. This demonstrated that MDTA's tolling equipment is performing accurately and within industry standards.

[1] The I-95 Express Toll Lanes are part of the John F. Kennedy Memorial Highway facility.

Road-side and Back-office Toll System Trip Synopsis

Collectively, the Road-side and Back-office Toll Systems make-up MDTA's Tolling System. Road-side Toll Systems capture, record video, classify, detect, and associate a radio frequency device (RFD)/transponder for each vehicle traveling through a toll zone, while traveling at highway speeds, in all weather, and changing lanes. For license plate transactions, the Road-side Toll System also reads and translates the license plate characters, origin, and plate type. Trips are constructed for roadways such as the Intercounty Connector (ICC) in which customers pay based on the distance traveled. After the Road-side Toll System constructs a fully formed trip, the trip is passed to the Back-office Toll System. For accounts registered with *E-ZPass* and Pay-by-Plate payment methods, the Back-office Toll System applies any applicable customer discount plans, such as Maryland *E-ZPass* or Commuter plans, and posts the trip to the customer's account. For unregistered accounts, which are captured through video tolls, the trip is made available for payment via the DriveEzMD website. The registered vehicle owner recorded at the MDOT Motor Vehicle Administration (MVA) is identified based on the license plate information so a Notice of Toll Due (NOTD) can be mailed; however, should a customer pay their toll before the MDTA mails the NOTD, there is a 15 percent early payment discount.

System Accuracy

Electronic Tolling Systems are highly accurate and provide several other significant benefits including crash reductions, time savings, health improvements, and pollution reductions. Established in 1987, *E-ZPass* supports the annual reciprocity in excess of 3.6 billion transactions and toll revenues over $14.5 billion. Although hardware or software problems may occur on occasion, electronic tolling systems have robust real-time monitoring systems that alert anomalies, so issues can be quickly identified and corrected, minimizing any potential errors.

The MDTA's Tolling System was designed, tested, and deployed to both meet and exceed industry standards, while also supporting complex customer discount programs, multiple payment methods, communication channels, and incorporates best in class systems and online maintenance systems. The MDTA maintains a robust, statistical sampling-based quality assurance and quality control program, including multiple layers of verification, automated alerts, business intelligence analytics, and system safety nets to achieve the highest degree of accuracy from its Tolling System.

The Tolling System includes redundant checks to ensure tolling accuracy. For example, the Road-side Toll System uses dual optical character recognition (OCR) engines to provide redundant plate reads to cross-check accuracy, supported by manual review to provide an additional layer of accuracy. Additionally, a layered approach is in place for quality checking, where the Road-side Toll System has quality checks that are independently checked by the Back-office, prior to a transaction posting to a customer's account.

The Tolling System undergoes separate independent audits that continually yield the highest accuracy rates in the industry. Additionally, the toll integrators are held to Key Performance Indicators and daily checks, 24 /7 monitoring, and monthly audits to ensure maximum accuracy.

Based on these checks, the system is exceeding industry standards and requirements for accuracy.

Perceived Errors vs. System Errors

Based on the MDTA's regular quality checks, the Tolling System has a high degree of accuracy with a low error rate. A list of common issues often perceived as tolling errors but are not system related has been compiled and is included for reference in Appendix I. For example, an *E-ZPass* customer may receive an image toll or video toll if the customer fails to properly mount their transponder, add their vehicle license plates to their *E-ZPass* account, or maintain a positive account balance.

On rare occasions, a system error can occur if a trip posts to an account or a NOTD is mailed in which:

- A vehicle was overclassified (miscounted the number of axles);
- An applicable discount was not given;
- A toll was processed twice or split into two separate trips[2]; or
- A toll is charged to the wrong customer.

The Tolling System incorporates controls and procedures that provides very low error rates for these types of errors. To address the accuracy of the Tolling System, this study specifically addresses each of these possible errors.

Study

Approach

To evaluate tolling accuracy at MDTA facilities, the study utilized tolling industry standard approaches using a combination of analysis/trending, system controls, and sample transaction testing. When relying upon analysis/trending, transactional data for the prior and/or subsequent week is shown for comparison purposes.

The study focused on trips and/or transactions for the seven-day period of September 22-28, 2022.

[2] A split trip is only applicable on the ICC in which trips are built. An ICC toll is calculated by multiplying the per mile rate and distance traveled. The ICC toll charged is subject to a minimum toll. A split trip could result in multiple minimum toll charges rather than the actual combined toll.

SEPTEMBER 2022

M	T	W	T	F	S	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

Study Week Highlighted in Green

During this week, the MDTA processed 2,445,523 trips, in the amount of $10,763,192.53, net of discounts. The trips and revenue composition during this period was as follows:

PAYMENT METHOD	TRIPS	REVENUE
E-ZPass	2,316,249	$10,077,592.56
Pay-by-Plate	2,992	$11,195.02
Video Toll	126,282	$674,404.95

CLASSIFICATION (AXLE)	TRIPS	REVENUE
2	2,253,669	$6,639,997.52
3	39,513	$314,568.97
4	29,036	$362,689.41
5	120,401	$3,349,570.65
6+	2,904	$96,365.98

Results

Vehicle Classification:

A vehicle axle count is a factor when determining the toll rate to be charged to the customer. The volume and types of vehicles that use MDTA's toll facilities are consistent, and therefore conclusions regarding accuracy of vehicle classifications can be drawn from graphing classification patterns by facility and toll zone and/or lane. An increase of commercial vehicles results in higher 3+ axle vehicle volumes during the weekdays compared to weekends. Left lanes have a higher volume of 2-axle vehicles, whereas the right lanes have a higher volume of 3+ axle vehicles. There may be some individual lane variability, depending on lane closures, ramp proximity, etc., but the superimposed summary of all lanes at a facility should be consistent so as to demonstrate accuracy.

Study Approach: When studying vehicle classification accuracy, the MDTA analyzed 2-axle and 3+ axle classifications through graphs that depict patterns by facility and toll zone/gantry for the ICC and by the facility and lane for the remaining eight facilities. Supplemental testing and/or investigation was performed when a pattern change could not be explained.

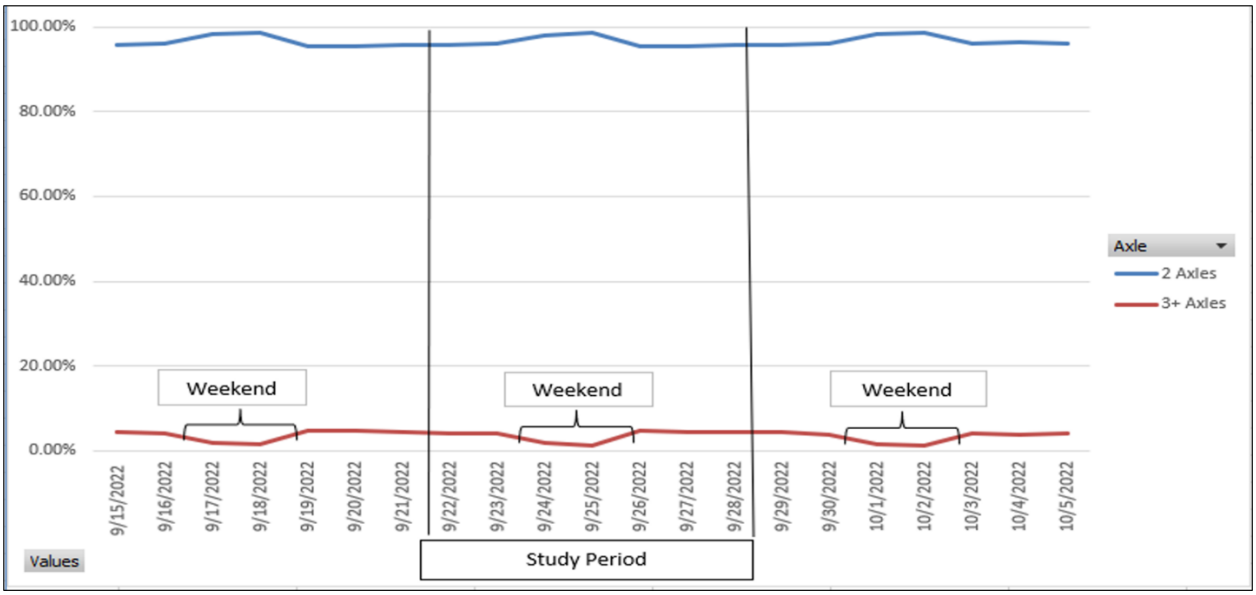
Conclusion: The Tolling System accurately classified vehicles and thereby resulted in the correct toll charged to customers. The analysis produced consistent vehicle type patterns and supplemental testing resulted in customers being charged correctly, except for two potential instances where the customer was under classified (i.e., charged a lower toll rate).

The following sections illustrate the consistent vehicle classifications by facility and the results of supplemental testing performed which supports the MDTA's conclusion that vehicles traveling on all facilities are classified correctly and the tolls imposed were accurate. Analyses for each facility can be found in Appendix II.

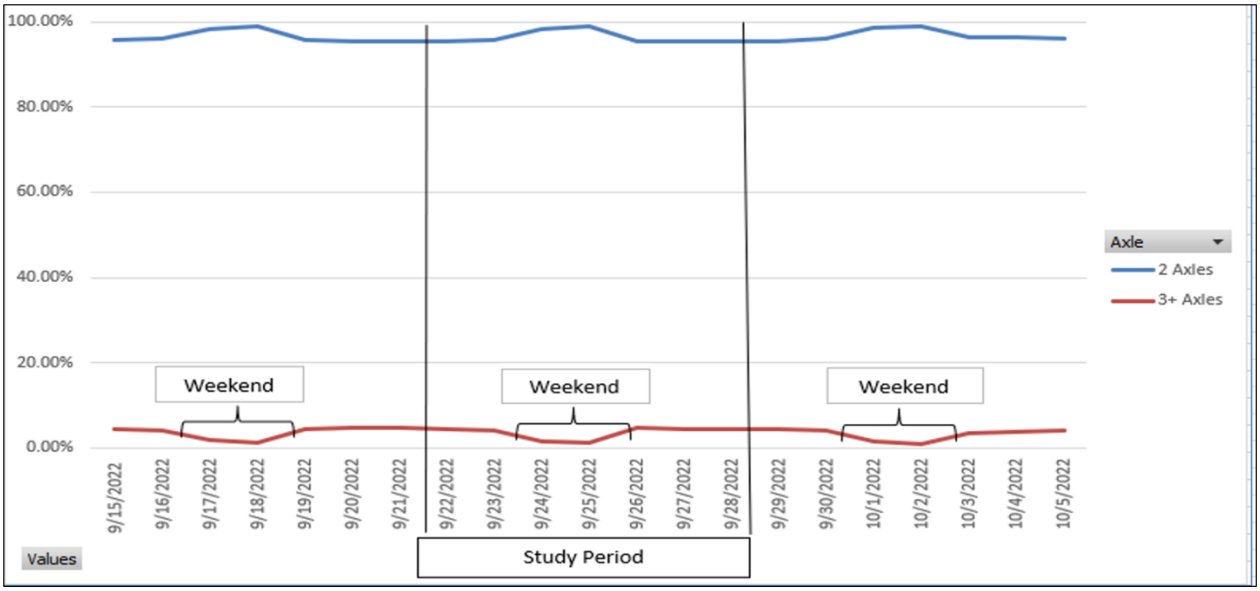
Intercounty Connector (ICC)

The ICC is primarily utilized by 2-axle vehicles, with minimal 3+ axle vehicles utilizing the facility during the weekdays and less during the weekend.

Eastbound



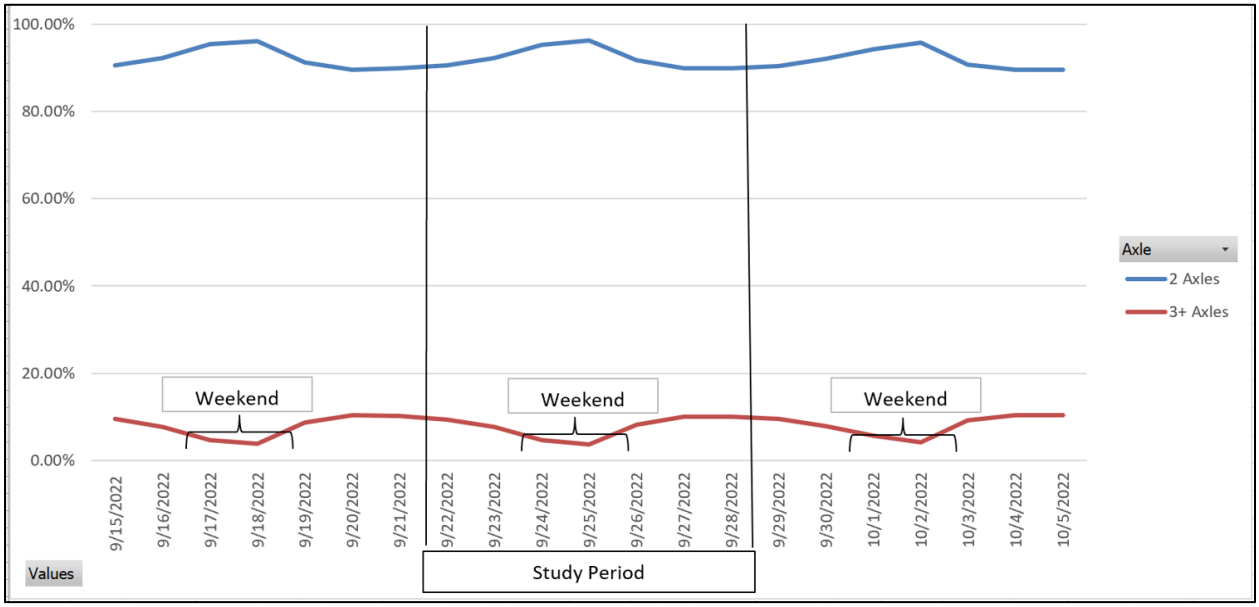
Westbound



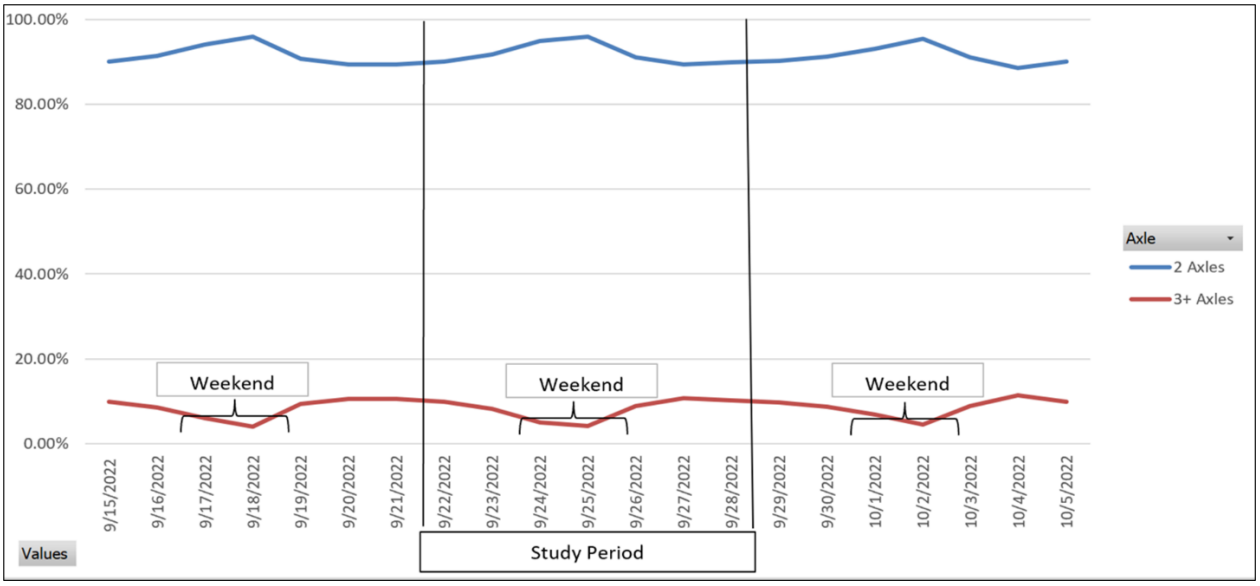
I-95 Express Toll Lanes (ETL)

The ETL is largely utilized by 2-axle vehicles, with some 3+ axle vehicles utilizing the facility during the weekdays and less during the weekend.

Northbound



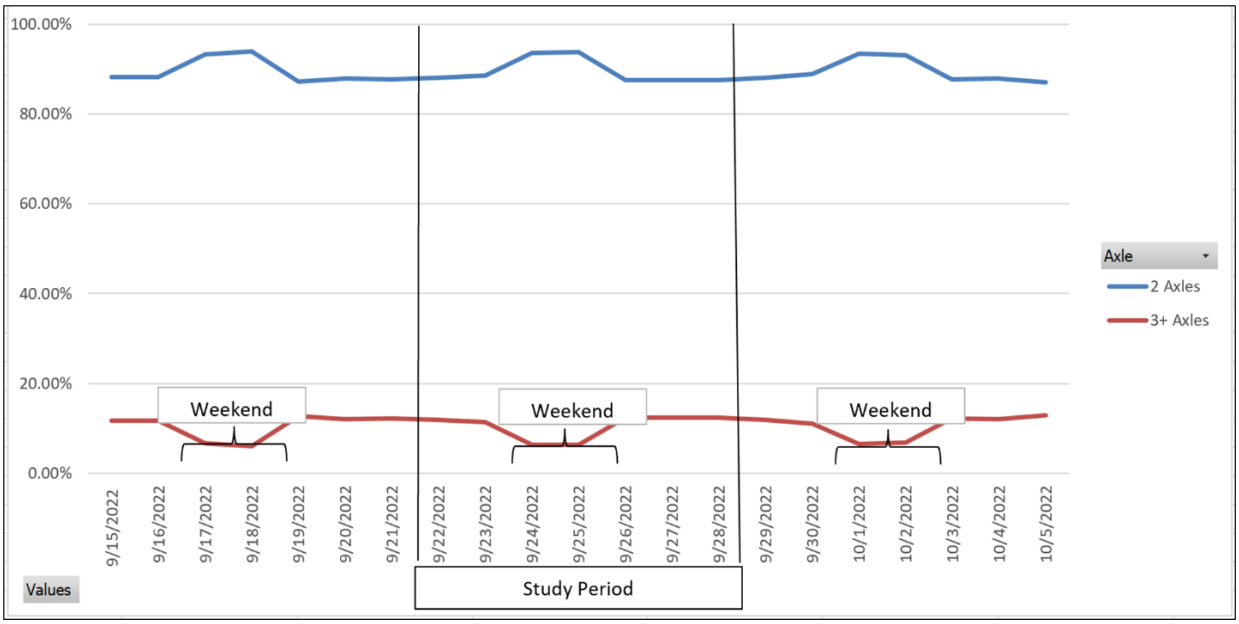
Southbound



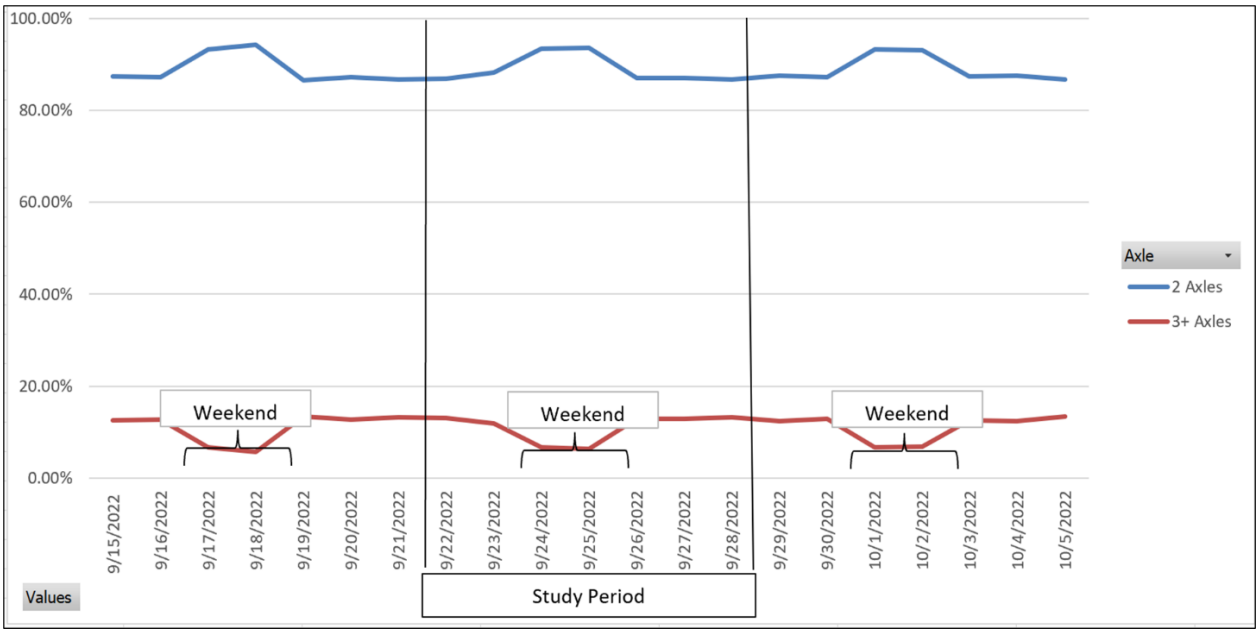
Francis Scott Key Bridge (FSK)

The FSK is largely utilized by 2-axle vehicles, with a moderate number of 3+ axle vehicles utilizing the facility during the weekdays and less during the weekend.

Eastbound



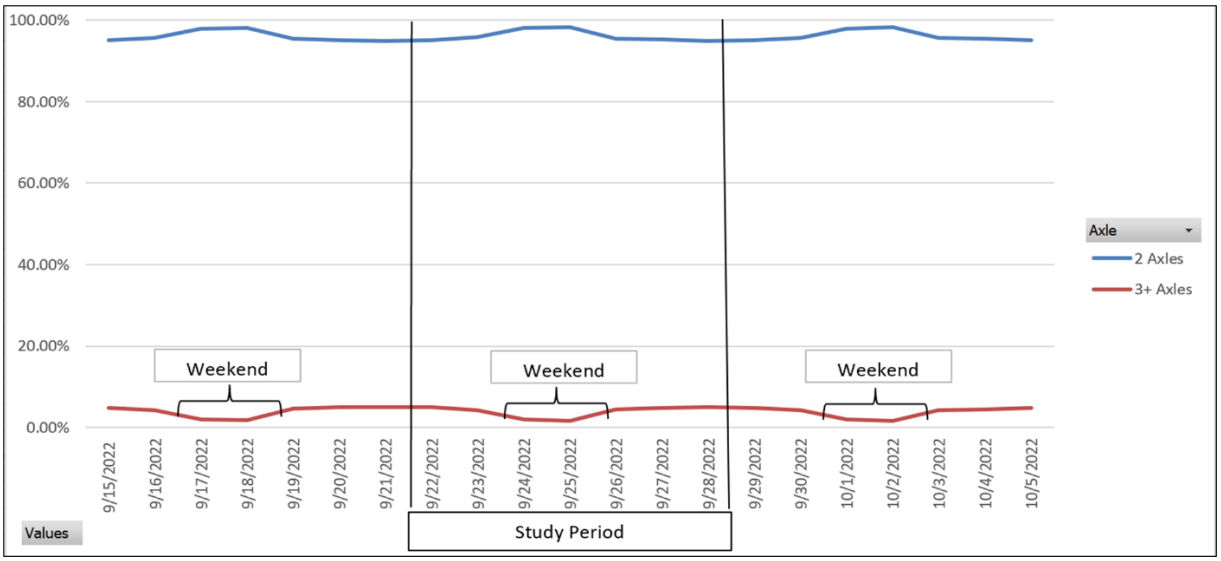
Westbound



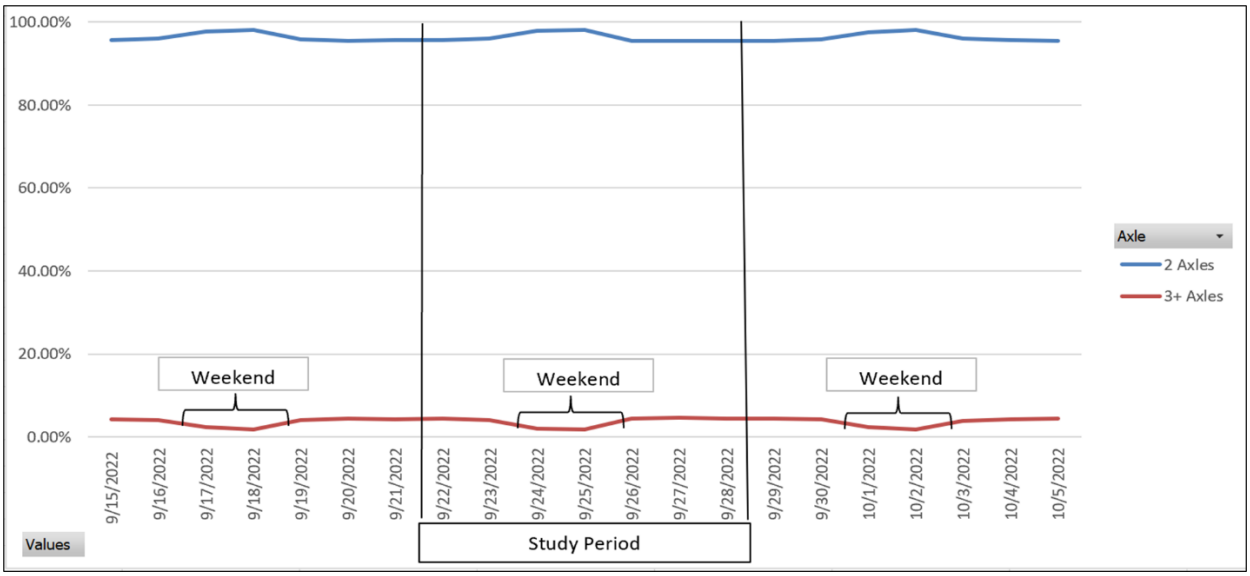
Baltimore Harbor Tunnel (BHT)

The BHT is largely utilized by 2-axle vehicles, with minimal 3+ axle vehicles utilizing the facility during the weekdays and less during the weekend.

Northbound



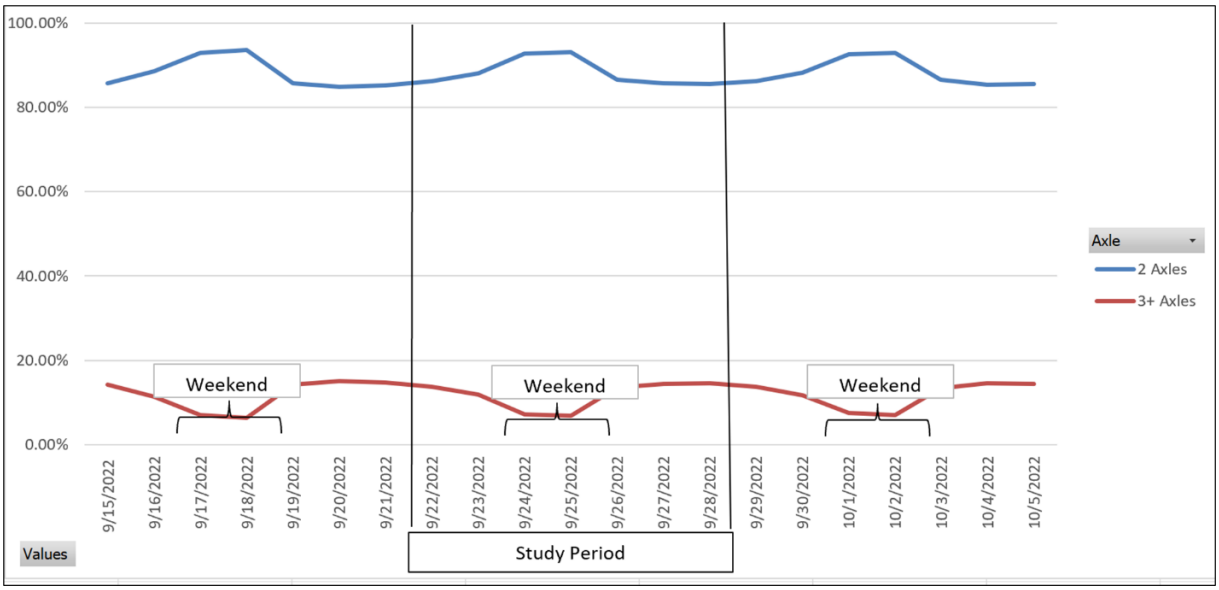
Southbound



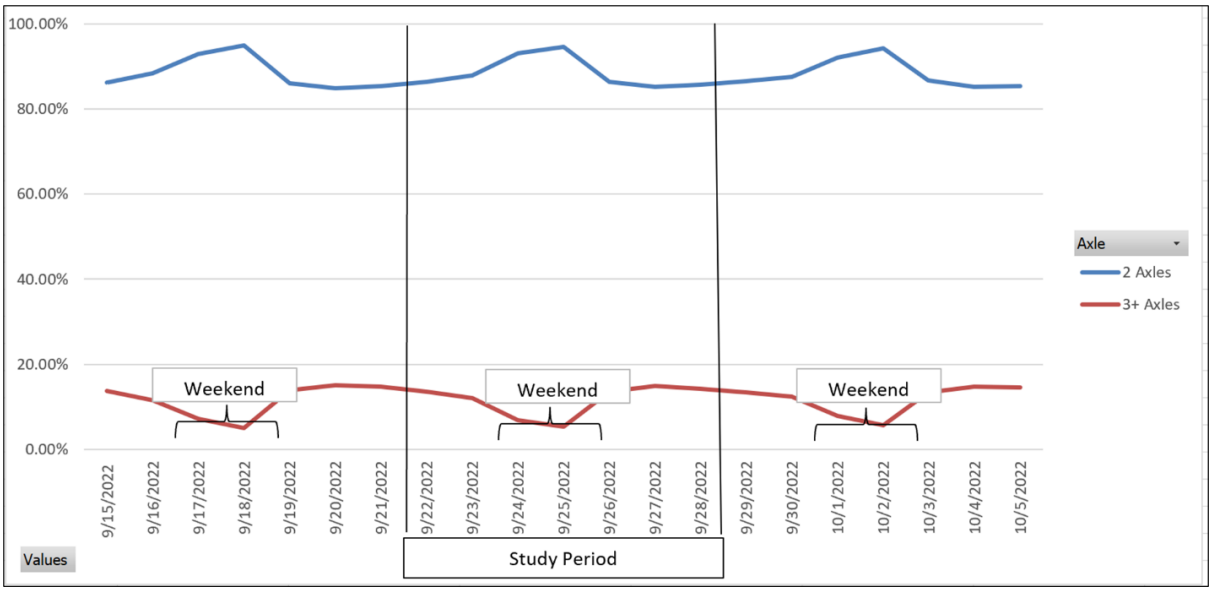
Fort McHenry Tunnel (FMT)

The FMT is largely utilized by 2-axle vehicles, with a moderate number of 3+ axle vehicles utilizing the facility during the weekdays and less during the weekend. An additional manual review found that the tolling system accurately classified 100 percent of a random sample of 57 3+ axle vehicles.

Northbound

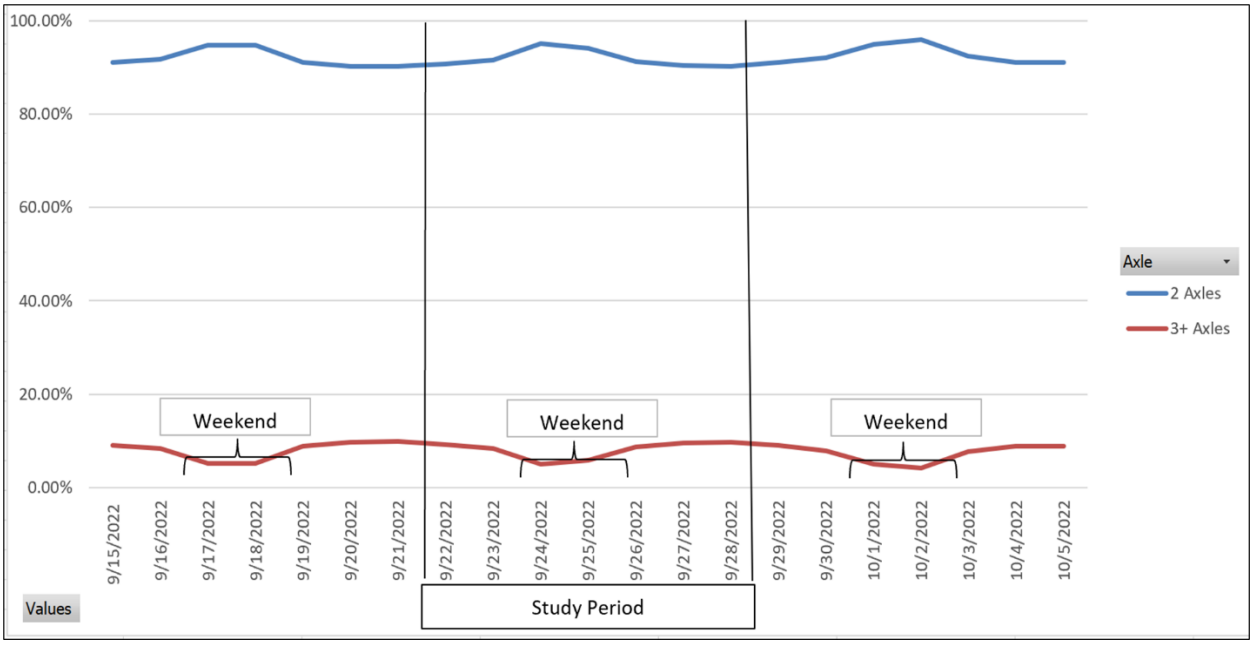


Southbound



Governor Harry W. Nice Memorial/Senator Thomas "Mac" Middleton Bridge (HWN/Middleton)

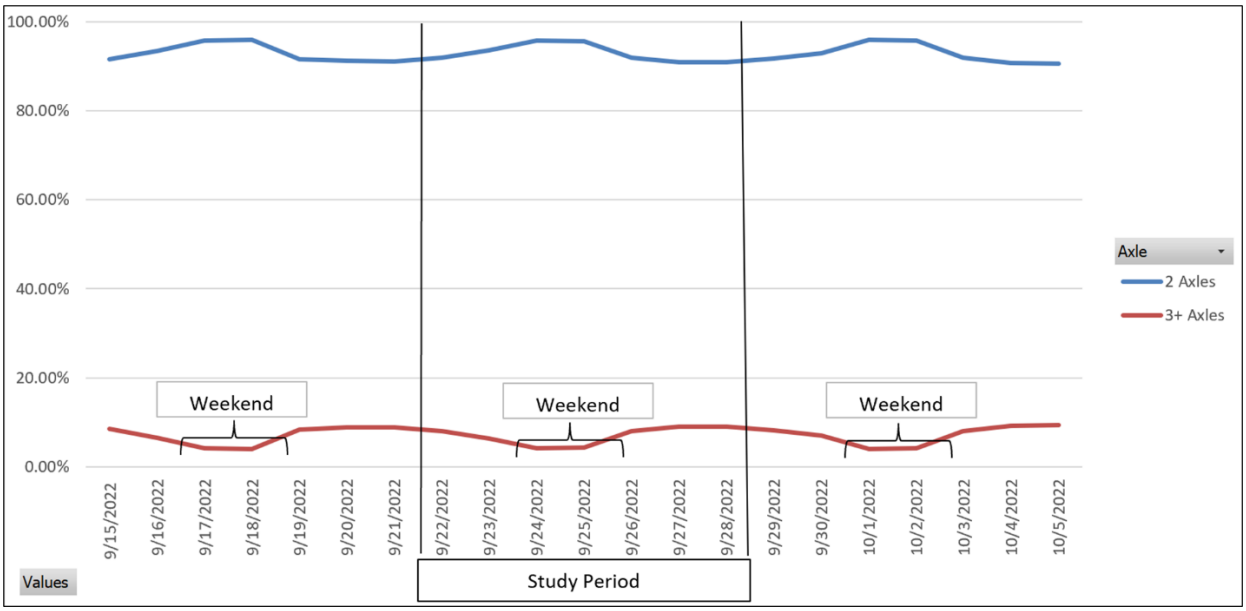
The HWN/Middleton is largely utilized by 2-axle vehicles, with some 3+ axle vehicles utilizing the facility during the weekdays and less during the weekend.



Note: Tolls are collected in one-direction.

William Preston Lane Jr. Memorial (Bay) Bridge (WPL)

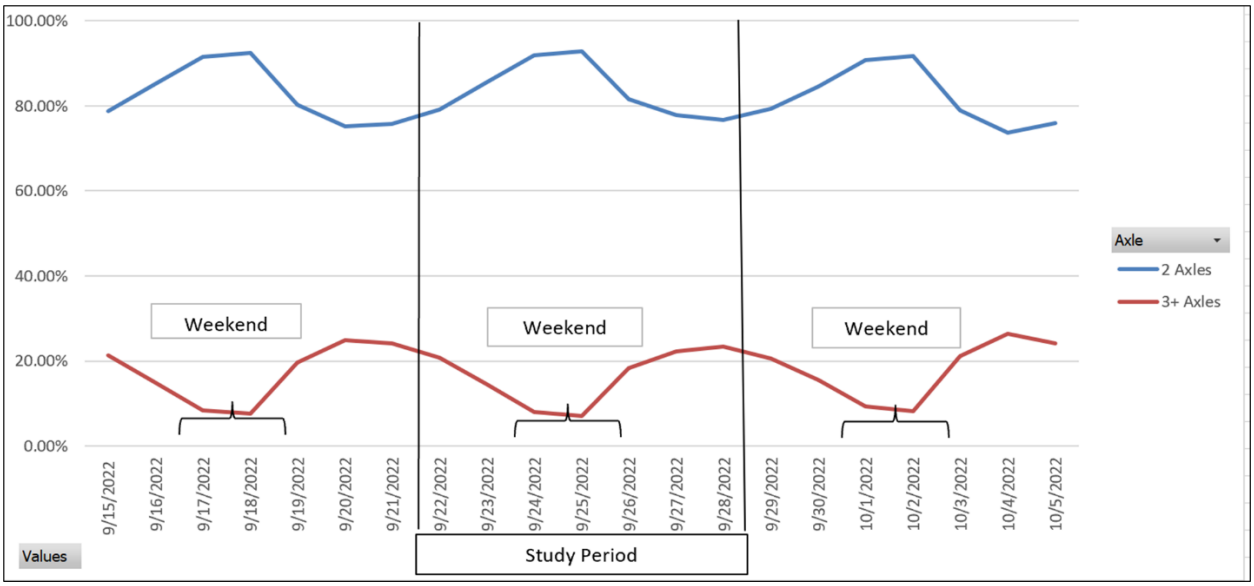
The WPL is largely utilized by 2-axle vehicles, with some 3+ axle vehicles utilizing the facility during the weekdays and less during the weekend. A manual review found that the tolling system accurately classified 96 percent of a random sample of fifty 3+ axle vehicles and under classified 4 percent of the sample, resulting in no overcharges.



Note: Tolls are collected in one-direction.

John F. Kennedy Memorial Highway (JFK)

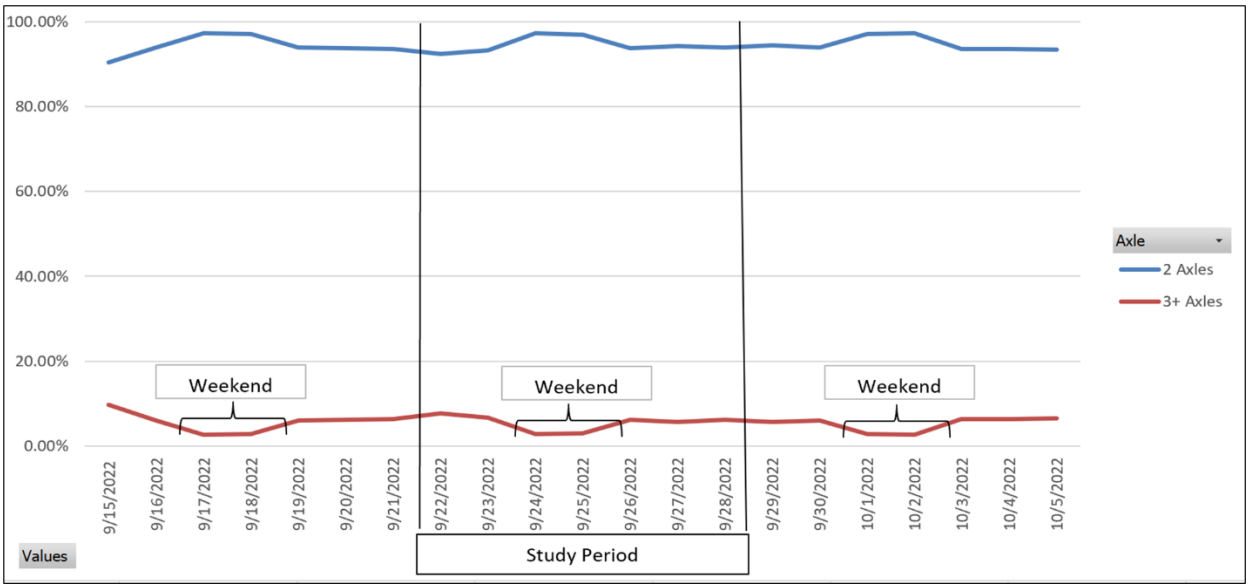
The JFK is largely utilized by 2-axle vehicles, with considerable 3+ axle vehicles utilizing the facility during the weekdays and less during the weekend.



Note: Tolls are collected in one-direction.

Thomas J. Hatem Memorial Bridge (TJH)

The TJH is largely utilized by 2-axle vehicles, with some 3+ axle vehicles utilizing the facility during the weekdays and less during the weekend.



Note: Tolls are collected in one-direction.

Transponder Read/Detection:

A customer's transponder must be detected by the Tolling System to receive discount(s) and/or the lowest toll rate possible. Properly mounting the transponder is the most significant action that affects transponders reading, known as automatic vehicle identification (AVI). The percentage of vehicles that have a properly mounted transponder reflects consistent patterns and therefore conclusions regarding transponder read/detection can be drawn by graphing detection patterns by facility and toll zone and/or lane. The typical pattern is that frequent customers have higher *E-ZPass* transponder usage. This pattern results in higher transponder usage during the weekdays compared to the weekends when less frequent travelers traverse the facilities. Consistent patterns demonstrate accuracy, whereas sharp changes may be indicative of a system classification issue.

Study Approach: When studying transponder read frequency, the MDTA conducted two tests. First, the MDTA analyzed AVI detections and Image-based transactions (I-toll) through graphs that depict patterns by facility and toll zone/gantry for the ICC and by the facility and lane for the remaining eight facilities. Second, the MDTA selected and evaluated 140 randomly selected *E-ZPass* trips posted to a customer's account based on an I-toll to determine if a transponder should have been detected.

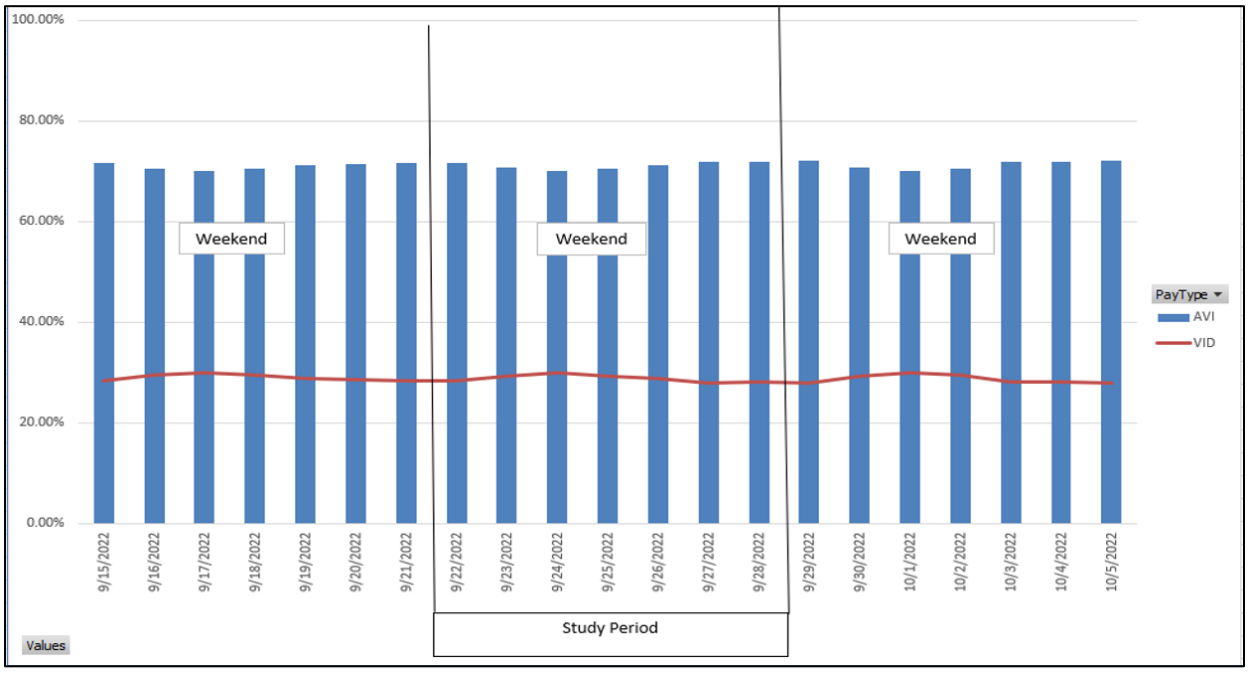
Conclusion: The Tolling System consistently detected/read transponders at all facilities. The analysis produced consistent detection/read patterns and the second test of *E-ZPass* image-based trips showed that 96.4 percent of the trips tested were the result of the transponder not being present in the vehicle, not properly mounted, or the account was inactive at the time of the transaction, and 2.9 percent of the trips were not read due to an older transponder in which the battery was likely at end of life. Further analyses can be found in Appendix III.

AVI and Image Analysis (Test 1)

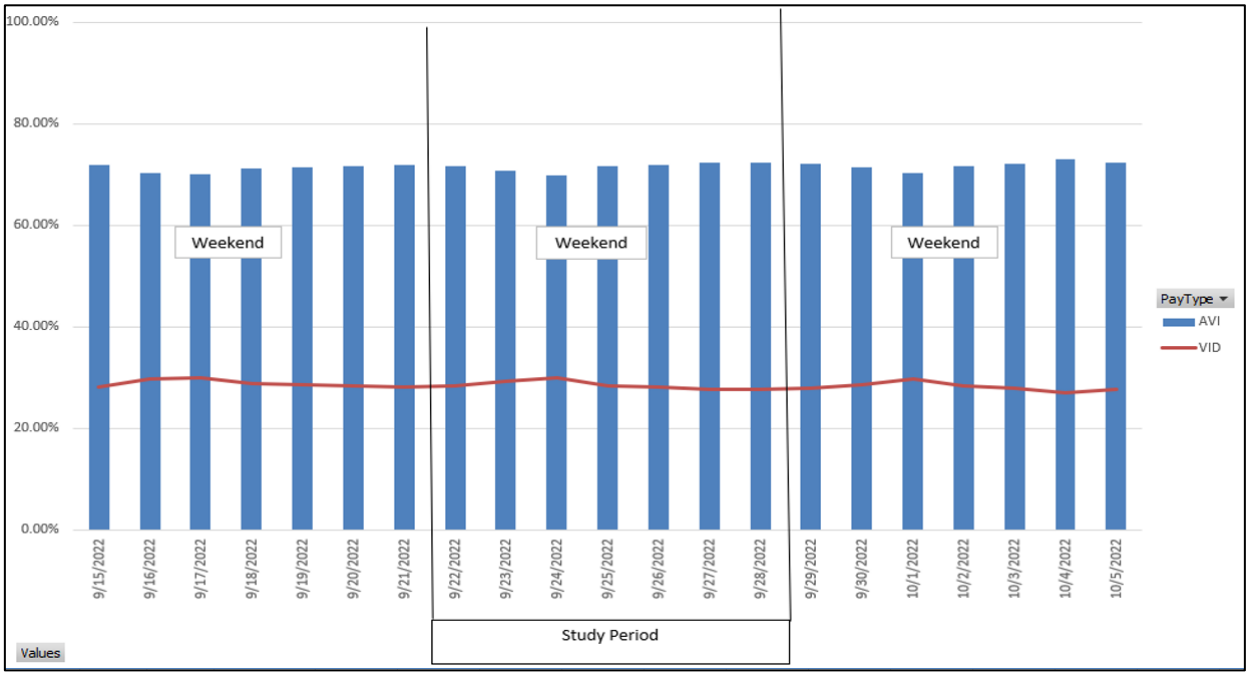
Intercounty Connector (ICC)

Based on the consistent pattern shown below, the Tolling System consistently detected/read transponders. Because the ICC customer base typically utilizes the roadway both during the work week and weekend, the weekend transponder read rate did not change from infrequent users as seen at other facilities. When analyzing transponder detection/reads by toll zone/gantry, the analysis demonstrated a high level of consistency and thereby detection.

Eastbound



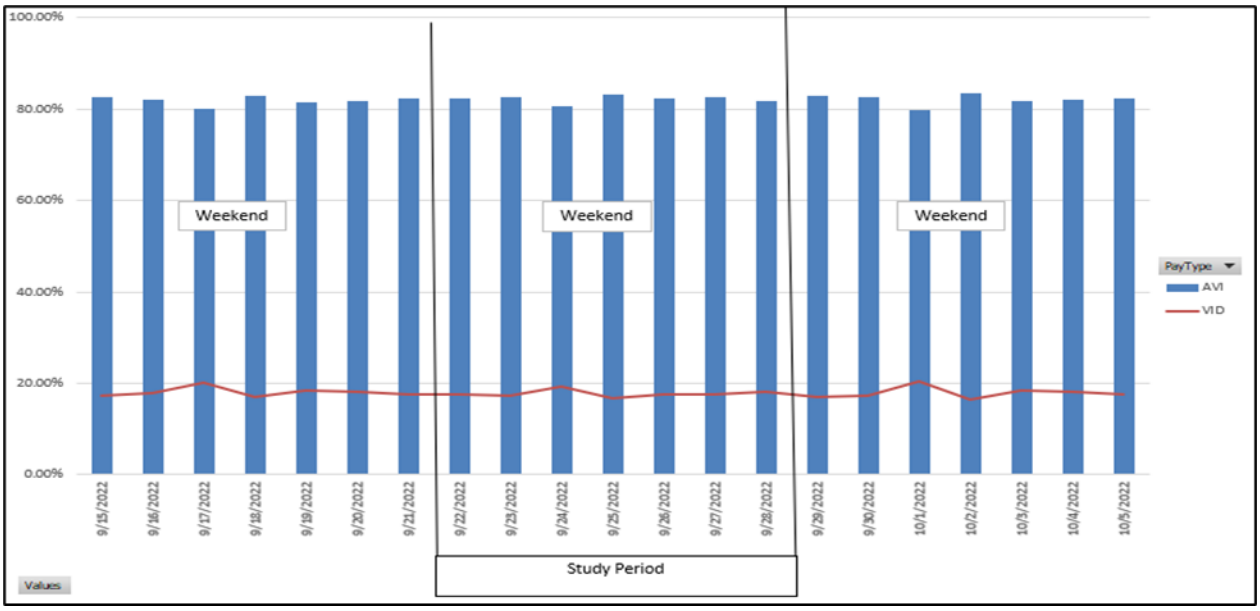
Westbound



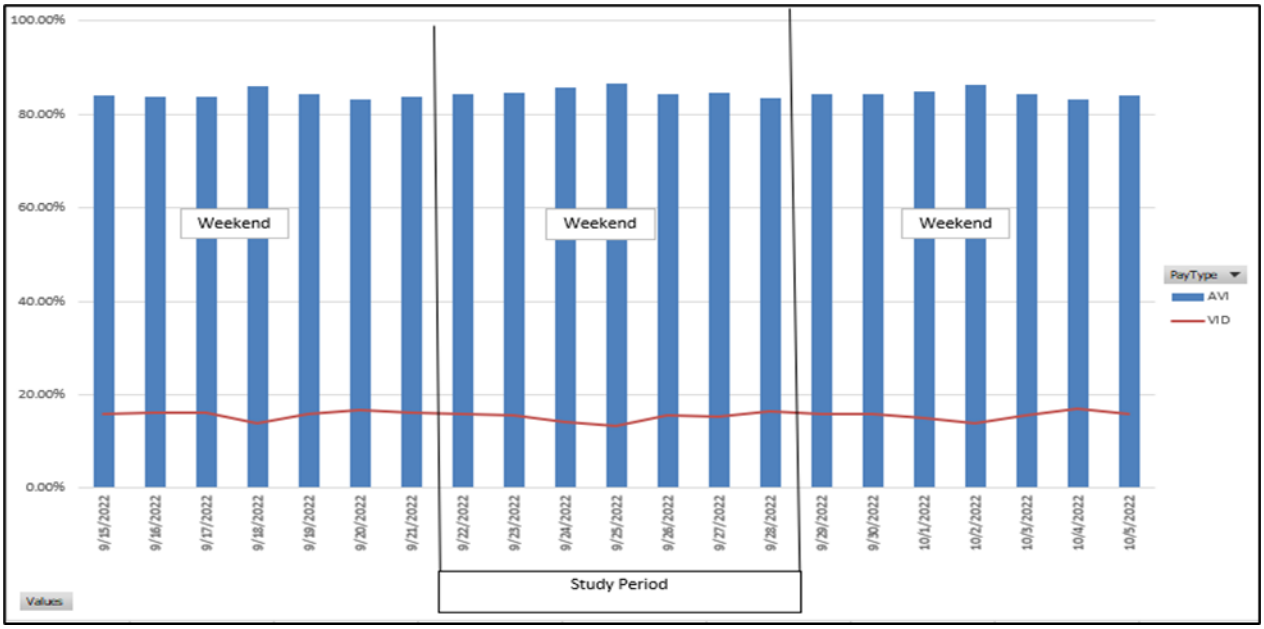
I-95 Express Toll Lanes (ETL)

Based on the consistent pattern shown below, the Tolling System consistently detected/read transponders. Infrequent travelers caused the transponder detection rate to decrease slightly during the weekends. When analyzing transponder detection/reads by lane, the analysis demonstrated a high level of consistency and thereby detection.

Northbound



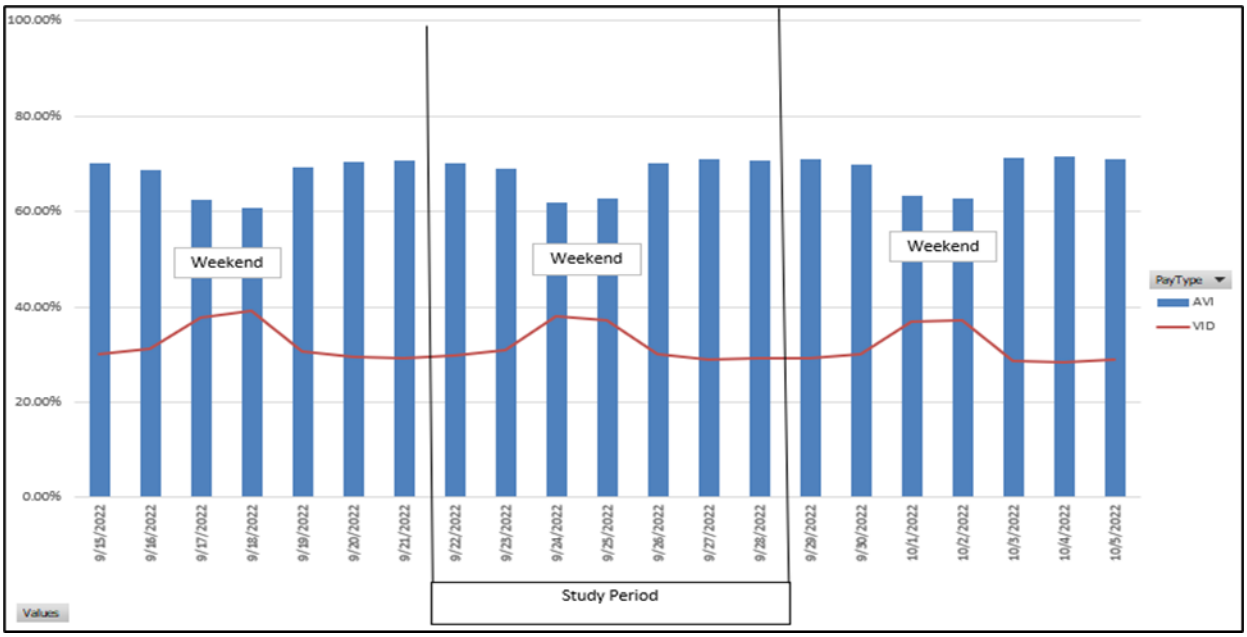
Southbound



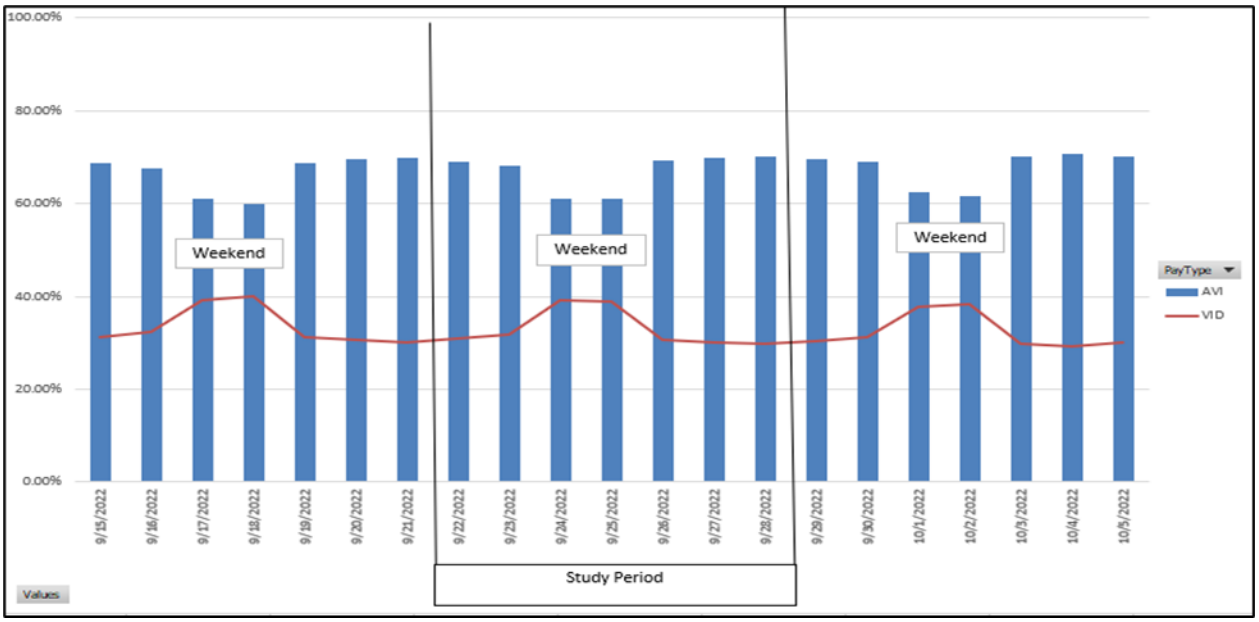
Francis Scott Key Bridge (FSK)

Based on the consistent pattern shown below, the Tolling System consistently detected/read transponders. Infrequent travelers caused the transponder detection rate to decrease during the weekends. When analyzing transponder detection/reads by lane, the analysis demonstrated a high level of consistency and thereby detection.

Eastbound



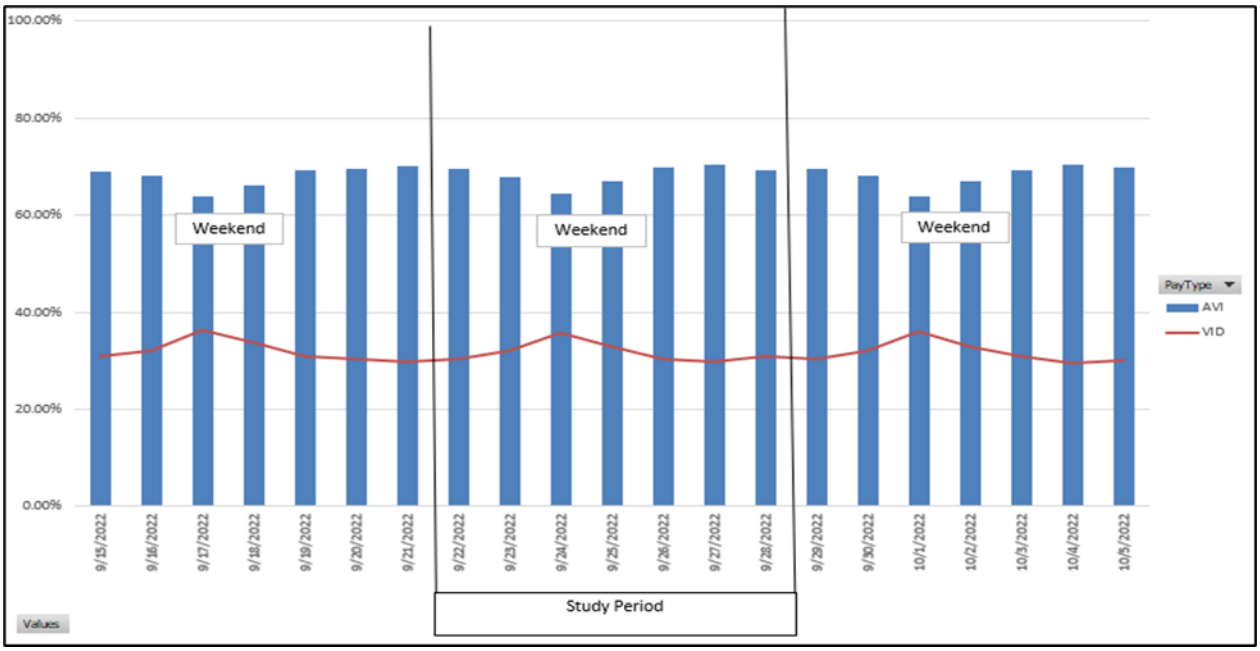
Westbound



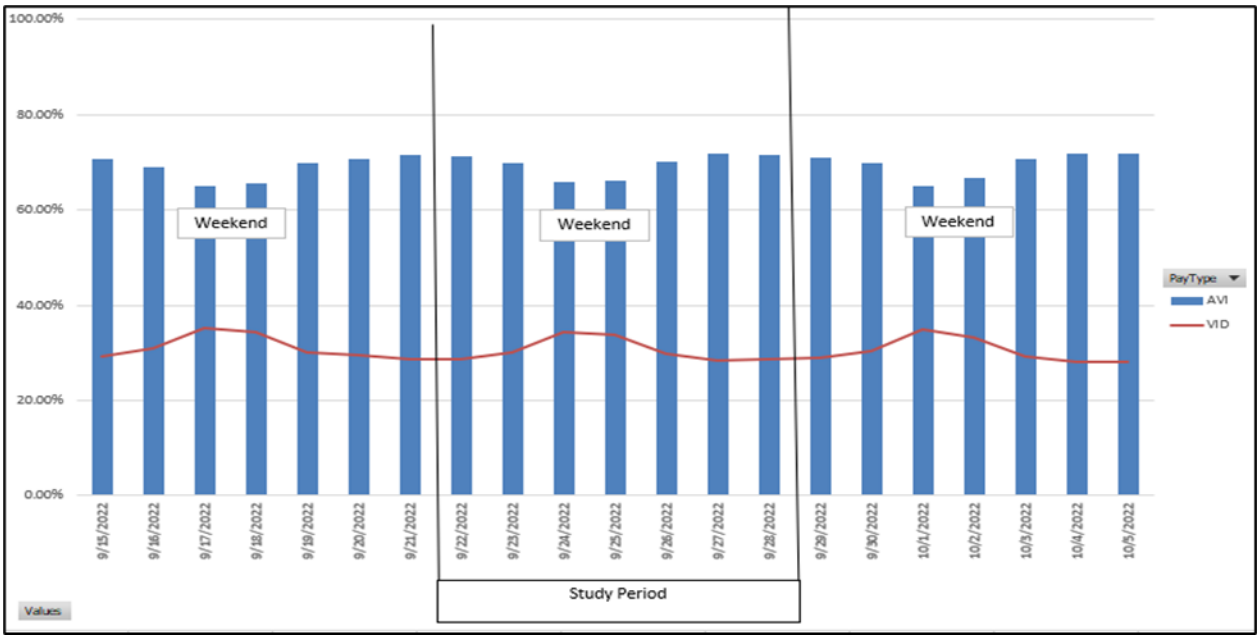
Baltimore Harbor Tunnel (BHT)

Based on the consistent pattern shown below, the Tolling System consistently detected/read transponders. Infrequent travelers caused the transponder detection rate to decrease during the weekends. When analyzing transponder detection/reads by lane, the analysis demonstrated a high level of consistency and thereby detection.

Northbound



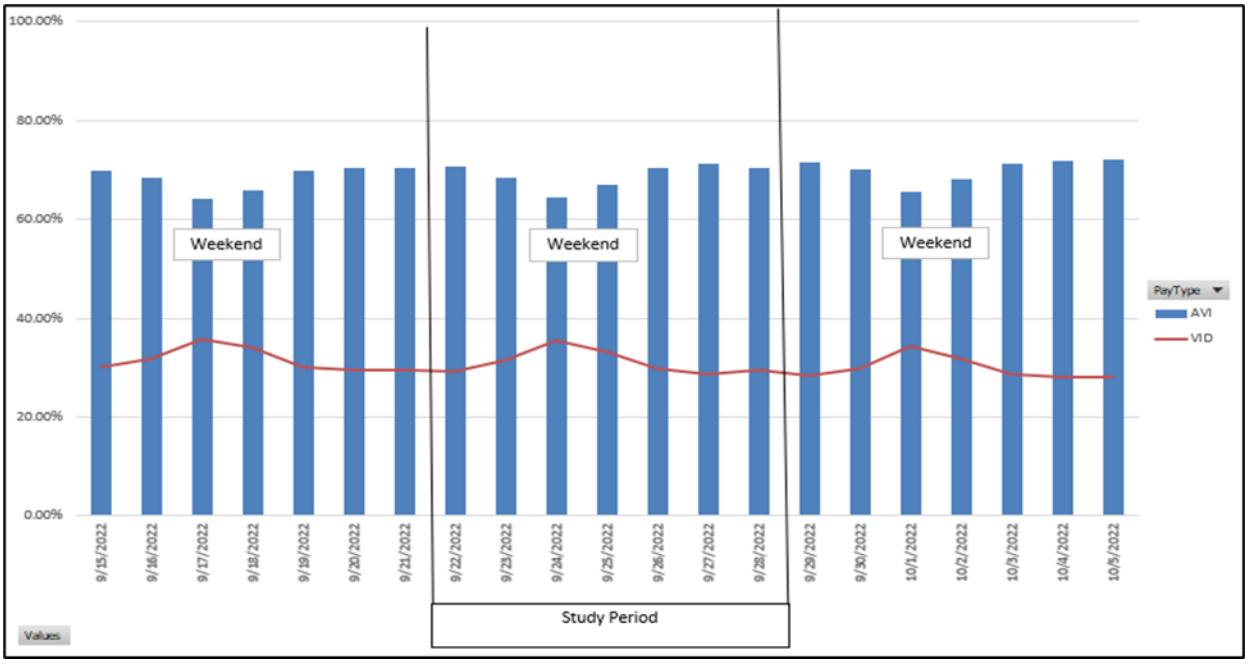
Southbound



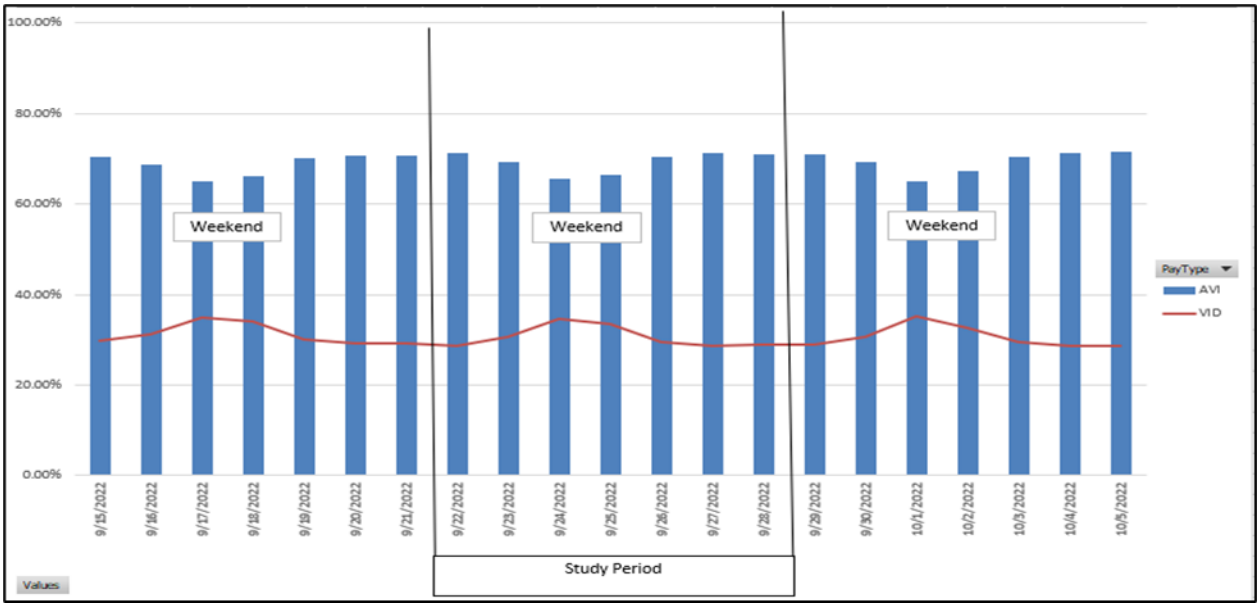
Fort McHenry Tunnel (FMT)

Based on the consistent pattern shown below, the Tolling System consistently detected/read transponders. Infrequent travelers caused the transponder detection rate to slightly decrease during the weekends but was somewhat offset by out-of-state *E-ZPass* travelers. The same pattern can be seen on the JFK facility. When analyzing transponder detection/reads by lane, the analysis demonstrated a high level of consistency and thereby detection.

Northbound

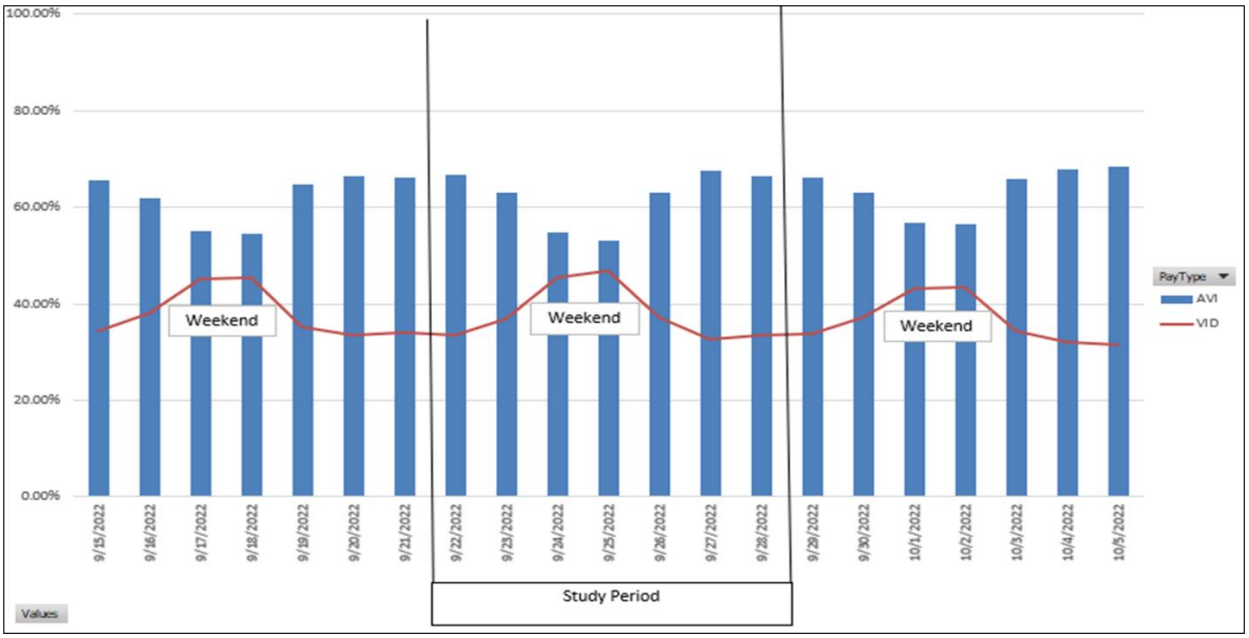


Southbound



Governor Harry W. Nice Memorial/Senator Thomas "Mac" Middleton Bridge (HWN/Middleton)

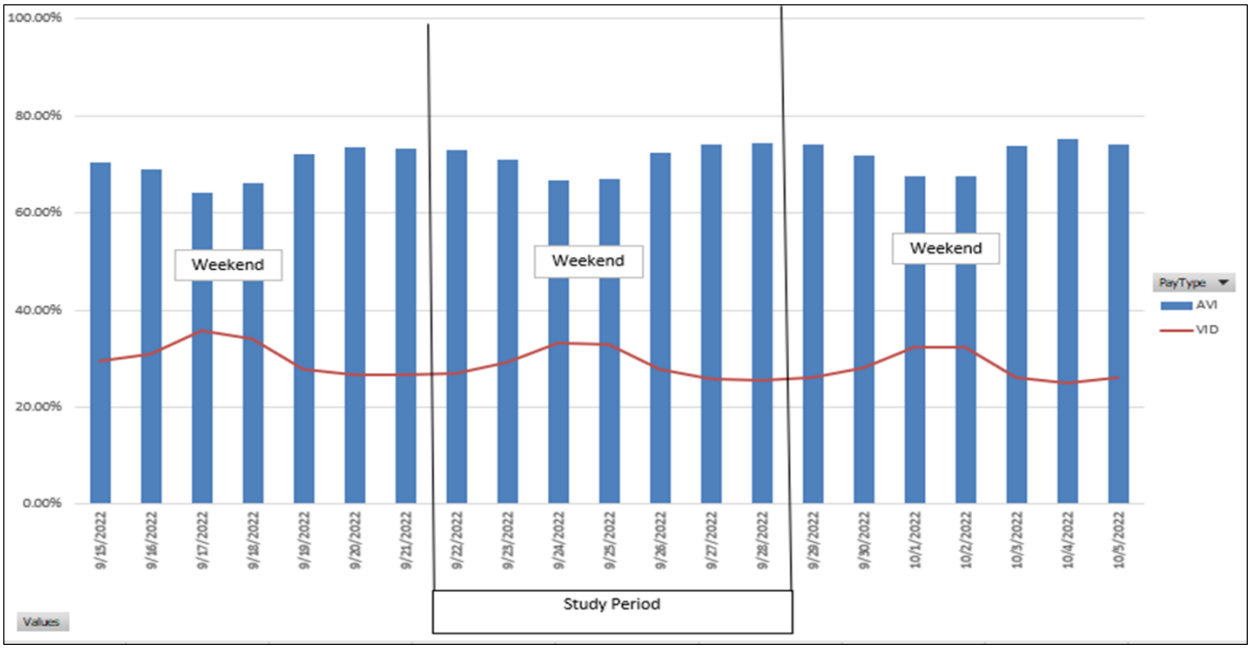
Based on the consistent pattern shown below, the Tolling System consistently detected/read transponders. Infrequent travelers caused the transponder detection rate to decrease during the weekends. When analyzing transponder detection/reads by lane, the analysis demonstrated a high level of consistency and thereby detection.



Note: Tolls are collected in one-direction.

William Preston Lane Jr. Memorial (Bay) Bridge (WPL)

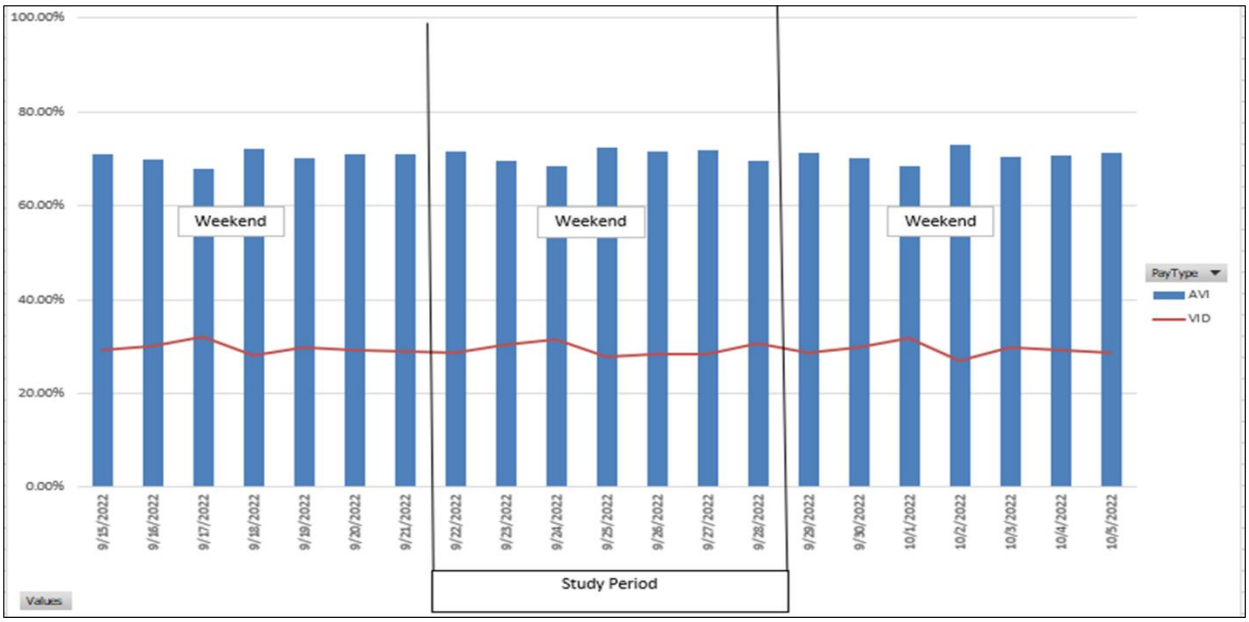
Based on the consistent pattern shown below, the Tolling System consistently detected/read transponders. Infrequent travelers caused the transponder detection rate to decrease during the weekends. When analyzing transponder detection/reads by lane, the analysis demonstrated a high level of consistency and thereby detection.



Note: Tolls are collected in one-direction.

John F. Kennedy Memorial Highway (JFK)

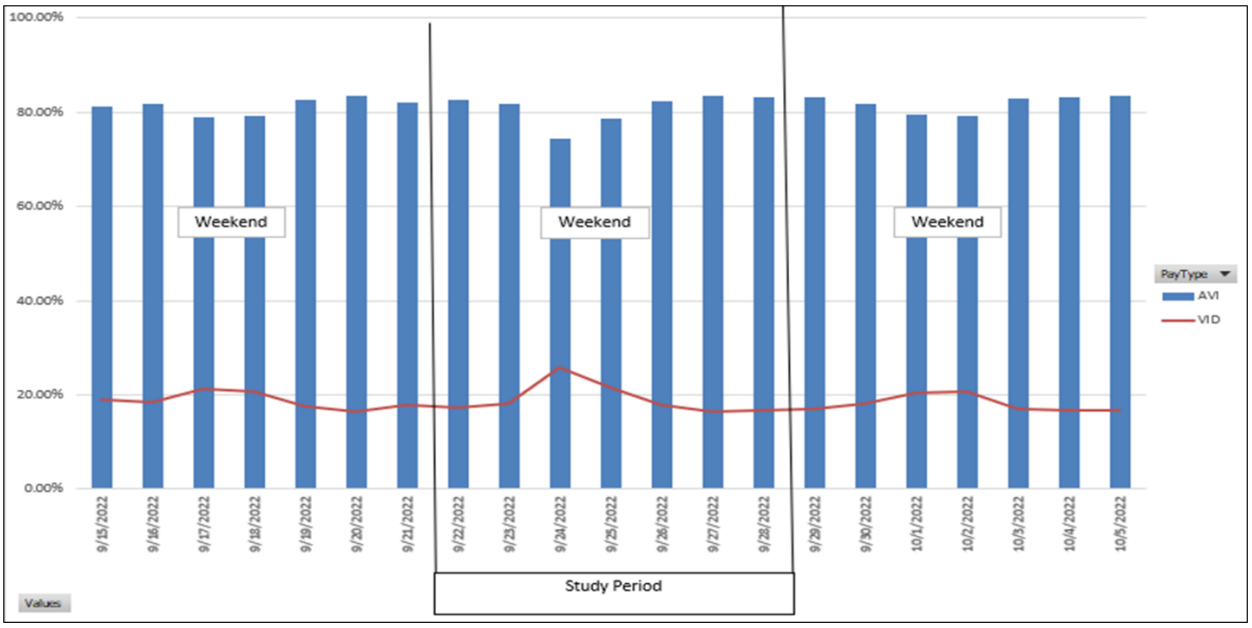
Based on the consistent pattern shown below, the Tolling System consistently detected/read transponders. Infrequent travelers caused the transponder detection rate to slightly decrease during the weekends but was somewhat offset by out-of-state *E-ZPass* travelers. The same pattern can be seen on the FMT facility. When analyzing transponder detection/reads by lane, the analysis demonstrated a high level of consistency and thereby detection.



Note: Tolls are collected in one-direction.

Thomas J. Hatem Memorial Bridge (TJH)

Based on the consistent pattern shown below and investigation of September 24, 2022, unexpected decrease in transponder detects/reads, the Tolling System consistently detected/read transponders. Infrequent travelers caused the transponder detection rate to slightly decrease during the weekends. The decrease in transponder detections/reads on September 24, 2022, was caused by Susquehanna River Running Festival participants passing through the toll zone. When analyzing transponder detection/reads by lane, the analysis demonstrated a high level of consistency and thereby detection.



Note: Tolls are collected in one-direction.

I-tolls (E-ZPass transactions posted to a customer's account based on a license plate) (Test 2)

The MDTA incorporated into this study a review of I-tolls in which Maryland *E-ZPass* customers were charged the full *E-ZPass* toll rate and, in most cases, did not receive the discounted toll rate. The study showed the Tolling System consistently detected/read transponders when the transponder was present in the vehicle and properly mounted, and the *E-ZPass* account was active. The MDTA's testing noted instances where the transponder was likely beyond its useful life causing the battery to be inoperable and the transponder to not be detected. In one instance, no apparent reason was identified for the transponder to not be detected/read.

An I-toll occurs when a transponder is not detected in a vehicle and the toll is posted to a customer's *E-ZPass* account using the vehicle license plate associated with their account or the account was inactive at the time of the trip, but active when the transaction was processed in the Back Office Toll System. A negative balance is the primary reason an account is inactive, which typically occurs if a credit card for auto-replenishment lapses or a customer fails to manually replenish their account. The review showed the primary reason a transponder was not detected was because the transponder was not physically present in the vehicle or not properly mounted. MDTA strongly encourages and educates customers on the benefits of proper mounting and provides alerts for frequent I-tolls. However, some customers elect to "wave" their transponder:

Examples of Transponder Waving

For the period of September 22-28, 2022, from a population of 259,014 I-tolls, of which 227,223 were 2-axle vehicles, the MDTA randomly selected a sample of 140 trips[3]. When reviewing the trips, the MDTA determined whether a transponder was visible and if it was not, then the transponder was not properly mounted and therefore, unable to determine if it was in the vehicle at all. If a transponder was visible, the MDTA determined if the transponder was properly mounted. If the transponder was properly mounted, the MDTA determined if the

[3] Testing focused on 2-axle legacy facilities (all facilities except for the ICC and ETL) trips because failure to read a transponder results in a customer not receiving an applicable discount. The total population of I-tolls for the test period was retrieved from the Tolling System for the applicable facilities and the Microsoft Excel Random Selection function was utilized to select 20 transactions from each facility. This sample size provides a 90 percent confidence level that the results are representative of the population with a 5 percent margin of error and given that historically less than 15 percent of the population I-tolls.

transponder/account was active. If the account was active, the MDTA determined the age of the transponder. The results of the review were as follows:

I-TOLL CAUSE	NUMBER OF OCCURENCES	PERCENTAGE OF OCCURENCES
Transponder not visible in vehicle	83	59.3%
Transponder not mounted properly	13	9.3%
Account inactive at time of transaction	39	27.9%
Transponder battery inoperable	4	2.9%
No identified reason	1	0.7%

Regarding potentially inoperable batteries, customers are alerted if they are frequently receiving I-tolls. Standard windshield mounted transponders are free, so MDTA replaces transponders upon request. Additionally, the MDTA issued transponder replacements to customers with aged transponders in 2018. Now, the MDTA is in a new cycle of replacing customer's transponders that are older than 10 years old. Moving forward, the MDTA anticipates annually replacing all transponders older than 10 years.

Duplicate and Split Trips[4]

The Toll System has a robust and vigilant design that ensures all transactions are captured and customers are not affected by duplicate billing or splitting a trip into two separate trips. This design approach includes multiple layers of filters in both the Road-side and Back-office Toll Systems. Additionally, the MDTA scans the system regularly as an additional compensating control.

Road-side Toll System Filters

The Road-side Toll System filters are designed to detect possible duplicate or split trips at the transaction and trip layer. At the transaction layer, the system flushes/disregards any transaction, in which the same license plate is detected at the same facility and lane within a neighboring time interval of +/- seconds (configurable duration). At the trip layer, the system flushes/disregards any trip, in which the same license plate is detected at the same facility, traveling in the same direction, within a neighboring time interval of +/- minutes (configurable duration).

Back-office Toll System Filters

The Back-office Toll System filters are designed to detect possible duplicate or split trips at the interface layer between the Road-side and Back-office systems and within Toll Posting submodule of the Back-office Toll System. At the interface layer, the Back-office Toll System detects any trip, with the same Trip identification number, that had been previously received by the Back-office Toll System. The system would reject these trips and not allow the trip to enter

[4] A trip is the collection of transactions at toll zones. A trip and transactions are one and the same at all facilities except for the ICC because these facilities only have one toll zone.

the Back-office Toll System. This rule applies to both transponder (a.k.a. AVI) and Video trips. Unique trips that are accepted at the interface layer are forwarded to the Toll Posting module for account identification and associated financial processing. During this process, the Back-office Toll System checks if a similar toll from the same facility, within the neighboring time interval of +/- minutes (configurable duration) was previously processed for the same transponder tag (in case of AVI trips) or same vehicle plate (in case of Video Toll trips). If similar tolls are identified, the subsequent trip is filtered out and not allowed to proceed further and post to a customer's account.

These systematic built-in processes capture any potential duplicate tolls and prevents customers from a duplicate or split trip. The MDTA also conducts queries across both AVI and Video trips should a rare and unusual circumstance occur and resulted in a duplicate or split trip. The query is part of the Back-office Toll System stored procedures, and, as part of this study, was rerun for the study period and no duplicate or split trips were identified.

Correct Customer:

The Road-side Toll System captures a front and rear image of each vehicle traveling through a toll zone and the vehicle's front and rear and license plate(s). Additionally, the Tolling System detects/reads a vehicle's transponder when present in the vehicle and properly mounted. The license plate image must be translated to the correct data characters, origin, and plate type[5] to post image transactions to a customer's *E-ZPass* account or issue a Video Toll NOTD.

For Maryland issued license plates, the characters visible are recognized by the MDOT MVA and are part of the plate characters. As shown in license plates A, B, and C below, the only differing factor is the plate type. Whereas other States, such as North Carolina, issue license plates in which the characters visible may or may not be recognized by the MDOT MVA and be part of the license plate characters. The plate type for both license plate D and E are Lions Club; however, for License plate D, the "LC" characters are not recognized and for license plate E, the "LC" characters are recognized.

License Plate A

Origin:	Maryland
Plate Type:	Afghanistan Campaign
Plate Characters:	CR00000

License Plate B

Origin:	Maryland
Plate Type:	Air Force Cross
Plate Characters:	CR00000

[5] Currently, there are 1,611 plate types in circulation that has required a 600-page Department of Motor Vehicle (DMV) processing guide due to the lack of standardization across the states for plate types/codes or how characters should be entered when requesting the register owner information.

License Plate C

Origin:	Maryland
Plate Type:	Air Medal
Plate Characters:	CR00000

License Plate D

Origin:	North Carolina
Plate Type:	Lions Club
Plate Characters:	0123

License Plate E

Origin:	North Carolina
Plate Type:	Lions Club
Plate Characters:	0000LC

Study Approach: When studying the accuracy of translating license plates to the correct origin, plate type, and characters, the MDTA randomly selected image transactions for each facility and reviewed the license plate image to ensure it was properly translated and reported to the Back-office Toll System accurately.

Conclusion: The Tolling System accurately translated the license plate image and reported to the Back-office the correct vehicle information. When the license plate characteristics could not be identified with a high confidence level, the trip was coded off and not sent to the Back-office Toll System for processing. The Tolling System accurately translated 100 percent of a random sample of 270 3+ axle vehicles.

For the period of September 22, 2022, through September 28, 2022, the MDTA randomly selected 270 trips to be reviewed. The MDTA verified the image was corrected translated and transferred the vehicle information correctly to the Back-office Toll System.

The results of the review were as follows:

FINDING	NUMBER OF OCCURENCES
License Plate Correctly Translated and Reported to the Back-office	246
Coded off – Not Sent to Back-office Toll System	24
License Plate Incorrectly Translated and Reported Incorrectly to the Back-office	0

Appendix I

CHECK LIST TO RESOLVE SOME COMMON ISSUES WITH TOLL BILLS

Please walk through and check-off each clickable box that provides you an explanation of the potential issue and provides a link to resolve that specific issue.

- ☐ **Credit Card expired?**
  Unfunded *E-ZPass* accounts with a negative balance are set to inactive status. Trips on Maryland toll roads are then charged at the Video Toll rate and not counted toward commuter discount plans. Log in and click on BILLING tab to update credit cards/bank accounts: https://csc.driveezmd.com/login.

- ☐ **Credit Card or Bank Account set to auto replenish to avoid negative balances?**
  Auto replenishment is the best way to ensure your account is always funded. Log in and click on BILLING tab to update credit cards/bank accounts: https://csc.driveezmd.com/login.

- ☐ **Need to add a Credit Card?**
  Adding a credit card is easy to do and with auto-replenishment can make sure account is always funded. View our video here. Log in and click on BILLING tab to update credit cards/bank accounts: https://csc.driveezmd.com/login.

- ☐ ***E-ZPass* properly mounted?**
  View our step-by-step installation instructions: https://driveezmd.com/acct-types/how-to-mount-your-transponder/. View our transponder "waver" video here to learn how properly mounting your *E-ZPass* transponder saves you money.

- ☐ **Do you know How People get I-Tolls versus Video Tolls?**
  Click here to view our I-Toll video.

- ☐ **License Plates for ALL vehicles linked with your transponder?**
  Log in and click on VEHICLES tab to update your license plates/vehicles here: https://csc.driveezmd.com/login.

- ☐ **Is your Address Current with the MVA?**
  Did you know that MDTA mails Video Tolls using the addresses on file with the Motor Vehicle Administration? Have you recently moved and didn't update your address? Click here to learn more about how to update your change of address.

- ☐ **Are you driving less, teleworking more, and receiving unused commuter trip (UUCT) charges on your statement?**
  Consider removing discount plans if you are regularly receiving UUCT charges on statements. Visit here to learn more about Discount Plans.

- **Do you know how to Pay Video Tolls Online?**
  View our video here on how to pay Video Tolls online. You can pay your Video Tolls at https://csc.driveezmd.com/pay-tolls-now. If you pay before the Video Toll is mailed, you'll save 15% (up to $5 per transaction). Keep saving on every trip with *E-ZPass* or Pay-By-Plate.

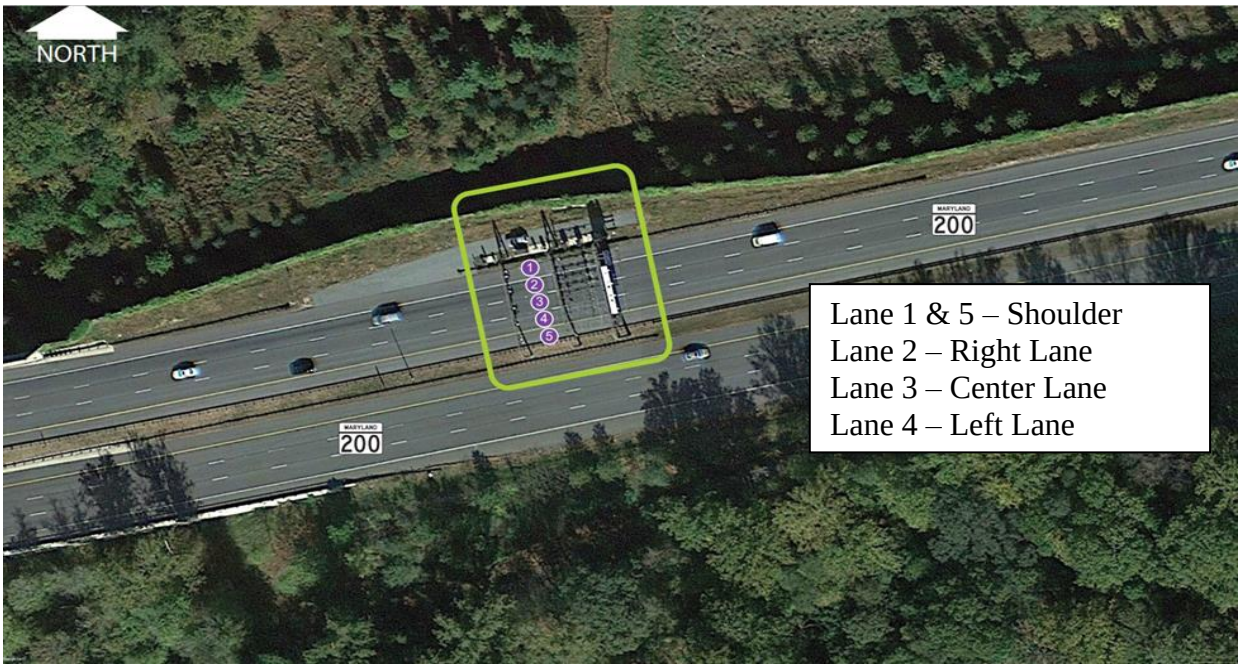
- **Have you Renewed Your Hatem Bridge Plan?**
  Hatem plans require prepayment renewal every year before the expiration date. Click here for the application details.

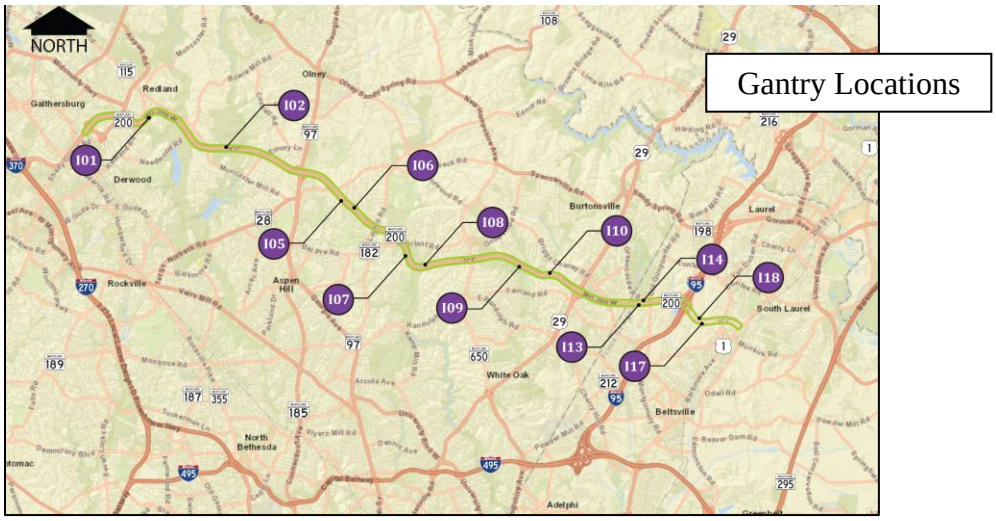
- **Do you have the right Hatem Plan?**
  Only the Hatem B plan is valid at all *E-ZPass* locations. The Hatem A plan is only valid at the Hatem Bridge. Use of a Hatem A plan at other facilities will result in Video tolls and/or the account being switched to inactive status. Learn more about Hatem Bridge discount plans: https://driveezmd.com/acct-types/e-zpass-discount-plans/.

Appendix II

Appendix II is a continuation of evaluating the accuracy of vehicle classifications. The appendix provides details on a Toll Zone/gantry or Lane level. The consistent classification patterns provide a high level of confidence the Tolling System classified vehicles correctly and thereby reflect the correct toll rate. Deviations in patterns may be indicative a potential system issue. When tolls are collected in two-directions, the graphs below are displayed to align with the corresponding Lane in the opposite direction.

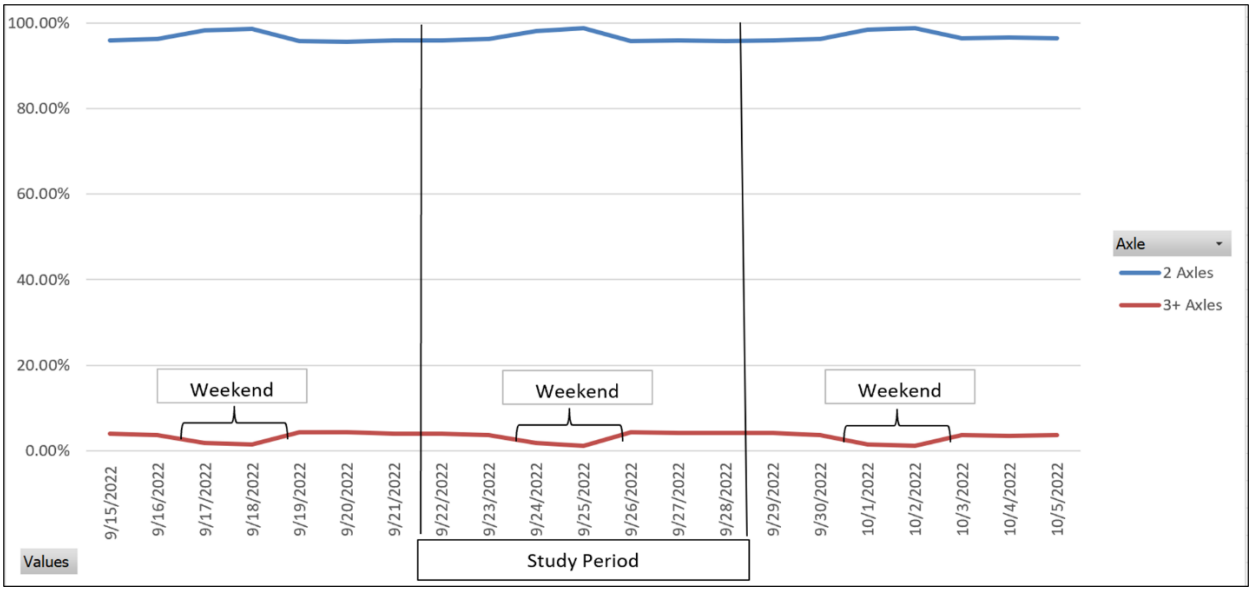
Intercounty Connector (ICC)



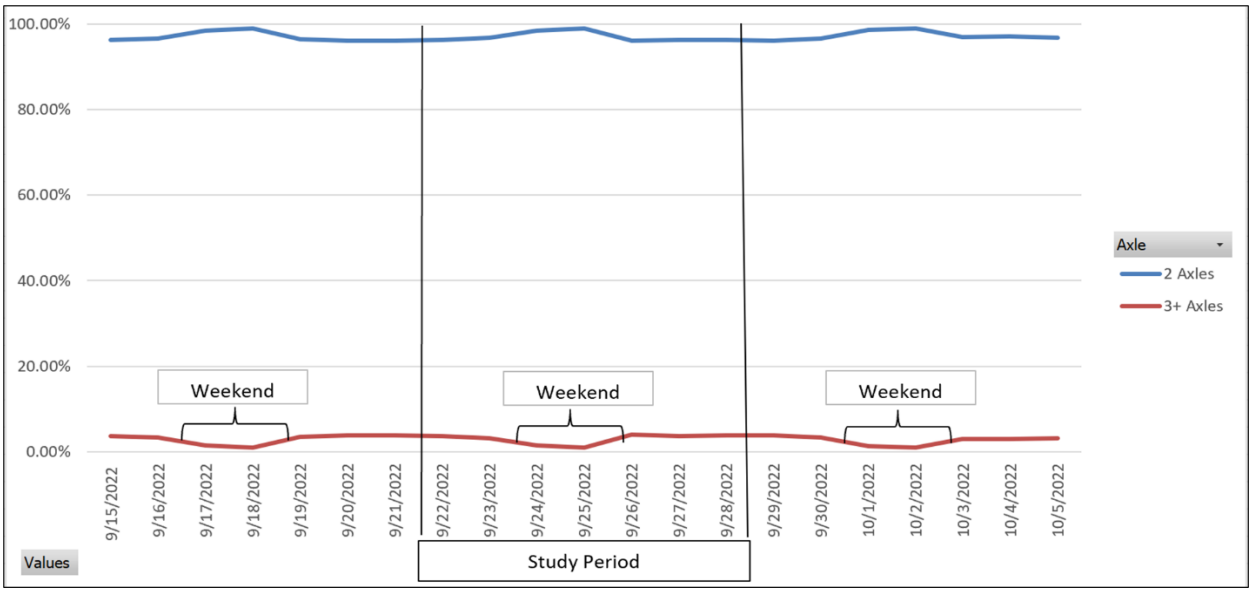


Conclusion: <u>Vehicle classifications were accurate</u>. Nearly all traffic on the ICC were 2-axle vehicles (see the following pages).

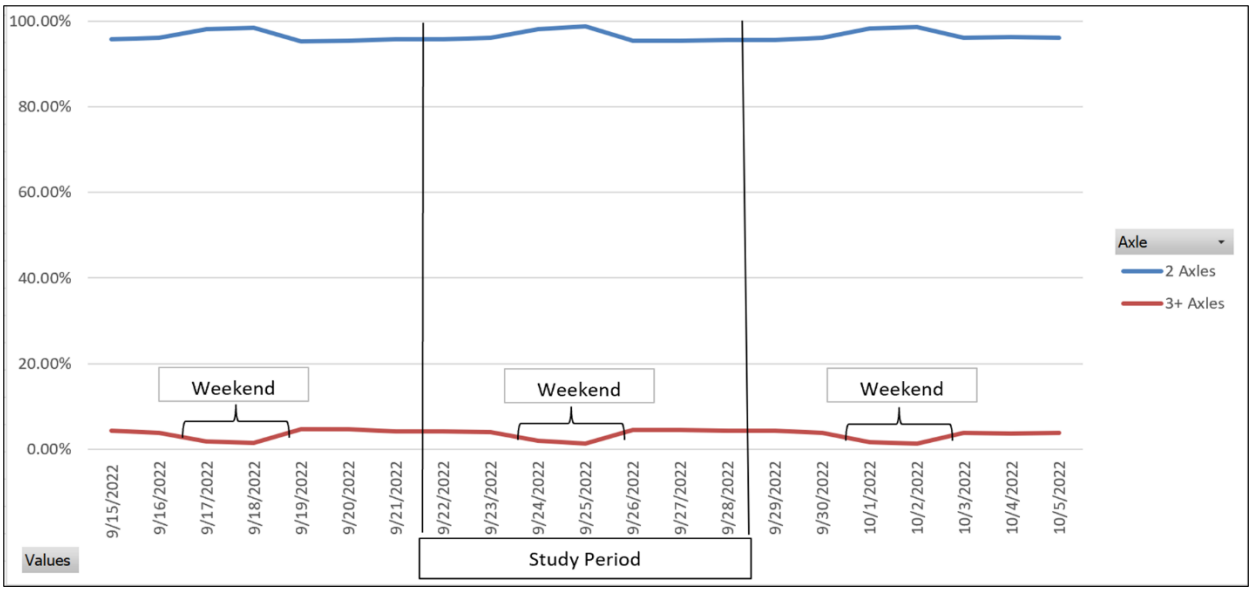
Gantry I01(EB I-370/MD97), Lanes 2-4



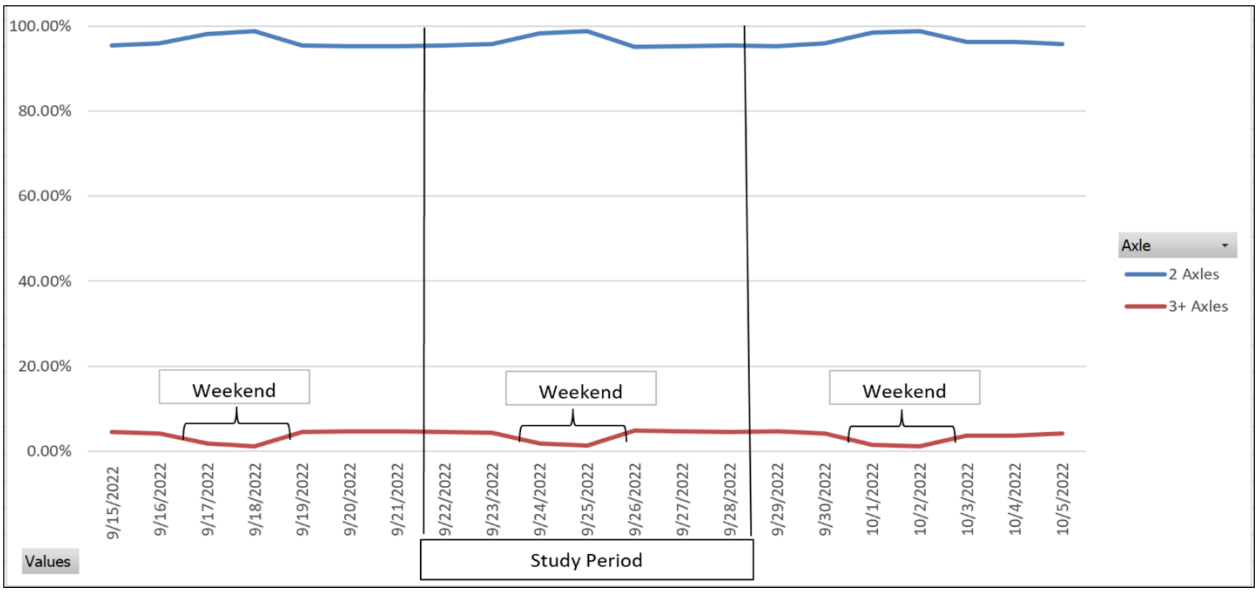
Gantry I02 (WB MD97/I-370), Lanes 2-4



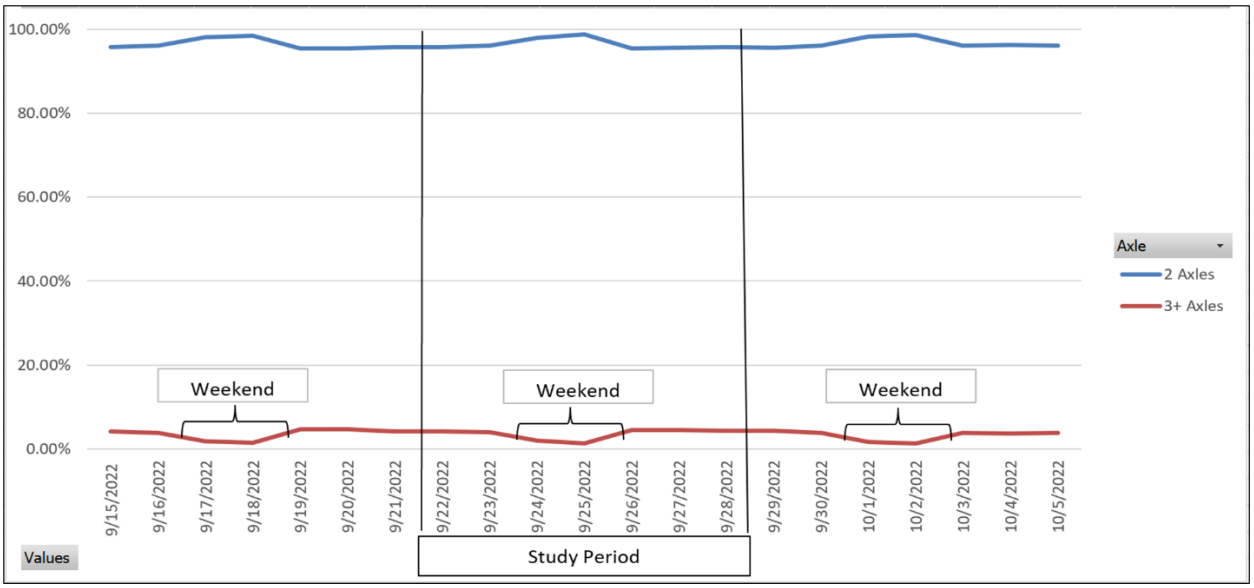
Gantry I05 (EB) (MD97/MD182), Lanes 2-4



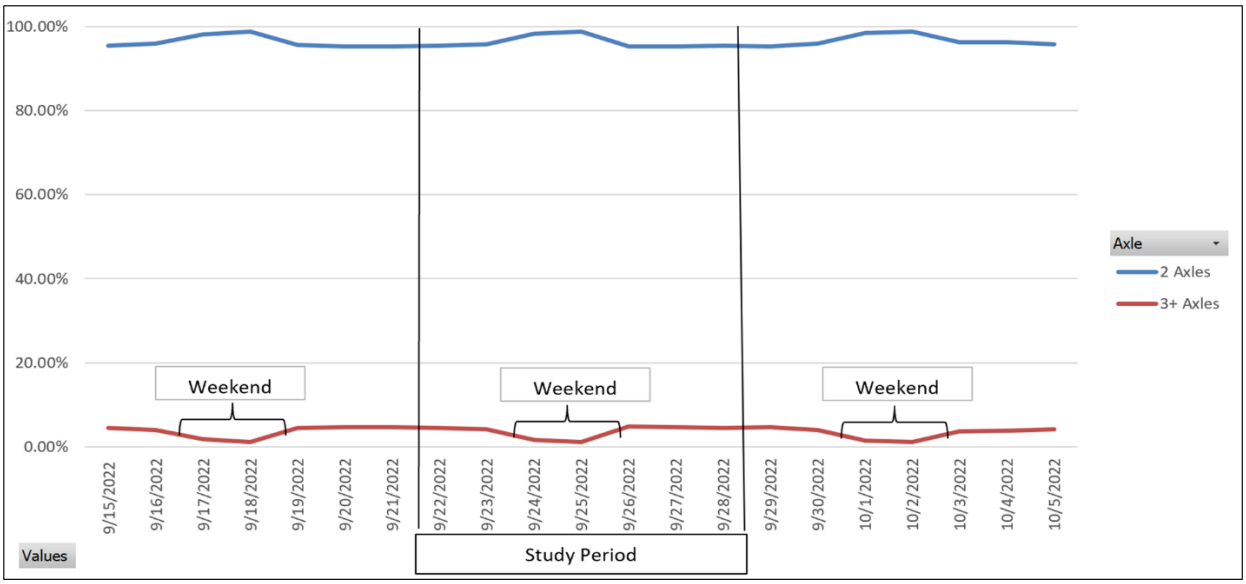
Gantry I06 (WB MD182/MD97), Lanes 2-4



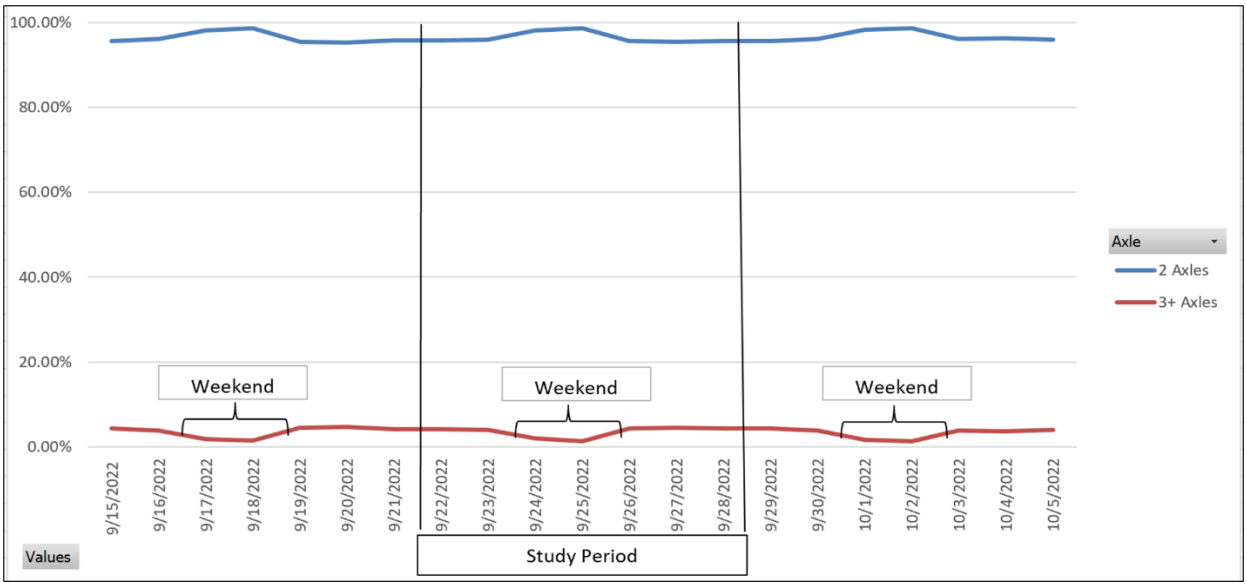
Gantry I07 (EB MD182/MD650), Lanes 2-4



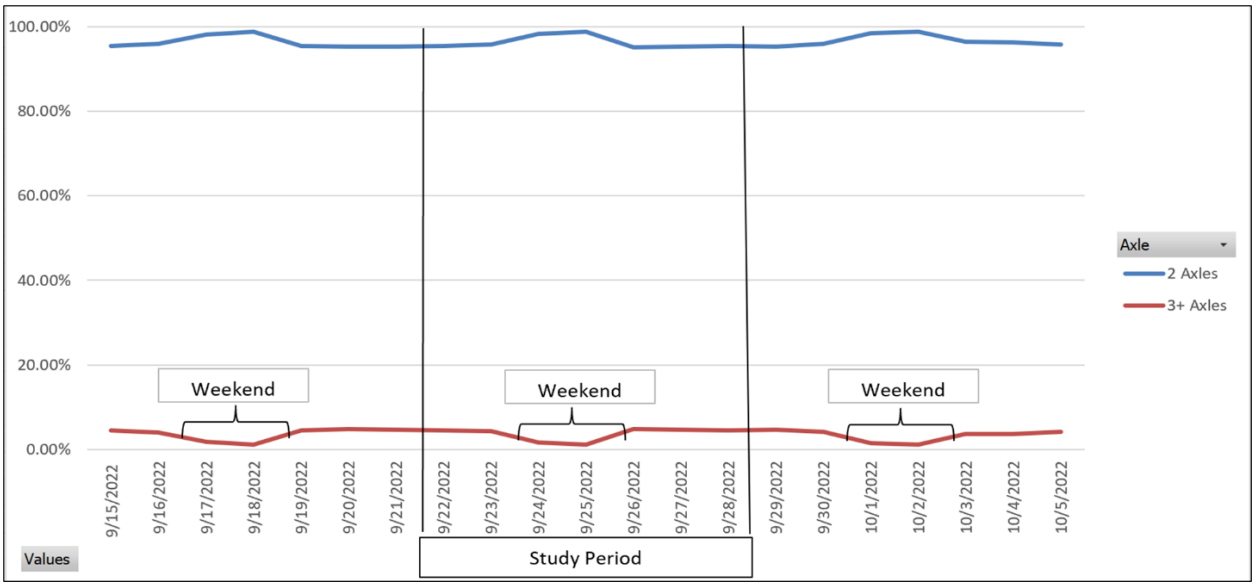
Gantry I08 (WB MD650/MD182), Lanes 2-4



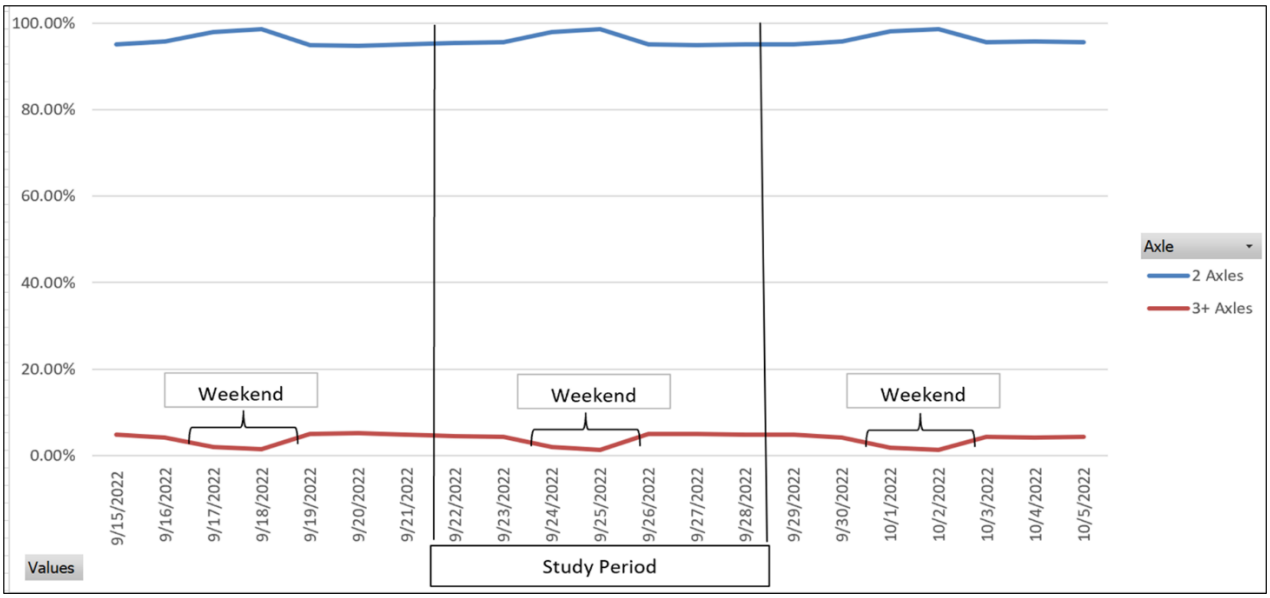
Gantry I09 (EB MD650/US29), Lanes 2-4



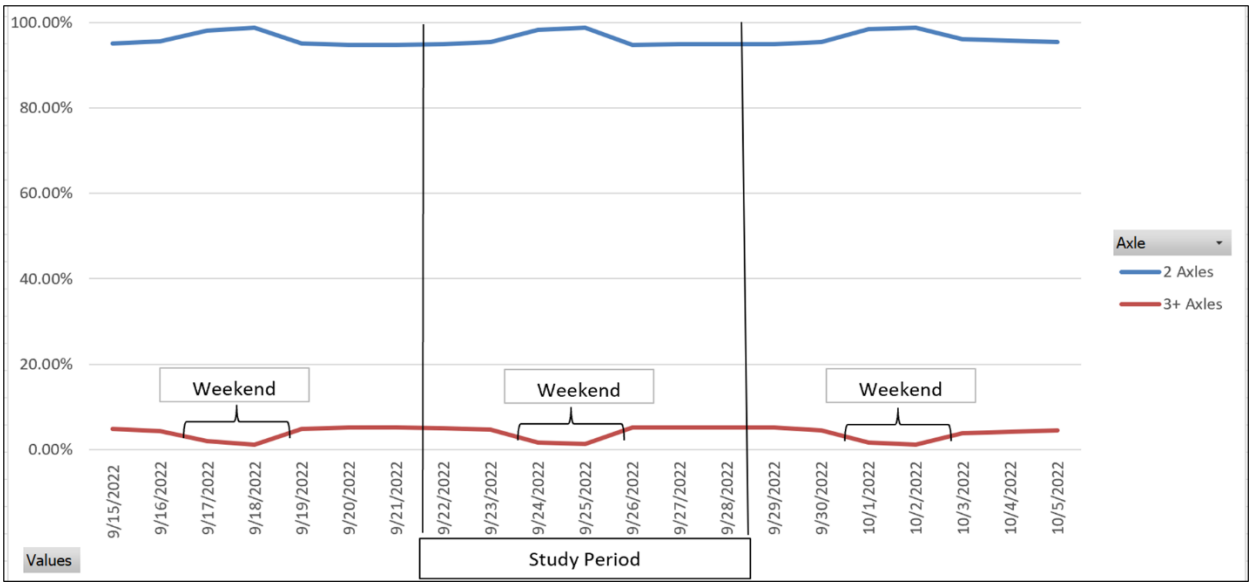
Gantry I10 (WB US29//MD650), Lanes 2-4



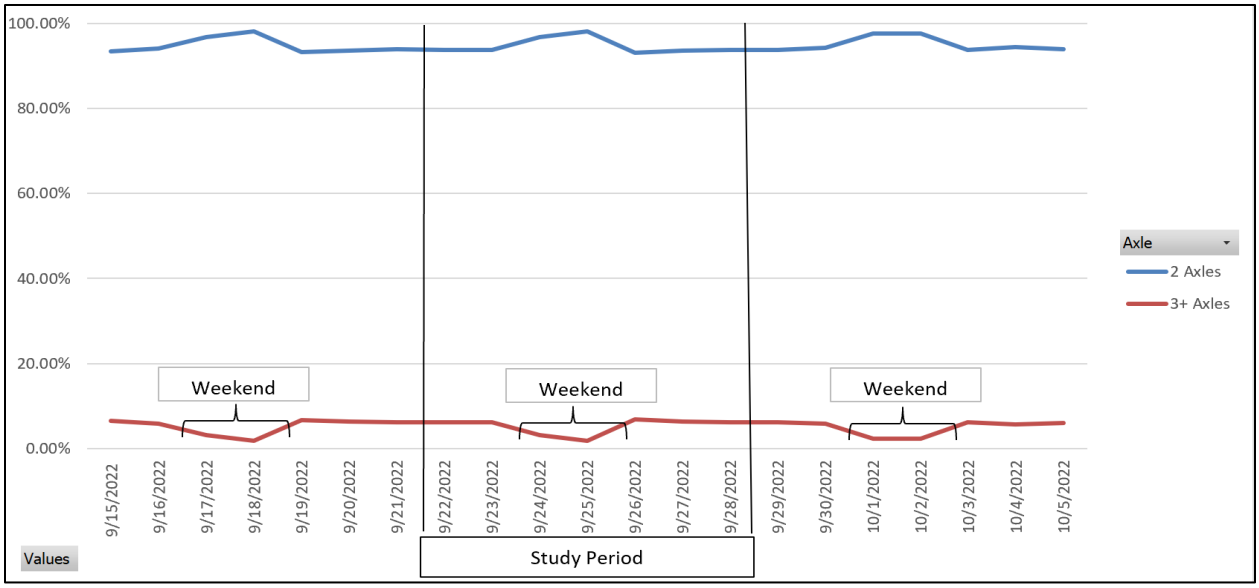
Gantry I13 (EB US29-Briggs Chaney Rd/I-95), Lanes 2-4



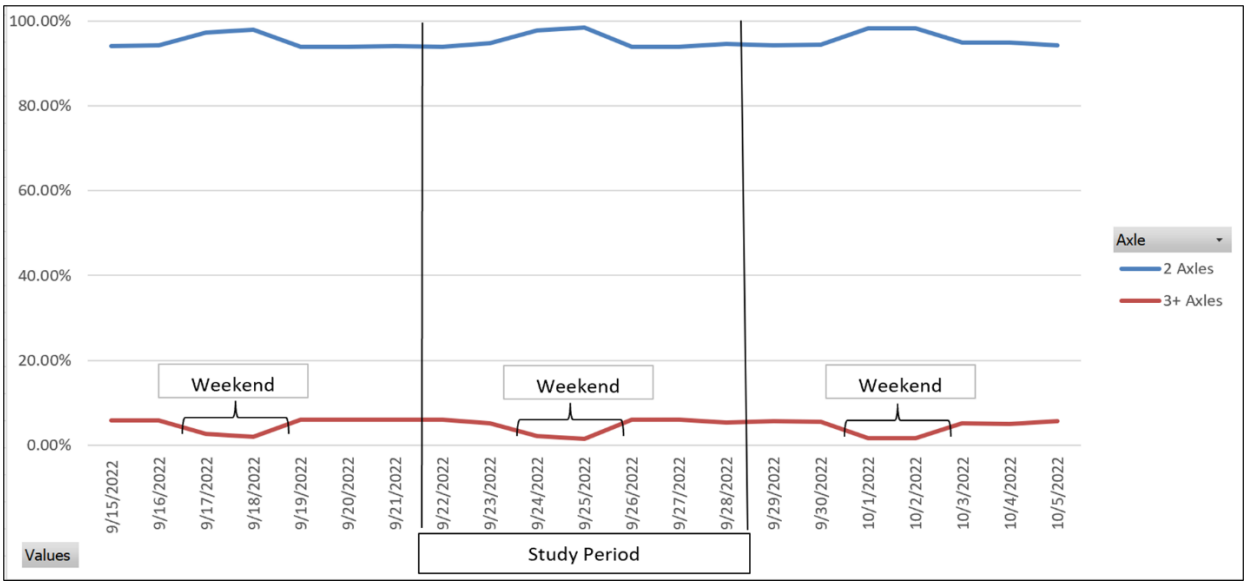
Gantry I14 (WB I-95/Briggs Chaney Rd-US29), Lanes 2-4



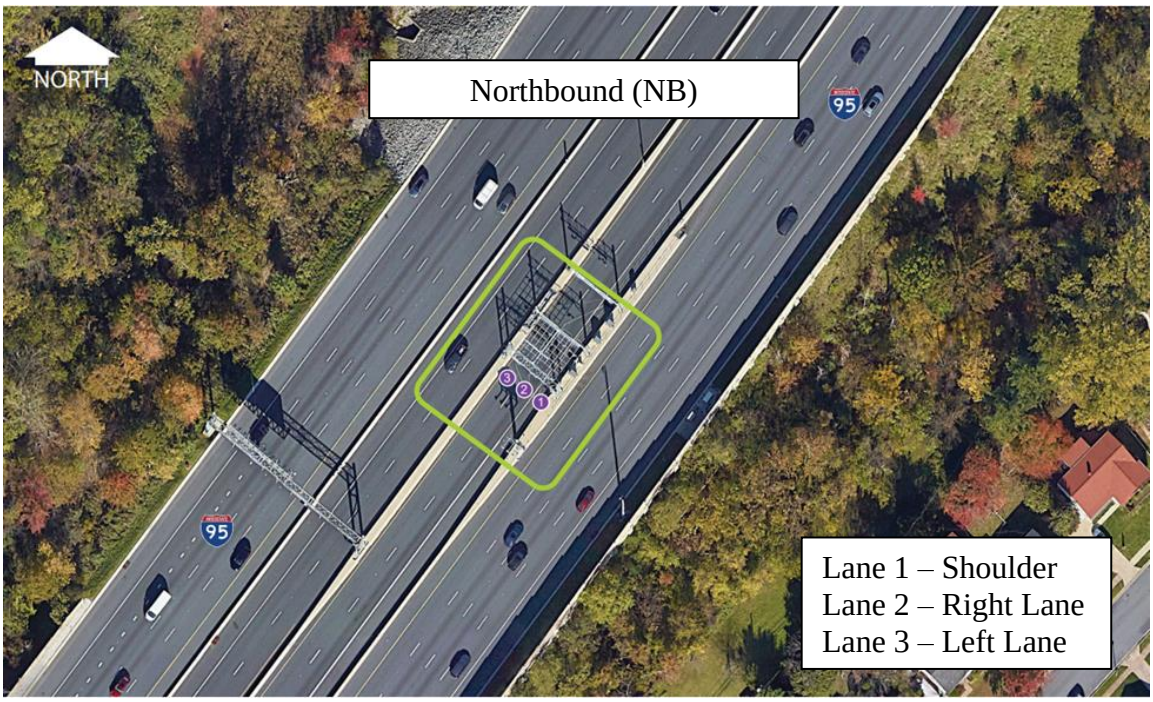
Gantry I17 (EB I-95/Konterra Dr.-US1), Lanes 2-4

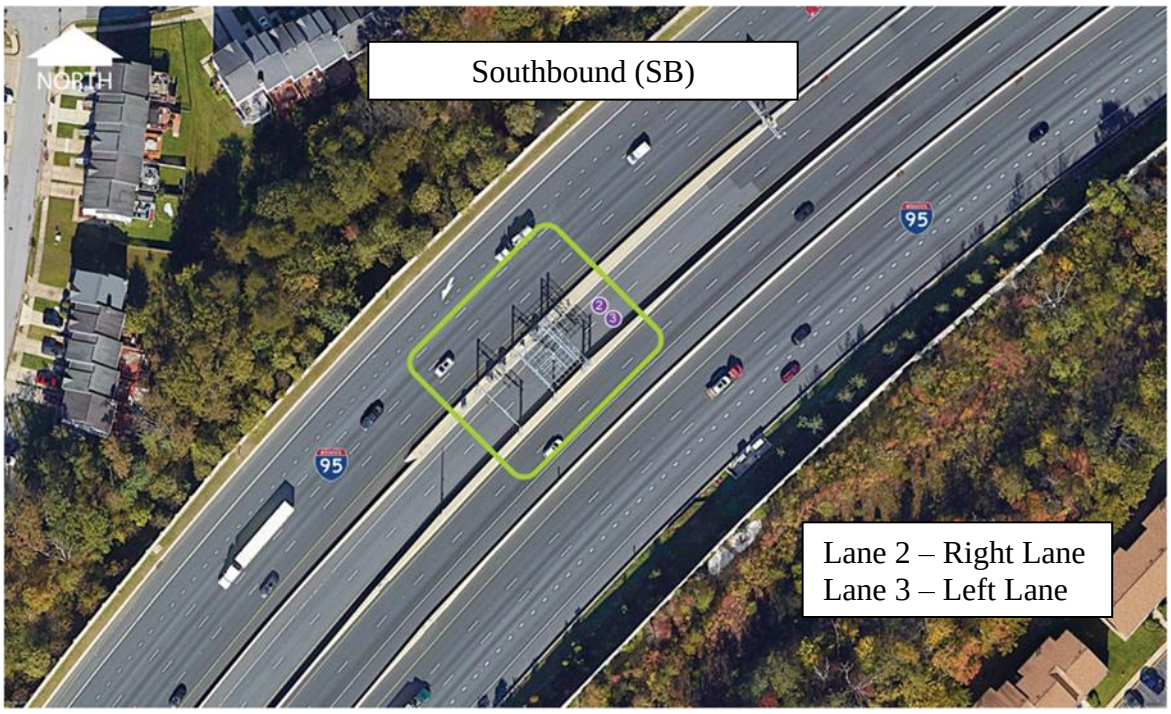


Gantry I18 (WB Konterra Dr.-US1/I-95), Lanes 2-4



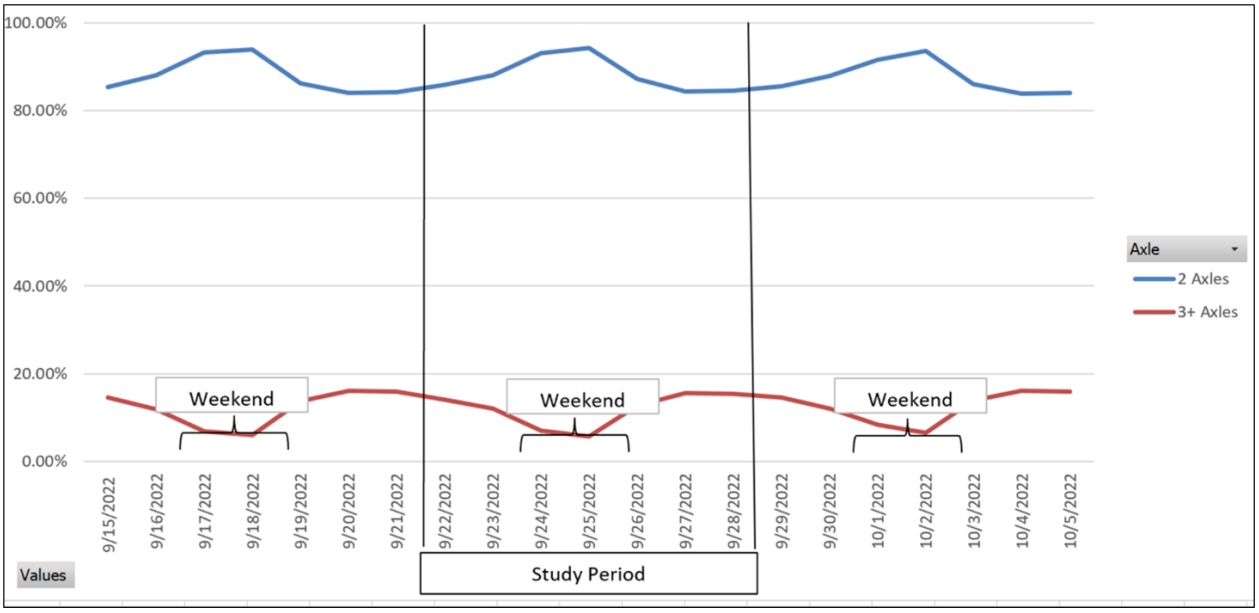
I-95 Express Toll Lanes (ETL)



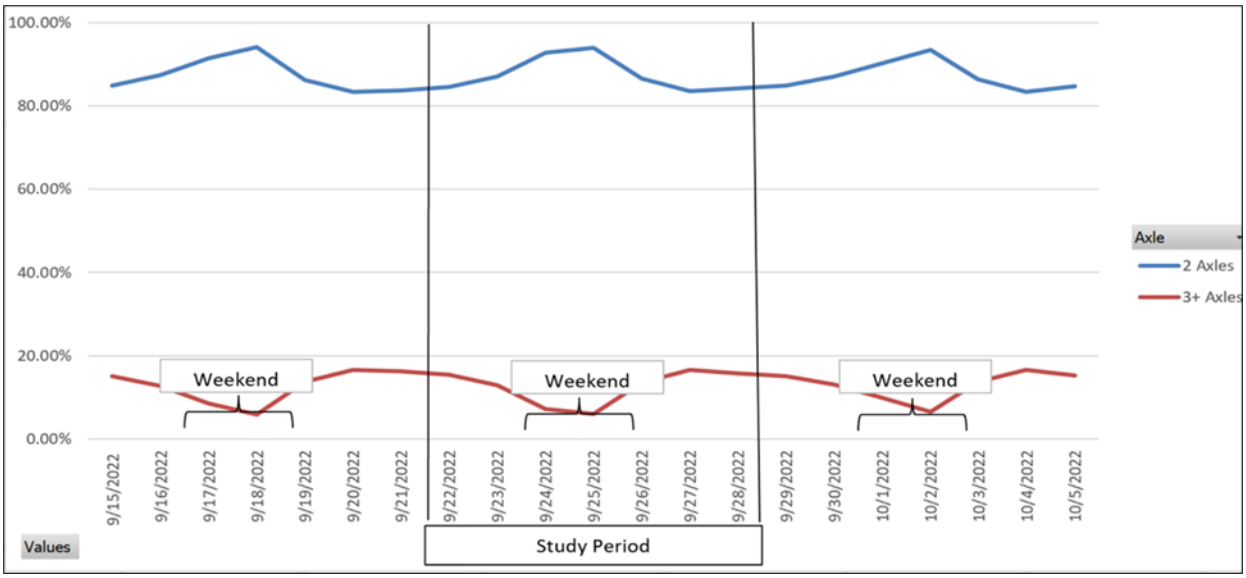


Conclusion: Vehicle classifications were accurate. The NB and SB right lanes have a moderate number 3+ vehicles and the left lanes are nearly entirely 2-axle vehicles (see the following pages).

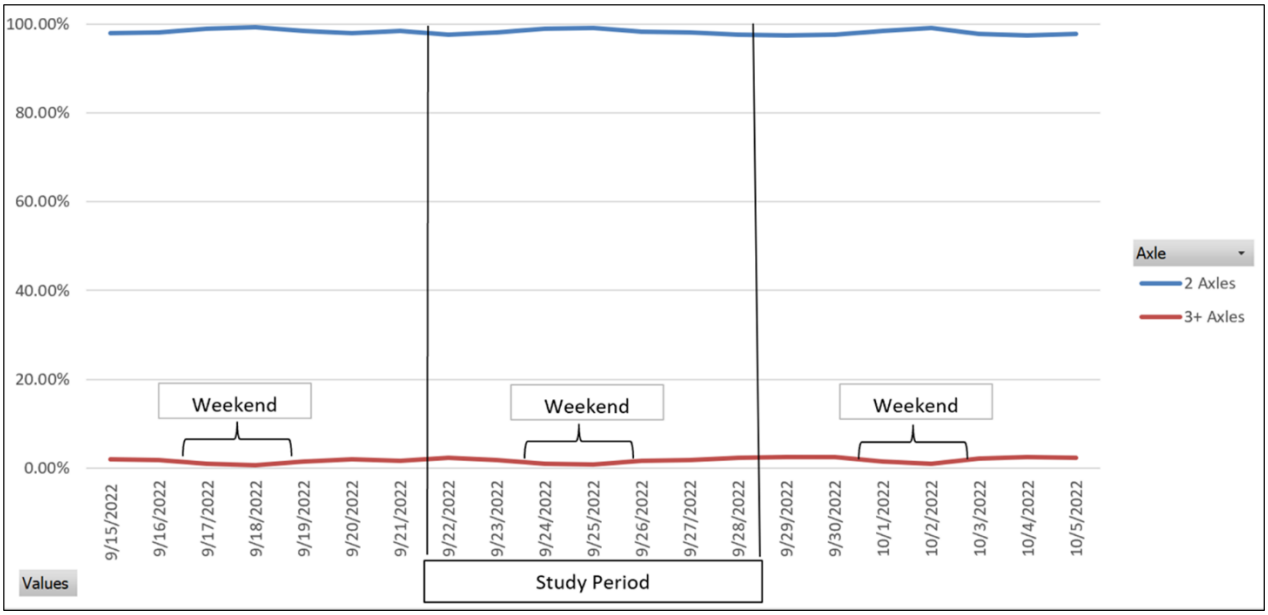
NB Lane 2 (Right Lane)



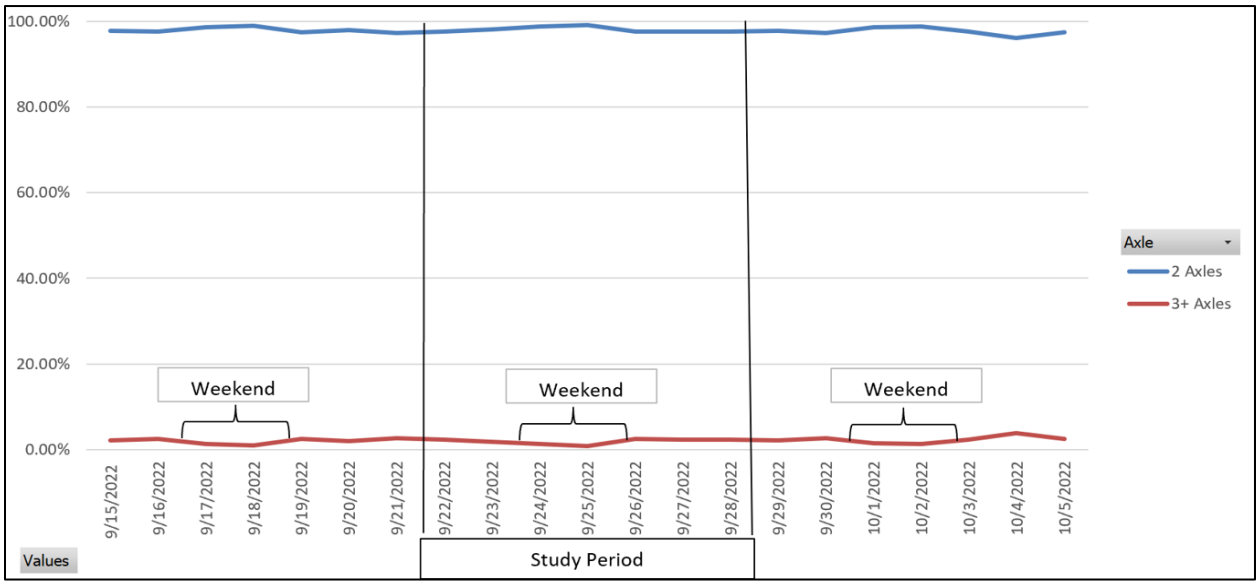
SB Lane 2 (Right Lane)



NB Lane 3 (Left Lane)



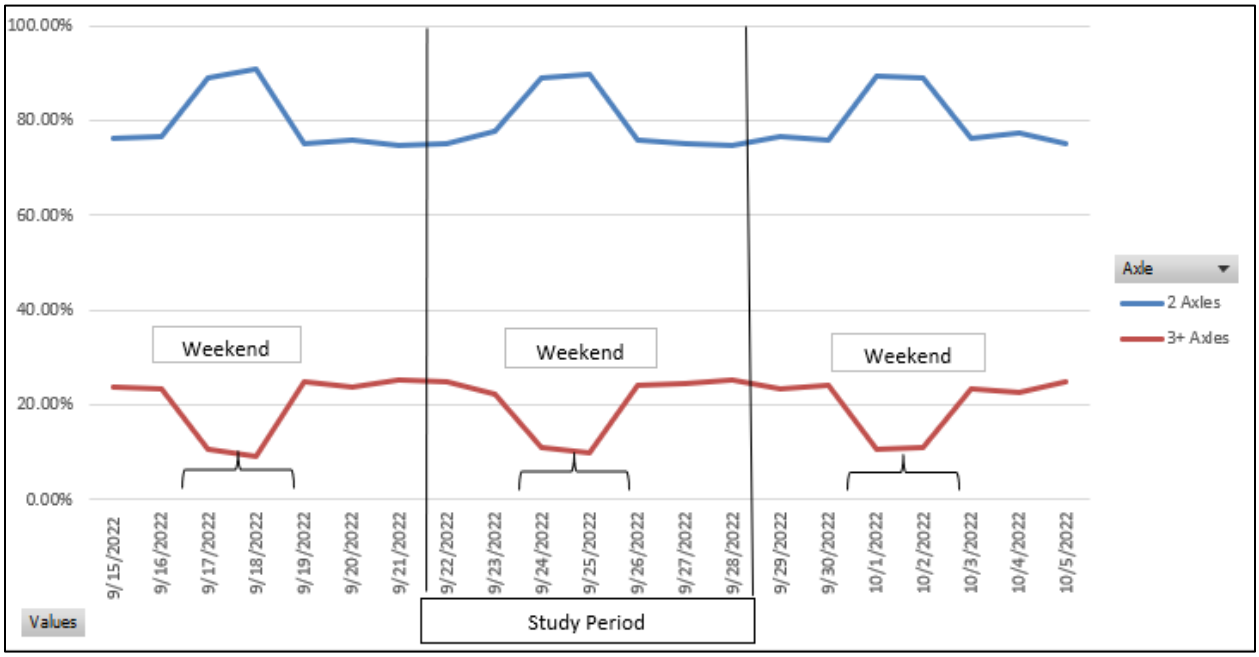
SB Lane 3 (Left Lane)



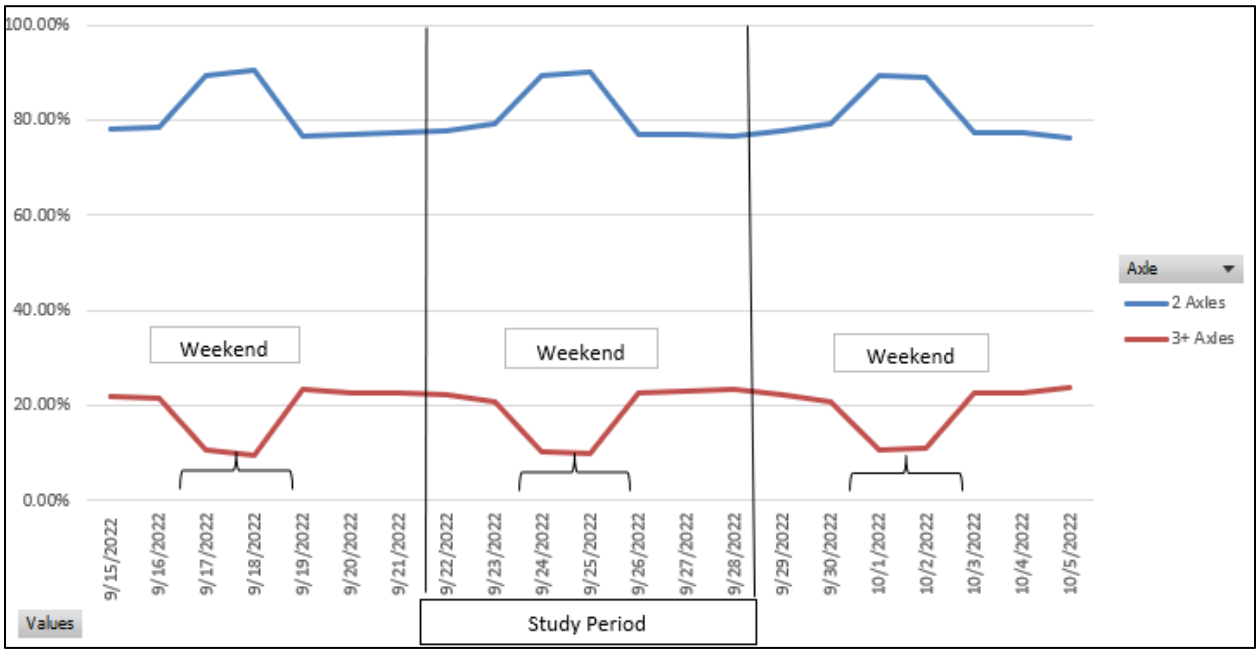
Francis Scott Key Bridge (FSK)

Conclusion: Vehicle classifications were accurate. The NB and SB right lanes have considerable 3+ vehicles and the left lanes are nearly entirely 2-axle vehicles (see the following pages).

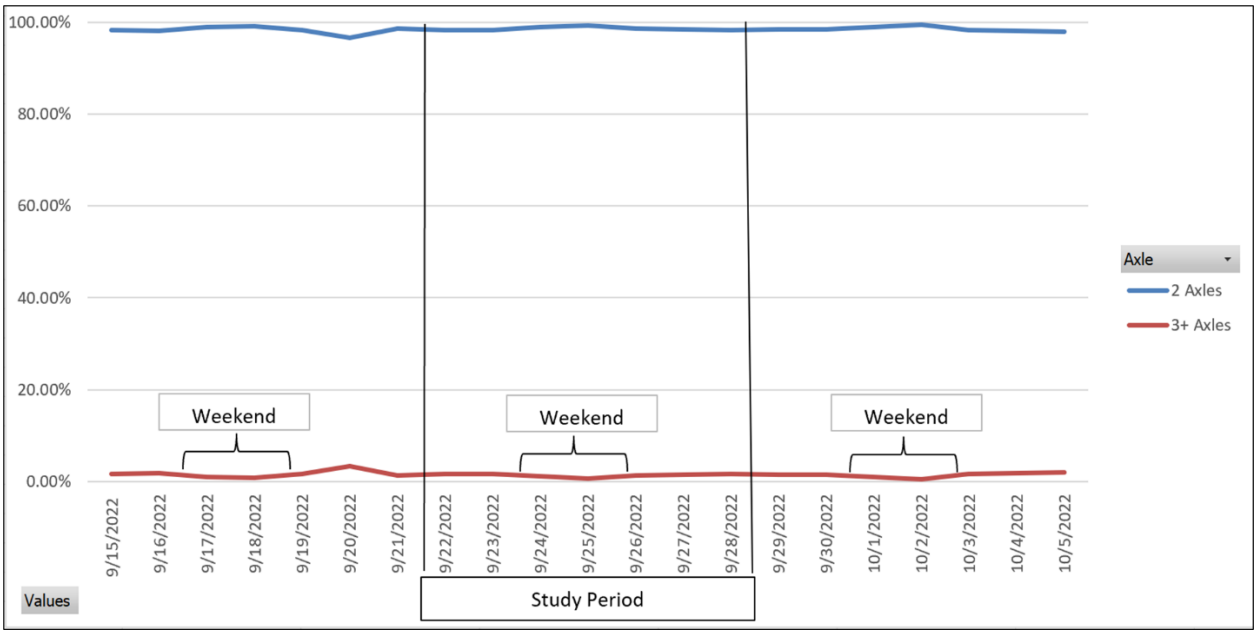
Lane 5 WB (Right Lane)



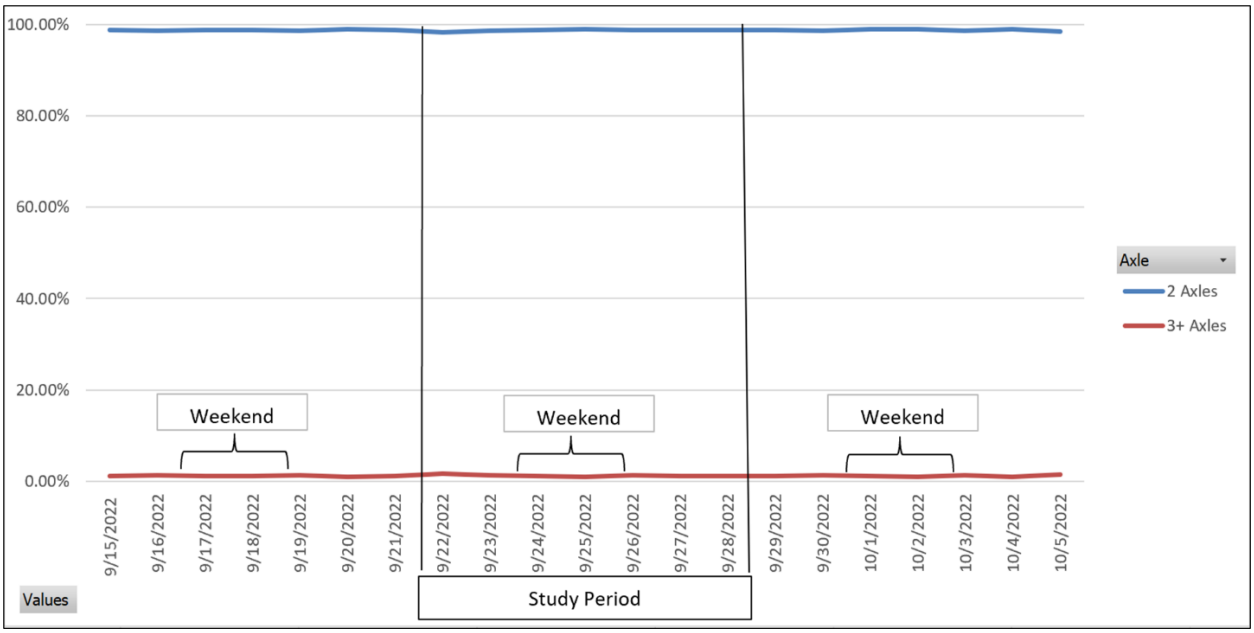
Lane 7 EB (Right Lane)



Lane 6 WB (Left Lane)



Lane 8 EB (Left Lane)



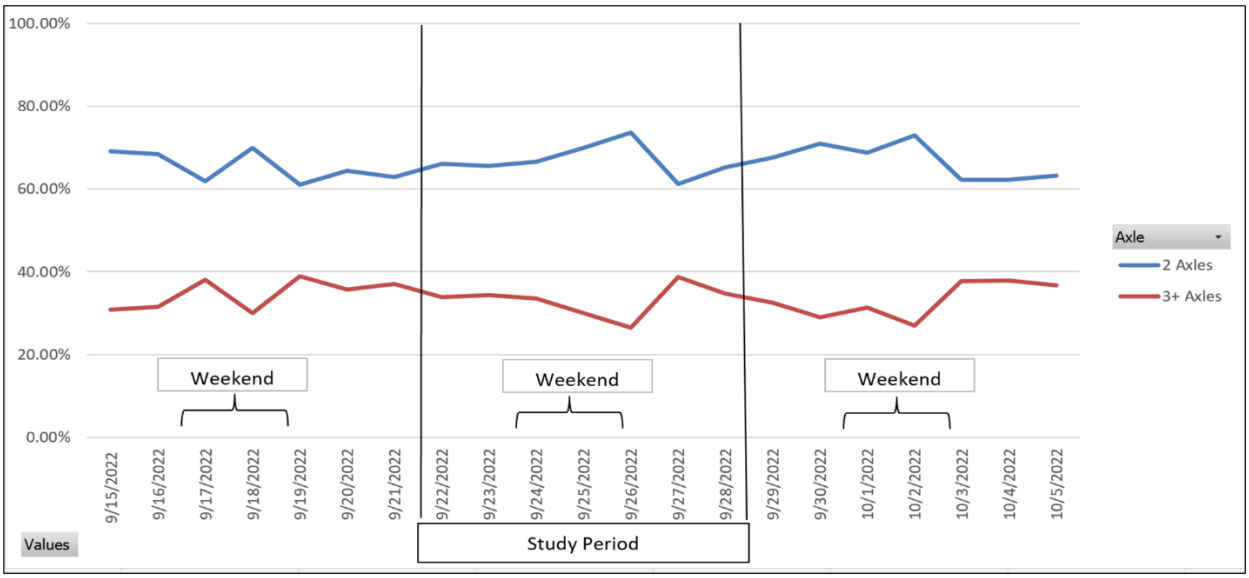
Lane 11

Note: This lane had very low traffic volumes and therefore does not produce consistent classification patterns and could not be incorporated into this analysis.

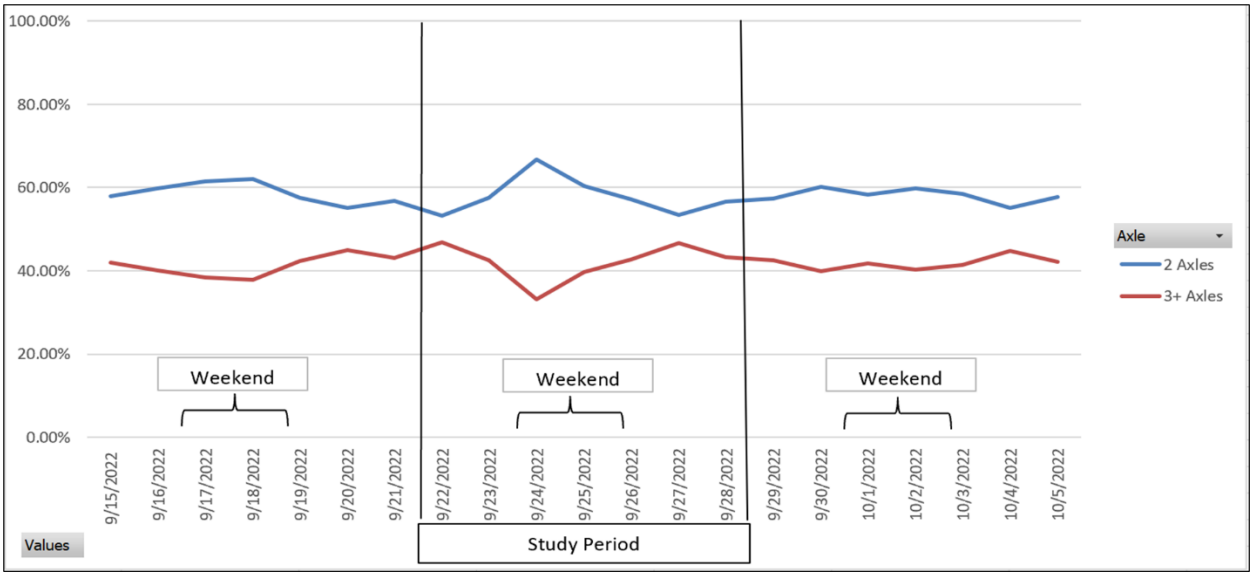
Baltimore Harbor Tunnel (BHT)

Conclusion: <u>Vehicle classifications were accurate</u>. The NB and SB three most right lanes (lanes, 5,6,7,12,13, and 14) had 3+ vehicles ranging from considerable to significant. The extreme proximity of the Childs Street exits to the toll plaza resulted in more 2-axle vehicle in the far-right lanes than is generally found at other facilities. The middle most lanes (lanes 4 and 11) had some 3+ vehicles and the left most lanes (lanes 1, 2, 3, 8, 9, 10) had minimal 3+ vehicles and tapered to solely 2-vehicles in the far-left lanes (see the following pages).

Lane 1 NB (Far Right Lane)

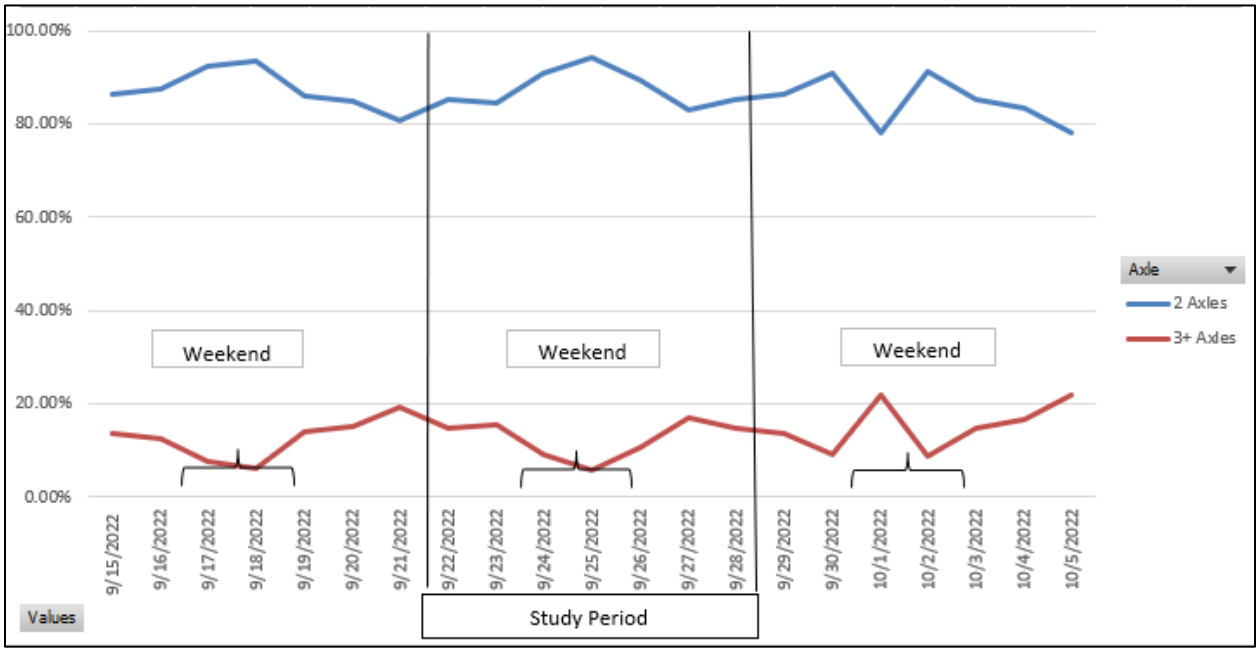


Lane 14 SB (Far Right Lane)

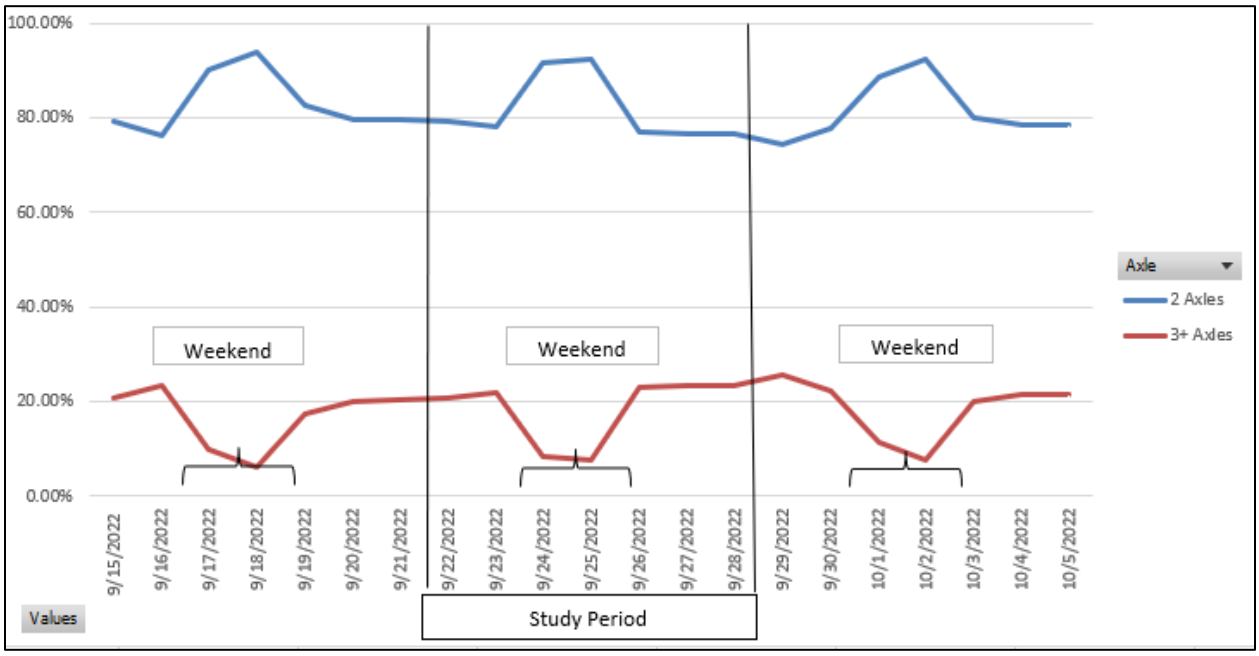


Note: The proximity of the Childs Street ramps to the toll plaza slightly impacts the traffic pattern.

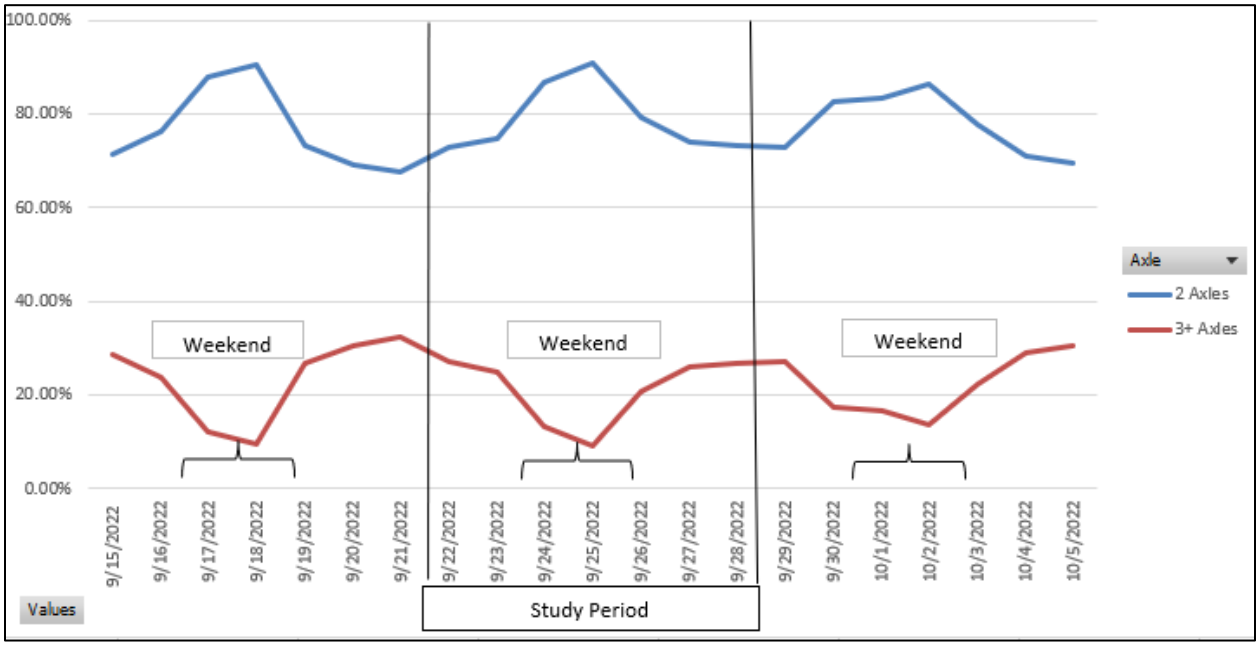
Lane 2 NB (2nd Most Right Lane)



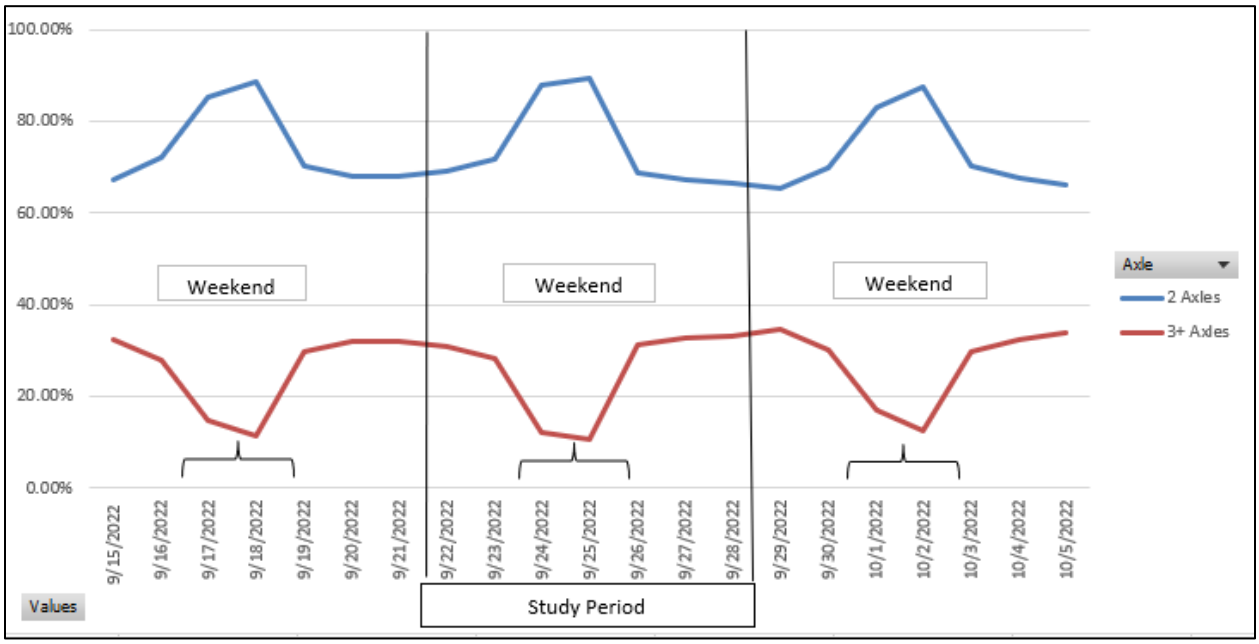
Lane 13 SB (2nd Most Right Lane)



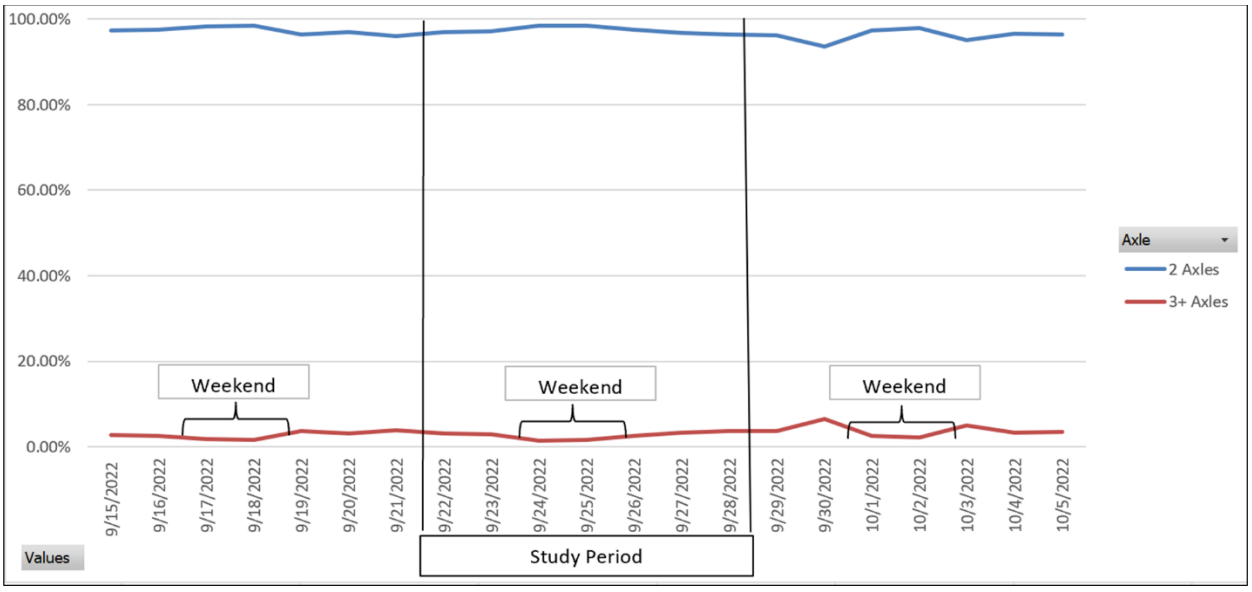
Lane 3 NB (3rd Most Right Lane)



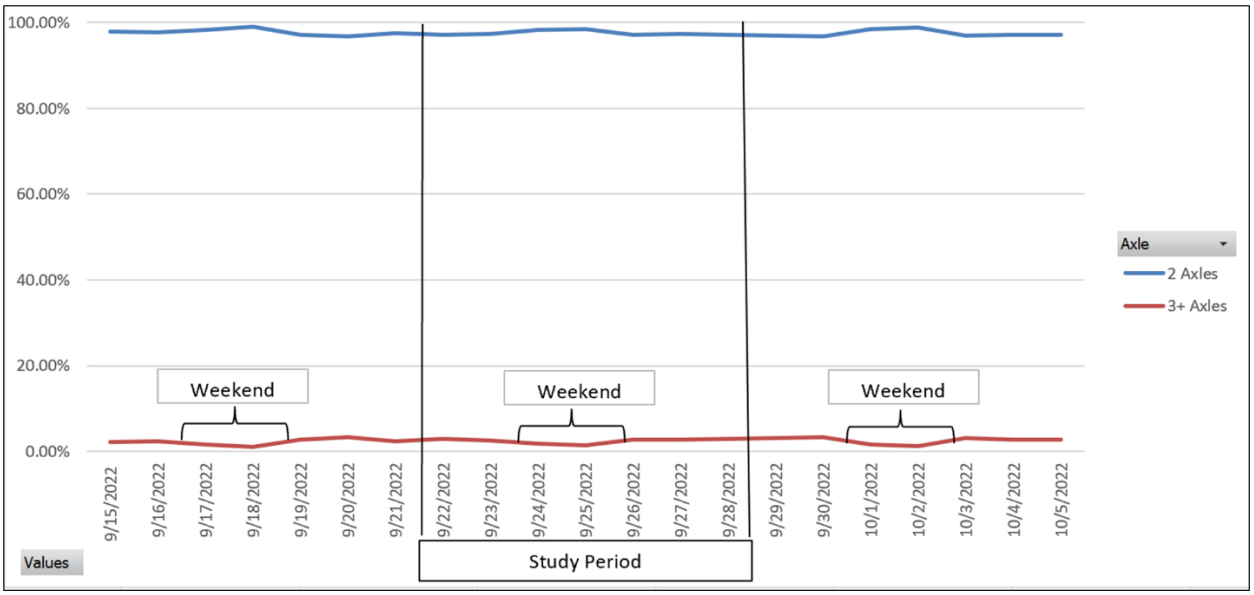
Lane 12 SB (3rd Most Right Lane)



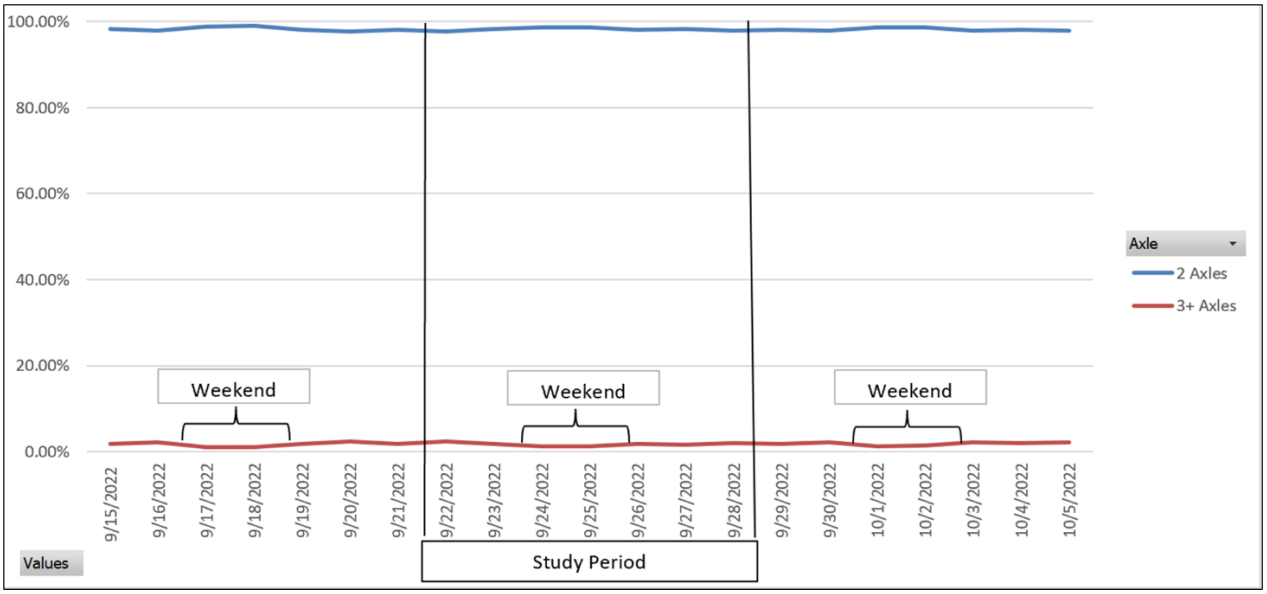
Lane 4 NB (Middle Most Lane)



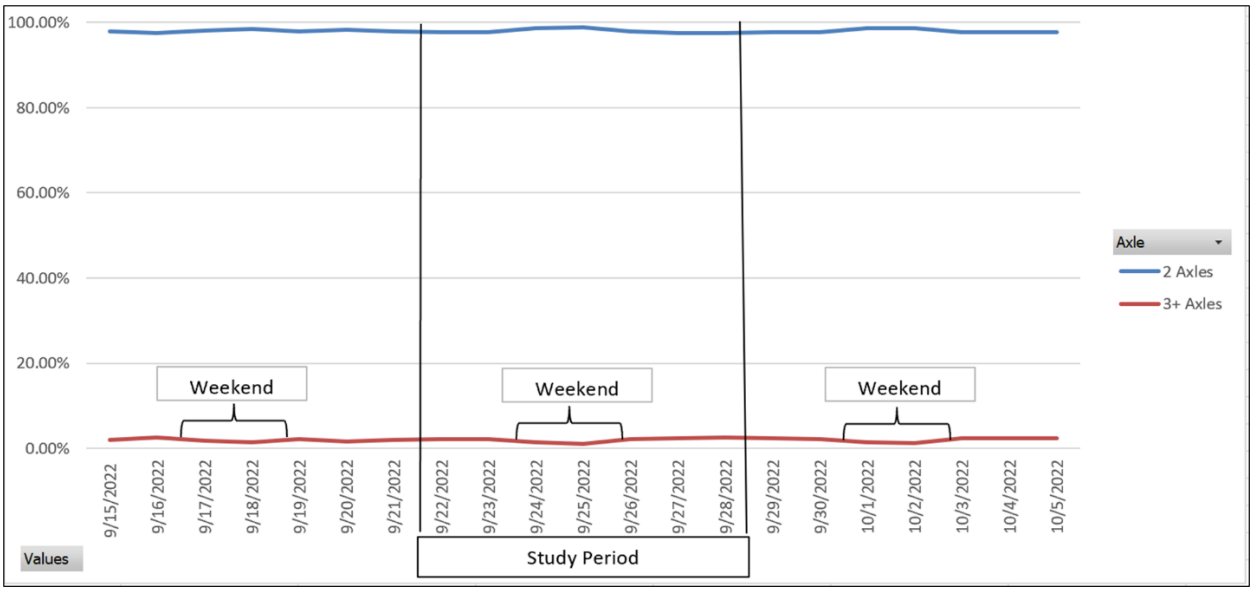
Lane 11 SB (Middle Most Lane)



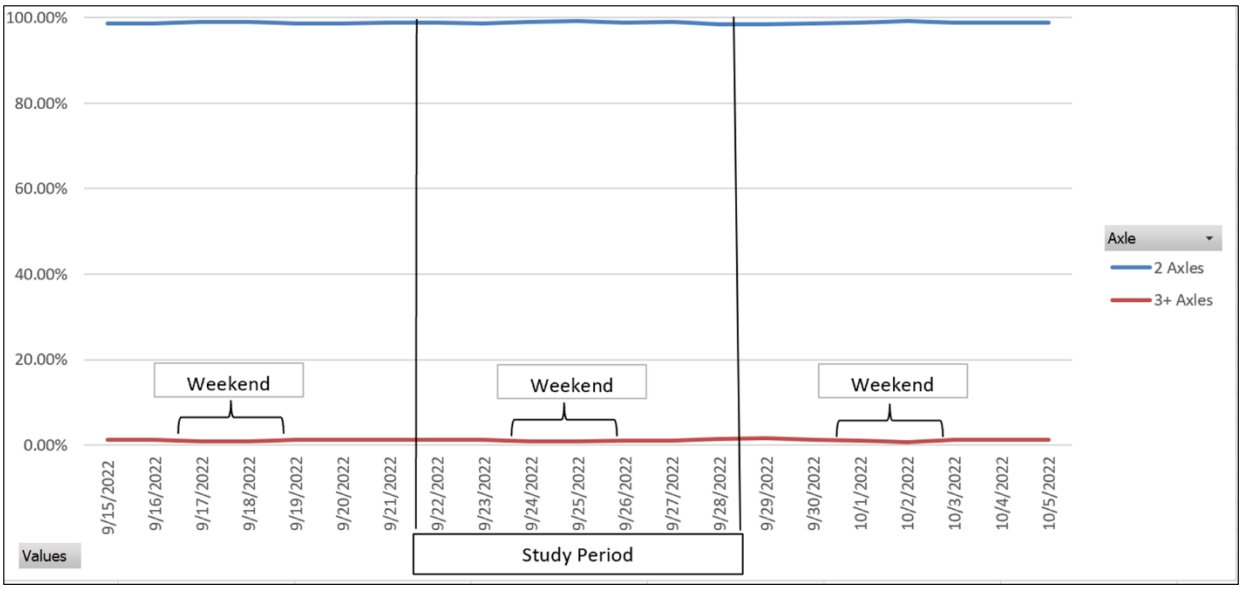
Lane 5 NB (3rd Most Left Lane)



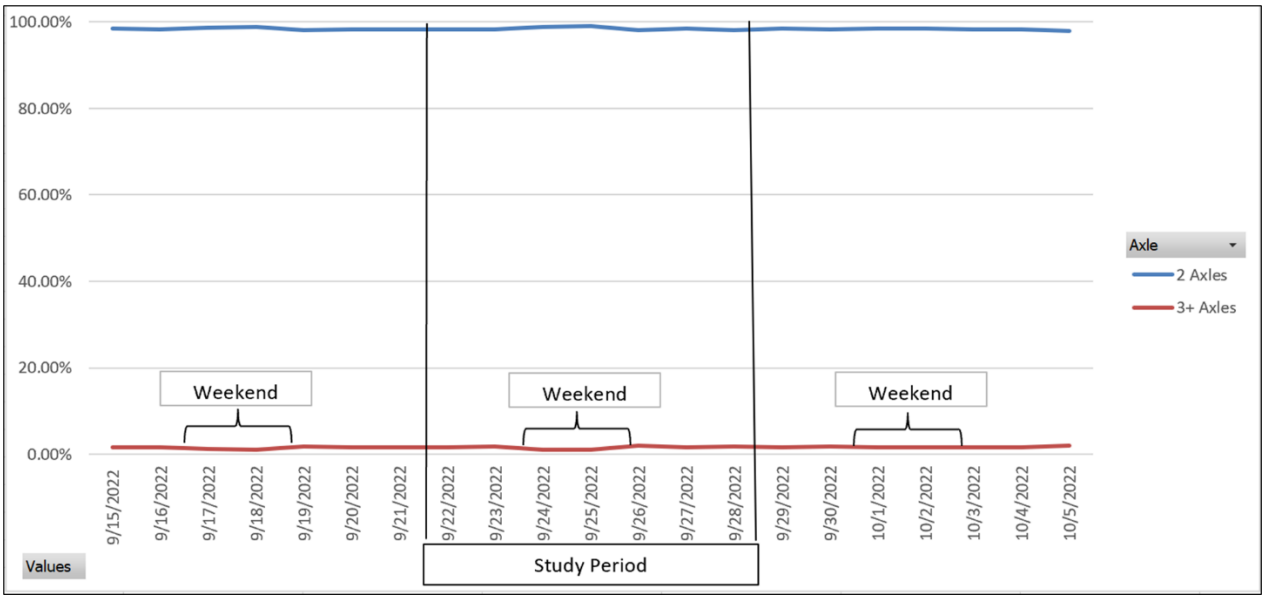
Lane 10 SB (3rd Most Left Lane)



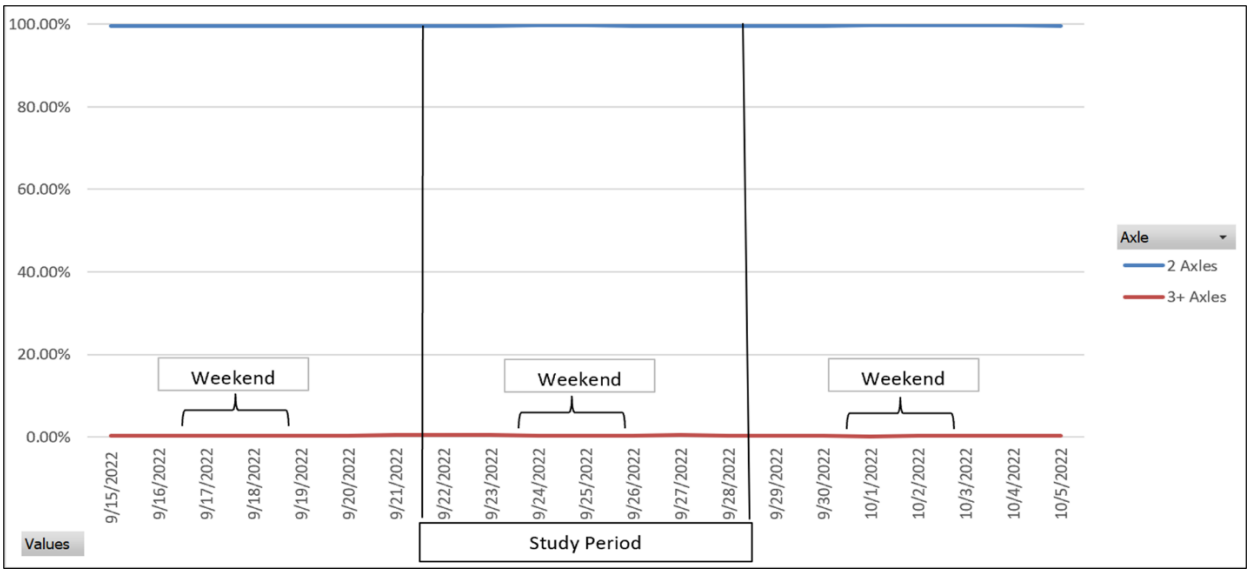
Lane 6 NB (2nd Most Left Lane)



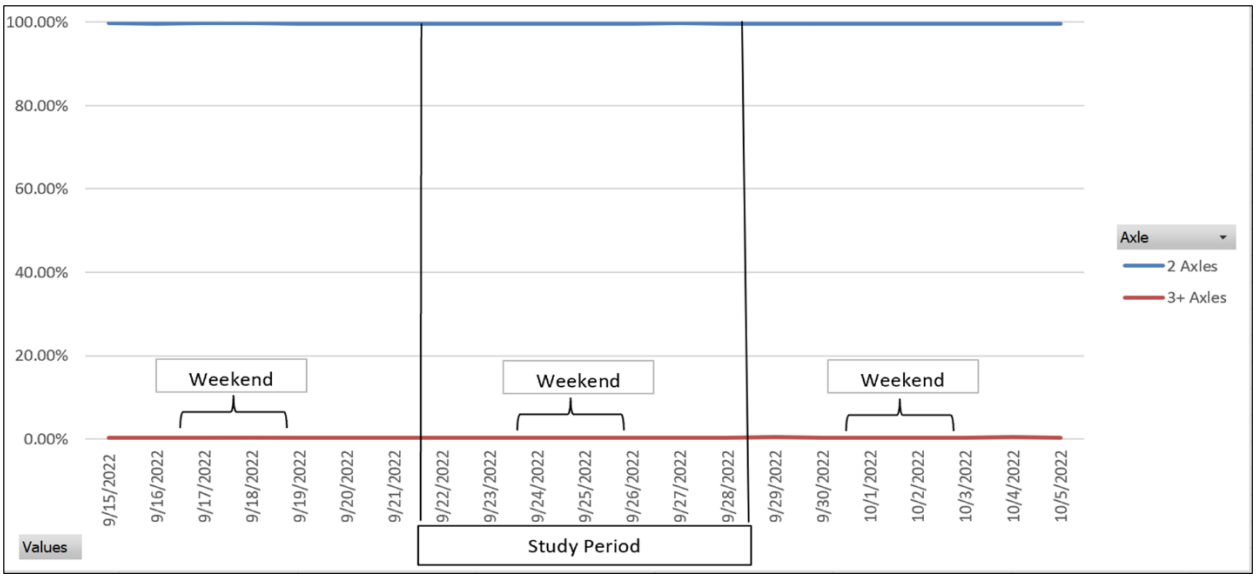
Lane 9 SB (2nd Most Left Lane)



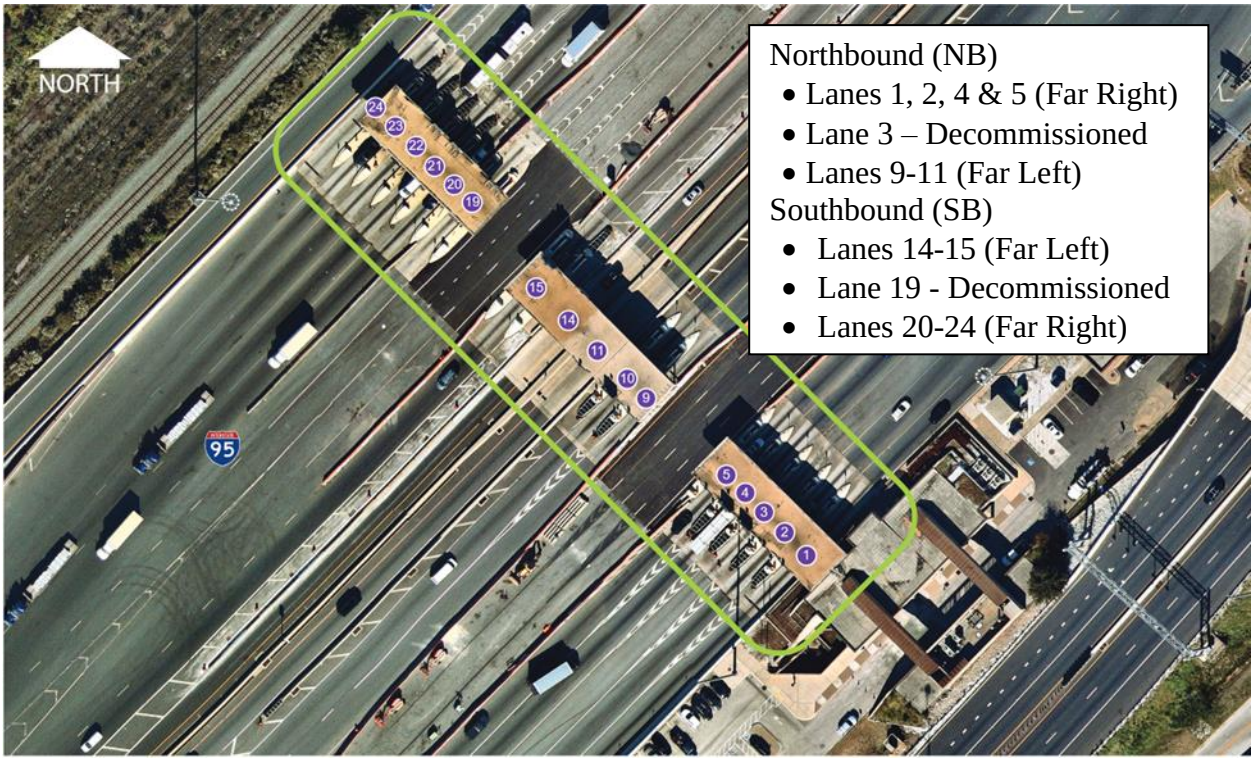
Lane 7 NB (Far Left Lane)



Lane 8 SB (Far Left Lane)



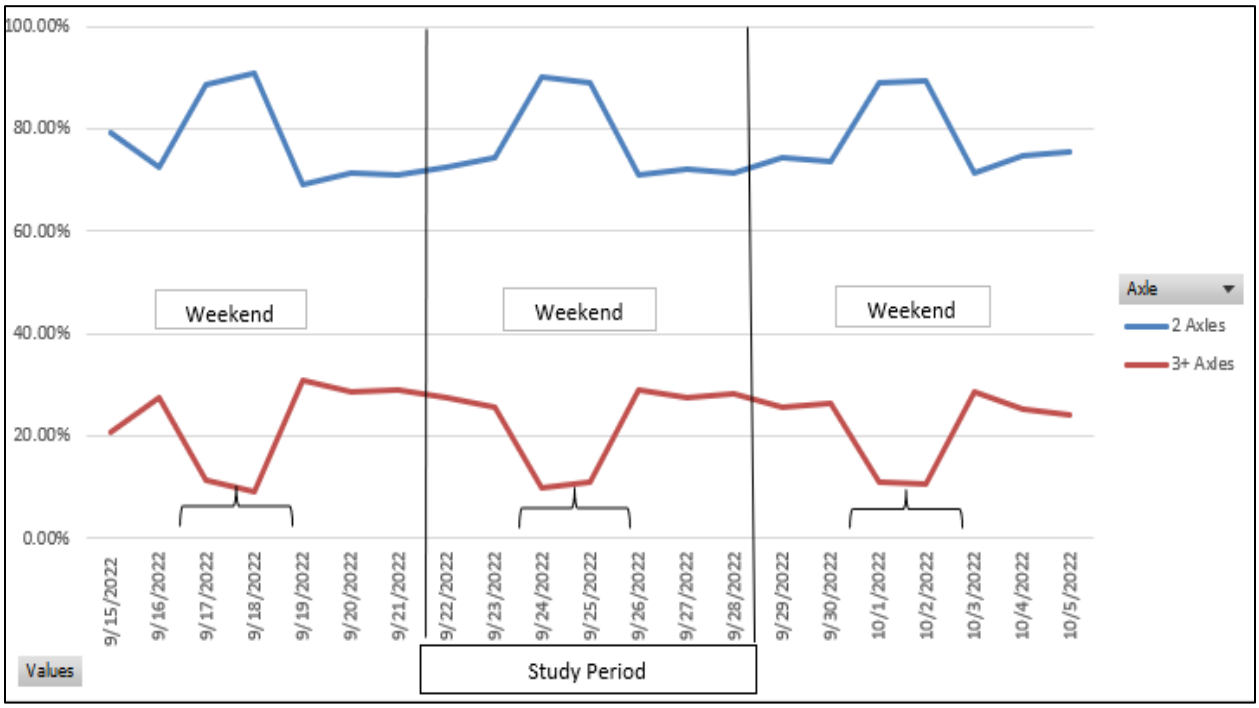
Fort McHenry Tunnel (FMT)



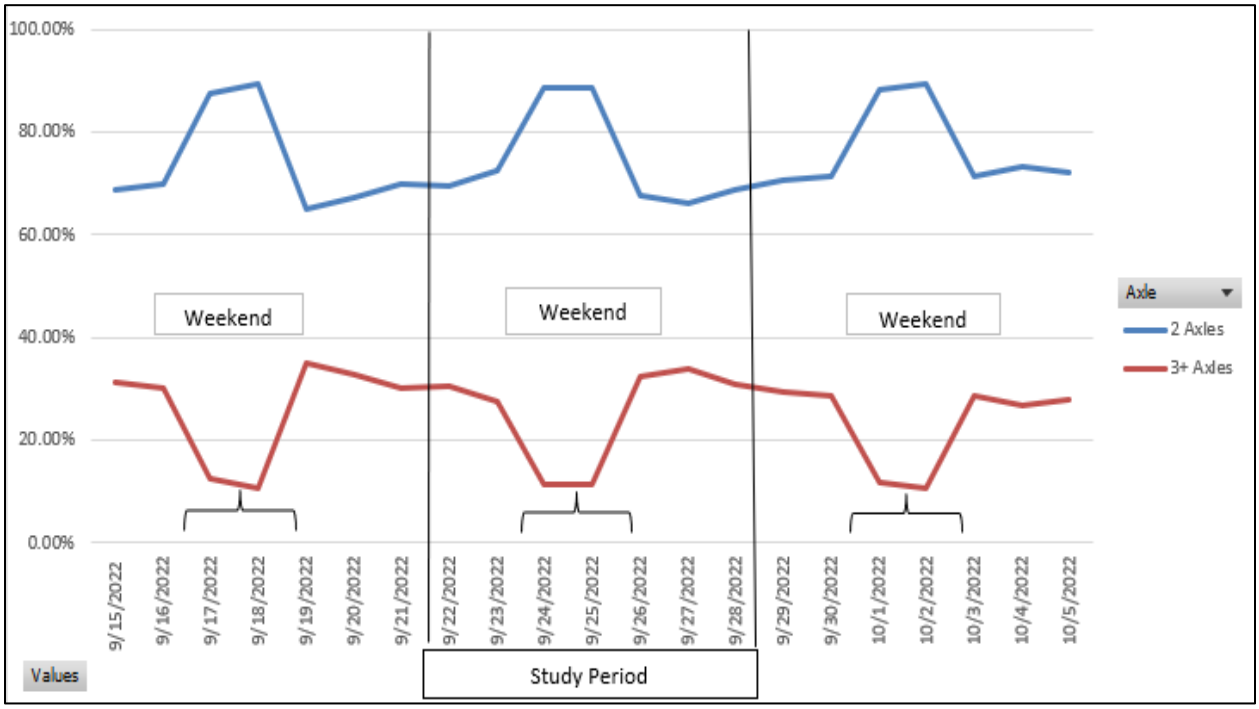
Conclusion: Vehicle classifications were accurate. As part of an AET project, the removal of the toll plaza is underway. As seen in the overhead image above, through lanes have been constructed, resulting in a group of left and right toll lanes. When comparing the NB and SB toll lanes, the SB direction has one additional toll lane in the group of lanes on the right-side of the highway and one less in the group of lanes on the left-side.

The NB and SB three most right lanes (Lanes NB: 1,2,4,5, and SB: 20,21,22,23,24) have 3+ vehicles ranging from considerable to significant. The extreme proximity of the Keith Avenue exits to the toll lanes and Key Highway exit immediate south of the tunnel portal results in more 2-axle vehicle in the far-right lanes than is generally found at other facilities. The left most lanes (lanes NB: 9,10,11 and SB: 14,15) have minimal 3+ vehicles and tapers to nearly solely 2-vehicles in the far-left lanes, except on certain days lane 10 showed a higher than anticipated number of 3-axle vehicles and therefore supplemental testing was performed to ensure vehicles were classified accurately. The supplemental testing revealed all vehicles were classified correctly (see the following pages).

Lane 1 NB (Far Right)

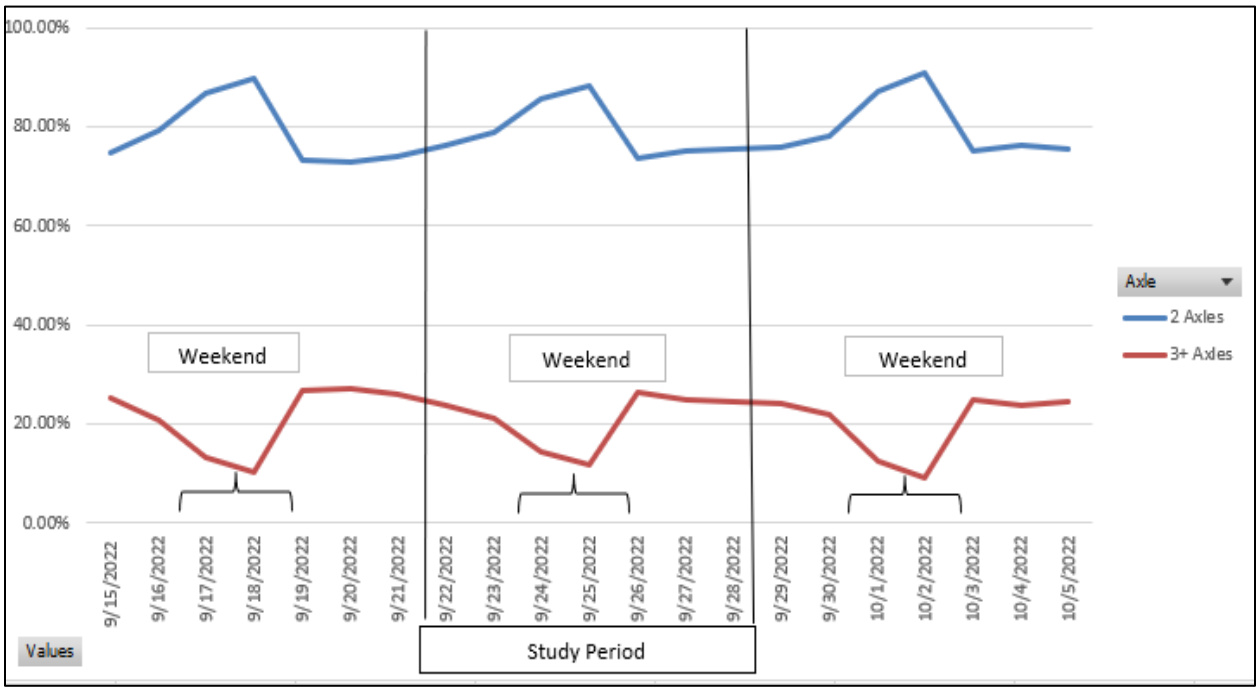


Lane 24 SB (Far Right)

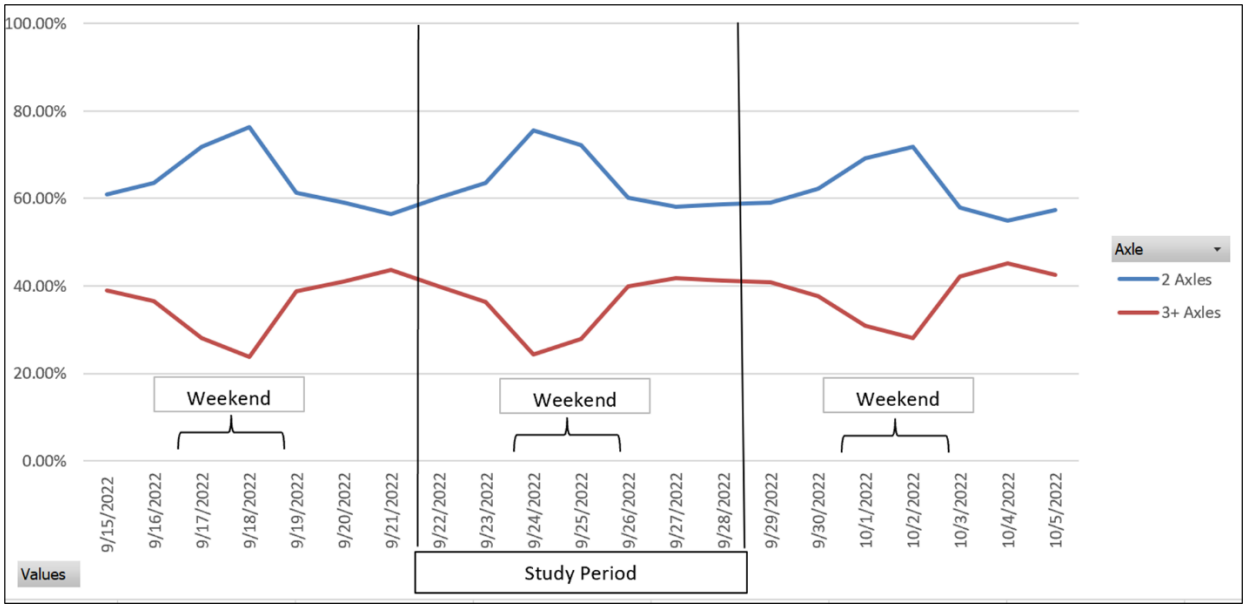


Lane 2 NB (2nd Most Right Lane)

Lane 23 SB (2nd Most Right Lane)

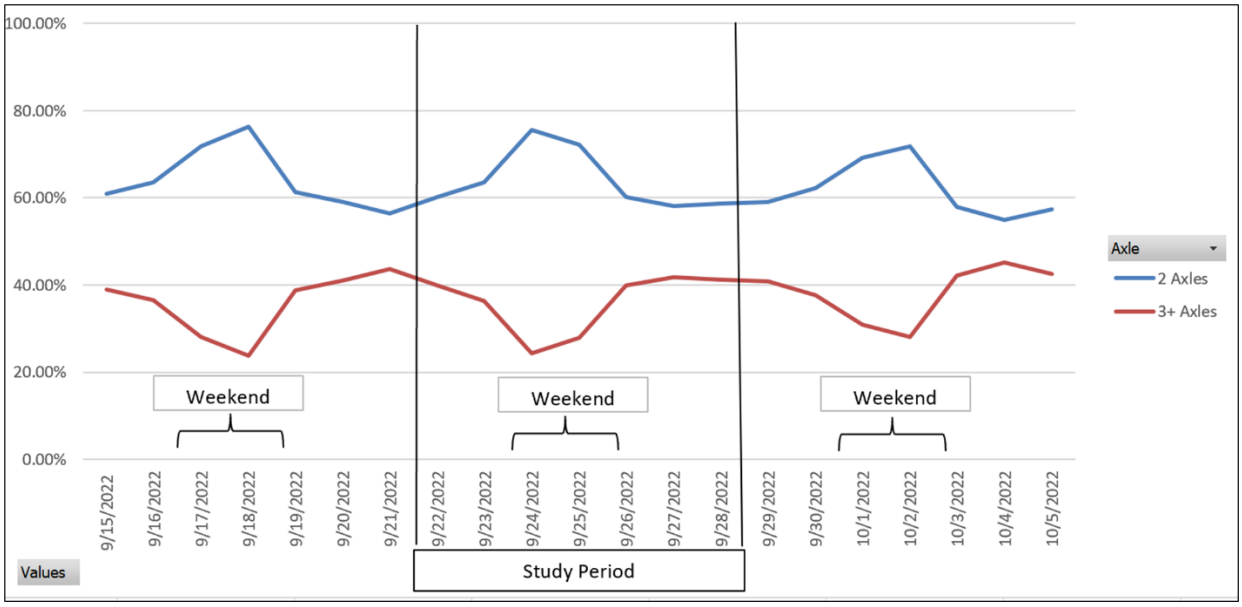


Lane 4 NB (3rd Most Right Lane)

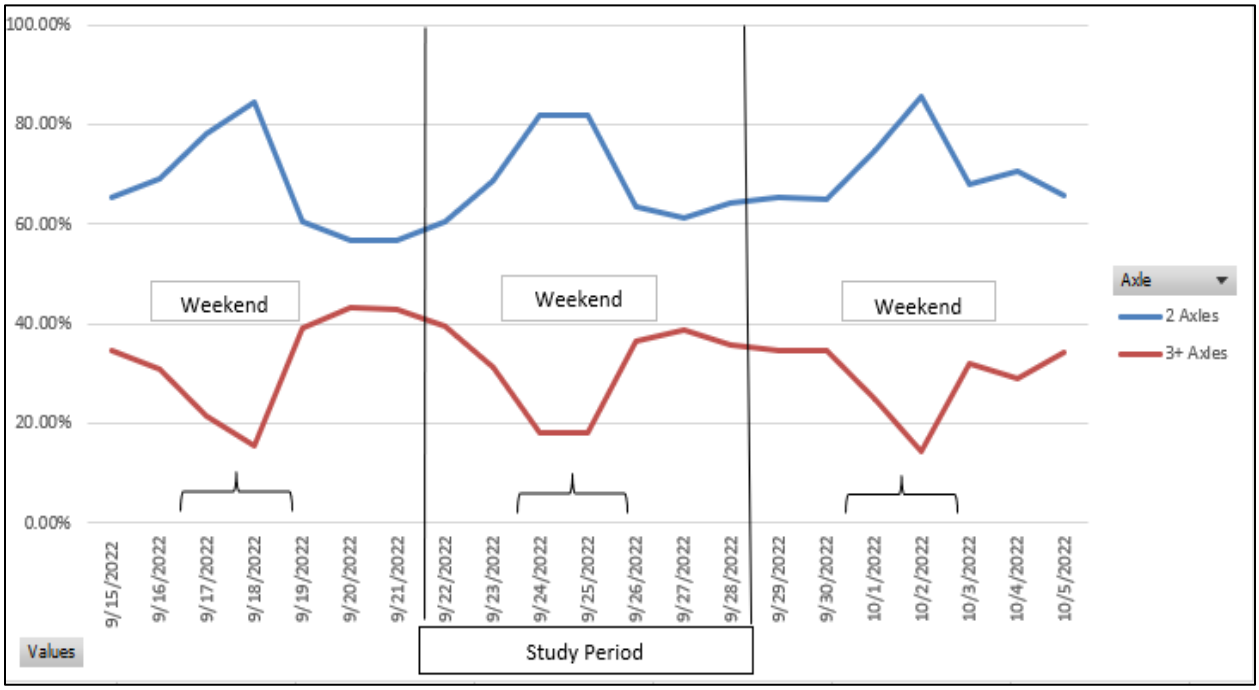


Lane 22 SB (3rd Most Right Lane)

Lane 4 NB (4th Most Right Lane)

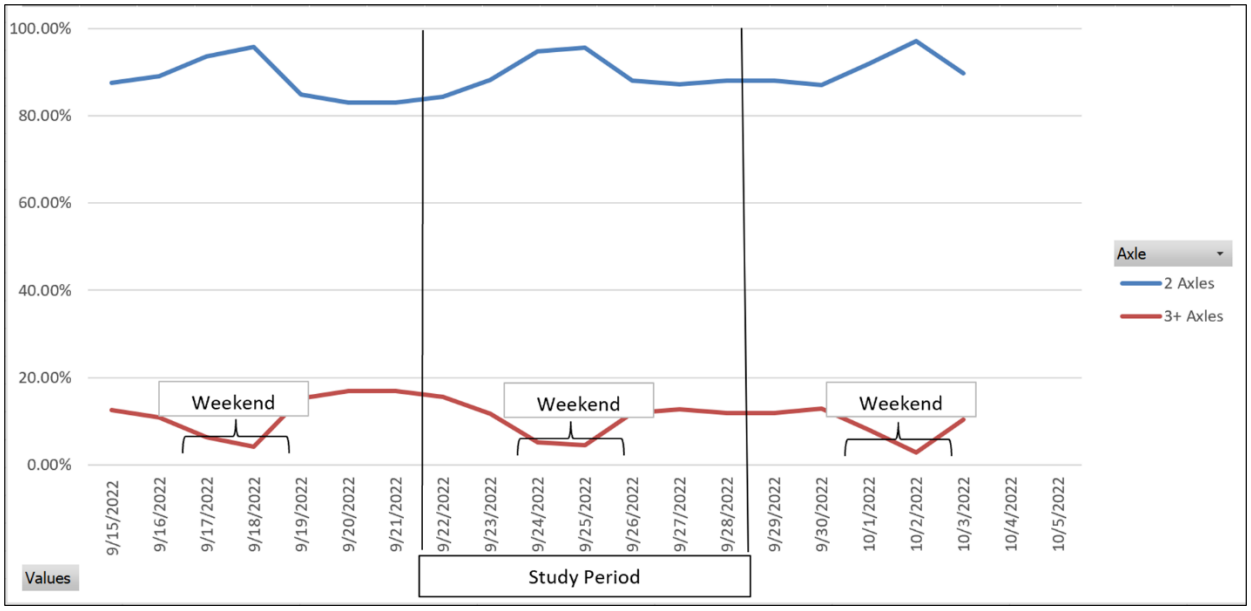


Lane 21 SB (4th Most Right Lane)

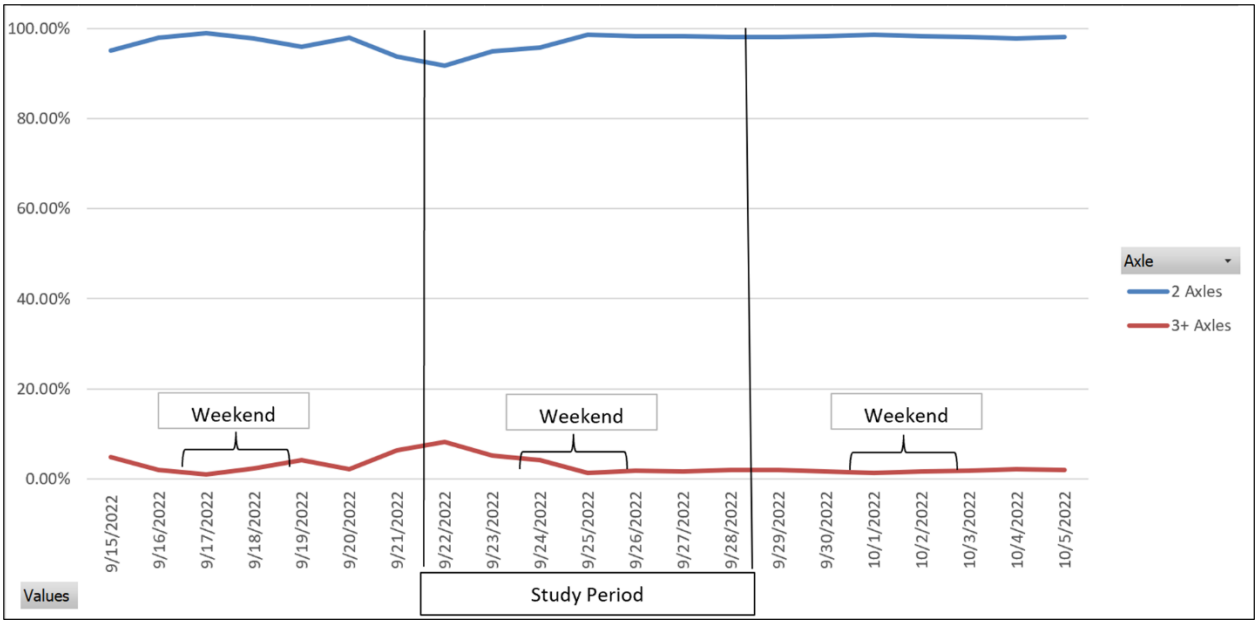


Note: Lanes 20 and 9 are not comparable due to the toll lane configuration

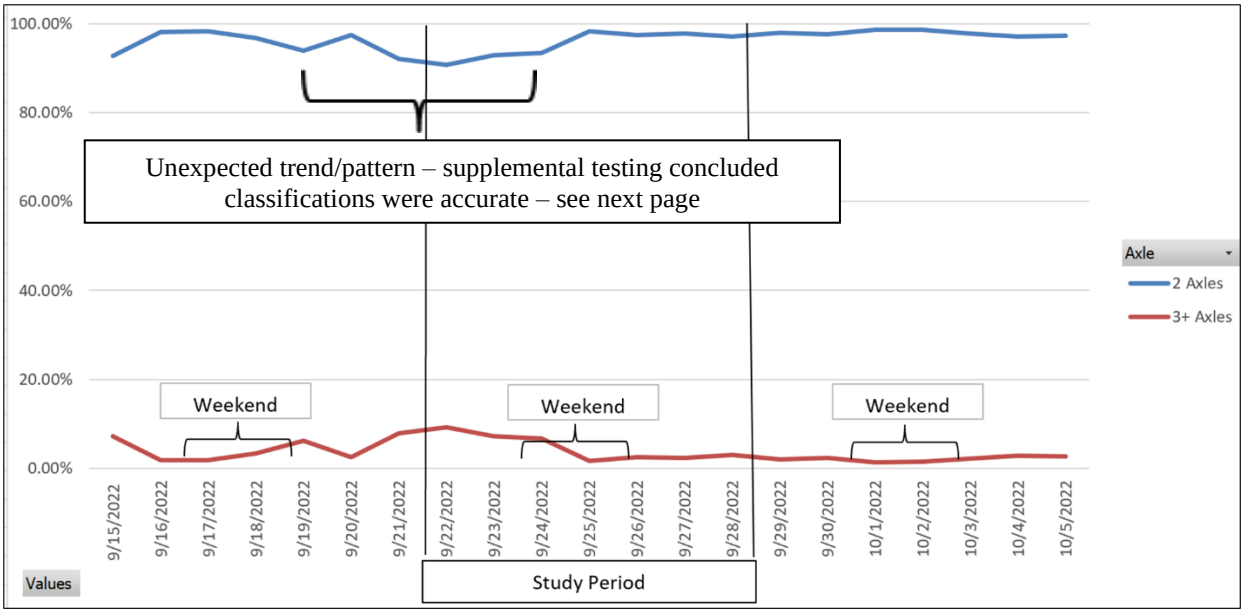
Lane 20 SB (5th Right Most Lane)



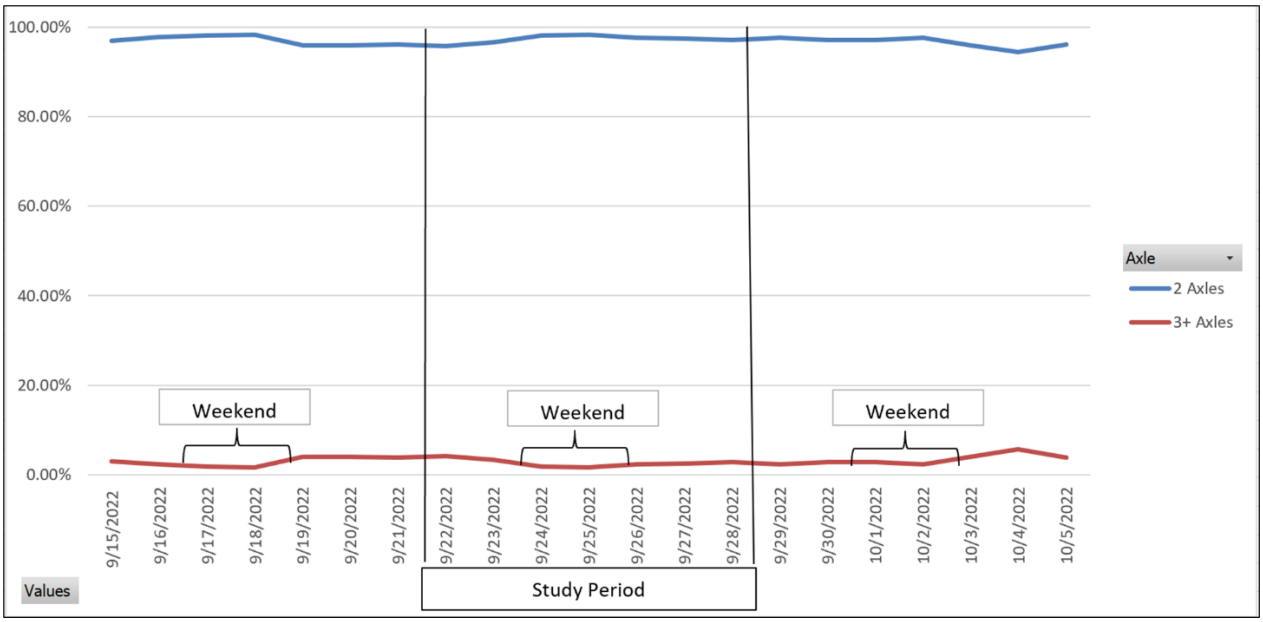
Lane 9 NB (3rd Most Left Lane)



Lane 10 NB (2nd Most Far Left Lane)



Lane 15 SB (2nd Most Far Left Lane)



Lane 10, the second most left lane northbound, classification patterns were disrupted on September 21-24, 2022. The lane captured a higher percentage of 3+ axle vehicles than normal. To ensure the pattern change was an anomaly, a random sample of 3+ axle transactions was selected for supplemental testing and manually reviewed to ensure the system accurately classified vehicles. The image of the vehicle associated with the selected transactions was reviewed.

TRANSACTION DESCRIPTION	NUMBER OF TRANSACTIONS
Total	32,293
3 or more axle	1,148
Random Sample[1]	57

The random sample consisted of the following:

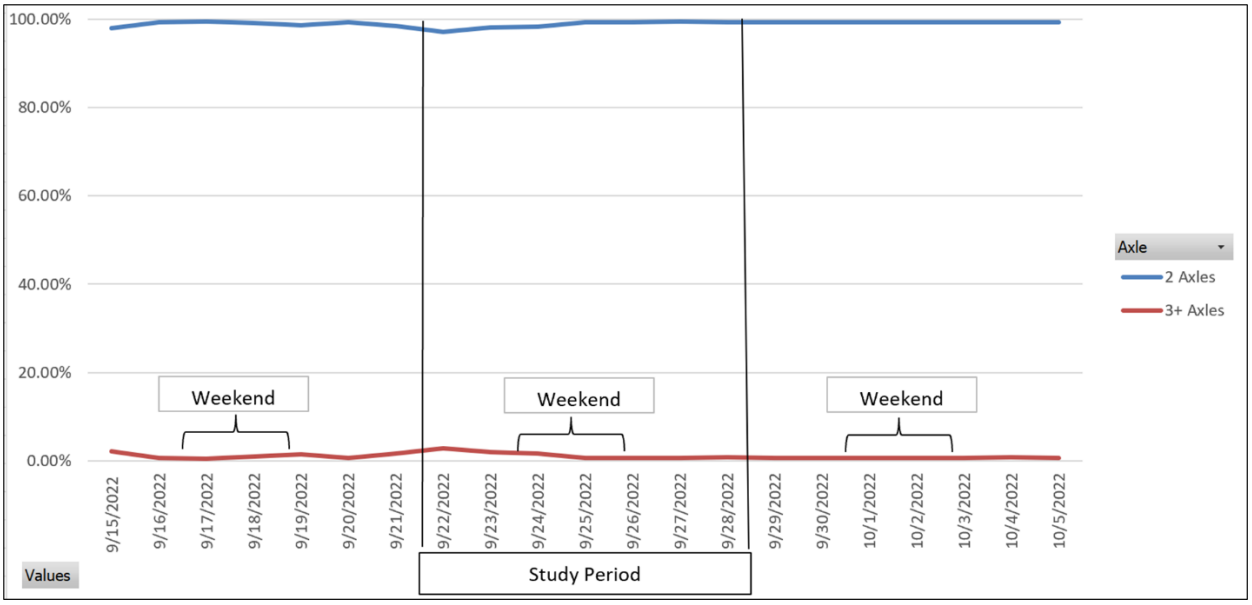
DATE	NUMBER OF TRANSACTIONS
9/21/22	13
9/22/22	23
9/23/22	10
9/24/22	11

CLASSIFICATION/AXLE	NUMBER OF TRANSACTIONS
3	10
4	11
5	35
6	1

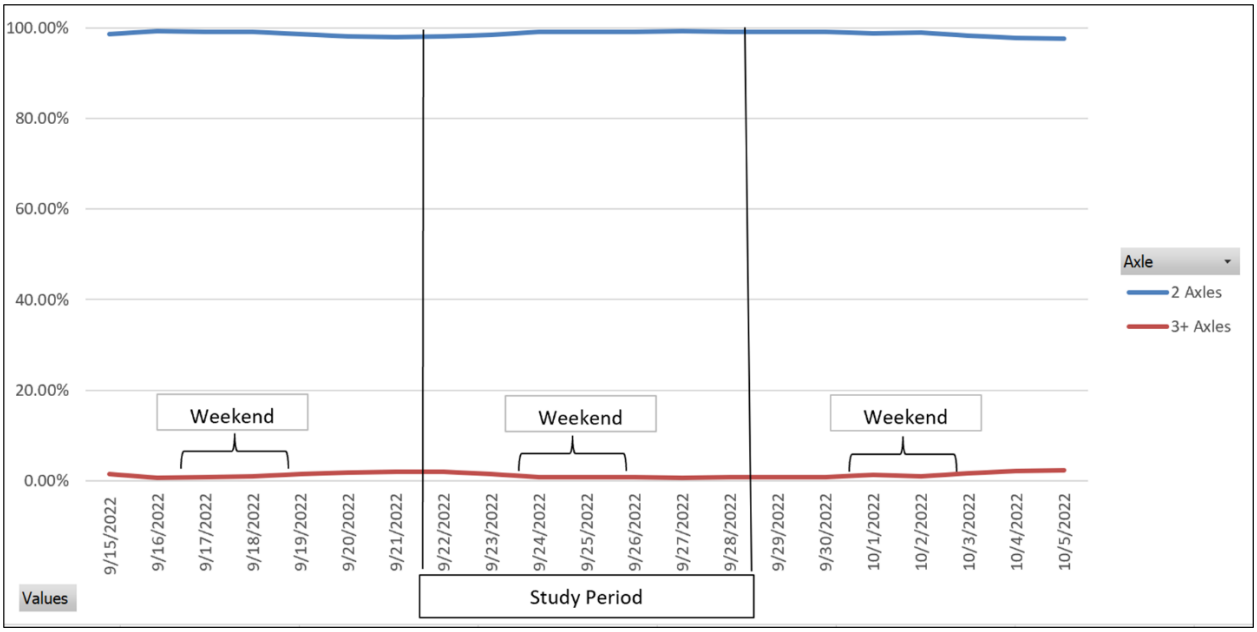
The tolling system properly classified 57 of the 57 transactions reviewed.

[1] The random sample was selected using the Microsoft Excel Random Selection function.

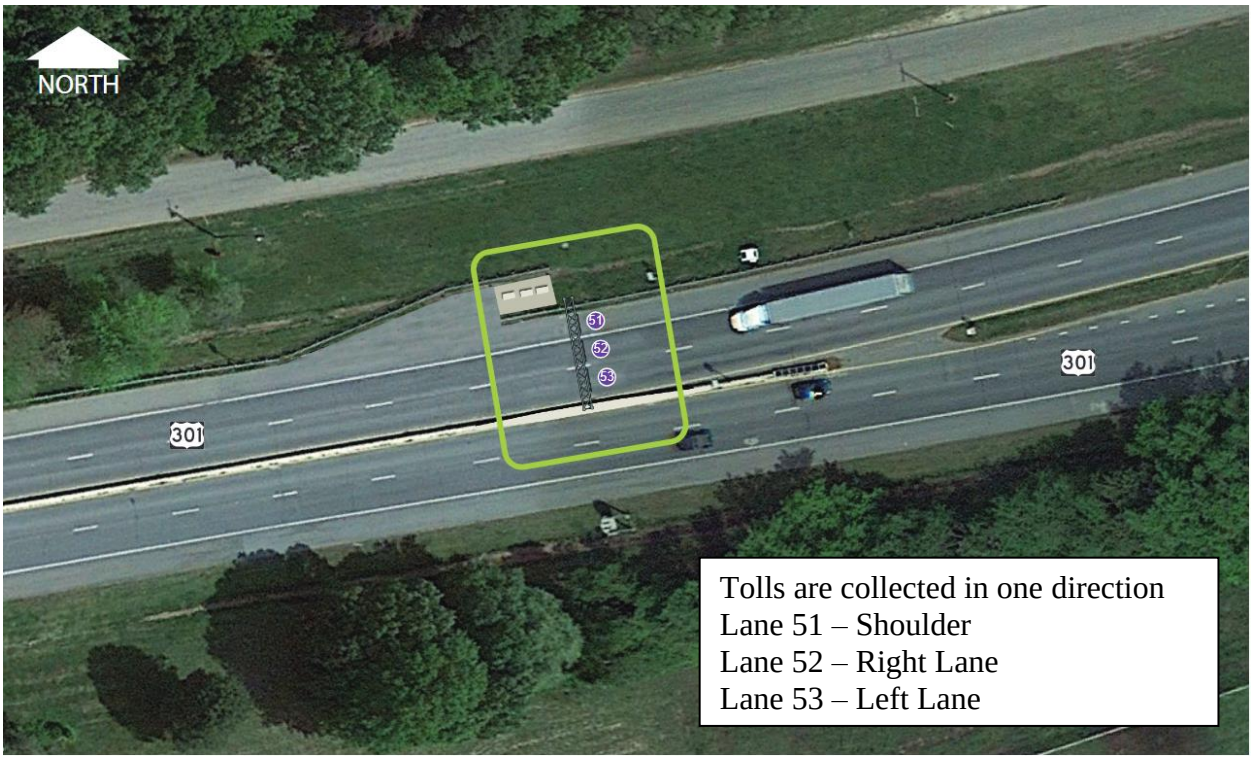
Lane 11 NB (Far Left Lane)



Lane 14 SB (Far Left Lane)

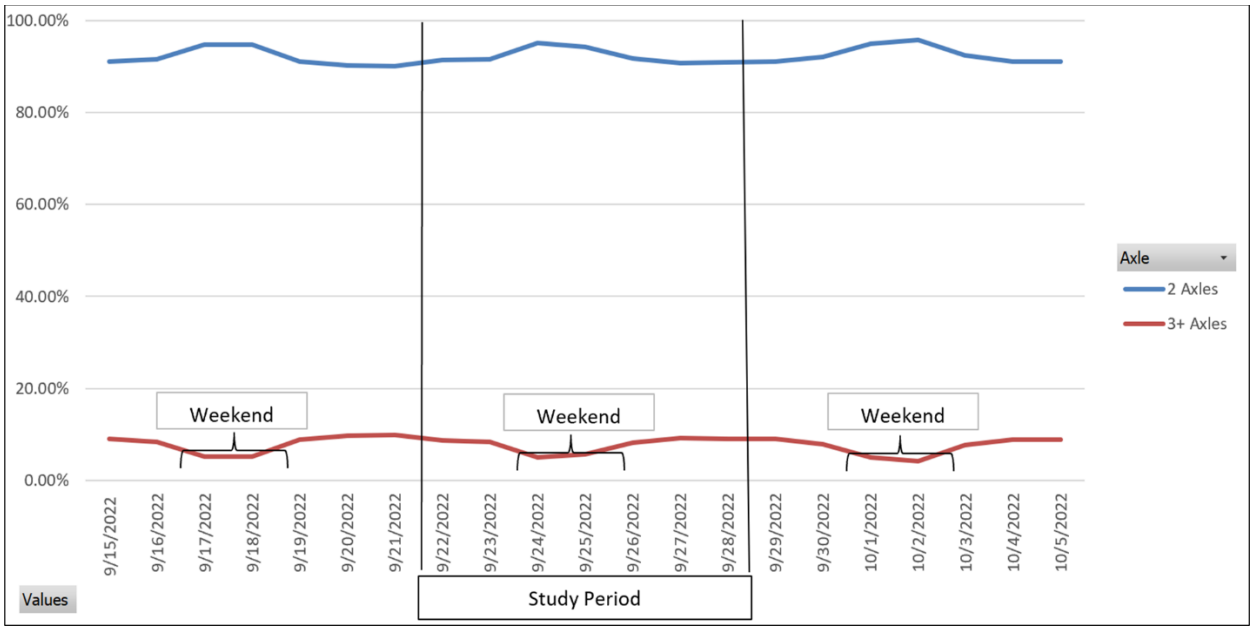


Governor Harry W. Nice Memorial/Senator Thomas "Mac" Middleton Bridge
(HWN/Middleton)



Conclusion: Vehicle classifications were accurate. The facility was largely utilized by 2-axle, with some 3+ axle vehicles (see the following pages).

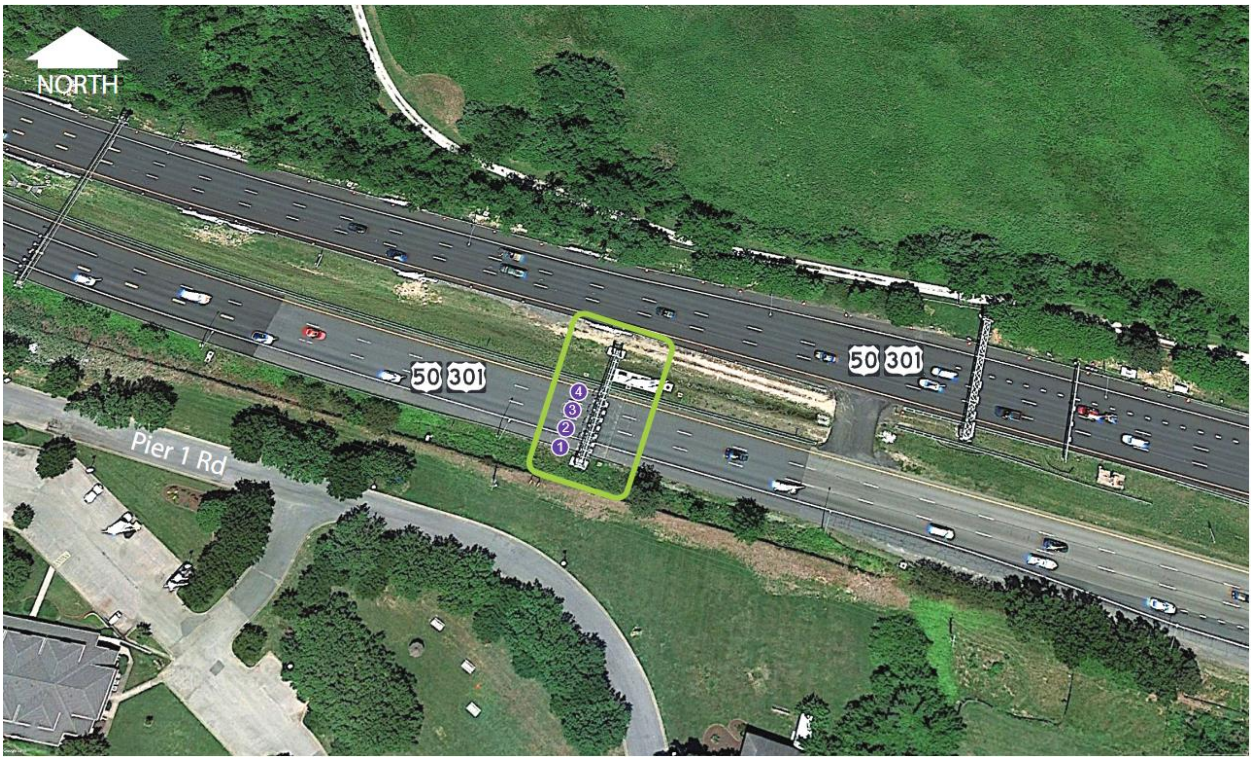
Lane 52 (Right Lane)



Lane 53 (Left Lane)

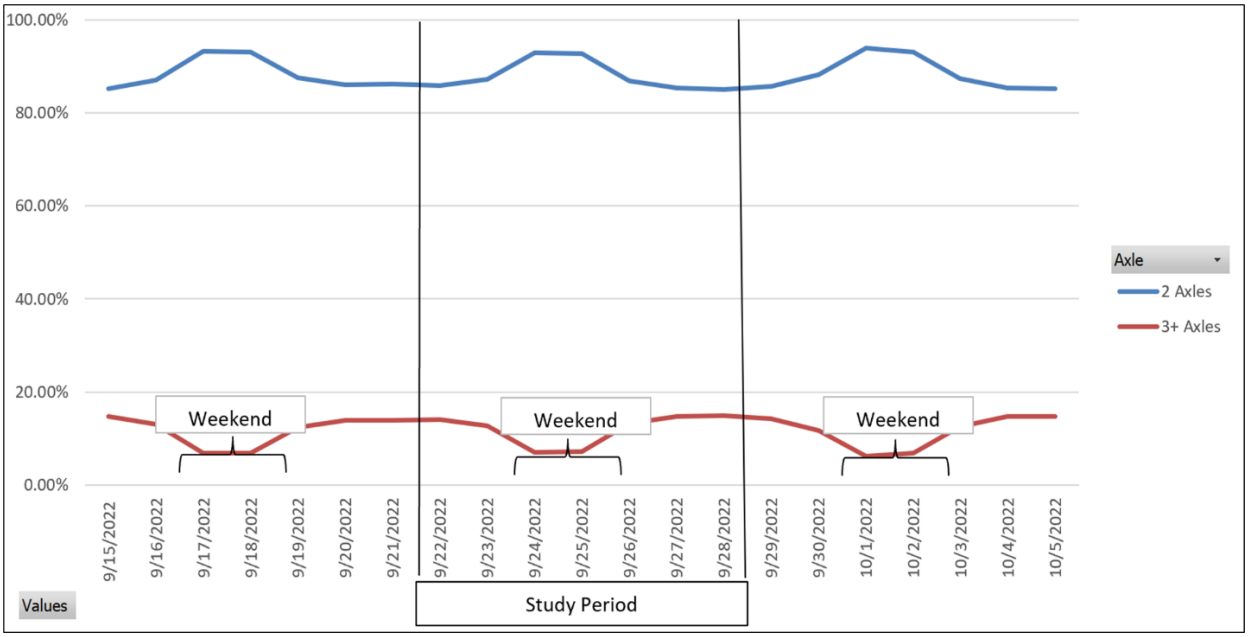
The left lane, lane 53, was closed due to construction for a substantial portion of the study period as well as the weeks prior to and after the study period. As such a traffic composition pattern did not exist and could not be used for this study. During the three-week period, 3.3% of total trips were captured in this lane.

William Preston Lane Jr. Memorial (Bay) Bridge (US 50/301)

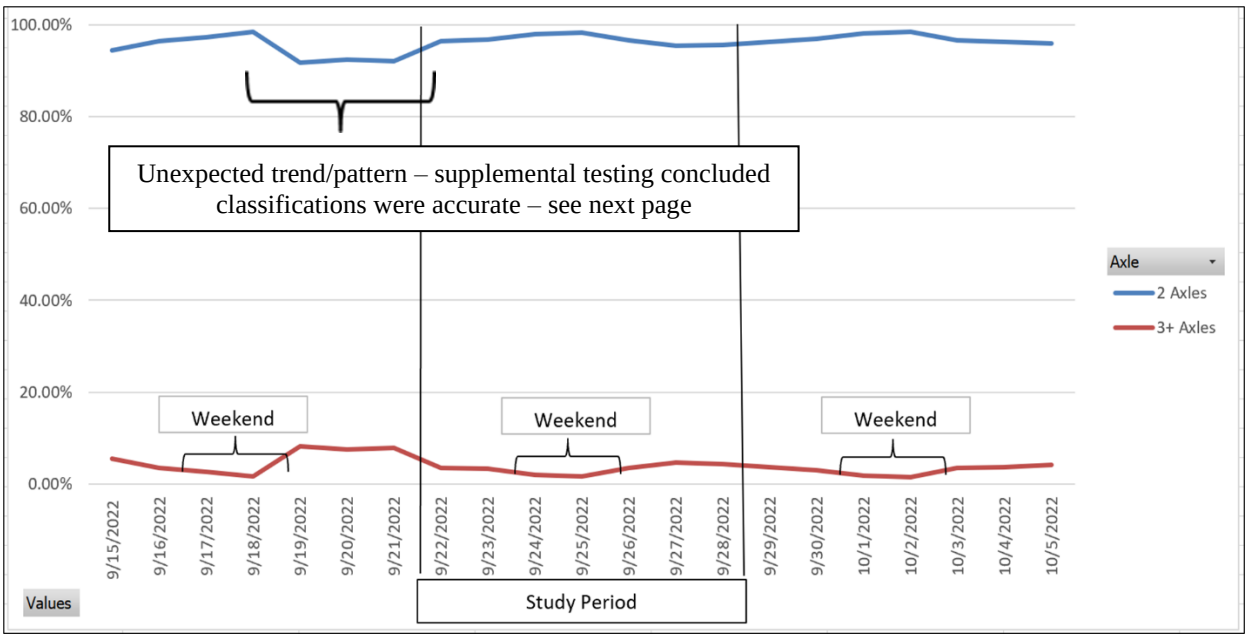


Conclusion: Vehicle classifications were accurate. The right lane had some 3+ vehicles and the left lane was nearly entirely 2-axle vehicles. The center lane, during the study period and week preceding the study period, were nearly entirely 2-axle vehicles; however, the week preceding the study period showed higher than normal 3+ axle vehicles and therefore supplemental testing was performed. The supplemental testing with manual review found all vehicles were properly classified, except two vehicles were potentially under classified (i.e., charged a lower toll rate).

Lane 2 (Right Lane)



Lane 3 (Center Lane)



Although not part of the study period, the center lane classification pattern was disrupted on September 19-21, 2022. To ensure the pattern change was an anomaly, a random sample of 3+ axle transactions was selected to be manually reviewed to ensure the system accurately classified vehicles. The image of the vehicle associated with the selected transactions was reviewed.

TRANSACTION DESCRIPTION	NUMBER OF TRANSACTIONS
Total	45,807
3 or more axle	2,045
Random Sample[2]	50

The random sample consisted of the following:

DATE	NUMBER OF TRANSACTIONS
9/19/22	19
9/20/22	7
9/21/22	24

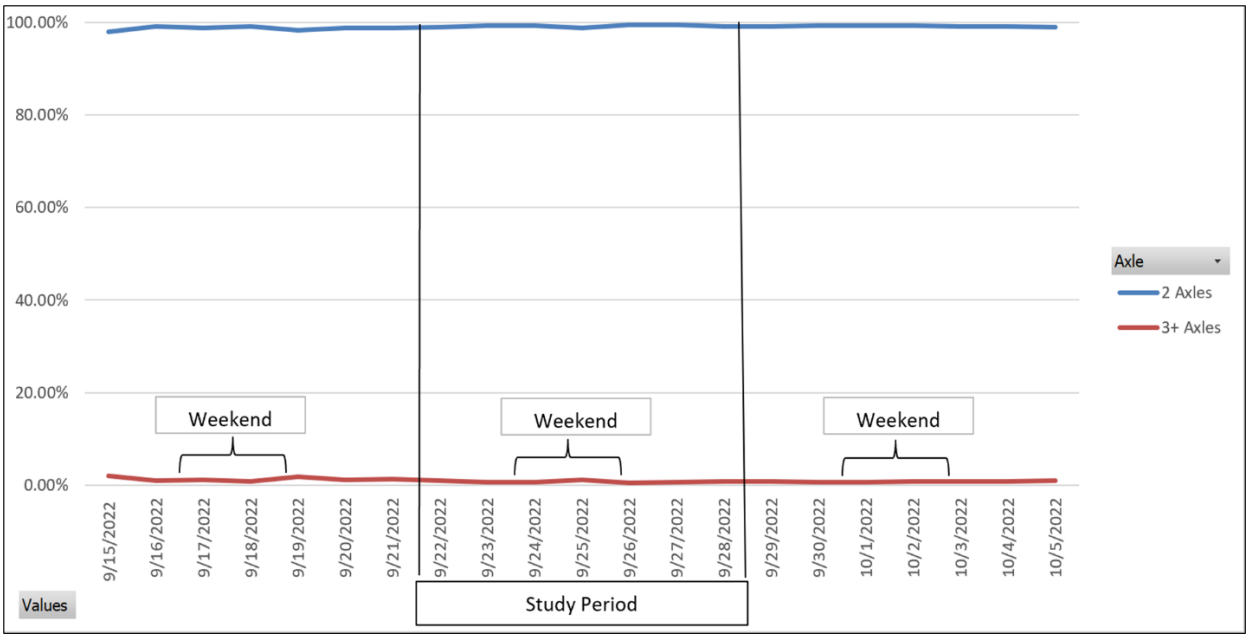
CLASSIFICATION/AXLE	NUMBER OF TRANSACTIONS
3	15
4	10
5	25

The Tolling System properly classified 48 of the 50 trips and potentially under classified two of the trips, which would result in charging at a lower toll rate. As background, in an All-Electronic Tolling (AET) loops are installed in the roadway to separate vehicles and count axles. The loops count axles by detecting the metal in a vehicle's tires.

Regarding the two trips that may have been under classified, the first vehicle was a truck towing an empty 2-axle boat trailer. The system classified the vehicle as 3-axle. Empty light trailers often bounce (tires lift off the roadway). As such, likely one of the axles was not detected resulting in the customer being undercharged. The second transaction was a 5-axle empty truck, with two tag axles (axles that can be raised and lowered by the driver based on the weight the vehicle is carrying). When the tag axles are risen, the vehicle is 3-axle. The vehicle was classified as 3-axle. The photo of the vehicle occurred slightly before the loops, one of the tag axles was clearly raised and the other tag axle was down at the time of the photo but may have been in the process of being raised since the truck was empty.

[2] A random sample was selected using the Microsoft Excel Random Selection function.

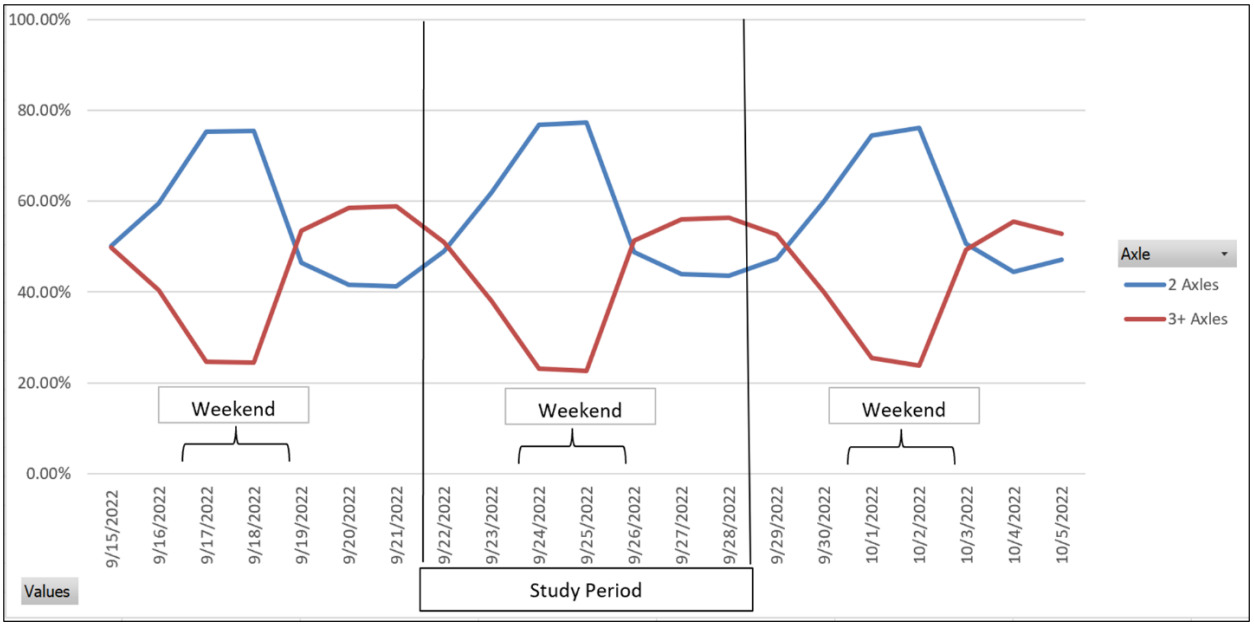
Lane 4 (Left Lane)



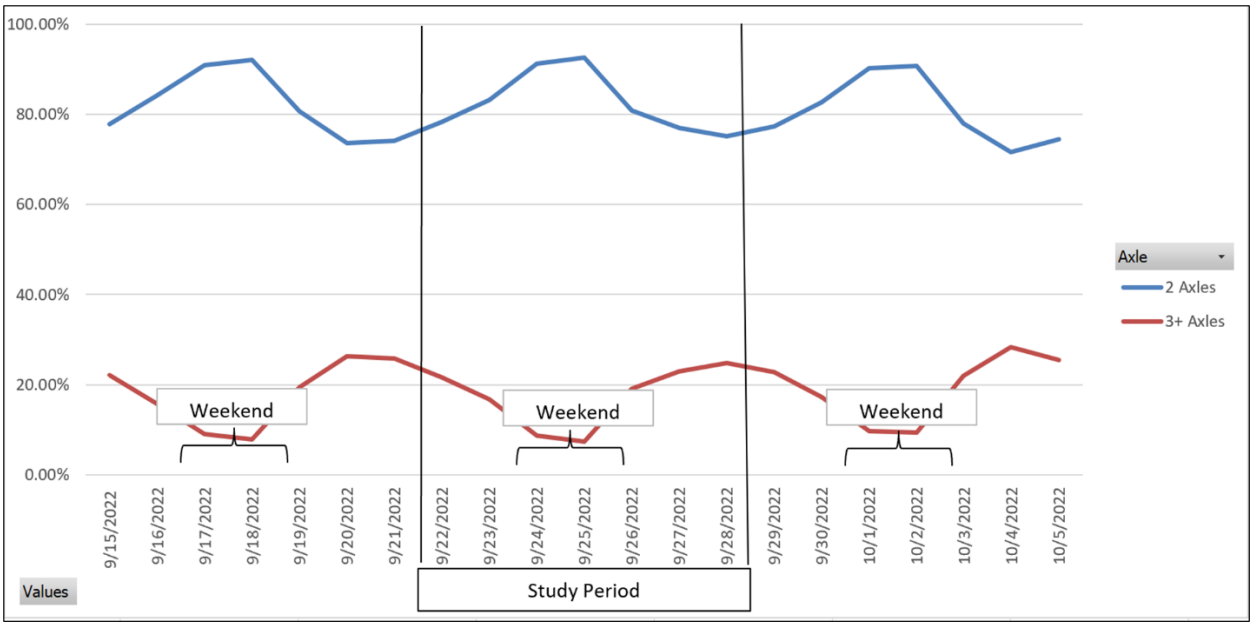
John F. Kennedy Memorial Highway (JFK)

Conclusion: Vehicle classifications were accurate. The right lane had significant 3+ axle vehicles, the center lane had less 3+ axle vehicles and the left lane is nearly entirely 2-axle vehicles.

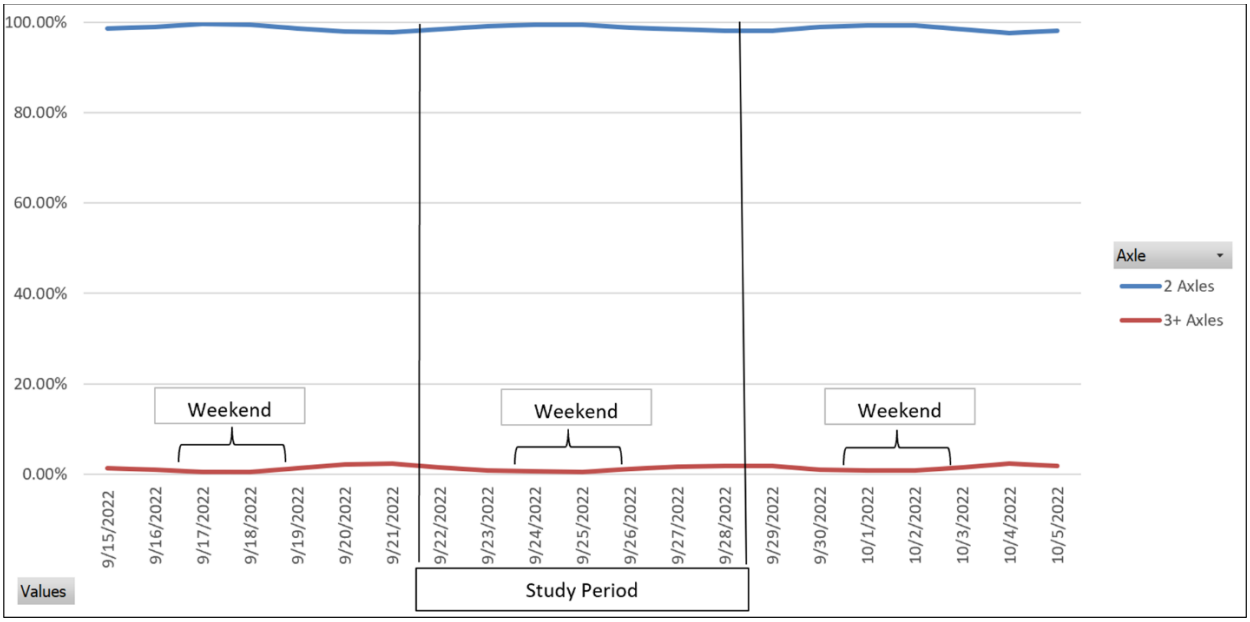
Lane 52 (Right Lane)



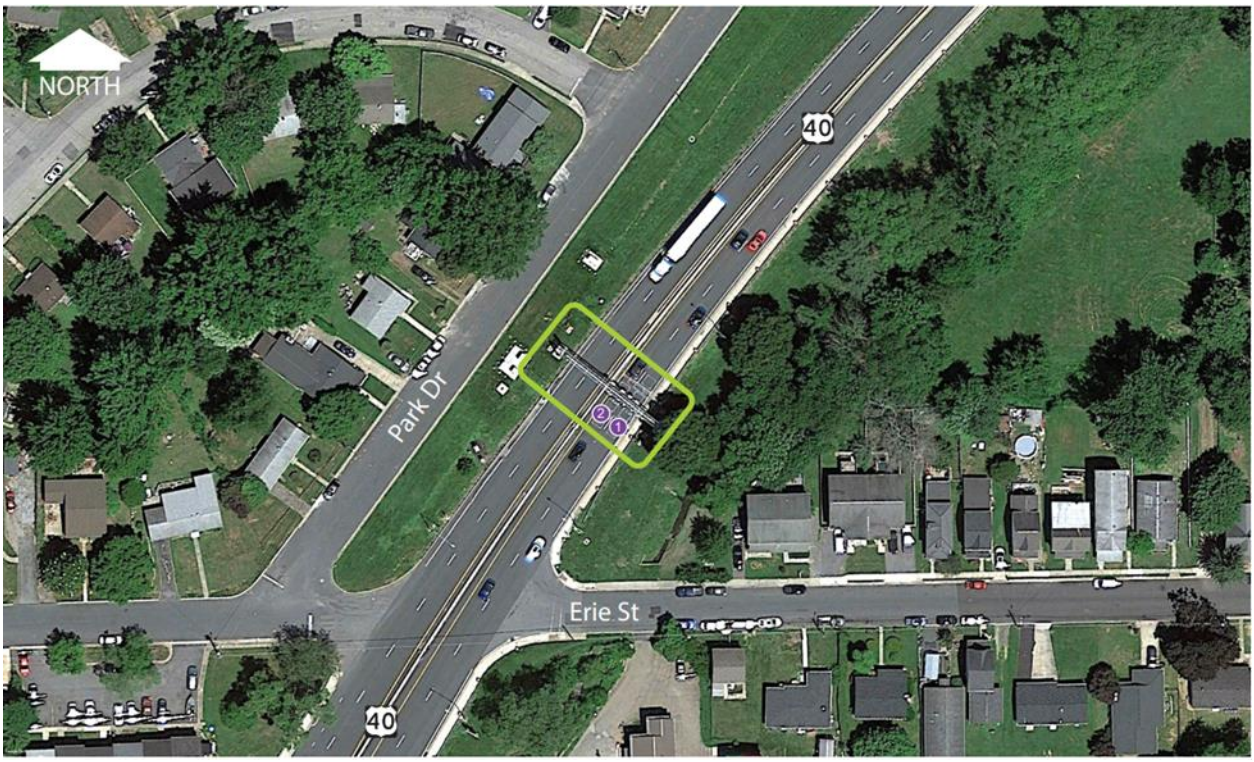
Lane 53 (Center Lane)



Lane 54 (Left Lane)

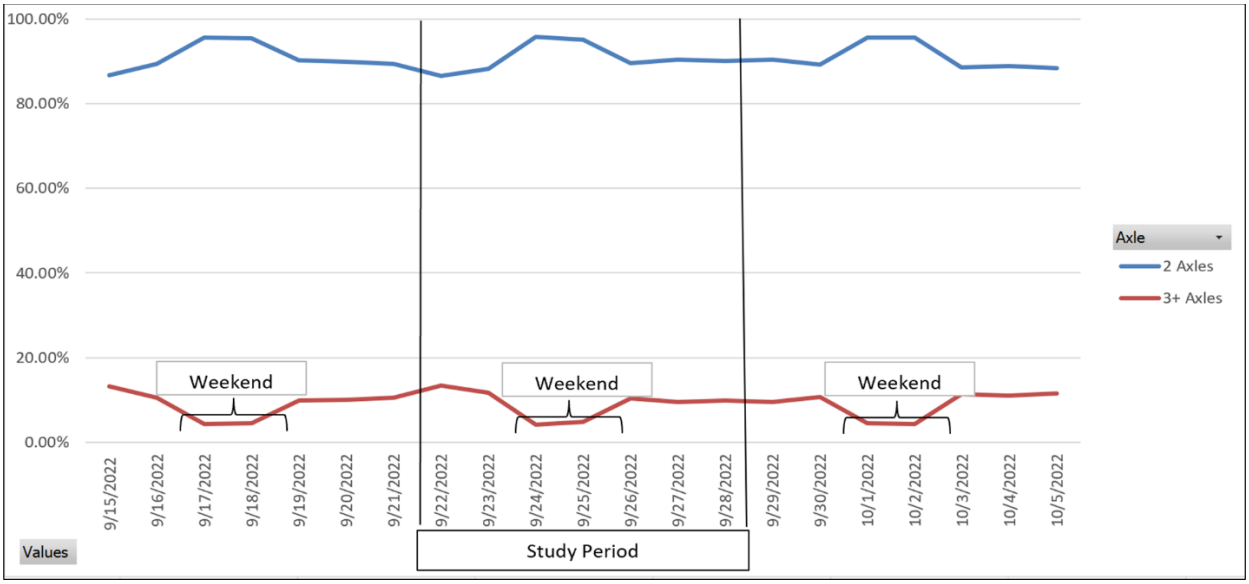


Thomas J. Hatem Memorial Bridge (TJH)

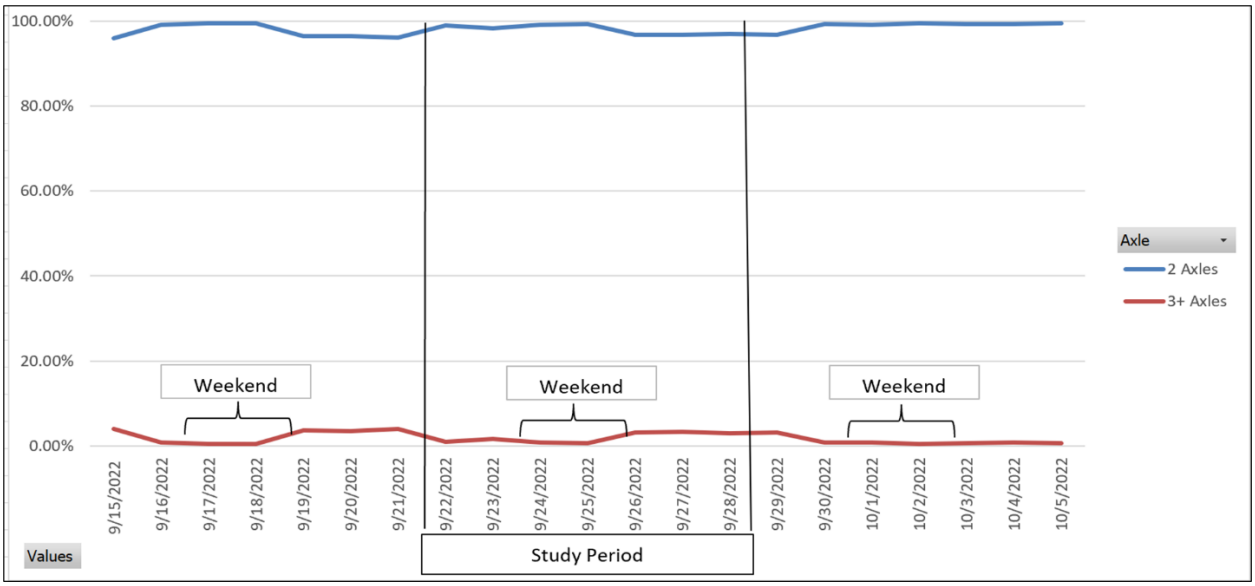


Conclusion: Vehicle classifications were accurate. The right lane had some 3+ axle vehicles and the left lane was nearly entirely 2-axle vehicles.

Lane 1 (Right Lane)



Lane 2 (Left Lane)



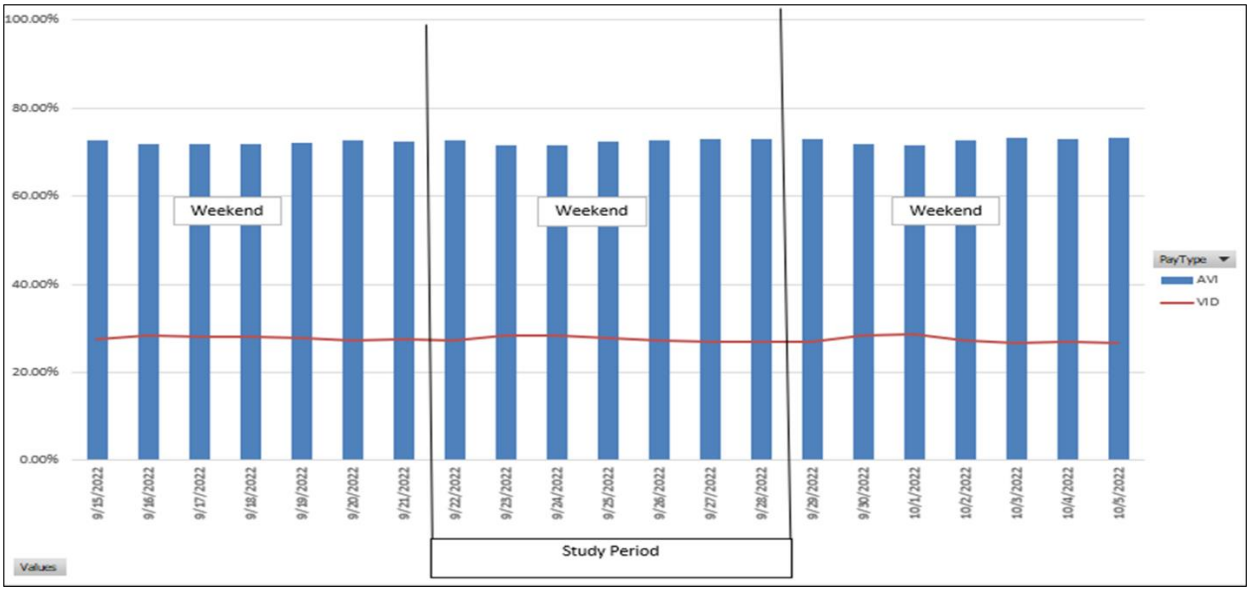
Appendix III

Appendix III is a continuation of evaluating the transponder detection/read recognition in relation to image-based transactions (a.k.a. VID as shown in the graphs on the following pages). The consistent detection/read patterns provide a high level of confidence that the system is recognizing transponders when present in the vehicle and properly mounted. Deviations in patterns may be indicative a potential system issue. When tolls are collected in two-directions, the graphs grouped to display the corresponding lane in the opposite direction.

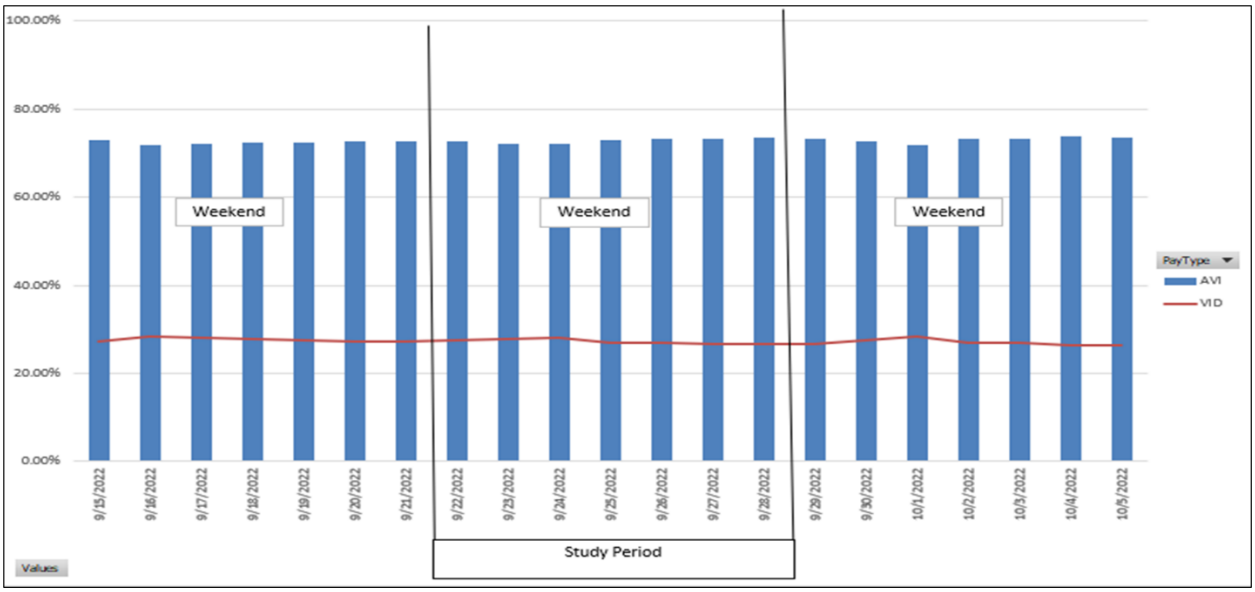
Intercounty Connector (ICC)

Conclusion: The Tolling System consistently detected transponders, allowing customers to receive lower tolls, when applicable. All toll zones/gantries showed a consistent transponder detection rate throughout the week, except gantries I17 and I18 (located between I-95 and Route 1) showed a slight increase in image-based transactions during the weekends, indicating transponders were accurately detected.

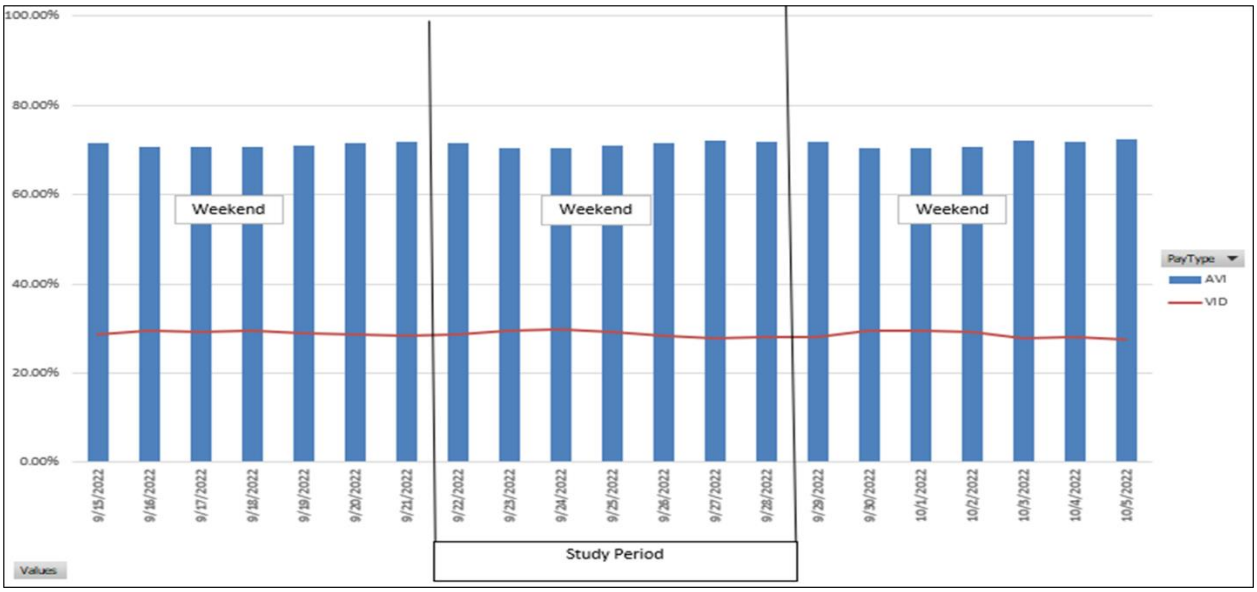
Gantry I01(EB I-370/MD97), Lanes 2-4



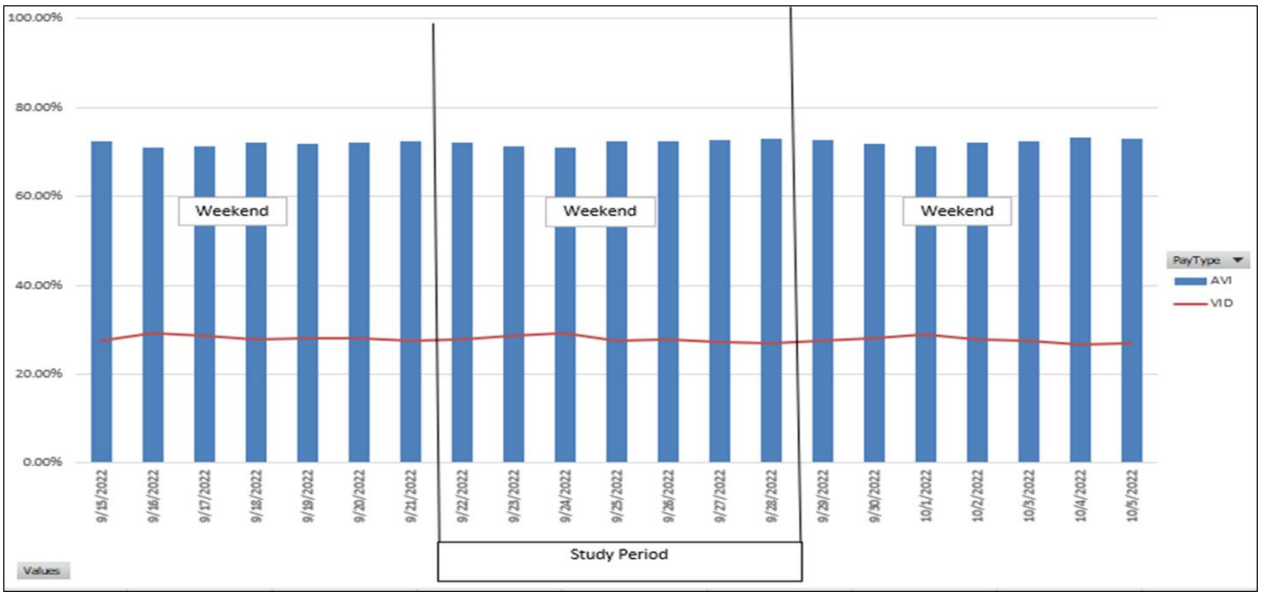
Gantry I02 (WB MD97/I-370), Lanes 2-4



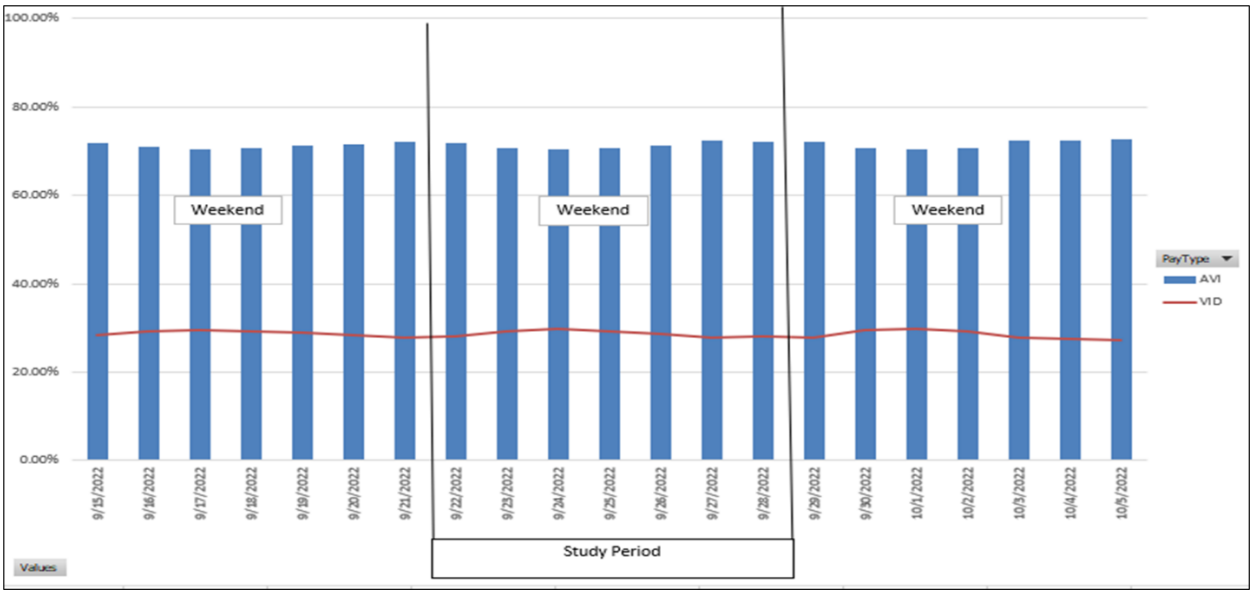
Gantry I05 (EB MD97/MD182), Lanes 2-4



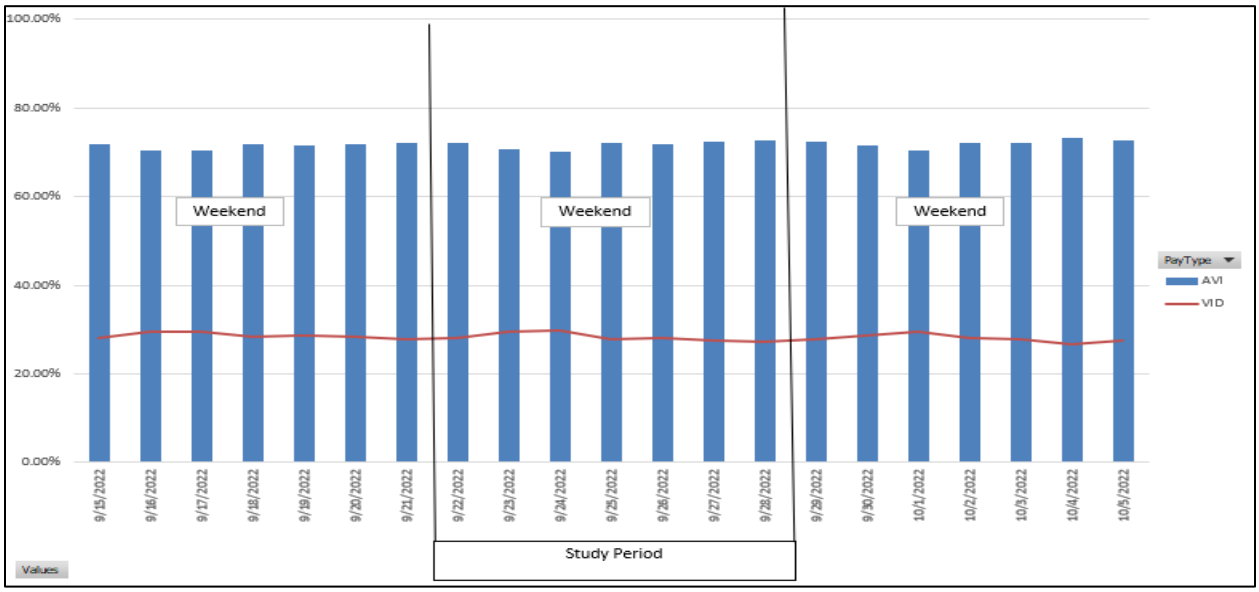
Gantry I06 (WB MD182/MD97), Lanes 2-4



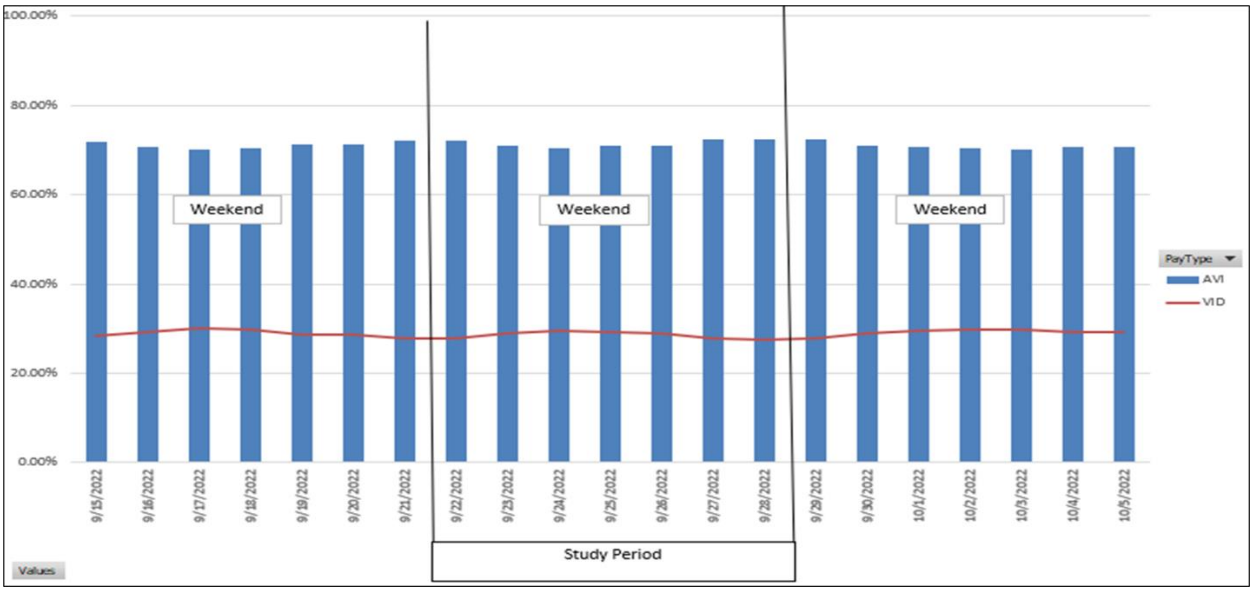
Gantry I07 (EB MD182/MD650), Lanes 2-4



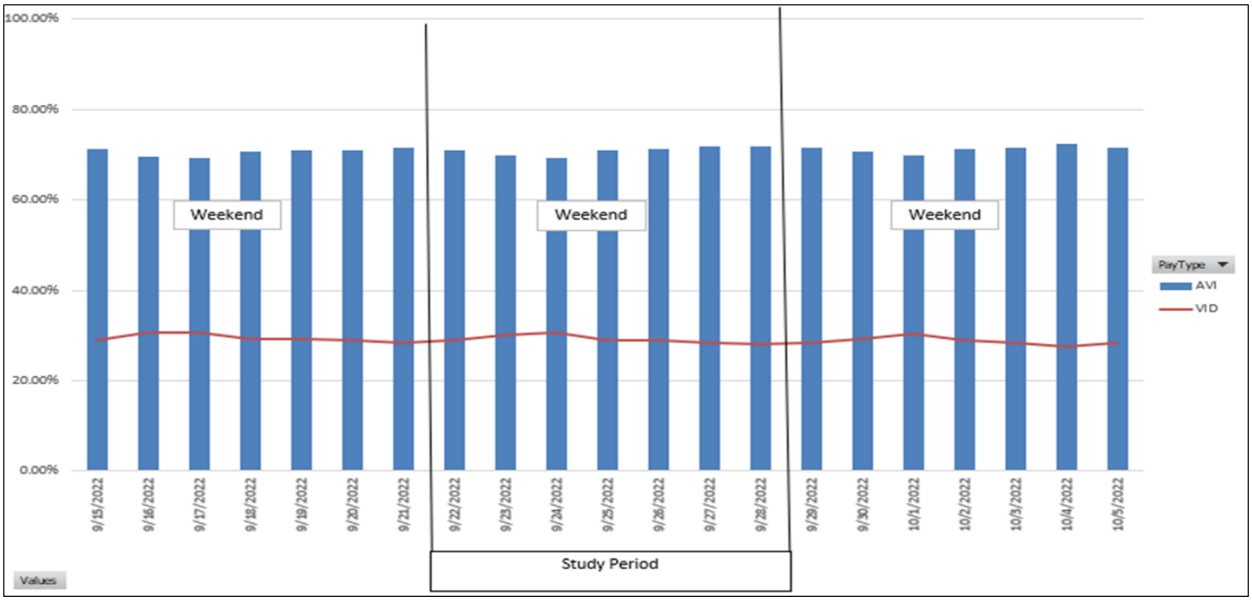
Gantry I08 (WB MD650/MD182), Lanes 2-4



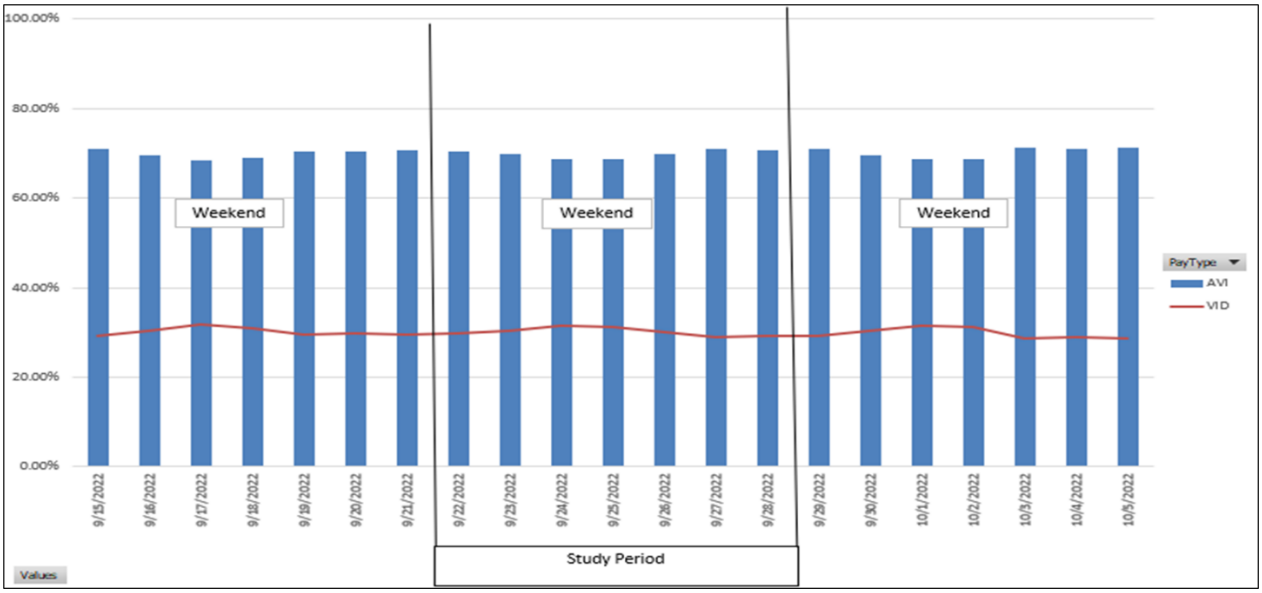
Gantry I09 (EB MD650/US29), Lanes 2-4



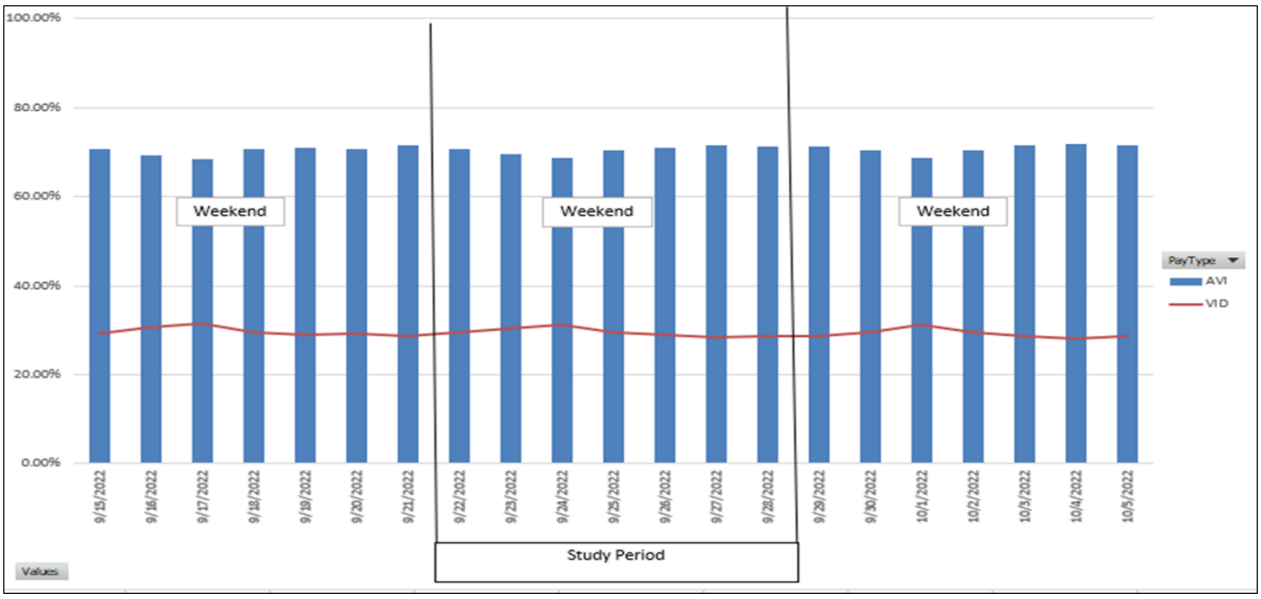
Gantry I10 (WB US29/MD650), Lanes 2-4



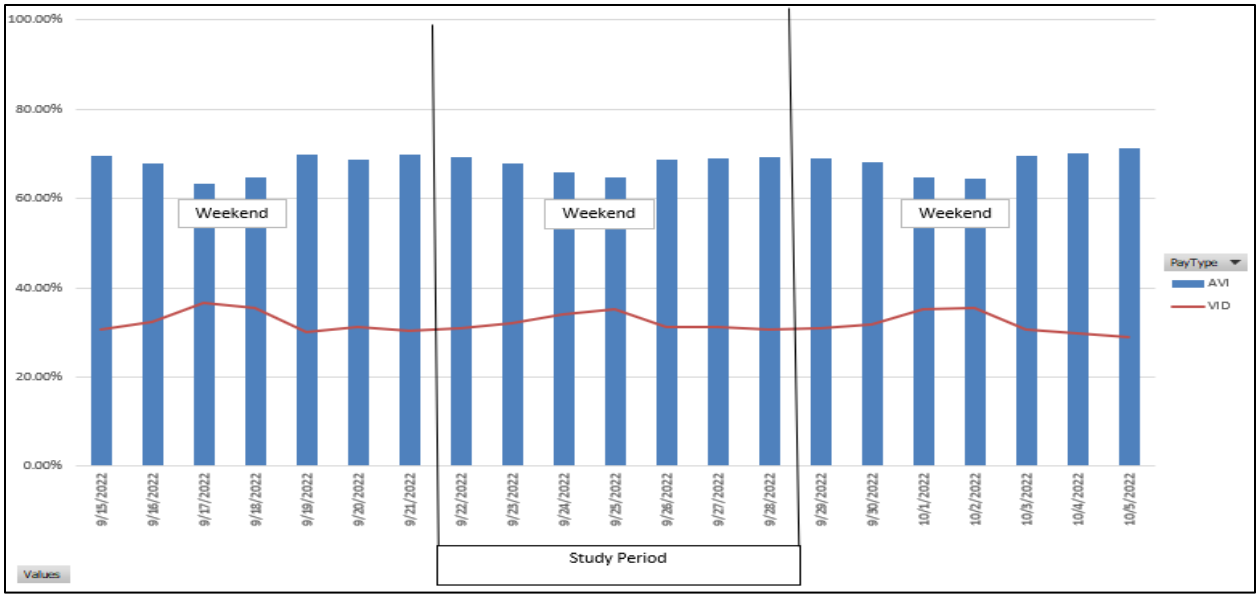
Gantry I13 (EB US29-Briggs Chaney Rd/I-95), Lanes 2-4



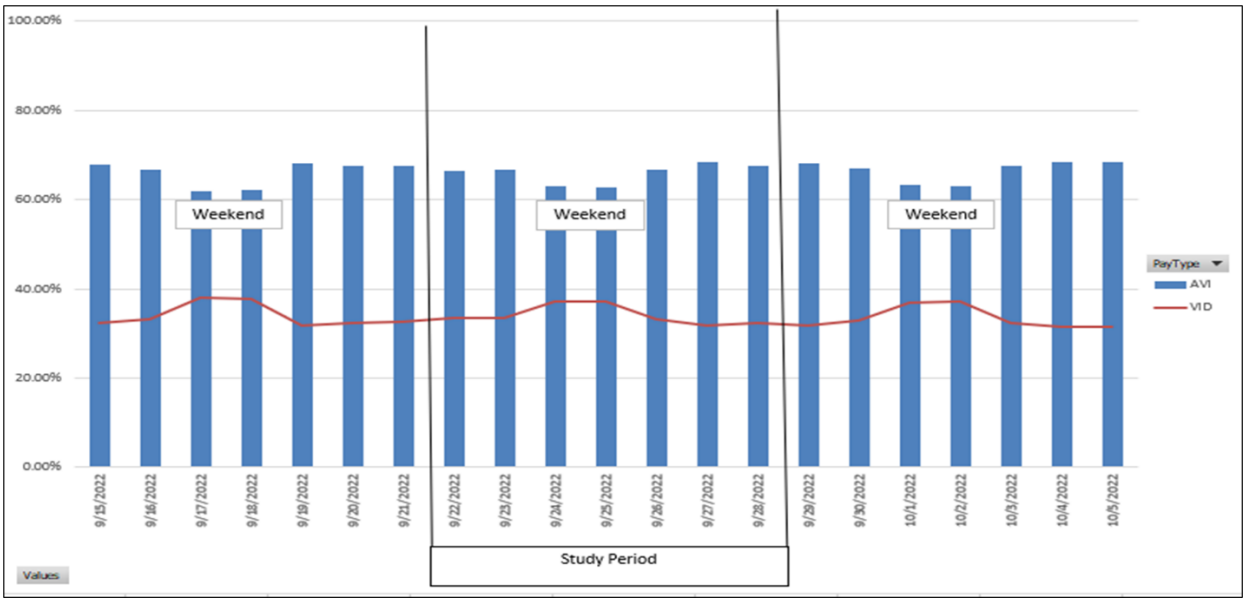
Gantry I14 (WB I-95/US29-Briggs Chaney Rd), Lanes 2-4



Gantry I17 (EB I-95/Konterra Dr-US1), Lanes 2-4



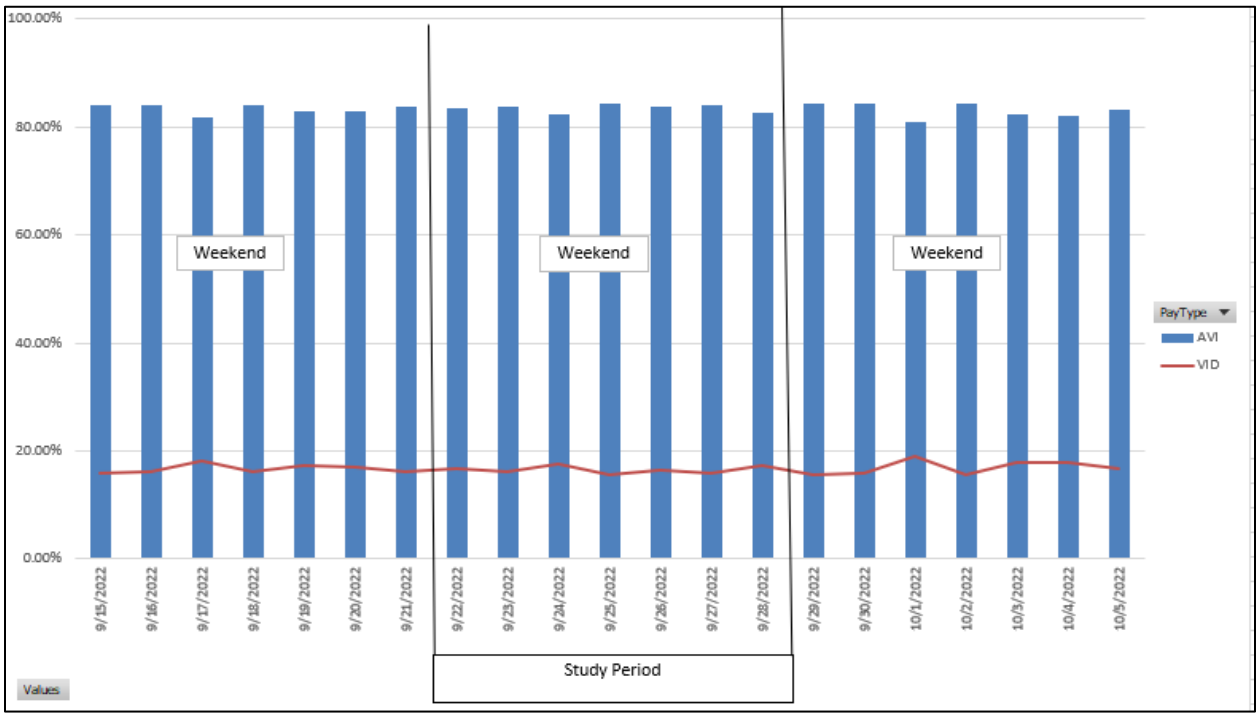
Gantry I18 (WB Konterra Dr-US1/I-95), Lanes 2-4



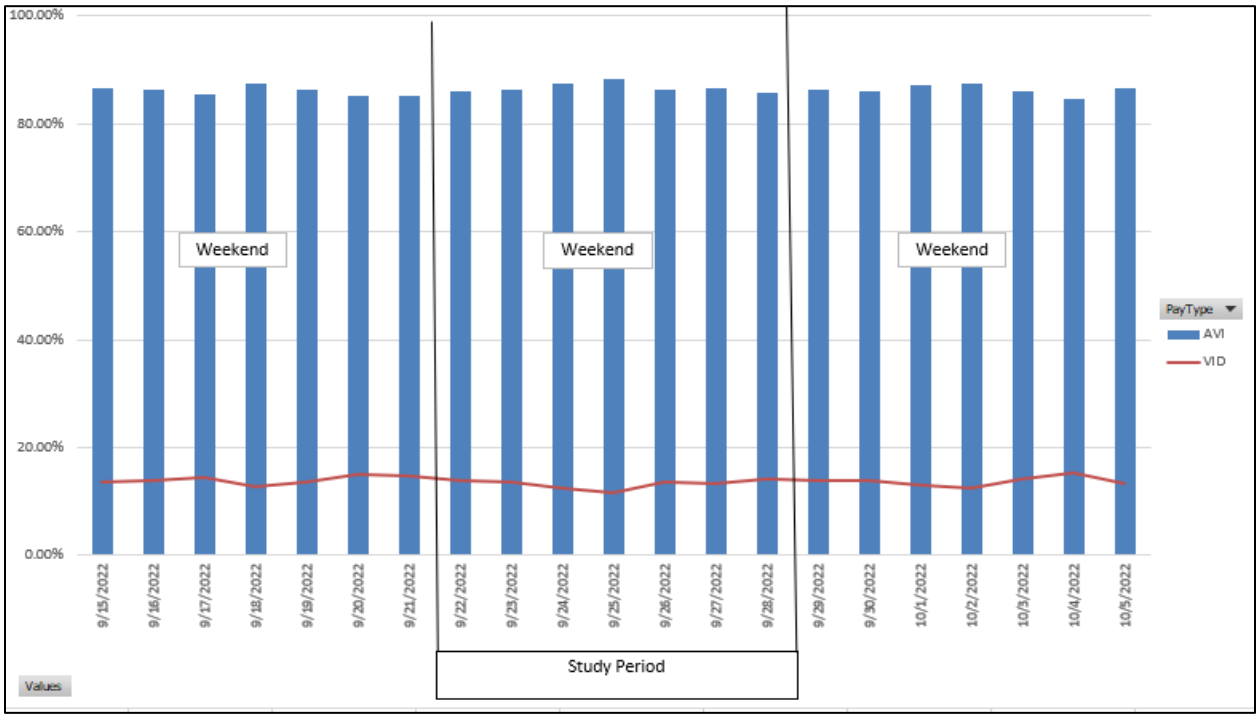
I-95 Express Toll Lanes (ETL)

Conclusion: The Tolling System consistently detected transponders, allowing customers to receive lower tolls, when applicable. All lanes showed consistent transponder detection rates, including a consistent increase in image-based transactions during the weekends which is driven by less frequent drivers and offset by out-of-state *E-ZPass* trips, indicating transponders were accurately detected. The same weekend pattern can be seen at FMT and JFK facilities, the other I-95 facilities.

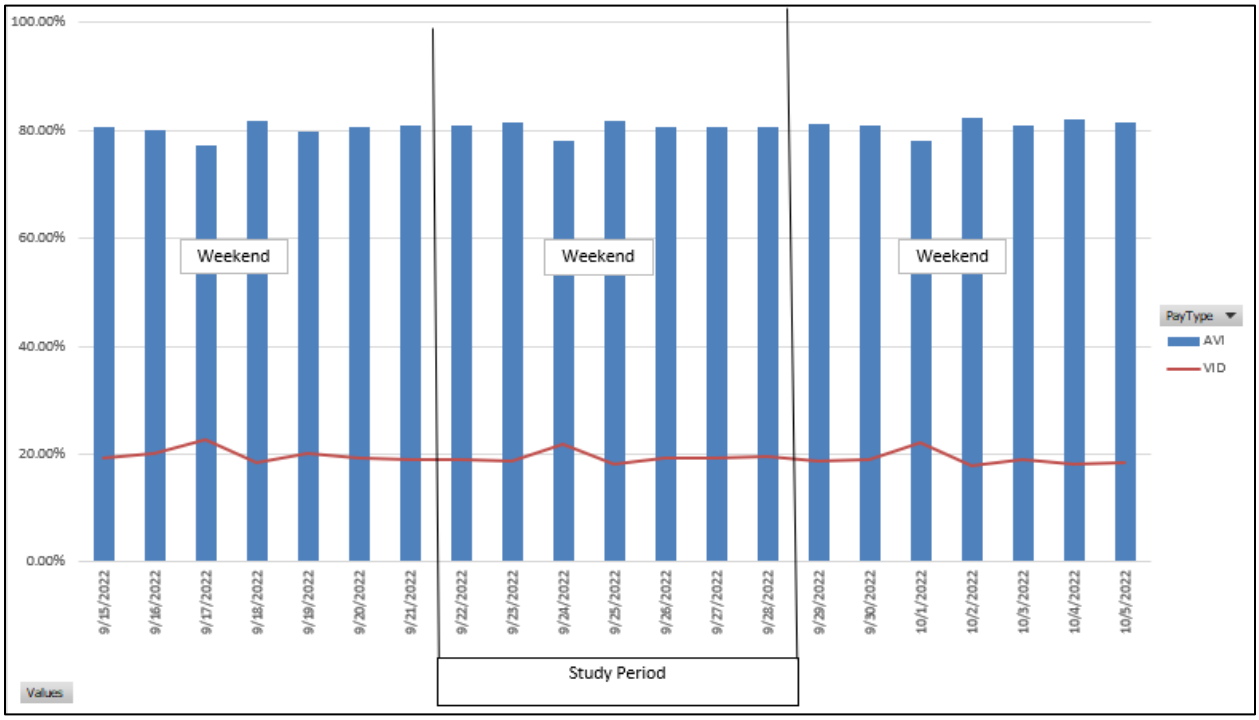
NB Lane 2 (Right Lane)



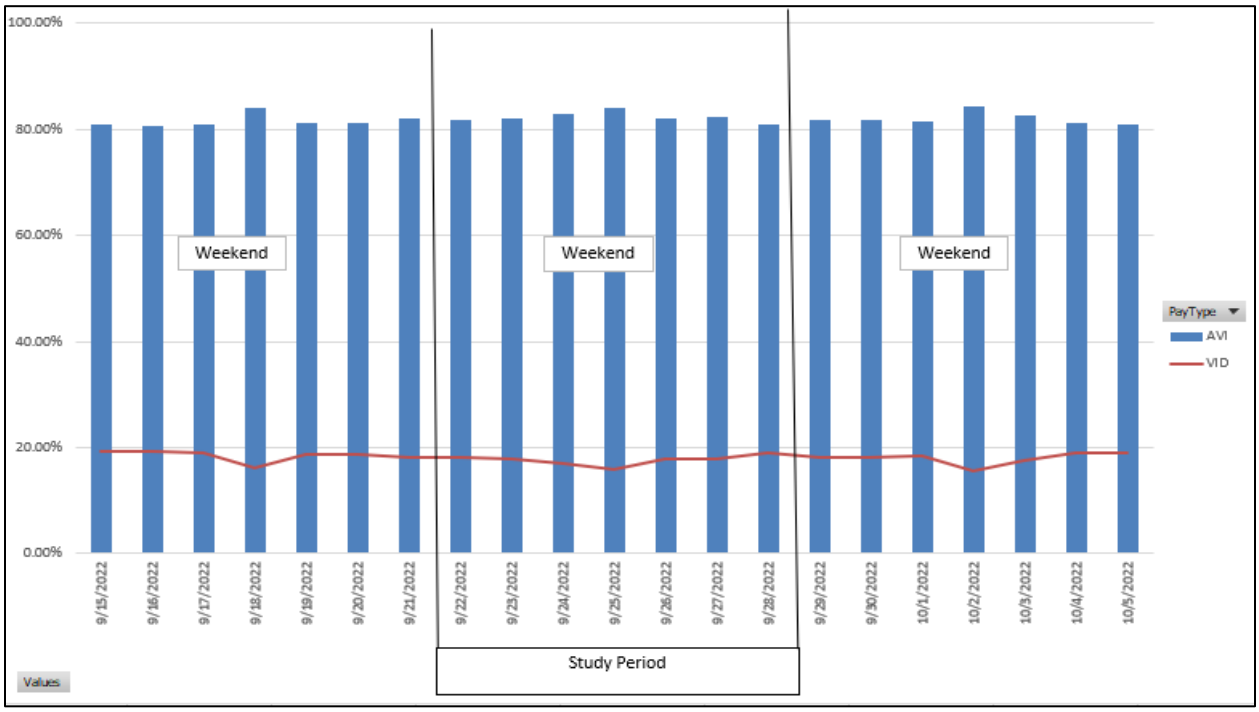
SB Lane 2 (Right Lane)



NB Lane 3 (Left Lane)



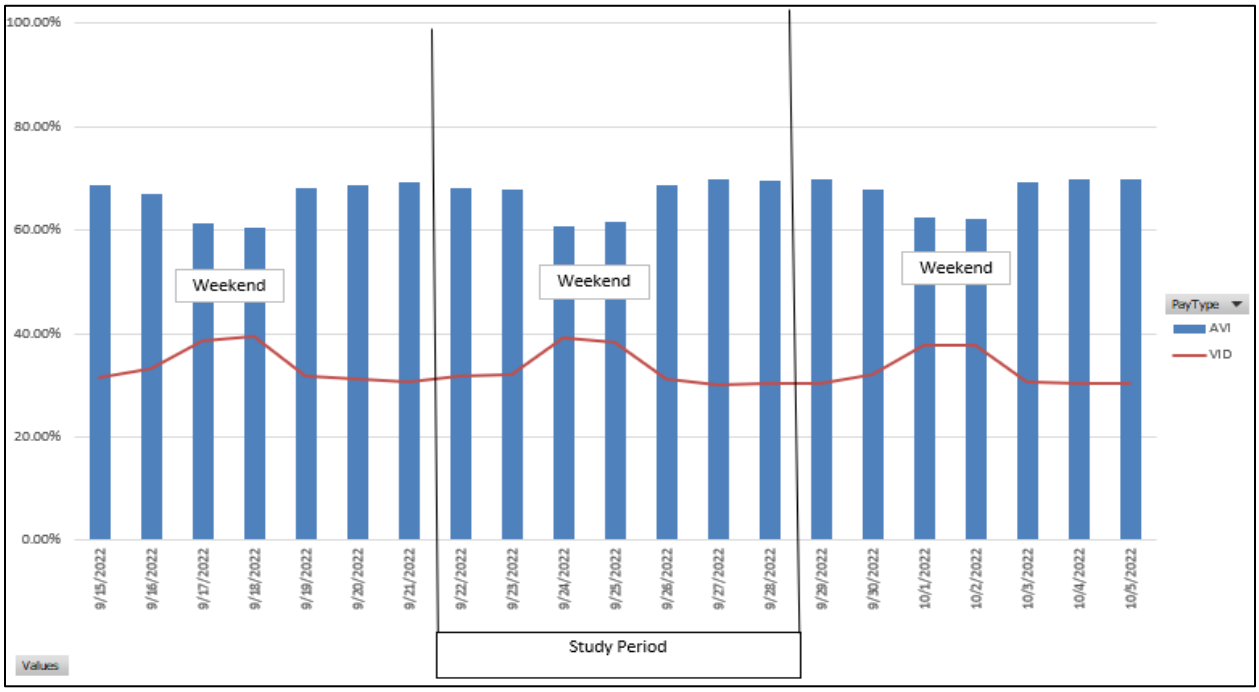
SB Lane 3 (Left Lane)



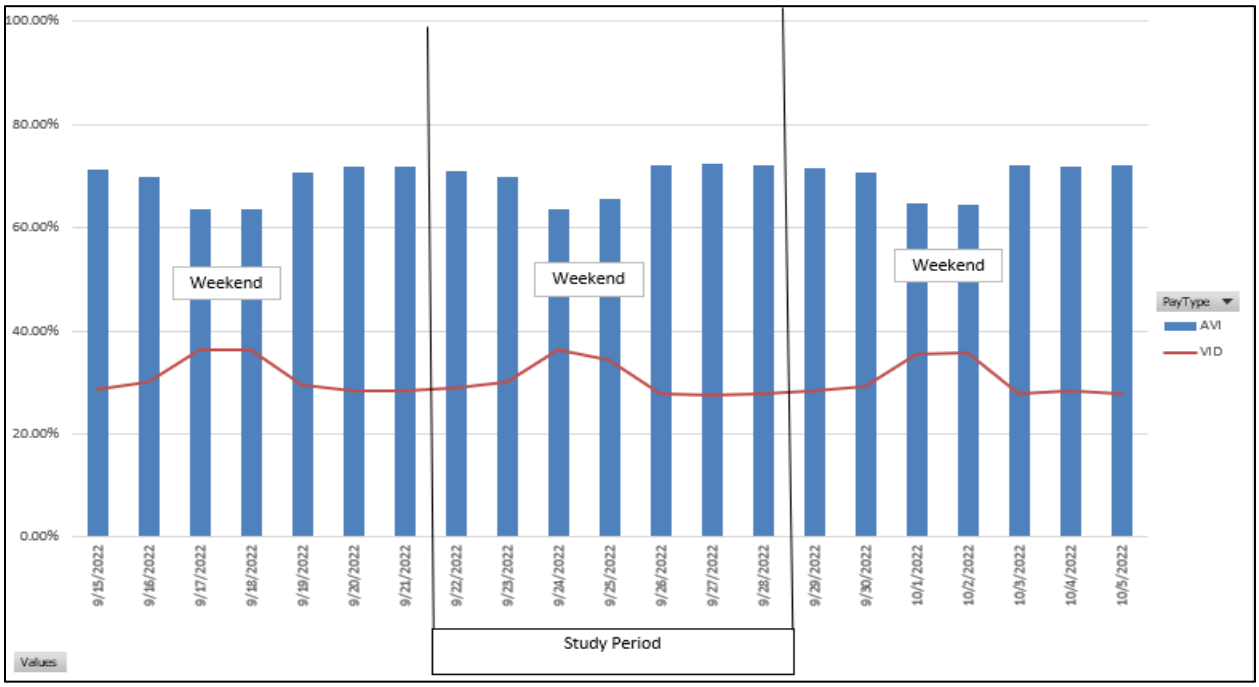
Francis Scott Key Bridge (FSK)

Conclusion: The Tolling System consistently detected transponders, allowing customers to receive discounts and lower tolls, when applicable. <u>All lanes showed consistent transponder detection rates, including an increase in image-based trips during the weekends driven by less frequent travelers, indicating transponders were accurately detected</u> (see the following pages).

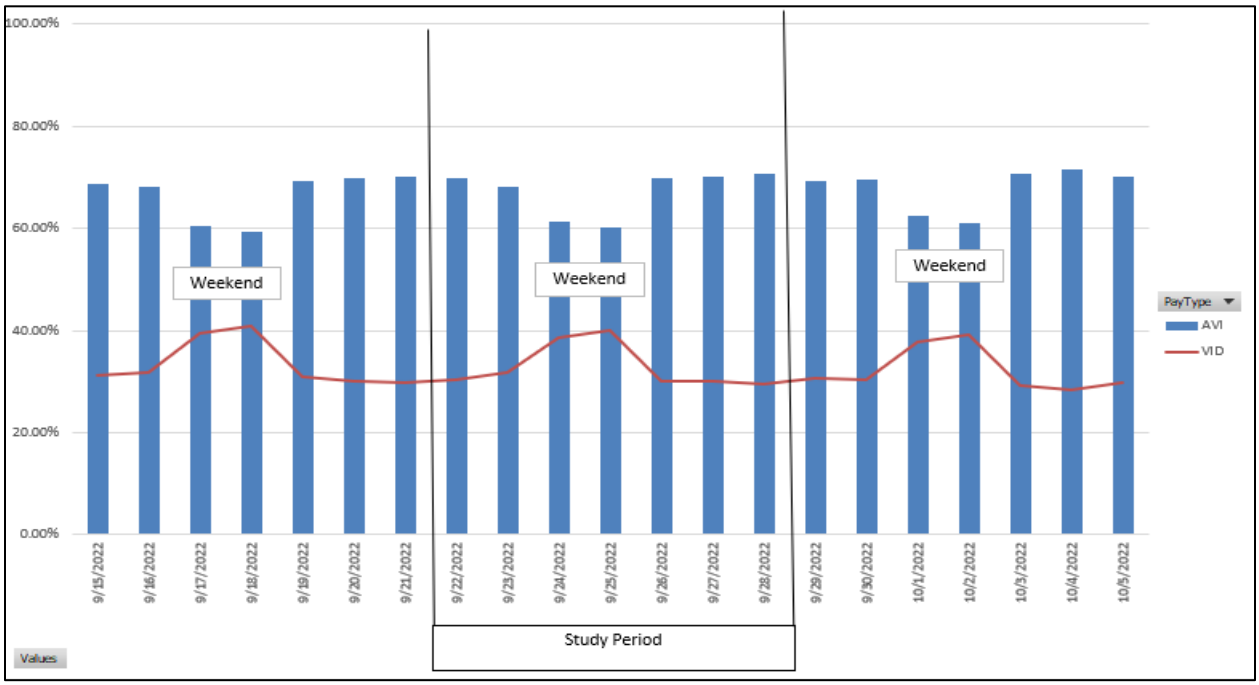
Lane 5 WB (Right Lane)



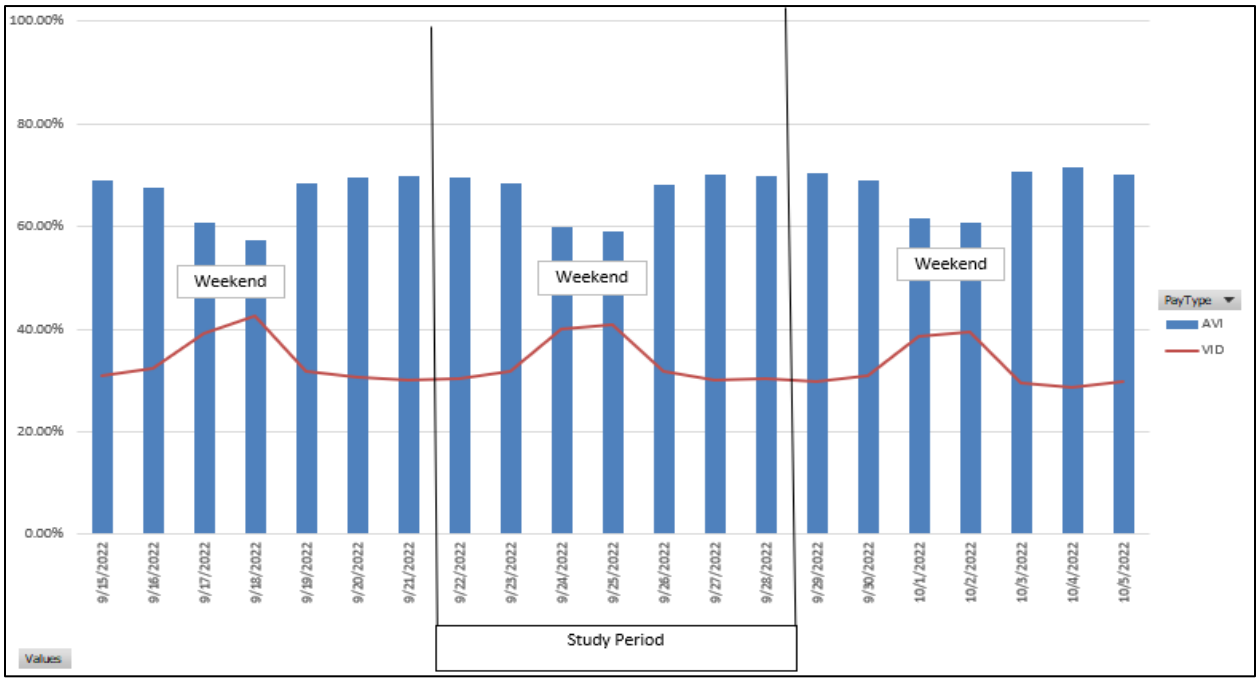
Lane 7 EB (Right Lane)



Lane 6 WB (Left Lane)



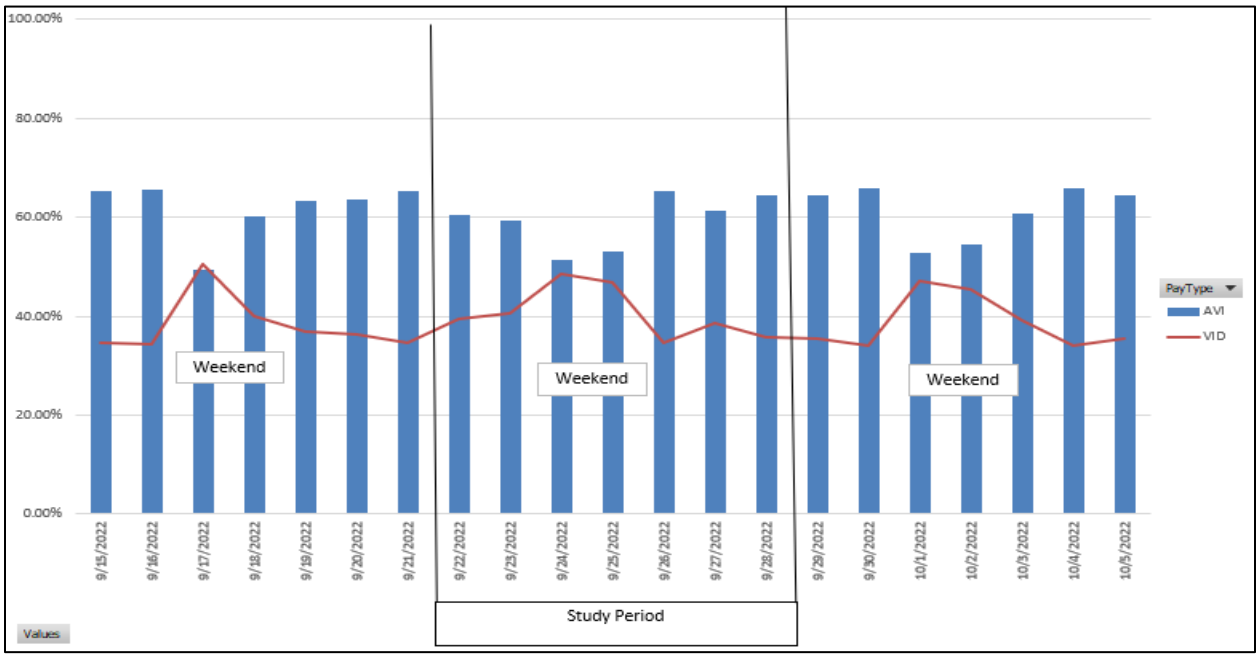
Lane 8 EB (Left Lane)



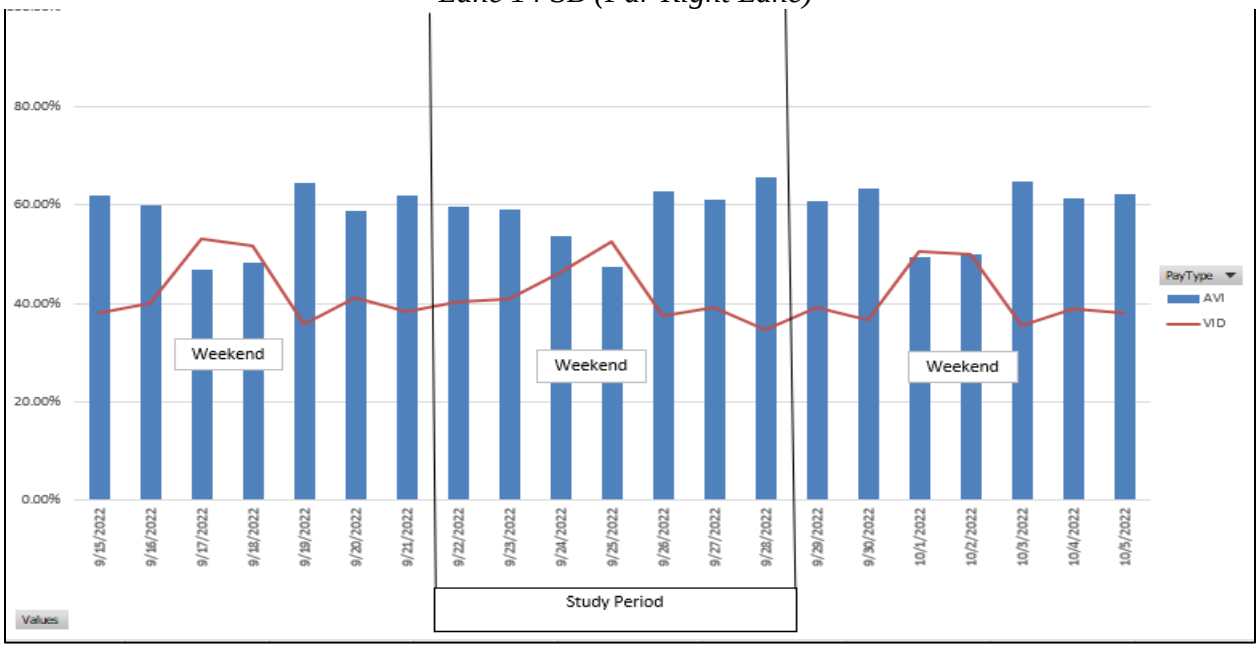
Baltimore Harbor Tunnel (BHT)

Conclusion: The Tolling System consistently detected transponders, allowing customers to receive discounts and lower tolls, when applicable. All lanes showed consistent transponder detection rates, including a consistent increase in image-based transactions during the weekends and a higher rate of image-based transactions in the lanes on the right side of the facility and less in the lanes on the left side of the facility, indicating transponders were accurately detected (see the following pages).

Lane 1 NB (Far Right Lane)

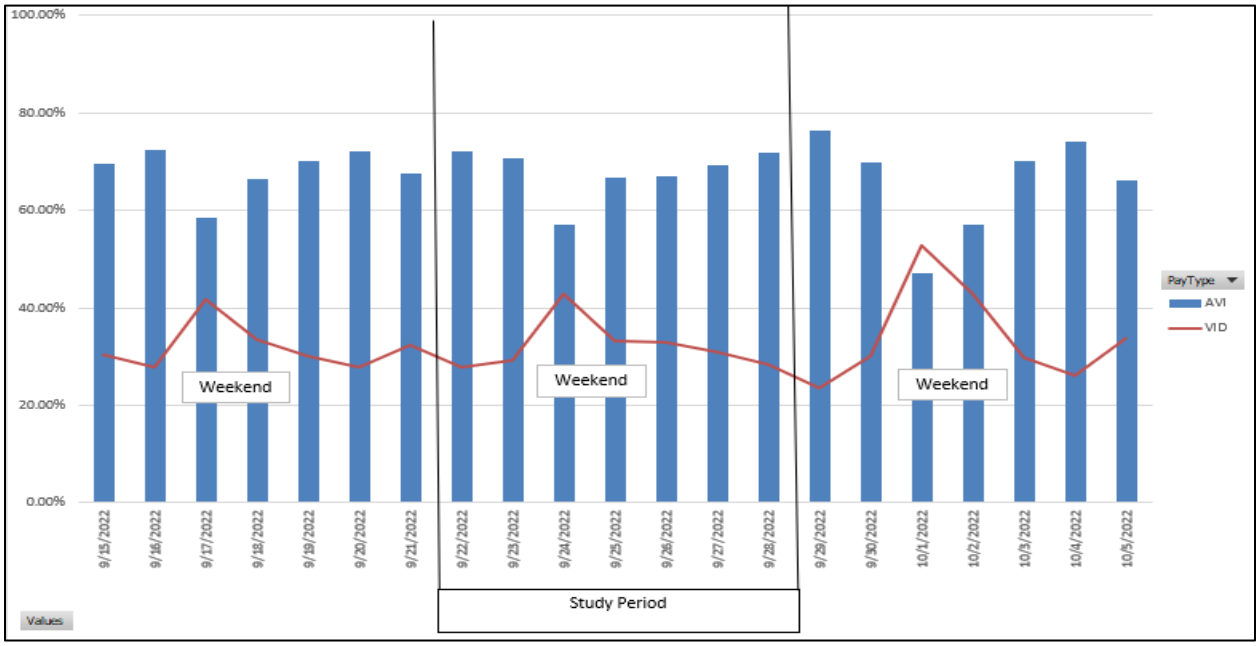


Lane 14 SB (Far Right Lane)

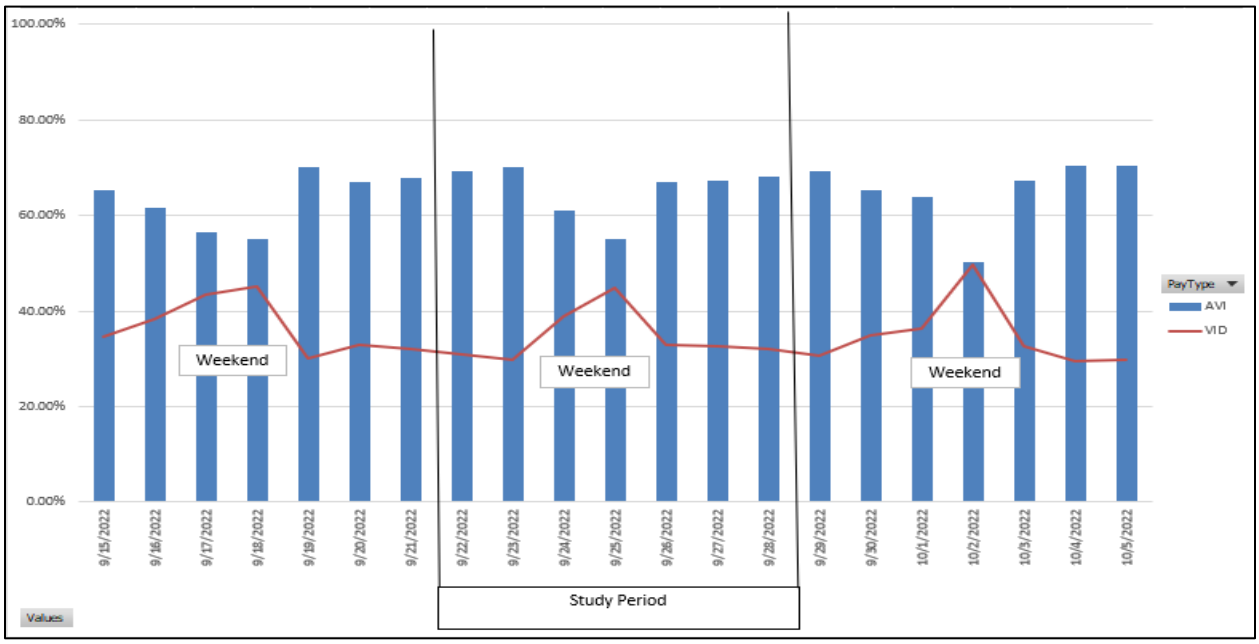


Note: The proximity of the Childs Street ramps to the toll plaza slightly impacts the traffic pattern.

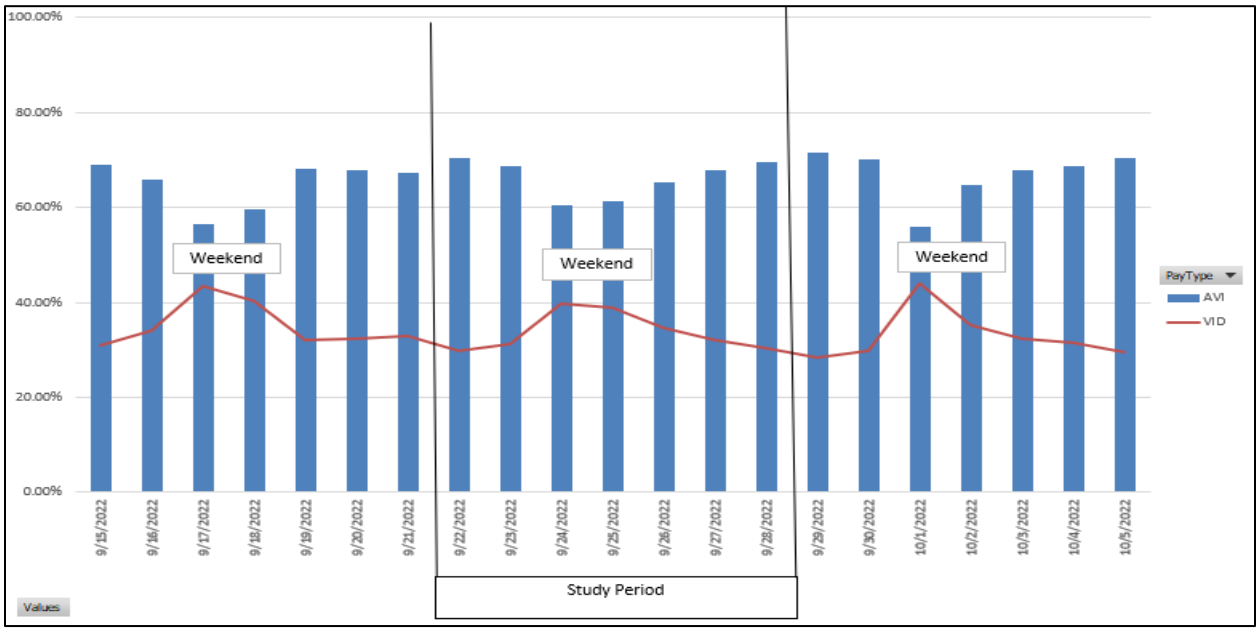
Lane 2 NB (2nd Most Right Lane)



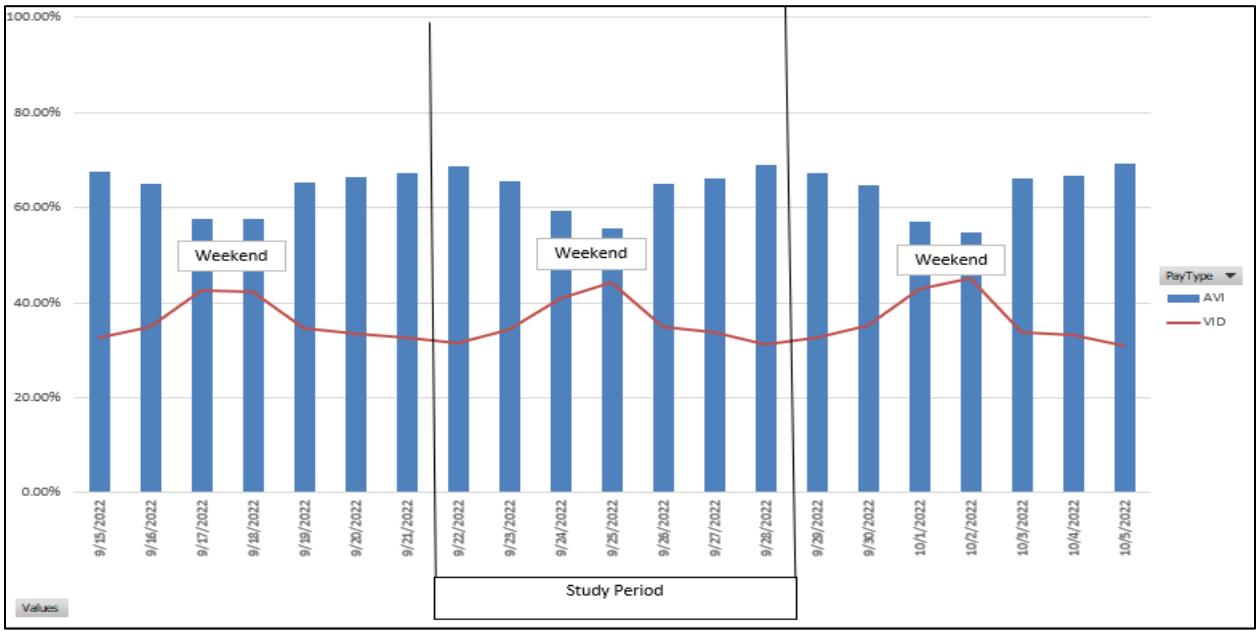
Lane 13 SB (2nd Most Right Lane)



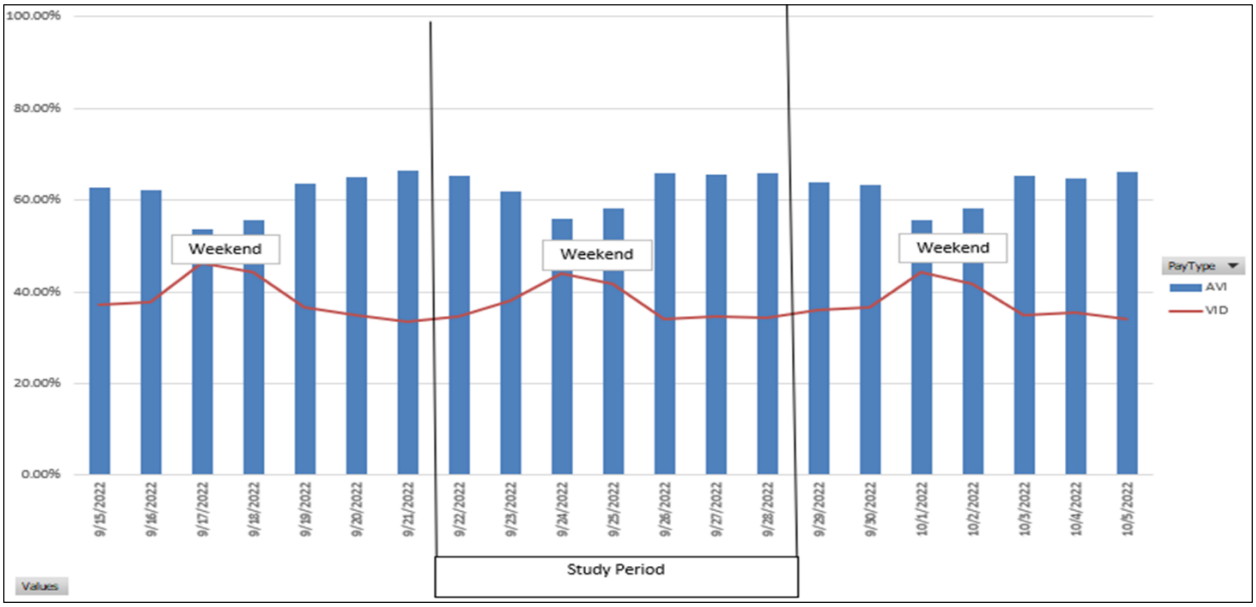
Lane 3 NB (3rd Most Right Lane)



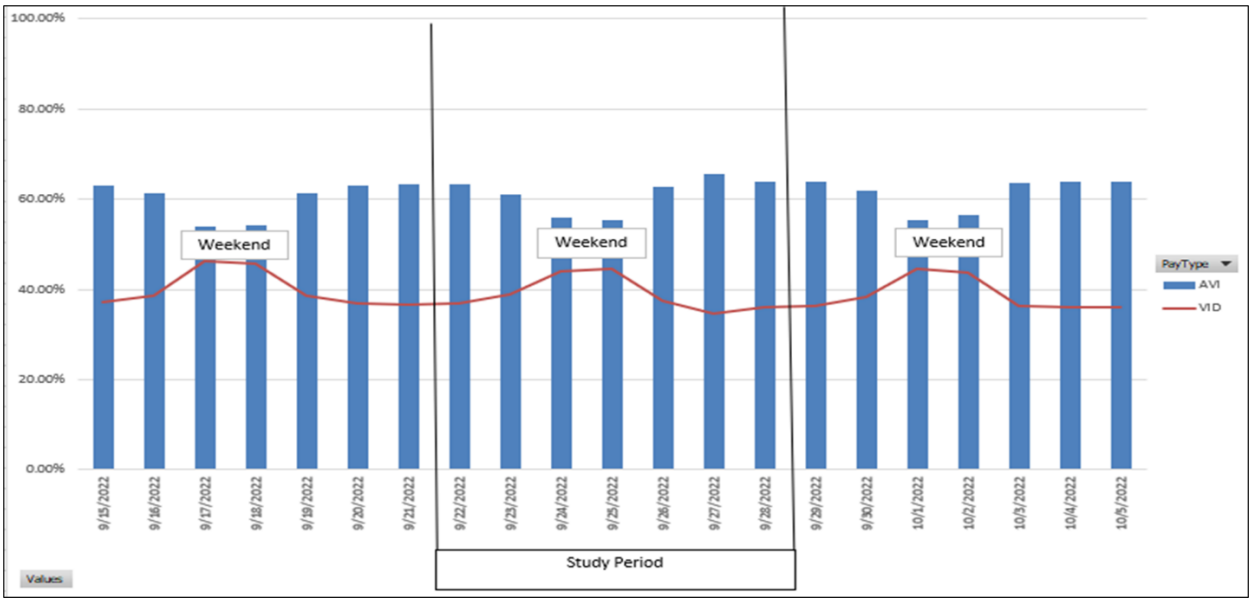
Lane 12 SB (3rd Most Right Lane)



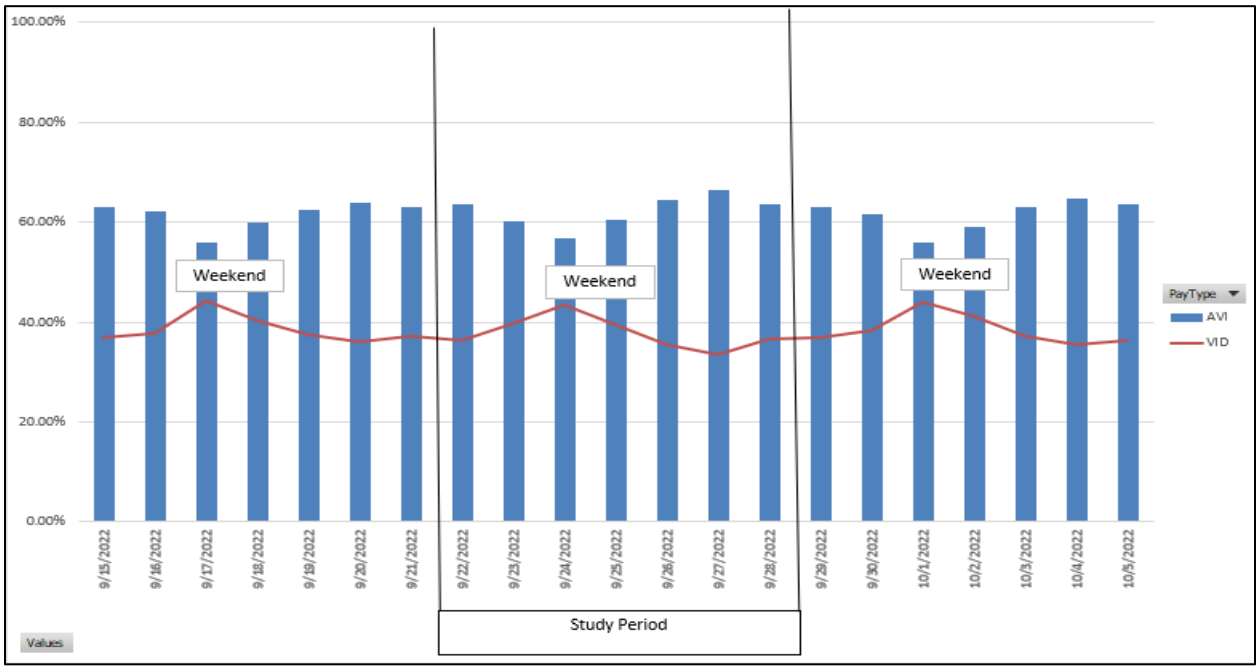
Lane 4 NB (Middle Most Lane)



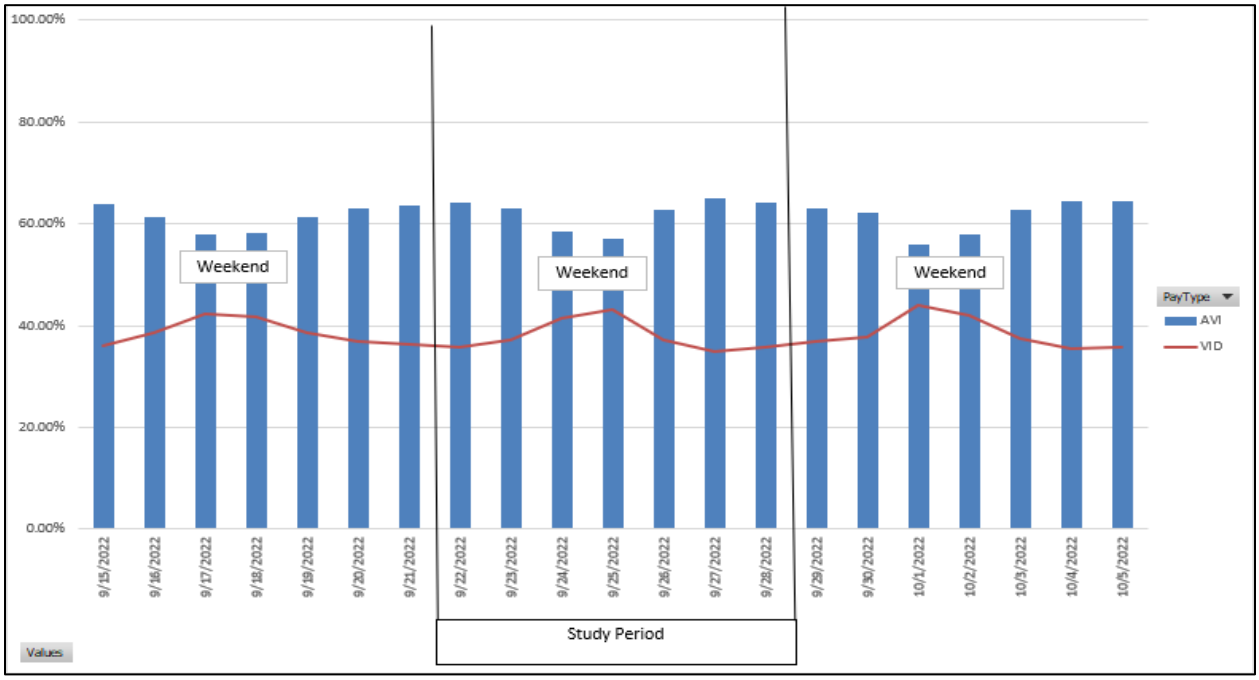
Lane 11 SB (Middle Most Lane)



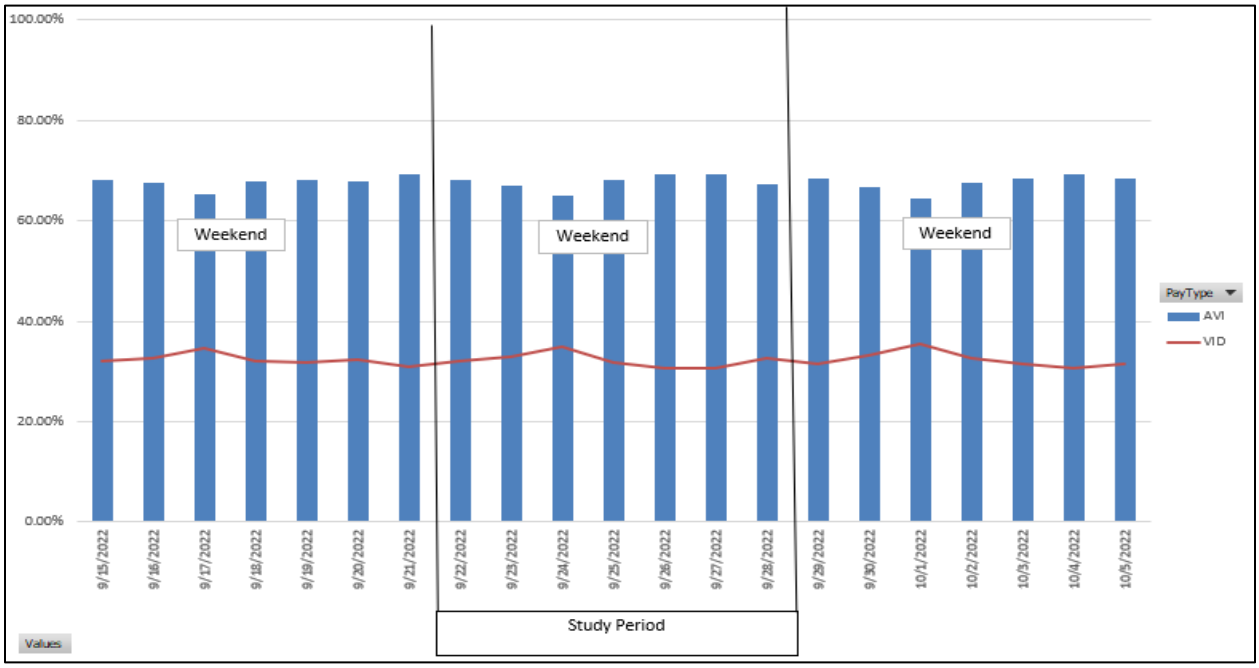
Lane 5 NB (3rd Most Left Lane)



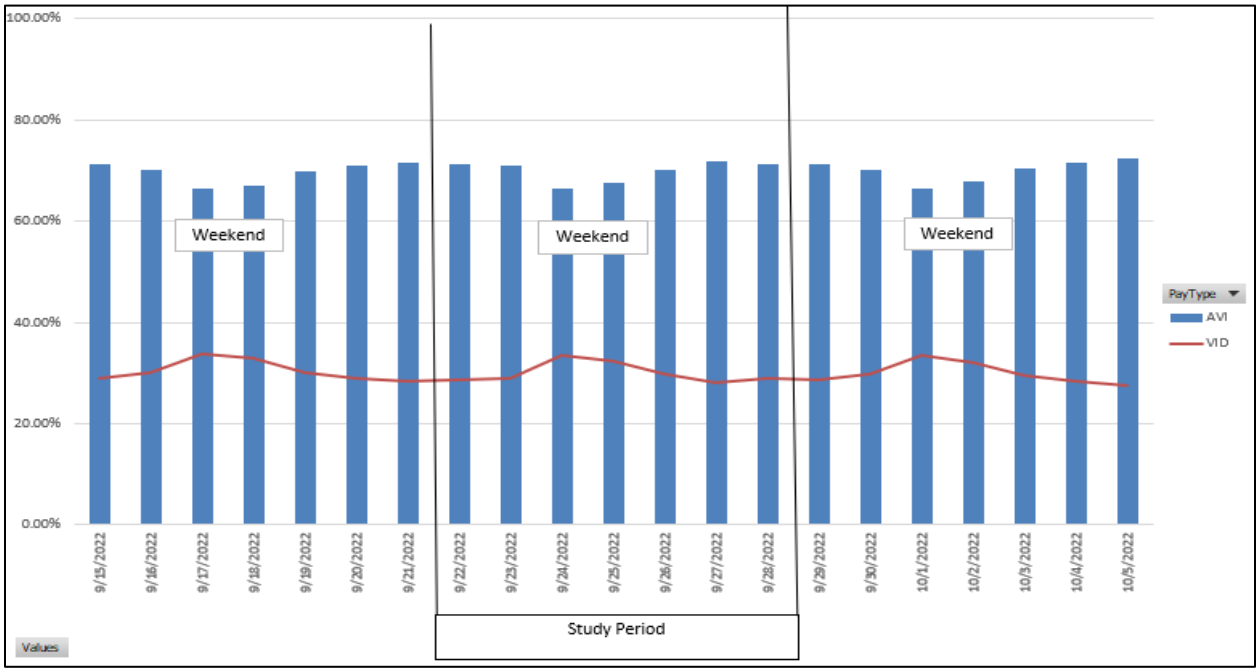
Lane 10 SB (3rd Most Left Lane)



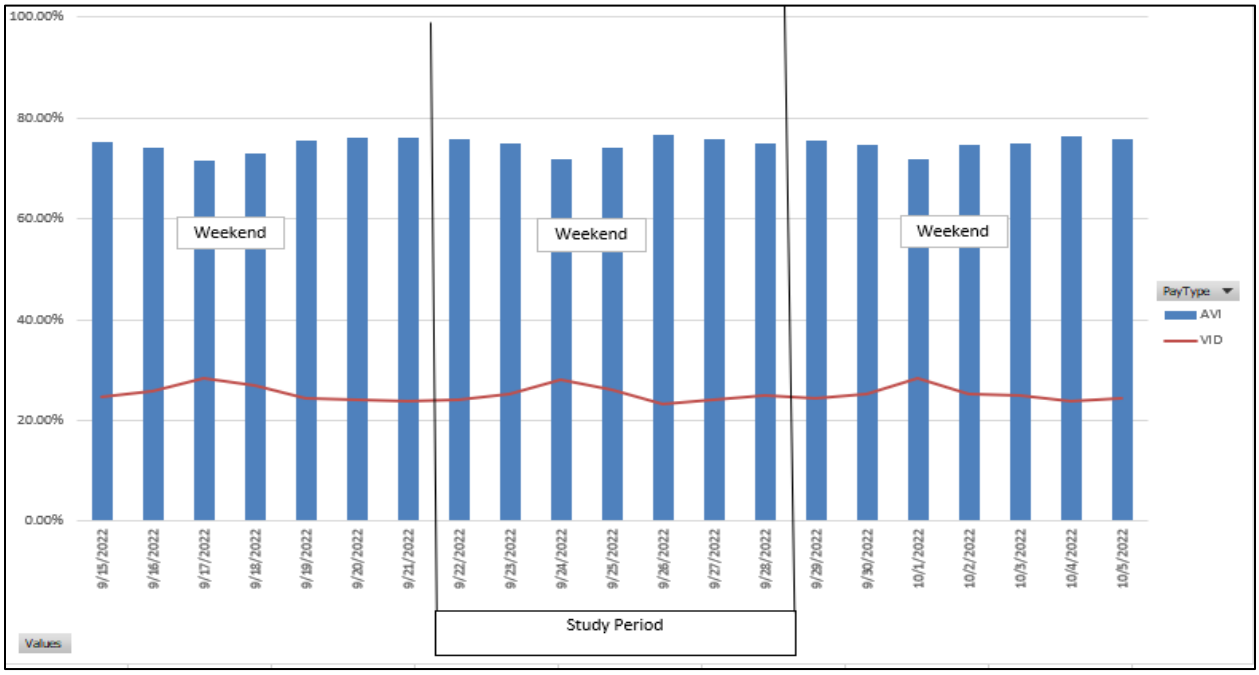
Lane 6 NB (2nd Most Left Lane)



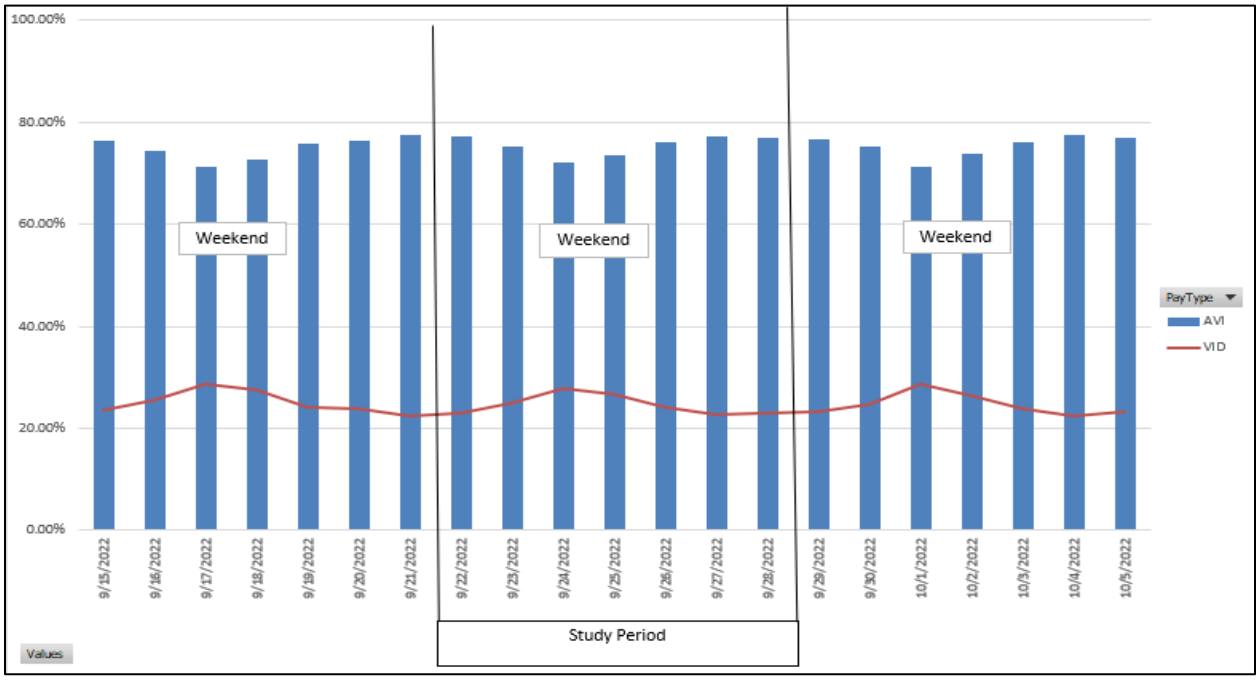
Lane 9 SB (2nd Most Left Lane)



Lane 7 NB (Far Left Lane)



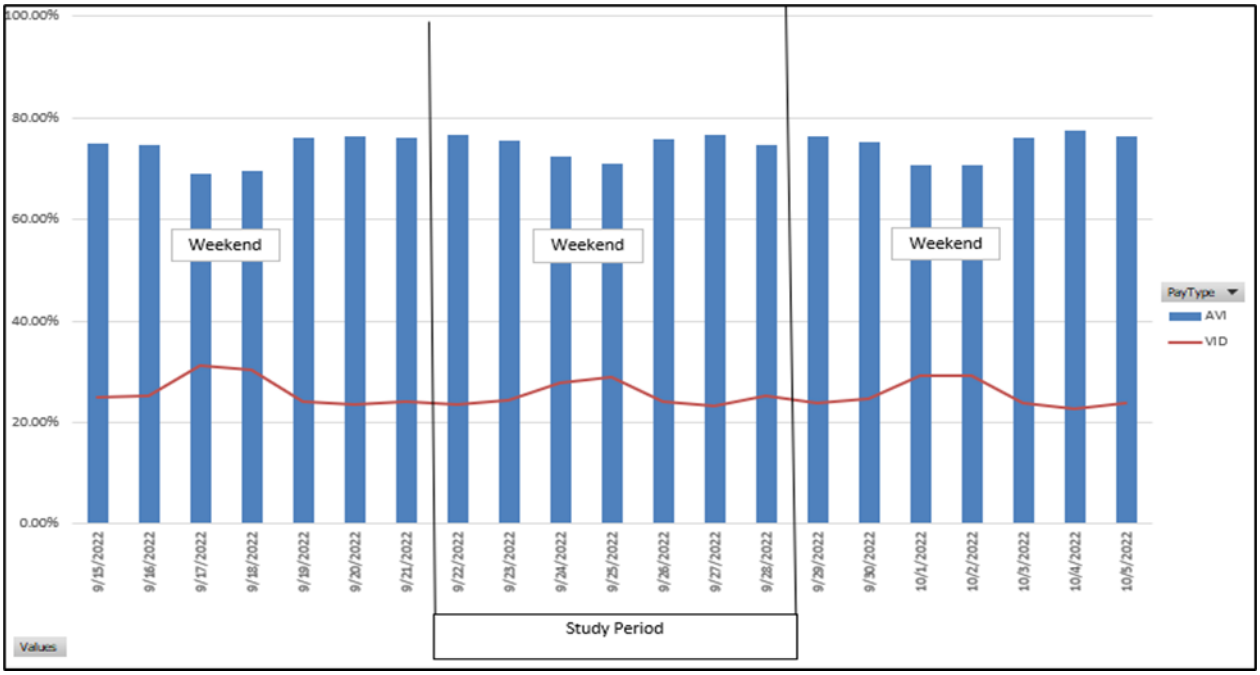
Lane 8 SB (Far Left Lane)



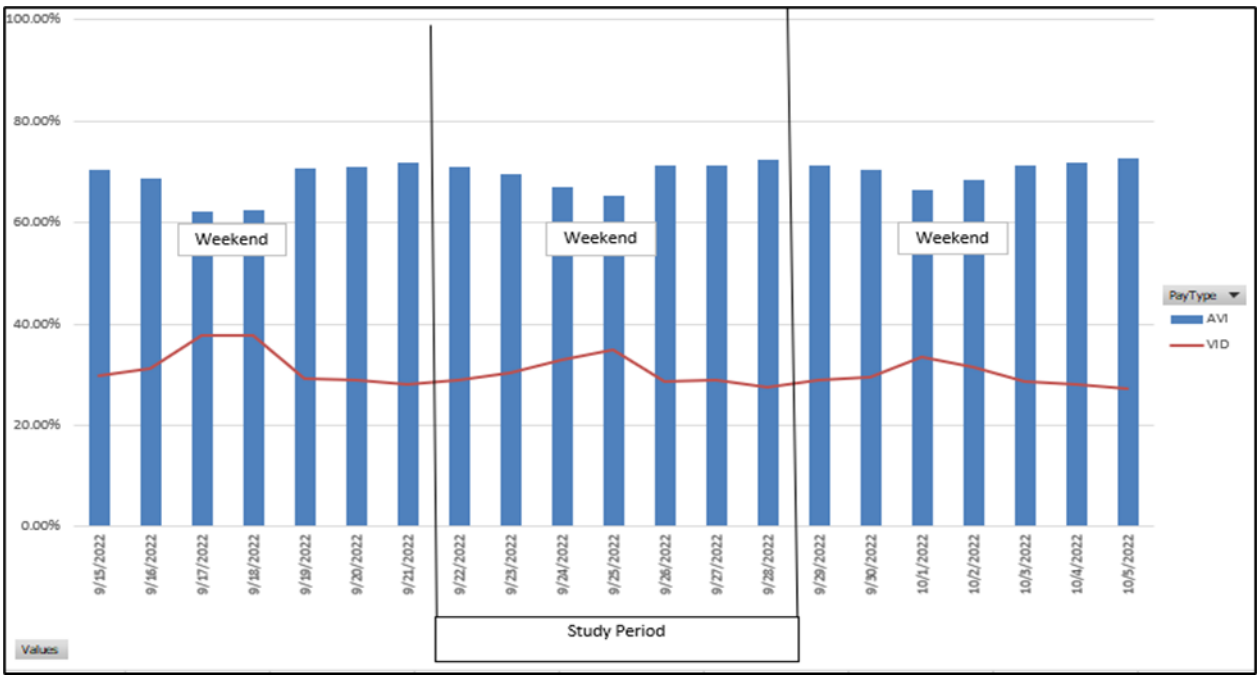
Fort McHenry Tunnel (FMT)

Conclusion: The Tolling System consistently detected transponders, allowing customers to receive discounts and lower tolls, when applicable. All lanes showed consistent transponder detection rates, including a consistent increase in image-based transactions during the weekends which is driven by less frequent drivers and is slightly offset by out-of-state *E-ZPass* trips, indicating transponders were accurately detected. The same weekend pattern can be seen at the ETL and JFK, the other I-95 facilities. Additionally, the lanes showed a consistently showed a higher rate of image-based transactions in the lanes on the right side of the plaza and less in the lanes on the left side of the plaza (see the following pages).

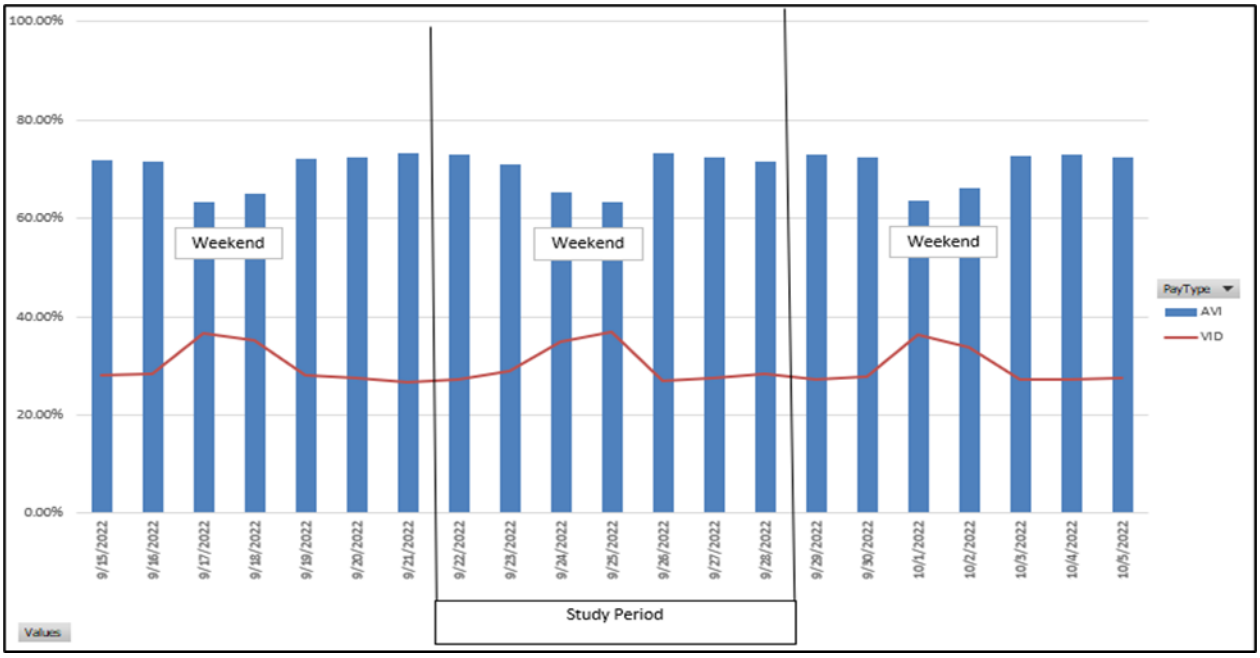
Lane 1 NB (Far Right)



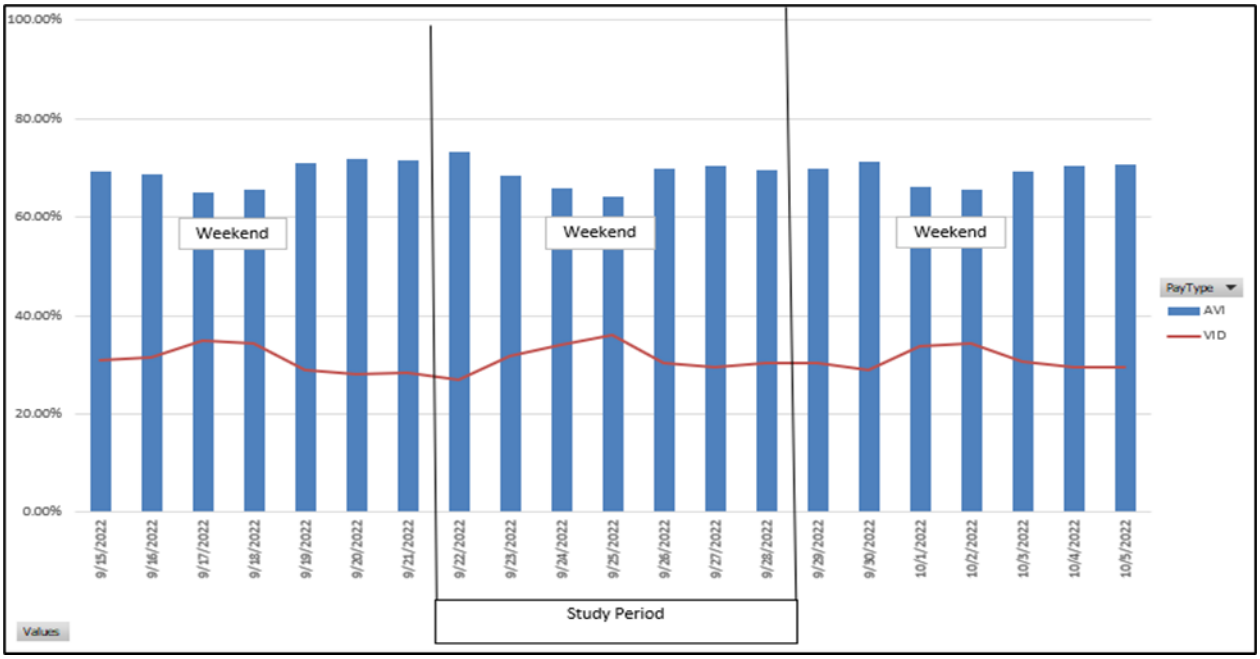
Lane 24 SB (Far Right)



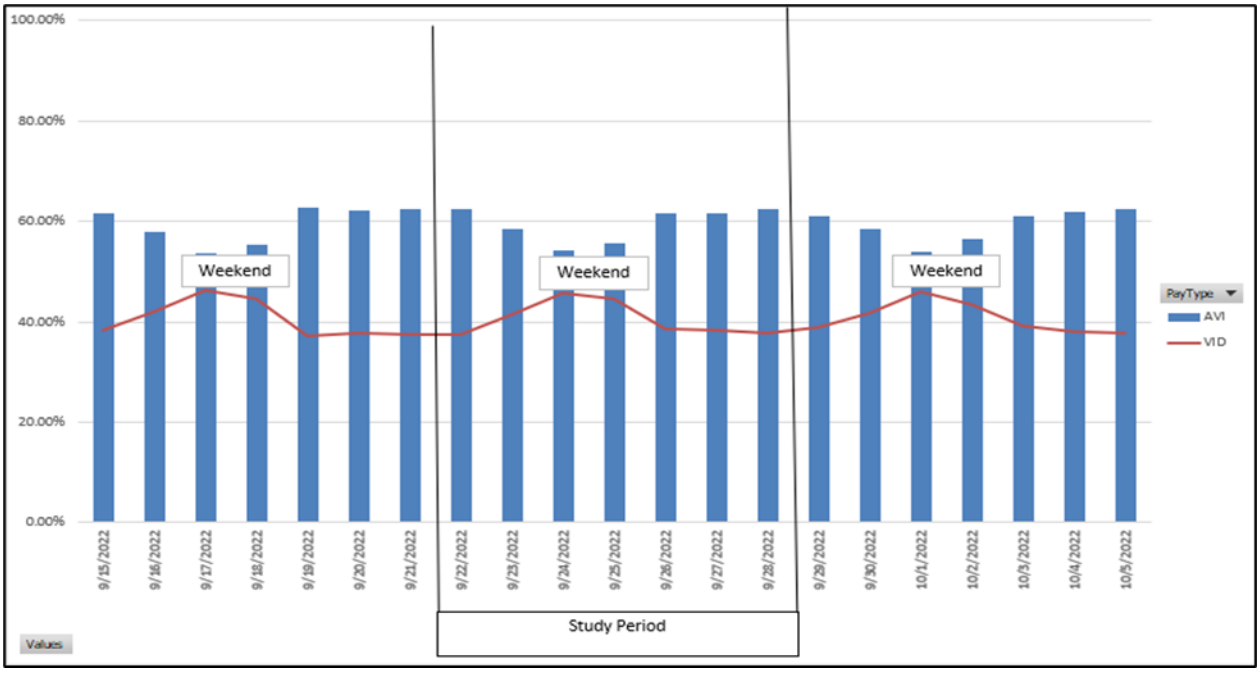
Lane 2 NB (2nd Most Right Lane)



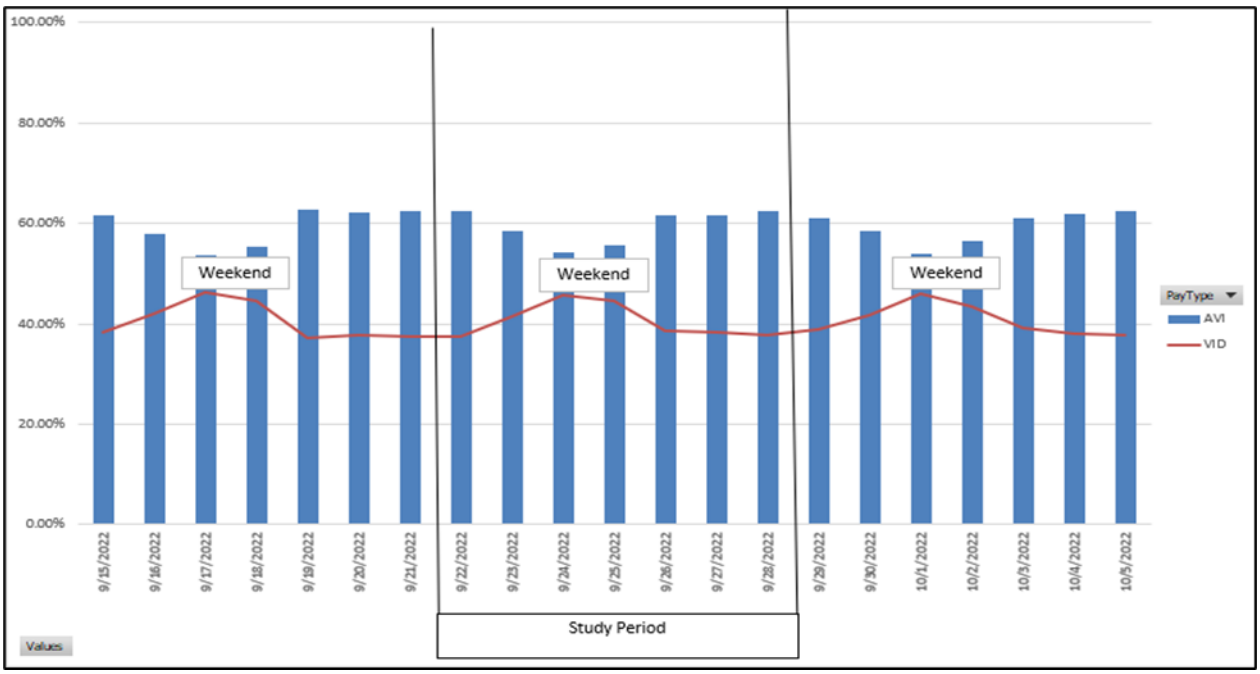
Lane 23 SB (2nd Most Right Lane)



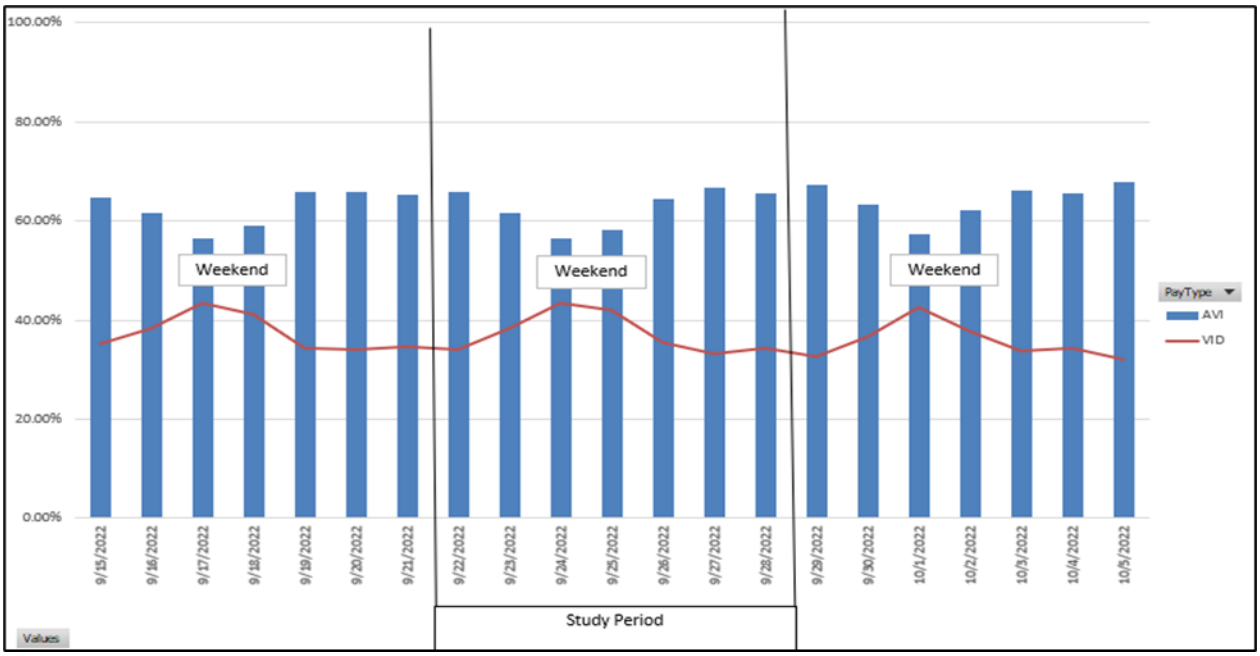
Lane 4 NB (3rd Most Right Lane)



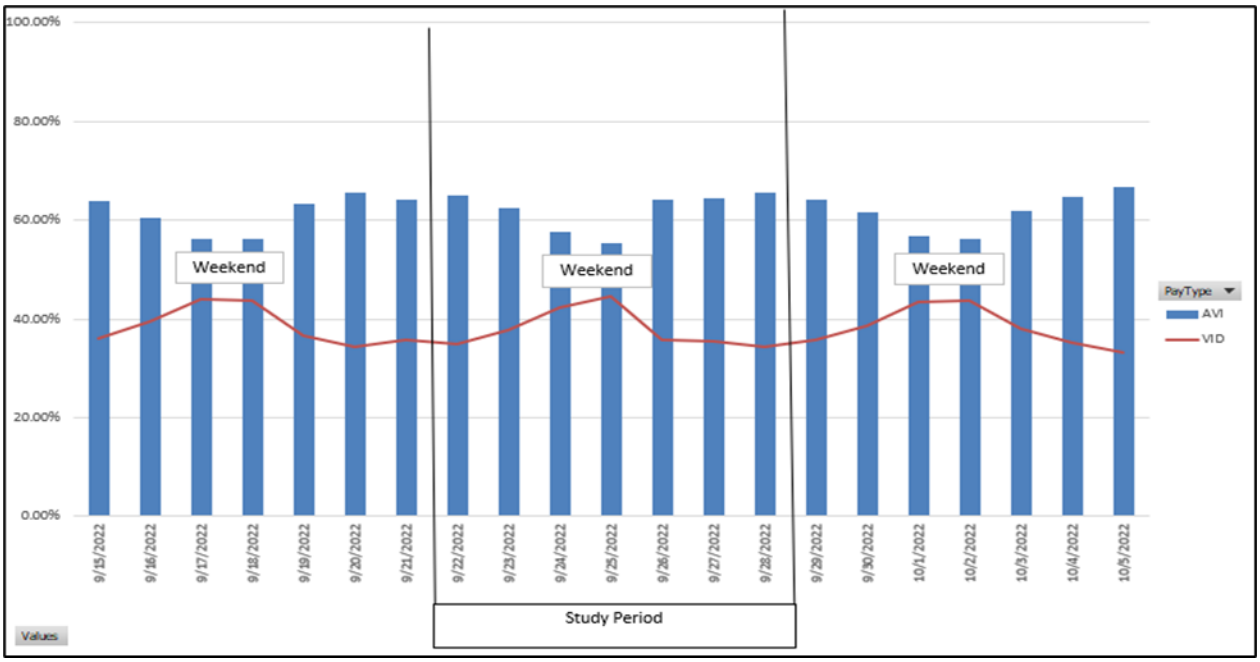
Lane 22 SB (3rd Most Right Lane)



Lane 5 NB (4th Most Right Lane)



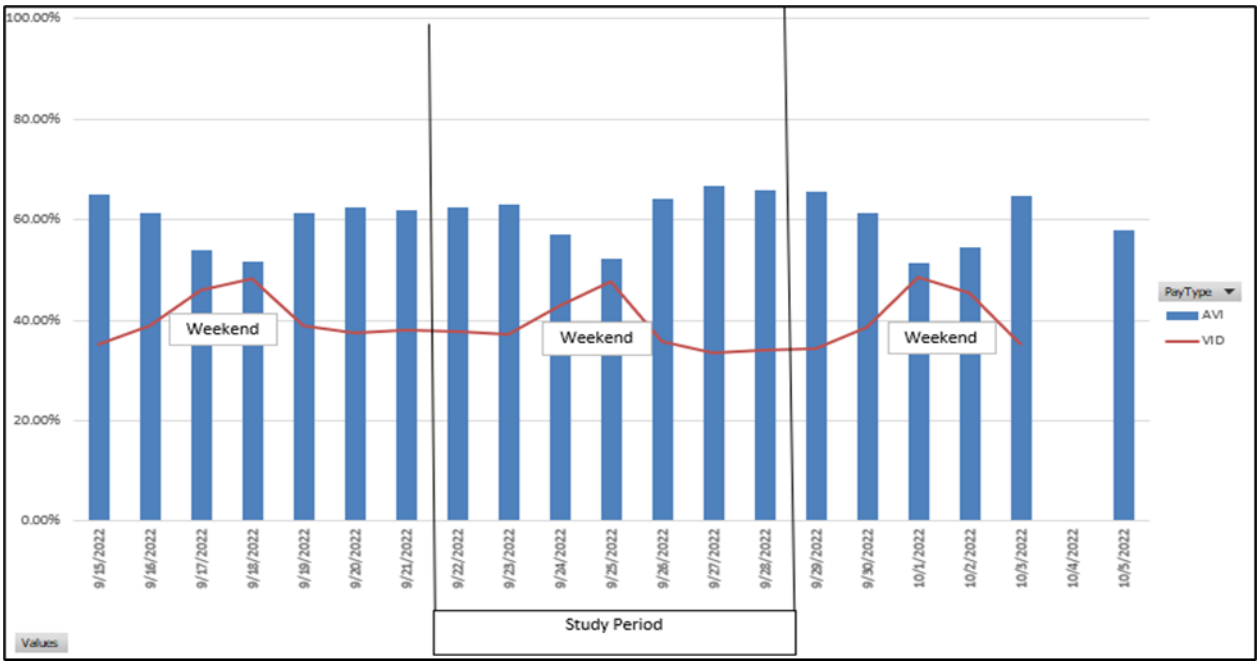
Lane 21 SB (4th Most Right Lane)



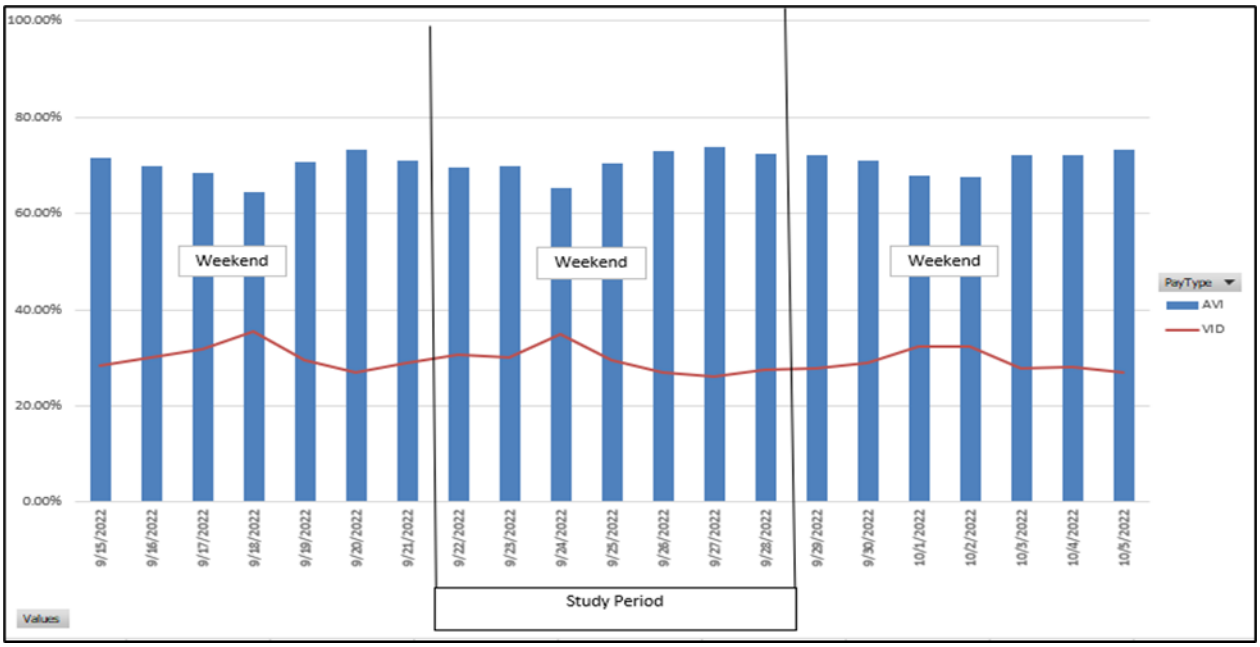
FMT Continued

Note: NB and SB have the same number of toll lanes. However, NB has one less lane within the right block of lanes before the divide from the left lanes and one additional lane in the left block of lanes. Therefore, lanes 20 and 9 are not comparable.

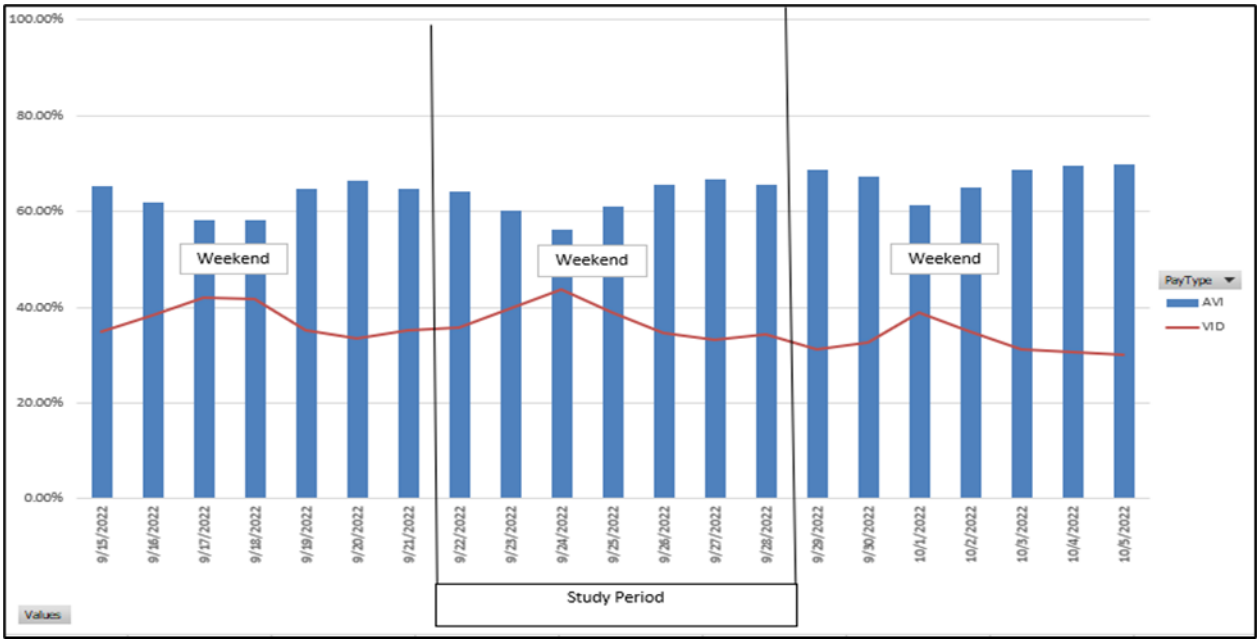
Lane 20 SB (5th Right Most Lane)



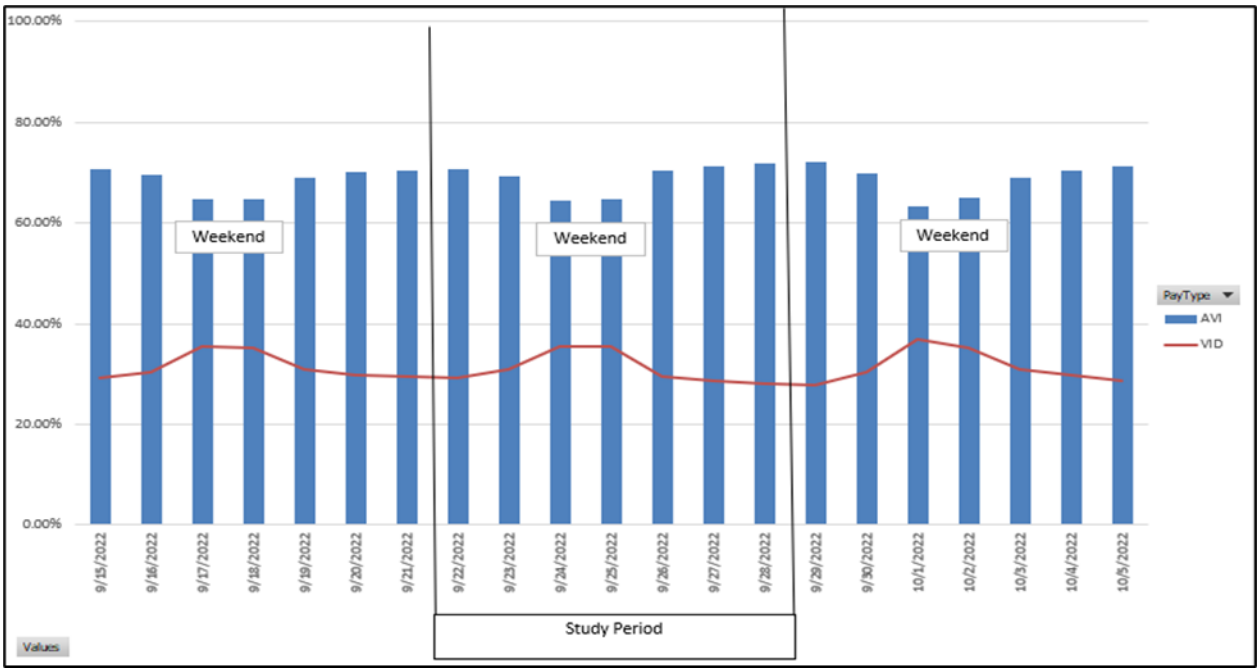
Lane 9 NB (3rd Most Left Lane)



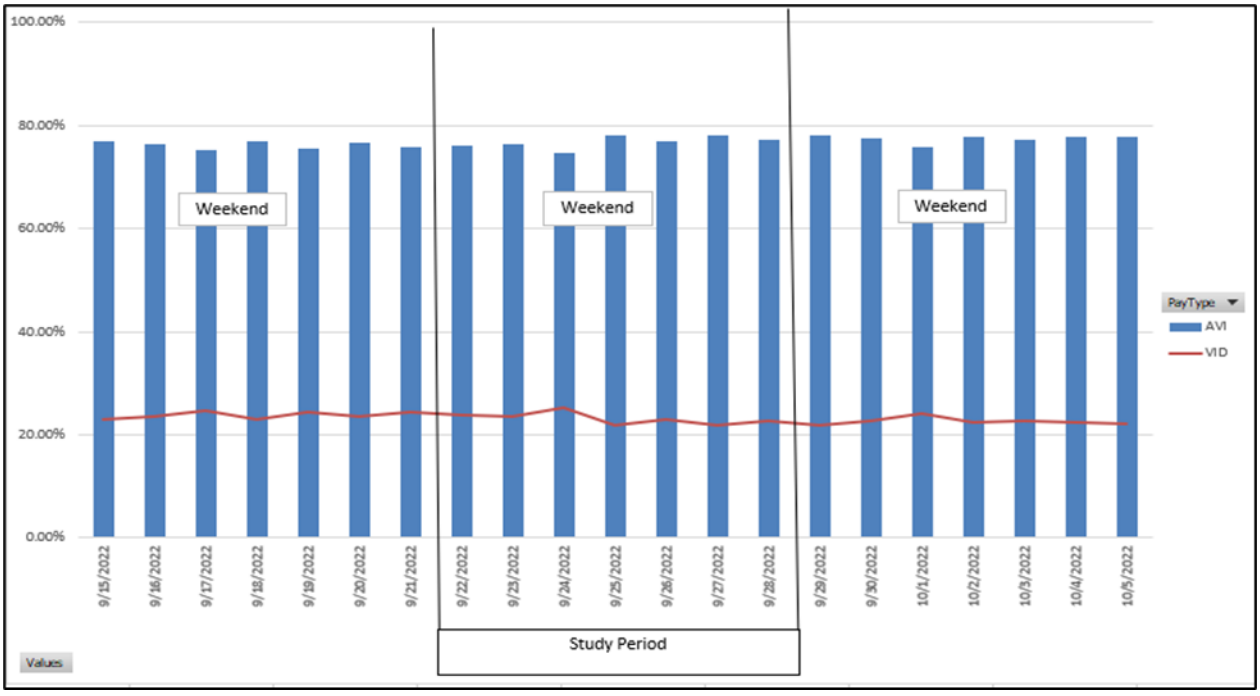
Lane 10 NB (2nd Most Far Left Lane)



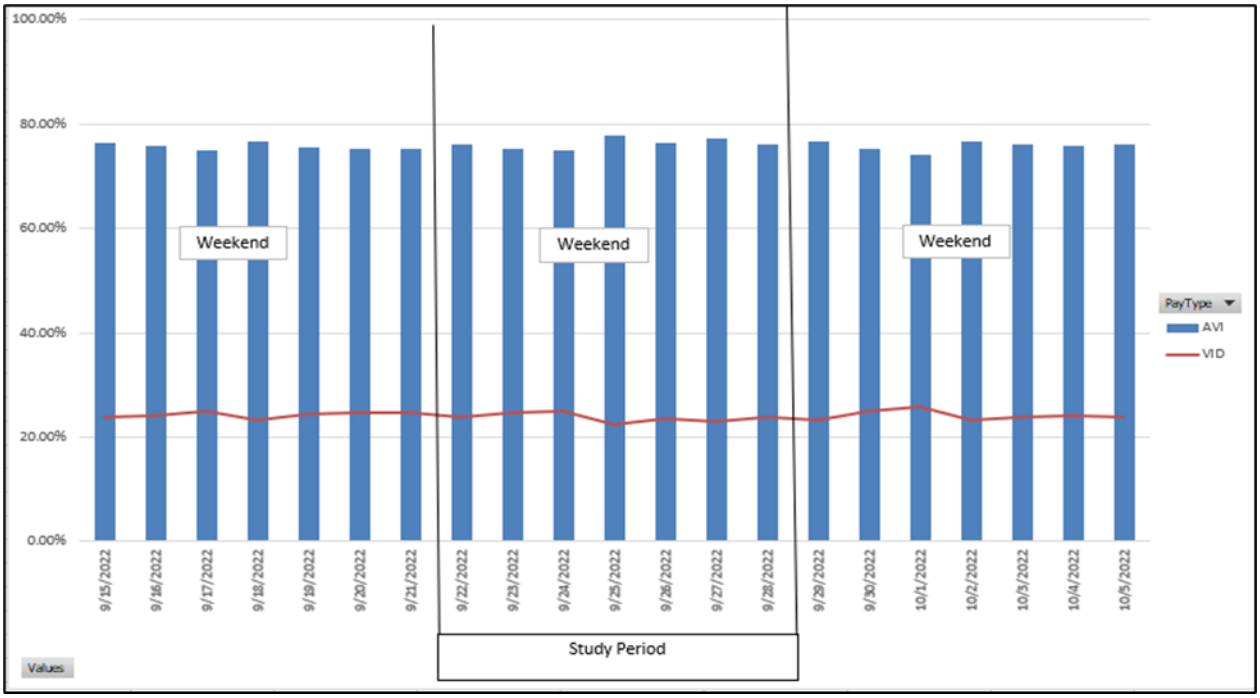
Lane 15 SB (2nd Most Far Left Lane)



Lane 11 NB (Far Left Lane)



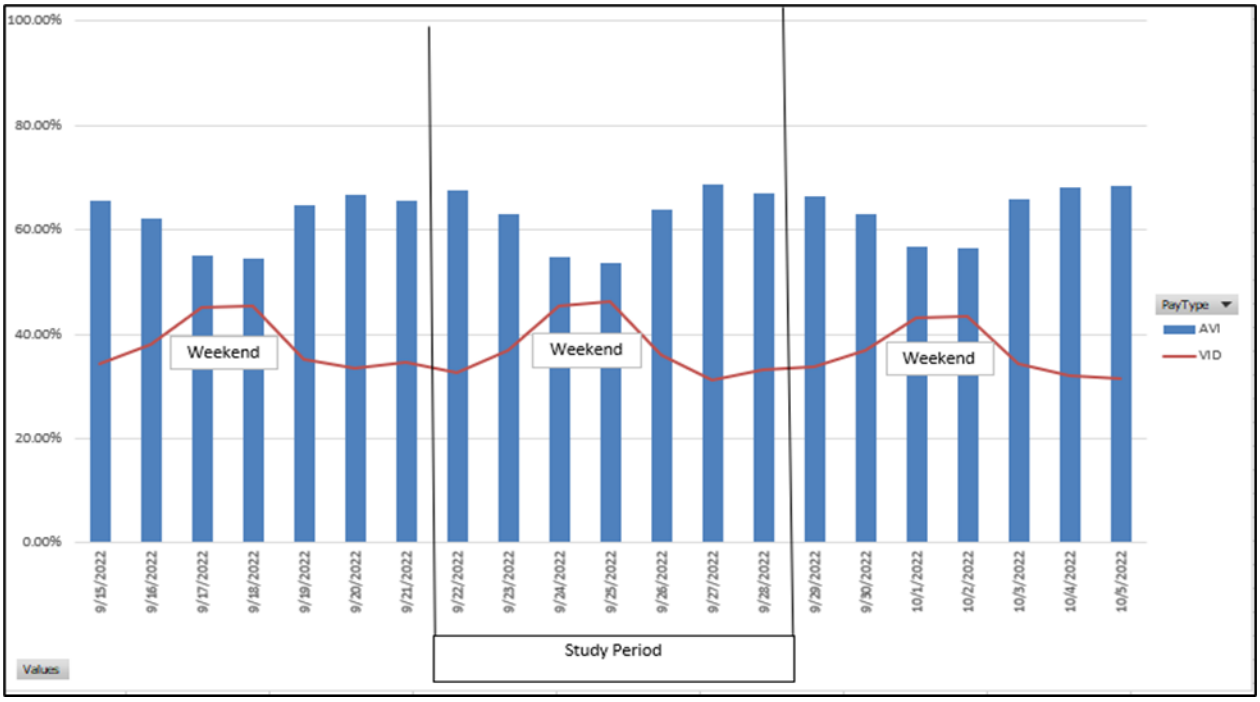
Lane 14 SB (Far Left Lane)



Governor Harry W. Nice Memorial/Senator Thomas "Mac" Middleton Bridge (HWN/Middleton)

Conclusion: The Tolling System consistently detected transponders, allowing customers to receive discounts and lower tolls, when applicable. All lanes showed consistent transponder detection rates, including a consistent increase in image-based transactions during the weekends and a higher rate of image-based transactions in the lanes on the right side of the facility and less in the lanes on the left side of the facility, indicating transponders were accurately detected (see the following pages).

Lane 52 (Right Lane)



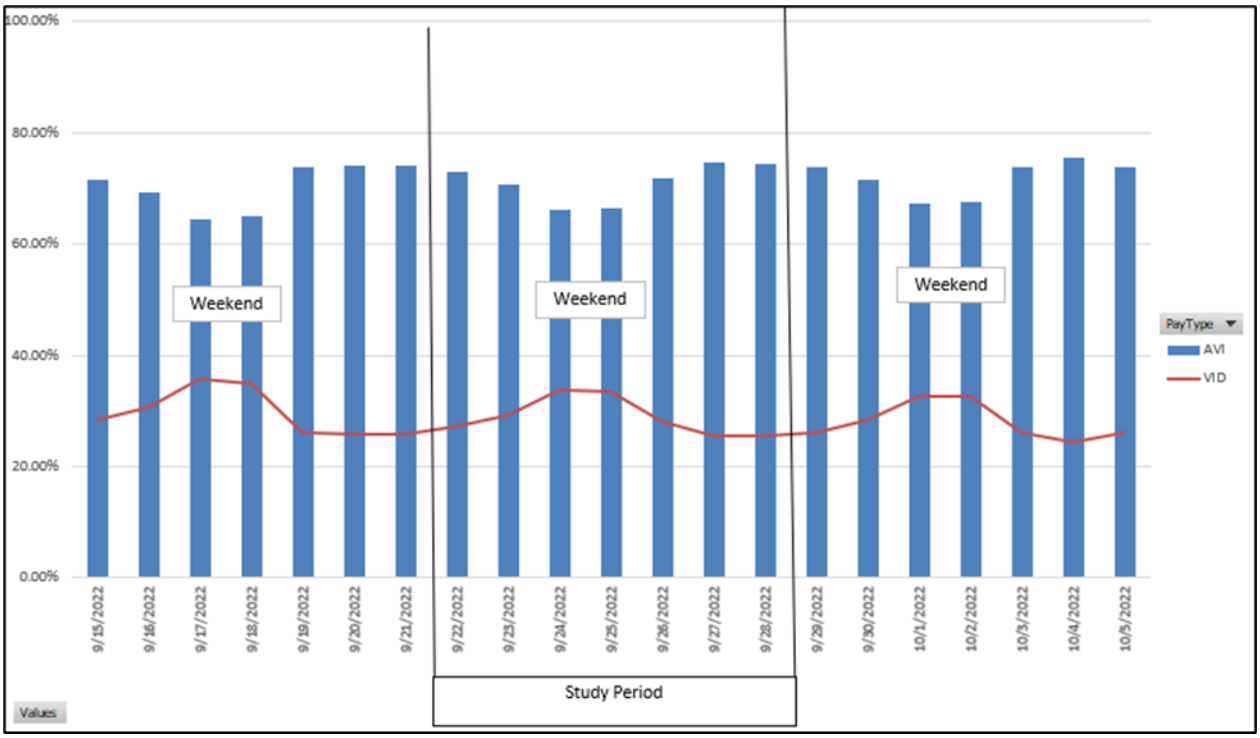
Lane 53 (Left Lane)

Note: The left lane, lane 53, was closed due to construction for a substantial portion of the study period and the weeks prior to and after the study period. As such a traffic composition pattern did not exist and could not be used for this study. During the three-week period, only 3.3% of total transactions were captured in this lane.

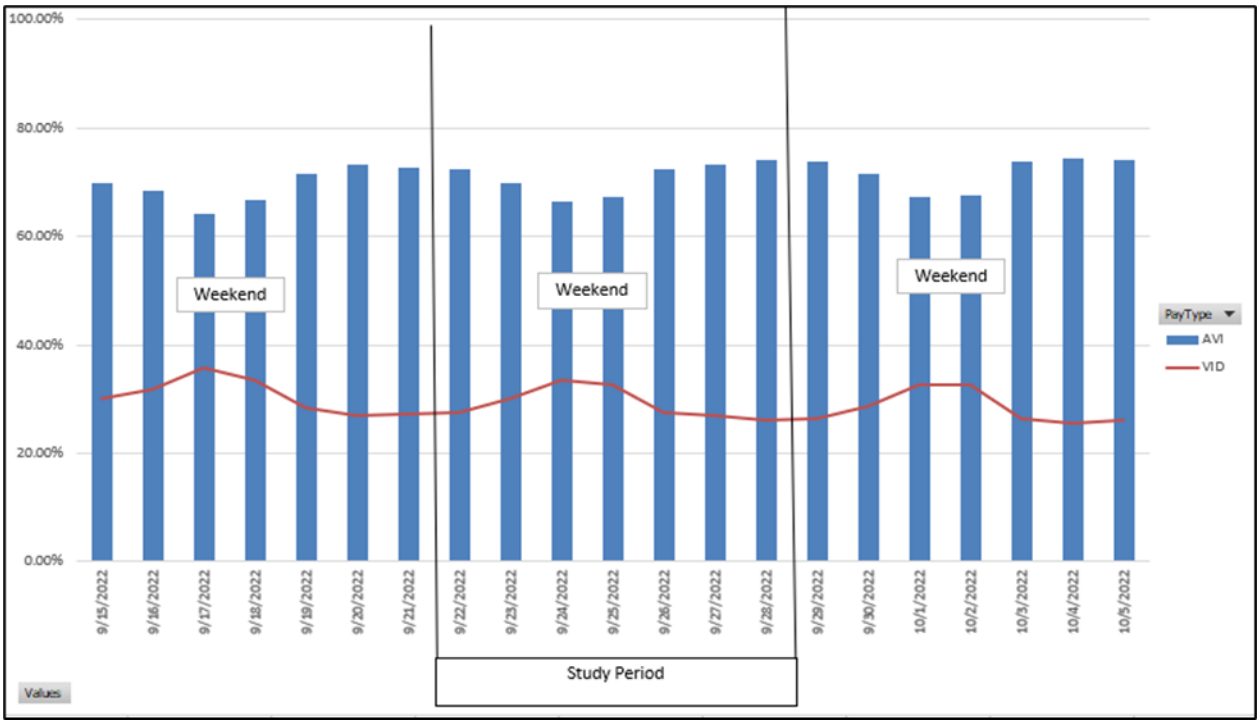
William Preston Lane Jr. Memorial (Bay) Bridge (US 50/301)

Conclusion: The Tolling System consistently detected transponders, allowing customers to receive discounts and lower tolls, when applicable. All lanes showed consistent transponder detection rates, including a consistent increase in image-based transactions during the weekends and a higher rate of image-based transactions in the lanes on the right and center lane and less in the left lane, indicating transponders were accurately detected (see the following pages).

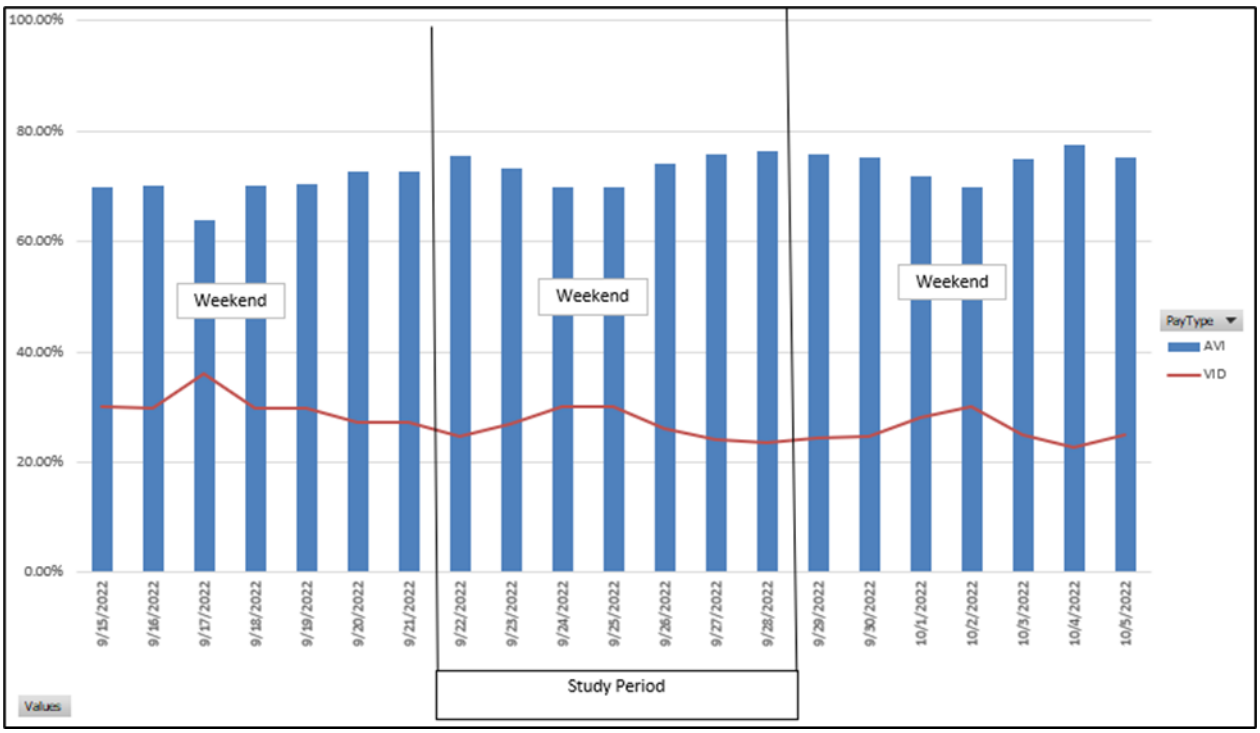
Lane 2 (Right Lane)



Lane 3 (Center Lane)



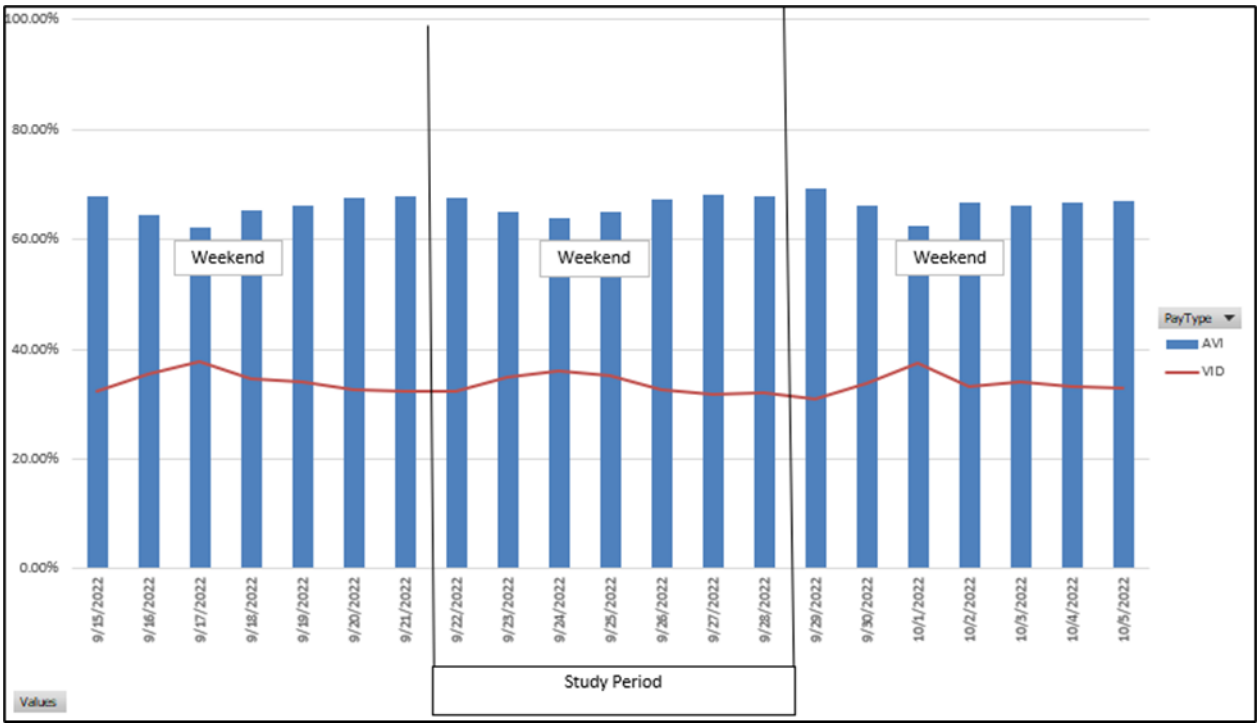
Lane 4 (Left Lane)



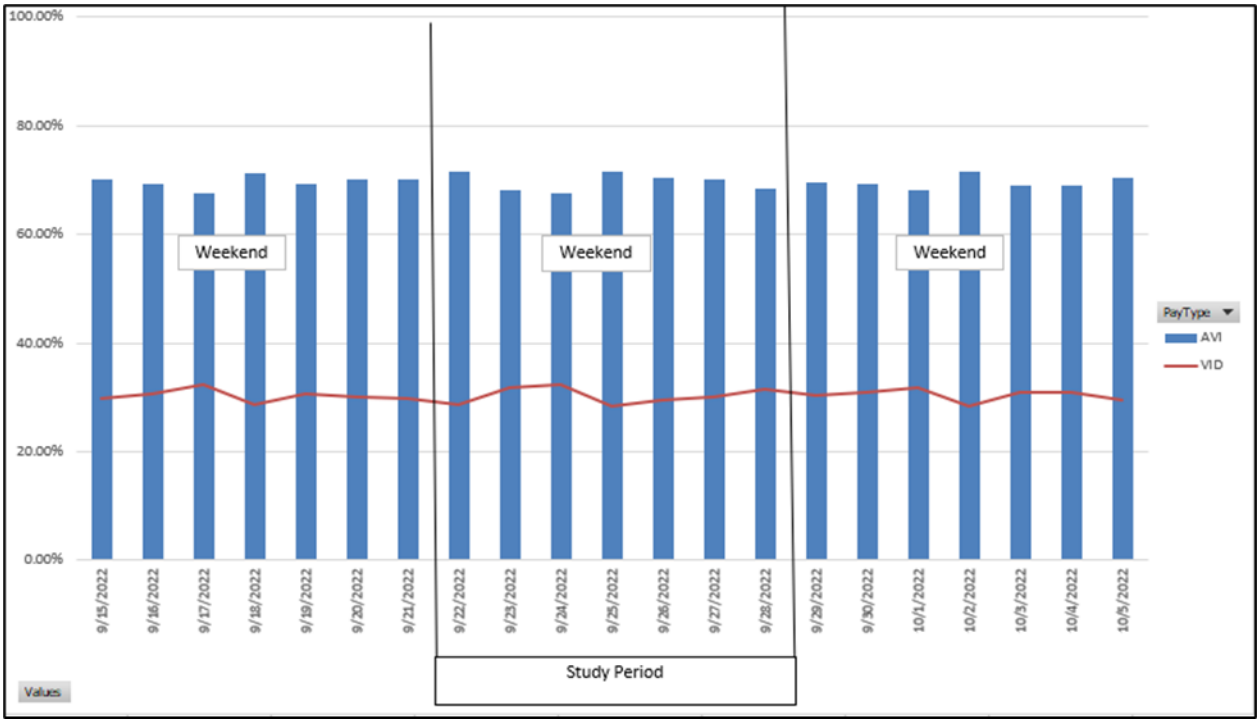
John F. Kennedy Memorial Highway (JFK)

Conclusion: The Tolling System consistently detected transponders, allowing customers to receive discounts and lower tolls, when applicable. All lanes showed consistent transponder detection rates, including a consistent increase in image-based transactions during the weekends which is driven by less frequent drivers and is slightly offset by out-of-state *E-ZPass* trips, indicating transponders were accurately detected. The weekend pattern increase can be seen at the ETL and FMT, the other I-95 facilities. Additionally, the lanes showed a consistent higher rate of image-based transactions in the lanes on the right and center lane and less in the left lane, indicating transponders were consistently detected.

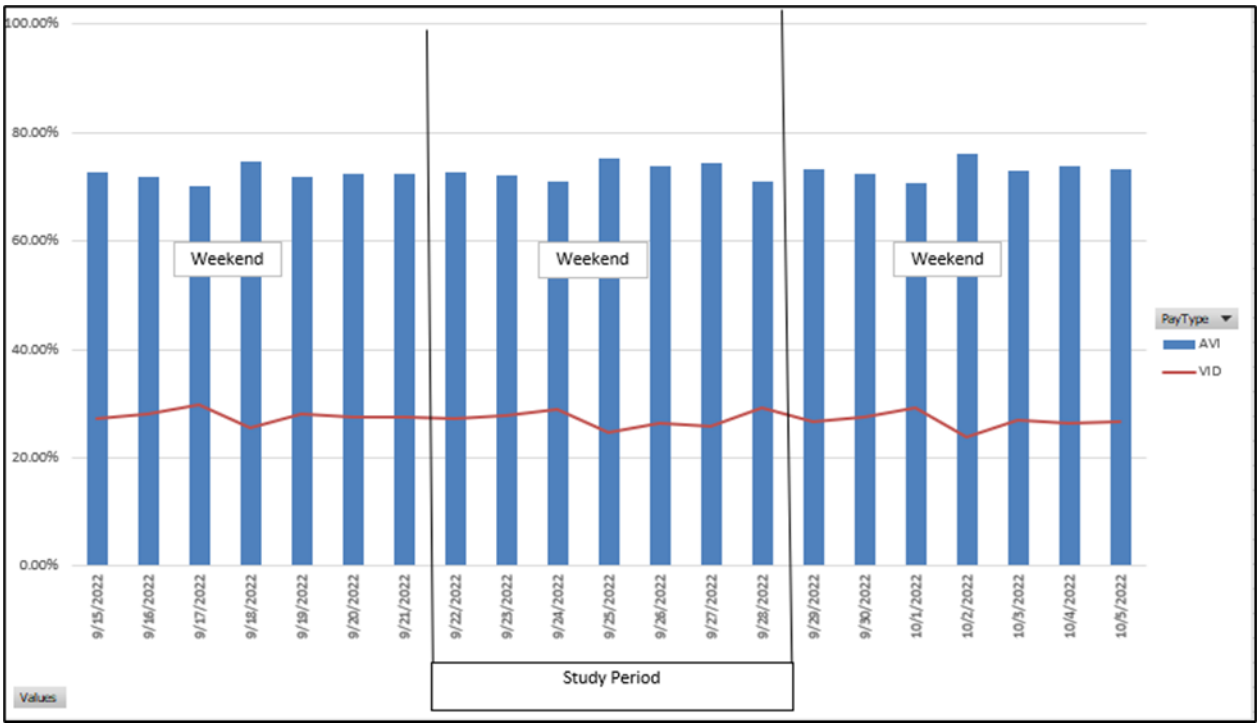
Lane 52 (Right Lane)



Lane 53 (Center Lane)



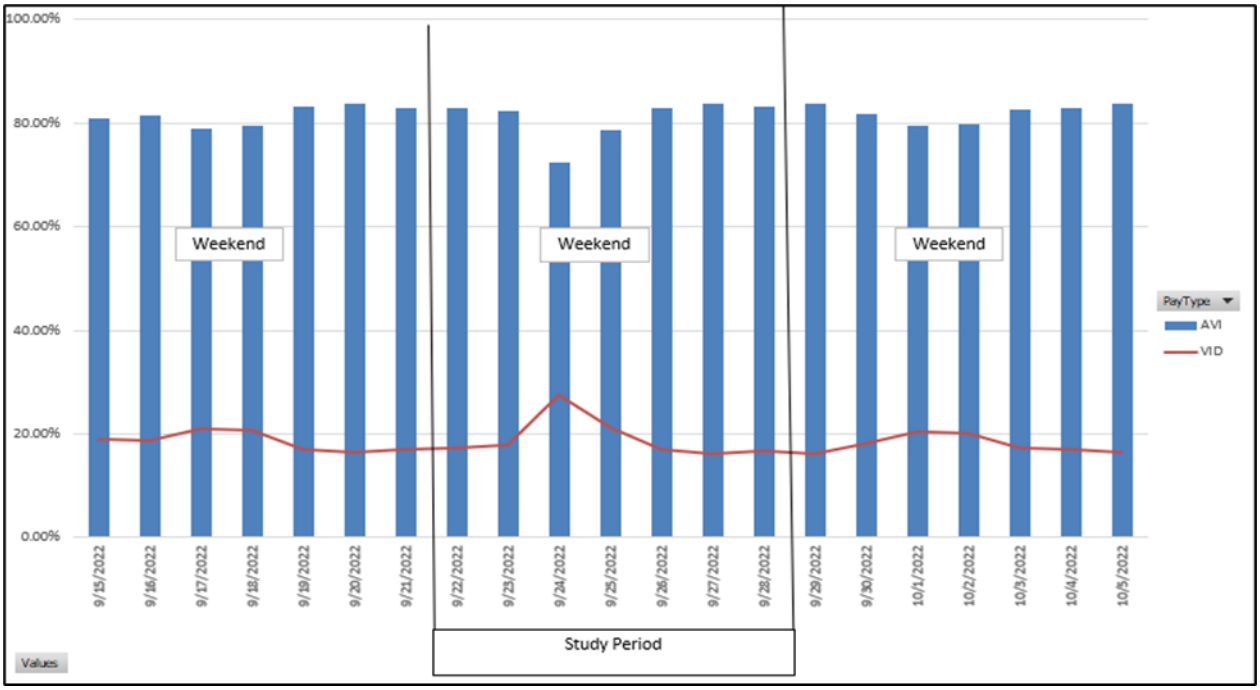
Lane 54 (Left Lane)



Thomas J. Hatem Memorial Bridge (TJH)

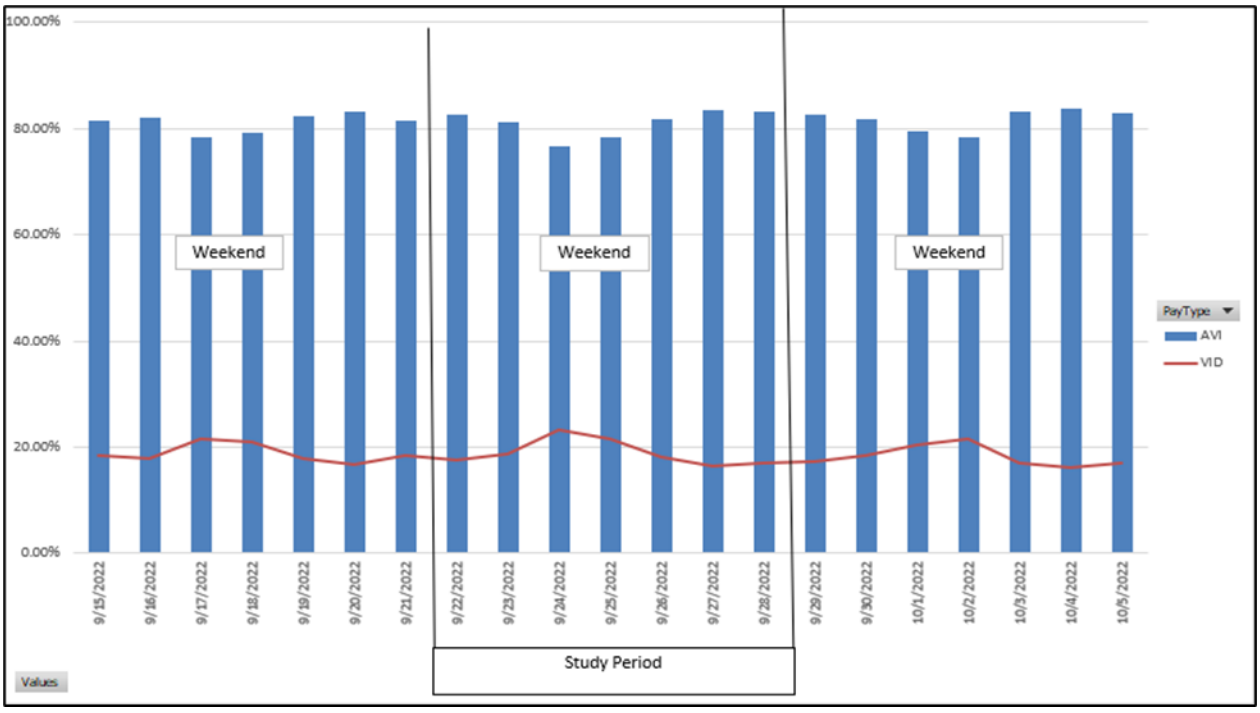
Conclusion: The Tolling System consistently detected transponders, allowing customers to receive discounts and lower tolls, when applicable. All lanes showed consistent transponder detection rates, including a consistent increase in image-based transactions during the weekends, except the right lane showed a slight spike on September 24, 2022, which was determined to be a non-issue. The spike was investigated and determined to be caused by the Susquehanna River Running Festival participants.

Lane 1 (Right Lane)



An additional review of the September 24, 2022, right lane, transactions was performed because of the unexpected increase in imaged-based transactions. The review determined the cause of the increase was the tolling equipment detecting participants in a running festival. The tolling equipment detects any object within the toll zone. These transactions were discarded and not processed. As such, the change in pattern was not the result of a system issue.

Lane 2 (Left Lane)



TAB 5

VERBAL

TAB 6

VERBAL

TAB 7

CLOSED SESSION

TAB 8

CLOSED SESSION