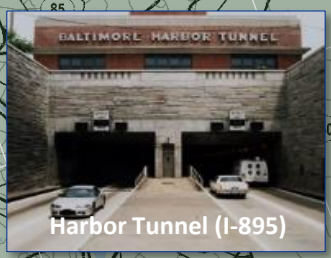
Maryland Transportation Authority FY 2025 Traffic and Toll Revenue Forecast Update

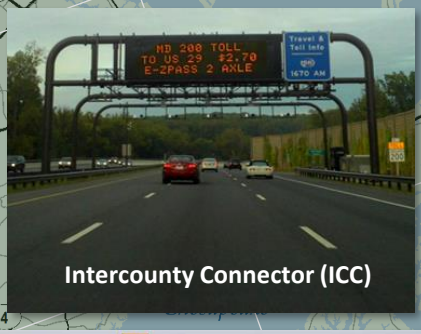

Kennedy Highway (I-95)


Hatem Bridge (US 40)

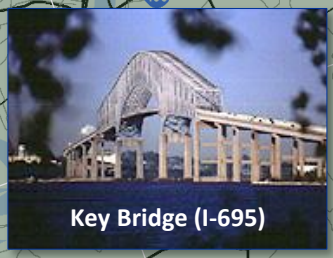

Fort McHenry Tunnel (I-95)



Harbor Tunnel (I-895)



Intercounty Connector (ICC)


Key Bridge (I-695)

I-95 Express Toll Lanes (ETL)


Nice/ Middleton Bridge (US 301)


Bay Bridge (US 50/301)

FINAL REPORT
October 29, 2024

MDTA

Maryland Transportation Authority

CDM Smith

Table of Contents

List of Figures

List of Tables

Chapter 1
Introduction

This letter report includes ten-year forecasts through FY 2034 for the seven "Legacy" toll facilities operated by MDTA, for the Intercounty Connector (ICC), and for the I-95 Express Toll Lanes (ETLs). It summarizes the study analysis, including a presentation of historical traffic and revenue trends, relevant socioeconomic conditions and forecasts, and the ten-year forecast results.

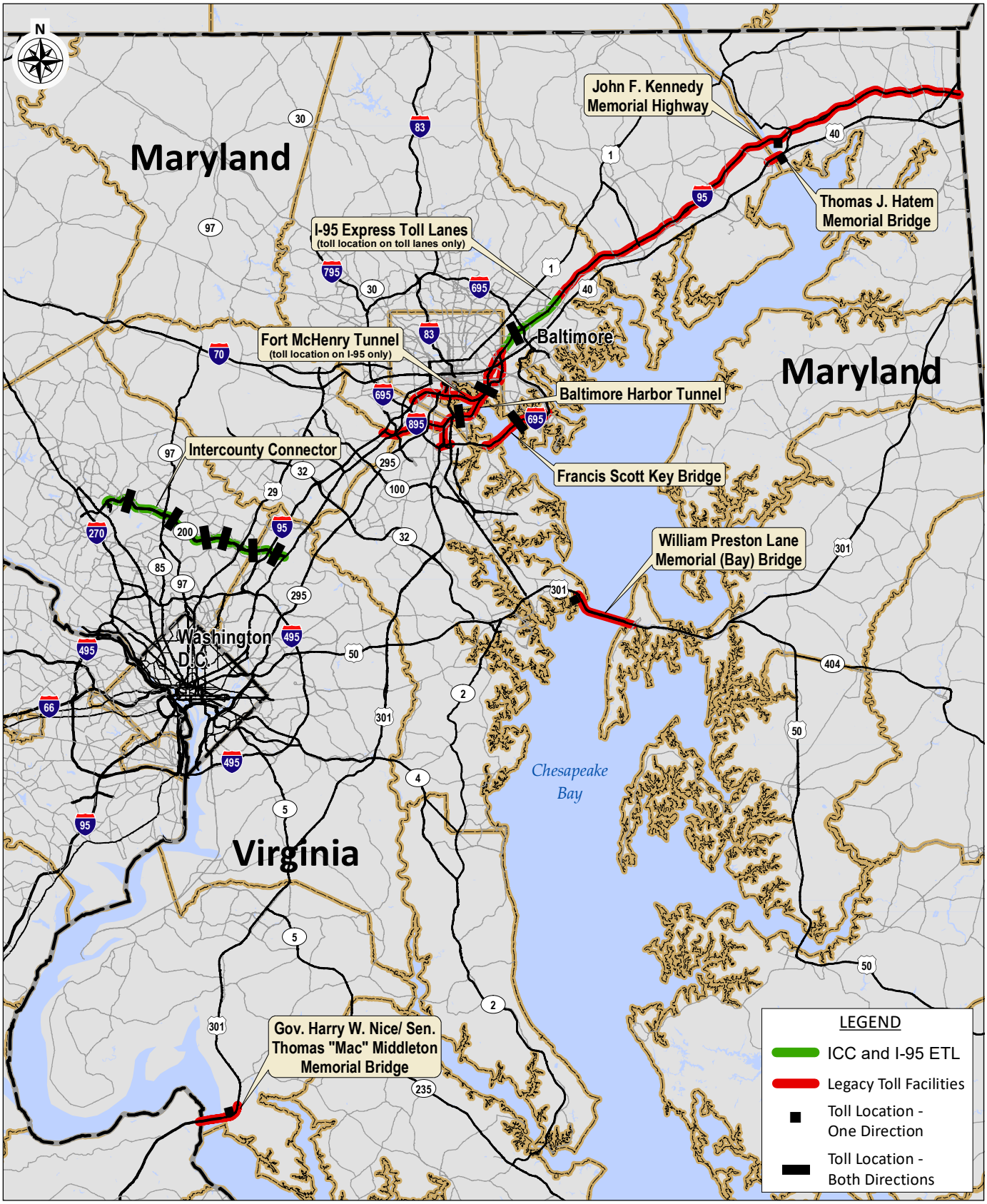
1.1 System Description

The nine facilities operated by MDTA are listed below. Collectively, the first seven facilities in the list below are referred to as the Legacy System.

- Thomas J. Hatem Memorial Bridge (Hatem Bridge, TJH)
- John F. Kennedy Memorial Highway, excluding the I-95 Express Toll Lanes (Kennedy Highway, JFK)
- Baltimore Harbor Tunnel (Harbor Tunnel, BHT)
- Fort McHenry Tunnel (Fort McHenry Tunnel, FMT)
- Francis Scott Key Bridge (Key Bridge, FSK)
- William Preston Lane Jr. Memorial Bridge (Bay Bridge, WPL)
- Governor Harry W. Nice Memorial/Senator Thomas "Mac" Middleton Bridge (Nice/Middleton Bridge, HWN)
- Intercounty Connector (ICC/MD 200)
- I-95 Express Toll Lanes (I-95 ETLs)

Figure 1-1 shows the locations of the MDTA Legacy system, ICC, and I-95 ETLs toll facilities and toll gantries in a regional context. As can be implied by the geographic distribution of the different facilities, the MDTA system serves a variety of travel purposes within the regional transportation system and consequently has a diverse mix of traffic classes and payment types.

In the north, the Hatem Bridge and the Kennedy Highway form two parallel crossings of the Susquehanna River. The Hatem Bridge carries US 40 over the river and is the oldest of the MDTA's facilities, having been open to traffic since August 1940. The existing structure replaced an older bridge that first opened in 1910. The John F. Kennedy Memorial Highway is a 50-mile segment of I-95 that was opened in November 1963. It currently has one mainline toll plaza located just east of the Susquehanna River.



FACILITY LOCATION MAP
MARYLAND TOLL FACILITIES

FIGURE 1-1

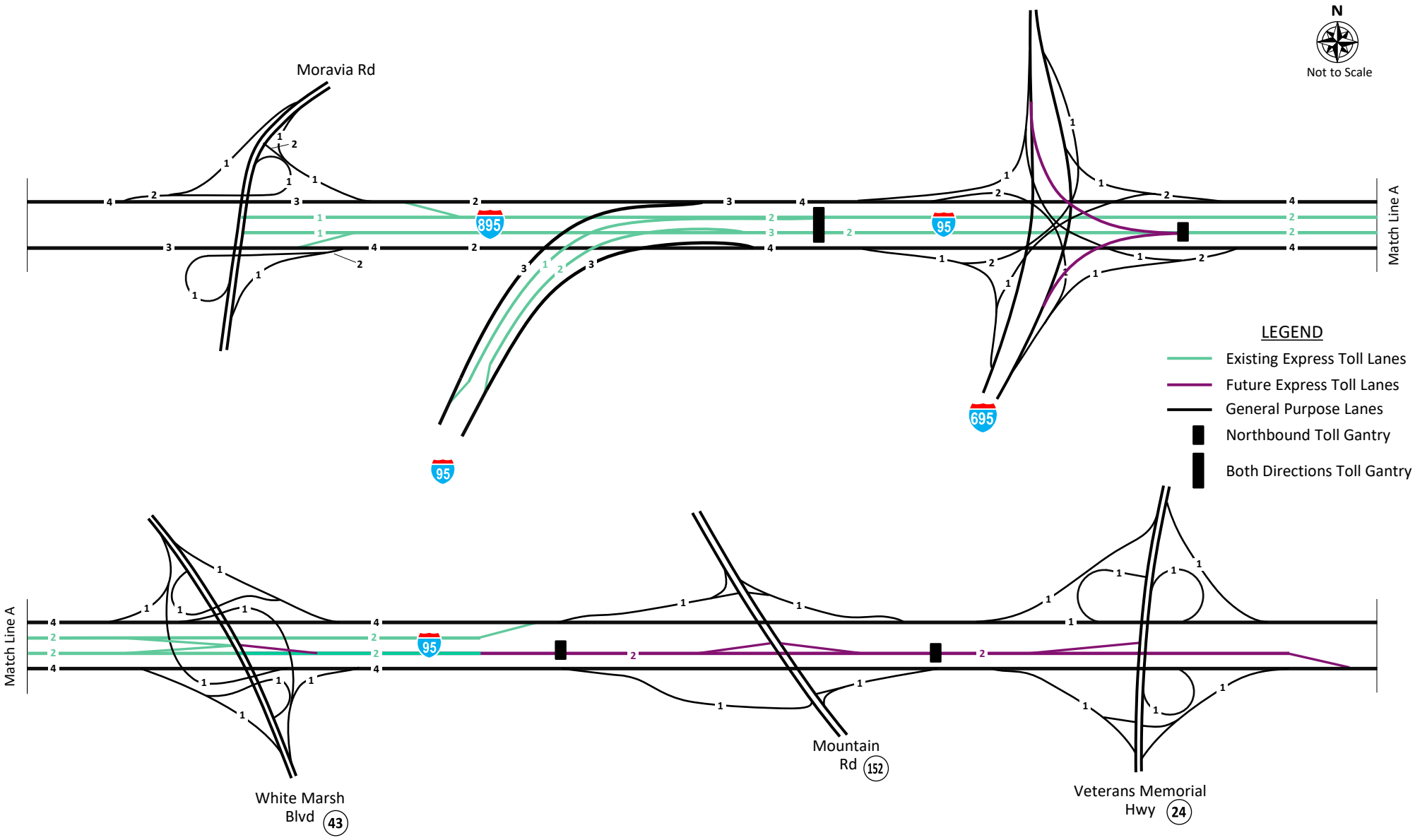
The I-95 ETLs are a separate eight-mile toll facility on the Kennedy Highway between I-895 and MD 43 in Northeast Baltimore. The facility, which opened in December 2014, includes two express toll lanes in each direction in between the general purpose lanes on this segment of I-95. A northern extension of only the northbound I-95 ETL facility is planned to open in phases within the forecasting horizon of this report. The assumed opening dates of this extension are included in the assumptions in Chapter 4. **Figure 1-2** shows the assumed access and tolling points on the I-95 ETL extension.

There are three alternative MDTA toll routes that cross the Baltimore Harbor in the center of the region: the Baltimore Harbor Tunnel (I-895), the Francis Scott Key Bridge (I-695), and the Fort McHenry Tunnel (I-95), which are collectively referred to as the Baltimore Harbor crossings. The oldest of the three Baltimore Harbor crossings is the Harbor Tunnel which opened in November 1957. The Key Bridge was built to alleviate congestion and delays at the Harbor Tunnel and was opened in March 1977. The newest of these facilities, the Fort McHenry Tunnel, is an eight-lane crossing that opened in November 1985.

In the early hours of March 26th, 2024, the Key Bridge collapsed due to the collision between a cargo ship and one of the bridge supports. This halted all traffic and severely impacted activity at the Port of Baltimore. Since the collapse, traffic has had to divert to the Fort McHenry Tunnel, Baltimore Harbor Tunnel, or other local roads as the rebuilding of the bridge will take a couple years to complete. Additional details of this event and how it has been considered in the forecast will be discussed further in Chapter 4.

The ICC facility is in the northern Washington D.C. metro region and connects I-370 in the Gaithersburg area to I-95 and US 1 near Laurel. The ICC opened in phases. The initial segment between I-370 and MD 97 opened to traffic in February 2011 and began collecting tolls in March 2011. The segment from MD 97 to I-95 opened to traffic in November 2011 and began collecting tolls in December 2011, and the final segment between I-95 and US 1 opened and began collecting tolls in November 2014.

The southern region contains two facilities which carry US 301 to diverse destinations. The Governor Harry W. Nice Memorial/Senator Thomas "Mac" Middleton Bridge was originally opened in December 1940, connecting Maryland with Virginia, thereby allowing travelers making regional through-trips to bypass the Washington DC area. A replacement of the bridge opened on October 12, 2022 which widened the bridge from two lanes per direction to four lanes per direction, improved safety with barrier-separated medians, provided a taller 135-foot clearance for ships to pass underneath, and replaced the toll booths with all-electronic tolling technology. The William Preston Lane Jr. Memorial (Bay) Bridge was first opened to traffic in July 1952 and crosses the Chesapeake Bay. Twenty-one years later in June 1973, a parallel span carrying westbound traffic was opened, with the original span carrying eastbound traffic. A Tier 1 National Environmental Policy Act (NEPA) Study, called the Chesapeake Bay Crossing Study, was completed and considers alternatives to address congestion on the Bay Bridge. A Record of Decision (ROD) on the study and Final Environmental Impact Statement (Final EIS) were approved in April 2022 along with the Selected Corridor Alternative. Final project design and construction will follow final agency decisions based on completion of Tier 2 NEPA Study documents. Currently, there is no timetable for construction of a new crossing.

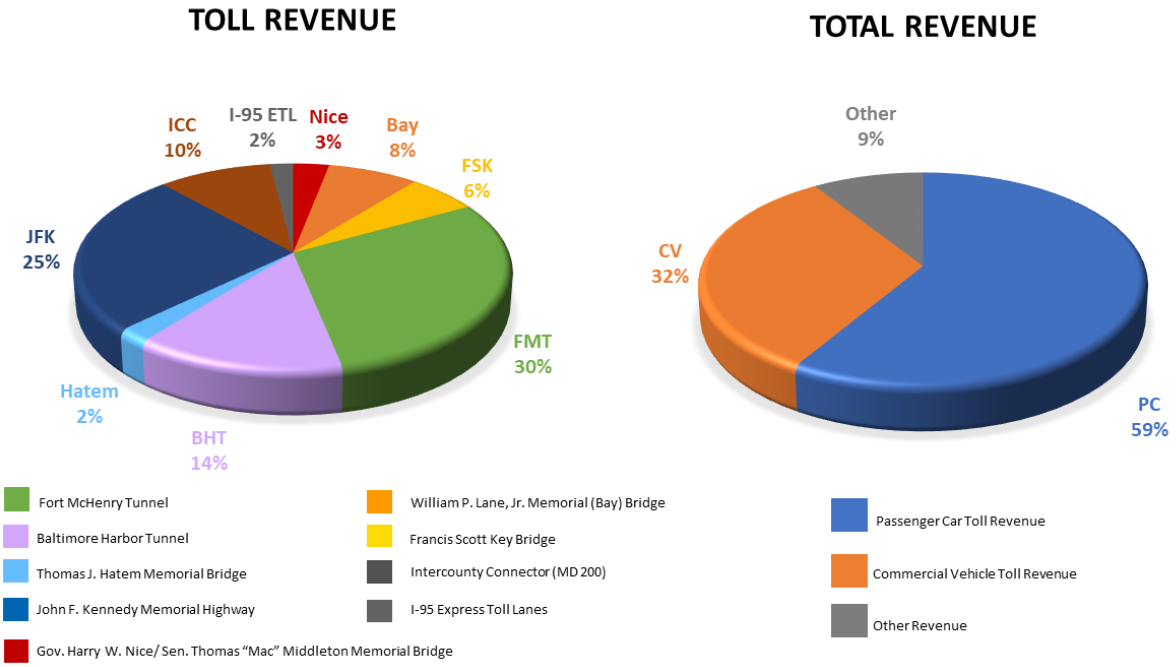


I-95 EXPRESS TOLL LANES (ETL)
EXISTING & FUTURE CONFIGURATION W/ I-695 DC

FIGURE 1-2

For context in this letter report, **Figure 1-3** shows the share of MDTA toll revenue by facility and total revenue by type for the most recent full fiscal year. As shown, three quarters of toll revenue is from the Kennedy Highway, Fort McHenry Tunnel, Harbor Tunnel, and Key Bridge, which make up the I-95 corridor and parallel Interstate crossings near downtown Baltimore. Total revenue includes 32 percent commercial vehicle toll revenue, about 59 percent passenger car toll revenue, and about 9 percent other revenue. Other revenue includes a combination of revenue collected and revenue deductions from unused Commuter Plan and Shoppers Plan trips, transponder fees and sales, the Hatem Bridge E-ZPass program, violation recovery (civil penalties), and commercial vehicle fees and discounts (post-usage discount, high frequency discount, and over-sized permit fees).

Figure 1-3
FY 2024 MDTA Share of Toll Revenue by Facility and Total Revenue by Type



1.2 Toll Rate and Civil Penalty Structure

1.2.1 Standard Toll Rates

Table 1-1 provides the standard Legacy system toll rates and toll collection direction. Toll rates vary by facility, method of payment, and vehicle class. The toll rates are grouped into three categories: Maryland E-ZPass, base toll rates which includes out-of-state E-ZPass and the pay-by-plate payment method, and video payment. Pay-by-Plate was introduced as another payment option for customers on April 29, 2021, which allows customers to pre-register their vehicle's license plate for video payment and receive the prior cash toll rate. A discount for early payment of video tolls was also introduced on April 29, 2021. This allows customers to receive a 15 percent discount (up to $5.00) when they pay their video tolls before an invoice is mailed. Maryland E-ZPass toll rates apply to drivers who register for an E-ZPass account and receive a

transponder from MDTA. These customers receive a discount compared to the base toll rate customers and can also enroll in discounts like the shopper and commuter rates and programs further described in **Table 1-2**. The base toll rate applies to out-of-state registered E-ZPass and pay-by-plate customers. Video customers pay a 50 percent surcharge over the base toll rate. Cash was a payment option at five of the seven Legacy facilities up until March 17, 2020 when cashless collection was initiated as a safety precaution related to the COVID-19 pandemic. The Hatem Bridge and Key Bridge facilities had already been converted to all-electronic tolling in October 2019. Permanent cashless tolling on the facilities that offered a cash payment option before the pandemic was announced on August 6, 2020.

Table 1-1
Standard MDTA Legacy System Toll Rates and Toll Collection Direction

Class	Hatem Bridge (Eastbound)	Kennedy Highway (Eastbound)	Harbor Facilities: FMT, BHT, FSK (Both)	Bay Bridge (Eastbound)	Nice/ Middleton Bridge (Westbound)
Maryland E-ZPass Payment Type					
Commuter[1]	$2.80	$2.80	$1.40	$1.40	$2.10
Shopper[1]	NA	NA	NA	$2.00	NA
2-axle	$6.00	$6.00	$3.00	$2.50	$4.50
3-axle	$11.20	$16.00	$8.00	$8.00	$12.00
4-axle	$16.80	$24.00	$12.00	$12.00	$18.00
5-axle	$48.00	$48.00	$24.00	$24.00	$36.00
6-axle+	$60.00	$60.00	$30.00	$30.00	$45.00
Base Toll Rates: Other E-ZPass Payment Type and Pay-By-Plate Payment Type[2]					
2-axle	$8.00	$8.00	$4.00	$4.00	$6.00
3-axle	$16.00	$16.00	$8.00	$8.00	$12.00
4-axle	$24.00	$24.00	$12.00	$12.00	$18.00
5-axle	$48.00	$48.00	$24.00	$24.00	$36.00
6-axle+	$60.00	$60.00	$30.00	$30.00	$45.00
Video Payment Type[3]					
2-axle	$12.00	$12.00	$6.00	$6.00	$9.00
3-axle	$24.00	$24.00	$12.00	$12.00	$18.00
4-axle	$36.00	$36.00	$18.00	$18.00	$27.00
5-axle	$63.00	$63.00	$36.00	$36.00	$51.00
6-axle+	$75.00	$75.00	$45.00	$45.00	$60.00

[1]Commuter and shopper programs for 2-axle vehicles only. Rates shown are if all trips are used

[2]ITOLs (video images matched to existing E-ZPass accounts) are charged the base toll rate.

[3]Customers that pay their video toll before an invoice is mailed are eligible for a 15% discount

Table 1-2 provides a description of the other MDTA Legacy system discount toll rate programs available to Maryland E-ZPass customers. The programs available for two-axle vehicles aim to provide discounts for drivers who use the MDTA facilities frequently. Commuter plans are available for the Baltimore Harbor crossings, the Nice/Middleton Bridge, and the Bay Bridge. These plans allow customers to complete a set number of trips within a 45-day period at a fixed price on specific facilities. Specific details of the commuter programs are shown in **Table 1-2**. In addition to the commuter plan at the Bay Bridge, there is a shopper plan that allows drivers to take ten trips Sunday through Thursday for $20 over a 90-day period on the Bay Bridge. The Hatem Bridge has two plans offered: Hatem Plan A and Hatem Plan B. Both plans provide unlimited trips for a flat annual fee of $20 and vary slightly in account setup and associated fees.

Two discount plans are offered for commercial vehicles with five-or-more axles: the post usage discount and supplemental rebate plan. The post usage discount reimburses business accounts a percentage of monthly tolls in the range of 10 to 20 percent based on the toll amount accrued in a 30-day period. The supplemental rebate program provides a similar structure for individual accounts by providing a discount in the range of 10 to 20 percent for accounts that make more than 60 trips per month. Also listed in **Table 1-2** are the Baltimore Harbor Tunnel Childs Street ramp and Key Bridge Broening Highway Turnaround tolls which are a lower toll rate for three-or-more axle vehicles using specific ramps near the Harbor Tunnel and Key Bridge

Tolls on the ICC differ from the Legacy system in that they're assessed on particular interchange-to-interchange movements, as shown in **Table 1-3.** The ICC is a cashless facility with E-ZPass, Pay-by-Plate or video payment options. This table provides the two-axle E-ZPass toll rates, which vary from $0.40 to $3.86 depending on the length of the trip and time of day. Higher toll rates are assessed on weekdays during the Peak Periods, which are 6:00 to 9:00 AM and 3:00 to 7:00 PM, compared to the Overnight (11:00 PM to 5:00 AM) and Off-Peak (all other hours) time periods. Tolls differ on the weekends for the Overnight and Off-Peak periods. E-ZPass toll rates are higher for commercial and recreational (boat and camper) vehicles based on the number of axles. Unlike toll rates on the Legacy system, E-ZPass rates are the same on the ICC for customers holding their accounts through MDTA and through other agencies. All video toll customers pay a 50 percent surcharge over the E-ZPass rate with a minimum of $1 and maximum of $15 above the E-ZPass rates. Pay-by-Plate customers pay a rate in between the video toll and E-ZPass customers.

The I-95 ETLs are an express lane facility with a single tolling point in each direction. Similar to the ICC, toll rates vary by vehicle type and time period. It is a cashless facility with payment method options of E-ZPass, Pay-by-Plate, or video tolling. As shown previously in **Figure 1-2**, a northbound extension of the I-95 ETLs is also planned to open within the forecasting period. **Table 1-4** provides the current toll rates by axle and payment type for the existing section from I-895 to MD 43, as well as the assumed toll rates for the two northbound extension tolling points, which extend through MD 24. Unlike toll rates on the Legacy system, E-ZPass rates are the same on the I-95 ETLs for customers holding their accounts through MDTA and through other agencies. Video toll customers pay a 50 percent surcharge over the E-ZPass rate with a minimum of $1 and maximum of $15 above the E-ZPass rates. Pay-by-plate customers pay a rate that is in between video toll and E-ZPass customers.

Table 1-2
Other MDTA Legacy System Discount Toll Rate Programs and Rates

Program	Details
Baltimore Region Commuter Discount Plan	For E-ZPass Maryland accounts holders driving **two-axle vehicles**. The Baltimore Regional Plan is $70 for 50 trips on the Fort McHenry Tunnel, Harbor Tunnel, Key Bridge, Kennedy HIghway, or Hatem Bridge. Two "trips" are deducted for each crossing of the Kennedy Highway and Hatem Bridge . Plans end after 45 days or when all of the trips are used, whichever comes first.
Nice Bridge Commuter Discount Plan	For E-ZPass Maryland accounts holders driving **two-axle vehicles**. The Nice bridge plan is $52.50 and offers 25 trips. The plans ends after 45 days or when all of the trips are used, whichever comes first.
Bay Bridge Commuter Discount Plan	For E-ZPass Maryland accounts holders driving **two-axle vehicles**. The Bay Bridge Plan is $35.00 and offers 25 trips. The plan ends after 45 days or when all of the trips are used, whichever comes first.
Bay Bridge Shopper Discount Plan	For E-ZPass Maryland accounts holders driving **two-axle vehicles**. The Bay Bridge Shopper plan is $20.00 for ten two-axle trips that can be used Sunday through Thursday. The plan ends after 90 days or when all of the trips are used, whichever comes first.
Hatem Bridge Discount Plan A	An E-ZPass account with transponders valid only at the Hatem Bridge. This plan applies only to **two-axle vehicles**, and includes unlimited trips. This plan is subject to a flat annual fee of $20.00. There are NO account fees, prepaid toll deposits or account statements.
Hatem Bridge Discount Plan B	This discount plan is attached to a normal Maryland E-ZPass account. This plan applies only to **two-axle vehicles**, and includes unlimited trips. This plan is subject to a flat annual fee of $20.00. Account fees apply as with the normal Maryland E-ZPass account.
Post Usage Discount Plan	Business accounts operating **five-or-more-axle vehicles** qualify for an E-ZPass post-usage discount based on the tolls paid in every 30-day period, with a 10 percent discount offered for total monthly tolls of $150.00 to $1,999.99, 15 percent for total monthly tolls of $2,000.00 to $7,500.00 and 20 percent for total monthly tolls of over $7,500.00.
Supplemental Rebate Plan	A supplemental rebate program is offered to **five-or-more-axle vehicles** with individual transponders making 60 or more trips per month. As of July 1, 2015, a 10 percent discount is offered for five- or more-axle vehicle transponders making 60-79 trips per month, 15 percent for 80-99 trips per month, and 20 percent for 100 or more per month.
Baltimore Harbor Childs Street Ramps and Key Bridge Broening Highway Turnaround Toll	Vehicles with a valid E-ZPass Maryland account and transponder will pay $2 per axle for **3, 4, 5 and 6+ axle vehicles** to use the I-895/Childs Street ramps at the Baltimore Harbor Tunnel and when making the Broening Highway Turnaround on the Key Bridge.

Table 1-3
Intercounty Connector Two-Axle E-ZPass Toll Rates by Movement and Time Period

Entrance	Time Period[1]	Exit						
		I-370 / Shady Grove Rd.	SR 97 / Georgia Ave.	SR 182 / Layhill Rd.	SR 650 / New Hampshire Ave.	US 29 / Briggs Cheney Rd.	I-95	Konterra Dr. / US 1
I-370; Shady Grove Rd.	Peak		$1.24	$1.74	$2.37	$2.92	$3.52	$3.86
	Off-Peak		$0.96	$1.35	$1.83	$2.26	$2.72	$2.98
	Overnight		$0.40	$0.56	$0.75	$0.93	$1.12	$1.23
SR 97 / Georgia Ave.	Peak	$1.24		$0.50	$1.13	$1.68	$2.28	$2.61
	Off-Peak	$0.96		$0.40	$0.87	$1.30	$1.76	$2.02
	Overnight	$0.40		$0.40	$0.40	$0.53	$0.72	$0.83
SR 182 / Layhill Rd.	Peak	$1.74	$0.50		$0.62	$1.18	$1.78	$2.11
	Off-Peak	$1.35	$0.40		$0.48	$0.91	$1.37	$1.63
	Overnight	$0.56	$0.40		$0.40	$0.40	$0.56	$0.67
SR 650 / New Hampshire Ave.	Peak	$2.37	$1.13	$0.62		$0.55	$1.15	$1.49
	Off-Peak	$1.83	$0.87	$0.48		$0.43	$0.89	$1.15
	Overnight	$0.75	$0.40	$0.40		$0.40	$0.40	$0.47
US 29 / Briggs Cheney Rd.	Peak	$2.92	$1.68	$1.18	$0.55		$0.60	$0.94
	Off-Peak	$2.26	$1.30	$0.91	$0.43		$0.46	$0.72
	Overnight	$0.93	$0.53	$0.40	$0.40		$0.40	$0.40
I-95	Peak	$3.52	$2.28	$1.78	$1.15	$0.60		$0.44
	Off-Peak	$2.72	$1.76	$1.37	$0.89	$0.46		$0.40
	Overnight	$1.12	$0.72	$0.56	$0.40	$0.40		$0.40
Konterra Dr. / US 1	Peak	$3.86	$2.61	$2.11	$1.49	$0.94	$0.44	
	Off-Peak	$2.98	$2.02	$1.63	$1.15	$0.72	$0.40	
	Overnight	$1.23	$0.83	$0.67	$0.47	$0.40	$0.40	

[1]Time periods are:

Peak Period is defined as 6:00 to 9:00 AM and 4:00 to 7:00 PM on Weekdays (excluding federal holidays).

Off-Peak Period is defined as 5:00 to 6:00 AM, 9:00 AM to 4:00 PM, and 7:00 to 11:00 PM on Weekdays and 5:00 AM to 11:00 PM on Weekends and federal holidays.

Overnight is defined as 11:00 PM to 5:00 AM every day.

Table 1-4
I-95 Express Toll Lane Toll Rates

Class	Existing Section (I-895 to MD 43)			Northbound Extension Phase 1 (MD 43 to MD 152)			Northbound Extension Phase 2 (MD 152 to MD 24)		
	Peak	Off-Peak	Overnight	Peak	Off-Peak	Overnight	Peak	Off-Peak	Overnight
E-ZPass Payment Type									
2-axle	$1.54	$1.19	$0.49	$1.54	$1.19	$0.49	$0.51	$0.40	$0.40
3-axle	$3.08	$2.38	$0.98	$3.08	$2.38	$0.98	$1.01	$0.78	$0.40
4-axle	$4.62	$3.57	$1.47	$4.62	$3.57	$1.47	$1.52	$1.17	$0.48
5-axle	$9.24	$7.14	$2.94	$9.24	$7.14	$2.94	$3.04	$2.35	$0.97
6-axle+	$11.55	$8.93	$3.68	$11.55	$8.93	$3.68	$3.80	$2.93	$1.21
Pay-By-Plate Payment Type									
2-axle	$1.93	$1.49	$0.61	$1.93	$1.49	$0.61	$0.64	$0.50	$0.50
3-axle	$3.85	$2.98	$1.23	$3.85	$2.98	$1.23	$1.26	$0.98	$0.50
4-axle	$5.78	$4.46	$1.84	$5.78	$4.46	$1.84	$1.90	$1.46	$0.60
5-axle	$11.55	$8.93	$3.68	$11.55	$8.93	$3.68	$3.80	$2.94	$1.21
6-axle+	$14.44	$11.16	$4.59	$14.44	$11.16	$4.59	$4.75	$3.66	$1.51
Video Payment Type									
2-axle	$2.54	$2.19	$1.49	$2.54	$2.19	$1.49	$1.51	$1.40	$1.40
3-axle	$4.62	$3.57	$1.98	$4.62	$3.57	$1.98	$2.01	$1.78	$1.40
4-axle	$6.93	$5.36	$2.47	$6.93	$5.36	$2.47	$2.52	$2.17	$1.48
5-axle	$13.86	$10.71	$4.41	$13.86	$10.71	$4.41	$4.55	$3.52	$1.97
6-axle+	$17.33	$13.39	$5.51	$17.33	$13.39	$5.51	$5.69	$4.40	$2.21

Time Periods:

Peak Period is defined as southbound from 6:00 to 9:00 AM Mon to Fri, northbound from 3:00 to 7:00 PM Mon to Fri, and both directions from 12:00 to 2:00 PM Sat and 2:00 to 5:00 PM Sun.

Off-Peak Period is defined as southbound from 5:00 to 6:00 AM/9:00 AM to 9:00 PM Mon to Fri, northbound from 5:00 AM to 3:00 PM/7:00 to 9:00 PM Mon to Fri, and both directions from 5:00 AM to 12:00 PM/2:00 to 9:00 PM Sat and 5:00 AM to 2:00 PM/5:00 to 9:00 PM Sunday.

Overnight is defined as 9:00 PM to 5:00 AM every day.

1.2.2 FY 2023 Temporary Business Rule Changes

On March 17, 2020 MDTA implemented systemwide cashless tolling until further notice like most other larger toll agencies in the United States that had the capability to do so. Permanent cashless tolling on all MDTA facilities was announced on August 6, 2020 to provide convenience for motorists, less engine idling for better fuel efficiency and reduced emissions, decreased congestion, and increased safety. Mailing of Notice of Toll Due (NOTD) video invoices was paused in March 2020 but was resumed in the fall of 2020. This resulted in a backlog of NOTD transactions. To assist customers having to pay these backlogged transactions, the MDTA board approved a customer assistance plan on February 24th, 2022 which was effective immediately. This plan included a civil penalty waiver grace period and ceased referring toll bills to the Central Collection Unit (CCU) and MDOT Motor Vehicle Administration (MDOT MVA) temporarily. The customer assistance plan was terminated on December 14th, 2022.

While all these video invoices have been mailed, these policy changes are important to recall when reviewing historical trends for collected transactions and revenue in Chapter 2.

1.2.3 Upcoming Toll Rate Changes

There is no future toll rate change assumed for the forecasting period through FY 2034 on the Legacy System and Intercounty Connector. The only toll change assumed in the forecast presented in this report is the I-95 ETL northbound existing segment tolled distance change which will occur in conjunction with the opening of the first section of the northbound extension, which is assumed in the second half of FY 2025.

1.2.4 Civil Penalties and Enforcement

Due to the customer assistance plan discussed in 1.2.2, civil penalties were not assessed on unpaid video invoices until after the termination of the customer assistance plan. Assessment of the $25 civil penalty resumed beginning December 1st, 2022 for all unpaid video transactions, including those from video invoices issued prior to the expiration of the customer assistance plan. Normal civil penalty collection and enforcement measures such as tax intercept and motor vehicle registration hold/suspension are assumed for this forecast.

1.3 Report Structure

Chapter 2, Historical Traffic and Revenue Trends, provides a summary of historical trends and variations of traffic and revenue on the Legacy bridges, tunnels, and highways operated by the MDTA. Trends in different payment shares are also provided.

Chapter 3, Socioeconomic Review, provides a summary of updated historical trends and forecasts of socioeconomic variables to provide the context for the traffic and revenue growth projections. The socioeconomic trend review consisted of data collection such as the compilation and updating of pertinent variables such as population, employment, income, gasoline prices, and real gross regional product from a number of public and private sources. These included the Bureau of Economic Analysis (BEA), US Census, Bureau of Labor Statistics (BLS), Maryland State Data Center (MD SDC), U.S. Energy Information Administration (EIA), Woods & Poole Economics (W&P), and Moody's Analytics (Moody's).

Chapter 4, Forecasts by Facility, provides a summary of the underlying assumptions and methodology used in the traffic and revenue forecasting process. Also presented in this Chapter are the 10-year traffic and revenue forecasts by facility and vehicle class for each of the MDTA facilities, including forecasted other revenue.

Chapter 5, Total Forecast Results, summarizes the forecasts for the MDTA system.

Chapter 6, Forecast Comparisons, provides a comparison of the updated forecasts to previous forecasts for the MDTA facilities.

Chapter 2
Historical Trends

This chapter includes analysis of historical traffic, revenue, and payment type trends on the MDTA facilities. Analysis of traffic trends on other routes in Maryland is also provided for context. Recent historical data is especially important as an input to developing the updated forecast documented in this report.

2.1 Maryland Vehicle Miles Traveled

Vehicle miles traveled (VMT) trends were reviewed to better understand the general trends in traffic growth nationally and within Maryland. The Federal Highway Administration develops annual estimates of national and state-wide VMT by roadway type, which have been summarized in **Table 2-1** for years 2007 through 2022 for the United States (U.S.) and Maryland. Data was not yet available for 2023.

Total VMT growth trends for both Maryland and the U.S. have been generally similar during the Great Recession impacted years (2007 to 2009) and years following (2009 to 2019). In general, the trends indicate that total national and statewide Maryland VMT growth is similar. However, growth on Maryland's Interstate highways at 0.6 percent per annum was much lower than the U.S. average of 1.5 percent per annum for the period between 2009 and 2019. Growth on the Maryland interstate system is still occurring, albeit at a lower rate than the nation. The percent of total VMT occurring on Interstate routes has remained relatively constant throughout the past 16 years. Approximately 25 percent of national VMT and 30 percent of Maryland VMT are made on interstate routes, which account for 2.5 percent and 3.9 percent of all roads in the nation and Maryland, respectively.

In 2020, due to travel restrictions and stay-at-home mandates from the COVID-19 pandemic, interstate VMT in the United States and Maryland declined by 13.1 and 19.1 percent, respectively. In 2021, interstate VMT increased by approximately 13 percent over 2020 levels in both the U.S. and Maryland. The U.S. interstate and total VMT in 2021 were still 1.6 percent below pre-pandemic levels of 2019. Maryland interstate and total VMT recovered to 4.3 and 3.0 percent below 2019 levels. In 2022, VMT continued to increase post-pandemic, albeit at a slower rate in Maryland compared to the nationwide average. Interstate and total VMT increased by 2.9 and 2.1 percent, respectively, while Maryland interstate VMT increased by 1.2 percent and total VMT increased by just 0.3 percent. This variation in trend for Maryland could be indicative of an increased share of remote working compared to the national average.

Table 2-1

National and Statewide Trends in Vehicle Miles Traveled

Calendar Year	United States [1]					Maryland				
	Interstate			Total		Interstate			Total	
	VMT (Millions)	Percent Change	Percent of Total	VMT (Millions)	Percent Change	VMT (Millions)	Percent Change	Percent of Total	VMT (Millions)	Percent Change
2007	745,457	-	24.4	3,049,027	-	17,015	-	30.1	56,503	-
2008	725,078	(2.7)	24.2	2,992,705	(1.8)	16,710	(1.8)	30.4	55,023	(2.6)
2009	722,655	(0.3)	24.3	2,975,804	(0.6)	16,965	1.5	30.7	55,293	0.5
2010	729,015	0.9	24.4	2,985,854	0.3	17,040	0.4	30.4	56,126	1.5
2011	725,787	(0.4)	24.4	2,968,990	(0.6)	16,964	(0.4)	30.2	56,221	0.2
2012	735,915	1.4	24.6	2,988,021	0.6	17,054	0.5	30.2	56,475	0.5
2013	745,106	1.2	24.8	3,006,911	0.6	17,064	0.1	30.1	56,688	0.4
2014	756,374	1.5	24.9	3,040,220	1.1	17,057	(0.0)	30.2	56,432	(0.5)
2015	782,111	3.4	25.1	3,109,937	2.3	17,102	0.3	29.7	57,516	1.9
2016	810,264	3.6	25.4	3,188,972	2.5	17,584	2.8	29.7	59,137	2.8
2017	824,910	1.8	25.6	3,227,358	1.2	17,937	2.0	29.9	59,892	1.3
2018	833,803	1.1	25.6	3,255,347	0.9	17,932	(0.0)	30.1	59,629	(0.4)
2019	842,604	1.1	25.7	3,276,482	0.6	18,059	0.7	30.0	60,136	0.9
2020	732,078	(13.1)	25.1	2,917,383	(11.0)	14,604	(19.1)	28.9	50,592	(15.9)
2021	815,183	11.4	25.9	3,146,281	7.8	16,545	13.3	29.2	56,601	11.9
2022	839,105	2.9	26.1	3,211,120	2.1	16,739	1.2	29.5	56,746	0.3
Average Annual Percent Change										
2007 to 2009		(1.5)			(1.2)		(0.1)			(1.1)
2009 to 2019		1.5			1.0		0.6			0.8
2019 to 2022		(0.1)			(0.7)		(2.5)			(1.9)

2007-2022 VMT Data source: Table VM-2, Highway Statistics, USDOT FHWA Office of Policy Information.

[1] Includes Puerto Rico.

2.2 MDTA Traffic and Revenue Trends

2.2.1 Collected Transactions and Revenue

This section provides a review of the historical collected toll transaction/trip trends and toll revenue trends for each of the seven MDTA Legacy facilities, I-95 Express Toll Lanes (ETLs), and the Intercounty Connector (ICC). Toll revenue is the revenue that is collected by transponder or by various forms of video payment (and formerly by in-lane cash payment) for payment of published toll rates. Other revenue includes a combination of revenue collected and revenue deductions from unused Commuter Plan and Shoppers Plan trips, transponder fees and sales, the Hatem Bridge E-ZPass® program, violation recovery (civil penalties), and commercial vehicle fees and discounts (post-usage discount, high frequency discount, and over-sized permit fees). The historical transaction/trip and revenue trends by facility for passenger cars, commercial vehicles and total traffic are presented by fiscal year in **Table 2-2**, **Table 2-3**, and **Table 2-4**, respectively. The historical transaction/trip and revenue trends for total vehicles by facility are graphically presented in **Figure 2-1.** The figure also indicates the years during which a toll change occurred which would have impacted T&R trends including toll increases in FY 2010, 2012, and 2014, and the toll decrease in FY 2016.

Table 2-2
MDTA Passenger Car Historic Collected Transactions and Toll Revenue

Fiscal Year	Hatem Bridge		Kennedy Highway		Harbor Tunnel		Fort McHenry Tunnel		Key Bridge[1]		Bay Bridge		Nice/Middleton Bridge		ICC [2]		I-95 ETL [2]	
	Value	Change	Value	Change	Value	Change	Value	Change	Value	Change	Value	Change	Value	Change	Value	Change	Value	Change
Passenger Car Transactions (in millions)																		
2007	5.286	-	12.874	-	24.891	-	40.945	-	10.970	-	12.409	-	3.112	-	-	-	-	-
2008	5.296	0.2	12.722	(1.2)	24.921	0.1	40.879	(0.2)	11.093	1.1	12.312	(0.8)	3.107	(0.2)	-	-	-	-
2009	4.942	(6.7)	12.794	0.6	24.795	(0.5)	39.851	(2.5)	10.601	(4.4)	11.902	(3.3)	3.097	(0.3)	-	-	-	-
2010	4.890	(1.1)	12.977	1.4	24.553	(1.0)	40.583	1.8	9.953	(6.1)	12.093	1.6	3.134	1.2	-	-	-	-
2011	4.961	1.4	13.565	4.5	25.397	3.4	42.704	5.2	10.587	6.4	12.608	4.3	3.181	1.5	-	-	-	-
2012	4.884	(1.5)	13.154	(3.0)	25.113	(1.1)	41.103	(3.7)	10.048	(5.1)	12.766	1.3	3.100	(2.5)	-	-	-	-
2013	4.391	(10.1)	12.912	(1.8)	23.414	(6.8)	40.116	(2.4)	9.982	(0.7)	11.865	(7.1)	3.071	(0.9)	-	-	-	-
2014	4.779	8.8	12.690	(1.7)	24.325	3.9	38.290	(4.6)	9.427	(5.6)	11.878	0.1	3.040	(1.0)	-	-	-	-
2015	5.064	6.0	13.022	2.6	26.517	9.0	38.353	0.2	9.632	2.2	12.008	1.1	3.095	1.8	-	-	-	-
2016	4.880	(3.6)	13.401	2.9	27.653	4.3	38.876	1.4	10.185	5.7	12.398	3.2	3.172	2.5	-	-	-	-
2017	4.893	0.3	13.745	2.6	26.974	(2.5)	41.381	6.4	10.257	0.7	12.692	2.4	3.209	1.2	31.758	-	8.614	-
2018	4.881	(0.2)	13.576	(1.2)	27.327	1.3	40.546	(2.0)	10.330	0.7	12.631	(0.5)	3.123	(2.7)	33.433	5.3	8.915	3.5
2019	4.869	(0.2)	13.316	(1.9)	20.254	(25.9)	43.955	8.4	11.674	13.0	12.706	0.6	3.104	(0.6)	35.231	5.4	9.331	4.7
2020	4.182	(14.1)	10.669	(19.9)	13.709	(32.3)	38.242	(13.0)	10.793	(7.5)	10.723	(15.6)	2.571	(17.2)	31.850	(9.6)	7.341	(21.3)
2021	2.868	(31.4)	7.287	(31.7)	11.489	(16.2)	25.709	(32.8)	7.490	(30.6)	7.799	(27.3)	1.591	(38.1)	10.947	(65.6)	4.840	(34.1)
2022	4.207	46.7	13.419	84.1	25.065	118.2	38.186	48.5	10.636	42.0	13.580	74.1	3.049	91.7	40.030	265.7	8.321	71.9
2023	4.216	0.2	13.023	(3.0)	27.013	7.8	37.787	(1.0)	11.085	4.2	12.984	(4.4)	2.926	(4.0)	33.132	(17.2)	8.308	(0.2)
2024	4.371	3.7	12.512	(3.9)	26.659	(1.3)	38.237	1.2	7.820	(29.5)	12.589	(3.0)	2.953	0.9	33.071	(0.2)	8.440	1.6
Passenger Car Revenue (in millions of dollars)																		
2007	1.119	-	58.915	-	29.926	-	56.924	-	10.805	-	24.652	-	7.154	-	-	-	-	-
2008	1.242	11.1	58.013	(1.5)	30.320	1.3	56.381	(1.0)	10.822	0.2	24.452	(0.8)	7.055	(1.4)	-	-	-	-
2009	1.255	1.0	58.467	0.8	30.840	1.7	55.224	(2.1)	10.512	(2.9)	23.740	(2.9)	7.020	(0.5)	-	-	-	-
2010	1.468	16.9	59.246	1.3	31.141	1.0	57.211	3.6	10.299	(2.0)	24.510	3.2	7.190	2.4	-	-	-	-
2011	1.622	10.5	59.906	1.1	31.856	2.3	58.288	1.9	10.658	3.5	25.105	2.4	7.233	0.6	-	-	-	-
2012	2.354	45.1	67.640	12.9	42.558	33.6	75.089	28.8	13.800	29.5	31.786	26.6	8.589	18.7	-	-	-	-
2013	3.993	69.6	73.602	8.8	46.871	10.1	87.559	16.6	16.450	19.2	36.113	13.6	9.577	11.5	-	-	-	-
2014	5.007	25.4	94.931	29.0	69.466	48.2	114.982	31.3	22.863	39.0	54.346	50.5	14.616	52.6	-	-	-	-
2015	5.113	2.1	97.301	2.5	77.033	10.9	115.294	0.3	24.330	6.4	55.630	2.4	15.198	4.0		-	-	-
2016	5.279	3.2	98.677	1.4	80.650	4.7	115.994	0.6	24.474	0.6	35.598	(36.0)	15.156	(0.3)	54.197	-	10.054	-
2017	5.619	6.5	101.363	2.7	80.207	(0.5)	124.262	7.1	25.478	4.1	36.562	2.7	15.419	1.7	58.795	8.5	10.765	7.1
2018	5.215	(7.2)	100.008	(1.3)	81.602	1.7	121.604	(2.1)	25.670	0.8	36.294	(0.7)	14.947	(3.1)	61.320	4.3	11.055	2.7
2019	5.298	1.6	97.883	(2.1)	61.575	(24.5)	132.376	8.9	29.335	14.3	36.714	1.2	14.897	(0.3)	62.688	2.2	11.529	4.3
2020	4.852	(8.4)	77.730	(20.6)	40.715	(33.9)	113.816	(14.0)	26.513	(9.6)	30.174	(17.8)	12.012	(19.4)	51.830	(17.3)	8.820	(23.5)
2021	3.377	(30.4)	52.666	(32.2)	32.941	(19.1)	74.337	(34.7)	18.388	(30.6)	20.418	(32.3)	7.279	(39.4)	18.781	(63.8)	5.873	(33.4)
2022	9.278	174.7	103.954	97.4	83.449	153.3	125.465	68.8	30.784	67.4	43.499	113.0	16.577	127.8	74.373	296.0	10.631	81.0
2023	6.652	(28.3)	99.059	(4.7)	87.269	4.6	120.463	(4.0)	30.822	0.1	39.486	(9.2)	15.169	(8.5)	62.638	(15.8)	10.443	(1.8)
2024	7.294	9.7	95.235	(3.9)	85.682	(1.8)	121.677	1.0	22.092	(28.3)	39.235	(0.6)	15.408	1.6	62.182	(0.7)	10.657	2.0

[1] The Key Bridge collapsed on March 26, 2024.

[2] Data for the ICC and I-95 ETL are presented beginning in FY 2017 for trips and FY 2016 for revenue due to vehicle class availability in data reporting. ICC transactions reported are trips.

Table 2-3
MDTA Commercial Vehicle Historic Collected Transactions and Toll Revenue

Fiscal Year	Hatem Bridge		Kennedy Highway		Harbor Tunnel		Fort McHenry Tunnel		Key Bridge[1]		Bay Bridge		Nice/Middleton Bridge		ICC [2]		I-95 ETL [2]	
	Value	Change	Value	Change	Value	Change	Value	Change	Value	Change	Value	Change	Value	Change	Value	Change	Value	Change
Commercial Vehicle Transactions (in millions)																		
2007	0.276	-	1.966	-	0.849	-	3.909	-	1.233	-	1.086	-	0.306	-	-	-	-	-
2008	0.260	(5.6)	1.930	(1.8)	0.850	0.1	3.950	1.1	1.250	1.3	1.058	(2.5)	0.284	(7.3)	-	-	-	-
2009	0.098	(62.1)	1.848	(4.2)	0.739	(13.1)	3.595	(9.0)	1.087	(13.0)	0.850	(19.7)	0.250	(12.0)	-	-	-	-
2010	0.103	4.9	1.773	(4.1)	0.672	(9.0)	3.480	(3.2)	1.006	(7.5)	0.901	6.0	0.220	(12.1)	-	-	-	-
2011	0.110	6.3	1.810	2.1	0.720	7.1	3.590	3.2	1.060	5.4	0.950	5.4	0.220	0.1	-	-	-	-
2012	0.150	36.6	1.670	(7.7)	0.637	(11.6)	3.420	(4.7)	1.000	(5.7)	0.900	(5.3)	0.190	(13.6)	-	-	-	-
2013	0.172	15.0	1.670	-	0.558	(12.3)	3.460	1.2	0.940	(6.0)	0.871	(3.2)	0.190	-	-	-	-	-
2014	0.169	(1.8)	1.687	1.0	0.568	1.6	3.586	3.6	0.993	5.6	0.881	1.1	0.203	7.0	-	-	-	-
2015	0.182	7.3	1.668	(1.1)	0.580	2.2	3.494	(2.6)	0.995	0.2	0.847	(3.8)	0.211	3.5	-	-	-	-
2016	0.210	15.6	1.762	5.7	0.633	9.1	3.763	7.7	1.010	1.5	0.874	3.2	0.209	(0.6)	-	-	-	-
2017	0.210	(0.2)	1.803	2.3	0.639	0.8	3.999	6.3	1.054	4.4	0.895	2.4	0.210	0.5	0.875	-	0.400	-
2018	0.205	(2.3)	1.875	4.0	0.685	7.3	4.174	4.4	1.096	3.9	0.887	(0.8)	0.203	(3.7)	0.968	10.6	0.478	19.5
2019	0.220	7.3	1.889	0.7	0.585	(14.6)	4.292	2.8	1.153	5.2	0.887	(0.1)	0.211	4.0	1.056	9.1	0.538	12.5
2020	0.212	(3.7)	1.830	(3.1)	0.459	(21.5)	4.055	(5.5)	1.142	(0.9)	0.824	(7.1)	0.183	(13.3)	1.096	3.8	0.448	(16.6)
2021	0.185	(12.8)	1.542	(15.8)	0.442	(3.7)	3.328	(17.9)	0.947	(17.1)	0.656	(20.3)	0.123	(32.5)	0.378	(65.5)	0.362	(19.3)
2022	0.268	45.2	2.229	44.6	0.793	79.3	4.888	46.9	1.354	43.0	0.928	41.4	0.252	104.1	1.431	278.4	0.679	87.8
2023	0.252	(6.1)	2.187	(1.9)	0.942	18.8	4.619	(5.5)	1.368	1.0	0.875	(5.8)	0.231	(8.2)	0.992	(30.7)	0.680	0.2
2024	0.233	(7.5)	2.045	(6.5)	0.949	0.7	4.499	(2.6)	1.119	(18.2)	0.839	(4.1)	0.218	(5.6)	0.961	(3.1)	0.678	(0.3)
Commercial Vehicle Revenue (in millions)																		
2007	2.699	-	35.704	-	5.183	-	27.761	-	8.437	-	9.741	-	3.277	-	-	-	-	-
2008	2.652	(1.7)	34.695	(2.8)	5.007	(3.4)	27.652	(0.4)	8.586	1.8	9.427	(3.2)	3.024	(7.7)	-	-	-	-
2009	0.811	(69.4)	36.671	5.7	4.770	(4.7)	27.746	0.3	8.051	(6.2)	8.770	(7.0)	2.750	(9.1)	-	-	-	-
2010	1.145	41.2	48.103	31.2	5.869	23.0	36.809	32.7	10.238	27.2	12.284	40.1	2.956	7.5	-	-	-	-
2011	1.197	4.5	47.484	(1.3)	5.995	2.1	37.029	0.6	10.117	(1.2)	12.512	1.9	2.916	(1.4)	-	-	-	-
2012	2.896	142.0	48.370	1.9	6.176	3.0	43.730	18.1	12.020	18.8	14.956	19.5	3.011	3.3	-	-	-	-
2013	3.972	37.2	51.104	5.7	6.203	0.5	51.125	16.9	13.170	9.6	17.263	15.4	3.588	19.1	-	-	-	-
2014	5.168	30.1	67.872	32.8	8.093	30.5	68.147	33.3	17.396	32.1	25.410	47.2	5.781	61.1	-	-	-	-
2015	6.076	17.6	69.234	2.0	8.505	5.1	70.486	3.4	18.645	7.2	25.529	0.5	6.214	7.5		-		-
2016	6.524	7.4	72.499	4.7	9.222	8.4	75.293	6.8	18.805	0.9	17.193	(32.7)	6.047	(2.7)	5.116	-	1.331	-
2017	6.468	(0.9)	74.448	2.7	9.254	0.3	79.920	6.1	19.464	3.5	17.399	1.2	6.046	(0.0)	5.522	7.9	1.713	28.7
2018	6.368	(1.6)	77.192	3.7	9.786	5.8	83.458	4.4	20.208	3.8	17.136	(94.9)	5.794	(4.2)	6.190	12.1	2.093	22.2
2019	6.874	8.0	78.103	1.2	8.690	(11.2)	85.073	1.9	21.196	4.9	17.030	(0.1)	6.072	4.8	6.627	7.1	2.392	14.3
2020	6.534	(5.0)	76.356	(2.2)	6.794	(21.8)	80.530	(5.3)	21.036	(0.8)	15.823	(7.1)	5.307	(12.6)	6.312	(4.8)	1.931	(19.3)
2021	5.806	(11.1)	64.566	(15.4)	6.906	1.6	67.193	(16.6)	17.360	(17.5)	12.625	(20.2)	3.532	(33.4)	2.532	(59.9)	1.880	(2.7)
2022	8.975	54.6	93.030	44.1	12.226	77.0	100.144	49.0	25.071	44.4	18.117	41.4	7.512	112.7	10.529	315.8	3.459	84.0
2023	8.348	(7.0)	92.890	(0.2)	14.928	22.1	95.041	(5.1)	25.968	3.6	16.948	(5.8)	6.890	(8.3)	7.513	(28.6)	3.513	1.6
2024	7.956	(4.7)	86.048	(7.4)	13.360	(10.5)	91.005	(4.2)	21.338	(17.8)	16.004	(4.1)	6.337	(8.0)	6.865	(8.6)	3.410	(2.9)

[1] The Key Bridge collapsed on March 26, 2024.

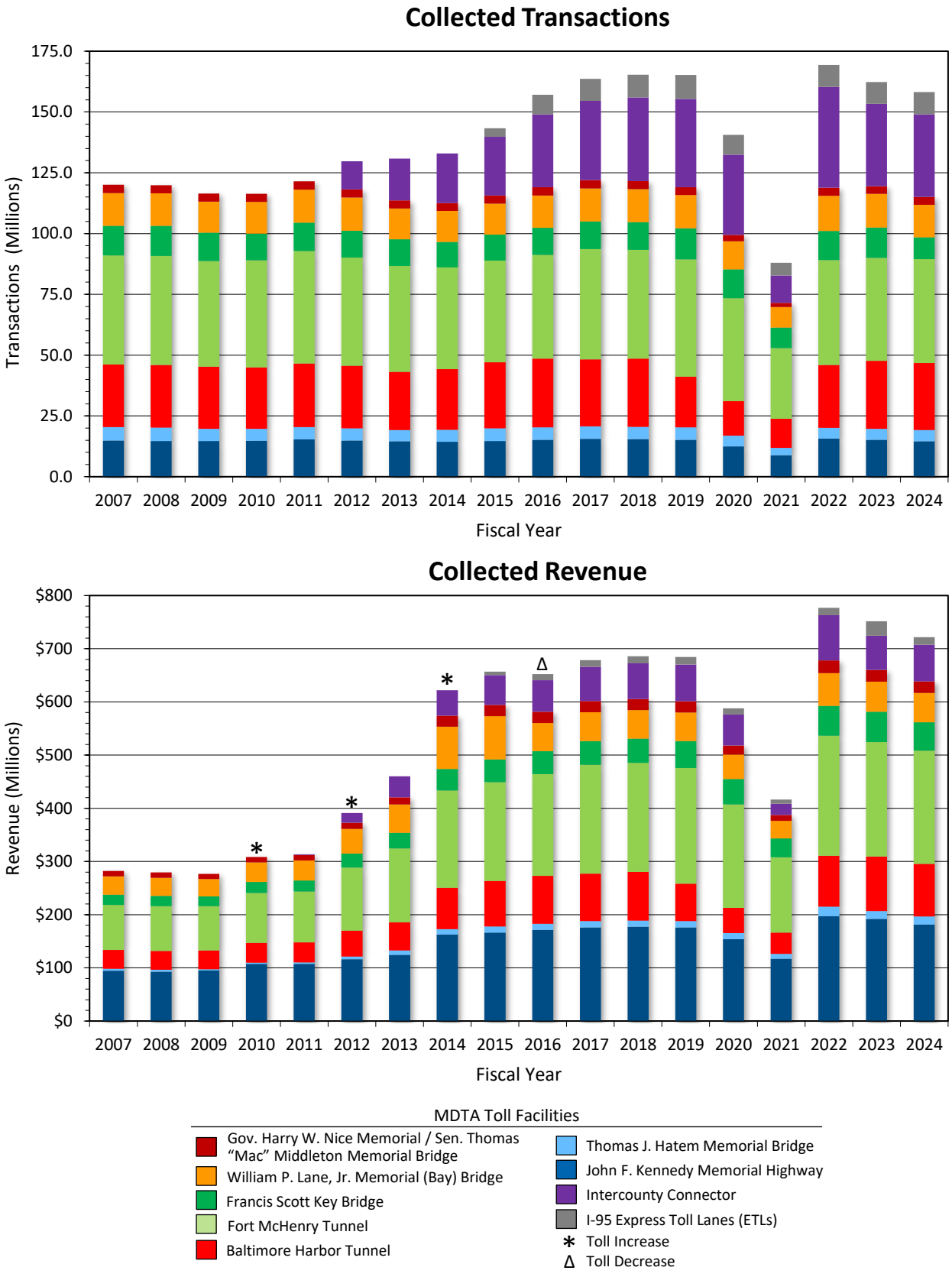
[2] Data for the ICC and I-95 ETL are presented beginning in FY 2017 for trips and FY 2016 for revenue due to vehicle class availability in data reporting. ICC transactions reported are trips.

Table 2-4
MDTA Total Traffic Historic Collected Transactions and Toll Revenue

Fiscal Year	Hatem Bridge		Kennedy Highway		Harbor Tunnel		Fort McHenry Tunnel		Key Bridge[1]		Bay Bridge		Nice/Middleton Bridge		ICC [2]		I-95 ETL [2]	
	Value	Change	Value	Change	Value	Change	Value	Change	Value	Change	Value	Change	Value	Change	Value	Change	Value	Change
Total Transactions (in millions)																		
2007	5.561	-	14.840	-	25.740	-	44.854	-	12.203	-	13.494	-	3.418	-	-	-	-	-
2008	5.556	(0.1)	14.652	(1.3)	25.771	0.1	44.829	(0.1)	12.343	1.1	13.370	(0.9)	3.391	(0.8)	-	-	-	-
2009	5.040	(9.3)	14.642	(0.1)	25.534	(0.9)	43.446	(3.1)	11.688	(5.3)	12.752	(4.6)	3.347	(1.3)	-	-	-	-
2010	4.993	(0.9)	14.750	0.7	25.226	(1.2)	44.063	1.4	10.959	(6.2)	12.994	1.9	3.354	0.2	-	-	-	-
2011	5.070	1.5	15.375	4.2	26.117	3.5	46.294	5.1	11.647	6.3	13.558	4.3	3.401	1.4	-	-	-	-
2012	5.034	(0.7)	14.824	(3.6)	25.750	(1.4)	44.523	(3.8)	11.048	(5.1)	13.666	0.8	3.290	(3.3)	11.562	-	-	-
2013	4.563	(9.4)	14.582	(1.6)	23.973	(6.9)	43.576	(2.1)	10.922	(1.1)	12.736	(6.8)	3.261	(0.9)	17.198	48.7	-	-
2014	4.948	8.4	14.377	(1.4)	24.893	3.8	41.875	(3.9)	10.419	(4.6)	12.759	0.2	3.243	(0.6)	20.476	19.1	-	-
2015	5.246	6.0	14.690	2.2	27.098	8.9	41.847	(0.1)	10.627	2.0	12.856	0.8	3.305	1.9	24.118	17.8	3.483	-
2016	5.090	(3.0)	15.163	3.2	28.287	4.4	42.639	1.9	11.195	5.3	13.272	3.2	3.381	2.3	29.975	24.3	8.048	131.0
2017	5.102	0.2	15.548	2.5	27.612	(2.4)	45.380	6.4	11.311	1.0	13.587	2.4	3.419	1.1	32.634	8.9	9.014	12.0
2018	5.086	(0.3)	15.451	(0.6)	28.012	1.4	44.720	(1.5)	11.425	1.0	13.518	(0.5)	3.325	(2.8)	34.401	5.4	9.393	4.2
2019	5.089	0.1	15.205	(1.6)	20.839	(25.6)	48.247	7.9	12.827	12.3	13.593	0.5	3.315	(0.3)	36.287	5.5	9.868	5.1
2020	4.394	(13.6)	12.499	(17.8)	14.168	(32.0)	42.297	(12.3)	11.935	(6.9)	11.547	(15.1)	2.753	(16.9)	32.946	(9.2)	7.789	(21.1)
2021	3.052	(30.5)	8.829	(29.4)	11.931	(15.8)	29.037	(31.3)	8.437	(29.3)	8.456	(26.8)	1.714	(37.8)	11.325	(65.6)	5.202	(33.2)
2022	4.475	46.6	15.648	77.2	25.858	116.7	43.074	48.3	11.990	42.1	14.508	71.6	3.301	92.6	41.461	266.1	9.000	73.0
2023	4.468	(0.2)	15.210	(2.8)	27.955	8.1	42.406	(1.6)	12.453	3.9	13.859	(4.5)	3.157	(4.4)	34.124	(17.7)	8.988	(0.1)
2024	4.604	3.0	14.557	(4.3)	27.608	(1.2)	42.736	0.8	8.939	(28.2)	13.428	(3.1)	3.171	0.4	34.032	(0.3)	9.118	1.4
Total Revenue (in millions of dollars)																		
2007	3.817	-	94.619	-	35.109	-	84.685	-	19.243	-	34.393	-	10.432	-	-	-	-	-
2008	3.894	2.0	92.707	(2.0)	35.328	0.6	84.032	(0.8)	19.408	0.9	33.879	(1.5)	10.079	(3.4)	-	-	-	-
2009	2.066	(46.9)	95.138	2.6	35.610	0.8	82.970	(1.3)	18.563	(4.4)	32.510	(4.0)	9.770	(3.1)	-	-	-	-
2010	2.613	26.5	107.349	12.8	37.010	3.9	94.020	13.3	20.537	10.6	36.794	13.2	10.146	3.8	-	-	-	-
2011	2.819	7.9	107.390	0.0	37.851	2.3	95.316	1.4	20.775	1.2	37.617	2.2	10.149	0.0	1.474	-	-	-
2012	5.250	86.2	116.010	8.0	48.734	28.8	118.819	24.7	25.820	24.3	46.742	24.3	11.601	14.3	18.063	1,125.4	-	-
2013	7.966	51.7	124.706	7.5	53.074	8.9	138.684	16.7	29.619	14.7	53.376	14.2	13.165	13.5	39.586	119.2	-	-
2014	10.174	27.7	162.803	30.5	77.559	46.1	183.130	32.0	40.260	35.9	79.756	49.4	20.397	54.9	48.029	21.3	-	-
2015	11.189	10.0	166.535	2.3	85.538	10.3	185.780	1.4	42.975	6.7	81.159	1.8	21.412	5.0	56.018	16.6	6.146	-
2016	11.803	5.5	171.176	2.8	89.872	5.1	191.287	3.0	43.279	0.7	52.791	(35.0)	21.203	(1.0)	59.312	5.9	11.385	85.3
2017	12.087	2.4	175.811	2.7	89.461	(0.5)	204.182	6.7	44.942	3.8	53.960	2.2	21.465	1.2	64.317	8.4	12.478	9.6
2018	11.582	(4.2)	177.199	0.8	91.388	2.2	205.063	0.4	45.878	2.1	53.429	(1.0)	20.741	(3.4)	67.511	5.0	13.148	5.4
2019	12.172	5.1	175.987	(0.7)	70.265	(23.1)	217.449	6.0	50.531	10.1	53.744	0.6	20.968	1.1	69.316	2.7	13.921	5.9
2020	11.386	(6.5)	154.086	(12.4)	47.509	(32.4)	194.346	(10.6)	47.549	(5.9)	45.997	(14.4)	17.319	(17.4)	58.142	(16.1)	10.751	(22.8)
2021	9.184	(19.3)	117.231	(23.9)	39.847	(16.1)	141.531	(27.2)	35.748	(24.8)	33.042	(28.2)	10.811	(37.6)	21.313	(63.3)	7.753	(27.9)
2022	18.253	98.8	196.984	68.0	95.675	140.1	225.610	59.4	55.855	56.2	61.615	86.5	24.089	122.8	84.903	298.4	14.090	81.7
2023	15.000	(17.8)	191.949	(2.6)	102.197	6.8	215.504	(4.5)	56.790	1.7	56.434	(8.4)	22.059	(8.4)	70.151	(17.4)	13.956	(0.9)
2024	15.250	1.7	181.283	(5.6)	99.042	(3.1)	212.682	(1.3)	43.430	(23.5)	55.239	(2.1)	21.745	(1.4)	69.047	(1.6)	14.067	0.8

[1] The Key Bridge collapsed on March 26, 2024.

[2] Data for the ICC and I-95 ETL are presented beginning in FY 2017 for trips and FY 2016 for revenue due to vehicle class availability in data reporting. ICC transactions reported are trips.



HISTORICAL COLLECTED TRANSACTIONS AND COLLECTED TOLL REVENUE BY FACILITY

FIGURE 2-1

Table 2-5 summarizes the average annual percent change in passenger car and commercial vehicle transactions and revenue trends by facility during the Great Recession years (FY 2007 to 2009), post-recession years (FY 2009 to 2019), and pandemic/post-pandemic years from 2019 to 2024 for the Legacy facilities based on the data provided in **Table 2-2** and **Table 2-3**. For all facilities, including the ICC and I-95 ETL, average annual percent change in passenger car and commercial vehicles transactions/trips and revenue are shown for the period from 2017 to 2019 due to data by vehicle class availability for the ICC and I-95 ETLs. FY 2019 to 2024 is shown for all facilities to show the period impacted by the COVID-19 pandemic, cashless conversion, and back-office transition.

Table 2-5
Average Annual Percent Change in Collected Transactions and Revenue by Facility

Fiscal Year	Hatem Bridge	Kennedy Highway	Harbor Tunnel	Fort McHenry Tunnel	Key Bridge[1]	Bay Bridge	Nice/ Middleton Bridge	ICC [2]	I-95 ETL [2]
Passenger Car Transactions (in millions)									
2007 to 2009	(3.3)	(0.3)	(0.2)	(1.3)	(1.7)	(2.1)	(0.2)	-	-
2009 to 2019	(0.1)	0.4	(2.0)	1.0	1.0	0.7	0.0	-	-
2017 to 2019	(0.2)	(1.6)	(13.3)	3.1	6.7	0.1	(1.6)	5.3	4.1
2019 to 2024	(2.1)	(1.2)	5.6	(2.7)	(7.7)	(0.2)	(1.0)	(1.3)	(2.0)
Passenger Car Revenue (in millions of dollars)									
2007 to 2009	14.8	(1.0)	3.8	(3.8)	(3.4)	(4.7)	(2.4)	-	-
2009 to 2019	38.7	13.2	17.9	22.8	27.0	11.1	19.5	-	-
2017 to 2019	(2.9)	(1.7)	(12.4)	3.2	7.3	0.2	(1.7)	3.3	3.5
2019 to 2024	6.6	(0.5)	6.8	(1.7)	(5.5)	1.3	0.7	(0.2)	(1.6)
Commercial Vehicle Transactions (in millions)									
2007 to 2009	(40.2)	(3.0)	(6.7)	(4.1)	(6.1)	(11.5)	(9.7)	-	-
2009 to 2019	8.4	0.2	(2.3)	1.8	0.6	0.4	(1.7)	-	-
2017 to 2019	2.4	2.3	(4.3)	3.6	4.6	(0.4)	0.1	9.8	16.0
2019 to 2024	1.2	1.6	10.2	0.9	(0.6)	(1.1)	0.7	(1.9)	4.8
Commercial Vehicle Revenue (in millions of dollars)									
2007 to 2009	(112.9)	3.4	(10.2)	(0.1)	(5.8)	(12.8)	(21.0)	-	-
2009 to 2019	59.6	19.6	15.5	29.6	25.4	17.2	20.6	-	-
2017 to 2019	3.1	2.4	(3.1)	3.2	4.4	(1.1)	0.2	9.6	18.2
2019 to 2024	3.0	2.0	9.0	1.4	0.1	(1.2)	0.9	0.7	7.3

[1] The Key Bridge collapsed on March 26, 2024.

[2] AAPC for ICC and I-95 ETL transactions/trips and revenue presented beginning FY 2017 due to vehicle class data availability.

As shown in **Table 2-5**, between FY 2007 and FY 2009, the passenger car transactions decreased on all seven Legacy facilities. The smallest decrease in passenger car transactions during this period was 0.2 percent per annum on the Harbor Tunnel and Nice/Middleton Bridge. The commercial vehicle transactions decreased significantly between FY 2007 and FY 2009 on all the legacy facilities, with the largest decrease of 40.2 percent per annum on the Hatem Bridge. Following these decreases associated with the Great Recession, continued economic uncertainty and several toll increases resulted in the total Legacy system transactions decreasing by 3.4 percent from 116.5 million in FY 2009 to 112.5 million in FY 2014. Due to the toll increases, the Legacy system revenue grew from about 277 million in FY 2009 to 595 million in FY 2015. Total

transactions increased by 2.8 percent in FY 2015 reaching FY 115.7 million, mostly due to the high growth on Hatem Bridge and Baltimore Harbor Tunnel, where transactions increased by 6.0 percent and 8.9 percent respectively, compared to FY 2014. The revenue decreased in FY 2016 by 2.2 percent due to the toll decrease implemented on July 1, 2015. The traffic increases between FY 2015 and FY 2017 on the system were the result of strong economic performance and the FY 2016 toll decrease. This upward trend came to an end in FY 2018, when the system transactions decreased by 0.3 percent. In FY 2019, the transactions decreased further by 2.0 percent, driven especially by the 25.6 drop in transactions on the Baltimore Harbor Tunnel due to construction. Revenue followed a similar trend decreasing by 2.1 percent and 0.7 percent in FY 2018 and FY 2019 respectively. Overall, between FY 2009 and FY 2019, the total legacy system transactions increased by 0.2 percent per annum and revenue increased by 7.8 per annum. Beginning in March 2020, the COVID-19 pandemic caused significant reductions in traffic on the MDTA system. This caused the FY 2020 Legacy system transaction to decrease by 16.4 percent and revenue to decrease by 13.8 percent compared to FY 2019. In FY 2021, ongoing pandemic impacts, back office transition collection issues, and the conversion to cashless tolling have caused a further 28.3 percent decline in transactions over FY 2020. In FY 2022, transactions and revenue increased by 66.3 and 75.0 percent, respectively, over the prior year. This is due to ongoing COVID-19 recovery as well as collections on transactions from previous years due to the business rule changes. In FY 2023, the Legacy system transactions increased by 0.5 percent and revenue decreased by 2.7, a result of fewer transactions collected from prior years after termination of the customer assistance plan. FY 2024 declined by 3.7 and 4.7 percent for transactions and revenue, respectively, primarily due to the impact from the Key Bridge collapse and video revenue collections. The initial impacts of the Key Bridge collapse on the Harbor Crossings and the residual impacts after the reopening of the Port of Baltimore will be discussed in more detail in Chapter 4 and how the impacts were considered in the forecast.

For the Intercounty Connector, tolling began on the second segment of the ICC from MD-97/Georgia Avenue to I-95 in FY 2012, making FY 2013 the first full fiscal year of I-370 to I-95 operations on the ICC. Trips then increased by 19.1 percent in FY 2014. This was due primarily to facility "ramp-up," when motorists adjust their travel patterns over time as they become aware of a new facility and the benefits that it offers over their current route of travel. This ramp-up period continued into FY 2015, with a 17.8 percent growth in trips and a 16.6 percent growth in toll revenue. FY 2015 growth also included the opening of the final segment of the ICC in November 2014; a 1.53-mile extension on the eastern end between I-95 and US 1. Trips in FY 2016 grew at a faster rate than FY 2015, which can be attributed in part to the toll reduction implemented on July 1, 2015. Toll revenue for FY 2016 was 5.9 percent higher than FY 2015, which reflects continued robust growth in trips offset in part by the negative revenue impact of the lower tolls. Trips growth for FY 2017 was strong at 8.9 percent. While FY 2018 and FY 2019 had trip growth around 5.5 percent. This strong growth is likely due to increasing regional population and employment as well as the ICC serving as a congestion relief route. As was seen with the Legacy facilities, due to the COVID-19 pandemic, there was a 9.2 decrease in trips and 16.1 percent decrease in revenue in FY 2020 compared to FY 2019. FY 2021 transactions and revenue were 65.6 and 63.3 percent lower than FY 2020, respectively, due to ongoing pandemic impacts, back office transition collection issues, and the conversion to cashless tolling. In FY 2022 transactions and revenue nearly tripled over FY 2021 due to processing of transactions from the previous fiscal years as well as some recovery from COVID-19 traffic impacts. In FY 2023,

transactions and revenue decreased by around 17 percent, resulting from lower collections on transactions from prior years after termination of the customer assistance plan. As video collections from backlog transactions continued to diminish in FY 2024, transactions and revenue decreased over FY 2023 by 0.3 and 1.6 percent, respectively. Toll revenue of $69.0 million shows a return to pre-pandemic levels, considering the FY 2019 toll revenue was $69.3 million.

The I-95 ETLs opened in FY 2015, and FY 2016 was the first full fiscal year of operations. In FY 2017, transactions and revenue on the ETLs increased by 12.0 percent and 9.6 percent, respectively, compared to FY 2016. This was due primarily to facility ramp-up, the phenomenon that occurs with the opening of a new facility as explained above. This growth continued in FY 2018 and FY 2019, when transactions increased by 4.2 percent and 5.1 percent, respectively, over their previous years. Revenue grew at slightly higher levels than transactions with a 5.4 percent growth in FY 2018 and 5.9 percent growth in FY 2019. Due to COVID-19 pandemic, FY 2020 transactions and revenue decreased significantly by 21.1 percent and 22.8 percent, respectively, compared to FY 2019. Ongoing pandemic impacts, back-office transition collection issues, and the conversion to cashless tolling, caused FY 2021 transactions to be 33.2 percent lower than FY 2020 and revenue to be 27.9 percent lower. In FY 2022, transactions and revenue were 73 and 81.7 percent higher than FY 2021, respectively. Whereas, in FY 2023, transactions decreased by 0.1 percent and revenue decreased by 0.9 percent. In FY 2024, transaction and revenue growth stabilized to 1.4 percent and 0.8 percent, respectively, over FY 2023.

2.2.2 In-Lane Traffic

This section provides a brief review of the historical raw in-lane traffic trends for each of the seven MDTA Legacy facilities, I-95 ETLs, and the ICC. Data shown is for traffic at the toll gantry locations. Data for the ICC, which has several toll gantries, is shown as the total in-lane traffic at all toll gantries. This data allows analysis of traffic trends without the impacts of recent collection related challenges. **Table 2-6** summarizes this data annually for FY 2019 through FY 2024 for passenger cars and commercial vehicles.

Considering FY 2020 had just three and a half months of COVID-19 impacted travel, FY 2021 made a strong recovery over FY 2020 particularly on the Kennedy Highway and the Bay Bridge for passenger cars. Due to the completion of construction on the Harbor Tunnel, passenger car traffic has increased significantly over FY 2020 and has pulled some traffic back that had diverted to the Fort McHenry and Francis Scott Key Bridge. Commercial vehicle traffic has made a strong recovery and experienced significant growth over FY 2020 for all Legacy facilities. In FY 2022, all facilities had positive growth over FY 2021 with the Kennedy Highway, Bay Bridge, and Nice Bridge maintaining higher growth than the other facilities. In FY 2023, all facilities had positive growth, excluding the Hatem Bridge and Fort McHenry Tunnel which both decreased by around one percent for total vehicles. In FY 2024, the Key Bridge collapse influenced the Harbor Crossings, but the Legacy system overall had 0.5 percent growth for passenger cars and a 1.6 percent decline for commercial vehicles. The decline in commercial vehicles aligns with our growth forecast which predicted that the high growth that began after the pandemic from increases in e-commerce was not sustainable.

The ICC and I-95 ETLs did not recover at the same pace as the Legacy facilities after the pandemic due to their larger commuting share of traffic and the congestion relief nature of these two

facilities. This sector of traffic dropped significantly as remote working increased during the pandemic. Due to this, the ICC declined by 13.8 percent year-over-year in both FY 2020 and FY 2021 for passenger cars. The I-95 ETLs fared worse in FY 2021 and declined by almost 21 percent, compared to a decline of 17.5 percent in FY 2020. In FY 2022, the ICC and ETLs had positive growth of 24.2 and 34.4 percent, respectively, for passenger cars. Commercial vehicles make up a very small portion of traffic on both of these facilities, but similar to the Legacy facilities they showed less impact due to COVID-19 in FY 2020 and were recovered to 2019 levels between FY 2021 and 2022. In FY 2023, passenger car traffic on the ICC and ETL grew by 7.6 and 0.8, respectively. Similarly, commercial vehicle traffic on the ICC and ETL increased 0.9 and 3.3 percent, respectively. FY 2024 showed strong growth on both facilities of 5.6 and 5.8 percent for the ICC and ETL, respectively. This growth was primarily due to increasing passenger car traffic.

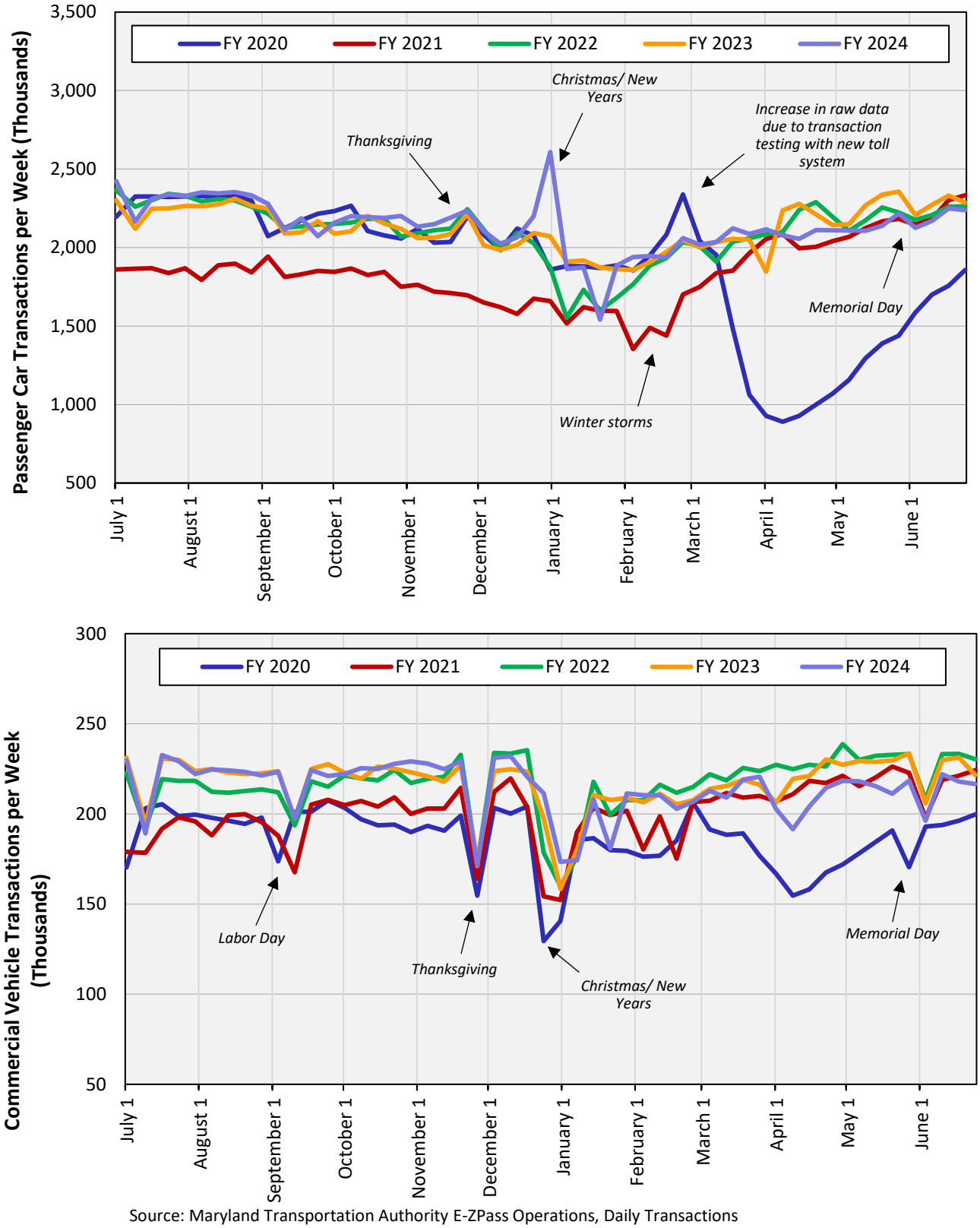
Figure 2-2 provides a graphical representation of these year-over-year trends for in-lane data from FY 2019 through FY 2023 for the total Legacy System passenger cars and commercial vehicles. **Figure 2-3** and **Figure 2-4** show the same information for the Intercounty Connector and I-95 ETLs.

Table 2-6
MDTA In-Lane Traffic by Fiscal Year

Fiscal Year	Hatem Bridge		Kennedy Highway		Harbor Tunnel		Fort McHenry Tunnel		Key Bridge[1]		Bay Bridge		Nice/Middleton Bridge		ICC [2]		I-95 ETL [2]	
	Value	Change	Value	Change	Value	Change	Value	Change	Value	Change	Value	Change	Value	Change	Value	Change	Value	Change
In-Lane Passenger Car Traffic (in millions)																		
2019	4.898	-	13.530	-	20.908	-	44.617	-	11.866	-	12.747	-	3.147	-	104.334	-	9.349	-
2020	4.450	(9.1)	11.367	(16.0)	15.189	(27.3)	40.757	(8.7)	11.821	(0.4)	11.703	(8.2)	2.803	(10.9)	89.920	(13.8)	7.709	(17.5)
2021	4.137	(7.0)	11.472	0.9	17.964	18.3	37.951	(6.9)	10.654	(9.9)	11.510	(1.6)	2.652	(5.4)	77.548	(13.8)	6.100	(20.9)
2022	4.535	9.6	13.445	17.2	26.441	47.2	38.986	2.7	10.936	2.6	12.443	8.1	3.076	16.0	96.283	24.2	8.199	34.4
2023	4.494	(0.9)	13.547	0.8	28.052	6.1	38.502	(1.2)	10.974	0.4	12.674	1.9	3.093	0.6	103.577	7.6	8.263	0.8
2024	4.559	1.5	13.514	(0.2)	28.700	2.3	41.093	6.7	7.982	(27.3)	12.930	2.0	3.097	0.1	109.661	5.9	8.760	6.0
In-Lane Commercial Vehicle Traffic (in millions)																		
2019	0.228	-	1.995	-	0.794	-	4.535	-	1.209	-	0.915	-	0.215	-	3.595	-	0.558	-
2020	0.228	(0.3)	2.022	1.4	0.652	(17.8)	4.496	(0.8)	1.247	3.2	0.923	0.9	0.202	(6.4)	3.528	(1.9)	0.490	(12.1)
2021	0.249	9.4	2.210	9.3	0.681	4.5	4.907	9.1	1.305	4.6	0.943	2.2	0.215	6.4	3.588	1.7	0.478	(2.6)
2022	0.270	8.4	2.349	6.3	0.921	35.2	5.156	5.1	1.402	7.4	0.946	0.3	0.265	23.3	3.758	4.7	0.678	41.9
2023	0.259	(4.1)	2.360	0.4	1.051	14.1	5.042	(2.2)	1.447	3.2	0.924	(2.4)	0.247	(6.8)	3.791	0.9	0.700	3.3
2024	0.256	(1.1)	2.350	(0.4)	1.071	1.9	5.115	1.4	1.210	(16.3)	0.912	(1.3)	0.234	(4.9)	3.732	(1.6)	0.724	3.5
Total In-Lane Traffic (in millions)																		
2019	5.126	-	15.525	-	21.702	-	49.151	-	13.075	-	13.662	-	3.363	-	107.930	-	9.907	-
2020	4.677	(8.8)	13.389	(13.8)	15.842	(27.0)	45.253	(7.9)	13.068	(0.1)	12.626	(7.6)	3.004	(10.7)	93.448	(13.4)	8.200	(17.2)
2021	4.386	(6.2)	13.682	2.2	18.646	17.7	42.858	(5.3)	11.959	(8.5)	12.453	(1.4)	2.866	(4.6)	81.136	(13.2)	6.578	(19.8)
2022	4.805	9.6	15.795	15.4	27.362	46.7	44.141	3.0	12.338	3.2	13.390	7.5	3.340	16.6	100.041	23.3	8.877	34.9
2023	4.753	(1.1)	15.907	0.7	29.103	6.4	43.544	(1.4)	12.421	0.7	13.598	1.6	3.340	(0.0)	107.368	7.3	8.963	1.0
2024	4.815	1.3	15.864	(0.3)	29.771	2.3	46.208	6.1	9.193	(26.0)	13.842	1.8	3.331	(0.3)	113.393	5.6	9.484	5.8

[1] The Key Bridge collapsed on March 26, 2024.

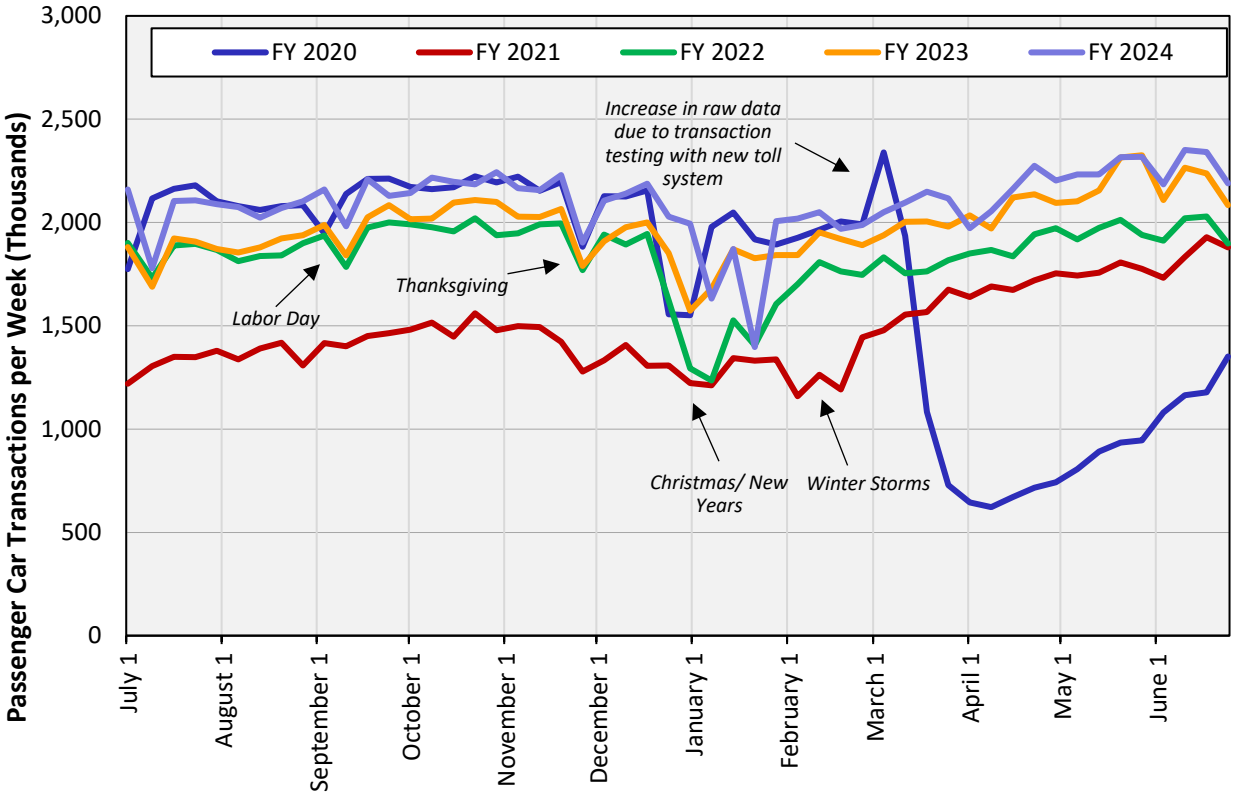
[2] Data for the ICC and I-95 ETL are presented beginning in FY 2017 for trips and FY 2016 for revenue due to vehicle class availability in data reporting. ICC transactions reported are trips.

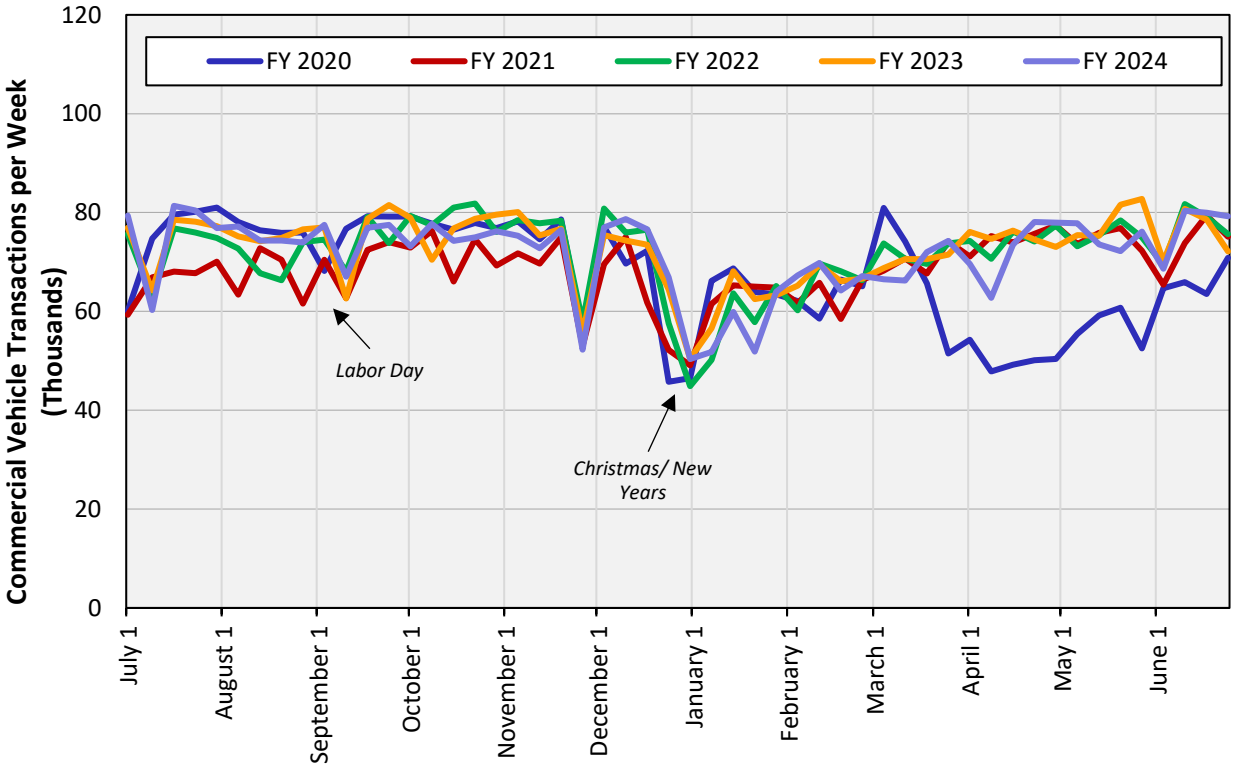


Source: Maryland Transportation Authority E-ZPass Operations, Daily Transactions

TRANSACTIONS PER WEEK BY FISCAL YEAR
TOTAL LEGACY SYSTEM

FIGURE 2-2

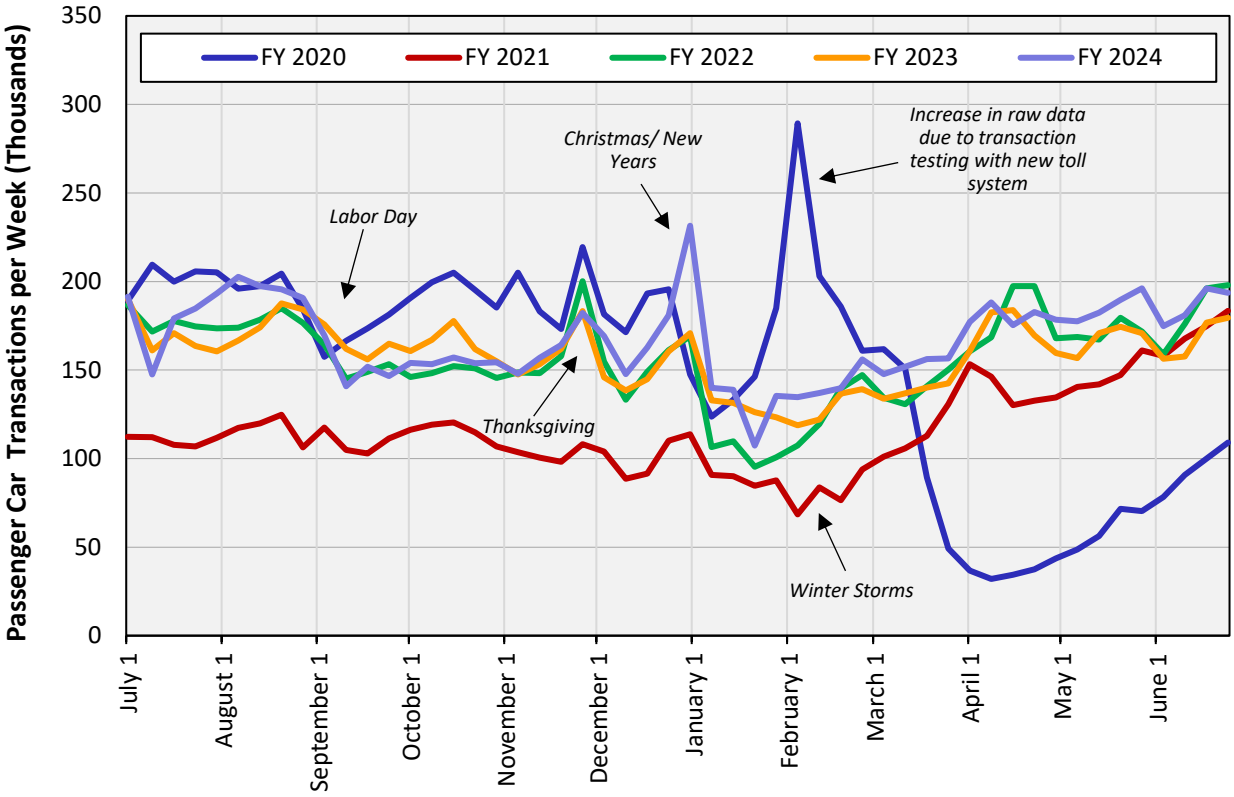


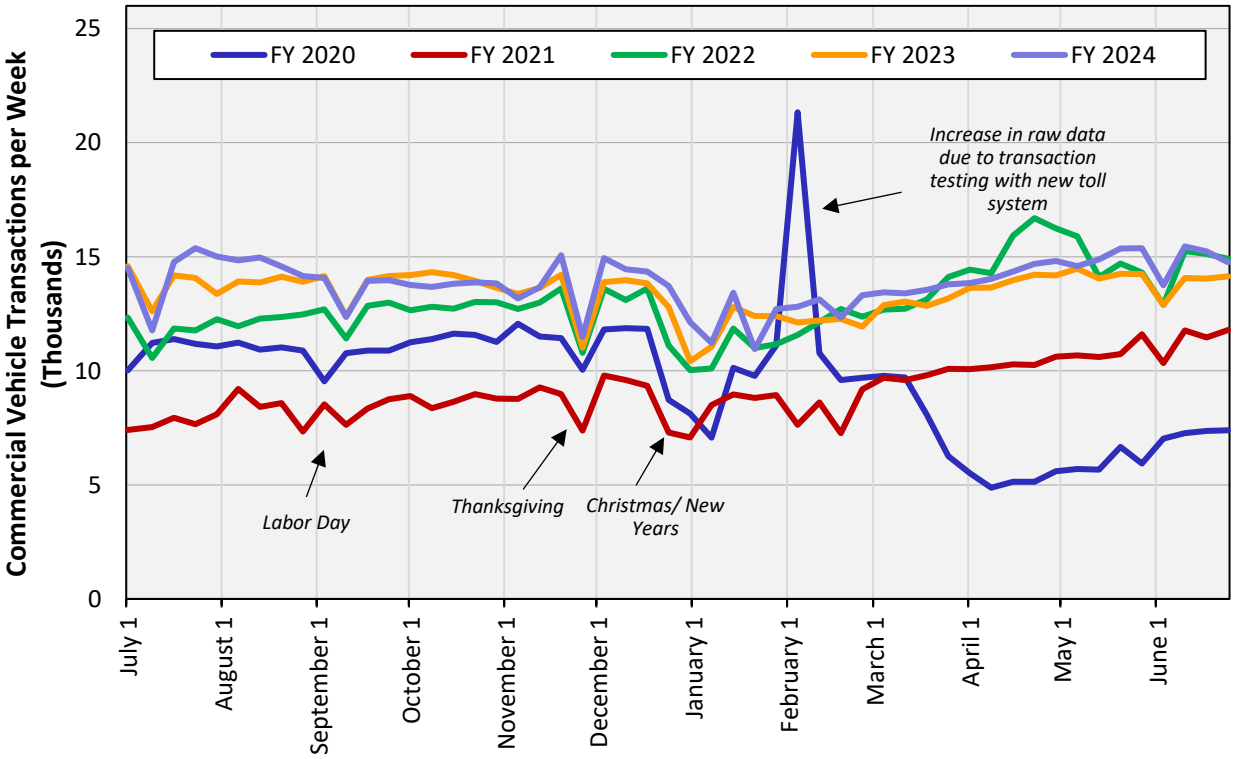


Source: Maryland Transportation Authority E-ZPass Operations, Daily Transactions

TRANSACTIONS PER WEEK BY FISCAL YEAR
INTERCOUNTY CONNECTOR

FIGURE 2-3





Source: Maryland Transportation Authority E-ZPass Operations, Daily Transactions

TRANSACTIONS PER WEEK BY FISCAL YEAR
I-95 EXPRESS TOLL LANES (ETL)

FIGURE 2-4

2.3 Historical Traffic on Other Major Highways

In order to better understand regional traffic growth patterns, historical traffic counts on select competing major routes were reviewed dating back to 2007. These roads include interstates and major highways that compete with or complement the MDTA Legacy facilities. The data presented in this section are based on calendar year average annual daily traffic volumes and associated growth rates at each location. Historical average annual daily traffic volumes and annual growth rates on six Maryland State Highway Authority (MSHA) roadways are presented in **Table 2-7**.

As shown in Table 2-7, the traffic volumes on the northern region MSHA roadway, US 1 (south of Sandy Hook Road), followed a more positive trend compared to the northern MDTA facilities, with an average annual growth of 1.1 percent between 2009 and 2019. This compares to a transaction growth of 0.4 percent for passenger cars and 0.2 percent for commercial vehicles during this period on the Kennedy highway. Toll increases implemented during this period would contribute to the more modest growth trends on the MDTA facilities. From 2019 to 2023, US 1 grew at an average annual rate of 2.7 percent, indicating recovery from COVID-19 impacts plus some additional growth.

The historical average annual daily traffic volumes and annual growth rates for the central region MSHA roadways are represented in Table 2-7 by I-95 (N of MD 100), I-97 (N of MD 176) and I-695 (E of MD 146), which are all located in the Baltimore area. Traffic volumes on the MSHA facilities decreased by an average of 2.0 percent in 2008, most likely due to the impacts of the Great Recession, while traffic volumes on the Central Region MDTA facilities did not experience significant effects of the recession until 2009 with volumes decreasing by 2.7 percent. Traffic volume decreases on the central MDTA facilities also occurred in years 2012 and 2013 due to toll rate increases. During the 2009 to 2019 post-recession period, traffic has increased by 0.2 percent on the MDTA facilities and 0.5 percent on the MSHA facilities in the central region. In the period from 2019 to 2023, MDTA facilities faired better in that they increased by 0.3 percent per year compared to MSHA facilities which decreased by 1.7 percent.

The historical average annual daily traffic volumes and annual growth rates on two southern region MSHA roadway is represented by MD 295 (N of MD 100) and US 301 (S of MD 234) in Table 2-7. During the 2009 to 2019 post-recession period, traffic has increased modestly, averaging 0.5 percent per annum on the southern MDTA facilities (Nice/Middleton and Bay Bridges) and 1.3 percent on the combined MSHA facilities. Traffic volume decreases on the southern MDTA facilities occurred in years 2012 and 2013 due to toll rate increases. Following this, both on the MDTA and on the combined Southern Region MSHA facilities, traffic grew at relatively higher levels outside of the pandemic. In the period from 2019 to 2023, the combined southern MSHA roadways declined by 1.4 percent per year, whereas the southern MDTA facilities increased by a modest 0.2 percent per year.

Table 2-7
Average Annual Daily Traffic Trends on Major Highways

Calendar Year	Northern		Central						Southern			
	US 1 S of Sandy Hook Road		I-95 N of MD 100		I-97 N of MD 176		I-695 E of MD 146		MD 295 N of MD 100		US 301 S of MD 234	
	Value	Change	Value	Change	Value	Change	Value	Change	Value	Change	Value	Change
2007	11,600	-	191,900	-	102,600	-	155,300	-	91,600	-	22,500	-
2008	11,100	(4.3)	188,000	(2.0)	100,600	(1.9)	152,200	(2.0)	88,900	(2.9)	21,400	(4.9)
2009	11,300	1.8	192,100	2.2	105,100	4.5	153,700	1.0	88,900	-	21,800	1.9
2010	10,100	(10.6)	192,900	0.4	105,500	0.4	150,900	(1.8)	89,400	0.6	22,500	3.2
2011	9,900	(2.0)	193,100	0.1	105,600	0.1	151,000	0.1	93,400	4.5	22,100	(1.8)
2012	9,900	-	191,300	(0.9)	106,200	0.6	151,800	0.5	92,600	(0.9)	22,100	-
2013	9,300	(6.1)	193,000	0.9	107,200	0.9	149,500	(1.5)	92,800	0.2	20,800	(5.9)
2014	9,300	-	192,800	(0.1)	107,100	(0.1)	149,300	(0.1)	107,700	16.1	20,800	-
2015	10,100	8.6	207,300	7.5	111,800	4.4	160,500	7.5	108,500	0.7	22,600	8.7
2016	11,500	13.9	201,600	(2.7)	108,700	(2.8)	150,200	(6.4)	103,300	(4.8)	21,900	(3.1)
2017	11,800	2.6	206,400	2.4	111,300	2.4	153,800	2.4	105,400	2.0	22,400	2.3
2018	11,700	(0.8)	205,200	(0.6)	121,100	8.8	152,900	(0.6)	104,500	(0.9)	22,200	(0.9)
2019	12,600	7.7	180,200	(12.2)	122,000	0.7	161,300	5.5	104,500	-	21,800	(1.8)
2020	10,971	(12.9)	145,051	(19.5)	98,182	(19.5)	129,811	(19.5)	87,223	(16.5)	18,031	(17.3)
2021	13,032	18.8	164,052	13.1	104,800	6.7	146,822	13.1	93,880	7.6	21,422	18.8
2022	12,713	(2.4)	165,533	0.9	105,741	0.9	148,143	0.9	94,441	0.6	20,893	(2.5)
2023	13,650	7.4	173,770	5.0	108,602	2.7	152,560	3.0	95,862	1.5	23,360	11.8
Average Annual Percent Change												
2007 to 2009		(1.3)		0.1		1.2		(0.5)		(1.5)		(1.6)
2009 to 2019		1.1		(0.6)		1.5		0.5		1.6		-
2019 to 2023[(1)]		2.7		(1.2)		(3.8)		(1.8)		(2.8)		2.3

Source: MSHA AADT Reports.

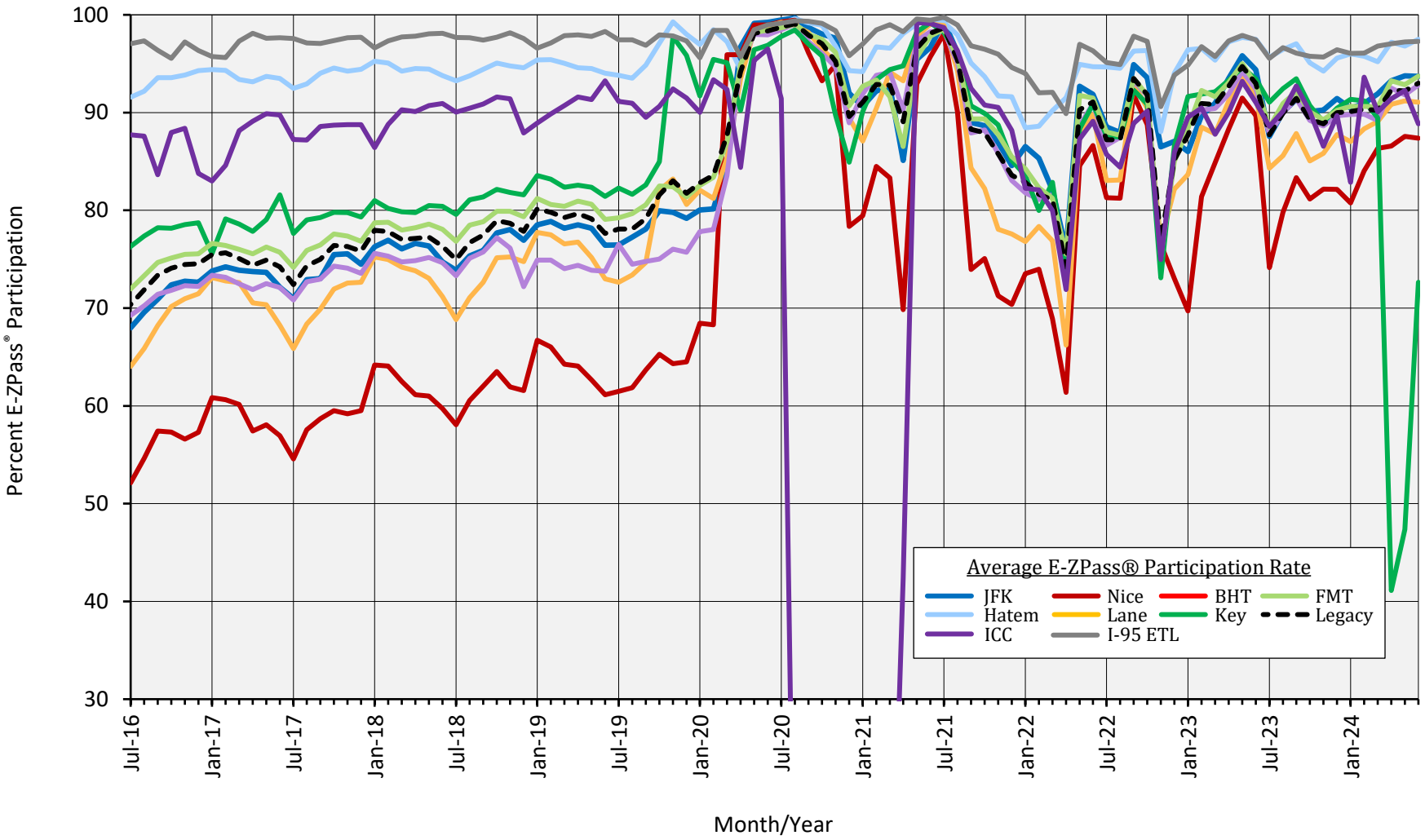
Trends over the past 13-year period for both the MDTA system and the other major highways were used as a reference in assessing the estimated ten-year traffic growth for the traffic and revenue forecasts presented in Chapter 4.

2.4 MDTA E-ZPass® Market Share

In recent years, electronic toll collection has played an increasingly important role in transaction processing for toll agencies across the nation. MDTA collects electronic tolls via E-ZPass® and after the official conversion to All-Electronic Tolling it remains an important component of MDTA tolling. **Figure 2-5** provides a graphic summary of the E-ZPass® market share for each of the seven Legacy facilities, the total Legacy system, the Intercounty Connector, and the I-95 Express Toll Lanes (ETL) from July 2016 through June 2024 for collected transactions.

From July 2019 to February 2020, E-ZPass® transactions accounted for an average of 80.8 percent of the total Legacy system transactions, an increase of 2.9 percent over the same period in FY 2019. Of these, 66.8 percent were made by Maryland E-ZPass® customers, including in-state E-ZPass® customers, commuter plans, shopper plans and Hatem Bridge plans. Over the same time period, in terms of individual facilities, the Thomas J. Hatem Memorial Bridge had the greatest percentage of E-ZPass® customers at 96.3 percent of total transactions over this time period, primarily due to the Hatem Bridge Toll Plans and its conversion to cashless tolling prior to March. The Governor Harry W. Nice Memorial/Senator Thomas "Mac" Middleton Bridge had the lowest percentage of E-ZPass® transactions during this time period at 64.4 percent. On a total system basis, between July 2019 and February 2020, cash transactions accounted for a combined 17.0 percent of all transactions, a decrease of 3.3 percent over same period in FY 2019. Video transactions accounted for 2.1 percent of all transactions made between July 2019 and February 2020.

On March 17, 2020 MDTA implemented systemwide cashless tolling to prevent the potential spread of COVID-19 during exchanges of cash at toll booths. Additionally, mailing of Notice of Toll Due (NOTD) video invoices was paused until October 2020. Due to these changes and other collection challenges related to the back-office transition, E-ZPass® transactions accounted for 94 percent of all Legacy system transactions in April 2020 and about 98 percent of the total transactions in May and June 2020. The pause of the NOTD invoicing mailings and the back-office transition caused FY 2021 and FY 2022 E-ZPass® trends to be more volatile than previous years. In particular, the ICC shows a significant drop in E-ZPass® market share in FY 2021 due to challenges with trip reconstruction related to the back-office transition. By the end of FY 2021 in July, E-ZPass® market share for all facilities was returning to levels seen initially after transition to all-electronic tolling. In FY 2022, as more NOTD invoices were mailed and paid from the paused period, the E-ZPass market share became volatile again as higher shares of video tolls were being paid. Due to this, the share of E-ZPass declined throughout the fiscal year before rebounding in May and June 2022. In FY 2023, there was a significant a drop in E-ZPass market share in November 2022 when the customer assistance plan terminated, causing another influx of video transactions being paid. Through FY 2024, occasional dips in market share are noticeable, particularly on the Nice Bridge, but the overall trend appears to be steadying compared to the volatility seen since FY 2021.



Note: FY 2021 Intercounty Connector toll revenue collection impacted by delay in trip reconstruction.
FY 2022 and FY 2023 impacted by video toll collection from delayed NOTDs from business rule changes.
FY 2024 impacted by Key Bridge collapse in March 2024.

Collected Transaction E-ZPass® Marketshare Trends by Facility

FIGURE 2-5

Chapter 3
Corridor Growth Review

3.1 Introduction

Trips on Maryland's tolled facilities are made for many purposes, including commuting, business, commerce, and recreation. Preparing facility traffic forecasts requires evaluating socioeconomic data (SED) that drive trip purposes, such as population, employment, and income. Therefore, historical and projected socioeconomic data are important in developing traffic forecasts. Socioeconomic data are provided by public and private sources for different geographies and time periods. This introduction overviews the socioeconomic data reviewed.

Variables – Include population, employment, unemployment rates, real per capita income, real gross domestic product (GDP), gross regional product (GRP), inflation, and fuel prices.

Geographies – Geographies profiled include national and census divisions (U.S., Mid Atlantic, South Atlantic), as well as Maryland and six sub-state regions, as mapped in **Figure 3-1**.

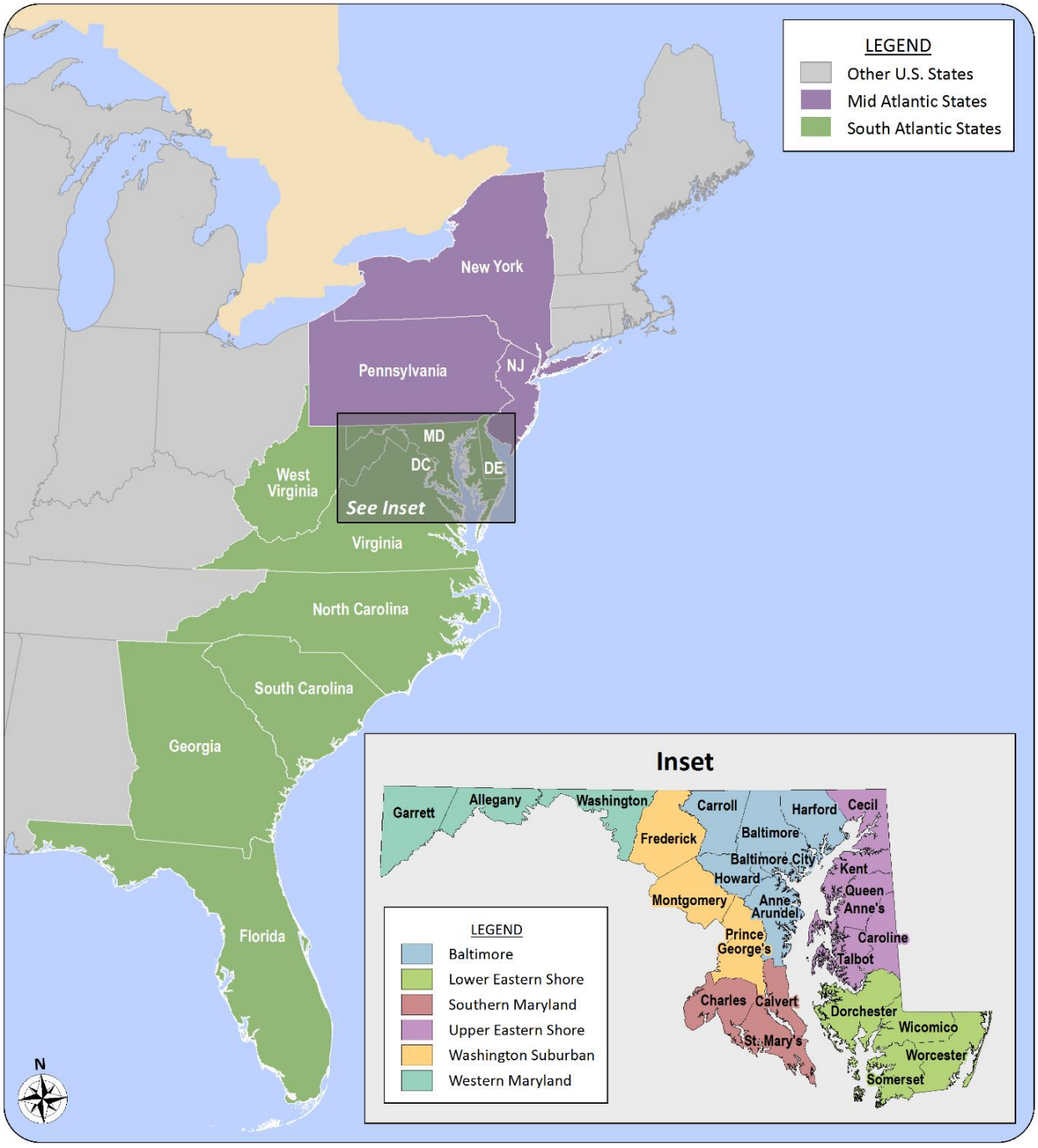
Sources – Government and private sector data sources include:

- United States Bureau of Economic Analysis (BEA)
- United States Bureau of Labor Statistics (BLS)
- Congressional Budget Office (CBO)
- United States Census Bureau (Census)
- Energy Information Administration (EIA)
- Federal Open Market Committee (FOMC)
- Office of Management and Budget (OMB)
- The State of Maryland Department of Planning State Data Center (MD SDC)
- Woods & Poole Economics, Inc., 2024 Complete Economic and Demographic Data Source (WP24)[1]

Analysis Horizon – Historical socioeconomic data are presented annually, including annual growth rates, and compound annual growth rates (CAGR) in the preceding decade. Forecasts are provided for the next decade in five-year increments (2023-2028 and 2028-2033), as available.

[1]Woods & Poole Economics, Inc. Washington, D.C. Copyright 2024. Woods & Poole does not guarantee the accuracy of this data. The use of this data and the conclusion drawn from it are solely the responsibility of CDM Smith.

Figure 3-1
Geographies Profiled



3.2 Recent Growth Trend Explanatory Factors

This section provides local explanatory context for traffic trends on the MDTA facilities, specifically focusing on the Port of Baltimore cargo tonnage, which impacts commercial vehicle traffic, and BWI airport passenger volumes, which impact Intercounty Connector passenger vehicle traffic.

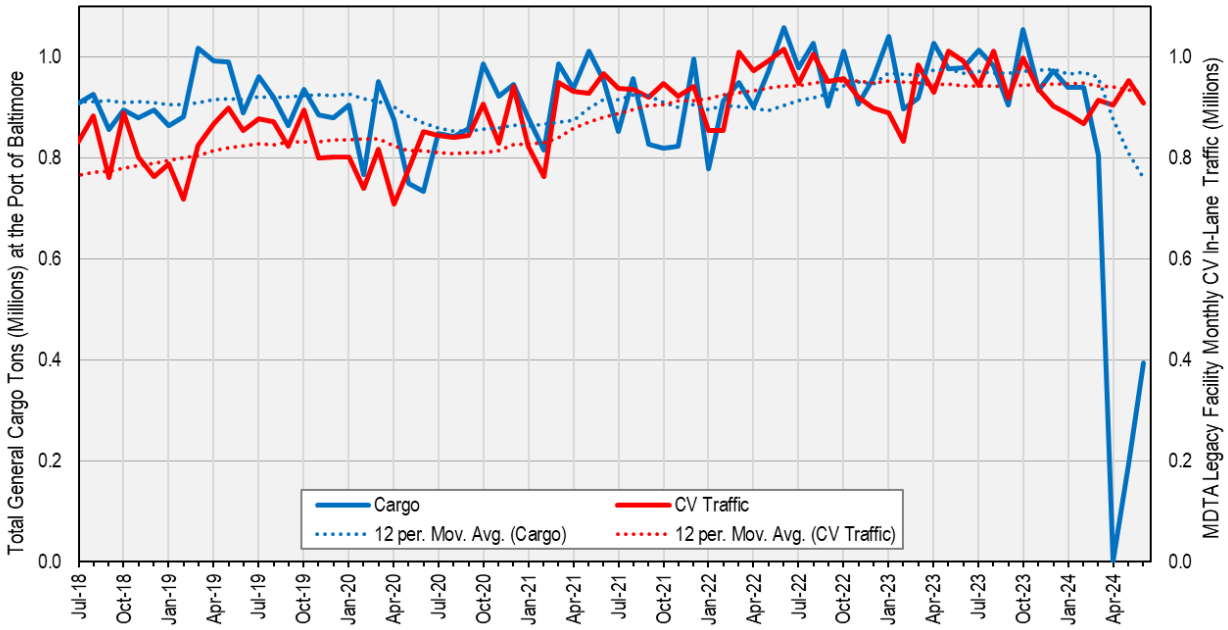
3.2.1 Port of Baltimore Cargo Tons

Shipping and port activity were indirectly impacted by the pandemic, although total general cargo tonnage did not materially change relative to historical trends. Port trends are typically correlated with commercial vehicle movements, as ports are intermodal connectors to surface transportation modes. Port of Baltimore activity affects transactions on the MDTA Legacy facilities, particularly at the Central Region facilities.

Figure 3-2 compares monthly Port of Baltimore total general cargo tons to total Legacy commercial vehicle (CV) in-lane traffic from July 2018 through June 2024. Tonnage data are sourced from the Maryland Department of Transportation, Port Administration (MPA). Port of Baltimore exhibited some initial cargo declines early in the pandemic (April and May 2020), which subsequently rebounded during the summer, and returned to more typical levels and monthly fluctuations by the second half of 2022. Legacy facility CV transactions and port tonnage exhibit mostly paralleled 12-month moving averages; however, the monthly correlation is relatively weak.

Port volumes effectively ceased in April and May 2024 when the Francis Scott Key Bridge collapsed, effectively cutting off the Patapsco shipping channel and Port cargo vessel access. As debris was mostly cleared by June, some cargo activity resumed, with levels less than half historical averages. Reduced cargo trends are likely to continue through the remainder of 2024 (and likely beyond) as salvage and repair operations continue.

Figure 3-2
Port of Baltimore Cargo Tons vs. Legacy Facilities In-Lane CV Traffic, FY 2018 – 2024 (Monthly)

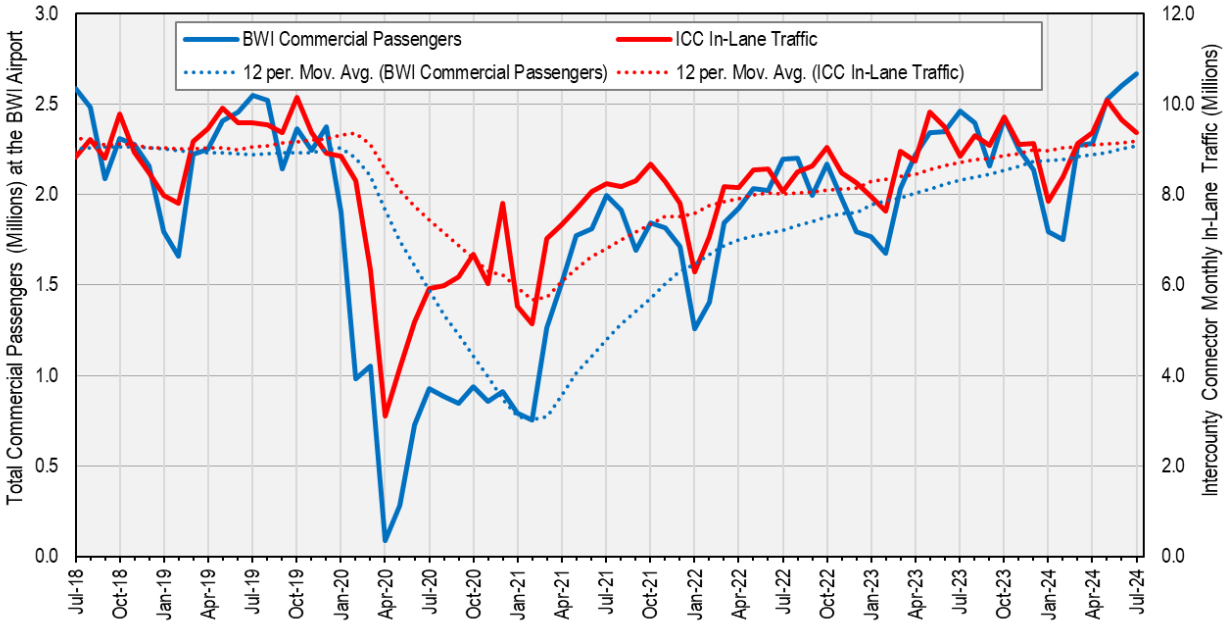


3.2.2 Baltimore/Washington International Airport (BWI) Passengers

Another transportation metric relating to leisure and business travel is airport activity. The Baltimore/Washington International Airport (BWI) passenger data (combined monthly enplanements and deplanements, sourced directly from the airport) are compared against the Intercounty Connector (ICC) monthly passenger car (PC) transactions, per **Figure 3-3**.

When domestic and international travel was halted in April 2020, passenger volumes dropped significantly more than toll transactions. Since the initial pandemic months, travel steadily increased year-over-year with some dampening occurring in winter months, due to seasonal cyclicality. Such seasonality is apparent in both BWI and ICC metrics. Monthly ICC in-lane PC traffic generally parallels BWI passenger volume data closely, not only in the 12-month moving averages, but also with a relatively high monthly correlation, exhibiting the heavy impact airport trips can have on ICC trips.

Figure 3-3
BWI Airport Passengers vs. ICC In-Lane PC Traffic, FY 2018 – 2024 (Monthly)



3.3 Socioeconomic Variables

Table 3-1 shows historical and forecast socioeconomic variable sources, terms and release dates. **Subsections 3.3.1-3.3.7** discuss historical and forecast trends for population, employment, unemployment rates, real per capita personal income, real gross domestic/regional product, inflation, and fuel prices. Note that the latest available MD SDC income data are from 2015, which are several years old, although population and employment were updated in 2022.

Table 3-1
Socioeconomic Variables: Terms and Sources

Variable	Term(s)	Historical Data	Forecast Data
Population	Persons	U.S. Census Bureau	Woods & Poole, 2024 MD SDC, Dec. 2022
Employment	Persons	U.S. Bureau of Economic Analysis, U.S. Bureau of Labor Statistics	Woods & Poole, 2024 MD SDC, Oct. 2022
Unemployment	Percentage	U.S. Bureau of Labor Statistics	CBO, Jun. 2024 FOMC, Jun. 2024 OMB, Nov. 2023
Real Per Capita Income	2023$	Woods & Poole, 2024	Woods & Poole, 2024 MD SDC, Jan. 2015
Real Gross Domestic/Regional Product	2023$	U.S. Bureau of Economic Analysis, Woods & Poole, 2024	CBO, Jun. 2024 FOMC, Jun. 2024 OMB, Nov. 2023 Woods & Poole, 2024
Inflation	Annual Percentage Change	U.S. Bureau of Labor Statistics	CBO, Jun. 2024 FOMC, Jun. 2024 OMB, Nov. 2023
Fuel Prices	Price per Gallon, Price per Barrel	Energy Information Administration	Energy Information Administration

3.3.1 Population

Historical

Table 3-2 shows U.S. Census Bureau population for 2013 to 2023 (July 1st estimates). National population increased from 316.0 to 335.0 million, equating to 0.6% CAGR; the South Atlantic, which includes Maryland, grew faster at 1.0% annually, and Mid Atlantic growth was almost flat, at 0.1% annually.

Maryland's population grew 257,000, from 5.9 to almost 6.2 million, reflecting a 0.4% CAGR. The most populous sub-state region, Baltimore, grew 0.2% annually while Southern Maryland grew relatively fastest, at 0.8%. Annualized growth in Maryland's other regions ranged from a slight contraction in Western Maryland to a high of 0.7% CAGR in Washington Suburban.

Population growth has decelerated in Maryland, dropping from 0.6% in 2013 to 0.3% in 2023, with a 0.2% decline in 2022. Baltimore's population decelerated earlier than the state, with effectively no growth since 2015.

Table 3-2
Historical Population

Geography	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	'13-'23
Population (Thousands)												
United States	315,994	318,301	320,635	322,941	324,986	326,688	328,240	331,527	332,049	333,271	334,915	18,921
Mid Atlantic	41,258	41,304	41,307	41,287	41,263	41,217	41,138	42,373	42,137	41,906	41,824	566
South Atlantic	61,729	62,382	63,117	63,907	64,620	65,230	65,785	66,175	66,674	67,445	68,226	6,497
Maryland	5,923	5,957	5,986	6,003	6,024	6,036	6,046	6,174	6,175	6,164	6,180	257
Baltimore	2,720	2,731	2,741	2,745	2,749	2,751	2,750	2,793	2,792	2,783	2,782	62
Lower Eastern Shore	211	211	211	212	212	213	213	213	215	216	217	6
Southern Maryland	352	355	357	360	363	366	369	374	378	379	382	30
Upper Eastern Shore	241	241	241	241	242	243	243	244	245	247	249	8
Washington Suburban	2,147	2,168	2,184	2,194	2,207	2,213	2,220	2,299	2,293	2,288	2,299	152
Western Maryland	253	252	251	251	251	251	250	251	252	251	252	-1
Annual Percent Change												
United States	0.7%	0.7%	0.7%	0.7%	0.6%	0.5%	0.5%	1.0%	0.2%	0.4%	0.5%	0.6%
Mid Atlantic	0.2%	0.1%	0.0%	-0.1%	-0.1%	-0.1%	-0.2%	3.0%	-0.6%	-0.5%	-0.2%	0.1%
South Atlantic	1.0%	1.1%	1.2%	1.3%	1.1%	0.9%	0.9%	0.6%	0.8%	1.2%	1.2%	1.0%
Maryland	0.6%	0.6%	0.5%	0.3%	0.3%	0.2%	0.2%	2.1%	0.0%	-0.2%	0.3%	0.4%
Baltimore	0.5%	0.4%	0.4%	0.1%	0.1%	0.1%	0.0%	1.6%	0.0%	-0.3%	0.0%	0.2%
Lower Eastern Shore	0.1%	0.0%	0.1%	0.2%	0.1%	0.3%	0.4%	-0.1%	0.7%	0.4%	0.5%	0.3%
Southern Maryland	0.9%	0.7%	0.7%	0.8%	0.9%	0.8%	0.8%	1.2%	1.1%	0.4%	0.7%	0.8%
Upper Eastern Shore	0.0%	0.0%	0.1%	0.0%	0.1%	0.4%	0.3%	0.2%	0.7%	0.7%	0.7%	0.3%
Washington Suburban	0.9%	1.0%	0.8%	0.5%	0.6%	0.3%	0.3%	3.6%	-0.3%	-0.2%	0.5%	0.7%
Western Maryland	-0.2%	-0.3%	-0.3%	0.0%	-0.1%	0.0%	-0.1%	0.4%	0.1%	-0.2%	0.2%	0.0%

Forecast

Table 3-3 shows average annual population growth forecasts through 2033 by Woods & Poole (WP24) and the Maryland State Data Center (MD SDC, Dec. 2022).

WP24 projects 0.6% National annualized growth between 2023 and 2033, the same pace as recent decade history. WP24 predicts Mid-Atlantic CAGR of 0.1% and South Atlantic at 1.0%.

Both WP24 and MD SDC project Maryland's population growth at close-to the 0.6% national projections, and that Southern Maryland will grow relatively faster than other regions, at 1.0%, similar to recent history. In Baltimore and Washington Suburban, the two major metro areas, WP24 projects 0.5% and 0.6% CGAR, respectively, and MD SDC projects similarly. Maryland and sub-regional forecasts from WP24 and MD SDC appear optimistic given actual population growth (plateauing) observed in recent years.

Table 3-3
Forecast Population Growth

	Historical	WP24			MD SDC		
Geography	'13-'23	'23-'28	'28-'33	'23-'33	'23-'28	'28-'33	'23-'33
United States	0.6%	0.7%	0.6%	0.7%	-	-	-
Mid Atlantic	0.1%	0.2%	0.2%	0.2%	-	-	-
South Atlantic	1.0%	0.9%	0.9%	0.9%	-	-	-
Maryland	0.4%	0.6%	0.5%	0.5%	0.6%	0.6%	0.6%
Baltimore	0.2%	0.5%	0.4%	0.5%	0.5%	0.4%	0.5%
Lower Eastern Shore	0.3%	0.5%	0.5%	0.5%	0.8%	0.8%	0.8%
Southern Maryland	0.8%	0.9%	0.9%	0.9%	1.0%	1.0%	1.0%
Upper Eastern Shore	0.3%	0.5%	0.5%	0.5%	0.7%	0.8%	0.8%
Washington Suburban	0.7%	0.7%	0.6%	0.6%	0.7%	0.6%	0.6%
Western Maryland	0.0%	0.2%	0.2%	0.2%	0.6%	0.6%	0.6%

3.3.2 Employment

Historical

Employment data in **Table 3-4** are from the U.S. Bureau of Economic Analysis (BEA) through 2022, with 2023 derived via applying the Bureau of Labor Statistics' (BLS) 2023/2022 growth. Between 2013 and 2023, employment increased faster than population, but notably declined in 2020 due to COVID-19 (especially in the first half-year). Growth in the South Atlantic was 2.4% CAGR, higher than the Mid-Atlantic (1.2%) and nationally (1.7%). Mid-Atlantic exhibited the relatively steepest employment decline in 2020 compared to the South Atlantic and the Nation.

Historical Maryland growth was 1.3% CAGR from 2013 to 2023, with a decline in 2020 slightly greater than the Nation, at 3.3% versus 3.1%. Growth in the substate regions was relatively close to statewide during the entire preceding decade, with some annual differences, excepting Western Maryland, which effectively plateaued since 2013 similar to population, with the most pronounced decline in 2020 and due to COVID-19.

Table 3-4
Historical Employment

Geography	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	'13-'23
Employment (Thousands)												
United States	182,328	186,240	190,326	193,426	196,394	200,292	201,635	195,287	202,752	212,442	215,503	33,175
Mid Atlantic	24,102	24,507	24,913	25,244	25,503	25,969	26,090	24,604	25,463	26,776	27,159	3,057
South Atlantic	34,674	35,561	36,541	37,359	38,207	39,204	39,665	39,072	40,852	42,801	43,784	9,110
Maryland	3,494	3,538	3,603	3,659	3,697	3,753	3,745	3,622	3,750	3,887	3,959	465
Baltimore	1,712	1,732	1,765	1,790	1,810	1,839	1,837	1,774	1,835	1,903	1,933	221
Lower Eastern Shore	116	117	118	119	120	121	122	117	123	127	132	16
Southern Maryland	153	155	159	164	165	164	165	164	171	175	180	26
Upper Eastern Shore	120	121	122	124	124	127	126	122	128	132	135	15
Washington Suburban	1,253	1,272	1,297	1,321	1,336	1,361	1,356	1,313	1,355	1,409	1,438	184
Western Maryland	140	140	141	141	141	141	140	132	138	140	141	2
Annual Percent Change												
United States	1.9%	2.1%	2.2%	1.6%	1.5%	2.0%	0.7%	-3.1%	3.8%	4.8%	1.4%	1.7%
Mid Atlantic	1.4%	1.7%	1.7%	1.3%	1.0%	1.8%	0.5%	-5.7%	3.5%	5.2%	1.4%	1.2%
South Atlantic	1.9%	2.6%	2.8%	2.2%	2.3%	2.6%	1.2%	-1.5%	4.6%	4.8%	2.3%	2.4%
Maryland	1.6%	1.3%	1.8%	1.6%	1.0%	1.5%	-0.2%	-3.3%	3.5%	3.6%	1.9%	1.3%
Baltimore	1.6%	1.2%	1.9%	1.4%	1.1%	1.6%	-0.1%	-3.4%	3.4%	3.7%	1.6%	1.2%
Lower Eastern Shore	0.7%	0.6%	1.0%	0.8%	0.8%	0.7%	0.3%	-3.9%	5.6%	3.2%	3.8%	1.3%
Southern Maryland	1.0%	1.2%	2.4%	3.0%	0.8%	-0.2%	0.5%	-0.8%	4.2%	2.7%	2.4%	1.6%
Upper Eastern Shore	2.1%	1.4%	0.7%	1.6%	0.3%	1.6%	-0.6%	-3.1%	5.2%	2.7%	2.3%	1.2%
Washington Suburban	1.9%	1.5%	2.0%	1.8%	1.2%	1.8%	-0.4%	-3.1%	3.2%	4.0%	2.0%	1.4%
Western Maryland	0.2%	0.1%	0.9%	0.2%	-0.3%	0.2%	-1.1%	-5.4%	4.3%	1.8%	0.9%	0.1%

Forecast

Table 3-5 shows employment growth forecasts with 1.2% CAGR nationally through 2033, per WP24, decelerated from the recent historical decade. South Atlantic forecast CAGR (1.4%) is expected to be higher than the U.S. and Mid-Atlantic (1.1%). WP24 forecasts 1.1% CAGR for Maryland, slightly decelerated relative to recent history and close to national forecasts.

According to the MD SDC (Oct. 2022), Maryland's employment forecast is 0.8% through 2033; slower than forecasted by WP24, but closer aligned with recent history. For Baltimore and Washington Suburban, WP24 projects 1.3% and 1.1%, respectively, with Southern Maryland as the second relatively fastest region behind Baltimore, at 1.2%.

Table 3-5
Forecast Employment Growth

	Historical	WP24			MD SDC		
Geography	'13-'23	'23-'28	'28-'33	'23-'33	'23-'28	'28-'33	'23-'33
United States	1.7%	1.3%	1.2%	1.2%	-	-	-
Mid Atlantic	1.2%	1.2%	1.0%	1.1%	-	-	-
South Atlantic	2.4%	1.5%	1.4%	1.4%	-	-	-
Maryland	1.3%	1.2%	1.0%	1.1%	0.9%	0.6%	0.8%
Baltimore	1.2%	1.4%	1.1%	1.3%	0.9%	0.6%	0.7%
Lower Eastern Shore	1.3%	0.8%	0.7%	0.7%	0.7%	0.6%	0.7%
Southern Maryland	1.6%	1.2%	1.2%	1.2%	1.0%	0.9%	0.9%
Upper Eastern Shore	1.2%	1.0%	1.0%	1.0%	1.2%	0.9%	1.1%
Washington Suburban	1.4%	1.2%	1.0%	1.1%	0.9%	0.6%	0.8%
Western Maryland	0.1%	0.6%	0.6%	0.6%	0.6%	0.5%	0.6%

3.3.3 Unemployment

Historical

Figure 3-4 shows annual unemployment rates from 2000 to 2023 from the BLS. Maryland's rate was almost universally lower than the Mid-Atlantic, South Atlantic, and Nation albeit paralleling very closely. In 2020, with the COVID-19 onset, unemployment rates unprecedentedly spiked very quickly, jumping enormously in April 2020, and then steadily declining in the following months. Unemployment rates steadily declined by early 2022 to a relative historical low around 3.6% and remained relatively close since. On an annualized basis, national unemployment was 3.6% in 2023, with Maryland at a very low 2.1%.

Figure 3-4
Historical Unemployment Rates (Macro Geographies)

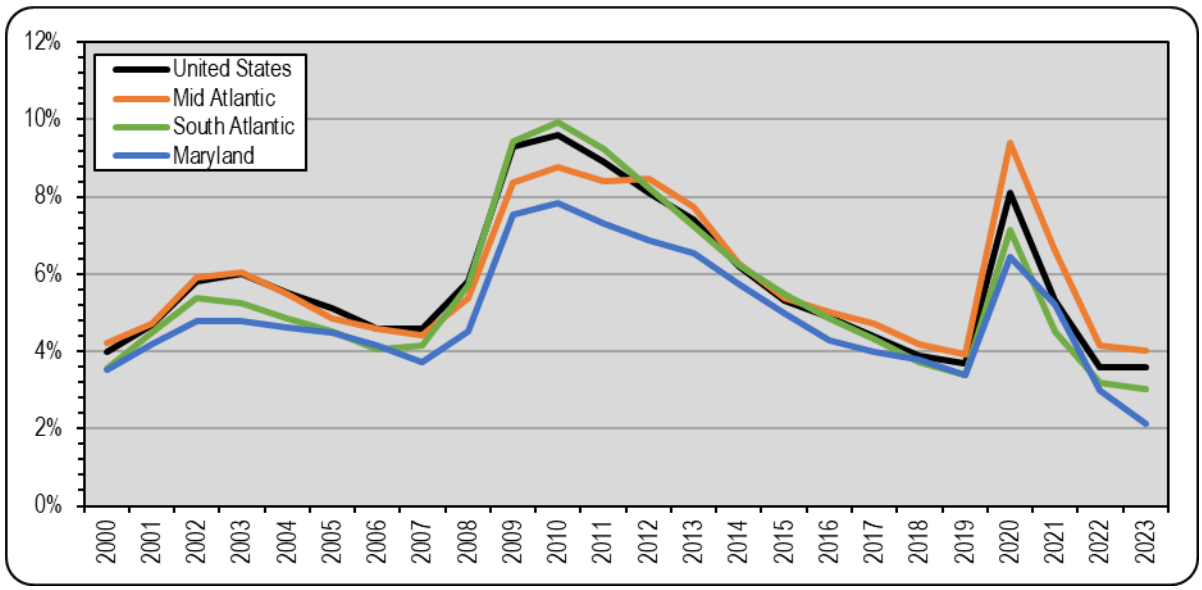
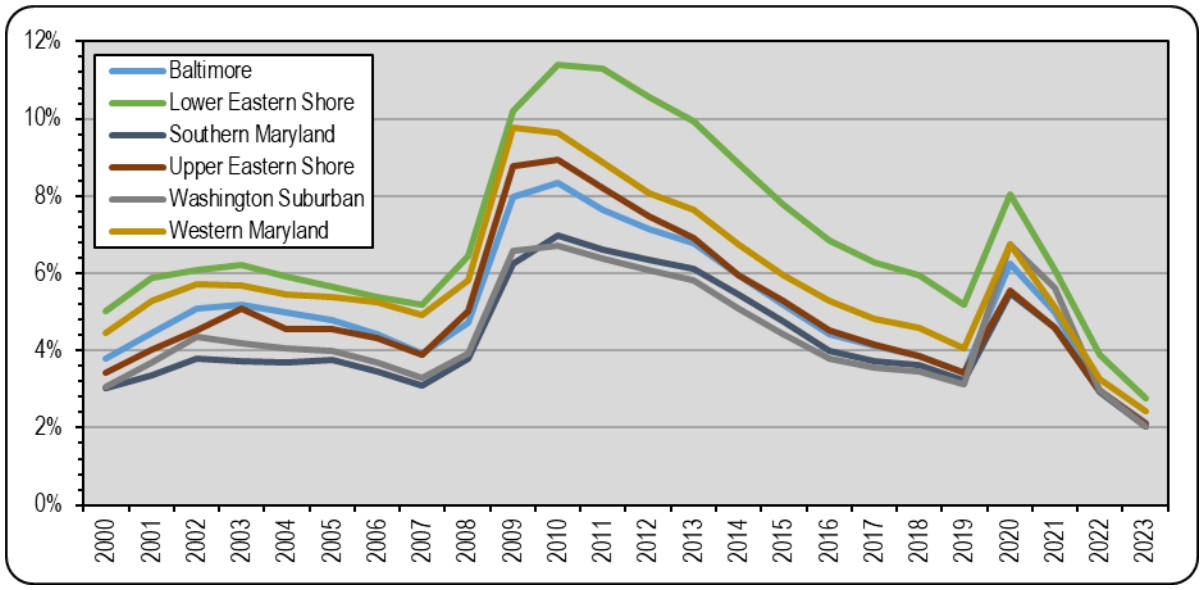


Figure 3-5 shows annual unemployment rates for Maryland's regions. In every year, Southern Maryland and Washington Suburban exhibited lower unemployment rates than elsewhere; unsurprising given the federal (D.C.) jobs concentrated there. Conversely, the Lower Eastern Shore and Western Maryland exhibited relatively higher unemployment rates than elsewhere.

Annual unemployment peaked between 2009 and 2011, during and following the Great Recession, reaching 11.4% in the Lower Eastern Shore, 9.8% in Western Maryland, 8.9% in the Upper Eastern Shore, and 8.3% in Baltimore. In the Washington Suburban region, unemployment peaked at 6.7% while Maryland's statewide rate reached 7.8%. Following those recessionary peak years, unemployment rates steadily declined to historically low levels in 2019. However, similar to the national level, COVID-19 reversed that trend quickly, with extraordinary unemployment rates peaking in the second-and-third quarters of 2020, followed by a steady decline through early 2022, whereby rates have held steadily at relatively low historical levels. On an annual basis, 2023 resulted in unemployment rates ranging between very low levels of 2.0% and 2.8% for the state regions.

Figure 3-5
Historical Unemployment Rates (Maryland Regions)



Forecast

National unemployment rates in 2020 spiked from COVID-19 and subsequently declined to near-historical lows. Unemployment rate projections from the Congressional Budget Office, the Federal Reserve (FOMC), and Office of Management and Budget expect the annual rates to increase slightly through 2025 from the current historical lows, mostly expecting responses to the FED FOMC's continued monetary tightening policy (to stem inflation) and political-cycle uncertainties. After 2025, the forecasts are for around 4.0% to 4.5% thereafter, per **Figure 3-6**.

Table 3-6 provides additional detail on the short-term unemployment outlook for 2024, 2025, and 2026, sourced from a wide variety of professional SED forecasters. The table is organized from most optimistic to most pessimistic forecasts for 2024. Data were compiled in August 2024 with most forecasters publishing data between June and August; the 2024 forecasts are narrowly ranging from 3.9% to 4.1%, averaging 4.0% and then to 4.2% in 2025.

Figure 3-6
Forecast U.S. Unemployment Rate

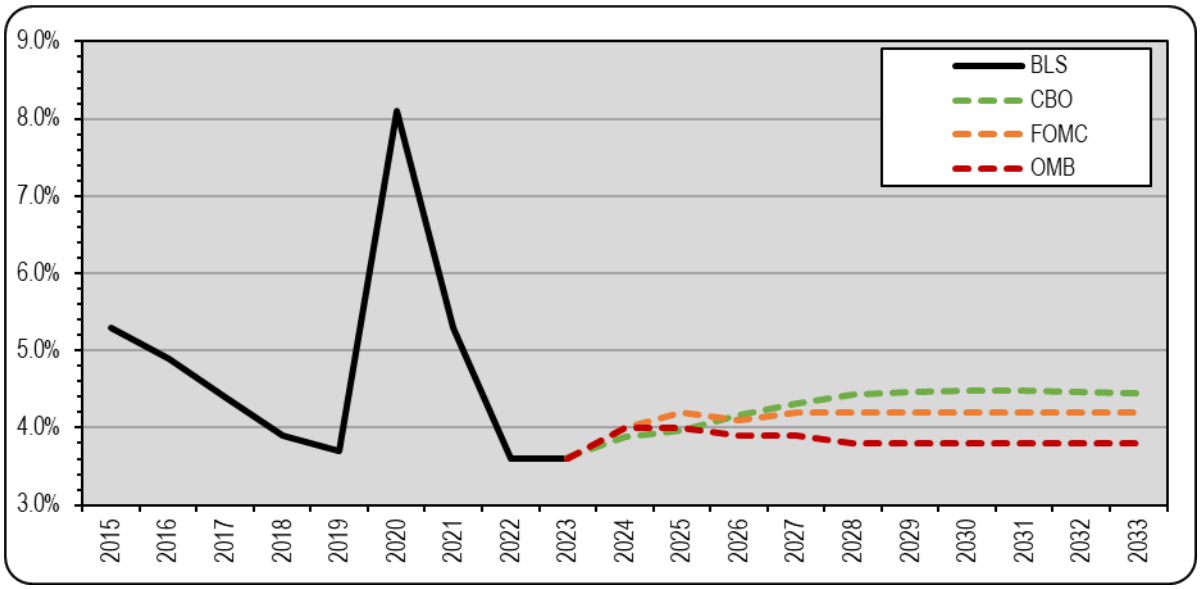


Table 3-6
Short-Term Forecast U.S. Unemployment Rate

Source	Release Date	2024	2025	2026
Congressional Budget Office (CBO)	June 18, 2024	3.9%	4.0%	4.2%
Organization for Economic Cooperation and Development (OECD)	May 2, 2024	3.9%	4.0%	#N/A
University of Michigan: Research Seminar in Quantitative Economics (RSQE)	May 17, 2024	3.9%	4.0%	#N/A
TD Economics	June 18, 2024	3.9%	4.0%	#N/A
International Monetary Fund (IMF): World Economic Outlook	April 16, 2024	4.0%	4.2%	4.3%
Conference Board	July 11, 2024	4.0%	3.9%	#N/A
Energy Information Administration (EIA): Short-Term Energy Outlook	August 6, 2024	4.0%	4.3%	#N/A
ScotiaBank Global Economics	July 18, 2024	4.0%	4.1%	#N/A
National Association of Realtors	June 25, 2024	4.0%	4.3%	#N/A
PNC Financial Services Group	August 1, 2024	4.0%	4.3%	4.0%
Office of Management and Budget (OMB)	March 8, 2024	4.0%	4.0%	3.9%
Royal Bank of Canada (RBC) Economics	July 12, 2024	4.0%	4.2%	#N/A
Federal Reserve Bank: Federal Open Market Committee (FOMC)	June 12, 2024	4.0%	4.2%	4.1%
Wells Fargo Economics Group	August 7, 2024	4.1%	4.3%	#N/A
Bank of Montreal (BMO) Capital Markets Economics	August 2, 2024	4.1%	4.4%	#N/A
Federal Reserve Bank of Philadelphia: Survey of Professional Forecasters*	August 9, 2024	4.1%	4.3%	4.2%
Average		4.0%	4.2%	4.1%

3.3.4 Per Capita Personal Income

Personal income indicates the relative affluence of a region's residents. Real per capita income includes the sum of wages and salaries, other labor income, proprietors' income, rental income of persons, dividend income, personal interest income, and transfer payments, less personal contributions for government social insurance, on a per-person basis. Real (above inflation) increases in per capita income can lead to an increased willingness to pay tolls.

Historical

Historical real personal income per capita, in constant 2023$[2], is presented in **Table 3-7**, from WP24. Per capita personal income nationally increased from $55,799 in 2013 to $70,172 in 2023, or 2.3% CAGR. In the Mid-Atlantic and South Atlantic, the CAGRs were 2.0% and 2.5%, respectively. Maryland's growth was 1.5%. In Maryland's regions, historical growth was lower than the nation, ranging from 1.0% in Washington Suburban to 2.1% in the Upper Eastern Shore.

While historical growth was relatively slower in Maryland than nationally, the absolute real income per capita was relatively higher. At $75,461, Maryland's per capita personal income was 7.5% higher than the Nation, and 13.0% higher than the South Atlantic in 2023. The Washington Suburban region, at $79,465 in 2023, was 13.2% higher than the nation, and Baltimore's $76,768 was 9.4% higher.

Table 3-7
Historical Real Personal Income Per Capita (2023$)

Geography	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	'13-'23
Total Real Personal Income/Capita (2023$)												
United States	55,799	57,368	59,457	59,979	61,400	62,890	64,601	68,051	71,153	67,920	70,172	14,373
Mid Atlantic	64,160	65,370	67,739	68,956	70,952	72,236	73,850	77,293	79,848	75,144	78,570	14,410
South Atlantic	52,335	53,912	56,203	56,878	58,405	59,633	61,394	64,188	67,474	64,811	66,772	14,438
Maryland	65,203	65,797	68,098	69,344	70,129	70,690	71,766	74,573	76,255	72,861	75,461	10,259
Baltimore	64,116	65,194	67,217	68,181	69,187	70,039	71,728	75,441	77,178	73,949	76,768	12,652
Lower Eastern Shore	47,420	48,755	51,098	50,509	51,470	51,108	51,173	53,705	56,642	53,280	55,503	8,083
Southern Maryland	63,129	63,468	65,655	66,460	66,710	67,044	68,285	71,887	71,464	68,328	69,749	6,620
Upper Eastern Shore	58,229	58,998	60,825	62,154	63,271	64,125	66,376	69,784	72,426	69,553	71,645	13,416
Washington Suburban	71,622	71,393	74,186	76,007	76,559	76,782	77,046	78,507	80,281	76,625	79,465	7,843
Western Maryland	46,207	47,583	48,723	49,744	50,020	51,024	51,933	55,298	56,972	53,424	54,072	7,865
Annual Percent Change												
United States	-0.9%	2.8%	3.6%	0.9%	2.4%	2.4%	2.7%	5.3%	4.6%	-4.5%	3.3%	2.3%
Mid Atlantic	-0.8%	1.9%	3.6%	1.8%	2.9%	1.8%	2.2%	4.7%	3.3%	-5.9%	4.6%	2.0%
South Atlantic	-2.3%	3.0%	4.2%	1.2%	2.7%	2.1%	3.0%	4.6%	5.1%	-3.9%	3.0%	2.5%
Maryland	-2.4%	0.9%	3.5%	1.8%	1.1%	0.8%	1.5%	3.9%	2.3%	-4.5%	3.6%	1.5%
Baltimore	-1.4%	1.7%	3.1%	1.4%	1.5%	1.2%	2.4%	5.2%	2.3%	-4.2%	3.8%	1.8%
Lower Eastern Shore	0.9%	2.8%	4.8%	-1.2%	1.9%	-0.7%	0.1%	4.9%	5.5%	-5.9%	4.2%	1.6%
Southern Maryland	-1.7%	0.5%	3.4%	1.2%	0.4%	0.5%	1.9%	5.3%	-0.6%	-4.4%	2.1%	1.0%
Upper Eastern Shore	0.1%	1.3%	3.1%	2.2%	1.8%	1.3%	3.5%	5.1%	3.8%	-4.0%	3.0%	2.1%
Washington Suburban	-4.3%	-0.3%	3.9%	2.5%	0.7%	0.3%	0.3%	1.9%	2.3%	-4.6%	3.7%	1.0%
Western Maryland	-0.9%	3.0%	2.4%	2.1%	0.6%	2.0%	1.8%	6.5%	3.0%	-6.2%	1.2%	1.6%

[2] WP24 provides real income per capita in 2017$, per current BEA data conventions; dollars in inflated to 2023$ using WP24's PCE index.

Forecast

Table 3-8 provides real personal income per capita forecasts. According to WP24, national growth is projected at 1.5% CAGR between 2023-2033; the Mid-Atlantic, South Atlantic, Maryland, and sub-state regions are expected to exhibit similar growth patterns, ranging between 1.4% and 1.7%. Maryland's SDC forecasts a relatively slower growth than WP24, with decelerating growth around or below 1.0% CAGR; however, the data are outdated, from 2015.

Table 3-8
Forecast Real Personal Income Per Capita Growth

	Historical	WP24			MD SDC		
Geography	'13-'23	'23-'28	'28-'33	'23-'33	'23-'28	'28-'33	'23-'33
United States	2.3%	1.5%	1.5%	1.5%	-	-	-
Mid Atlantic	2.0%	1.7%	1.6%	1.6%	-	-	-
South Atlantic	2.5%	1.6%	1.5%	1.6%	-	-	-
Maryland	1.5%	1.6%	1.5%	1.5%	0.9%	0.8%	0.8%
Baltimore	1.8%	1.8%	1.6%	1.7%	1.0%	0.8%	0.9%
Lower Eastern Shore	1.6%	1.3%	1.3%	1.3%	0.9%	0.9%	0.9%
Southern Maryland	1.0%	1.5%	1.4%	1.4%	1.0%	0.9%	1.0%
Upper Eastern Shore	2.1%	1.4%	1.4%	1.4%	1.0%	0.8%	0.9%
Washington Suburban	1.0%	1.5%	1.3%	1.4%	0.8%	0.7%	0.8%
Western Maryland	1.6%	1.4%	1.4%	1.4%	1.0%	0.9%	1.0%

3.3.5 Gross Domestic/Regional Product

Gross domestic product (national level) and gross regional product (state- and county-level) measure the value of all goods and services produced within a geographic area and are general indicators of a region's economic activity.

Historical

Historical real gross domestic product (GDP) and gross regional product (GRP), in real 2023$[3], are presented in **Table 3-9**. Real GDP grew at 2.3% CAGR between 2013-2023, and a relatively large 2.2% annual decline in 2020 from COVID-19 effectively reset the national economy to 2018 levels. However, 2021 rebounded beyond pre-COVID 2019 levels and grown steadily since. Growth in the Mid-Atlantic was 2.6%, and the South Atlantic was 1.5%. At 1.4%, Maryland's real GRP historical growth rate was slightly more than half the U.S.

Data in **Tables 3-2** and **3-4** showed in 2023, Maryland comprised 9.1% of the South Atlantic's population and 9.0% of employment, respectively. **Table 3-9** shows that Maryland accounted for

[3] BEA provides real GDP and GRP in 2017$; dollars in inflated to 2023$ using WP24's PCE index. BEA provided recent county-level data between 2017 and 2022; data prior-to 2017 were culled from the BEA as well, but the vintage release with 2012$ denomination (also inflated to 2023$ using W&P PCE index); 2023 county data are based on WP24's growth.

13.1% of the South Atlantic's real GRP. Within Maryland, the sub-state regions of Baltimore and Washington Suburban accounted for 89.8% of Maryland's real GRP in 2023.

Table 3-9
Historical Real Gross Domestic/Regional Product (2023$)

Geography	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	'13-'23
Gross Regional Product (2023$ billions)												
United States	21,442	21,983	22,631	23,043	23,609	24,309	24,909	24,358	25,771	26,269	26,937	5,495
Mid Atlantic	3,849	3,940	4,071	4,180	4,290	4,401	4,502	4,425	4,704	4,838	4,981	1,131
South Atlantic	3,343	3,400	3,469	3,518	3,574	3,655	3,731	3,591	3,754	3,831	3,878	535
Maryland	438.9	445.8	455.9	471.8	481.2	484.5	484.3	467.7	488.6	496.3	506.8	67.9
Baltimore	209.6	212.9	218.1	225.1	236.5	239.0	240.5	232.2	243.4	248.1	260.2	50.6
Lower Eastern Shore	11.0	11.5	12.0	12.1	12.3	12.2	12.0	11.5	12.5	13.0	13.3	2.3
Southern Maryland	19.5	19.9	20.3	21.3	22.8	21.6	21.7	21.8	21.5	21.3	21.7	2.1
Upper Eastern Shore	11.3	11.4	11.7	12.2	12.9	13.2	13.2	12.5	13.3	13.4	13.8	2.5
Washington Suburban	162.0	164.2	168.6	174.8	182.8	184.5	183.3	176.8	184.3	187.1	195.0	33.0
Western Maryland	12.3	12.6	12.6	13.1	13.9	14.0	13.7	12.9	13.6	13.4	13.7	1.4
Annual Percent Change												
United States	2.1%	2.5%	2.9%	1.8%	2.5%	3.0%	2.5%	-2.2%	5.8%	1.9%	2.5%	2.3%
Mid Atlantic	1.8%	2.4%	3.3%	2.7%	2.6%	2.6%	2.3%	-1.7%	6.3%	2.9%	2.9%	2.6%
South Atlantic	1.1%	1.7%	2.0%	1.4%	1.6%	2.2%	2.1%	-3.8%	4.5%	2.1%	1.2%	1.5%
Maryland	0.8%	1.6%	2.3%	3.5%	2.0%	0.7%	0.0%	-3.4%	4.5%	1.6%	2.1%	1.4%
Baltimore	1.6%	1.6%	2.5%	3.2%	5.1%	1.1%	0.6%	-3.4%	4.8%	1.9%	4.9%	2.2%
Lower Eastern Shore	4.5%	4.7%	3.9%	1.0%	1.6%	-0.6%	-1.7%	-4.5%	9.4%	3.8%	2.2%	1.9%
Southern Maryland	-0.6%	1.8%	2.2%	4.8%	7.2%	-5.3%	0.4%	0.5%	-1.3%	-0.9%	1.5%	1.0%
Upper Eastern Shore	4.1%	1.2%	3.1%	3.9%	5.4%	2.6%	-0.2%	-5.1%	6.6%	0.9%	2.5%	2.0%
Washington Suburban	-1.1%	1.3%	2.7%	3.7%	4.6%	0.9%	-0.7%	-3.5%	4.2%	-1.5%	4.2%	1.9%
Western Maryland	-1.0%	2.2%	0.3%	3.8%	5.8%	-1.2%	-1.9%	-6.0%	4.9%	-1.4%	2.4%	1.1%

Forecast

Table 3-10 provides gross domestic/regional product forecasts. WP24 projects 2.0% annual real growth through 2033 nationally, and for the South Atlantic slightly faster (2.2%), with Maryland's GRP closer to the national 2.0%. Within Maryland, the highest real GRP growth is expected in Baltimore (2.2%) and Washington Suburban (2.0%).

Table 3-10
Forecast Real Gross Domestic/Regional Product Growth

	Historical	WP24		
Geography	'13-'23	'23-'28	'28-'33	'23-'33
United States	2.3%	2.0%	1.9%	2.0%
Mid Atlantic	2.6%	2.0%	1.8%	1.9%
South Atlantic	1.5%	2.2%	2.1%	2.2%
Maryland	1.4%	2.1%	1.9%	2.0%
Baltimore	2.2%	2.3%	2.1%	2.2%
Lower Eastern Shore	1.9%	1.6%	1.5%	1.6%
Southern Maryland	1.0%	1.5%	1.4%	1.4%
Upper Eastern Shore	2.0%	1.8%	1.8%	1.8%
Washington Suburban	1.9%	2.1%	1.8%	2.0%
Western Maryland	1.1%	1.3%	1.3%	1.3%

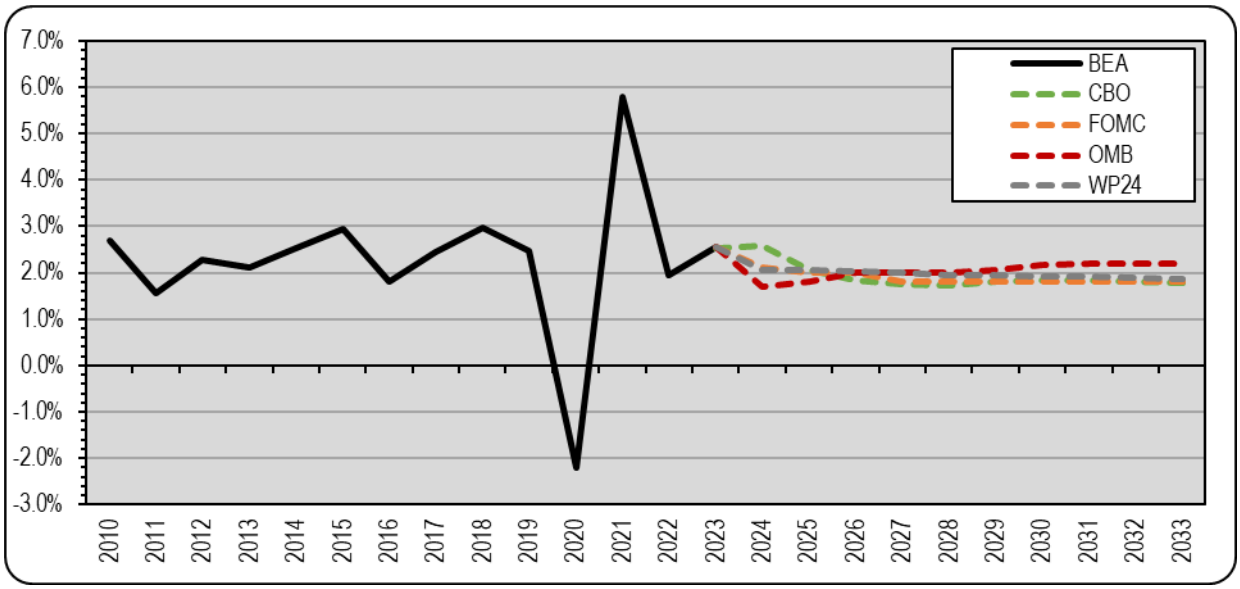
Table 3-11 provides detail on short-term GDP outlook for 2024, 2025, and 2026, sourced from various private and public sector agencies, and is organized from most optimistic to most pessimistic for 2024. As shown, most forecasters expect continued growth in 2024 and some deceleration in the next couple years, with an average of 2.3% in 2024 and 1.9% in 2025.

Table 3-11
Forecast Short-Term Real GDP Growth

Source	Release Date	2024	2025	2026
International Monetary Fund (IMF): World Economic Outlook	April 16, 2024	2.7%	1.9%	2.0%
Federal Reserve Bank of Philadelphia: Survey of Professional Forecasters*	August 9, 2024	2.6%	1.9%	2.3%
Wells Fargo Economics Group	August 7, 2024	2.6%	1.9%	#N/A
PNC Financial Services Group	August 1, 2024	2.6%	2.0%	2.3%
University of Michigan: Research Seminar in Quantitative Economics (RSQE)	May 17, 2024	2.6%	2.1%	#N/A
Congressional Budget Office (CBO)	June 18, 2024	2.6%	2.1%	1.8%
Organization for Economic Cooperation and Development (OECD)	May 2, 2024	2.6%	1.8%	#N/A
Bank of Montreal (BMO) Capital Markets Economics	August 2, 2024	2.5%	1.8%	#N/A
World Bank	June 14, 2024	2.5%	1.8%	1.8%
ScotiaBank Global Economics	July 18, 2024	2.4%	1.8%	#N/A
TD Economics	June 18, 2024	2.4%	2.0%	#N/A
Energy Information Administration (EIA): Short-Term Energy Outlook	August 6, 2024	2.4%	1.6%	#N/A
Royal Bank of Canada (RBC) Economics	July 12, 2024	2.2%	1.5%	#N/A
Conference Board	July 11, 2024	2.1%	1.6%	#N/A
Federal Reserve Bank: Federal Open Market Committee (FOMC)	June 12, 2024	2.1%	2.0%	2.0%
Woods & Poole Economics, Inc.	July 2, 2024	2.1%	2.0%	2.0%
Office of Management and Budget (OMB)	March 8, 2024	1.7%	1.8%	2.0%
National Association of Realtors	June 25, 2024	1.4%	1.9%	#N/A
Average		2.3%	1.9%	2.0%

Figure 3-7 shows real GDP historical growth from 2010-2023 and forecasted growth for about the next decade by the CBO, FOMC, OMB, and WP24. In 2024/5, the sources forecast a range between 1.7% and 2.6% growth. After that, all sources forecast an expected convergence around 2.0% into the future, close to long-term historical averages.

Figure 3-7
Forecast Mid-Term Real GDP Growth



3.3.6 Inflation

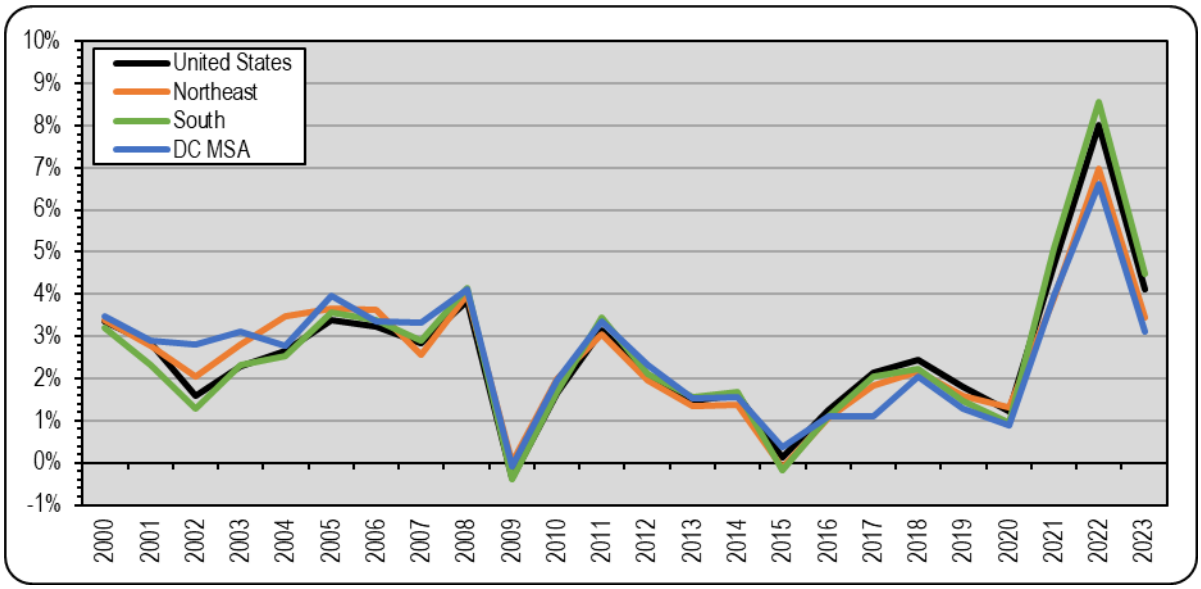
Comparing inflation rates with future toll policy plans can indicate the relative real cost of tolls over time. For example, if toll rates are unchanged during an inflation period, the real toll costs become relatively less expensive.

Historical

From 2000-2023, the national inflation rate[4] via the BLS averaged 2.6%, ranging from a high of 8.0% recently in 2022 to a low of -0.4% in 2009. **Figure 3-8** shows that inflation rates in the Northeast,[5] South,[6] and Washington DC MSA[7] closely tracked the U.S. rate. Although inflation was quite high since 2021 as a function of COVID-19 related factors (pent up demand, supply chain restrictions, etc.), the FED FOMC has implemented monetary tightening policies aimed at curtaining further inflation, and has had some success in 2023 and into 2024, with mid-year year-over-year inflation coming down to the low-3.0% range.

[4] Measured by the Consumer Price Index for urban consumers (CPI-U).
[5] Northeast census defined as CT, ME, MA, NH, NJ, NY, PA, RI, and VT.
[6] South census defined as AR, AL, DE, DC, FL, GA, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, and WV.
[7] Washington-Arlington-Alexandria, DC-MD-VA-WV Metropolitan Statistical Area.

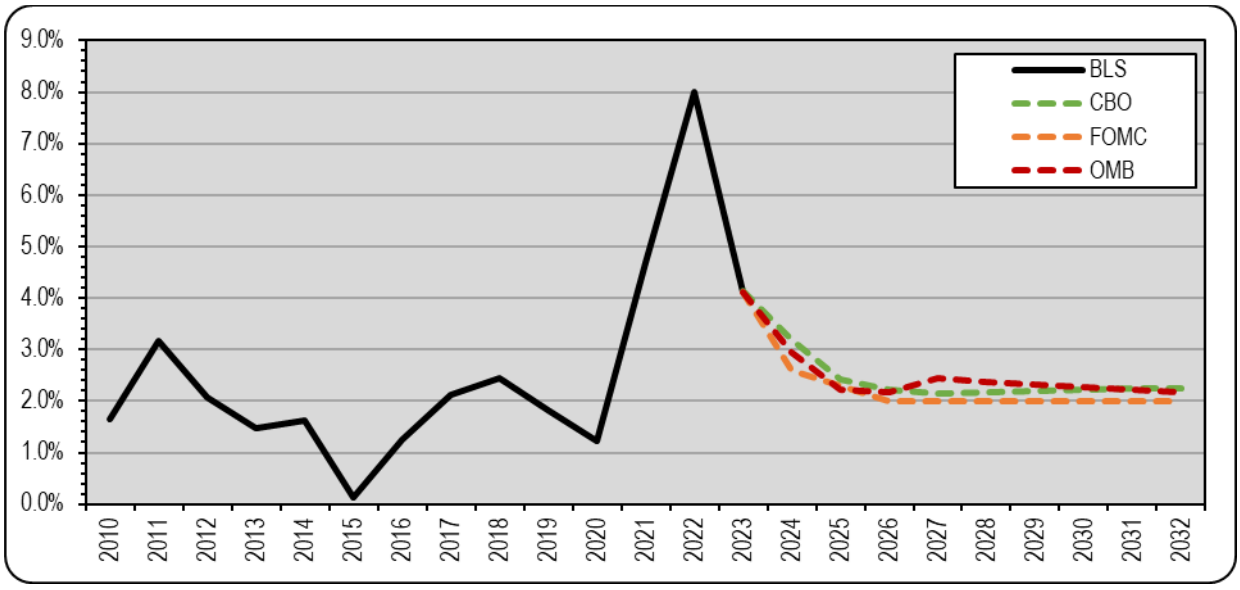
Figure 3-8
Historical Inflation (CPI-U)



Forecast

Figure 3-9 shows the national inflation forecasts by the CBO, FOMC, and OMB. In 2024, the sources expect U.S. inflation to reduce further to around 2.9%, on average, and continuously decrease to around 2.3% by 2025. FOMC measures inflation via the Personal Consumption Expenditure (PCE) index, which closely parallels the CPI-U measure. Inflation is thereafter expected to remain at, or close to, the official 2.0% FOMC PCE target rate (that is, monetary policy will work as expected).

Figure 3-9
Forecast Inflation (CPI-U)



3.3.7 Fuel Prices

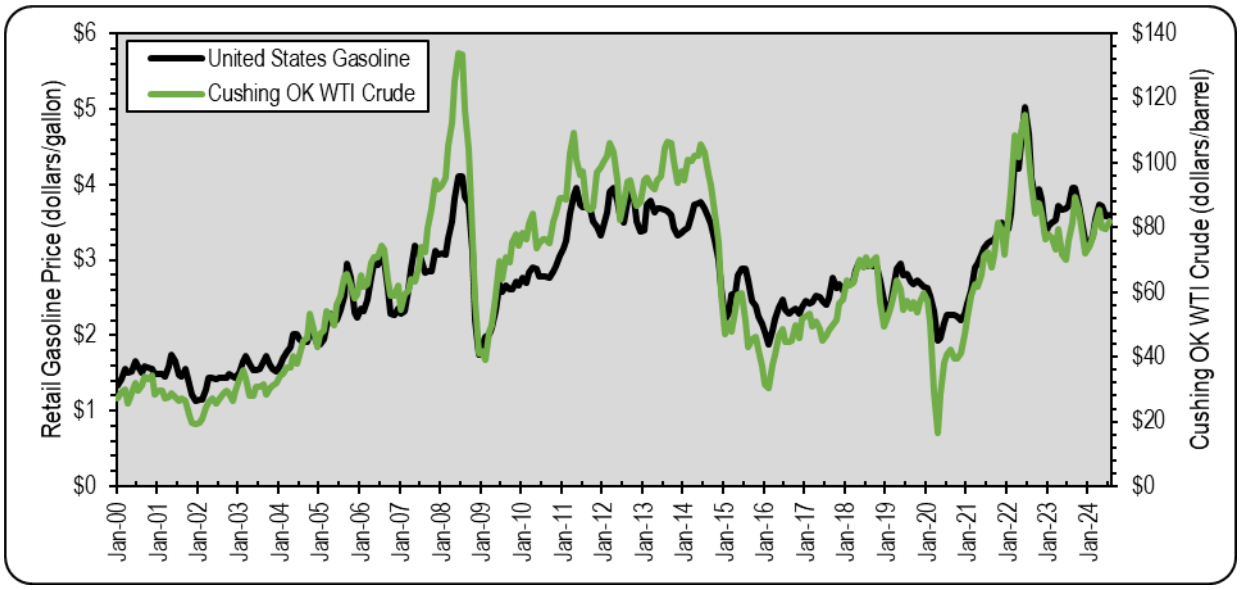
Fuel prices are another important variable related to traffic forecasting. Fuel price increases beyond inflation leads to increasing vehicle operating cost and generally less travel, including less travel on toll facilities. In the reverse, declining fuel prices results in generally more travel. Such divergences and behavioral responses are typically short-lived (within a year).

Historical

Figure 3-10 illustrates the monthly crude oil[8] and retail gasoline prices[9] from 2000 to mid-2024. The price data in Figure 3-10 are shown in nominal dollars (i.e., current dollars)[10] and are measured by price per barrel (crude oil) and price per gallon (gasoline).

U.S. gasoline prices ranged from a low of $1.13 per gallon in December 2001 to a high of $5.03 per gallon in June 2022. Monthly gasoline since declined to around $3.60. Retail gasoline prices in the Central Atlantic[11] and Lower Atlantic[12] generally tracked national prices, with the Central Atlantic typically 1.9% higher and the Lower Atlantic 3.4% lower.

Figure 3-10
Historical Fuel Prices (Current $)



Gasoline retail prices generally mirrors crude oil prices since crude oil historically accounted for approximately 50% of gasoline's production costs. **Figure 3-10** shows that crude oil ranged from $16.55 in April 2020 to $133.88 in June 2008, a with some pronounced volatility in certain months attributable to various reasons (recessions, OPEC, hurricanes, supply/storage shortages, etc.).

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[8] Cushing OK WTI (West Texas Intermediate) spot price per barrel, free on-board delivery.
[9] Retail price per gallon of unleaded gasoline, all grades, all formulations.
[10] 2000 data are presented in 2000 dollars, 2001 data in 2001 dollars, etc.
[11] Central Atlantic includes DE, DC, MD, NJ, NY and PA.
[12] Lower Atlantic includes FL, GA, NC, SC, VA and WV.

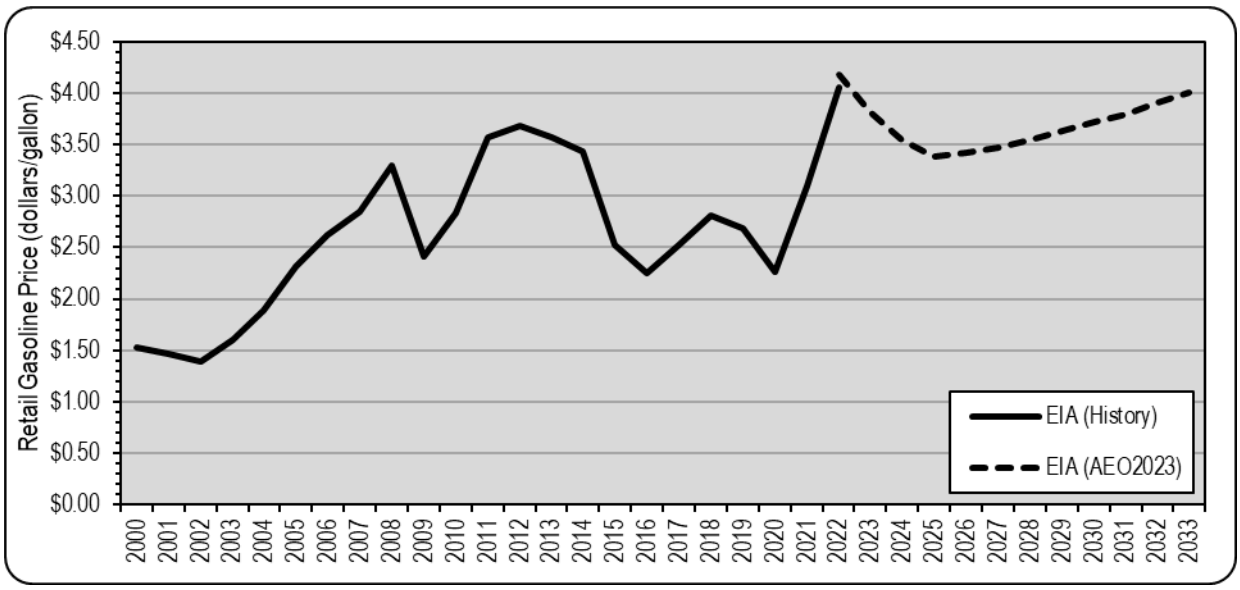
months attributable to various reasons (recessions, OPEC, hurricanes, supply/storage shortages, etc.).

Crude oil averaged approximately $65.00 per barrel in 2018, $57.00 in 2019, dropping to $41.00 in 2020, mostly due to the precipitous drop in late-Spring/early-Summer with the onset of COVID-19. In 2021, prices increased to $68.00 per barrel and in 2022 to $95.00 then down to $78.00 in 2023; as of June 2024, prices are $82.00

Forecast

Figure 3-11 provides national gasoline price forecasts in current dollars. Retail gasoline prices, averaging $4.06 in 2022 increased notably since 2016; however, the EIA expects prices to steadily reduce through 2025 to $3.38 and thereafter increase about a dime annually.

Figure 3-11
Forecast Fuel Price (Current $)



Chapter 4
Forecasts by Facility

This chapter summarizes the development of the forecasts of future year transactions and toll revenue for the MDTA system. Separate sections and discussions are provided for the overall assumptions, the Legacy facilities, ICC, I-95 ETLs, and other revenue. The 10-year annual forecast results by facility through FY 2034 are included in this chapter. Monthly forecasts for FY 2025 and FY 2026 are also included.

4.1 Assumptions

Transaction and revenue forecasts were predicated upon the following basic assumptions, which are considered reasonable by CDM Smith for purposes of the forecast:

1. The MDTA toll facilities and approach roads will continue to be well-maintained and effectively signed;
2. No competing highway projects other than those identified in this report will be constructed or significantly improved during the forecast period;
3. MDTA will continue to operate within its business rules and practices;
4. For the purposes of this forecast, it is assumed that no toll rate or toll schedule adjustments will be made during the forecasting period other than those presented in **Chapter 1**;
5. Annual revenue estimates are expressed in future year dollars (nominal);
6. No major recession, natural disasters, future pandemics, or other significant exogenous events will occur that would significantly reduce travel in the region;
7. Socioeconomic growth, including related to population and employment, will occur as presented in this study; and
8. Motor fuel will remain in adequate supply, and future price increases will not significantly exceed the long-term rate of inflation.

Any significant departure from these basic assumptions could materially affect forecasted transactions and toll revenue.

Detailed Assumptions

In addition to the basic assumptions listed above, several other more specific assumptions were made as provided in **Table 4-1**.

Table 4-1
Detailed Forecast Assumptions

Assumption Category	Assumption Detail
Growth	The growth forecast produced by the econometric update (WT#12) and used in the last two annual forecasts was used for this study. Based on recent in-lane trends, minor adjustments were made to the near-term growth in FY 2025 and FY 2026.
Construction	Traffic impacts on FSK from the deck replacement and Curtis/Bear Creek projects were removed due to planned completion prior to the bridge reopening. Duration of significant impacts from I-895 AET conversion extended to 18 months, schedule shifted to occur after completion of new FSK bridge.
FSK Replacement	The new FSK bridge will be open to traffic in the fall of 2028, assuming November 1st.
Backlog Transactions	Assuming no further backlog transactions will be processed and all transactions more than a year old can no longer be invoiced.
NOTD Collection Rates	Collection rates were reduced in the forecast based on recent trends in FY24 after Customer Assistance Plan termination and the resumption of enforcement measures. NOTD collection rates fell below what was forecasted last year and the latest trends fed the assumption for this year's forecast. Collection rates at the NOTD level were reduced by 10 percentage points (compared to our assumption in last year's forecast), and the rate of increase in collection rates over the next three years was tampered. This assumption was based on the recent MDTA collection rates and the comparison to similar sized facilities that also converted to AET. A slight increase in civil penalty collections in the forecast was assumed since a smaller payment rate at the NOTD level would push more customers to pay at the subsequent levels.
Toll Changes	No future systemwide toll rate changes are assumed. A correction to the I-95 ETL northbound existing tolled distance is assumed to occur in January 2025 when the first phase of the northbound extension is assumed to open.
Forecasting Approach	All transactions and toll revenue as well as civil penalty revenue are forecasted in the month of collection (cash accounting).

Assumptions related to the construction projects listed in **Table 4-1** are discussed in more detail later in this chapter.

4.2 Legacy System

This section provides an overview of the development of the traffic and toll revenue forecasts for the Legacy system. The inputs to the forecast included toll rates by payment method, traffic growth forecasts, E-ZPass® participation percentages, and the impacts associated with planned roadway improvements on the Legacy facilities.

4.2.1 Forecast Methodology

Econometric models were developed for the Legacy system traffic growth forecasts as detailed in in the report *Maryland Transportation Authority FY 2023 Traffic and Toll Revenue Forecast Update*. The econometric models sought to establish correlative relationships between various socioeconomic independent variables (such as population, employment, GRP, etc.) and the dependent variable, transactions. The traffic growth used in this current study is based on the growth from the econometric analysis with adjustments as necessary to account for the most recent traffic and economic trends related to inflation and gas prices, long-term pandemic-related commuting trend changes, as well as construction impacts summarized in the subsequent section. Passenger car and commercial vehicle transactions were forecasted independently by facility using these growth rates and by benchmarking to actual FY 2024 trends.

Assumptions including those related to the Key Bridge collapse, construction impacts, and NOTD payment rates were then applied to the estimated normal growth rates. The end-product of the

model was a baseline 10-year forecast of transactions and revenue by facility, by vehicle class (passenger cars and commercial vehicles), and by method of payment.

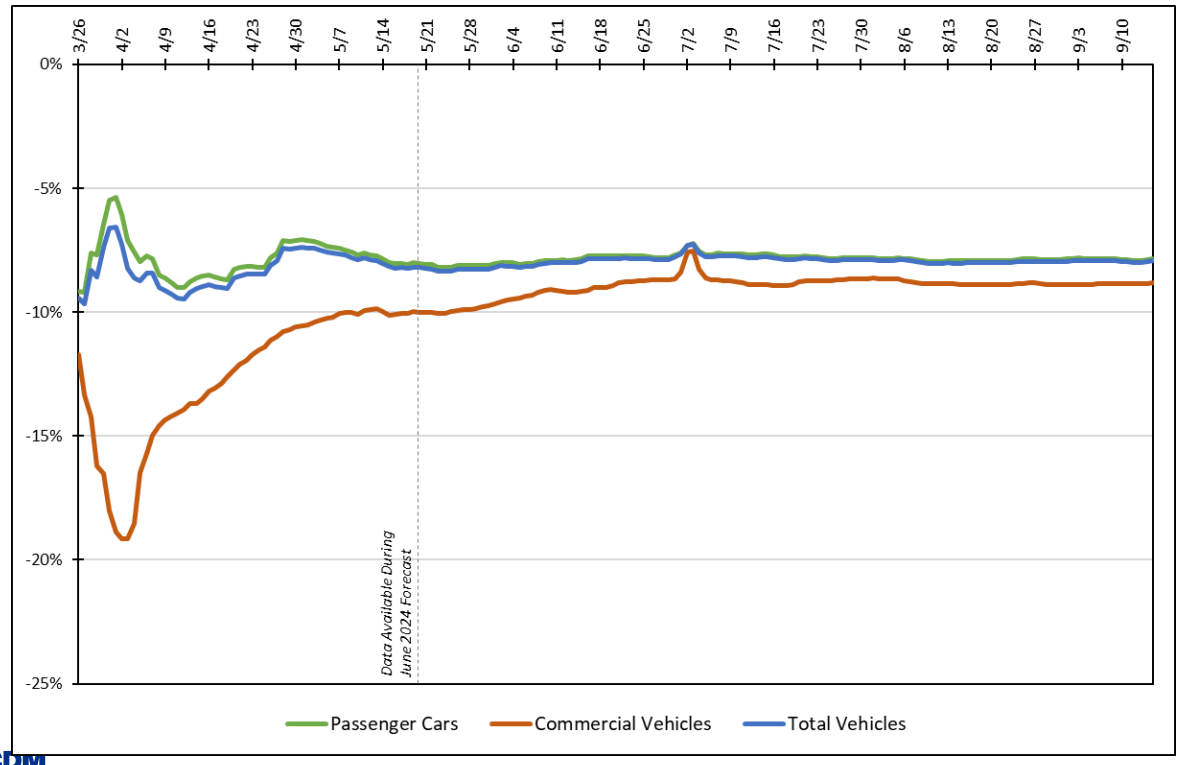
4.2.2 Francis Scott Key Bridge Collapse

This section summarizes the estimated diversion impacts directly after the collapse of the Francis Scott Key Bridge on March 26, 2024, and how the impacts were considered in this Legacy System annual forecast update.

To quantify the impacts of trip diversion after the collapse, CDM Smith requested the latest daily gantry transaction data from MDTA which captured the amount of traffic that shifted to the I-895 Baltimore Harbor Tunnel (BHT) and the I-95 Fort McHenry Tunnel (FMT), which are the two alternatives that cross the Patapsco River directly. The recapture rate at these two facilities was 44 percent based on data through September 15th. While many vehicles were able to divert to the tunnels on I-95 and I-895, certain commercial vehicles are banned from using these facilities due to their size and hazardous waste restrictions. Furthermore, as congestion increases on the tunnels due to the traffic shift, some additional MDTA customers may choose to divert or forego their trip altogether. Because of this, a small share of traffic could shift to non-MDTA facilities such as the I-695 outer loop around Baltimore or local roads through the downtown area.

To understand how many trips were lost to suppression or non-MDTA facilities, the daily data was reviewed for the total Harbor Crossings, which is the combined Baltimore Harbor Tunnel, Fort McHenry Tunnel, and Francis Scott Key Bridge. **Figure 4-1** shows the cumulative traffic impact since the day of the collapse for the combined Harbor Crossings.

Figure 4-1
Harbor Crossings Cumulative Impact Since FSK Collapse



At the time of the June 2024 forecast, data was available through May 20th, 2024. Currently, for this annual forecast update, the daily data was available through mid-September. The chart shows that since the June 2024 FSK forecast, passenger car impacts have remained essentially flat throughout the summer at around -8 percent, even after the reopening of the Port of Baltimore on June 12th. Commercial vehicles, however, showed a decline in impacts from around -10 percent in May 2024 to around -9 percent in September 2024. This improvement coincided with the opening of the various channels in the port until the full opening was announced. Since July when operations were back fully, commercial vehicle impacts have remained consistent. This information formulated the assumed impacts for traffic diversion in the forecast.

4.2.3 Construction Impacts

The major construction projects expected to impact traffic and revenue on the MDTA Legacy system are described below. In reviewing these projects and estimating the traffic impacts, it was estimated that during the construction periods, some traffic would divert to the next best alternative tolled or toll-free crossing if possible, while a small portion of more discretionary trips would be suppressed.

1. **Eastbound Span of William Preston Lane, Jr Memorial Bridge (US-50)** – This project will rehabilitate the deck of the eastbound span of the William Preston Lane (Bay) Bridge. Construction began in January 2023 and initial construction and material procurement will continue through the end of 2023. Major construction will be performed primarily during off-peak night-time closures which will begin in Winter 2023/2024. Preliminary completion is estimated for Fall 2026.

2. **Baltimore Harbor Tunnel (I-895) AET Conversion -** This project supports the recent conversion of the facility to cashless tolling by permanently removing the existing toll plaza and installing a gantry system. The project scope also includes geometric improvements to the adjacent interchange ramps at Childs Street, Frankfurst Avenue, and Shell Road to comply with AASHTO standards, as well as removal and replacement of the Shell Road ramp, Frankfurst Avenue, and access road bridge structures along I-895. Consideration is being given to performing work excluding I-895 first to avoid impacting the increased traffic due to the FSK Bridge collapse. After the FSK Bridge Replacement project is open to service, the remaining construction impacts are anticipated to include concurrent single lane closures in both directions of I-895 for a duration of 18 months.

3. **I-95 ETL Northbound Extension –** This project will involve the widening and reconstruction of I-95 northbound from MD 43 to north of MD 24 to accommodate two new ETL lanes in the northbound direction. The lane configuration from MD 43 to MD 24 will be four general purpose lanes and two ETLs. From MD 24 northbound the configuration will be three general purpose lanes and two ETLs. The ETLs will transition to a single lane ETL and then run concurrent to the three GP lanes until the four lanes transition back to three lanes in advance of the MD 136/Calvary Road Overpass approximately two miles north of MD 24. The completion of construction through the MD 152 Interchange is scheduled for the fall of 2024. The completion of construction through the MD 24 Interchange is scheduled for winter of 2027/2028. Coinciding with the completion of the northbound extension, direct connectors from I-695 eastbound and westbound to I-95 northbound will open as well. Upon completion of the program, there will be three northbound

tolling zones on the I-95 ETLs between the I-95/895 split and MD 24: from the I-95/895 split to MD 43, MD 43 to MD 152, and MD 152 to MD 24.

Additional construction projects on the MDTA facilities and competing non-MDTA highways and arterials were also reviewed, but it was determined that the construction activity associated with these projects will result in negligible impacts on MDTA traffic and toll revenue. This includes the subgrade improvements east of Bear Creek and the rehabilitation of decks at the Curtis Creek bascule span approaches on I-695. In prior years, these projects were forecasted to cause diversion from the Key Bridge to the Harbor Tunnel or Fort McHenry Tunnel. Due to the collapse of the Key bridge, these projects have been expedited and will be complete before the reopening of the bridge, therefore causing no impacts to traffic and revenue during the forecast period.

4.2.4 Forecast Results

Table 4-2 presents actual collected transactions and toll revenue for the Legacy system for FY 2024 and forecasted collected transactions and toll revenue for FY 2025 through FY 2034 by passenger cars and commercial vehicles. The forecasts reflect collections after assumed reductions due to unbillable and unpaid trips. **Table 4-3** provides historical and forecasted total transactions and toll revenue for the Legacy system by facility. FY 2025 transactions and revenue are forecasted to decrease slightly over FY 2024 due to reduced collections of backlogged transactions and from a full year of impacts from the Key Bridge collapse. The Key Bridge replacement is assumed to open in the fall of 2028, or FY 2029, which is the reason for the larger increase in transactions and revenue over FY 2028. Following the reopening, the Harbor Tunnel AET conversion will begin, as detailed previously in **Section 4.2.2**, allowing the new Key Bridge to absorb some of the potential diversion from the construction. After FY 2031, transactions and revenue are not assumed to be impacted by such large construction projects and reflect expected normal growth through the end of the forecast period in FY 2034.

Table 4-2
Total Legacy System Forecasted Transactions and Toll Revenue Collected by Class

Fiscal Year	Transactions (Millions) [1]			Toll Revenue ($ Millions) [1]		
	PC	CV	Total	PC	CV	Total
2024 [2]	105.2	9.9	**115.1**	386.6	242.1	**628.7**
2025	102.0	9.4	**111.4**	372.4	233.4	**605.7**
2026	102.7	9.5	**112.2**	377.2	235.3	**612.5**
2027	103.6	9.5	**113.1**	381.6	236.5	**618.1**
2028	104.8	9.6	**114.4**	386.8	238.4	**625.1**
2029	108.9	10.0	**118.9**	398.2	246.2	**644.4**
2030	111.1	10.2	**121.4**	405.2	251.0	**656.2**
2031	112.9	10.3	**123.2**	411.1	252.5	**663.6**
2032	113.9	10.4	**124.3**	415.0	254.2	**669.2**
2033	114.4	10.4	**124.8**	416.8	254.5	**671.4**
2034	115.2	10.4	**125.7**	419.6	255.6	**675.2**

[1] Includes impacts due to leakage, including unpaid transactions.

[2] Represents actual data.

Table 4-3
Legacy System Historical and Forecasted Transactions and Toll Revenue Collected by Facility

Fiscal Year [1]	Transactions (Millions) [4]								Percent Growth
	JFK	Hatem	BHT	FMT	FSK	Bay	Nice	Total [2]	
2019	15.2	5.1	20.8	48.2	12.8	13.6	3.3	**119.1**	(2.0)
2020 [3]	12.5	4.4	14.2	42.3	11.9	11.5	2.8	**99.6**	(16.4)
2021	8.9	3.1	12.0	29.2	8.5	8.6	1.7	**72.0**	(27.7)
2022	15.6	4.5	25.9	43.1	12.0	14.5	3.3	**118.9**	65.1
2023	15.2	4.5	28.0	42.4	12.5	13.9	3.2	**119.5**	0.6
2024 [3]	14.6	4.6	27.6	42.7	8.9	13.4	3.2	**115.1**	(3.7)
2025	14.4	4.6	28.8	47.0	0.2	13.3	3.1	**111.4**	(3.2)
2026	14.5	4.6	28.9	47.7	0.0	13.4	3.1	**112.2**	0.7
2027	14.6	4.6	29.2	48.1	0.0	13.4	3.2	**113.1**	0.9
2028 [3]	14.7	4.6	29.6	48.7	0.0	13.5	3.2	**114.4**	1.1
2029	14.8	4.6	23.8	49.8	9.1	13.5	3.2	**118.9**	3.9
2030	14.9	4.6	18.3	52.3	14.4	13.6	3.3	**121.4**	2.1
2031	14.9	4.6	28.2	46.4	12.1	13.6	3.3	**123.2**	1.5
2032 [3]	15.0	4.7	28.7	46.8	12.2	13.7	3.3	**124.3**	0.9
2033	15.1	4.7	28.9	47.0	12.2	13.7	3.3	**124.8**	0.4
2034	15.2	4.7	29.2	47.3	12.3	13.7	3.4	**125.7**	0.7
Fiscal Year [1]	Toll Revenue ($ Millions) [4]								Percent Growth
	JFK	Hatem	BHT	FMT	FSK	Bay	Nice	Total [2]	
2019	176.0	12.2	70.3	217.4	50.5	53.7	21.0	**601.1**	(0.7)
2020 [3]	154.1	11.4	47.5	194.3	47.5	46.0	17.3	**518.2**	(13.8)
2021	117.5	9.2	40.1	142.2	36.0	33.3	10.9	**389.3**	(24.9)
2022	197.0	18.3	95.7	225.6	55.9	61.6	24.1	**678.1**	74.2
2023	191.9	15.1	102.2	215.5	56.8	56.4	22.1	**660.0**	(2.7)
2024 [3]	181.3	15.3	99.0	212.7	43.4	55.2	21.7	**628.7**	(4.7)
2025	178.1	14.9	103.6	233.5	1.0	53.9	20.9	**605.7**	(3.7)
2026	179.4	15.0	105.0	238.1	0.0	54.1	21.0	**612.5**	1.1
2027	180.7	15.1	106.4	240.3	0.0	54.5	21.3	**618.1**	0.9
2028 [3]	182.4	15.2	108.1	243.0	0.0	55.0	21.5	**625.1**	1.1
2029	182.9	15.2	87.0	240.0	42.6	55.0	21.6	**644.4**	3.1
2030	183.9	15.2	66.3	245.9	67.9	55.2	21.8	**656.2**	1.8
2031	184.9	15.2	101.6	225.0	59.6	55.4	22.0	**663.6**	1.1
2032 [3]	186.2	15.3	103.9	226.2	59.8	55.6	22.2	**669.2**	0.8
2033	186.7	15.3	104.6	226.9	59.9	55.7	22.3	**671.4**	0.3
2034	187.7	15.4	105.6	228.1	60.2	55.8	22.4	**675.2**	0.6

[1] Actual data presented for FY 2019 through FY 2024.

[2] Summations may not equal total due to rounding.

[3] Leap Year

[4] Includes impacts due to leakage, including unpaid transactions.

For purposes of budgeting and the tracking of actual versus forecasted transactions and revenue, monthly forecasts of transaction and toll revenue were developed for FY 2025 and FY 2026. **Table 4-4** provides the forecasted monthly transactions and **Table 4-5** provides the forecasted monthly toll revenue for the total Legacy system. Actual 2024 data is shown for July through August for both transactions and revenue. All other monthly data presented in these tables is forecasted.

Additionally, to support ongoing efforts related to the Key Bridge collapse and the impacts on MDTA revenue, **Table 4-6** provides the estimated lost revenue throughout the 10-year forecast period due to the bridge collapse. In order to estimate this value, a hypothetical forecast was created assuming the Key Bridge collapse did not occur. This forecast was then compared to the forecast presented in Table 4-2 and Table 4-3 to estimate the toll revenue lost strictly from the collapse of the bridge. As shown in the table, the lost revenue from ranges from $9.2 million in FY 2024 to $28.5 million in FY 2028. The combined lost revenue for all years is $131.8 million. In addition to the lost toll revenue, an additional $5.8 million is estimated to be lost in the other revenue category, yielding a combined revenue impact of $137.7 million. This value is slightly lower than the lost revenue estimated in the June 2024 forecast because of the revised diversion impacts and refinements to the vehicle class distribution and video collection rates. Video collection rates were updated in this forecast based on the latest data available from MDTA and based on CDM Smith's experience with similar AET facilities this year. The collection rates reflect a reduction in collection at the NOTD stage, but a slightly higher share paying at the citation and vehicle registration hold levels. Lastly, the shifting of the BHT AET conversion construction project to after the reopening of the Key Bridge was another factor in the change to the lost revenue. Shifting this project to post reopening will allow traffic to divert to the new bridge and therefore have less overall diversion at the Harbor Crossings.

Table 4-4
Monthly Collected Transactions by Method of Payment
FY 2025 and FY 2026

Month	Passenger Cars (2-Axle)							Commercial Vehicles (3+ Axle)			Total [1]
	Commuters & Shoppers	MD E-ZPass	Full Fare E-ZPass	Video	Official Duty	Hatem Plan A & B	Total 2-Axle	E-ZPass	Video	Total 3+ Axle	
FY 2025											
July	1.582	3.417	2.609	0.795	0.081	0.273	**8.755**	0.745	0.029	**0.774**	**9.530**
August	1.685	3.624	2.570	0.784	0.093	0.298	**9.052**	0.775	0.027	**0.802**	**9.854**
September	1.696	3.594	2.430	0.862	0.092	0.291	**8.965**	0.820	0.030	**0.851**	**9.815**
October	1.708	3.295	2.296	0.781	0.091	0.281	**8.452**	0.787	0.032	**0.819**	**9.271**
November	1.637	3.438	2.427	0.732	0.083	0.272	**8.589**	0.729	0.031	**0.761**	**9.350**
December	1.593	3.386	2.315	0.718	0.080	0.267	**8.358**	0.701	0.028	**0.729**	**9.087**
January	1.570	2.863	2.029	0.639	0.086	0.271	**7.458**	0.714	0.025	**0.739**	**8.197**
February	1.589	2.949	1.809	0.607	0.088	0.258	**7.299**	0.692	0.021	**0.714**	**8.013**
March	1.716	3.162	2.169	0.743	0.095	0.270	**8.155**	0.743	0.028	**0.771**	**8.926**
April	1.688	3.389	2.690	0.636	0.093	0.286	**8.782**	0.781	0.026	**0.806**	**9.588**
May	1.728	3.893	2.713	0.598	0.095	0.299	**9.326**	0.833	0.023	**0.856**	**10.182**
June	1.527	3.506	2.513	0.832	0.094	0.297	**8.769**	0.769	0.033	**0.802**	**9.571**
FY TOTAL	**19.719**	**40.515**	**28.569**	**8.726**	**1.069**	**3.362**	**101.961**	**9.091**	**0.333**	**9.424**	**111.386**
FY 2026											
July	1.414	3.393	2.660	0.917	0.087	0.298	**8.769**	0.755	0.038	**0.792**	**9.561**
August	1.523	3.430	2.598	0.814	0.081	0.294	**8.739**	0.790	0.030	**0.820**	**9.559**
September	1.692	3.678	2.446	0.864	0.093	0.289	**9.061**	0.824	0.031	**0.855**	**9.916**
October	1.706	3.373	2.310	0.795	0.092	0.279	**8.555**	0.790	0.033	**0.823**	**9.379**
November	1.634	3.518	2.443	0.741	0.084	0.270	**8.690**	0.733	0.032	**0.764**	**9.454**
December	1.590	3.465	2.329	0.726	0.081	0.265	**8.455**	0.704	0.028	**0.732**	**9.188**
January	1.569	2.931	2.041	0.652	0.087	0.269	**7.550**	0.717	0.026	**0.743**	**8.293**
February	1.588	3.019	1.819	0.617	0.089	0.256	**7.387**	0.695	0.022	**0.717**	**8.105**
March	1.715	3.237	2.182	0.746	0.096	0.268	**8.244**	0.746	0.029	**0.775**	**9.019**
April	1.685	3.469	2.708	0.648	0.094	0.284	**8.889**	0.784	0.026	**0.810**	**9.700**
May	1.723	3.984	2.731	0.605	0.096	0.297	**9.436**	0.837	0.024	**0.860**	**10.296**
June	1.523	3.586	2.529	0.855	0.095	0.295	**8.884**	0.773	0.034	**0.806**	**9.690**
FY TOTAL	**19.362**	**41.083**	**28.797**	**8.982**	**1.074**	**3.363**	**102.661**	**9.147**	**0.352**	**9.498**	**112.159**

[1] Includes impacts due to leakage, including unpaid transactions. Summations may not equal total due to rounding.

Table 4-5
Monthly Collected Toll Revenue by Method of Payment
FY 2025 and FY 2026

Month	Passenger Cars (2-Axle)							Commercial Vehicles (3+ Axle)			
	Commuters & Shoppers	MD E-ZPass	Full Fare E-ZPass	Video	Official Duty	Hatem Plan A & B	Total 2-Axle	E-ZPass	Video	Total 3+ Axle	Total [1]
FY 2025											
July	$2.325	$11.349	$13.441	$5.176	-	-	**$32.290**	$18.072	$0.834	**$18.906**	**$51.196**
August	2.469	12.744	13.152	5.071	-	-	**33.437**	18.844	0.754	**19.598**	**53.034**
September	2.491	12.508	12.454	5.526	-	-	**32.979**	20.092	0.828	**20.920**	**53.899**
October	2.509	11.618	11.740	5.054	-	-	**30.921**	19.229	0.886	**20.115**	**51.036**
November	2.406	12.057	12.520	4.732	-	-	**31.716**	17.896	0.880	**18.776**	**50.491**
December	2.343	11.839	11.893	4.645	-	-	**30.720**	17.527	0.796	**18.323**	**49.043**
January	2.298	9.905	10.323	4.177	-	-	**26.702**	17.860	0.727	**18.587**	**45.290**
February	2.326	10.211	9.185	3.908	-	-	**25.630**	17.151	0.615	**17.767**	**43.397**
March	2.517	11.029	11.073	4.705	-	-	**29.324**	18.608	0.796	**19.404**	**48.729**
April	2.474	11.753	13.508	4.109	-	-	**31.844**	19.160	0.742	**19.901**	**51.746**
May	2.538	13.821	13.731	3.842	-	-	**33.932**	20.476	0.660	**21.135**	**55.067**
June	2.256	12.541	12.839	5.228	-	-	**32.865**	19.028	0.892	**19.921**	**52.785**
FY TOTAL	**$28.952**	**$141.377**	**$145.859**	**$56.173**	**-**	**-**	$372.361	**$223.944**	**$9.410**	$233.353	$605.714
FY 2026											
July	$2.093	$11.984	$13.770	$5.841	-	-	**$33.689**	$18.543	$1.031	**$19.573**	**$53.262**
August	2.243	12.100	13.208	5.227	-	-	**32.777**	19.149	0.825	**19.974**	**52.751**
September	2.485	12.819	12.514	5.549	-	-	**33.367**	20.165	0.841	**21.006**	**54.373**
October	2.506	11.910	11.796	5.144	-	-	**31.356**	19.300	0.914	**20.214**	**51.570**
November	2.401	12.357	12.580	4.786	-	-	**32.125**	17.962	0.898	**18.860**	**50.985**
December	2.338	12.133	11.949	4.700	-	-	**31.119**	17.592	0.805	**18.397**	**49.517**
January	2.296	10.158	10.372	4.259	-	-	**27.085**	17.926	0.743	**18.670**	**45.755**
February	2.324	10.470	9.225	3.970	-	-	**25.989**	17.215	0.630	**17.845**	**43.834**
March	2.515	11.309	11.124	4.729	-	-	**29.678**	18.677	0.811	**19.488**	**49.166**
April	2.470	12.052	13.582	4.189	-	-	**32.293**	19.231	0.761	**19.992**	**52.285**
May	2.530	14.161	13.801	3.886	-	-	**34.379**	20.551	0.673	**21.224**	**55.602**
June	2.249	12.845	12.906	5.362	-	-	**33.362**	19.098	0.915	**20.013**	**53.374**
FY TOTAL	**$28.449**	**$144.297**	**$146.827**	**$57.644**	**-**	**-**	$377.218	**$225.408**	**$9.848**	$235.256	$612.474

[1] Includes impacts due to leakage, including unpaid transactions. Summations may not equal total due to rounding.

Table 4-6
Estimate of Lost Transactions and Revenue from Key Bridge Collapse

Fiscal Year	Transactions - Impact of FSK Collapse							
	Difference				Percent Difference			
	BHT	FMT	FSK	Total Harbor Crossing	BHT	FMT	FSK	Total Harbor Crossing
2024	0.4	0.8	(3.1)	**(1.9)**	1.6%	1.8%	-25.8%	**-2.3%**
2025	2.1	3.4	(11.5)	**(6.1)**	7.7%	7.8%	-98.6%	**-7.4%**
2026	2.0	3.2	(11.7)	**(6.5)**	7.4%	7.1%	-100.0%	**-7.8%**
2027	2.0	3.2	(11.8)	**(6.5)**	7.4%	7.1%	-100.0%	**-7.8%**
2028	2.0	3.2	(11.9)	**(6.6)**	7.4%	7.1%	-100.0%	**-7.8%**
2029	0.7	1.1	(3.9)	**(2.2)**	2.9%	2.2%	-30.2%	**-2.6%**
2030	0.0	0.0	(0.0)	**(0.0)**	0.0%	0.0%	-0.1%	**0.0%**
2031	-	-	-	**-**	0.0%	0.0%	0.0%	**0.0%**
2032	-	-	-	**-**	0.0%	0.0%	0.0%	**0.0%**
2033	-	-	-	**-**	0.0%	0.0%	0.0%	**0.0%**
Total	**9.2**	**14.9**	**(53.9)**	**(29.8)**	**3.5%**	**3.2%**	**-43.8%**	**-3.5%**
Fiscal Year	**Toll Revenue - Impact of FSK Collapse**							
	Difference				**Percent Difference**			
	BHT	**FMT**	**FSK**	**Total Harbor Crossing**	**BHT**	**FMT**	**FSK**	**Total Harbor Crossing**
2024	$1.1	$4.5	($14.9)	**($9.2)**	1.1%	2.2%	-25.5%	**-2.5%**
2025	$7.0	$21.0	($56.2)	**($28.2)**	7.3%	9.9%	-98.3%	**-7.7%**
2026	$7.9	$21.8	($57.6)	**($27.9)**	8.2%	10.1%	-100.0%	**-7.5%**
2027	$8.0	$21.9	($58.1)	**($28.2)**	8.1%	10.0%	-100.0%	**-7.5%**
2028	$8.1	$22.1	($58.7)	**($28.5)**	8.1%	10.0%	-100.0%	**-7.5%**
2029	$2.8	$7.6	($20.4)	**($9.9)**	3.3%	3.3%	-32.3%	**-2.6%**
2030	$0.0	$0.0	($0.1)	**($0.0)**	0.0%	0.0%	-0.1%	**0.0%**
2031	-	-	-	**-**	0.0%	0.0%	0.0%	**0.0%**
2032	-	-	-	**-**	0.0%	0.0%	0.0%	**0.0%**
2033	-	-	-	**-**	0.0%	0.0%	0.0%	**0.0%**
Total	**$35.0**	**$99.0**	**($265.8)**	**($131.8)**	**3.7%**	**4.4%**	**-44.3%**	**-3.5%**

(1) Actual data presented for FY 2024.

4.3 Intercounty Connector

4.3.1 Forecast Methodology and Assumptions

Base ICC annual collected trip and toll revenue forecasts were made using a review and analysis of the most recent historical trends (pre-pandemic) and the latest fiscal year, and adjusting base growth rates estimated in the most recent previous ICC forecast update, as necessary. Estimated trips and revenue reflects collected toll revenue by MDTA after assumed reductions due to leakage of unbillable and unpaid trips. The forecasts reflect the assumptions listed in **Section 4.1**, including those listed in **Table 4-1** related to MDTA business rules.

Related to other projects that may potentially impact the ICC, previous sketch-level modeling of the impacts of the Maryland I-495 and I-270 Managed Lanes Traffic Relief Plan (TRP) on the ICC showed the potential for impacts on ICC traffic. On May 12, 2021 the recommended preferred alternative (RPA) for the TRP program was announced to be **American Legion Bridge I-270 to I-370 (Phase 1 South).** This RPA focuses solely on building a new American Legion Bridge and delivering two high occupancy toll (HOT) managed lanes in each direction on Phase 1 South. No action was taken on the remainder of I-495 east of the I-270 eastern spur. Based on sketch-level modeling, Phase 1 South is not anticipated to have any negative impacts on the ICC forecast projections and could instead have a positive impact. In the future should other phases of the TRP program advance, the potential impacts would need to be monitored. Sketch-level modeling has shown that the ICC appeared to be negatively impacted by priced managed lanes on the I-495 north beltway between I-270 and I-95, as this section of I-495 is parallel to and serves as an alternative route to the ICC for some trips.

4.3.2 Forecast Results

Table 4-7 provides the Intercounty Connector actual collected trips and revenue for FY 2024 and the forecasted collected trips and revenue for FY 2025 through FY 2034, by ETC and video. ETC transactions and revenue are both forecasted to increase in FY 2025, whereas video transactions are forecasted to decrease as backlog transactions dissipate over FY 2024. Latest daily in-lane traffic trends show the recovery from the pandemic for commuters has leveled off in the most recent fiscal year, so no additional recovery beyond normal growth was assumed in the forecast.

For purposes of budgeting and the tracking of actual versus forecasted transactions and revenue, monthly forecasts of transaction and toll revenue were developed for FY 2025 and FY 2026. **Table 4-8** presents the Intercounty Connector monthly forecasted trips and collected toll revenue for FY 2025 and FY 2026. Actual FY 2025 data is shown for July through August for transactions and revenue. All other monthly data presented in this table is forecasted.

Table 4-7
Intercounty Connector Forecasted Collected Annual Trips and Collected Toll Revenue

Fiscal Year	Trips (Millions) [1]			Toll Revenue ($ Millions) [1]		
	E-ZPass	Video	Total	E-ZPass	Video	Total
2024 [2]	30.7	3.3	**34.0**	59.6	9.5	**69.0**
2025	32.5	2.8	**35.3**	62.8	8.1	**70.8**
2026	33.2	2.9	**36.1**	63.8	8.4	**72.1**
2027	33.9	3.0	**36.9**	65.1	8.6	**73.7**
2028	34.7	3.1	**37.8**	66.6	8.9	**75.5**
2029	35.3	3.2	**38.4**	67.7	9.1	**76.8**
2030	36.0	3.3	**39.2**	69.0	9.3	**78.3**
2031	36.5	3.3	**39.8**	70.1	9.4	**79.5**
2032	37.2	3.4	**40.5**	71.4	9.6	**81.0**
2033	37.6	3.4	**41.1**	72.3	9.7	**82.0**
2034	38.2	3.5	**41.7**	73.4	9.9	**83.3**

[1] Includes impacts due to leakage, including unpaid transactions.

[2] Represents actual data.

Table 4-8
Intercounty Connector Forecasted Collected Monthly Trips and Collected Toll Revenue

Month	Trips (Millions) [1]				Toll Revenue ($ Millions) [1]			
	PC E-ZPass	CV E-ZPass	Video	Total	PC E-ZPass	CV E-ZPass	Video	Total
FY 2025								
July	3.613	0.105	0.265	**3.984**	$6.384	$0.758	$0.752	**$7.894**
August	2.607	0.074	0.255	**2.935**	4.738	0.570	0.725	**6.034**
September	2.887	0.089	0.257	**3.234**	5.114	0.628	0.733	**6.475**
October	2.649	0.080	0.229	**2.958**	4.728	0.562	0.657	**5.947**
November	2.375	0.066	0.254	**2.695**	4.158	0.472	0.728	**5.357**
December	2.440	0.070	0.232	**2.742**	4.318	0.507	0.662	**5.487**
January	2.234	0.061	0.212	**2.506**	3.918	0.435	0.608	**4.961**
February	2.296	0.064	0.201	**2.561**	4.166	0.510	0.574	**5.249**
March	2.690	0.071	0.221	**2.982**	4.783	0.511	0.628	**5.922**
April	2.504	0.074	0.232	**2.809**	4.494	0.529	0.659	**5.682**
May	2.769	0.077	0.218	**3.064**	4.924	0.554	0.616	**6.093**
June	2.529	0.071	0.262	**2.862**	4.486	0.506	0.745	**5.737**
FY TOTAL	**31.593**	**0.900**	**2.839**	**35.332**	**$56.211**	**$6.541**	**$8.086**	**$70.838**
FY 2026								
July	2.650	0.083	0.266	**2.999**	$4.652	$0.587	$0.762	**$6.001**
August	2.599	0.077	0.246	**2.923**	4.595	0.551	0.699	**5.844**
September	3.077	0.091	0.271	**3.439**	5.449	0.643	0.772	**6.864**
October	2.823	0.082	0.242	**3.147**	5.038	0.576	0.695	**6.309**
November	2.531	0.068	0.251	**2.849**	4.431	0.483	0.716	**5.630**
December	2.600	0.072	0.241	**2.913**	4.601	0.519	0.687	**5.808**
January	2.380	0.062	0.221	**2.663**	4.175	0.446	0.632	**5.253**
February	2.446	0.065	0.210	**2.722**	4.439	0.523	0.598	**5.560**
March	2.866	0.072	0.249	**3.188**	5.097	0.524	0.707	**6.328**
April	2.668	0.076	0.233	**2.977**	4.788	0.542	0.662	**5.992**
May	2.951	0.079	0.227	**3.257**	5.247	0.567	0.643	**6.456**
June	2.695	0.073	0.280	**3.047**	4.781	0.518	0.794	**6.093**
FY TOTAL	**32.286**	**0.899**	**2.937**	**36.122**	**$57.293**	**$6.478**	**$8.367**	**$72.138**

[1] Includes impacts due to leakage, including unpaid transactions.

4.4 I-95 ETLs

4.4.1 Forecast Methodology and Assumptions

The I-95 ETL forecasts were made using a spreadsheet modeling methodology. The spreadsheet model was calibrated to actual FY 2024 I-95 ETL traffic and revenue performance and was then used to forecast future traffic and revenue for the existing ETL section and the future ETL extensions. To update the I-95 ETL forecast spreadsheet model for this forecast, a re-benchmarking was performed based on the latest collected transactions and revenue data to refine inputs such as E-ZPass market share and vehicle class distribution. The daily data was used to compare the raw traffic growth to the growth forecast assumed in the model.

Once the spreadsheet model was calibrated, it was used to develop the 10-year forecast. The I-95 ETL forecast used the assumptions described in **Section 4.1**, including the detailed assumptions related to the northbound tolled distance change in FY 2025. This change reduces the toll rate for only the existing northbound segment to assume a distance of 6.5 miles instead of 7.0 miles. Also included for the I-95 ETL forecast was the assumption of the future northbound extension. This project will include widening and construction of the I-95 ETLs northbound from MD 43 to beyond MD 24 to accommodate two ETL lanes and I-695 direct connectors as detailed in the construction impacts discussion within **Section 4.2**. A schematic showing the I-95 ETL extensions is included in **Chapter 1**. The toll rate change discussed above is assumed to occur in conjunction with the opening of the first extension. A baseline growth forecast was applied to estimate future volumes on the corridor. Based on the calibrated settings within the model, the future year models estimated what percent of traffic will choose to use the ETLs based on capacity, estimated future speeds within the corridor, value of time, toll rates, and travel time reliability.

4.4.2 Forecast Results

Table 4-9 provides the forecasted annual trips and toll revenue for the total of the existing section and planned extensions of the I-95 ETLs, including the I-695 direct connectors. Access changes to and from the ETLs are planned with the opening of the extensions

Table 4-9
I-95 ETL Total with Extensions Forecasted Collected Annual Trips and Toll Revenue

	Trips (Millions) [1]			Toll Revenue ($ Millions) [1]		
Fiscal Year	E-ZPass	Video	Total	E-ZPass	Video	Total
2024 [2]	8.8	0.3	**9.1**	13.4	0.7	**14.1**
2025 [3]	9.6	0.3	**9.9**	16.2	0.8	**17.0**
2026	10.7	0.4	**11.0**	20.2	1.1	**21.3**
2027	11.1	0.4	**11.5**	21.2	1.1	**22.3**
2028 [4]	13.4	0.5	**13.9**	27.3	1.4	**28.7**
2029	15.5	0.6	**16.1**	32.8	1.7	**34.5**
2030	16.1	0.6	**16.7**	34.0	1.8	**35.8**
2031	16.7	0.6	**17.3**	35.4	1.8	**37.2**
2032	17.3	0.6	**17.9**	36.7	1.9	**38.6**
2033	17.9	0.7	**18.6**	38.0	1.9	**40.0**
2034	18.5	0.7	**19.2**	39.4	2.0	**41.4**

[1] Includes impacts due to leakage, including unpaid transactions.

[2] Represents actual data.

[3] Phase 1 of northbound extension assumed opening on Jan 1, 2025, toll distance change assumed for northbound existing section.

[4] Phase 2 of northbound extension and I-695 DCs assumed opening on Jan 1, 2028.

For purposes of budgeting and the tracking of actual versus forecasted trips and revenue, monthly forecasts of collected trips and toll revenue were developed for FY 2025 and FY 2026. **Table 4-9** provides the monthly forecasted collected trips and toll revenue for the I-95 ETLs by passenger car and commercial vehicle. Actual FY 2025 data is shown for July through August for transactions and revenue. All other monthly data presented in this table is forecasted.

Table 4-10
I-95 ETL Forecasted Monthly Collected Trips and Toll Revenue

Month	Trips (Millions) [1]			Toll Revenue ($ Millions) [1]		
	E-ZPass	Video	Total	E-ZPass	Video	Total
FY 2025						
July	0.801	0.026	**0.828**	1.173	0.057	**1.230**
August	0.826	0.029	**0.854**	1.217	0.062	**1.279**
September	0.819	0.034	**0.853**	1.414	0.085	**1.499**
October	0.836	0.033	**0.869**	1.440	0.082	**1.523**
November	0.822	0.030	**0.852**	1.406	0.075	**1.481**
December	0.789	0.029	**0.818**	1.360	0.072	**1.432**
January	0.672	0.024	**0.696**	1.185	0.060	**1.245**
February	0.628	0.021	**0.648**	1.101	0.053	**1.154**
March	0.769	0.026	**0.794**	1.349	0.065	**1.413**
April	0.876	0.030	**0.906**	1.487	0.074	**1.561**
May	0.879	0.030	**0.909**	1.513	0.075	**1.588**
June	0.883	0.032	**0.915**	1.514	0.080	**1.595**
FY TOTAL	**9.599**	**0.344**	**9.942**	**$ 16.159**	**$ 0.841**	**$ 16.999**
FY 2026						
July	0.932	0.038	**0.971**	1.748	0.103	**1.851**
August	1.002	0.037	**1.039**	1.882	0.100	**1.982**
September	0.896	0.037	**0.933**	1.706	0.100	**1.806**
October	0.915	0.036	**0.951**	1.737	0.097	**1.835**
November	0.899	0.033	**0.932**	1.695	0.089	**1.784**
December	0.864	0.032	**0.895**	1.641	0.086	**1.726**
January	0.735	0.026	**0.762**	1.432	0.072	**1.504**
February	0.687	0.023	**0.710**	1.331	0.062	**1.393**
March	0.841	0.028	**0.869**	1.630	0.077	**1.706**
April	0.958	0.032	**0.990**	1.790	0.088	**1.878**
May	0.962	0.033	**0.994**	1.825	0.089	**1.914**
June	0.966	0.035	**1.001**	1.826	0.095	**1.921**
FY TOTAL	**10.657**	**0.390**	**11.047**	**$ 20.243**	**$ 1.057**	**$ 21.301**

[1] Includes impacts due to leakage, including unpaid transactions.

4.5 Other Revenue

4.5.1 Forecast Methodology and Assumptions

In addition to collected toll revenue, MDTA also collects "Other Revenue" associated with the operation of its facilities. These have been summarized into the following categories:

1. Unused Commuter and Shoppers Plan Trips
2. Transponder Fees and Sales
    a. Transponder sales
    b. Monthly Service Fees
3. Hatem E-ZPass® program
4. Violation Recovery
5. Commercial Vehicle Fees and Discounts
    a. Post-Usage Discount
    b. Supplemental Rebate Plan
    c. Over-Size Permit Fee

The following sub-sections provide a description of each of the other revenue categories that are considered in this forecast. Note that previously CDM Smith also included another category called concession revenue in the annual forecast update. At the direction of MDTA, in this forecast concession revenue is no longer included in other revenue.

Unused Commuter and Shoppers Plan Trips

MDTA provides customers the option to enroll in commuter plans which provide discounts for frequent trips. As discussed previously in **Chapter 1,** MDTA offers three different Commuter Plans based on the facilities included in the plan as well as a Shoppers Plan. All plans allow customers to purchase a large number of discounted trips that must be used in a specific time period. Any remaining balance after the time periods have expired is included in other revenue as "unused pre-paid trip revenue".

Transponder Fees and Sales

As of May 23, 2018, the $7.50 cost for the Standard E-ZPass® transponder was eliminated, while costs for the Exterior Mount and Flex transponders are $13.50 and $16.50, respectively. The Standard is the more typical windshield mounted transponder, the Exterior is mounted to a passenger car's front license plate, and the Flex is for those traveling on Express Lanes and allows vehicles to indicate if they have the number of people in their vehicle to qualify for HOV discounts using the switch to display "HOV On".

Prior to July 1, 2015, account holders were subject to a monthly account fee of $1.50. Accounts making three-or-more transactions per month were exempt from this fee, but any user with less than three transactions were charged. As of July 1, 2015, this monthly account fee was eliminated for Maryland E-ZPass® account holders. Monthly fees are still assessed on Maryland E-ZPass® accounts for out-of-state customers but were temporarily paused in FY 2022 as part of customer focused business rule changes. These fees were resumed in FY 2023 on August 10th, 2022.

Hatem E-ZPass® Program

The Hatem Bridge E-ZPass® Program provides drivers with two possible plan options. Choice A allows drivers with a two-axle vehicle to pay $20 per year for unlimited trips without any additional fees or prepaid toll deposits. However, this plan allows the E-ZPass® to only be used on the Hatem Bridge, and cannot be used at other toll facilities or with other E-ZPass® discount plans. Choice B is an add-on to a standard Maryland E-ZPass® account. This allows drivers to pay $20 per year for unlimited trips at the Hatem Bridge. There are associated account maintenance fees for non-Maryland accounts as well as a pre-paid toll balance, but this plan also gives drivers a discount off the base toll rate for two-axle vehicles at all Maryland toll facilities, excluding the Intercounty Connector and I-95 Express Toll Lanes, and can be combined with other discount plans. The discount provided is 37.5 percent for the Bay Bridge and 25 percent for all other facilities. Revenue associated with purchasing these plans is included in the other revenue.

Violation Recovery

Historical violation recovery data through FY 2023 have been provided by MDTA. Prior to FY 2016, "violation fees" were charged to drivers who chose not to initially pay their toll. Since video customers are no longer assessed "violations fees" but are instead assessed civil penalties if they do not pay their video tolls within 45 days, no estimates of future "violation fee" revenue for the Legacy facilities, the ICC and I-95 Express Toll Lanes are included in the other revenue forecast. Future forecasts of civil penalty revenue are based on the following assumptions:

- Civil penalties were reduced from $50 to $25 in FY 2021 for all transactions with civil penalties and will remain at $25 for the duration of the forecast.
- Civil penalty collections in FY 2023 were impacted due to the MDTA customer assistance program which was initiated in February 2022 and terminated December 14, 2022. Civil penalty collections are assumed to be returned to normal procedure in FY 2024.

Commercial Vehicles Fees and Discounts

There are two available discount programs for commercial vehicles with five-or-more-axles. The first plan is the post-usage plan, which is account specific and can be used on all eligible facilities. With this plan, each account is assessed after 30 days and the post-usage discount is calculated based on the total toll usage. The fee estimates for this program were developed from existing data and historical trends.

The other available discount plan is similar in that it is account specific and can be used on all eligible facilities. With this plan however, the account assessment after 30 days calculates the discount based on the total trips per transponder.

In addition to the two discount plans available to commercial vehicles, there is a fee for over-sized and/or overweight vehicles. As of May 1, 2009, a $25 permit fee was charged and covered all MDTA maintained roadways along the vehicle's route. This fee is a one-time charge and is not applied at any specific tolling location.

4.5.2 Forecast Results

Table 4-11 provides the historical and forecasted other revenue for the Legacy facilities, ICC, and I-95 ETLs. Historical data is shown for FY 2019 through FY 2024. Due to the business rule changes taken by MDTA, other revenue increased significantly from FY 2021 to FY 2024. This is due to an increase in processing of the backlogged video transactions, leading to an increase in civil penalty collections particularly in FY 2023 and FY 2024, after the termination of the customer assistance plan. Other revenue is forecasted to decrease in FY 2025 and again slightly in FY 2026 due to the depletion of backlog transactions. After FY 2028, other revenue is forecasted to grow in the range of 0.9 to 2.5 percent per year.

Table 4-12 provides the FY 2025 and FY 2026 monthly other revenue forecast for the combined Legacy facilities, ICC, and I-95 ETLs.

Table 4-10
Other Revenue by Facility

Fiscal Year [1]	Legacy Facilities								Intercounty Connector & I-95			Total Other Revenue [2]
	Service Fees and Sales				Violation Recovery	Commercial Vehicles			Service Fees and Sales		Violation Recovery	
	Unused Pre-Paid Trip Revenue	Trans-ponder Sales	Monthly Account Fees	Hatem E-Z Pass Program	Civil Penalties	Post-Usage Discount	High Frequency Discount	Over-size Permit Fee	Trans-ponder Sales	Monthly Account Fees	Civil Penalties	
2019	14.00	(0.60)	1.59	1.68	21.27	(8.58)	(1.20)	1.26	(0.10)	0.27	10.19	**39.78**
2020	10.64	0.22	2.05	1.69	16.93	(8.63)	(1.30)	1.06	0.04	0.34	11.93	**34.96**
2021	4.49	(0.12)	2.01	1.57	13.66	(6.76)	(0.84)	1.05	(0.00)	0.05	3.58	**18.70**
2022	11.41	0.33	(0.32)	1.76	18.03	(10.87)	(1.02)	1.19	0.04	(0.04)	6.17	**26.68**
2023	16.90	0.29	2.36	1.86	14.42	(8.54)	(0.97)	1.28	0.03	0.26	5.47	**33.36**
2024	17.18	0.31	3.16	1.85	44.39	(8.49)	(0.89)	1.18	0.04	0.37	12.13	**71.23**
2025	17.39	0.31	2.56	1.92	31.12	(7.86)	(0.82)	1.14	0.03	0.29	8.72	**54.80**
2026	17.33	0.30	2.42	1.87	28.72	(8.02)	(0.88)	1.16	0.04	0.29	8.37	**51.59**
2027	17.46	0.30	2.43	1.87	28.82	(8.06)	(0.88)	1.17	0.04	0.30	8.60	**52.05**
2028	17.63	0.31	2.46	1.88	29.02	(8.11)	(0.89)	1.17	0.04	0.32	8.88	**52.71**
2029	17.64	0.31	2.46	1.88	29.46	(8.45)	(0.92)	1.22	0.04	0.33	9.22	**53.18**
2030	17.68	0.31	2.47	1.88	30.70	(8.64)	(0.95)	1.25	0.04	0.34	9.41	**54.49**
2031	17.96	0.31	2.50	1.89	31.07	(8.70)	(0.95)	1.26	0.04	0.35	9.60	**55.33**
2032	18.13	0.31	2.53	1.90	31.47	(8.76)	(0.96)	1.27	0.04	0.36	9.78	**56.07**
2033	18.21	0.32	2.54	1.90	31.75	(8.77)	(0.96)	1.27	0.04	0.36	9.98	**56.64**
2034	18.33	0.32	2.56	1.90	31.90	(8.80)	(0.96)	1.27	0.05	0.37	10.14	**57.08**

Source: Historical data from MDTA

(1) FY 2019 - 2024 represents actual data.

(2) Summations may not match total due to rounding.

Table 4-11
Forecasted Monthly Other Revenue

Month	Total Other Revenue
FY 2025	
July	$4.378
August	6.432
September	4.224
October	3.381
November	3.846
December	5.816
January	4.145
February	3.970
March	5.235
April	4.758
May	4.395
June	4.220
FY TOTAL	**$54.799**
FY 2026	
July	$4.069
August	3.790
September	4.129
October	3.455
November	3.694
December	5.820
January	4.025
February	3.903
March	5.300
April	4.733
May	4.405
June	4.264
FY TOTAL	**$51.586**

Chapter 5
Total Forecast Results

This chapter provides a summary of the total MDTA system collected transactions/trips and revenue for all facilities. **Table 5-1** provides the total annual collected transactions for the Legacy system and total trips for the Intercounty Connector (ICC) and I-95 ETLs for FY 2024 actual and the FY 2025 to FY 2034 forecast.

Table 5-1
Total System Collected Transactions/Trips

	Transactions (millions)				
Fiscal Year	Legacy	ICC	I-95 ETL	Total [1]	Percent Change
2024 [2]	115.1	34.0	9.1	**158.2**	-
2025	111.4	35.3	9.9	**156.7**	(1.0)
2026	112.2	36.1	11.0	**159.3**	1.7
2027	113.1	36.9	11.5	**161.6**	1.4
2028	114.4	37.8	13.9	**166.1**	2.8
2029	118.9	38.4	16.1	**173.4**	4.4
2030	121.4	39.2	16.7	**177.3**	2.2
2031	123.2	39.8	17.3	**180.3**	1.7
2032	124.3	40.5	17.9	**182.8**	1.4
2033	124.8	41.1	18.6	**184.5**	0.9
2034	125.7	41.7	19.2	**186.6**	1.1

[1] Summations may not equal total due to rounding.

[2] Represents actual data.

Table 5-2 provides the total system collected revenue, summarized by Legacy system toll revenue, ICC toll revenue, I-95 ETL toll revenue, and other revenue for all MDTA facilities for FY 2024 actual and the FY 2025 to FY 2034 forecast.

Figure 5-1 provides a graphical representation of the share of transactions/trips by facility for the first year and last year of the 10-year forecast, FY 2025 and 2034. In FY 2025, the Legacy system is forecasted to account for 71 percent of total transactions and trips, and the I-95 ETLs are forecasted to account for the smallest share at 6 percent. By FY 2033, due to comparatively higher growth rates on the ICC and I-95 ETLs, and the I-95 ETL extension, the Legacy system is forecasted to account for 67 percent of total transactions. ICC trips are forecasted to decrease slightly from 23 to 22 percent, and the I-95 ETL trips are forecasted to increase to 10 percent by FY 2034.

Table 5-2
Total System Collected Toll and Other Revenue

Fiscal Year	Revenue ($ millions)					
	Legacy	ICC	I-95 ETL	Other [1]	Total [2]	Percent Change
2024 [3]	628.7	69.0	14.1	71.2	**783.0**	-
2025	605.7	70.8	17.0	54.8	**748.4**	(4.4)
2026	612.5	72.1	21.3	51.6	**757.5**	1.2
2027	618.1	73.7	22.3	52.0	**766.1**	1.1
2028	625.1	75.5	28.7	52.7	**782.0**	2.1
2029	644.4	76.8	34.5	53.2	**808.9**	3.4
2030	656.2	78.3	35.8	54.5	**824.8**	2.0
2031	663.6	79.5	37.2	55.3	**835.6**	1.3
2032	669.2	81.0	38.6	56.1	**844.8**	1.1
2033	671.4	82.0	40.0	56.6	**850.0**	0.6
2034	675.2	83.3	41.4	57.1	**856.9**	0.8

[1] Includes Other Revenue from Legacy, ICC, and I-95 ETL. Does not include concession revenue.

[2] Summations may not equal total due to rounding.

[3] Represents actual data.

Figure 5-1
Share of Collected Transactions/Trips, FY 2025 and FY 2034

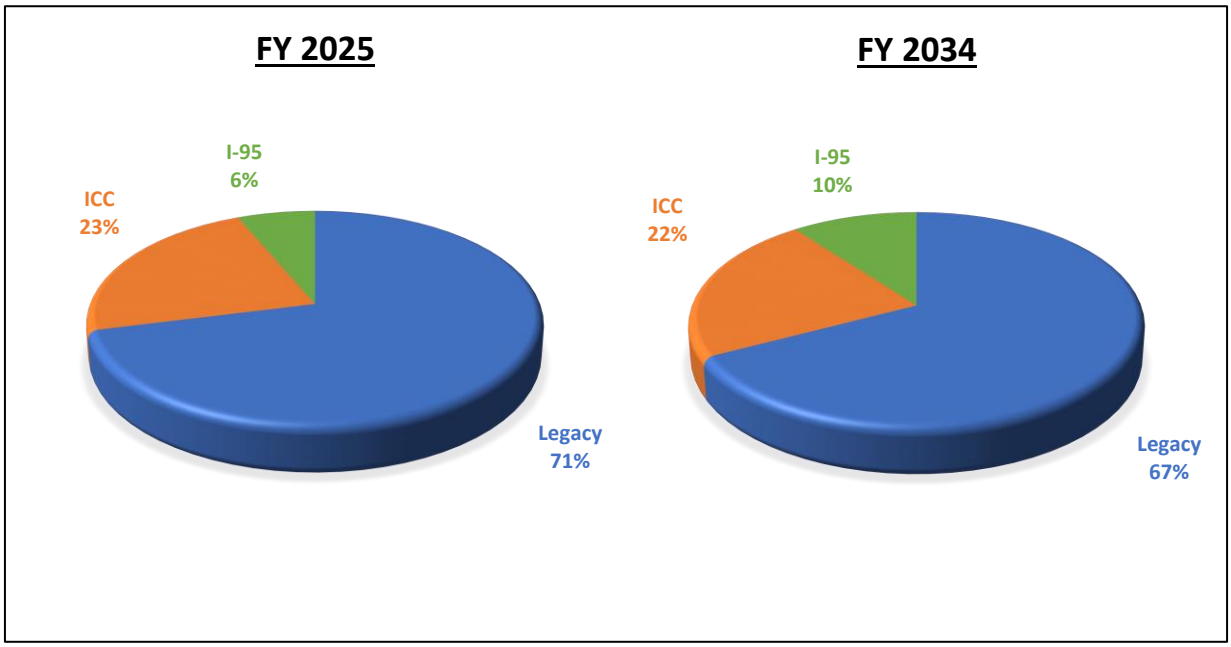


Figure 5-2 provides the same graphical representation for collected total revenue, separated by facility toll revenue and other revenue. Due to the higher share of transactions, the Legacy system also provides the highest share of total revenue and is forecasted to decrease slightly from 81 percent in FY 2025 to 79 percent in FY 2034. The ICC and I-95 ETLs will increase slightly from FY 2025 to FY 2034 due to the I-95 ETL extension and the higher projected growth rate for ICC, while other revenue is forecasted to stay at seven percent in both years.

Figure 5-2
Share of Collected Total Revenue, FY 2025 and FY 2034

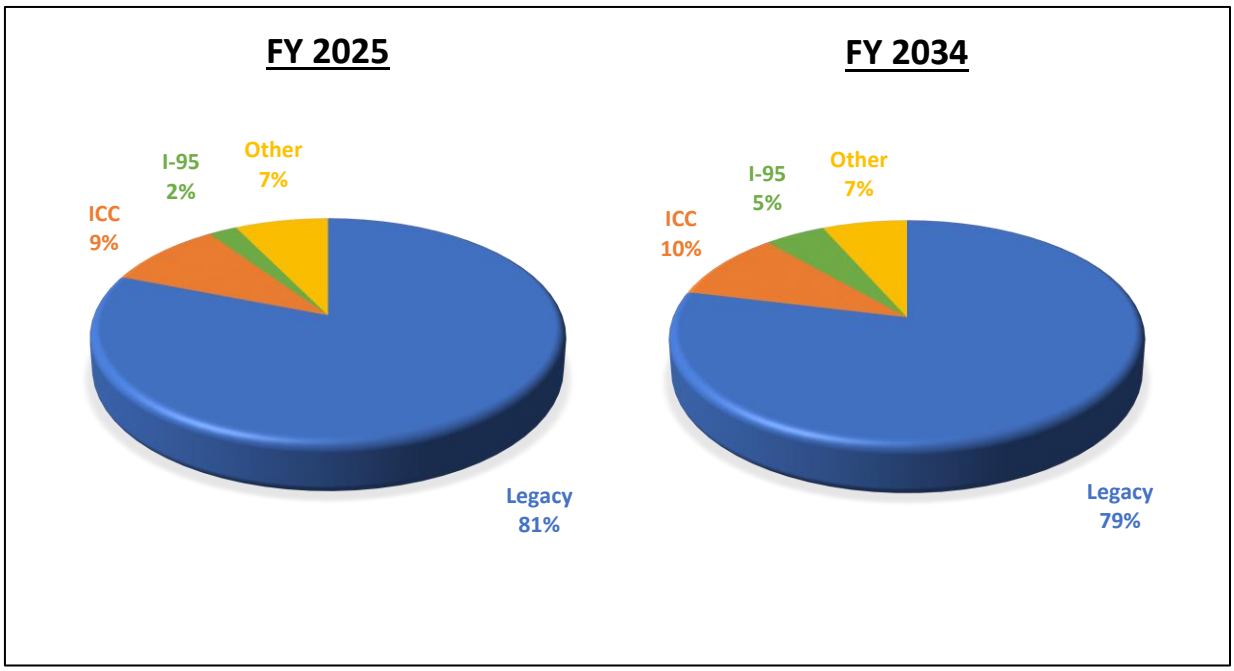


Table 5-3 summarizes the FY 2025 and FY 2026 monthly forecasted transactions, toll revenue, and other revenue for the combined Legacy system, ICC, and I-95 ETL's.

Table 5-3
Total System Collected Monthly Transactions, Toll Revenue, and Other Revenue

Month	Transactions (Millions) [1]	Revenue ($ Millions) [1][2]		
		Toll	Other	Total
FY 2025				
July	14.341	60.320	4.378	**64.697**
August	13.643	60.348	6.432	**66.779**
September	13.902	61.872	4.224	**66.096**
October	13.099	58.506	3.381	**61.887**
November	12.897	57.330	3.846	**61.176**
December	12.647	55.963	5.816	**61.779**
January	11.400	51.496	4.145	**55.641**
February	11.223	49.800	3.970	**53.770**
March	12.702	56.064	5.235	**61.299**
April	13.303	58.988	4.758	**63.746**
May	14.155	62.749	4.395	**67.144**
June	13.348	60.117	4.220	**64.337**
FY TOTAL	**156.660**	**$ 693.551**	**$ 54.799**	**$ 748.351**
FY 2026				
July	13.530	61.114	4.069	**65.183**
August	13.521	60.577	3.790	**64.367**
September	14.287	63.044	4.129	**67.173**
October	13.477	59.714	3.455	**63.168**
November	13.236	58.400	3.694	**62.094**
December	12.995	57.051	5.820	**62.870**
January	11.717	52.511	4.025	**56.536**
February	11.536	50.787	3.903	**54.690**
March	13.076	57.200	5.300	**62.500**
April	13.667	60.155	4.733	**64.888**
May	14.547	63.972	4.405	**68.378**
June	13.738	61.388	4.264	**65.652**
FY TOTAL	**159.328**	**$ 705.912**	**$ 51.586**	**$ 757.499**

[1] Includes impacts due to leakage, including unpaid transactions.

[2] Other revenue does not include concession revenue.

Chapter 6
Forecast Comparisons

This chapter provides comparisons of the current forecasts for the Legacy system, Intercounty Connector, and I-95 ETL's against the previous forecasts from the June 2024 FSK forecast update in the report "FSK Bridge Collapse Traffic and Revenue Forecast Update."

Table 6-1 provides the forecast comparison for the Legacy system, with actual revenue shown for FY 2024 in the current forecast. Passenger car revenue is forecasted to be higher than the previous forecast in all years due to increased E-ZPass transactions and updated construction impacts. Commercial vehicles are forecasted to decrease by more than 5.5 percent compared to the June forecast due adjustments to near-term growth rates and adjustments to video collection rates by vehicle class.

Table 6-1
Legacy System Toll Revenue Comparison

Fiscal Year	Passenger Cars			Commercial Vehicles			Total Vehicles		
	June 2024	% Diff - Current vs. June 2024	Current [(1)]	June 2024	% Diff - Current vs. Nov. 2022	Current [(1)]	June 2024	% Diff - Current vs. June 2024	Current [(1)]
2024	$ 386.4	0.1%	$ 386.6	$ 243.8	-0.7%	$ 242.1	$ 630.2	-0.2%	$ 628.7
2025	370.9	0.4%	372.4	246.5	-5.3%	233.4	617.5	-1.9%	605.7
2026	378.2	-0.2%	377.2	249.6	-5.7%	235.3	627.7	-2.4%	612.5
2027	377.5	1.1%	381.6	251.3	-5.9%	236.5	628.8	-1.7%	618.1
2028	370.5	4.4%	386.8	252.5	-5.6%	238.4	623.0	0.3%	625.1
2029	399.5	-0.3%	398.2	262.0	-6.1%	246.2	661.5	-2.6%	644.4
2030	408.1	-0.7%	405.2	266.7	-5.9%	251.0	674.8	-2.8%	656.2
2031	410.8	0.1%	411.1	267.7	-5.7%	252.5	678.5	-2.2%	663.6
2032	413.6	0.3%	415.0	268.9	-5.5%	254.2	682.4	-1.9%	669.2
2033	416.4	0.1%	416.8	270.4	-5.9%	254.5	686.8	-2.2%	671.4
2034	-	-	419.6	-	-	255.6	-	-	675.2

[(1)] Actual revenue shown for 2024.

Table 6-2 provides the forecast comparison for the Intercounty Connector. The current forecast is higher than the June 2024 forecast by 3.3 percent in FY 2025, tapering down to 2.9 percent by FY 2033. This reduction is due to benchmarking to the latest trends on the ICC including the average toll, which more accurately adjusts the vehicle class distribution and trip length in the transactions on the facility compared to last year's forecast.

Table 6-2
Intercounty Connector Comparison

Fiscal Year	June 2024	% Diff - Current vs. June 2024	Current [1]
2024	$ 71.8	-3.8%	$ 69.0
2025	68.6	3.3%	70.8
2026	70.4	2.5%	72.1
2027	71.8	2.7%	73.7
2028	73.2	3.1%	75.5
2029	74.6	2.9%	76.8
2030	76.1	2.9%	78.3
2031	77.3	2.9%	79.5
2032	78.4	3.2%	81.0
2033	79.7	2.9%	82.0
2034	-	-	83.3

[1] Actual revenue shown for 2024.

Table 6-3 provides the forecast comparison for the I-95 ETLs. In the current forecast, near-term projections were revised to the latest FY 2024 trends and the distance correction was made to the northbound existing segment in FY 2025. Baseline growth from the June 2024 forecast was used.

Table 6-3
I-95 ETLs Comparison

Fiscal Year	June 2024	% Diff - Current vs. June 2024	Current [1]
2024	$ 14.4	-2.6%	$ 14.1
2025	18.5	-8.1%	17.0
2026	22.7	-6.1%	21.3
2027	23.7	-6.1%	22.3
2028	30.4	-5.5%	28.7
2029	36.3	-5.0%	34.5
2030	37.7	-5.0%	35.8
2031	39.2	-5.1%	37.2
2032	40.6	-5.0%	38.6
2033	42.1	-5.0%	40.0
2034	-	-	41.4

[1] Actual revenue shown for 2024.

Table 6-4 provides the forecast comparison for other revenue. Actual FY 2024 other revenue came in 5.5 percent lower than forecast due to underperformance in civil penalty collections. FY 2025 other revenue is forecasted to be higher than the previous forecast due to the assumptions for collections enforcement and changes to the video collections assumptions. By reducing the share of customers that are paying at the NOTD level, there is a larger pool of customers that may pay at the citation level and therefore will pay civil penalties. Due to this, the civil penalty revenue was increased in the range of 10 to 12 percent compared to the June 2024 forecast.

Table 6-5 provides the forecasted total revenue comparison for the entire MDTA system.

Table 6-4
Other Revenue Comparison[1]

Fiscal Year	June 2024	% Diff - Current vs. June 2024	Current [2]
2024	$ 75.4	-5.5%	$ 71.2
2025	48.1	14.0%	54.8
2026	46.6	10.7%	51.6
2027	46.9	11.0%	52.0
2028	47.1	12.0%	52.7
2029	49.1	8.2%	53.2
2030	49.6	10.0%	54.5
2031	50.0	10.7%	55.3
2032	50.4	11.3%	56.1
2033	50.7	11.7%	56.6
2034	-	-	57.1

[1] Other revenue forecasts do not include concession revenue.

[2] Actual revenue shown for 2024.

Table 6-5
Total System Revenue Comparison

Fiscal Year	Total System		
	June 2024	% Diff - Current vs. June 2024	Current [1]
2024	$ 791.8	-1.1%	$ 783.0
2025	752.6	-0.6%	748.4
2026	767.4	-1.3%	757.5
2027	771.2	-0.7%	766.1
2028	773.7	1.1%	782.0
2029	821.6	-1.5%	808.9
2030	838.1	-1.6%	824.8
2031	844.9	-1.1%	835.6
2032	851.9	-0.8%	844.8
2033	859.2	-1.1%	850.0
2034	-	-	856.9

[1] Actual revenue shown for 2024.

Disclaimer

CDM Smith used currently-accepted professional practices and procedures in the development of the traffic and revenue estimates in this report. However, as with any forecast, it should be understood that differences between forecasted and actual results may occur, as caused by events and circumstances beyond the control of the forecasters. In formulating the estimates, CDM Smith reasonably relied upon the accuracy and completeness of information provided (both written and oral) by the MDTA. CDM Smith also relied upon the reasonable assurances of independent parties and is not aware of any material facts that would make such information misleading.

CDM Smith made qualitative judgments related to several key variables in the development and analysis of the traffic and revenue estimates that must be considered as a whole; therefore, selecting portions of any individual result without consideration of the intent of the whole may create a misleading or incomplete view of the results and the underlying methodologies used to obtain the results. CDM Smith gives no opinion as to the value or merit of partial information extracted from this report.

All estimates and projections reported herein are based on CDM Smith's experience and judgment and on a review of information obtained from multiple agencies, including MDTA. These estimates and projections may not be indicative of actual or future values, and are therefore subject to substantial uncertainty. Certain variables such as future developments, economic cycles, pandemics, government actions, climate change related events, or impacts related to advances in automotive technology etc. cannot be predicted with certainty and may affect the estimates or projections expressed in this report, such that CDM Smith does not specifically guarantee or warrant any estimate or projection contained within this report.

While CDM Smith believes that the projections and other forward-looking statements contained within the report are based on reasonable assumptions as of the date of the report, such forward-looking statements involve risks and uncertainties that may cause actual results to differ materially from the results predicted. Therefore, following the date of this report, CDM Smith will take no responsibility or assume any obligation to advise of changes that may affect its assumptions contained within the report, as they pertain to socioeconomic and demographic forecasts, proposed residential or commercial land use development projects and/or potential improvements to the regional transportation network.

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