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# General Traffic and Earnings

Consultant's Annual Report

PREPARED FOR

**CENTRAL  
FLORIDA  
EXPRESSWAY  
AUTHORITY**



*Fiscal Year 2021*



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# CHAPTER 1

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## INTRODUCTION AND SYSTEM OVERVIEW





# INTRODUCTION AND SYSTEM OVERVIEW

## 1.1 Introduction

Prepared for the Central Florida Expressway Authority (CFX), this annual report contains a summary of the Fiscal Year (FY) 2021 traffic and revenue (T&R) performance characteristics and 30-year forecasts of T&R for seven of the toll facilities that constitute the CFX System (the "System"). The eighth toll facility, S.R. 451, is not reported separately because there are no associated plaza groups for the facility. This report also includes a brief discussion of the external factors that influence future T&R. Any changes in data sources or methodologies that have occurred since the last report are noted in the text.

The purposes of this report are to describe current T&R trends for the System, to summarize the forecasting methodology used to develop the future estimates and to provide both short-term and long-term forecasts of T&R for the System. This report contains a description of historical T&R from FY 2002 through FY 2021, along with projected T&R for FY 2022 through FY 2051. CFX's fiscal year ends on June 30<sup>th</sup> and begins on July 1<sup>st</sup> of the preceding calendar year. Future year traffic projections are also presented as Annual Average Daily Traffic (AADT), but on a calendar year basis.

This chapter contains an overview of CFX's System, a description of the current toll rate schedule, a comparison of CFX toll rates with other toll facilities across the nation, a summary of the COVID-19 pandemic impacts, a summary of historical annual transactions and revenue with percentages by facility, monthly transactions and revenue, historical electronic toll collection (ETC) usage, recent events that have an impact on system T&R, a summary of the forecasting methodology and the T&R estimates over the next 30 years for the System.

Chapter 2 contains a review of socioeconomic indicators (historical trends and current conditions). Chapters 3 through 9 contain summaries of T&R performance and forecasts for each of CFX's toll facilities. Traffic profiles for each facility are included in the Appendix.

## 1.2 System Description

The current CFX System consists of the following seven toll facilities:

- S.R. 528 – Martin B. Andersen Beachline Expressway
- S.R. 408 – Spessard Lindsay Holland East-West Expressway
- S.R. 417 – Central Florida GreeneWay
- S.R. 429 – Daniel Webster Western Beltway/Wekiva Parkway
- S.R. 414 – John Land Apopka Expressway
- S.R. 453
- S.R. 538 – Poinciana Parkway

A location map of the eight facilities and the region they serve can be found in **Figure 1-1**, Central Florida Expressway System. S.R. 451 is the Western Beltway Connector Road.

The System as it exists today is the result of many improvement and expansion projects, constructed over the 58-year period between 1963 and 2021. The first facility is the 23-mile S.R. 528 Beachline Expressway, which opened to traffic in 1967. Presently, this facility extends from the S.R. 482/Sand Lake Road/Boggy Creek Road interchange on the west end to S.R. 520 on the eastern end, connecting Orlando to the Space Coast. Until recently it had three mainline toll plazas: Airport Main, Beachline Main, and Dallas Main, and two pairs of ramp plazas. In March 2016, the Airport Main Plaza was removed, and toll collection was transferred to Florida Turnpike Enterprise's (FTE) Beachline West Main Plaza. New ramp plazas were also installed at the Conway Road and Boggy Creek Road Interchanges with tolls collected to and from the east. FTE owns and operates the western 8 miles of S.R. 528 from Boggy Creek Road to Interstate 4 (I-4) and the eastern end from S.R. 520 to S.R. 407 and U.S. 1 in Brevard County.

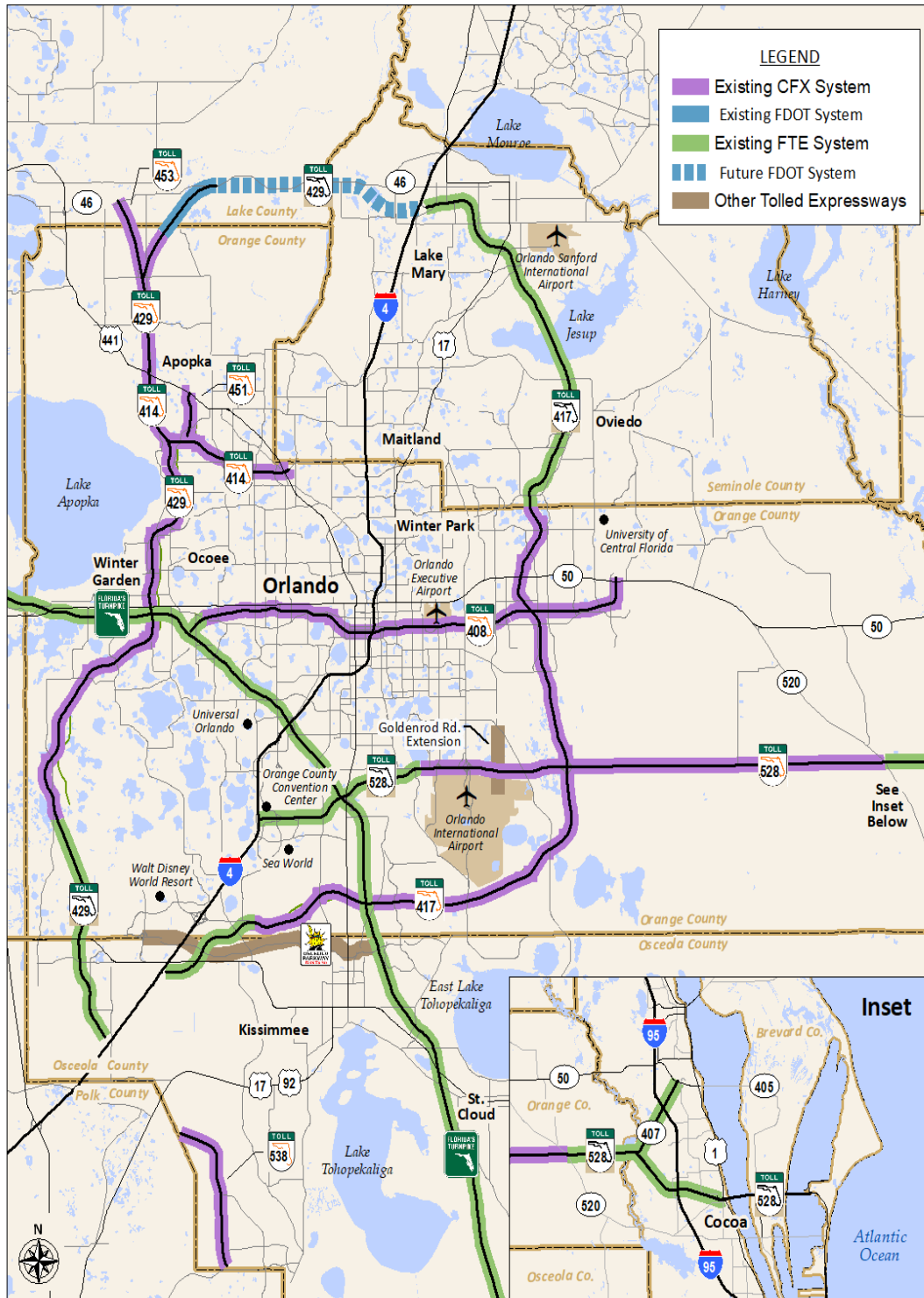
The second facility is S.R. 408 East-West Expressway, which first opened to traffic in 1973. This facility currently runs 22 miles from the Florida's Turnpike/Old Winter Garden Road overpass on the western end to the S.R. 50/East Colonial Drive interchange on the eastern end. S.R. 50 is another main parallel highway. S.R. 408 has four mainline toll plazas: Hiawasse Main, Pine Hills Main, Conway Main, and Dean Main, along with 10 pairs of ramp plazas plus two single ramp plazas.

The next facility is S.R. 417 Central Florida GreeneWay, which first opened to traffic in 1988. S.R. 417 is the eastern/southern beltway around Orlando with the CFX portion extending 33 miles from International Drive on the southern end to the Aloma Avenue/Seminole County Line on the northern end. It has four mainline plazas: John Young Main, Boggy Creek Main, Curry Ford Main, and University Main, along with 12 pairs of ramp plazas. FTE owns and operates toll facilities on S.R. 417 on either side of the CFX toll facility completing the beltway.

The fourth facility is S.R. 429 Western Beltway/Wekiva Parkway, which as its name suggests is the western beltway around Orlando. S.R. 429 first opened to traffic in 2000. The CFX portion of S.R. 429 extends 31 miles from Seidel Road in west Orange County on the southern end to Mt. Plymouth Road on the northern end. Of the 31 miles, three miles are part of a dual route with S.R. 414 (John Land Apopka Expressway). Until recently S.R. 429 had two mainline toll plazas: Forest Lake Main and Independence Main, along with five pairs of ramp plazas. In July 2017, the Ponkan Main Plaza opened to traffic as an all-electronic toll (AET) collection facility. In April 2018, the Mt. Plymouth Main Plaza also opened to traffic as an AET facility. The portion of S.R. 429 with the Ponkan and Mt. Plymouth Main Plazas was developed and constructed as the Wekiva Parkway. The 2-mile Western Beltway Connector Road (S.R. 451) is the former S.R. 429 connection to U.S. 441 extending from S.R. 414 on the southern end to U.S. 441 on the northern end. FTE owns and operates toll facilities on S.R. 429 from Seidel Road to I-4 in Osceola County and operates the portion from Mt. Plymouth north into Seminole County, which is owned by the Florida Department of Transportation (FDOT). Eventually, this portion of the Western Beltway will be completed with a connection in the north to I-4 and S.R. 417.



Figure 1-1  
Central Florida Expressway System



The fifth facility, which opened to traffic in 2009, is the 9-mile S.R. 414 John Land Apopka Expressway. Of the nine miles, three are part of a dual route with S.R. 429. S.R. 414 extends Maitland Boulevard from U.S. 441 westerly to S.R. 429/Western Beltway, to relieve congestion on U.S. 441. The Apopka Expressway has one mainline plaza, Coral Hills Main, and two pairs of ramp plazas.

The sixth facility, which opened to traffic in 2018, is the 2-mile portion of the S.R. 453 project locally known as the Wekiva Parkway or the Mount Dora Connector. S.R. 453 provides a connection from S.R. 429 northwest to Mount Dora via S.R. 46 in Lake County. S.R. 453 has one mainline plaza, Coronado Main, and no ramp plazas.

The seventh facility, S.R. 538 Poinciana Parkway, is a 7-mile toll facility built by the Osceola County Expressway Authority (OCX) and operated by CFX as a non-system facility in FY 2019. S.R. 538 opened to traffic in April of 2016 and in December of 2018 the CFX Board unanimously supported transitioning control of the facility from OCX to CFX. The facility was acquired by CFX as a System facility as of December 2019. This facility extends from Cypress Parkway in Poinciana north to the end of the bridge at Ronald Reagan Parkway/Kinney Harmon Road. S.R. 538 has two mainline toll plazas: Marigold Main and Koa Main, with no ramp plazas.

Goldenrod Road Extension is a 2-mile toll facility built and operated by CFX, but not part of the CFX System. Opened to traffic in 2003, this toll facility extends Goldenrod Road from S.R. 15/Narcoossee Road southerly to Heintzelman Boulevard and serves as a reliever to S.R. 15/Narcoossee Road. The facility has an interchange with S.R. 528 and one mainline toll plaza, the Goldenrod Main.

**Table 1-1** is a summary of CFX System facilities with the corresponding lengths and opening years.

**Table 1-1  
CFX System Facilities**

CFX System Current	Length (miles)	Year
S.R. 528 - Martin Andersen Beachline Expressway	23	1967
S.R. 408 - Spessard Holland East West Expressway	22	1973
S.R. 417 - Central Florida Greeneway	32	1988
S.R. 429 - Daniel Webster Western Beltway	31	2000
S.R. 414 - John Land Apopka Expressway	9	2009
S.R. 451 - Western Beltway Connector Road	2	2012
S.R. 538 - Poinciana Parkway	7	2016
S.R. 453	2	2018
Current System Total <sup>A</sup>	125	
CFX Non-System		
Goldenrod Road Extension	2	2003

Notes:

A - Of the 31 miles on S.R. 429 and nine miles on S.R. 414, three are part of a dual route between the two expressways. The three miles are only included once in the calculation of CFX System total miles.

### 1.3 Toll Rates

On February 26, 2009, the CFX Board approved a series of System wide toll rate adjustments. The toll rate policy included a one-time adjustment and a series of increases to keep pace with inflation. The policy stated that all tolls be adjusted to reflect the higher of either the combined annual increases to the Consumer Price Index for All Urban Consumers (CPI-U) in the South or three percent per year (applied linearly, i.e., a 15 percent increase on the original toll every five years). The one-time adjustment occurred on April 5, 2009, in which toll rates at all mainline plazas (except the recently opened Coral Hills) and most toll ramp locations increased by \$0.25. The purpose of the rate increase was to counterbalance declining System revenues due to the Great Recession, to stabilize the fiscal integrity of CFX, and to fortify the ability to improve and expand the System in the future.

Then on July 1, 2012 (the beginning of FY 2013), CFX implemented a rate differential for the first time for cash and electronic customers. Customers who paid tolls with ETC now paid a lower toll rate than cash customers. The rate differential encouraged participation in the ETC program, thereby helping CFX maintain lower toll collection costs. Also, as previously explained, CFX implemented the first toll rate adjustment to keep pace with inflation.

On February 9, 2017, the Board voted unanimously to eliminate the planned 15 percent toll rate adjustment scheduled for July 1, 2017 (FY 2018). Instead, a new "Customer First" toll policy was adopted, which delayed the next toll rate adjustment until July 1, 2018 (FY 2019). The Board cited the agency's strong financial health in recent years as the primary reason for this decision. Going forward customers will see an annual increase in tolls based on CPI (with a floor of 1.5%), which is lower and more gradual than the original 15 percent increase every five years. The FY 2021 toll rates are presented in **Table 1-2**. The rates shown in this table come from the third toll rate adjustment under the new toll policy at a CPI adjustment of 1.50%. In accordance with CFX's Toll Policy, the next toll rate adjustment will be implemented on July 1, 2021 (FY 2022) and every subsequent year.

FY 2021 was also the first year with the new Pay by Plate (PBP) toll rate, adopted by the CFX Board on October 10, 2019, and implemented on July 1, 2020. The PBP toll rate was set to twice the ETC toll rate at all locations and is adjusted each year as the electronic rate is adjusted in compliance with the Customer First toll rate policy. Except for cashless toll locations, this was a significant change in toll. The proportion of tolls paid through the PBP process has been on the rise especially during the prior three years.

There have been several changes to the toll rate schedule due to additions and deletions of main and ramp plazas, including the addition of the Dallas Main plaza and Dallas ramp plazas in March 2012, the addition of C.R. 437A ramp plazas in January 2013, the removal of the Valencia College Lane ramp plazas in March 2013, the addition of the Schofield Road ramps on S.R. 429 in May 2015, the removal of the Airport Main plaza and the addition of ramp plazas at Boggy Creek Road and Conway Road in March 2016, the opening of the SR 429/Wekiva Parkway in April 2018, the purchase of the Poinciana Parkway in Dec 2018, and the addition of the Stoneybrook West Ramps in October 2020. These changes to toll plazas on the System are reflected in the table.

**Table 1-2  
CFX System Toll Rates, FY 2021 (as of July 1, 2020)**

Toll Locations	Electronic Toll Schedule					Cash Toll Schedule					Pay By Plate Toll Schedule				
	2 Axles <sup>A</sup>	3 Axles	4 Axles	5 Axles	6 Axles	2 Axles <sup>A</sup>	3 Axles	4 Axles	5 Axles	6 Axles	2 Axles <sup>A</sup>	3 Axles	4 Axles	5 Axles	6 Axles
<b>S.R. 528</b>															
Boggy Creek Road/McCoy Road	\$1.15	\$1.15	\$1.15	\$1.15	\$1.15	\$1.50	\$1.50	\$1.50	\$1.50	\$1.50	\$2.30	\$2.30	\$2.30	\$2.30	\$2.30
Conway Road/Tradeport Drive	\$1.15	\$1.15	\$1.15	\$1.15	\$1.15	\$1.50	\$1.50	\$1.50	\$1.50	\$1.50	\$2.30	\$2.30	\$2.30	\$2.30	\$2.30
Beachline Main Plaza	\$0.92	\$1.82	\$2.12	\$2.70	\$2.70	\$1.25	\$2.25	\$2.50	\$3.00	\$3.00	\$1.84	\$3.64	\$4.24	\$5.40	\$5.40
Innovation Way	\$0.62	\$0.62	\$0.62	\$0.62	\$0.62	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75	\$1.24	\$1.24	\$1.24	\$1.24	\$1.24
Dallas Blvd.	\$0.53	\$0.53	\$0.53	\$0.53	\$0.53	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75	\$1.06	\$1.06	\$1.06	\$1.06	\$1.06
Dallas Main Plaza <sup>B</sup>	\$0.79	\$1.06	\$1.32	\$1.32	\$1.32	\$1.50	\$1.75	\$2.00	\$2.00	\$2.00	\$1.81	\$2.35	\$2.87	\$2.87	\$2.87
<b>S.R. 408</b>															
Good Homes Road	\$0.28	\$0.28	\$0.28	\$0.28	\$0.28	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50	\$0.56	\$0.56	\$0.56	\$0.56	\$0.56
Hiawassee Main Plaza	\$0.87	\$1.74	\$2.02	\$2.61	\$2.61	\$1.00	\$2.00	\$2.25	\$3.00	\$3.00	\$1.74	\$3.48	\$4.04	\$5.22	\$5.22
Hiawassee Road	\$0.58	\$0.58	\$0.58	\$0.58	\$0.58	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75	\$1.16	\$1.16	\$1.16	\$1.16	\$1.16
Pine Hills Main Plaza	\$1.15	\$1.74	\$2.02	\$2.61	\$2.61	\$1.50	\$2.00	\$2.25	\$3.00	\$3.00	\$2.30	\$3.48	\$4.04	\$5.22	\$5.22
Old Winter Garden Road	\$0.87	\$0.87	\$0.87	\$0.87	\$0.87	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00	\$1.74	\$1.74	\$1.74	\$1.74	\$1.74
John Young Parkway (S.R. 423)	\$0.87	\$0.87	\$0.87	\$0.87	\$0.87	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00	\$1.74	\$1.74	\$1.74	\$1.74	\$1.74
Orange Blossom Trail	\$0.58	\$0.58	\$0.58	\$0.58	\$0.58	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75	\$1.16	\$1.16	\$1.16	\$1.16	\$1.16
Mills Avenue	\$0.58	\$0.58	\$0.58	\$0.58	\$0.58	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75	\$1.16	\$1.16	\$1.16	\$1.16	\$1.16
Bumby Avenue	\$0.58	\$0.58	\$0.58	\$0.58	\$0.58	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75	\$1.16	\$1.16	\$1.16	\$1.16	\$1.16
Conway Road	\$0.87	\$0.87	\$0.87	\$0.87	\$0.87	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00	\$1.74	\$1.74	\$1.74	\$1.74	\$1.74
Andes/Semoran Blvd.	\$1.15	\$1.15	\$1.15	\$1.15	\$1.15	\$1.50	\$1.50	\$1.50	\$1.50	\$1.50	\$2.30	\$2.30	\$2.30	\$2.30	\$2.30
Conway Main Plaza	\$1.15	\$1.74	\$2.02	\$2.61	\$2.61	\$1.50	\$2.00	\$2.25	\$3.00	\$3.00	\$2.30	\$3.48	\$4.04	\$5.22	\$5.22
Semoran Blvd. (S.R. 436)	\$0.87	\$0.87	\$0.87	\$0.87	\$0.87	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00	\$1.74	\$1.74	\$1.74	\$1.74	\$1.74
Dean Road	\$0.58	\$0.58	\$0.58	\$0.58	\$0.58	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75	\$1.16	\$1.16	\$1.16	\$1.16	\$1.16
Dean Main Plaza	\$0.87	\$1.74	\$2.02	\$2.61	\$2.61	\$1.00	\$2.00	\$2.25	\$3.00	\$3.00	\$1.74	\$3.48	\$4.04	\$5.22	\$5.22
Rouse Road	\$0.58	\$0.58	\$0.58	\$0.58	\$0.58	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75	\$1.16	\$1.16	\$1.16	\$1.16	\$1.16
<b>S.R. 417</b>															
John Young Main Plaza	\$1.45	\$2.02	\$2.61	\$3.18	\$3.18	\$1.75	\$2.25	\$3.00	\$3.50	\$3.50	\$2.90	\$4.04	\$5.22	\$6.36	\$6.36
John Young Parkway (S.R. 423)	\$0.87	\$0.87	\$0.87	\$0.87	\$0.87	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00	\$1.74	\$1.74	\$1.74	\$1.74	\$1.74
Orange Blossom Trail	\$0.58	\$0.58	\$0.58	\$0.58	\$0.58	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75	\$1.16	\$1.16	\$1.16	\$1.16	\$1.16
Landstar Blvd.	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00
Boggy Creek Main Plaza	\$1.45	\$2.02	\$2.61	\$3.18	\$3.18	\$1.75	\$2.25	\$3.00	\$3.50	\$3.50	\$2.90	\$4.04	\$5.22	\$6.36	\$6.36
Boggy Creek Road	\$1.15	\$1.15	\$1.15	\$1.15	\$1.15	\$1.50	\$1.50	\$1.50	\$1.50	\$1.50	\$2.30	\$2.30	\$2.30	\$2.30	\$2.30
Lake Nona Blvd.	\$0.87	\$0.87	\$0.87	\$0.87	\$0.87	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00	\$1.74	\$1.74	\$1.74	\$1.74	\$1.74
Narcoossee Road	\$0.87	\$0.87	\$0.87	\$0.87	\$0.87	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00	\$1.74	\$1.74	\$1.74	\$1.74	\$1.74
Moss Park Road	\$0.58	\$0.58	\$0.58	\$0.58	\$0.58	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75	\$1.16	\$1.16	\$1.16	\$1.16	\$1.16
Innovation Way/Dowden Road	\$0.58	\$0.58	\$0.58	\$0.58	\$0.58	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75	\$1.16	\$1.16	\$1.16	\$1.16	\$1.16
Lee Vista Blvd.	\$0.58	\$0.58	\$0.58	\$0.58	\$0.58	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75	\$1.16	\$1.16	\$1.16	\$1.16	\$1.16
Curry Ford Main Plaza	\$0.87	\$1.74	\$2.02	\$2.61	\$2.61	\$1.00	\$2.00	\$2.25	\$3.00	\$3.00	\$1.74	\$3.48	\$4.04	\$5.22	\$5.22
Curry Ford Road (S.R. 552)	\$0.58	\$0.58	\$0.58	\$0.58	\$0.58	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75	\$1.16	\$1.16	\$1.16	\$1.16	\$1.16
Colonial Drive (S.R. 50)	\$0.58	\$0.58	\$0.58	\$0.58	\$0.58	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75	\$1.16	\$1.16	\$1.16	\$1.16	\$1.16
University Main Plaza	\$0.87	\$1.74	\$2.02	\$2.61	\$2.61	\$1.00	\$2.00	\$2.25	\$3.00	\$3.00	\$1.74	\$3.48	\$4.04	\$5.22	\$5.22
University Blvd.	\$0.58	\$0.58	\$0.58	\$0.58	\$0.58	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75	\$1.16	\$1.16	\$1.16	\$1.16	\$1.16
<b>S.R. 429</b>															
Schofield Road	\$0.58	\$0.58	\$0.58	\$0.58	\$0.58	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75	\$1.16	\$1.16	\$1.16	\$1.16	\$1.16
New Independence Parkway	\$0.87	\$0.87	\$0.87	\$0.87	\$0.87	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00	\$1.74	\$1.74	\$1.74	\$1.74	\$1.74
Independence Main Plaza	\$1.45	\$2.02	\$2.61	\$3.18	\$3.18	\$1.75	\$2.25	\$3.00	\$3.50	\$3.50	\$2.90	\$4.04	\$5.22	\$6.36	\$6.36
Stoneybrook West Parkway	\$0.59	\$0.59	\$0.59	\$0.59	\$0.59	N/A	N/A	N/A	N/A	N/A	\$1.18	\$1.18	\$1.18	\$1.18	\$1.18
C.R. 535	\$0.58	\$0.58	\$0.58	\$0.58	\$0.58	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75	\$1.16	\$1.16	\$1.16	\$1.16	\$1.16
S.R. 438	\$0.30	\$0.30	\$0.30	\$0.30	\$0.30	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50	\$0.60	\$0.60	\$0.60	\$0.60	\$0.60
West Road	\$0.87	\$0.87	\$0.87	\$0.87	\$0.87	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00	\$1.74	\$1.74	\$1.74	\$1.74	\$1.74
Forest Lake Main Plaza	\$1.45	\$2.02	\$2.61	\$3.18	\$3.18	\$1.75	\$2.25	\$3.00	\$3.50	\$3.50	\$2.90	\$4.04	\$5.22	\$6.36	\$6.36
C.R. 437A	\$0.58	\$0.58	\$0.58	\$0.58	\$0.58	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75	\$1.16	\$1.16	\$1.16	\$1.16	\$1.16
Ponkan Main Plaza	\$0.83	\$1.25	\$1.66	\$2.07	\$2.07	N/A	N/A	N/A	N/A	N/A	\$1.66	\$2.50	\$3.32	\$4.14	\$4.14
Mt. Plymouth Main Plaza	\$0.78	\$1.18	\$1.55	\$1.95	\$1.95	N/A	N/A	N/A	N/A	N/A	\$1.56	\$2.36	\$3.10	\$3.90	\$3.90
<b>S.R. 453</b>															
Coronado Main Plaza	\$0.67	\$1.02	\$1.35	\$1.70	\$1.70	N/A	N/A	N/A	N/A	N/A	\$1.34	\$2.04	\$2.70	\$3.40	\$3.40
<b>S.R. 414</b>															
Coral Hills Main Plaza	\$1.15	\$1.74	\$2.30	\$2.89	\$2.89	\$1.50	\$2.00	\$2.75	\$3.25	\$3.25	\$2.30	\$3.48	\$4.60	\$5.78	\$5.78
Keene Road	\$0.58	\$0.58	\$0.58	\$0.58	\$0.58	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75	\$1.16	\$1.16	\$1.16	\$1.16	\$1.16
Hiawassee Road	\$0.30	\$0.30	\$0.30	\$0.30	\$0.30	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50	\$0.60	\$0.60	\$0.60	\$0.60	\$0.60
<b>S.R. 538</b>															
Marigold Main Plaza	\$2.08	\$3.15	\$4.16	\$5.23	\$5.23	N/A	N/A	N/A	N/A	N/A	\$4.16	\$6.30	\$8.32	\$10.46	\$10.46
Koa Main Plaza	\$0.51	\$0.76	\$1.02	\$1.27	\$1.27	N/A	N/A	N/A	N/A	N/A	\$1.02	\$1.52	\$2.04	\$2.54	\$2.54

Notes:

A - Includes motorcycles.

B - The toll listed for this plaza includes the toll collected for FDOT, which is \$0.26 for transponder transactions or \$0.75 for cash transactions regardless of the number of axles.

### 1.3.1 DISCOUNT PROGRAMS

In 1998, CFX began a frequent-user discount program for customers who utilize E-PASS transponders. The discount program helped CFX with a Florida Transportation Commission (FTC) performance measure that required 75 percent of the total transactions to be completed utilizing ETC transponders. This performance measure was instituted by the FTC in 2007. The E-PASS discount program offered a five percent rebate to ETC customers with 40 or more CFX transactions per month and a ten percent rebate to customers with 80 or more CFX transactions per month. While E-PASS is compatible with other interoperable transponders, transactions on those systems were not eligible for the frequent user discount. Only transactions on CFX facilities that were paid through ETC received this discount, including SunPass and LeeWay.

In May 2016, CFX replaced the frequent-user discount program with a new Customer Loyalty Discount Program. The Customer Loyalty Discount Programs is exclusive to E-PASS customers and is a tiered program that provides toll discounts based on the number of transactions per transponder each month. All E-PASS customers are automatically eligible to participate in the program so there is no enrollment process or monthly fee. The program offers a ten percent rebate to E-PASS customers with 40 or more CFX electronic transactions per month and a 15 percent rebate to customers with 80 or more CFX electronic transactions per month. The discount will only be offered in months when actual toll revenue exceeds the revenue projections by more than 2.0 percent.

Beginning in FY 2016 (July 2015), CFX implemented the Beltway Discount Program. This discount program, offered for a six-year period, provided relief for and options to customers during the construction activities on I-4. The program provided an additional 5.0 percent discount to customers with 20 or more transactions in a month on the CFX "beltway" facilities, which included S.R. 417, S.R. 429 and S.R. 414. The discount was only offered in months when actual toll revenue exceeded the revenue projections by more than 2.0 percent. In FY 2021, this discount program provided \$4.2 million in rebates to customers. This discount program expired on June 30, 2021, as a majority of the I-4 Ultimate project was complete.

Beginning February 1, 2016 (FY 2016), CFX launched a discount program offering rebates to school buses using CFX facilities. A 99.0 percent rebate is now given to school buses equipped with special E-PASS transponders transporting students on official school business from school districts in Orange, Brevard, Lake, Osceola, Seminole, Polk and Volusia Counties. The rebate is only offered in months when actual toll revenue exceeds the revenue projections by more than 2.0 percent. In FY 2021, this discount program provided \$0.2 million in rebates to Central Florida school districts.

In the first fiscal year of implementation (FY 1998), the rebates totaled approximately \$0.7 million, or approximately 0.7 percent of the total System revenues. In FY 2021, the discount program has grown to \$13.4 million, or approximately 2.6 percent of the total System revenues. This growth is indicative of the significant increase in transponder usage overall and the frequency of trips made by electronic toll customers. In FY 2021 the paid in-lane revenues collected through ETC reached 93.9 percent.

### 1.3.2 TOLL RATE COMPARISON TO OTHER U.S. TOLL FACILITIES

As shown in **Table 1-3**, the FY 2021 average toll rates per mile on CFX's seven facilities are comparable to the average toll rates on other toll facilities across the United States. The average rates per mile for CFX's facilities are between 11.3 and 22.6 cents per mile for cash rates, 22.6 and 74.0 cents per mile for video rates, and 11.3 and 37.0 cents per mile for ETC rates. The average cash rate for the CFX System is 15.2 cents per mile, the average video rate is 32.3 and the average ETC rate is 16.2 cents per mile. Toll rates on CFX facilities vary depending on the opening year of the facility and the initial toll rate, and the relative toll adjustments that have taken place since the opening of the facility.

**Table 1-3  
Toll Rate Comparison with Other U.S. Toll Facilities**

State	Toll Facility	Notes	Initial Opening Year	Most Recent Toll Increase	Facility Type	Length (miles)	Passenger Cars					
							Toll Rates			Rate-Per-Mile (cents)		
							Cash	Video	ETC	Cash	Video	ETC
CA	San Joaquin Hills Corridor (SR 73)		1996	Jul-19	R/U	15	-	\$8.65	\$8.65	-	57.7	57.7
VA	Chesapeake Expressway (Route 168)		2001	May-21	R	16	\$9.00	-	\$9.00	56.3	-	56.3
CO	Northwest Parkway		2003	Jan-21	U	10	-	\$5.40	\$4.40	-	56.8	46.3
CA	Eastern Toll Road (SR 241)		1998	Jul-19	R/U	24	-	\$10.78	\$10.78	-	44.9	44.9
VA	Dulles Greenway		1995	Apr-21	R/U	14	\$5.80	-	\$5.80	41.4	-	41.4
FL	CFX S.R. 538 (Poinciana Parkway)		2016	Jul-20	R/U	7	-	\$5.18	\$2.59	-	74.0	37.0
DE	Delaware Turnpike (I-95)		1963	Oct-07	R/U	11	\$4.00	-	\$4.00	35.7	-	35.7
VA	Dulles Toll Road		1984	Apr-20	C	13	\$4.75	\$4.75	\$4.75	35.4	35.4	35.4
CO	E-470		1991	Jan-20	R/U	47	-	\$22.55	\$14.25	-	48.3	30.5
CA	South Bay Expressway		2007	Jan-12	C	10	\$3.50	\$5.50	\$2.75	35.0	55.0	27.5
FL	Lee Roy Selmon Crosstown Expressway (SR 618)		1976	Apr-21	U	17	-	\$5.16	\$4.08	-	30.5	24.1
TX	Harris County Toll Road Authority - Westpark Tollway		2004	Apr-20	U	13	-	\$3.50	\$3.00	-	26.9	23.1
SC	Greenville Southern Connector		2001	Jan-21	R/U	16	\$4.00	-	\$3.60	25.0	-	22.5
TX	TX DOT, Grand Parkway		2011	Jan-21	U	58	-	-	\$13.03	-	-	22.4
MD	Maryland Inter County Connector	E	2011	Jul-15	P	18	-	\$5.78	\$3.86	-	32.3	21.6
FL	CFX S.R. 453		2018	Jul-20	R/U	4	-	\$1.34	\$0.67	-	38.3	19.1
TX	North Texas Tollway Authority - President George Bush TPK		1998	Jul-19	U	51	-	\$14.75	\$9.82	-	28.6	19.1
FL	CFX S.R. 408 (East-West Expressway)		1973	Jul-20	U	22	\$5.00	\$8.08	\$4.04	22.6	36.5	18.3
TX	North Texas Tollway Authority - Dallas North Tollway		1968	Jul-19	U	32	-	\$8.61	\$5.73	-	26.9	17.9
FL	Miami Dade Expressway, Gratigny Parkway, SR 924		1992	Jul-18	U	5	-	\$1.88	\$0.94	-	34.8	17.4
TX	North Texas Tollway Authority - Sam Rayburn Tollway		2008	Jul-19	U	26	-	\$6.74	\$4.49	-	25.9	17.3
TX	Harris County Toll Road Authority - Sam Houston Tollway		1988	Apr-20	U	70	-	\$14.25	\$12.00	-	20.4	17.1
FL	CFX System (All Facilities)	A	-	Jul-20	R/U	125	\$19.00	\$40.40	\$20.20	15.2	32.3	16.2
FL	Miami Dade Expressway Authority - Dolphin Expressway (SR 836)		1969	Jul-18	U	14	-	\$4.52	\$2.26	-	32.3	16.1
FL	Osceola Parkway (S.R. 522)		1995	Jul-20	U	12	\$2.00	\$3.00	\$2.00	16.1	24.2	16.1
NJ	New Jersey Turnpike		1951	Sep-20	R/U	118	\$18.85	-	\$18.85	16.0	-	16.0
FL	Miami Dade Expressway, Airport Expressway, SR 112		1961	Jul-18	U	4	-	\$1.32	\$0.66	-	31.4	15.7
FL	CFX S.R. 429 (Western Beltway and Wekiva Parkway)	B	2000	Jul-20	R/U	31	\$3.50	\$9.02	\$4.51	11.3	29.1	14.5
FL	CFX S.R. 417 (Central Florida Greenway)		1989	Jul-20	R/U	32	\$5.50	\$9.28	\$4.64	17.2	29.0	14.5
TX	Harris County Toll Road Authority - Hardy Toll Road		1987	Apr-20	U	21	-	\$3.50	\$3.00	-	16.6	14.2
FL	Miami Dade Expressway, Don Shula Expressway (SR 874)		1974	Jul-18	U	7	-	\$1.86	\$0.92	-	26.6	13.1
FL	Florida's Turnpike, Polk Parkway		1998	Oct-17	U	25	\$4.50	-	\$3.21	18.0	-	12.8
FL	CFX S.R. 414 (Apopka Expressway)	B	2009	Jul-20	R/U	9	\$1.50	\$2.30	\$1.15	16.7	25.6	12.8
IL	Veterans Memorial Tollway		1989	Jan-21	R/U	30	-	\$7.60	\$3.80	-	25.5	12.7
FL	Florida's Turnpike, Veterans Expressway		1994	Oct-17	U	15	-	\$2.41	\$1.87	-	16.1	12.5
PA	Pennsylvania Turnpike		1940	Jan-21	R	360	-	\$88.80	\$43.85	-	24.7	12.2
DE	Korean War Veterans Memorial Highway (SR 1)		1993	Aug-14	R/U	51	\$6.00	-	\$6.00	11.7	-	11.7
FL	CFX S.R. 528 (Beachline Expressway)		1967	Jul-20	R/U	23	\$3.50	\$5.20	\$2.60	15.2	22.6	11.3
FL	Florida's Turnpike, Beachline West		1973	Oct-17	U	8	\$1.25	-	\$0.80	15.3	-	9.8
FL	Florida's Turnpike, Western Beltway		2005	Oct-17	R/U	11	\$1.50	-	\$1.07	13.6	-	9.7
FL	Florida's Turnpike, Sawgrass Expressway		1986	Oct-17	U	23	-	\$2.68	\$2.14	-	11.7	9.3
FL	Florida's Turnpike, Homestead Extension		1973	Oct-17	U	47	-	\$5.36	\$4.28	-	11.4	9.1
WV	West Virginia Turnpike		1954	Jan-19	R	88	\$12.00	-	\$7.80	13.6	-	8.9
NH	Blue Star Turnpike		1950	Jul-09	R	16	\$2.00	-	\$1.40	12.3	-	8.6
FL	Florida's Turnpike, Ticket System		1957	Jan-21	R	155	-	-	\$12.37	-	-	8.0
IN	Indiana Toll Road		1956	Jul-20	R	157	\$12.00	-	\$12.04	7.6	-	7.7
FL	Florida's Turnpike, Suncoast Parkway		2001	Jan-20	U	42	-	\$4.02	\$3.21	-	9.6	7.6
FL	Florida's Turnpike, Southern Coin System		1957	Jan-21	U	43	-	-	\$3.21	-	-	7.5
NJ	Garden State Parkway	D	1954	Sep-20	R/U	173	\$11.40	-	\$11.40	6.6	-	6.6
FL	Florida's Turnpike, Northern Coin System		1957	Jan-21	U	67	-	-	\$4.28	-	-	6.4
IL	Tri-State Tollway		1958	Jan-21	U	77	-	\$9.00	\$4.50	-	11.6	5.8
ME	Maine Turnpike		1947	Nov-12	R	111	\$7.00	-	\$6.45	6.3	-	5.8
OH	Ohio Turnpike		1954	Jan-21	R	241	\$20.50	-	\$14.00	8.5	-	5.8
IL	Reagan Memorial Tollway		1958	Jan-21	C	96	-	\$10.20	\$5.10	-	10.6	5.3
IL	Jane Addams Memorial Tollway		1958	Jan-21	C	79	-	\$7.90	\$3.95	-	10.1	5.0
NY	New York State Thruway		1954	Jan-21	R/U	496	-	\$31.50	\$24.22	-	6.4	4.9
KS	Kansas Turnpike		1956	Oct-18	R	236	\$15.00	-	\$11.15	6.4	-	4.7
FL	FDOT, Alligator Alley		1966	Oct-17	R	78	\$3.25	-	\$2.94	4.2	-	3.8
MA	Massachusetts Turnpike	C	1957	Oct-16	C	123	-	\$7.95	\$4.25	-	6.5	3.5
NH	Spaulding Turnpike		1956	Oct-07	R	33	\$1.50	-	\$1.06	4.5	-	3.2

R:Rural, U:Urban, C:Commuter

Notes:

A - CFX System total length (miles) does not include the two miles for S.R. 451 (Wester Beltway Connector Road).

B - Of the 23 miles on S.R. 429 and nine miles on S.R. 414, three are part of a dual route between the two expressways. The three miles are only included once in the calculation of CFX System total miles.

C - Commuter rate of \$1.50 available with minimum purchase of 25 trips good for 45 days.

D - For passenger cars, no toll charged for 48-mile portion between interchanges 1 and 6.

E - S.R. 453 is 2-miles, toll is for 2 miles plus 1.5 miles of SR 429 to Kelly Park Road.

### 1.3.3 ELASTICITY

The effect of a change in toll rates on T&R can be analyzed with the microeconomic concept of elasticity. Elasticity represents the relative change in traffic (or revenue) as the result of a relative change in toll rate with other factors held constant. Generally, several factors can affect elasticity, including diversion to competing facilities, changes in travel modes, trip consolidation/trip chaining, and/or adjustment in the timeframe of travel. The effects of changes in toll rate on the various facilities of the CFX System depend on the value of travel time savings, the availability of alternative parallel highways, local driver's knowledge of alternative/substitute routes and the level of congestion. Evaluating the degree of elasticity of a historic toll rate increase on the CFX facilities provides guidance in forecasting the elasticity of future toll rate increases.

Elasticity is calculated as the percentage change in traffic (or revenue) divided by the percentage change in toll rate. Traffic elasticity typically (and logically) has a negative algebraic sign, in that an increase in toll results in a reduction in traffic. For traffic, the higher the absolute value of elasticity the greater the decline in traffic. Typically, but with limitations, revenue elasticity has a positive algebraic sign. An elasticity value of 1.0 would represent a case in which the response to a change in toll was unitary (perfectly elastic). That is, the relative change in revenue would be the same as the change in toll rate. Expected elasticity values are lower than 1.0, or relatively inelastic, which would yield smaller percentage decreases in traffic, and consequently smaller revenue increases.

The effect of the July 2018 toll rate increase on traffic was not profound for several reasons. This rate increase was the first indexing of toll rates to the Consumer Price Index. For calendar year 2018 the change in CPI was calculated at 2.05%, which calculated to a few pennies at most toll locations. To determine elasticity of the FY 2019 toll rate increase, T&R from two months (May and June) in FY 2018 was compared against the T&R for the two months after the increase in FY 2019 and adjusted for seasonality. The overall growth on the facilities overshadowed the effect of the toll rate increase, which resulted in no noticeable traffic elasticity. The most recent toll rate adjustment of 1.50% in July 2020 (FY 2021) took place during the COVID-19 pandemic, making it impossible to determine the elasticity of demand.

Another recent toll rate adjustment was in July 2012. This rate increase created a toll differential for the first time on CFX facilities. Electronic toll rates were increased by 9.0 percent, which equates to between \$0.03 and \$0.12 depending on the location. Cash toll rates were increased by \$0.25 at most locations, based on the policy to round the cash rate up to the next quarter. There was a shift in the method of payment from cash to ETC because of the rate increase, as customers took advantage of the toll rate differential. To determine elasticity of the FY 2013 toll rate increase, T&R from four months (July – October) in FY 2012 was compared against the T&R for the same four months in FY 2013. Comparing the traffic from the same timeframe of the prior year avoided seasonality issues but involved issues of growth in traffic. The impacts from the July 1, 2012 toll rate adjustment on T&R, including the calculated elasticity for a four-month period (July through October) are presented in **Table 1-4**.



**Table 1-4  
Elasticity of July 2012 Toll Rate Increase**

Facility	Toll Increase	Traffic		Revenue	
		Impact	Elasticity	Impact	Elasticity
S.R. 528	11%	1.3%	N/A	12.5%	N/A
S.R. 408	13%	-1.8%	-0.14	10.8%	0.83
S.R. 417	14%	-1.9%	-0.14	12.1%	0.86
S.R. 429	15%	0.7%	N/A	15.3%	N/A
S.R. 414	17%	13.7%	N/A	33.6%	N/A

The traffic elasticity on both S.R. 408 and S.R. 417 was -0.14, with a very minor impact to the traffic. S.R. 528 was excluded from the elasticity calculation due to the recent opening of Dallas Boulevard Main Plaza and the reduction of the \$1.50 toll rate to \$0.75 at Beachline Main Plaza. S.R. 429 and S.R. 414 were excluded from the elasticity calculation since these facilities experienced increases in traffic over the period. Both facilities had just recently opened to traffic with higher initial annual growth rates and had influences beyond the toll rate change. These facilities also serve areas that were still experiencing development growth, as compared to S.R. 408 and S.R. 417 that served developed urban areas of Orlando.

S.R. 408 and S.R. 417 had revenue elasticity of 0.83 and 0.86, respectively. This means that some customers responded to the toll rate increase by using alternative routes or switching from cash to ETC. For the entire CFX System, ETC participation increased approximately 4.0 percent over the prior year (July – October). The 4.0 percent increase was not entirely a result of the conversion of cash customers to ETC because normal growth is embedded in the T&R calculations and it is difficult to identify and remove.

### 1.4 Sustainability

As part of CFX’s commitment to explore more sustainable practices, the Authority adopted a Sustainability Study in April of 2019 and has begun to implement several key recommended elements. These key elements include deployment of Photovoltaic (PV) power solutions, improved energy efficiency at CFX buildings and readiness for vehicle electrification. The first PV project CFX implemented was at the Hiawassee Mainline toll plaza on S.R. 408. Elevated ground mount PV arrays were installed in the dry retention ponds adjacent to the toll plaza and provided connections to two (2) meter locations which power the Hiawassee Data Center (~320 kW) and the Mainline Plaza Building (~250kW). CFX has also piloted a floating PV installation which includes onsite power storage to power a Dynamic Message Sign (DMS) on S.R. 429 near the Schofield Road interchange. CFX has funded an additional five PV (or solar) deployment projects, including installations at eight toll plaza facilities with a total capital investment of just under \$10M in the FY 2022 – FY 2026 work plan.





To identify improvements for energy efficiency at CFX buildings, an energy audit was conducted at the headquarters building. The energy audit provided several recommendations including implementation of internal LED lighting, advancements in lighting controls and HVAC controls among other low-cost/high return energy reductions. The readiness for the eventual electrification of the vehicle fleet includes a first step to install electric vehicle (EV) charging stations at the CFX headquarters, an initiative which was completed in FY 2021. Locations for additional EV Charging stations are being explored throughout the system. Next steps for vehicle electrification could include replacing appropriate fleet vehicles with all-electric or Plug in Hybrid vehicles (PHEV). The study found that converting a

single traditional combustion vehicle to a PHEV or Battery Electric vehicle (BEV) would prevent release of 5- 10 thousand pounds of CO<sub>2</sub> annually. Another concept being studied includes PV (or solar) installations in the CFX headquarters parking lot, providing shade for 165 existing parking spaces while collecting solar energy to power the building.

### 1.5 COVID-19 Update

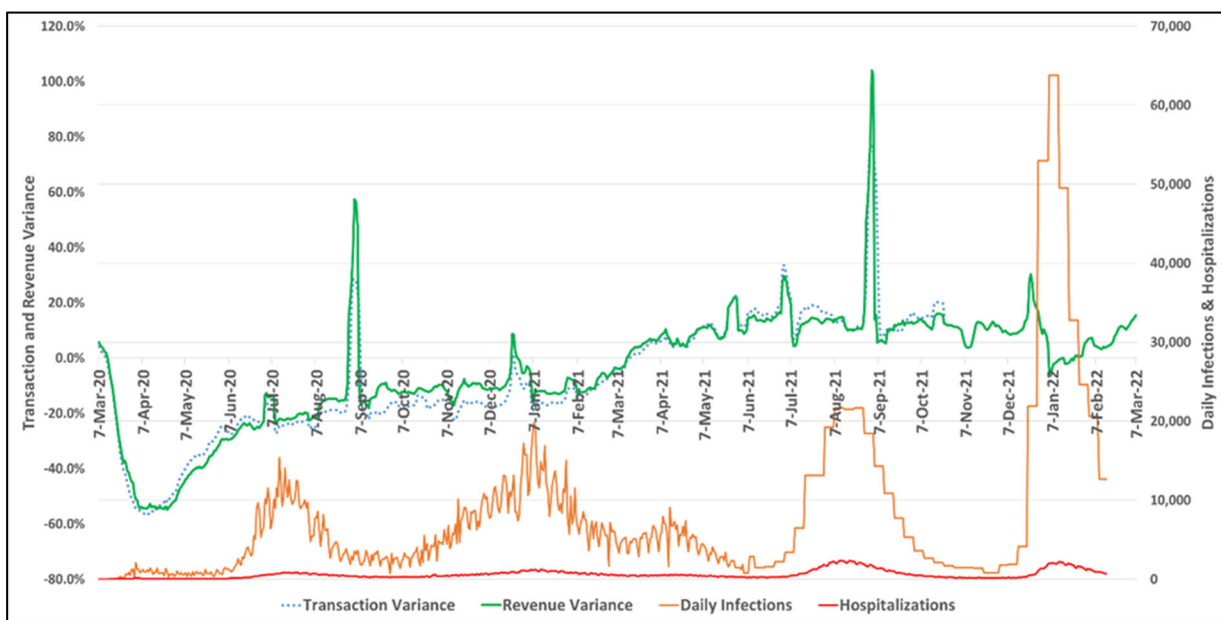
Since the coronavirus disease (COVID-19) was identified in December 2019 and declared a pandemic on March 11, 2020, the impacts of this pandemic were profound on transportation agencies across the country. In FY 2021, the nation was still in the midst of the pandemic, and many travel restrictions were lifted, but vaccines were not approved by the US Food and Drug Administration (FDA) until mid-December. Despite the lingering effects of COVID-19, after the initial decline, CFX total transactions climbed throughout the fiscal year and reached pre-COVID levels (FY 2019) in April and May in most plaza groups, while total revenue met pre-COVID levels in February and exceeded them in March of 2021.

After initial outbreak, the Institute for Health Metrics and Evaluation (IHME), University of Washington, developed and frequently updated forecasts for every country, with separate forecasts for every state in the United States. The IHME forecasts have included projections of daily deaths, total deaths, hospital resources, daily infections and testing, social distancing, and mask use. Every published forecast starts with updated information about recent experience.

**Figure 1-2** contains a history of daily infection and hospitalizations from COVID-19 in Florida starting March 2020 through current (March 2022). The figure also contains the 7-day rolling average variance of transactions and revenue from FY 2019 data through March 2022 to compare the COVID-19 related health incidents with impacts to T&R on the CFX System. Looking first at the daily infections and hospitalizations, after the initial decline in March and April 2020, the daily

infections displayed a pattern with infection rates rising in July and January each year. In July 2020, the infection rate increased after the Fourth of July holiday, and again in January 2021 after the winter holidays. In the summer of 2021, one of the first cases of the Delta variant was reported in June in Orange County, FL, and in all 50-states by July 1<sup>st</sup>. It was detected in more than 80% of the new infections and was even detected in “break through cases” – cases in vaccinated subjects. On December 1, 2021, the first reported case of the Omicron variant was reported in California. Early data on the variant revealed that this variant is highly contagious, as reflected in the severe spike in infections in January and February of 2022, but data also revealed that the symptoms and reactions to this variant were much less severe.

**Figure 1-2  
CFX Transaction and Revenue Variance with Florida COVID-19 Data**



Source: Institute for Health Metrics and Evaluation, Updated March 7, 2022, and CFX daily transaction and revenue data

Comparing the 7-day rolling average transaction and revenue variance, there were minor positive adjustments to the variance immediately preceding a spike in the daily infections, very minor in July and December of 2020, during months with stricter travel restrictions, and larger in July and December 2021, with fewer travel restrictions. The large spikes in September each year were related to toll suspension during Hurricane Dorian in September 2019, which are reflected as a large positive variance in September 2020 and 2021. Traffic and revenue were impacted to a greater extent with the Omicron variant. As shown in the figure, the significant increase in the daily infections, led to the first negative revenue variance since March of 2021. It is directly related to the number of infections and possibly the quarantining/negative test requirements before returning to work policies held by most employers. As the daily infection cases declined, revenues returned to positive variance.

**1.5.1 RECENT EVENTS**

With the availability of vaccines starting in mid-December of 2020, travel restrictions were eased or lifted in many parts of the country. Social distancing was still in effect with many

industries still under reduced capacities, including Central Florida's theme parks and attractions in FY 2021. Below is a historical list of COVID-19 related events during FY 2021.

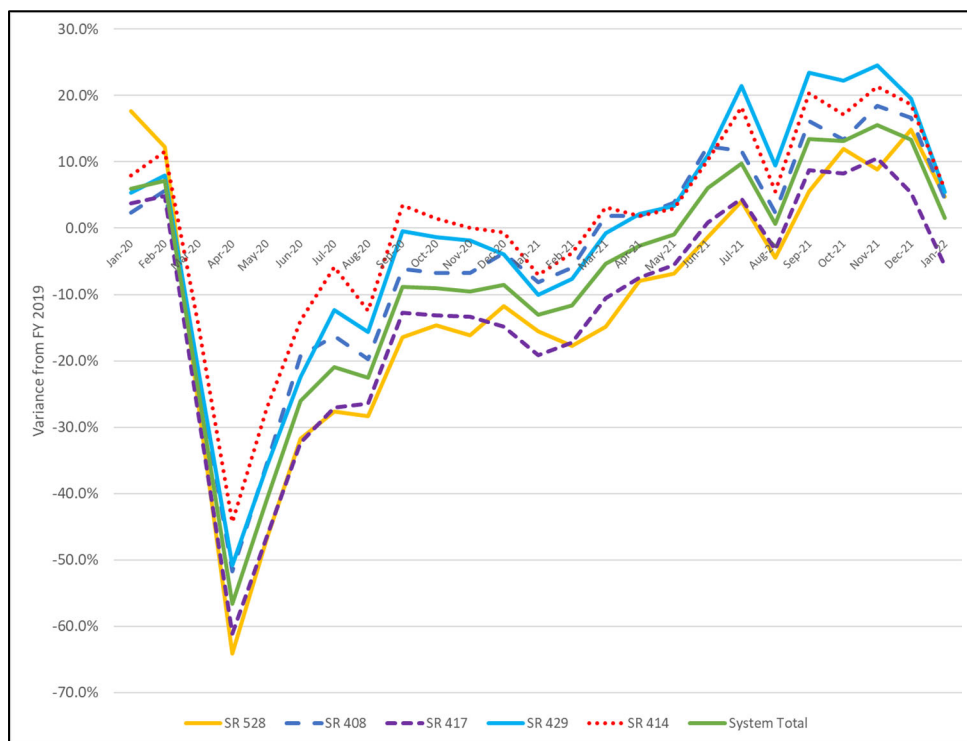
- WDW reopened Magic Kingdom and Animal Kingdom on July 11, 2020, and Hollywood Studios and Epcot on July 15, 2020; all at only 25 percent capacity; and then increased to 35 percent capacity on December 29, 2020.
- Governor DeSantis rescinded Executive Order requiring travelers from Connecticut, New Jersey and New York to self-quarantine for 14 days upon arrival.
- Florida public schools reopened for in-person learning on August 31, 2020, with optional virtual classroom learning.
- Florida bars were allowed to reopen at 50 percent capacity beginning September 14, 2020.
- Governor DeSantis lifted all COVID-19 restrictions on businesses statewide with no capacity restrictions beginning September 25, 2020.
- CFX reopened the customer service center to the public on November 9, 2020.
- Orlando water parks reopened first week in March, including Volcano Bay and Blizzard Beach.
- Governor DeSantis announced his Seniors First Vaccine Strategy on December 2, 2020 (long care residents, health care workers and people 65 and older were eligible for the vaccine).
- FDA authorized for emergency use the Pfizer-BioNTech COVID-19 Vaccine on December 11, 2020, and the Moderna COVID-19 Vaccine on December 18, 2020.
- President Trump signs \$900B Bipartisan-Bicameral Omnibus COVID Relief Deal on December 27, 2020, providing \$600 stimulus checks to many Americans in the last week of the year.
- FDA authorized emergency use of the Janssen (Johnson and Johnson) vaccine on February 27, 2021.
- Governor DeSantis issued an order allowing law enforcement officers, firefighters, and K-12 teachers and staff aged 50 and older to receive coronavirus vaccines on March 1, 2021, which was changed to all teachers including day care/preschool teachers on March 4, 2021.
- President Biden signed the \$1.9T American Rescue Plan Act of 2021 on March 11, 2021, providing \$1,400 stimulus checks to many Americans.
- As of March 29, 2021, more than 3.2M Florida seniors had been vaccinated (70% population), eligibility opened to populations 40 and older, with all adult population eligible for vaccinations on April 5, 2021.
- University of Central Florida announced return to normal in-person classes beginning with fall semester, which started on August 23, 2021.

Despite the impacts from COVID-19, the three bond rating agencies affirmed their ratings for the authority's senior lien bonds and revised their rating outlook from negative to stable despite the pandemic's negative impacts to traffic and revenue in FY 2021. Both S&P Global and Fitch Ratings affirmed CFX's A+ rating, and Moody's Investor Service affirmed an A1 rating on senior lien revenue bonds and A2 on junior lien revenue bonds, concluding the rating outlook is stable.

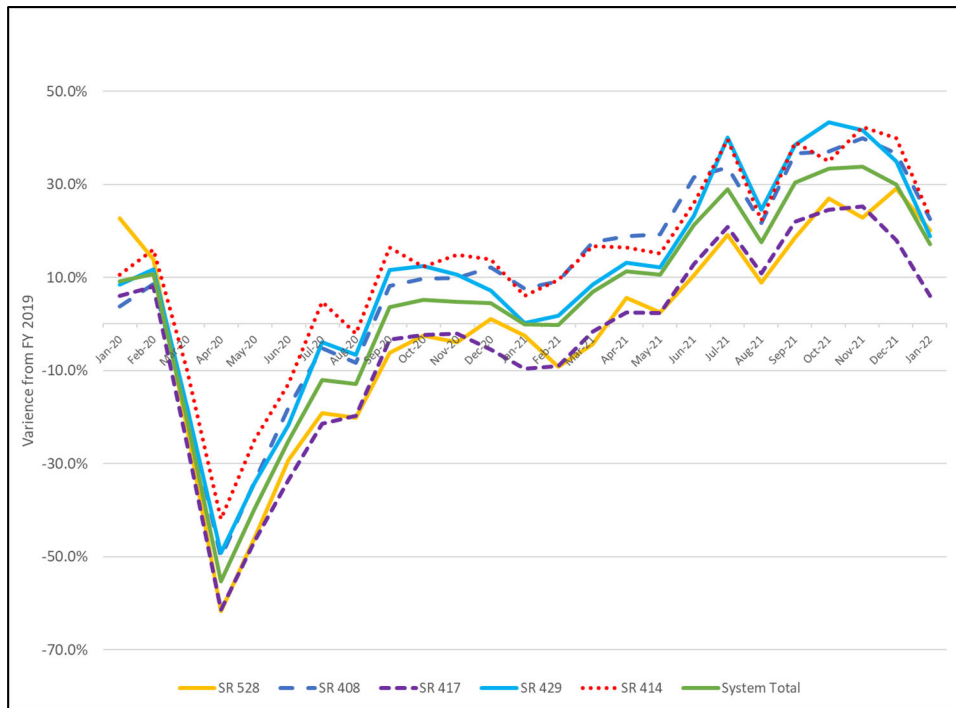
### 1.5.2 RECENT IMPACTS

COVID-19 has had a negative impact on T&R across the CFX System. The graphs in **Figure 1-3** and **Figure 1-4** show the monthly transaction and revenue variance by facility, respectively, from January 2020 through January 2022. The graphs show the CFX system that was open to traffic in FY 2019, so S.R. 453 and S.R. 538 are not shown in the data. These monthly variances show the transactions and revenue declined on all the facilities during the second week of March 2020. The effects bottomed out during the second week of April 2020. While there was not substantial variation by facility – each facility had approximately the same pattern of impact by month – there is a difference in the depth of impact based on the facility.

**Figure 1-3**  
**CFX Monthly Transaction Variance from FY 2019 by Facility (January 2020 – January 2022)**



**Figure 1-4**  
**CFX Monthly Revenue Variance from FY 2019 by Facility (January 2020 – January 2022)**



The more commuter-oriented facilities, including S.R. 408, S.R. 414, and S.R. 429, had lower variance in T&R, than the more tourism-oriented facilities of S.R. 528 and S.R. 417. S.R. 414 had a transaction variance of -44.3 percent in April 2020, while S.R. 528 had a transaction variance of -64.2 percent in the same month. S.R. 414 and S.R. 408 were the first to return to positive revenue variance in March of 2021, while S.R. 528 and S.R. 417 remained in negative variance through the summer of 2021.

These same trends were seen in the monthly revenue variance data. The commuter facilities had less original impact from COVID-19, observing variance of -42 percent on S.R. 414 and -50.2 percent on S.R. 408 in April 2020, while the tourism-oriented corridors observed -61 percent revenue variance on both S.R. 528 and S.R. 417. S.R. 414, S.R. 408, and S.R. 429 all had positive revenue variance in September 2020 while S.R. 528 and S.R. 417 continued to lag with negative revenue variance through March 2021. Revenues bouncing back sooner than transactions is due in part to the inflationary toll policy and the implementation of the PBP toll rate.

As of January 2022, CFX continues to monitor T&R variance. The Omicron variant had impacts to T&R variances across the system, with all the facilities experiencing a decline in January 2022 and S.R. 417 having a negative transaction variance, the first since September of 2021. Early indications are that this trend will not continue, and all the facilities continue to surpass pre-COVID volumes.

## 1.6 System Historical Transactions and Toll Revenues

### 1.6.1 DEFINITIONS

When a customer drives through a CFX toll location and pays the toll, the transaction and revenue is classified as “Paid In-Lane.” The customer has the option to pay the toll in the lane with cash or through ETC. When a customer drives through a CFX toll location and does not pay the toll while passing through, the transaction and revenue is classified as “Unpaid In-Lane.” The only way for the customer to pay the toll afterwards is through a process known as Pay By Plate (PBP). Non-revenue producing transactions are another very small portion of Unpaid In-Lane transactions. Total transactions are the sum of paid in-lane and unpaid in-lane transactions. Total revenue is the sum of paid in-lane revenue and the revenue collected through PBP, estimated as an accrued amount.

PBP toll invoicing is an option for customers that do not pay the toll in the lane and choose to forgo the benefits of lower ETC toll rates. With PBP, an image of the customer’s license plate is captured when the vehicle passes through the toll location. During processing, the PBP toll rate for that plaza, which is twice the ETC toll rate as of July 1, 2020 (FY 2021), is charged to the vehicle’s owner. A monthly toll invoice is generated and mailed to the registered owner of the vehicle. Payment is due within 30 days to avoid toll violations and fines. The following section includes a breakdown of transactions and revenues by paid in-lane and PBP.

### 1.6.2 ANNUAL PAID IN-LANE TRANSACTION AND REVENUE TRENDS

A history of annual paid in-lane transactions and revenues for the seven toll facilities from FY 2002 to FY 2021 is presented in **Table 1-5**. The annual data is based on the CFX Monthly Statistical Reports and is not reconciled to the audited fiscal year end results. Also, more detailed information on history is presented in Chapters 3 through 9 of this report. These historical tables do not include PBP transactions and revenues, only those that are paid in-lane. For this and other reasons, the information presented in this section may differ slightly from the data presented in the FY 2021 Comprehensive Annual Financial Report (CAFR) and other information in this report.

Historical paid in-lane transactions for the CFX System since FY 2002 are displayed in **Figure 1-5**. The grey line represents the number of paid in-lane transactions and shows how overall transactions have increased over the last 20 years. The bars represent the annual growth (percent change) of transactions. The same information for paid in-lane revenues is depicted in **Figure 1-6**. Paid in-lane transaction and revenue growth patterns exhibited on the System are similar.

System growth was consistently strong up through FY 2007. Transactions and revenue exhibited double-digit growth in FY 2000 and in FY 2004. The growth in transactions and revenue fell to below 5 percent in FY 2002, the first time annual growth rates fell below 5 percent since FY 1992. The downturn in growth was primarily due to a national economic slowdown in the first half of FY 2002, accompanied by the events of September 11, 2001. In FY 2005, System transaction and revenue growth was over 5 percent even though the State of Florida was impacted by four hurricanes that resulted in toll suspensions on all CFX plazas for 21 days in August and September of 2004. Then, in FY 2008 the first signs of the Great Recession appeared with transaction and

**Table 1-5  
System Totals – Historical Paid In-Lane Transactions and Revenue  
FY 2002 – FY 2021**

Fiscal Year Ending	S.R. 528	S.R. 408	S.R. 417	S.R. 429	S.R. 414	S.R. 453	S.R. 538	TOTAL	Percent Change
<b>TRANSACTIONS (millions)</b>									
2002 <sup>A,B</sup>	31.6	110.1	64.9	5.8				212.4	
2003	33.7	116.1	71.3	9.5				230.6	8.6%
2004 <sup>C</sup>	37.5	124.7	79.6	13.8				255.6	10.8%
2005 <sup>D,E</sup>	39.7	127.8	87.2	16.4				271.1	6.1%
2006 <sup>F</sup>	42.4	135.4	96.2	20.2				294.2	8.5%
2007 <sup>G</sup>	44.5	138.3	102.4	24.4				309.6	5.2%
2008 <sup>H,I</sup>	44.8	139.0	104.5	26.6				314.9	1.7%
2009 <sup>J,K</sup>	40.7	131.3	94.8	25.1	0.6			292.5	-7.1%
2010 <sup>L</sup>	40.9	126.0	89.3	25.0	5.3			286.5	-2.1%
2011	42.5	126.7	90.9	25.9	6.5			292.5	2.1%
2012 <sup>M</sup>	47.5	126.2	90.7	26.4	7.3			298.1	1.9%
2013 <sup>N</sup>	57.6	123.5	90.3	27.2	8.3			306.9	3.0%
2014	59.7	129.7	97.2	30.7	9.5			326.8	6.5%
2015	64.3	138.2	109.3	35.2	10.6			357.6	9.4%
2016 <sup>O</sup>	71.5	146.2	127.4	41.2	12.0			398.3	11.4%
2017 <sup>P</sup>	76.8	147.7	138.1	45.5	12.8			420.9	5.7%
2018 <sup>Q,R,S</sup>	76.7	145.2	145.9	51.7	13.4	0.5		433.4	3.0%
2019 <sup>*</sup>	77.1	141.1	145.5	57.6	13.9	2.2		437.4	0.9%
2020 <sup>*T,U</sup>	68.0	124.7	125.9	52.7	13.1	2.3	1.7	388.4	-11.2%
2021 <sup>*V</sup>	62.8	130.9	122.4	54.1	13.4	3.0	3.9	390.5	0.5%
<b>TOLL REVENUES (millions)</b>									
2002 <sup>A,B</sup>	\$28.7	\$69.7	\$42.6	\$5.1				\$146.1	
2003	\$30.6	\$73.2	\$46.5	\$7.2				\$157.5	7.8%
2004 <sup>C</sup>	\$34.3	\$78.7	\$51.6	\$9.2				\$173.8	10.3%
2005 <sup>D,E</sup>	\$36.1	\$80.4	\$56.7	\$10.5				\$183.7	5.7%
2006 <sup>F</sup>	\$38.4	\$85.1	\$62.6	\$13.5				\$199.6	8.7%
2007 <sup>G</sup>	\$40.0	\$86.5	\$66.9	\$17.4				\$210.8	5.6%
2008 <sup>H,I</sup>	\$40.1	\$86.1	\$68.5	\$19.0				\$213.7	1.4%
2009 <sup>J,K</sup>	\$38.5	\$88.3	\$66.8	\$19.0	\$0.6			\$213.2	-0.2%
2010 <sup>L</sup>	\$46.6	\$107.7	\$79.0	\$23.5	\$4.2			\$261.0	22.4%
2011	\$48.4	\$108.3	\$80.1	\$24.4	\$5.1			\$266.3	2.0%
2012 <sup>M</sup>	\$48.7	\$107.7	\$80.5	\$24.9	\$5.7			\$267.5	0.5%
2013 <sup>N</sup>	\$54.5	\$119.3	\$91.2	\$29.4	\$7.7			\$302.1	12.9%
2014	\$56.3	\$125.2	\$98.3	\$33.5	\$9.1			\$322.4	6.7%
2015	\$60.4	\$133.0	\$110.4	\$38.9	\$10.4			\$353.1	9.5%
2016 <sup>O</sup>	\$66.7	\$140.1	\$129.0	\$46.1	\$12.0			\$393.9	11.6%
2017 <sup>P</sup>	\$71.8	\$141.0	\$140.4	\$51.7	\$13.0			\$417.9	6.1%
2018 <sup>Q,R,S</sup>	\$71.8	\$138.3	\$148.4	\$58.3	\$13.8	\$0.3		\$430.9	3.1%
2019 <sup>*</sup>	\$73.8	\$136.6	\$152.6	\$66.7	\$14.6	\$1.3		\$445.6	3.4%
2020 <sup>*T,U</sup>	\$66.4	\$123.3	\$133.9	\$62.5	\$14.1	\$1.6	\$2.8	\$404.6	-9.2%
2021 <sup>*V</sup>	\$62.4	\$133.8	\$131.2	\$64.9	\$14.8	\$2.1	\$6.6	\$415.8	2.8%

\*Indicates systemwide toll rate increase according to Customer First Toll Policy

Notes:

B - C.R. 535 ramps on S.R. 429 opened in 2002.

C - Effects of the events on September 11, 2001.

D - Express lanes opened at University Main plaza.

E - Express lanes opened at Curry Ford and Dean Main plazas.

F - Effects from 2004 hurricane season (4 storms with toll suspensior

G - Express lanes opened at Boggy Creek, John Young Parkway, and

Hiwassee Main Plazas.

H - Express lanes opened at Pine Hills main plaza.

I - Express lanes opened at Conway Main plaza.

J - First effects of national economic recession.

K - Tolls increased Systemwide in April 2009.

L - Coral Hills Plaza opened 2009.

M - Dallas Main Plaza opened to traffic on March 19, 2012.

N - Tolls increased Systemwide in July 2012.

O - Beachline Airport Main plaza closed in March 2016.

P - Effects from Hurricane Matthew in October 2016.

Q - Effects from Hurricane Irma in September 2017.

R - Ponkan Main Plaza opened in July 2017.

S - Mt. Plymouth Main Plaza and Coronado Main Plaza opened in April 2018.

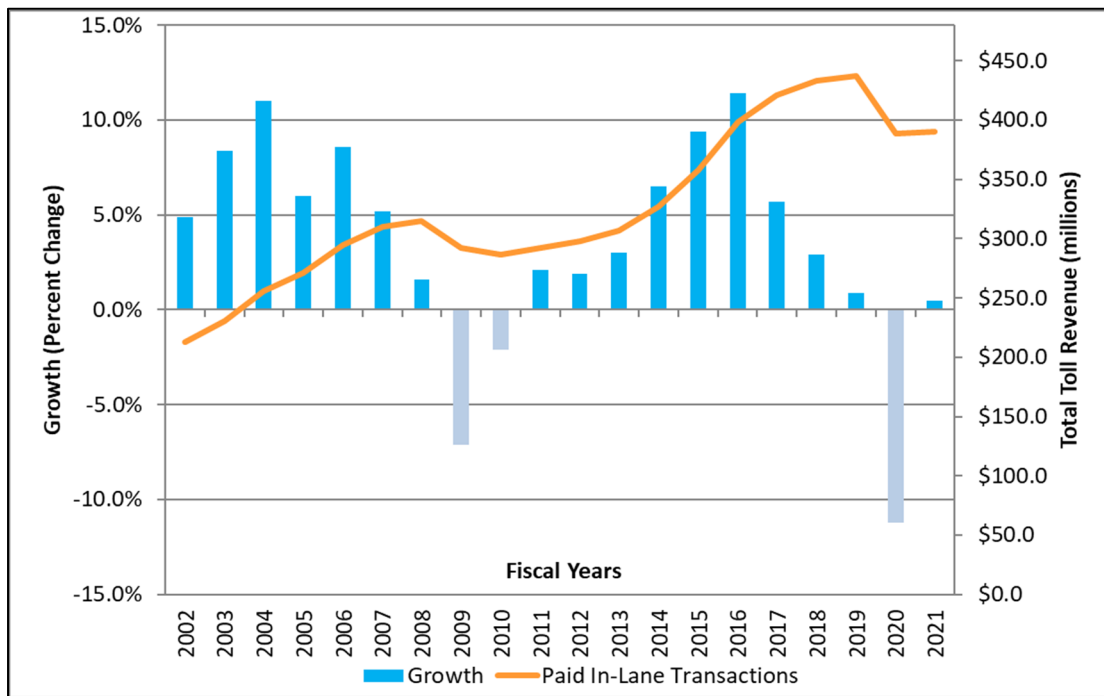
T - Poinciana Parkway acquired by CFX in December 2019.

U - Effects from Hurricane Dorian in September 2019 and first effects of COVID-19 pandemic began in March 2020.

V - Continued effects of COVID-19 pandemic.

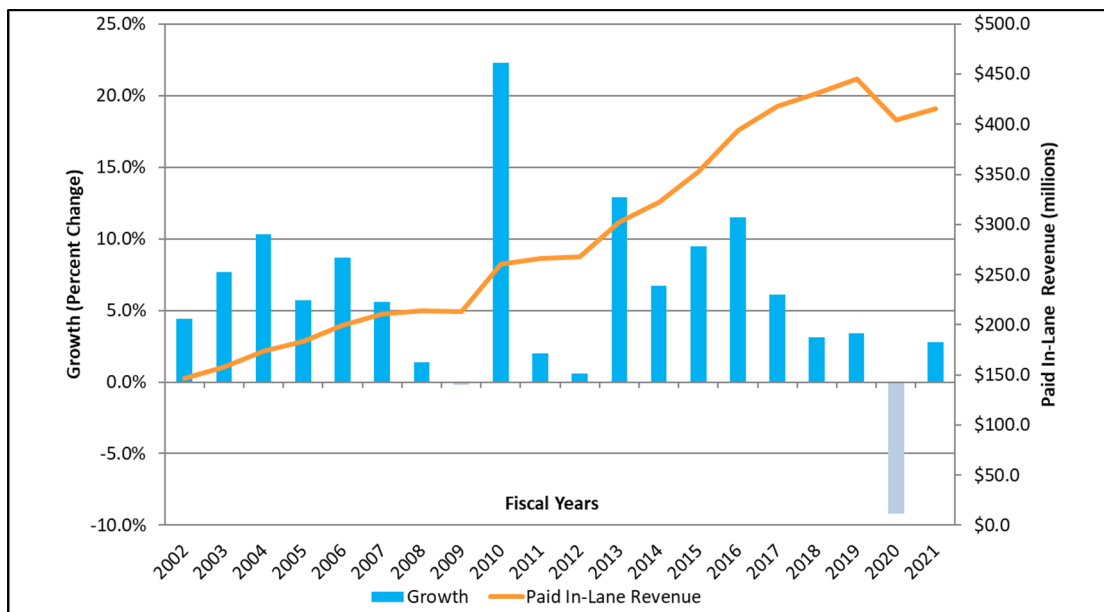


**Figure 1-5**  
**CFX System Historical Paid In-Lane Transactions and Annual Growth**  
**FY 2002 – FY 2021**



Source: Monthly unaudited data provided by CFX

**Figure 1-6**  
**CFX System Historical Paid In-Lane Revenue and Annual Growth**  
**FY 2002 – FY 2021**



Source: Monthly unaudited data provided by CFX

revenue growth slowing down as the housing and construction industry across the State of Florida slowed down.

In FY 2009, paid in-lane transactions decreased by 7.1 percent, which can be attributed to the economic recession and the Systemwide toll rate increase. Paid in-lane revenues only dipped into negative growth in FY 2009. The April 2009 toll rate increase slowed the negative revenue growth in FY 2009 to only -0.2 percent growth. The negative growth would have been worse without the toll rate increase, which included the last three months of FY 2009. The first nine months of FY 2010 were also impacted by the toll rate increase with paid in-lane revenues increasing 22.4 percent in FY 2010, while paid in-lane transactions still experienced a negative 2.1 percent annual growth. Also, during FY 2009, transactions were negatively impacted by two days of toll suspensions during Tropical Storm Fay. FY 2011 through FY 2013 showed stable transaction growth with each year increasing 2 to 3 percent despite the toll rate increase at the beginning of FY 2013. From FY 2014 through FY 2016, transactions on CFX facilities grew at faster rates than those seen prior to the Great Recession, a period of extraordinary growth. Since FY 2016, paid in-lane transactions increased over prior years, but growth has tapered off, in part due to the migration from paid in-lane to PBP. Paid in-lane revenues climbed to nearly \$431 million in FY 2018.

In October 2016 (FY 2017), Hurricane Matthew tracked parallel to the Florida coast as a Category 3 storm with winds up to 130 miles per hour. Tolls were suspended on the CFX System beginning at 8:00 pm on October 5, 2016 through early on October 10, 2016. The toll suspension resulted in a loss of approximately 4.6 million transactions and \$4.5 million in toll revenues on the CFX System. In September 2017 (FY 2018), Hurricane Irma tracked parallel to the Florida coast as a Category 4 storm with winds up to 155 miles per hour. Tolls were suspended on CFX toll facilities beginning on September 5, 2017 through September 20, 2017 resulting in a transaction loss of approximately 19.3 million and a toll revenue loss of \$19.2 million on the CFX System. In FY 2019, both transactions and revenue increased over FY 2018, due in part to Hurricane Irma, and the increase in transactions and revenue that were lost in FY 2018, but also in part to natural growth on these facilities. Paid in-lane transactions and revenue were 0.9 percent higher and 3.4 percent higher, respectively, than FY 2018. The slower growth in transactions and revenues in FY 2019 can be attributed in part to an increase in customers utilizing the PBP program.

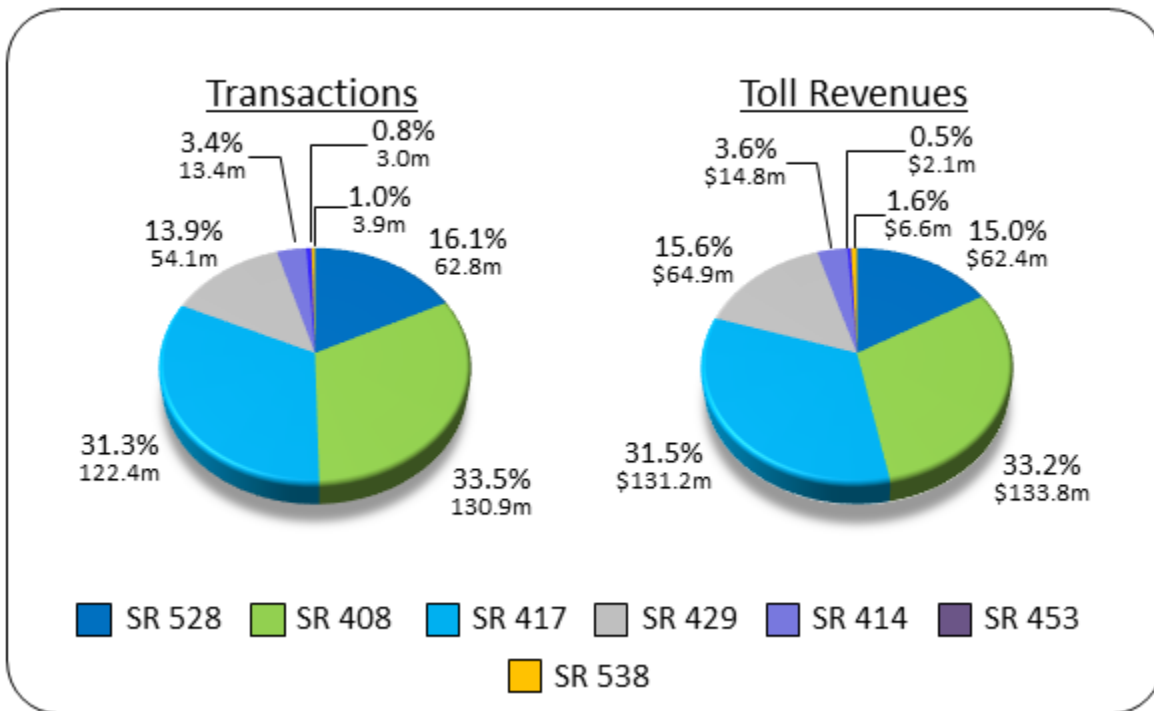
In FY 2020, both transactions and revenue decreased, due to the negative impacts of the COVID-19 pandemic, which was explained in greater detail in **Section 1.4**. Paid in-lane transactions and revenue were 11.2 percent lower and 9.2 percent lower, respectively, than FY 2019. More customers continued to use the PBP program as well due to the suspension of cash tolls on all CFX facilities from March 19, 2020 to May 31, 2020. September 2019 transactions and revenues were also negatively impacted by toll suspensions during Hurricane Dorian.

In FY 2021, total System transactions and revenue increased 0.5 percent and 2.8 percent respectively, compared to FY 2020. This increase can be partially attributed to FY 2020 being negatively impacted by the COVID-19 pandemic (i.e., a recovery from the worst of COVID-19) and the FY 2021 toll rate adjustment.

### 1.6.3 ANNUAL PAID IN-LANE TRANSACTIONS AND REVENUE BY FACILITY

Figure 1-7 contains a summary of the FY 2021 paid in-lane transactions and revenues by facility, both the number and as a percentage of the System. The largest share of the paid in-lane transactions and revenue were reported on S.R. 408, with 33.5 percent, or 130.9 million of the paid in-lane transactions and 33.2 percent, or \$133.8 million of the revenues. Paid in-lane transactions on S.R. 417 were 31.3 percent of the System or 122.4 million and paid in-lane revenues were 31.5 percent of the System or \$131.2 million. Prior to the COVID-19 pandemic, S.R. 417 surpassed S.R. 408 in total transactions and revenues. However, due to the differential impacts of COVID-19 on tourist travel, S.R. 408 had the largest share of transactions and revenues on the System. S.R. 528 comprised 16.1 percent, or 62.8 million of the paid in-lane transactions and 15.0 percent, or \$62.4 million of the paid in-lane revenues. S.R. 429 paid in-lane transactions represented 13.9 percent, or 54.1 million of the System transactions and 15.6 percent, or \$64.9 million of the System revenues. S.R. 414 paid in-lane transactions were reported at 13.4 million or 3.4 percent, while paid in-lane revenues were reported at \$14.8 million or 3.6 percent of the System revenues. Paid in-lane transactions on S.R. 453 were 3.0 million or 0.8 percent of the System and revenues were \$2.1 million or 0.5 percent of the System. S.R. 538 represented 3.9 million or 1.0 percent of System transactions and \$6.6 million or 1.6 percent of System revenues for FY 2021.

**Figure 1-7**  
**CFX System Paid In-Lane Transactions and Revenue by Facility**  
**FY 2021**



Source: Monthly unaudited data provided by CFX

### 1.6.4 ANNUAL PBP TRANSACTION AND REVENUE TRENDS

A history of annual PBP transactions and revenue on the total CFX System from FY 2012 to FY 2021 are presented in **Table 1-6**. PBP transactions and revenue are recorded by toll location and accrued monthly by plaza group, however Table 1-6 shows the annual totals for the CFX System as reported at year end.

**Table 1-6**  
**CFX System – Historical PBP Transactions and Revenue**  
**FY 2012 – FY 2021**

Fiscal Year	Transactions (millions)	Percent Change	Toll Revenues (millions)	Percent Change
	<b>TRANSACTIONS (millions)</b>			
<b>2012</b>	4.4		\$4.6	
<b>2013</b>	5.4	22.7%	\$6.9	50.0%
<b>2014</b>	6.8	25.9%	\$8.4	21.7%
<b>2015</b>	8.8	29.4%	\$11.0	31.0%
<b>2016</b>	12.2	38.6%	\$15.7	42.7%
<b>2017</b>	14.6	19.7%	\$22.4	42.7%
<b>2018</b>	21.6	47.9%	\$24.4	8.9%
<b>2019</b>	43.6	101.9%	\$49.9	104.5%
<b>2020</b>	48.6	11.5%	\$57.7	15.6%
<b>2021</b>	52.9	8.8%	\$103.9	80.1%

Source: Monthly unaudited data provided by CFX

PBP transactions have increased from 4.4 million in FY 2012 to 52.9 million in FY 2021, while PBP revenues have increased from \$4.6 million to \$103.9 million over the same period. In FY 2021, PBP transactions increased 8.8 percent and PBP revenues increased 80.1 percent over FY 2020. The trends show that more customers are choosing the PBP method of payment. During the early part of COVID-19 pandemic, cash toll collection was suspended for several months. For this reason, PBP transactions and revenue increased in FY 2020. The significant increase in PBP revenues in FY 2021 can be attributed to the new PBP toll rate adopted by the CFX Board that went into effect on July 1, 2020 (FY 2021), at which time the PBP toll rate at all toll locations was increased to twice the ETC toll rate. Because of the new PBP toll rate, it is anticipated that going forward a portion of customers paying via PBP will switch to ETC to avoid the higher toll rate. Overall, the increase in customer preference for PBP in recent years has contributed to the slower growth in paid in-lane transactions and revenue.

### 1.6.5 MONTHLY PAID IN-LANE TRANSACTION SEASONAL VARIATION

In **Table 1-7**, monthly paid in-lane transactions are normalized to the average number of paid in-lane transactions per day. Using the average number of transactions per day allows for an easy comparison of the variations in relative travel demand over the year. The pattern of seasonal usage changes slightly from year to year, based on the number of weekdays in each month, but in FY 2021 this seasonality was overshadowed by the impacts on travel demand from the COVID-

19 pandemic. Therefore, the factors in Table 1-7 do not reflect the typical monthly seasonal trends on the CFX System. Instead, these factors include the recovery from COVID-19.

The average number of transactions per day in FY 2021 on the System ranged from a low of 890,200 in July 2020 to a high of 1,259,600 in June 2021. Because of the recovery from COVID, paid in-lane transactions steadily increased through the end of the fiscal year. This data is presented in a graphical format in **Figure 1-8**. Each month's average paid in-lane transactions per day appear as a percentage of the average for the fiscal year. As shown in the figure, July paid in-lane transactions were 16.8 percent below average and July paid in-lane transactions were 17.7 percent above the average.

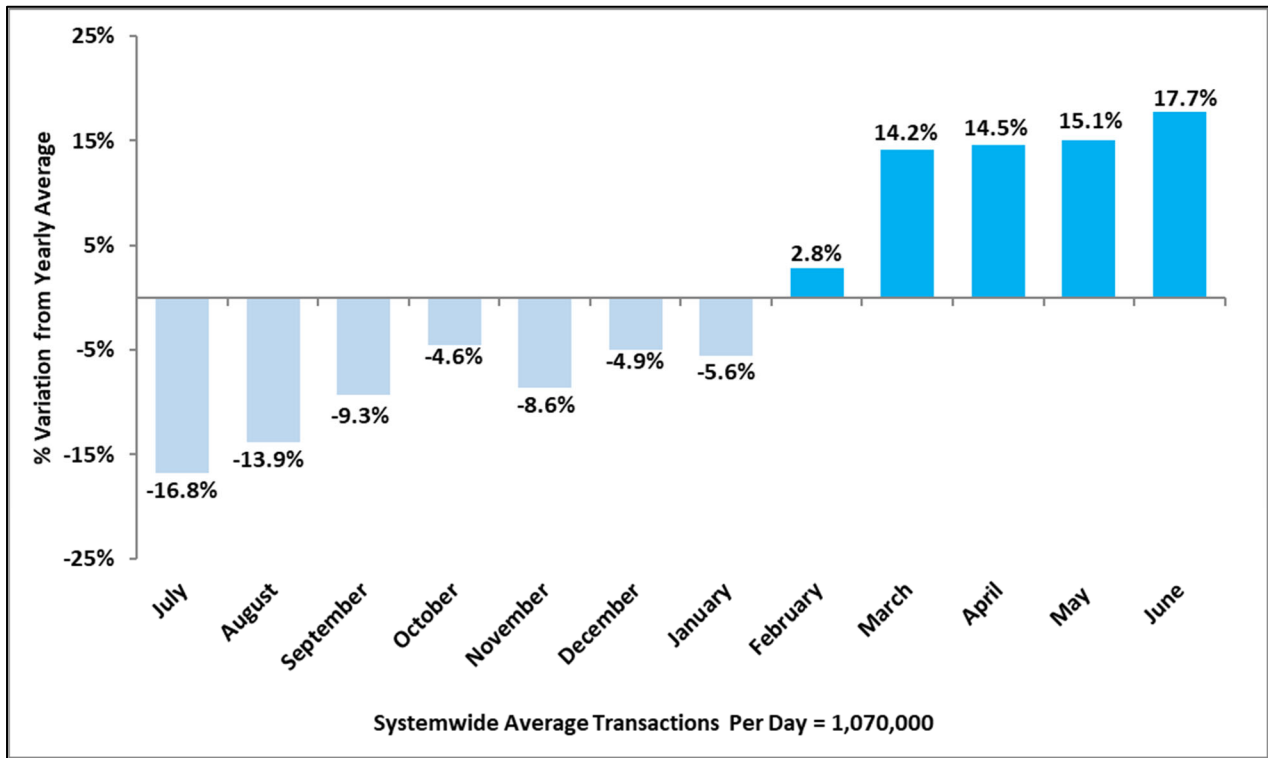
Typically, paid in-lane transactions are lower than average for the first half of the year and higher than average for the second half of the year. This is a normal pattern for seasonal variation, with the spring months being the peak season, due to an increase in the number of tourists and seasonal residents in the area. The seasonal patterns vary on different facilities, with the Beachline Expressway having the strongest seasonal variation due to its proximity to the Orlando International Airport (OIA) and the tourist attractions.

**Table 1-7**  
**CFX System - Monthly Seasonal Variation in Paid In-Lane Transactions**  
**FY 2021**

Number of Days in Month	Paid In-Lane Transactions	Average Transactions Per Day	Seasonal Factor
31	27,595,054	890,200	0.832
31	28,573,215	921,700	0.861
30	29,114,652	970,500	0.907
31	31,661,673	1,021,300	0.954
30	29,325,695	977,500	0.914
31	31,529,242	1,017,100	0.951
31	31,327,843	1,010,600	0.944
28	30,805,431	1,100,200	1.028
31	37,871,132	1,221,600	1.142
30	36,769,485	1,225,600	1.145
31	38,177,083	1,231,500	1.151
30	37,787,721	1,259,600	1.177
	<b>32,544,852</b>	<b>1,070,000</b>	<b>1.000</b>
<b>365</b>	<b>390,538,226</b>		

Source: Monthly unaudited data provided by CFX

**Figure 1-8**  
**CFX System Variation in Paid In-Lane Transactions Per Day, by Month**  
**FY 2021**



Source: Monthly unaudited data provided by CFX

**1.6.6 RECENT TRENDS**

Several T&R trends influenced recent and will influence future results. Some of these are long-term trends and others have been developing over the past few years. We have used the latest information for the first half of FY 2022.

The proportion of paid in-lane transactions that were paid with cash has been declining. **Figure 1-9** contains a graph of the proportion paid with cash by month. At the beginning of FY 2016, approximately 16.5% of paid in-lane transactions were paid with cash. During the first half of FY 2022, only 3.6% of these paid in-lane revenue transactions were paid with cash. An increasing share of the customers who pay in the lane are paying with ETC. The period when cash toll collection was suspended, from March 19, 2020 to May 31, 2020, is visible in the graph.

**Figure 1-9**  
**Proportion Paid In-Lane Transactions Paid with Cash**  
**by Month, July 2015 to January 2022**

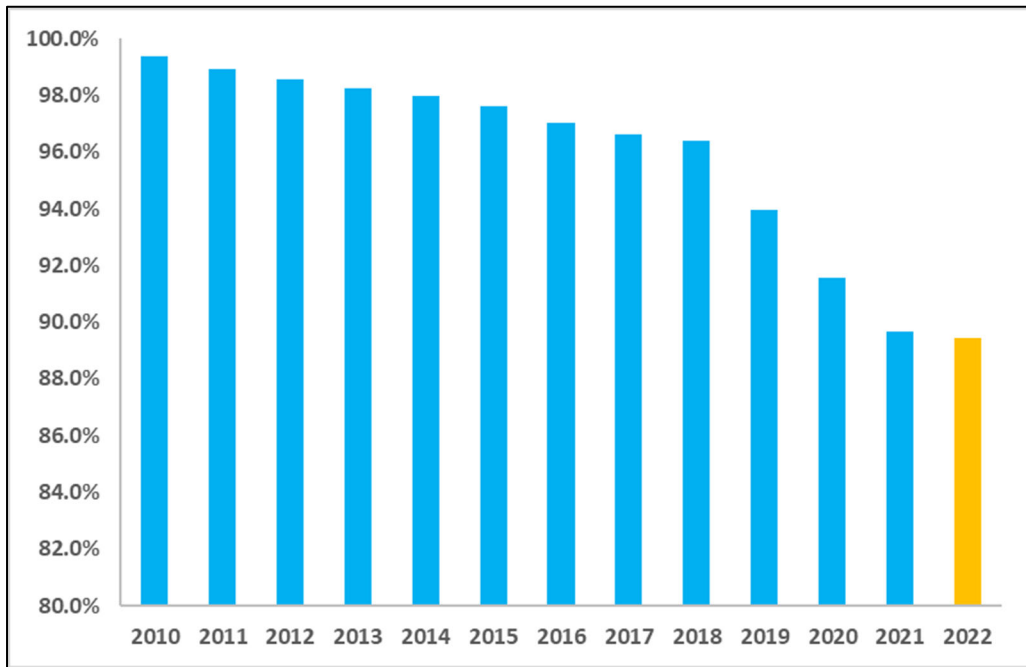


Source: CFX Monthly T&R Analysis

The proportion of transactions that are paid in-lane has also been declining for some time. **Figure 1-10** is a graph with the proportion of all transactions that were paid in-lane since FY 2010. In FY 2010, 99.3 percent of all transactions were paid with cash or ETC, i.e., paid in-lane transactions. In FY 2021, this number dropped to 89.7 percent. Expectations are that this value will decline further in FY 2022 to 89.5 percent. A similar pattern occurs on all CFX expressways. This means that an increasing number of customers are using the PBP process.

This recent trend is unexpected, since CFX has taken many steps to incentivize customers to pay tolls in the lane. It is anticipated that future paid-in lane transactions will increase over time due to the implementation of the new PBP toll rates. Customers can pay with cash at every toll location except the five toll locations associated with the recently opened S.R. 429/Wekiva Parkway and the recently opened and acquired S.R. 538/Poinciana Parkway. CFX offers convenient ways for customers to obtain transponders (including free sticker tags) and provides easy ways to put funds into their accounts (including the ability to use cash in the reload lanes at several mainline toll plazas).

**Figure 1-10**  
**Proportion of Transactions Paid In-Lane**  
**FY 2010 – FY 2022**



Source: CFX Monthly T&R Analysis

The increase in the number and proportion of customers choosing PBP means that it takes CFX a longer time and costs more to collect the toll. Furthermore, CFX is not able to collect all toll revenue owed by PBP customers. Like the private sector, CFX has added an accounts receivable (AR) for unpaid in-lane revenues. The December 2021 aging report is provided in **Table 1-8**. A portion of the initial unpaid in-lane transactions are recognized and reclassified as transactions by ETC account holders. CFX now accrues revenue for unpaid in-lane transactions at approximately 50 percent of the initial billed amount.



**Table 1-8  
CFX Pay by Plate Aging Report  
As of December 31, 2021**

CENTRAL FLORIDA EXPRESSWAY AUTHORITY PAY BY PLATE AGING REPORT AS OF DECEMBER 31, 2021						
Month UTN/PBP was Created	Total Transactions Associated with an UTN/PBP <sup>(1)</sup>	Toll Revenue Billed	Toll Revenue Paid-to-Date	Toll Revenue M-Tolled-to- Date <sup>(2)</sup>	Total Toll Revenue Collected-to- Date	Percentage of Billed Revenue Collected-to- Date
Dec-19	6,178,315	\$7,702,838.60	\$5,195,256.78	\$1,041,087.33	\$6,236,344.11	80.96%
Jan-20	7,434,890	\$8,947,588.80	\$5,824,656.21	\$1,359,271.44	\$7,183,927.65	80.29%
Feb-20	7,978,541	\$10,069,822.29	\$6,449,396.40	\$1,562,469.29	\$8,011,865.69	79.56%
Mar-20	6,160,740	\$7,571,651.97	\$4,730,875.86	\$1,215,723.46	\$5,946,599.32	78.54%
Apr-20	6,000,728	\$6,478,287.06	\$4,059,822.93	\$1,080,834.58	\$5,140,657.51	79.35%
May-20	5,064,318	\$5,238,909.26	\$3,263,148.40	\$924,962.77	\$4,188,111.17	79.94%
Jun-20	6,092,685	\$6,276,270.15	\$3,877,659.59	\$1,113,657.85	\$4,991,317.44	79.53%
Jul-20	5,535,821	\$7,318,639.11	\$4,202,646.83	\$1,318,510.46	\$5,521,157.29	75.44%
Aug-20	6,375,974	\$11,912,400.76	\$6,366,101.00	\$1,876,968.75	\$8,243,069.75	69.20%
Sep-20	5,950,316	\$11,170,333.26	\$5,912,095.63	\$1,773,725.43	\$7,685,821.06	68.81%
Oct-20	5,923,274	\$11,093,561.33	\$5,742,098.74	\$1,786,965.47	\$7,529,064.21	67.87%
Nov-20	6,238,481	\$11,586,672.15	\$5,939,064.59	\$1,847,759.31	\$7,786,823.90	67.21%
Dec-20	6,188,390	\$11,470,638.07	\$5,728,130.75	\$1,906,812.82	\$7,634,943.57	66.56%
Jan-21	6,338,113	\$11,712,907.15	\$5,521,755.41	\$2,029,387.18	\$7,551,142.59	64.47%
Feb-21	5,709,714	\$10,547,183.73	\$4,695,824.91	\$1,864,217.70	\$6,560,042.61	62.20%
Mar-21	6,608,946	\$12,250,562.44	\$5,199,932.22	\$2,217,996.39	\$7,417,928.61	60.55%
Apr-21	6,722,489	\$12,481,546.78	\$5,129,172.90	\$2,076,852.04	\$7,206,024.94	57.73%
May-21	7,107,015	\$13,193,955.11	\$5,017,907.45	\$1,993,622.54	\$7,011,529.99	53.14%
Jun-21	7,798,150	\$14,522,392.99	\$5,183,673.39	\$2,135,271.76	\$7,318,945.15	50.40%
Jul-21	7,159,012	\$13,436,680.04	\$4,485,465.07	\$1,959,657.39	\$6,445,122.46	47.97%
Aug-21	7,545,439	\$14,294,959.80	\$4,342,803.18	\$2,046,454.00	\$6,389,257.18	44.70%
Sep-21	7,327,806	\$13,819,331.33	\$3,729,065.28	\$1,860,665.00	\$5,589,730.28	40.45%
Oct-21	7,316,624	\$13,751,077.31	\$3,229,265.06	\$1,595,938.00	\$4,825,203.06	35.09%
Nov-21	7,954,642	\$14,990,722.92	\$2,704,270.06	\$1,284,354.00	\$3,988,624.06	26.61%
Dec-21	7,638,247	\$14,465,676.59	\$1,205,803.33	\$671,784.00	\$1,877,587.33	12.98%
<b>TOTALS</b>	<b>166,348,670</b>	<b>\$276,304,609.00</b>	<b>\$117,735,891.97</b>	<b>\$40,544,948.96</b>	<b>\$158,280,840.93</b>	<b>57.28%</b>

(1) Transactions associated with an PBP could have occurred up to one year prior to PBP creation.  
(2) M-tolls are paid from an E-PASS account after the PBP is created.

Source: CFX Statistical Report December 2021

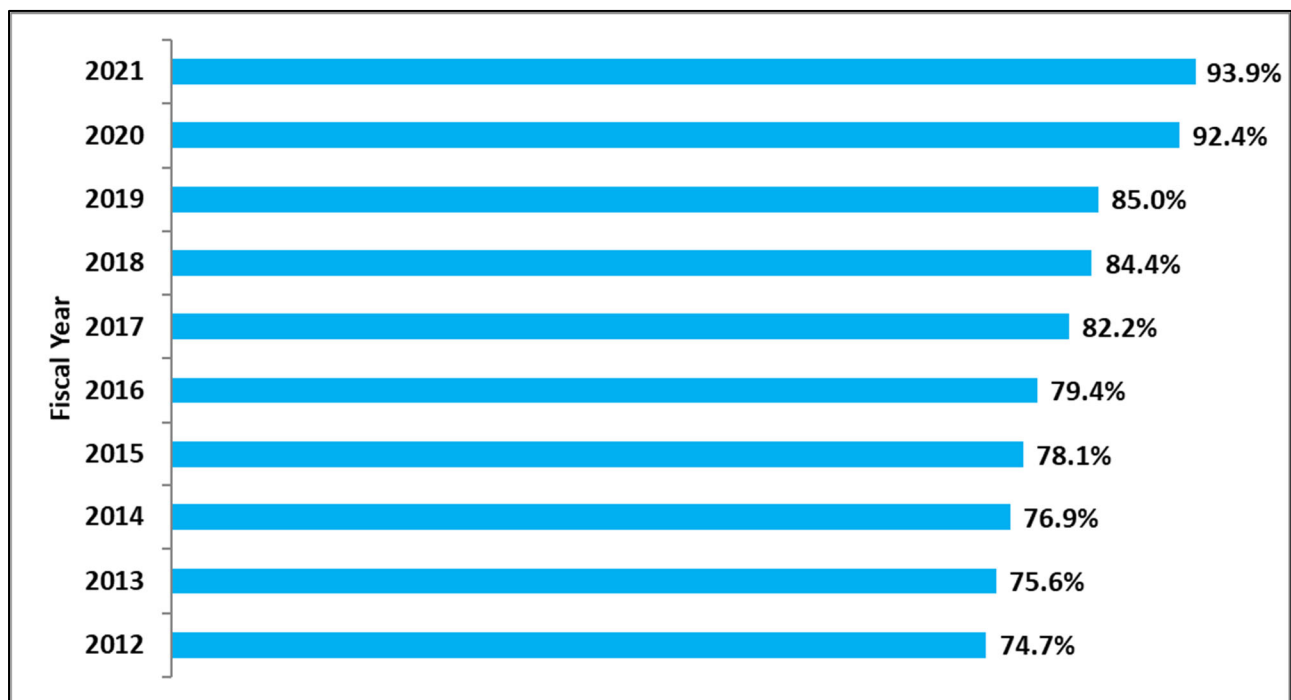
## 1.7 ETC Usage

In 1994, CFX introduced the first ETC program in Florida, known as E-PASS. During that year there were approximately 2,300 E-PASS transponders in use on the System. As of FY 2021 the number has grown to 1,163,067 transponders and approximately 730,000 active E-PASS accounts. As shown in **Figure 1-11**, the percent of paid in-lane revenues from ETC has grown steadily for the past 10 years from only 74.7 percent in FY 2012 to 93.9 percent in FY 2021. ETC transactions account for over 90 percent of daily paid in-lane revenue on all CFX System facilities. Many customers purchase E-PASS to take advantage of the lower electronic toll rate and pay on average 23 percent less in tolls.

In FY 2013, E-PASS became interoperable with North Carolina Quick Pass and Georgia Peach Pass. This means that Quick Pass and Peach Pass transponders are accepted on CFX facilities and E-PASS transponders are accepted on the North Carolina and Georgia facilities. ETC usage is still expected to increase as customers shift to ETC to take advantage of the lower ETC toll rate and convenience of paying tolls electronically, especially with implementation of PBP toll rates that are now twice the ETC toll rate as of July 2020 (FY 2021).

Beginning May 11, 2016, CFX implemented a pilot program called The Reload Lane to encourage and increase E-PASS usage. CFX offered this drive-through lane on S.R. 408 at the Conway Main Plaza for customers to sign up for an E-PASS electronic transponder or replenish an existing E-PASS account from 6:00 a.m. to 8:00 p.m. daily. This program was the first of its kind in the continental United States and provided customer convenience and multiple payment options (cash, check, and debit/credit card). The program was expanded to S.R. 417 and S.R. 429 in FY 2017. Due to the success of this program, the CFX Board approved the expansion of the Reload Lane capabilities to all manned toll plaza lanes on all system facilities, expected to be completed by FY 2022.

**Figure 1-11**  
**CFX System Percent of Paid In-Lane Revenue from Electronic Toll Collection**  
**FY 2012 – FY 2021**



Source: Monthly unaudited data provided by CFX

The Customer Loyalty Discount Program introduced in May 2016 provided discounts to frequent users of all facilities for E-PASS transactions. This program is discussed in more detail in **Section 1.3.1** of this chapter. CFX also began offering CollegePass in its first branded E-PASS partnership with the University of Central Florida (UCF), the University of Florida (UF) and Florida State University (FSU). These special sticker tags cost \$18.50 plus tax and an additional \$10 for new customers to activate a prepaid toll account. CollegePass works the same way as regular sticker tag transponders and offers the same discounts and benefits exclusive to E-PASS customers. Regular sticker tags are still available at no cost to the customer.

In November 2017, CFX announced the development of an interoperability agreement with the E-ZPass group, the largest group of toll road operators in the United States. The agreement made CFX the first expressway system in Florida to accept E-ZPass, which is a network of toll road agencies operating from Maine to North Carolina and west through Illinois. Following the announcement of the new agreement, CFX unveiled a new portable transponder that would be accepted on facilities that use both E-PASS and E-ZPass, called the E-PASS Xtra.

In 2020, CFX introduced Uni, a portable toll pass. Uni is a multi-protocol transponder that works in 18 states with all the benefits of E-PASS. Customers can enjoy benefits including one account and one invoice for travel in 18 states, no account fees, transferrable from vehicle to vehicle, works with rental cars and motorcycles, and pays for parking at Orlando International Airport. Uni offers the same benefits as E-PASS Xtra, but with newer, future-ready toll technologies.

In June 2021, CFX also launched the Visitor Toll Pass program, which is a free temporary toll pass for rental car customers traveling through the Orlando International Airport. With the pass, rental car customers pay the ETC rates on Florida toll roads with no extra or hidden fees.



## 1.8 Forecasting Methodology

The estimates of future annual T&R for the CFX System, contained in this annual report, were derived from a complex process involving both a traditional four-step, travel demand model and a series of T&R models both designed specifically for this purpose. The overall approach was to develop estimates of future paid in-lane transactions and then separate estimates of future unpaid in-lane transactions. The forecasts of paid in-lane transactions were obtained through the application of annual growth rates by plaza group. The early-year growth rates came from recent experience and trends and the outer-year growth rates reflect results from the travel demand model. With estimates of both types of transactions, the final step was to prepare estimates of future toll revenue and the effects of the discount programs. At the risk of over-simplification, the forecasts of future toll revenues were estimated as the sum of the product of the traffic forecasts (converted to the number of annual transactions) and the toll rate at each tolling point on the CFX System. This section of the report provides an overview of the forecasting methodology and general approach used to estimate T&R.

### 1.8.1 TRAVEL DEMAND MODEL

The long-term growth rates are based on results from the series of travel demand models known as the CFX Model 3.X. These models were developed and continually improved versions the prior model. The more recent model CFX Model 3.3 has been used for project-specific forecasts including the S.R. 538/Poinciana Parkway. The foundation for the model used was the 2009 Orlando Urban Area Transportation Study (OUATS) Model, developed by MetroPlan Orlando. Model features outside of the MetroPlan Orlando area (Orange, Seminole and Osceola Counties)

are based on the 2005 Central Florida Regional Planning Model (CFRPM) produced by Florida Department of Transportation, District 5.

The models were calibrated to recent conditions, including socioeconomic (SE) data from the US Census and Woods and Poole data in the traditional CFRPM zone systems. The calibration was based on the transportation networks taken from the two operational models. The networks and associated counts were reviewed using aerial photography and updated as necessary. Data from the National Highway Travel Survey (NHTS) Florida was acquired and used to calibrate the trip length distributions for five trip purposes (home-based work, home-based shopping, home-based social recreation, home-based other and non-home-based trips). The treatment of external trips was also carefully reviewed and improved, as was the use of time penalties and turn prohibitions.

To make the model more sensitive to network and tolling considerations, it was calibrated to match historical traffic counts on mainline and ramp segments on the CFX System. In the validation year, almost all transactions were Paid In-Lane transactions. The calibration process utilized an approach called Origin-Destination Matrix Estimation (ODME) to enhance the replication of observed traffic patterns, especially on the CFX System. Technical documentation of the model development process is available separately. At the conclusion, the model provided a very close fit to travel patterns in general and especially close to travel on the CFX System.

Turning to the production of traffic forecasts, SE data forecasts were developed in three planning horizon years (2025, 2035, and 2045) corresponding to the years with SE data forecasts. The SE data forecasts were developed from a combination of growth rates by county and the spatial pattern of development from the MPO plans. Population growth rates were developed from the Medium level population projections by county from the most recent publication by the Bureau of Economic and Business Research (BEBR), College of Business Administration at the University of Florida. Forecasts of employment were based on estimates of future employment by county produced by Woods and Poole. Control totals for each county by data set were developed and applied to the spatial distribution of growth by zone as adopted by the MPOs.

Future year transportation networks were created for each of the planning horizon years. The future year networks were updated to include the latest network improvements from the Long-Range Transportation Plans (LRTPs) and Transportation Improvement Programs (TIPs) for all MPOs covered by the model. These included MetroPlan Orlando, Lake-Sumter MPO, Space Coast TPO, River to Sea TPO and Polk County TPO. The future networks included all improvements identified in the CFX Work Program and Master Plan. The future year networks also included improvement projects identified in the Florida DOT Strategic Intermodal System's (SIS) 1<sup>st</sup> and 2<sup>nd</sup> 5-year plans, and SIS Cost Feasible 2040 Plan, as well as Florida Turnpike Enterprise's 5-Year Work Program along with the 2010 Update of Florida's Turnpike Enterprise Master Plan.

The Customer First Toll Policy, adopted by the CFX Board for implementation in FY 2018, was incorporated in the travel demand model. In this way, the model provided direct estimates of the effect of future SE data, network improvements and toll rate adjustments on CFX System traffic.

## 1.8.2 HISTORIC TRANSACTIONS AND REVENUE

The T&R Model was built on an up-to-date history of transactions and revenue for each plaza group by month, found in the monthly unaudited data provided by CFX. The data, which describes the paid in-lane transactions and revenue, has been used in the past as the basis for development of the travel demand model and for the T&R estimates. In prior forecasts, the impacts of Uniform Toll Notices (UTNs) and PBP were handled separately at a system level. Given recent changes, these are now separately forecast by plaza group. Since the historic data includes the effect of vehicle class on T&R, the forecasts of future T&R also include these effects.

Data on unpaid in-lane transactions and revenue also comes from the monthly unaudited data provided by CFX and the **2021 Comprehensive Annual Financial Report (2021 CAFR)**. The separate analysis and forecasts of unpaid in-lane (PBP) transactions and revenue necessarily includes violations and leakage.

The revenue impacts of the discount programs are based on information contained in the 2021 CAFR and handled separately at a system level.

## 1.8.3 PAID IN-LANE TRANSACTIONS

The T&R Model is a spreadsheet that includes a combination of history and prior forecasts, along with the new forecasts.

Recent paid in-lane transaction data was used to assess the impacts of the three recent weather events (Hurricane Matthew in FY 2017, Hurricane Irma in FY 2018 and Hurricane Dorian in FY 2020). The impacts of the COVID-19 pandemic, which began in March 2020, were also considered. This data was then used to identify growth trends by plaza group with and without the hurricanes and COVID-19. The transaction estimates for FY 2022, the first year in the forecast, were developed from the first half year of actual results extended to the remainder of the year. The estimates for FY 2023 and beyond were adjusted or “trued up” to reflect achievable expectations for the first fiscal year in the new forecast.

Then, near-term and mid-term growth rates were developed from the combination of recent growth and the growth rates derived from the travel demand model. The long-term growth rates come from the travel demand model with some adjustment.

The effect of the combination of travel demand model and the T&R model is such that the paid in-lane transaction estimates are controlled to match base year values. Growth in the paid in-lane transaction estimates is primarily determined by changes from the travel demand model, modified by recent experience. This includes the effects of changes in the spatial pattern of SE activity, changes in transportation network and changes in toll rate.

## 1.8.4 PAY BY PLATE (PBP) TRANSACTIONS

The estimates of PBP transactions utilize preliminary transaction results by plaza group from FY 2020 and FY 2021 and the first six months of FY 2022. PBP transactions are described as the unpaid in-lane transactions as a proportion of the paid in-lane transactions with an applied accrual rate. With the new PBP toll rate adopted by the CFX Board in October 2019, that was

implemented on July 1, 2020 (FY 2021), it is anticipated that a portion of the PBP transactions will move back to paid in-lane transactions, ETC, and a portion will stay. The forecast includes an assumption that 95% of the forecasted unpaid in-lane transactions will remain in FY 2022, 90% will remain in FY 2023, and 85% of forecasted unpaid in-lane transactions will remain in FY 2024 and beyond. **Table 1-9** contains the proportions of paid in-lane transactions used to determine the PBP transactions.

For FY 2022, the average proportion of the first six months was used to estimate the unpaid in-lane transactions with an accrual rate of 50%. For FY 2023 the proportion was calculated as the difference in proportion of paid in-lane transactions from FY 2021 and FY 2022 added to the prior year with an accrual rate of 49%. For FY 2024 and beyond the proportion was calculated as the difference in proportion of paid in-lane transactions from the two prior years added to the most recent prior year with an accrual rate of 48%. Over time as the number of PBP customers shrinks, it will be more difficult to collect tolls from those remaining in PBP, hence the lower accrual rate.

**Table 1-9**  
**Unpaid In-Lane Transactions as Proportion of Paid In-Lane Transactions**

Plaza Group		FY 2021	FY 2022	FY 2023	FY 2024 and
Airport Main	S.R. 528	22.1%	21.1%	19.5%	18.0%
Beachline Main		24.3%	20.2%	18.3%	17.7%
Dallas Main		19.5%	20.9%	19.4%	18.9%
Hiawasse Main	S.R. 408	25.3%	25.7%	23.8%	22.9%
Pine Hills Main		28.2%	29.1%	26.7%	25.6%
Conway Main		26.2%	27.4%	25.0%	24.0%
Dean Main		25.2%	25.3%	22.8%	21.6%
John Young Main	S.R. 417	25.3%	26.6%	24.2%	23.1%
Boggy Creek Main		23.1%	22.3%	19.7%	18.2%
Curry Ford Main		21.9%	22.6%	20.5%	19.4%
University Main		21.6%	21.9%	19.8%	18.9%
Forest Lake Main	S.R. 429	22.4%	24.0%	22.0%	20.9%
Independence Main		20.0%	21.9%	20.0%	18.9%
Ponkan Main		23.7%	24.8%	22.2%	21.1%
Mt. Plymouth Main		22.9%	23.9%	21.4%	20.3%
Coral Hills Main	S.R. 414	22.9%	24.7%	21.4%	20.0%
Coronado Main	S.R. 453	25.6%	26.5%	23.5%	22.1%
Marigold Main	S.R. 538	45.8%	41.7%	37.3%	35.5%
Koa Main		39.2%	36.4%	33.4%	31.7%

Source: CFX Monthly T&R Analysis

### 1.8.5 TOLL REVENUE

Just like the process with transactions, recent paid in-lane revenue data was used to assess the impacts of the three recent hurricanes. This data was then used to identify growth trends by plaza group. The transaction estimates for FY 2022 were developed from the first half year of actual results extended to the remainder of the year. The estimates for FY 2023 and beyond were

adjusted or “trued up” to reflect achievable expectations for the first fiscal year in the new forecast. The CFX toll policy was applied in all future years, specifically the indexed toll rate. The 1.5% floor was used in all future years except FY 2022 in which tolls were increased by 5.08 percent.

Then, once again, mid-term growth rates were developed from the combination of recent growth and the growth rates derived from the travel demand model. The long-term growth rates from the travel demand model with some adjustment.

The effect of the combination of travel demand model, toll rate adjustments, and the T&R model is such that the paid in-lane revenue estimates are controlled to match base year values. Growth in the paid in-lane revenue estimates is primarily determined by changes from the travel demand model, modified by recent experience. This includes the effects of changes in the spatial pattern of SE activity, changes in transportation network and changes in toll rate. Because of the indexed toll rates, the growth rates in revenue are higher than the growth rates in transactions. The traffic and revenue forecasts, while pursued independently, are related through the effective toll rate. The planned toll rate increases are visible in future effective toll rates.

The revenue collected from the PBP process in each plaza group is determined by calculating the initial billed amount of revenue. For FY 2022 and beyond, the initial billed amount was calculated as the PBP transactions times twice the ETC toll rate, escalated according to the Customer First toll policy (1.5% per year). This change is due to a new PBP toll rate that was implemented on July 1, 2020 (FY 2021). **Table 1-10** contains a summary of the effective toll rates by plaza group for FY 2021. The total revenue is the sum of the revenue from paid in-lane transactions and the revenue collected from the PBP process.

**Table 1-10**  
**Effective Toll Rates (FY 2021)**

Plaza Group		ETC	Cash	PBP
Airport Main	S.R. 528	\$1.16	\$1.27	\$2.25
Beachline Main		\$1.04	\$1.27	\$1.76
Dallas Main		\$0.58	\$0.74	\$0.98
Hiawasse Main	S.R. 408	\$0.84	\$0.93	\$1.52
Pine Hills Main		\$1.15	\$0.90	\$2.10
Conway Main		\$1.80	\$0.17	\$2.13
Dean Main		\$0.86	\$0.97	\$1.59
John Young Main	S.R. 417	\$1.19	\$1.42	\$2.09
Boggy Creek Main		\$1.24	\$1.58	\$2.39
Curry Ford Main		\$0.91	\$0.99	\$1.63
University Main		\$0.90	\$0.98	\$1.57
Forest Lake Main	S.R. 429	\$1.29	\$1.44	\$2.34
Independence Main		\$1.17	\$1.58	\$2.15
Ponkan Main		\$0.91	\$0.00	\$1.66
Mt. Plymouth Main		\$0.89	\$0.00	\$1.56
Coral Hills Main	S.R. 414	\$1.10	\$1.16	\$1.91
Coronado Main	S.R. 453	\$0.72	\$0.00	\$1.54
Marigold Main	S.R. 538	\$2.18	\$0.00	\$4.11
Koa Main		\$0.54	\$0.00	\$1.02

Source: CFX Monthly T&R Analysis

Note: \$0.00 indicates no cash toll collection

### 1.8.6 FORECASTING ASSUMPTIONS

T&R estimates for the CFX System are predicated on the following basic assumptions, all of which are considered reasonable for the purposes of this T&R study:

- Toll rates at each location are in nominal or future-year dollars, conforming to the current toll rate policy. Toll rate adjustments (indexed tolls) are applied every year based on the net change in CPI of 5.08 percent in FY 2022 and 1.5 percent each year thereafter.
- Inflation is assumed to be 2.5 percent annually which includes the adjustment for real income growth. The value of time is likewise expected to increase by 2.5 percent per year.
- Future transportation projects were assumed as defined in the locally adopted plans. The projects listed in the locally adopted Transportation Improvement Programs (TIP) and the 2045 Long Range Transportation Plans (LRTP) were reviewed and compared with the prior model and with the CFRPM. Most of the projects in the TIP were assumed to be built by FY 2018, but some occur later depending on the horizon year. The Cost Feasible LRTP projects were reviewed and included in the corresponding future-year. CFX improvements were assumed and included based on projects identified in the 2040



Master Plan. Details on future projects that impact specific system components are provided in each chapter.

- The complete Wekiva Parkway, from US 441 to I-4, was included in the models by the horizon year of 2023. T&R from the CFX portion of the Wekiva Parkway are included in the System totals reported in this annual report. The new toll facility is reported as part of S.R. 429 and the new facility S.R. 453.
- The estimates assume that the I-4 Ultimate project will be completed and opened to traffic in FY 2022.
- No local, regional or national emergency, outside of the current COVID-19 pandemic, will arise which would abnormally restrict the use of motor vehicles, or substantially alter economic activity or freedom of mobility.
- Motor fuel will remain in adequate supply, and long-term increases in price will not significantly exceed the overall rate of inflation throughout the forecast period.
- The CFX System will be well-maintained, efficiently operated and effectively signed and promoted to encourage maximum usage.
- Forecasted transactions are the sum of paid in-lane and unpaid in-lane transactions. Forecasted revenue is the sum of paid in-lane revenue and revenue accrued for unpaid in-lane transactions. Allowances for the discount programs are included separately on a System-wide basis.
- The impacts of the widening projects in the CFX Work Program have been included in these estimates. None of the potential CFX expansion projects have been included.

Any significant departure from the above basic assumptions could materially affect estimated traffic and toll revenues for the CFX System.

## **1.9 System Forecasts**

### **1.9.1 SYSTEM TRANSACTION AND TOLL REVENUE FORECASTS**

The total transactions and toll revenue by facility and for the System are summarized in **Table 1-11** and **Table 1-12**. The tables are divided into paid in-lane transactions and revenue and PBP transactions and revenue. This information is presented for historical transactions and toll revenue since FY 2010 and estimates in a 30-year forecast. The forecasts were produced by mainline plaza groups, aggregated to toll facility and then to the CFX System.

**Table 1-11  
CFX System Transaction Forecast (Millions)**

Fiscal Year		Paid In-Lane	PBP	Total	Percent Annual Change
2010		286.5	1.8	288.3	
2011		292.5	3.1	295.6	2.5%
2012		298.1	4.4	302.5	2.3%
2013 <sup>A</sup>		306.9	5.4	312.3	3.2%
2014		326.8	6.8	333.6	6.8%
2015		357.6	8.8	366.4	9.8%
2016 <sup>B</sup>	Actual	398.3	12.2	410.5	12.0%
2017 <sup>C</sup>		420.9	14.6	435.5	6.1%
2018 <sup>D,E</sup>		433.4	21.6	455.0	4.5%
2019 <sup>F</sup>		437.4	43.6	481.0	5.7%
2020 <sup>G</sup>		388.4	48.6	437.0	-9.1%
2021 <sup>H</sup>		390.5	52.8	443.3	1.4%
2022 <sup>I</sup>			442.3	52.1	494.4
2023		473.9	48.7	522.6	5.7%
2024		502.2	48.2	550.4	5.3%
2025		515.1	49.3	564.4	2.5%
2026		524.7	50.2	574.9	1.9%
2027		533.7	51.0	584.7	1.7%
2028		542.5	51.9	594.4	1.7%
2029		551.5	52.8	604.3	1.7%
2030		559.9	53.4	613.3	1.5%
2031		568.8	54.2	623.0	1.6%
2032		577.1	54.7	631.8	1.4%
2033		585.6	55.5	641.1	1.5%
2034		593.7	55.9	649.6	1.3%
2035	Forecast	601.7	56.7	658.4	1.4%
2036		609.8	57.4	667.2	1.3%
2037		617.7	57.6	675.3	1.2%
2038		625.5	58.4	683.9	1.3%
2039		633.0	58.9	691.9	1.2%
2040		641.0	59.1	700.1	1.2%
2041		648.3	59.8	708.1	1.1%
2042		655.7	60.0	715.7	1.1%
2043		663.0	60.2	723.2	1.0%
2044		670.3	60.8	731.1	1.1%
2045	677.2	61.1	738.3	1.0%	
2046	684.3	61.5	745.8	1.0%	
2047	691.0	61.7	752.7	0.9%	
2048	697.4	61.8	759.2	0.9%	
2049	704.1	62.0	766.1	0.9%	
2050	710.1	62.1	772.2	0.8%	
2051	716.4	62.3	778.7	0.8%	

Fiscal Year	Compound Annual Average Growth Rates (CAAGR)		
2010 - 2021	2.9%	36.0%	4.0%
2021 - 2031	3.8%	0.3%	3.5%
2031 - 2041	1.3%	1.0%	1.3%
2041 - 2051	1.0%	0.4%	1.0%

Notes:

Actual transaction data provided by CFX from Monthly Statistical Reports.

A - Systemwide toll rate increase.

B - Airport Main Plaza closes, new ramp plazas open at beginning of FY 2016.

Transactions for tolls collected at the Turnpike plaza not included.

C - Effects from Hurricane Matthew in October 2016.

D - Ponkan Main plaza opened on July 27, 2017 and Mount Plymouth Main opened on April 1, 2018 (S.R. 429).

Coronado Main plaza opened on April 1, 2018 (S.R. 453).

E - Effects from Hurricane Irma in September 2017.

F - First year of implementation of "Customer First" toll rate policy and assumed toll rate increase of 2.05% in FY 2019.

Annual toll rate increase of 2.05% in FY 2019 and 1.5% assumed annually throughout forecast period.

G - Effects from Hurricane Dorian in September 2019 and first effects of COVID-19 pandemic began in March 2020.

H - New toll rates for PBP customers, set at 2.0 times the ETC rate. Continued effects of COVID-19 pandemic.

I - Completion of I-4 Ultimate project.

**Table 1-12**  
**CFX System Toll Revenue Forecast - Before Discounts (Millions)**

Fiscal Year		Paid In-Lane	PBP	Total	Percent Annual Change
2010		\$261.0	\$2.2	\$263.2	
2011		\$266.3	\$3.3	\$269.6	2.4%
2012		\$267.5	\$4.6	\$272.1	0.9%
2013 <sup>A</sup>		\$302.1	\$6.9	\$309.0	13.6%
2014		\$322.4	\$8.4	\$330.8	7.1%
2015		\$353.1	\$11.0	\$364.1	10.1%
2016 <sup>B</sup>	Actual	\$393.9	\$15.7	\$409.6	12.5%
2017 <sup>C</sup>		\$417.9	\$22.4	\$440.3	7.5%
2018 <sup>D,E</sup>		\$430.9	\$24.4	\$455.3	3.4%
2019 <sup>F</sup>		\$445.6	\$49.9	\$495.5	8.8%
2020 <sup>G</sup>		\$404.6	\$57.8	\$462.4	-6.7%
2021 <sup>H</sup>		\$415.8	\$103.9	\$519.7	12.4%
2022 <sup>I</sup>		\$470.9	\$105.4	\$576.3	10.9%
2023		\$526.4	\$103.6	\$630.0	9.3%
2024		\$558.2	\$103.7	\$661.9	5.1%
2025		\$580.8	\$107.5	\$688.3	4.0%
2026		\$599.5	\$110.9	\$710.4	3.2%
2027		\$617.3	\$114.2	\$731.5	3.0%
2028		\$635.1	\$117.5	\$752.6	2.9%
2029		\$653.1	\$120.5	\$773.6	2.8%
2030		\$671.6	\$123.7	\$795.3	2.8%
2031		\$690.1	\$127.1	\$817.2	2.8%
2032		\$709.2	\$130.3	\$839.5	2.7%
2033		\$728.4	\$133.4	\$861.8	2.7%
2034		\$747.6	\$136.7	\$884.3	2.6%
2035	Forecast	\$767.4	\$139.9	\$907.3	2.6%
2036		\$787.1	\$142.8	\$929.9	2.5%
2037		\$807.6	\$146.1	\$953.7	2.6%
2038		\$827.9	\$149.4	\$977.3	2.5%
2039		\$848.4	\$152.5	\$1,000.9	2.4%
2040		\$869.6	\$155.8	\$1,025.4	2.4%
2041		\$890.8	\$158.6	\$1,049.4	2.3%
2042		\$912.0	\$162.0	\$1,074.0	2.3%
2043		\$933.7	\$164.9	\$1,098.6	2.3%
2044		\$955.5	\$167.9	\$1,123.4	2.3%
2045	\$977.8	\$170.7	\$1,148.5	2.2%	
2046	\$1,000.0	\$173.8	\$1,173.8	2.2%	
2047	\$1,022.4	\$176.7	\$1,199.1	2.2%	
2048	\$1,045.2	\$179.1	\$1,224.3	2.1%	
2049	\$1,067.9	\$182.1	\$1,250.0	2.1%	
2050	\$1,090.9	\$184.7	\$1,275.6	2.0%	
2051	\$1,114.2	\$187.5	\$1,301.7	2.0%	

Fiscal Year	Compound Annual Average Growth Rates (CAAGR)		
2010 - 2021	4.3%	42.0%	6.4%
2021 - 2031	5.2%	2.0%	4.6%
2031 - 2041	2.6%	2.2%	2.5%
2041 - 2051	2.3%	1.7%	2.2%

## Notes:

Actual transaction data provided by CFX from Monthly Statistical Reports.

A - Systemwide toll rate increase.

B - Airport Main Plaza closes, new ramp plazas open at beginning of FY 2016.

Transactions for tolls collected at the Turnpike plaza not included.

C - Effects from Hurricane Matthew in October 2016.

D - Ponkan Main plaza opened on July 27, 2017 and Mount Plymouth Main opened on April 1, 2018 (S.R. 429).

Coronado Main plaza opened on April 1, 2018 (S.R. 453).

E - Effects from Hurricane Irma in September 2017.

F - First year of implementation of "Customer First" toll rate policy and assumed toll rate increase of 2.05% in FY 2019.

Annual toll rate increase of 2.05% in FY 2019 and 1.5% assumed annually throughout forecast period.

G - Effects from Hurricane Dorian in September 2019 and first effects of COVID-19 pandemic began in March 2020.

H - New toll rates for PBP customers, set at 2.0 times the ETC rate. Continued effects of COVID-19 pandemic.

I - Completion of I-4 Ultimate project.

### 1.9.2 SYSTEM AVAILABLE REVENUES

The System Available Revenue is defined as paid in-lane revenue plus revenue from PBP, less the discounts. The calculations are summarized in **Table 1-13**. CFX instituted a more convenient method of payment for PBP tolls in June 2009. CFX's PBP business rules were also modified in 2010 to require all outstanding tolls be paid for a customer to renew their Florida vehicle registration. The paid in-lane revenues plus the revenue from PBP is expected to increase from the actual \$514.7 million collected in FY 2021 to \$817.2 million in FY 2031, \$1,049.4 million in FY 2041 and \$1,301.7 million in FY 2051.

Table 1-13 also shows total revenue less the discounts during the fiscal year to equal Available Revenue. The discount programs are discussed in detail in **Section 1.3.1** of this chapter. The resulting Available Revenue can be used by CFX for their operating and maintenance budget and debt service. The Available Revenues are projected to increase from the actual \$496.9 million in FY 2021 to estimated amounts of \$790.9 million in FY 2031, \$1,011.0 million in FY 2041 and \$1,248.7 million in FY 2051.

### 1.9.3 NON-SYSTEM REVENUES

The Goldenrod Road Extension is a toll facility operated by CFX. It was constructed as an extension of the existing Goldenrod Road (S.R. 551) to provide an additional north-south facility operated by CFX as a Non-System project in the vicinity of the Orlando International Airport (OIA). Goldenrod Road was a four-lane state-maintained facility that terminated at Narcoossee Road. The Goldenrod Road Extension continues the roadway south from the terminus at Narcoossee Road to Cargo Road on the airport property. There is one interchange on the facility at S.R. 528, just east of the airport. The Greater Orlando Aviation Authority (GOAA) constructed Heintzelman Boulevard, a four-lane facility that connects with the Goldenrod Road Extension at Cargo Road and then extends south through the OIA. Heintzelman Boulevard is not currently signed for use by the general public and serves as an access road for airport employees.

Construction of the Goldenrod Road Extension began in January 2001 and was opened to traffic in March 2003. This project was jointly funded by CFX, Orange County, the City of Orlando, GOAA and private developers, with CFX serving as the lead agency on the project. The Goldenrod Road Extension is tolled at one location. A mainline plaza, with a toll of \$0.50 is located north of the interchange with S.R. 528. Revenues generated by the toll on the Goldenrod Road Extension are not included as part of CFX's System revenues. Revenues generated by this non-System roadway are not pledged as part of the System revenues available for debt service. Such revenues will be used to repay funds used by the partners for the construction of the roadway as well as the continued operations and maintenance expenses. According to the agreements between the project's partners, once toll revenues have paid for project costs (including toll operations and maintenance), the toll plaza will be removed, and the City of Orlando will assume ownership of the roadway.

**Table 1-13  
CFX System Toll Revenues Available (Millions)**

Fiscal Year	Paid In-Lane Revenue <sup>E</sup>	PBP Revenue <sup>F</sup>	Total Revenue	Discounts <sup>G</sup>	Available Revenue	Percent Annual Change
2010	\$262.0	\$1.1	\$263.1	\$9.4	\$253.6	
2011	\$266.5	\$3.0	\$269.5	\$9.5	\$260.0	2.5%
2012	\$267.9	\$4.3	\$272.2	\$9.6	\$262.6	1.0%
2013 <sup>A</sup>	\$302.7	\$6.3	\$309.0	\$10.8	\$298.2	13.5%
2014	\$322.8	\$8.1	\$330.9	\$11.7	\$319.1	7.0%
2015	\$353.1	\$11.0	\$364.1	\$13.2	\$350.9	10.0%
2016	\$393.9	\$15.7	\$409.6	\$18.7	\$390.9	11.4%
2017	\$418.5	\$21.8	\$440.3	\$16.6	\$423.7	8.4%
2018	\$430.8	\$27.3	\$458.1	\$16.3	\$441.8	4.3%
2019 <sup>B</sup>	\$445.6	\$38.0	\$483.6	\$20.4	\$463.2	4.8%
2020	\$407.2	\$61.1	\$468.3	\$16.4	\$451.9	-2.4%
2021 <sup>C</sup>	\$415.9	\$98.8	\$514.7	\$17.8	\$496.9	10.0%
2022 <sup>D</sup>	\$470.9	\$105.4	\$576.3	\$15.8	\$560.5	12.8%
2023	\$526.4	\$103.6	\$630.0	\$17.9	\$612.1	9.2%
2024	\$558.2	\$103.7	\$661.9	\$19.3	\$642.6	5.0%
2025	\$580.8	\$107.5	\$688.3	\$20.4	\$667.9	3.9%
2026	\$599.5	\$110.9	\$710.4	\$21.3	\$689.1	3.2%
2027	\$617.3	\$114.2	\$731.5	\$22.3	\$709.2	2.9%
2028	\$635.1	\$117.5	\$752.6	\$23.2	\$729.4	2.8%
2029	\$653.1	\$120.5	\$773.6	\$24.2	\$749.4	2.7%
2030	\$671.6	\$123.7	\$795.3	\$25.2	\$770.1	2.8%
2031	\$690.1	\$127.1	\$817.2	\$26.3	\$790.9	2.7%
2032	\$709.2	\$130.3	\$839.5	\$27.3	\$812.2	2.7%
2033	\$728.4	\$133.4	\$861.8	\$28.4	\$833.4	2.6%
2034	\$747.6	\$136.7	\$884.3	\$29.6	\$854.7	2.6%
2035	\$767.4	\$139.9	\$907.3	\$30.7	\$876.6	2.6%
2036	\$787.1	\$142.8	\$929.9	\$31.9	\$898.0	2.4%
2037	\$807.6	\$146.1	\$953.7	\$33.2	\$920.5	2.5%
2038	\$827.9	\$149.4	\$977.3	\$34.4	\$942.9	2.4%
2039	\$848.4	\$152.5	\$1,000.9	\$35.7	\$965.2	2.4%
2040	\$869.6	\$155.8	\$1,025.4	\$37.0	\$988.4	2.4%
2041	\$890.8	\$158.6	\$1,049.4	\$38.4	\$1,011.0	2.3%
2042	\$912.0	\$162.0	\$1,074.0	\$39.7	\$1,034.3	2.3%
2043	\$933.7	\$164.9	\$1,098.6	\$41.1	\$1,057.5	2.2%
2044	\$955.5	\$167.9	\$1,123.4	\$42.6	\$1,080.8	2.2%
2045	\$977.8	\$170.7	\$1,148.5	\$44.1	\$1,104.4	2.2%
2046	\$1,000.0	\$173.8	\$1,173.8	\$45.6	\$1,128.2	2.2%
2047	\$1,022.4	\$176.7	\$1,199.1	\$47.1	\$1,152.0	2.1%
2048	\$1,045.2	\$179.1	\$1,224.3	\$48.7	\$1,175.6	2.0%
2049	\$1,067.9	\$182.1	\$1,250.0	\$50.3	\$1,199.7	2.1%
2050	\$1,090.9	\$184.7	\$1,275.6	\$51.3	\$1,224.3	2.1%
2051	\$1,114.2	\$187.5	\$1,301.7	\$53.0	\$1,248.7	2.0%

Fiscal Year	Compound Annual Average Growth Rate (CAAGR)				
2010 - 2021	4.3%	51.1%	6.3%	5.9%	6.3%
2021 - 2031	5.2%	2.6%	4.7%	4.0%	4.8%
2031 - 2041	2.6%	2.2%	2.5%	3.9%	2.5%
2041 - 2051	2.3%	1.7%	2.2%	3.3%	2.1%

Notes:  
A - Systemwide toll rate adjustments.  
B - CFX Board adopted "Customer First" toll policy on February 9, 2017, implemented with Systemwide increase of 2.05% on July 1, 2018 (FY 2019). The floor of 1.5% increase was implemented on July 1, 2021 (FY 2022). Further adjustments (estimated at 5.08% in FY 2023 and 1.5% for all subsequent years) are included at the beginning of each fiscal year.  
C - New toll rates for customers paying toll through the Pay By Plate (PBP) process, set at 2.0 times the ETC rate  
D - Adjustments for completion of I-4 Ultimate.  
E - **Paid In-Lane Revenue** is provided and audited by CFX. System paid in-lane revenue may not equal the sum of paid in-lane revenue by plaza group, presented in Table 1-13 due to rounding and end-of-year adjustments. The adjustments occur periodically throughout the fiscal year and are not tied to the collected revenue of any particular plaza group.  
F - **PBP Revenue** is provided and audited by CFX. System PBP revenue may not equal the sum of PBP revenue in Table 1-13 due to rounding and end-of-year revenue collected in-lane; in FY 2021, PBP revenue was 23.8% of the in-lane revenue; in FY 2022, the PBP revenue is forecasted to be over 22.0% of the in-lane revenue; these long-term forecasts maintain PBP revenue as just over 17.0 of the in-lane revenue.  
G - CFX operates three Discount Programs, which are explained in detail in Chapter 1 of this report. Historical information on the E-PASS discount comes from the 2021 CAFR.

## **1.10 Disclaimer**

CDM Smith used currently-accepted professional practices and procedures in the development of these traffic and revenue estimates. 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 CFX. CDM Smith also relied upon the reasonable assurances of other 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 CFX. 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.

CDM Smith is not, and has not been, a municipal advisor as defined in Federal law (the Dodd Frank Bill) to CFX and does not owe a fiduciary duty pursuant to Section 15B of the Exchange Act to CFX with respect to the information and material contained in this report. CDM Smith is not recommending and has not recommended any action to CFX. CFX should discuss the information and material contained in this report with any and all internal and external advisors that it deems appropriate before acting on this information.

# CHAPTER 2

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## ECONOMIC INDICATORS







# ECONOMIC INDICATORS

Regional travel demand is driven, in part, by the levels, growth, and spatial patterns of socioeconomic activity, such as population, housing, employment, retail sales, and tourism. Socioeconomic growth is a major factor determining future toll road use. Other important factors specific to Central Florida include enplanements at Orlando



International Airport (OIA), enrollment at the University of Central Florida (UCF) and area attraction attendance. These factors are related to underlying socioeconomic variables. For this reason, it is important to understand socioeconomic conditions where CFX facilities operate. This chapter reviews CFX-relevant socioeconomic factors and comparative data (historical and forecast) for Brevard, Lake, Orange, Osceola, Polk, Seminole and Volusia Counties, and Florida.

## 2.1 COVID-19 Impacts

COVID-19 detrimentally impacted the United States, affecting lives, livelihoods, and everyday behaviors since mid-March 2020. An ensuing pandemic, with multiple infectious peaks, altered societal norms, including travel and economic activities. After two years, “normal” pre-COVID-19 activities have mostly returned; however, vaccinations and other precautions will continue to be a part of our daily lives. COVID-19 triggered a significant contraction in socioeconomic activity at the national, state, and regional levels in 2020, as described below.

### 2.1.1 NATIONAL REAL GROSS DOMESTIC PRODUCT

National real GDP shrank by an annualized 5.1 percent in the first quarter of 2020, which was significant considering the loss occurred almost entirely in March, with growth in January and February. Real GDP then fell by an annualized 31.2 percent in 2020 quarter 2, at an unprecedented rate since quarterly data were published (1947). No other quarter in the last 75 years was even close; 1958 quarter 1 was the previous record contraction at 10.0 percent annualized, and the most severe impact during the Great Recession was 8.5 percent annualized in 2008 quarter 4. GDP in 2020 quarter 3 partially rebounded by an annualized 33.8 percent, followed by a smaller 4.5 percent increase in 2020 quarter 4. While 2020 quarter 3 growth appears large, it did not reflect a full bounce-back, and real GDP declined 3.4 percent in 2020. Such an annual decline was unobserved since 1946 (11.6 percent loss, reflecting the unravelling of the WWII boom years). As the official arbiter of economic cycles, the National Bureau of Economic Research (NBER) designated the COVID-19 pandemic a recession spanning February through April 2020. 2021 observed a 5.7 percent annual growth (6.3, 6.7, 2.3, and 6.9 percent annualized growth in the respective quarters), effectively offsetting the losses in 2020, with total real growth equaling 2.1 percent for 2021 over pre-COVID 2019.

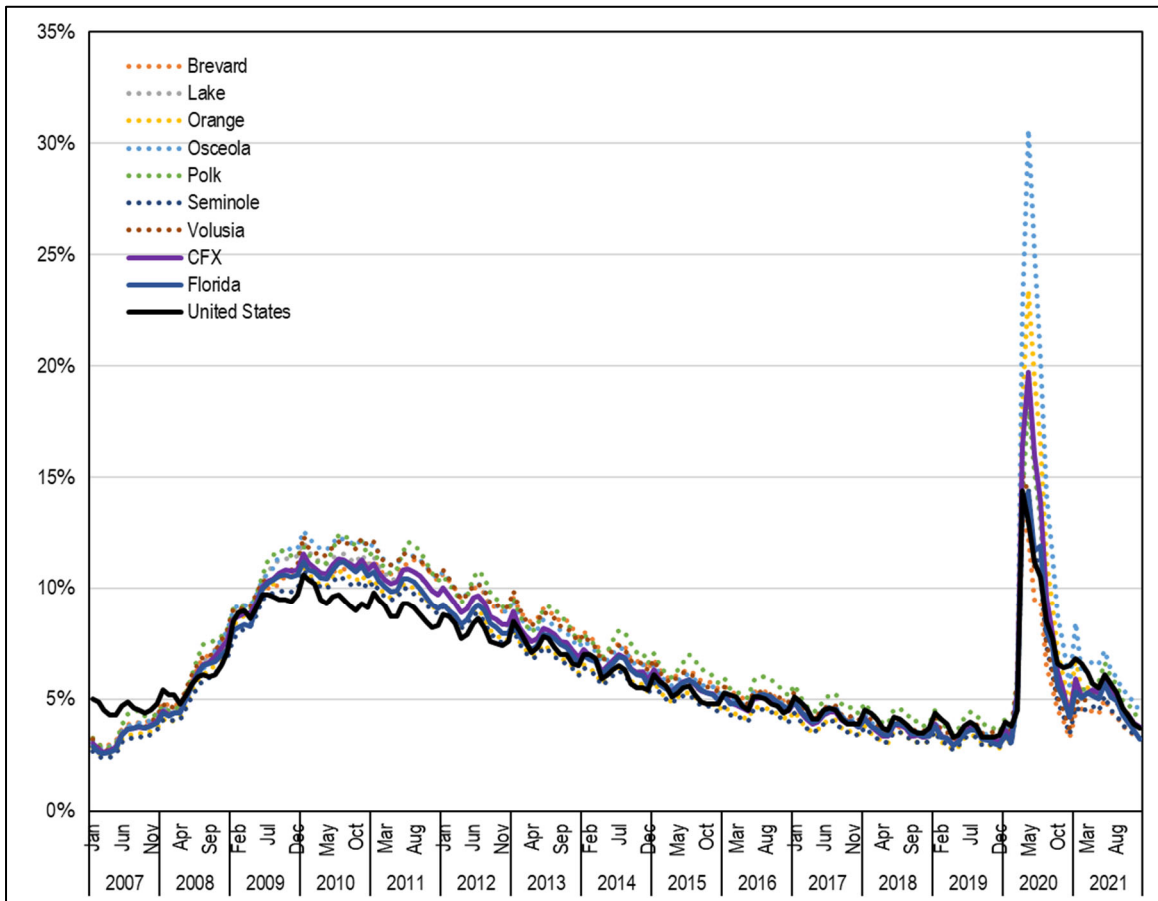
### 2.1.2 FLORIDA REAL GROSS STATE PRODUCT

COVID-19 economic impacts to Florida were similar to the nation. GSP in 2020 quarters 1 and 2 shrank by an annualized 1.7 percent and 31.1 percent, respectively. In 2020 quarter 3, it rebounded at 32.6 percent annualized, and in 2020 quarter 4 it grew at a slower 3.4 percent. In total, Florida's economy contracted 2.8 percent in 2020 and real GSP grew faster than the nation in the first three quarters of 2021. Quarterly data for MSAs/counties are not published by the Bureau of Economic Analysis.

### 2.1.3 UNEMPLOYMENT RATES

Monthly unemployment rates for Florida, the United States, and seven-county Central Florida area are presented in **Figure 2-1**. Tourism-dependent regions within Florida were particularly impacted by COVID-19. April and May 2020 had the highest unemployment rates during the pandemic, immediately following the virus' initial contagion and during policy responses that shuttered businesses and social activities as preemptive, precautionary measures. Prior to COVID-19, unemployment rates were at historically low levels, in the low-to-mid 3.0 percent range during late 2019. In April 2020, the national unemployment rate (seasonally unadjusted) spiked to 14.4 percent; Florida peaked in May 2020 at 14.3 percent, at rates notably higher than the worst months during the 2007-2009 Great Recession (around 10.0 percent). Within Central Florida, unemployment rates were even worse, peaking at 19.7 percent in May 2020 for the seven-county area, with Orange and Osceola Counties the hardest hit, at 23.4 percent and 30.6 percent, respectively. Many employees returned to previous jobs, or found other employment, albeit all with additional safety precautions implemented, resulting in the unemployment rates subsequently declining. At the end of 2021, unemployment rates are back down to 3.2 percent in Florida and 3.7 percent nationally.

**Figure 2-1  
Monthly Unemployment Rates  
2007 – 2021**



Source: U.S. Bureau of Labor Statistics

### 2.1.4 ECONOMIC OUTLOOK

Many sources publish short-term real GDP forecasts, typically with rolling, quarterly updates to reflect current information and changing policy responses, as compiled and compared in **Table 2-1** for 2022 and 2023. An average 4.0 percent is forecasted for 2022, ranging from 3.5 percent to 5.2 percent, as a continued rebounding above 2021 growth. In 2023, real GDP is forecasted to decelerate to 2.7 percent, closer in magnitude to pre-COVID-19 annual growth.

**Table 2-1**  
**National Real GDP Forecasts**  
**2022 – 2023**

Source	Release Date	Timeliness	2022	2023
International Monetary Fund (IMF): World Economic Outlook	October 12, 2021	Recent	5.2%	#N/A
Wells Fargo Securities Economics Group	December 9, 2021	Recent	4.4%	3.0%
Energy Information Administration (EIA): Short-Term Energy Outlook	December 2, 2021	Recent	4.4%	#N/A
PNC Financial Services Group	October 1, 2021	Recent	4.3%	2.3%
ScotiaBank Global Economics	December 9, 2021	Recent	4.2%	3.2%
TD Economics	December 14, 2021	Recent	4.1%	2.6%
Federal Reserve Bank: Federal Open Market Committee (FOMC)	December 15, 2021	Recent	4.0%	2.2%
University of Michigan: Research Seminar in Quantitative Economics (RSQE)	November 18, 2021	Recent	4.0%	3.1%
Federal Reserve Bank of Philadelphia: Survey of Professional Forecasters*	November 15, 2021	Recent	3.9%	2.6%
Economist Intelligence Unit (EIU): Global Forecasting Service	December 14, 2021	Recent	3.8%	2.2%
Organization for Economic Cooperation and Development (OECD)	December 1, 2021	Recent	3.7%	2.4%
National Association for Business Economics (NABE)*	November 21, 2021	Recent	3.6%	#N/A
Bank of Montreal (BMO) Capital Markets Economics	December 10, 2021	Recent	3.5%	2.5%
Royal Bank of Canada (RBC) Economics	December 2, 2021	Recent	3.5%	2.2%
Conference Board	December 15, 2021	Recent	3.5%	3.9%
Congressional Budget Office (CBO)	June 29, 2021	Lagged	5.0%	1.5%
Office of Management and Budget (OMB)	June 14, 2021	Lagged	3.2%	2.0%
Woods & Poole Economics, Inc.	June 21, 2021	Lagged	2.1%	2.1%
Average (Lagged)		Lagged	3.4%	1.9%
Average (Recent)		Recent	4.0%	2.7%

## 2.2 Population

### 2.2.1 HISTORICAL TRENDS

Historical 1980 to 2020 population trends are shown in **Table 2-2**; corresponding compound average annual growth rates (CAAGR) are in **Table 2-3**. Study area population grew 2.7 times since 1980, from approximately 1.7 million to over 4.5 million in 2020, at 2.6 percent per year. Average annual growth decelerated from 3.8 percent in the 1980s to 2.2 percent between 2000 and 2010, and 1.9 percent since 2010. Since 1980, Osceola County grew fastest in the area by 5.3 percent per year. Brevard, Polk, and Volusia Counties experienced slower relative growth around 2.0 percent per year. Nearly one third of the area's population is in Orange County, with over 1.4 million residents. Florida's population grew from 9.7 million in 1980 to nearly 21.7 million in 2020, or an average increase of 2.0 percent per year. Historically, study area population growth outpaced Florida over the last four decades.

**Table 2-2**  
**Historical Population**  
**1980 – 2020**

County	1980	1990	2000	2010	2020
Brevard	272,959	398,978	476,230	543,376	607,008
Lake	104,870	152,104	210,528	297,052	373,635
Orange	470,865	677,491	896,344	1,145,956	1,403,003
Osceola	49,287	107,728	172,493	268,685	382,803
Polk	321,652	405,382	483,924	602,095	740,123
Seminole	179,752	287,529	365,196	422,718	473,837
Volusia	258,762	370,712	443,343	494,593	559,967
Area Total	1,658,147	2,399,924	3,048,058	3,774,475	4,540,376
Florida	9,746,961	12,937,926	15,982,378	18,801,310	21,688,239

Source: U.S. Census Bureau

**Table 2-3**  
**Historical Population Growth (CAAGR)**  
**1980 – 2020**

County	1980-'90	1990-'00	2000-'10	2010-'20	1980-'20
Brevard	3.9%	1.8%	1.3%	1.1%	2.0%
Lake	3.8%	3.3%	3.5%	2.3%	3.2%
Orange	3.7%	2.8%	2.5%	2.0%	2.8%
Osceola	8.1%	4.8%	4.5%	3.6%	5.3%
Polk	2.3%	1.8%	2.2%	2.1%	2.1%
Seminole	4.8%	2.4%	1.5%	1.1%	2.5%
Volusia	3.7%	1.8%	1.1%	1.2%	1.9%
Area Total	3.8%	2.4%	2.2%	1.9%	2.6%
Florida	2.9%	2.1%	1.6%	1.4%	2.0%

Source: U.S. Census Bureau

**Table 2-4** contains a summary of the 2012 to 2021 school enrollments. Osceola County experienced the relatively fastest growth, at 3.1 percent annually in the last decade, while Brevard and Volusia Counties exhibited almost no change (0.4 and 0.3 percent annually, respectively); study area enrollment grew 1.4 percent. Enrollment growth is not directly comparable to population due to families without school-age children and home-schooling. Enrollments declined in 2020, attributed to COVID-19, but increased 13.1 percent in 2021. 2021 enrollments are estimates, as final numbers are not released until the end of the school year in June or July 2022.

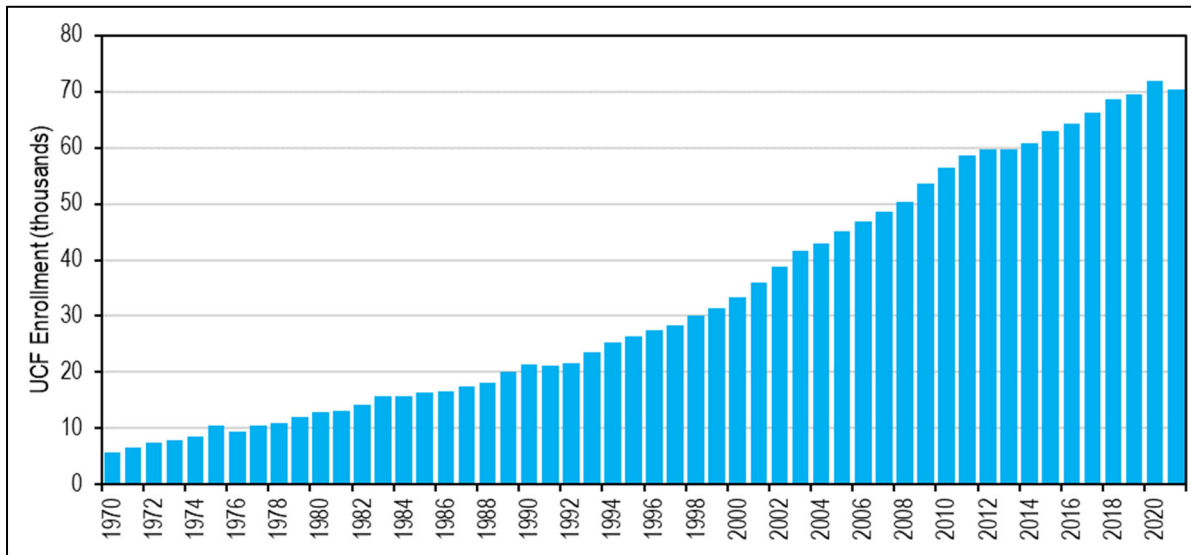
**Table 2-4**  
**Historical School Enrollment**  
**2012 – 2021**

County	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2012-'21 % Δ	2012-'21 CAAGR
Brevard	70,529	70,071	71,119	71,634	72,408	72,467	72,646	73,106	70,214	73,150	3.7%	0.4%
Lake	40,760	40,971	41,322	41,839	41,866	42,643	43,409	44,473	41,835	44,990	10.4%	1.1%
Orange	182,438	185,594	190,380	195,408	198,984	203,950	206,451	207,751	200,495	209,716	15.0%	1.6%
Osceola	55,881	57,239	58,465	61,141	62,561	66,010	67,632	69,378	69,162	73,738	32.0%	3.1%
Polk	95,634	96,144	97,877	99,247	101,051	102,863	104,305	106,782	104,667	111,898	17.0%	1.8%
Seminole	64,105	64,019	65,428	66,236	67,055	67,281	67,247	67,301	64,214	68,711	7.2%	0.8%
Volusia	61,056	60,935	61,351	62,304	62,269	62,132	62,027	62,121	57,758	62,887	3.0%	0.3%
Area Total	570,403	574,973	585,942	597,808	606,194	617,346	623,716	630,911	608,345	645,091	13.1%	1.4%

Source: Florida Department of Education

UCF opened in 1968 with fewer than 2,000 enrolled students. **Figure 2-2** shows annual enrollment steadily increased as UCF became a large-scale university, with nearly 72,000 students in 2020; however, 2021 enrollment declined to 70,400. Long-term annual growth averaged 4.2 percent from 1980 to 2021, due to the opening of new programs and campus facilities, and to an increase in transfer students. While enrollments are significant, many students only attend part-time, and many attend on-line classes; as such, many students do not travel to the main campus.

**Figure 2-2  
Historical UCF Enrollment  
1970 – 2021**



Source: University of Central Florida

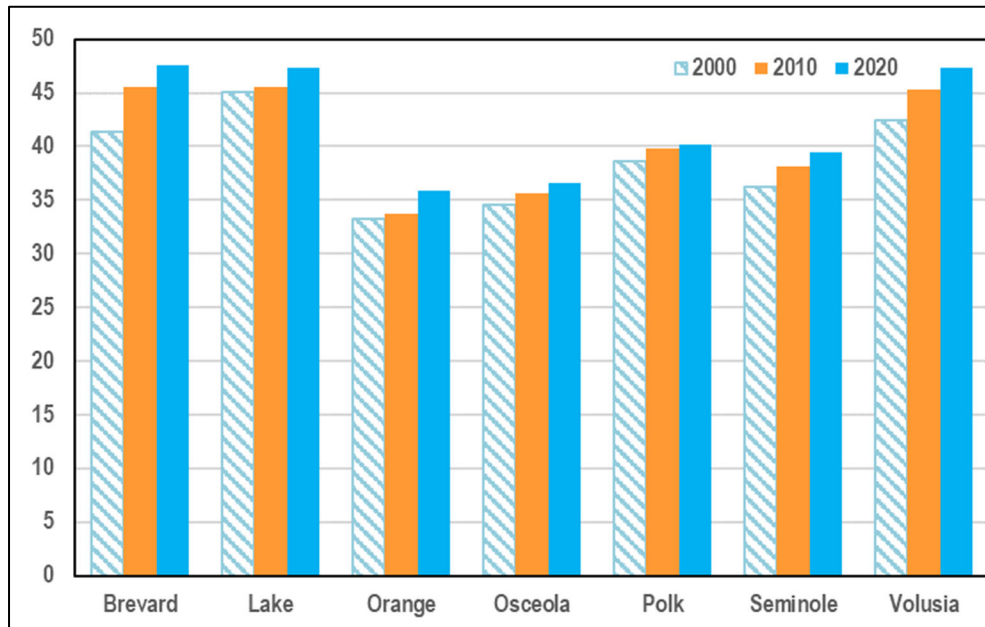
The study area age distributions in 2000, 2010, and 2020 are shown in **Table 2-5**. Most people (58.4 percent in 2020) are working age (20 to 64), who represent commuter and business-related trips; such working age proportions have not changed appreciably since 2000. Study area median ages are shown in **Figure 2-3**. Brevard and Lake Counties have the highest median ages, reflecting some retirement communities; Volusia County also has a relatively older median age. Orange and Osceola Counties have the lowest median age. Median ages have increased in every county since 2000, reflecting a general population aging.

**Table 2-5  
Historical Population by Age  
2000, 2010, 2020**

Age	2000 Census		2010 Census		2020 Census	
	Population	Percent	Population	Percent	Population	Percent
0-4	184,700	6.1%	221,562	5.9%	244,467	5.4%
5-19	615,697	20.2%	732,041	19.4%	797,436	17.6%
20-24	185,459	6.1%	264,847	7.0%	280,447	6.2%
25-34	405,961	13.3%	473,023	12.5%	635,591	14.0%
35-44	486,110	15.9%	490,323	13.0%	581,114	12.8%
45-54	395,565	13.0%	552,868	14.6%	562,679	12.4%
55-64	289,212	9.5%	453,437	12.0%	590,931	13.0%
65-74	262,234	8.6%	318,580	8.4%	480,361	10.6%
75+	223,120	7.3%	267,794	7.1%	367,350	8.1%
<b>Total</b>	<b>3,048,058</b>	<b>100.0%</b>	<b>3,774,475</b>	<b>100.0%</b>	<b>4,540,376</b>	<b>100.0%</b>

Source: U.S. Census Bureau

**Figure 2-3  
County Median Age  
2000, 2010, 2020**



Source: U.S. Census Bureau

**2.2.2 PROJECTIONS**

The University of Florida’s Bureau of Economic and Business Research (BEBR) updates Florida’s/counties’ population forecasts annually with three scenarios: low, medium, and high. Medium level projections are typically used to develop transportation plans. **Table 2-6** summarizes BEBR’s 2021 medium forecasts as CAAGRs. Future long-term study area population growth through 2040 averages 1.2 percent per year, slightly higher than the 1.0 percent per year projected for Florida. Osceola County is projected to increase population relatively the fastest, at 2.2 percent per year, while Brevard and Volusia Counties are expected to have relatively the lowest growth of 0.8 percent per year. Population growth rates decelerate over time.

**Table 2-6  
Projected Population Growth (CAAGR)  
2020 – 2040**

County	2020-'21	2021-'30	2030-'40	2020-'40
Brevard	1.7%	0.9%	0.6%	0.8%
Lake	4.2%	1.2%	1.2%	1.3%
Orange	2.0%	1.6%	1.1%	1.3%
Osceola	4.6%	2.6%	1.6%	2.2%
Polk	3.2%	1.3%	1.0%	1.2%
Seminole	1.4%	1.1%	0.7%	0.9%
Volusia	1.8%	0.9%	0.6%	0.8%
Area Total	2.5%	1.4%	1.0%	1.2%
Florida	1.7%	1.2%	0.8%	1.0%

Source: University of Florida Bureau of Economic and Business Research

## 2.3 Housing Units

### 2.3.1 HISTORICAL TRENDS

Housing metrics are another measure used in transportation planning. **Table 2-7** summarizes historical study area housing units, which expanded from 700 thousand in 1980 to almost 2.0 million in 2020. A housing unit is a house, an apartment, a mobile home, a group of rooms, or a single room that is occupied (or if vacant, is intended for occupancy) as separate living quarters, per the US Census. Orange County has the highest housing unit concentration in the area, with over 564 thousand in 2020. Corresponding historical housing unit CAAGRs are in **Table 2-8**. Housing units grew 2.6 percent per year since 1980, slowing from 4.4 percent per year in the 1980s to 1.1 percent per year since 2010, which is a similar deceleration trend as population. Osceola County experienced relatively fastest growth, averaging 5.0 percent per year; Volusia County was the relative slowest at 1.9 percent annually. Overall, historical study area housing unit growth outpaced Florida's growth, and grew from 16 percent share of statewide housing units in 1980 to 20 percent in 2020.

**Table 2-7**  
**Historical Housing Units**  
**1980 – 2020**

County	1980	1990	2000	2010	2020
Brevard	113,900	185,150	222,072	269,864	285,701
Lake	50,511	75,707	102,829	144,996	166,160
Orange	184,701	282,686	361,349	487,839	564,287
Osceola	23,825	47,959	72,293	128,170	168,555
Polk	134,873	186,225	226,376	281,214	310,895
Seminole	68,154	117,841	147,080	181,307	195,551
Volusia	124,427	180,983	211,938	254,226	266,069
Area Total	700,391	1,076,551	1,343,937	1,747,616	1,957,218
Florida	4,378,867	6,100,250	7,303,108	8,989,580	9,779,697

Source: U.S. Census Bureau

**Table 2-8**  
**Historical Housing Units Growth (CAAGR)**  
**1980 – 2020**

County	1980-'90	1990-'00	2000-'10	2010-'20	1980-'20
Brevard	5.0%	1.8%	2.0%	0.6%	2.3%
Lake	4.1%	3.1%	3.5%	1.4%	3.0%
Orange	4.3%	2.5%	3.0%	1.5%	2.8%
Osceola	7.2%	4.2%	5.9%	2.8%	5.0%
Polk	3.3%	2.0%	2.2%	1.0%	2.1%
Seminole	5.6%	2.2%	2.1%	0.8%	2.7%
Volusia	3.8%	1.6%	1.8%	0.5%	1.9%
Area Total	4.4%	2.2%	2.7%	1.1%	2.6%
Florida	3.4%	1.8%	2.1%	0.8%	2.0%

Source: U.S. Census Bureau



### 2.3.2 PROJECTIONS

**Table 2-9** summarizes long-term household growth forecasts, published by Woods & Poole<sup>1</sup> (housing units are unavailable; households are used here as a close proxy). Future long-term study area growth is projected to average 1.3 percent per year through 2040. Osceola County is forecasted with relatively fastest growth, averaging 2.5 percent per year, while Brevard County is expected to have relatively slowest growth, at 0.7 percent per year.

**Table 2-9**  
**Projected Household Growth (CAAGR)**  
**2020 – 2040**

County	2020-'21	2021-'30	2030-'40	2021-'40
Brevard	1.3%	0.9%	0.6%	0.7%
Lake	2.4%	2.0%	1.6%	1.8%
Orange	2.0%	1.7%	1.3%	1.5%
Osceola	3.1%	2.7%	2.3%	2.5%
Polk	1.8%	1.4%	1.0%	1.2%
Seminole	1.6%	1.3%	0.9%	1.1%
Volusia	1.4%	1.0%	0.6%	0.8%
Area Total	1.8%	1.5%	1.1%	1.3%
Florida	1.6%	1.3%	1.0%	1.1%

Source: Woods & Poole Economics, Inc. 2021

## 2.4 Employment

### 2.4.1 HISTORICAL TRENDS

Employment data are shown in **Table 2-10** and **Table 2-11**, indicating the highest concentration of employment in Orange County, representing 42.1 percent of the area. Long-term historical area employment growth averaged 2.9 percent per year since 1980. Growth in the 1980s was 4.7 percent per year, then decelerated between 2000 and 2010 to 1.4 percent per year, with highest growth in Osceola and Lake Counties. Since 2010, growth increased to 2.4 percent per year, with Osceola County averaging the highest growth at 4.1 percent per year. Historically, study area employment growth outpaced Florida by an average of approximately 0.5 percent per year.

**Table 2-10**  
**Historical Employment**  
**1980 – 2020**

County	1980	1990	2000	2010	2020
Brevard	129,188	202,232	242,259	256,563	301,003
Lake	46,281	58,326	86,269	113,201	148,851
Orange	291,166	516,943	735,810	822,557	1,052,459
Osceola	19,483	43,173	63,735	101,338	151,586
Polk	156,846	194,693	234,576	255,704	322,404
Seminole	61,621	121,188	186,059	217,211	277,507
Volusia	105,796	146,833	177,896	211,634	245,776
Area Total	810,381	1,283,388	1,726,604	1,978,208	2,499,586
Florida	4,687,521	6,740,289	8,881,279	9,805,154	12,148,603

Source: Bureau of Economic Analysis

<sup>1</sup> Woods & Poole does not guarantee the accuracy of this data. The use of this data and the conclusions drawn from it are solely the responsibility of the Consulting Team.

**Table 2-11**  
**Historical Employment Growth (CAAGR)**  
**1980 – 2020**

County	1980-'90	1990-'00	2000-'10	2010-'20	1980-'20
Brevard	4.6%	1.8%	0.6%	1.6%	2.1%
Lake	2.3%	4.0%	2.8%	2.8%	3.0%
Orange	5.9%	3.6%	1.1%	2.5%	3.3%
Osceola	8.3%	4.0%	4.7%	4.1%	5.3%
Polk	2.2%	1.9%	0.9%	2.3%	1.8%
Seminole	7.0%	4.4%	1.6%	2.5%	3.8%
Volusia	3.3%	1.9%	1.8%	1.5%	2.1%
Area Total	4.7%	3.0%	1.4%	2.4%	2.9%
Florida	3.7%	2.8%	1.0%	2.2%	2.4%

Source: Bureau of Economic Analysis

## 2.4.2 PROJECTIONS

Study area employment is projected to grow 1.7 percent per year through 2050, per **Table 2-12**, similar to statewide forecast growth. Osceola County's employment is forecasted to increase relatively fastest at 2.9 percent per year, while Brevard and Volusia Counties are forecasted with the relative slowest growth of 1.0 percent through 2050.

**Table 2-12**  
**Projected Employment Growth (CAAGR)**  
**2020 – 2050**

County	2020-'21	2021-'30	2030-'40	2040-'50	2021-'50
Brevard	7.4%	1.2%	1.0%	0.8%	1.0%
Lake	16.6%	2.2%	2.0%	1.8%	2.0%
Orange	19.6%	2.1%	1.9%	1.6%	1.9%
Osceola	20.1%	3.1%	2.9%	2.8%	2.9%
Polk	5.6%	1.4%	1.2%	1.0%	1.2%
Seminole	16.1%	1.9%	1.7%	1.4%	1.7%
Volusia	10.0%	1.3%	1.0%	0.8%	1.0%
Area Total	14.8%	1.9%	1.7%	1.5%	1.7%
Florida	11.4%	1.7%	1.5%	1.4%	1.5%

Source: Woods & Poole Economics, Inc., 2021

**Table 2-13** shows employment projections by major sector: industrial, commercial, and service industries, with annual future growth averaging 0.7, 1.5, and 1.9 percent through 2050, respectively. Jobs growth in commercial and service sectors reflect Central Florida's tourism industry, while the industrial sector is expected to experience relatively slower growth.

**Table 2-13**  
**Projected Sector Employment Growth (CAAGR)**  
**2020 – 2050**

Area	2020-'21	2021-'30	2030-'40	2040-'50	2021-'50
Industrial	8.0%	0.7%	0.7%	0.7%	0.7%
Commercial	10.2%	1.6%	1.5%	1.3%	1.5%
Service	17.2%	2.2%	1.9%	1.6%	1.9%

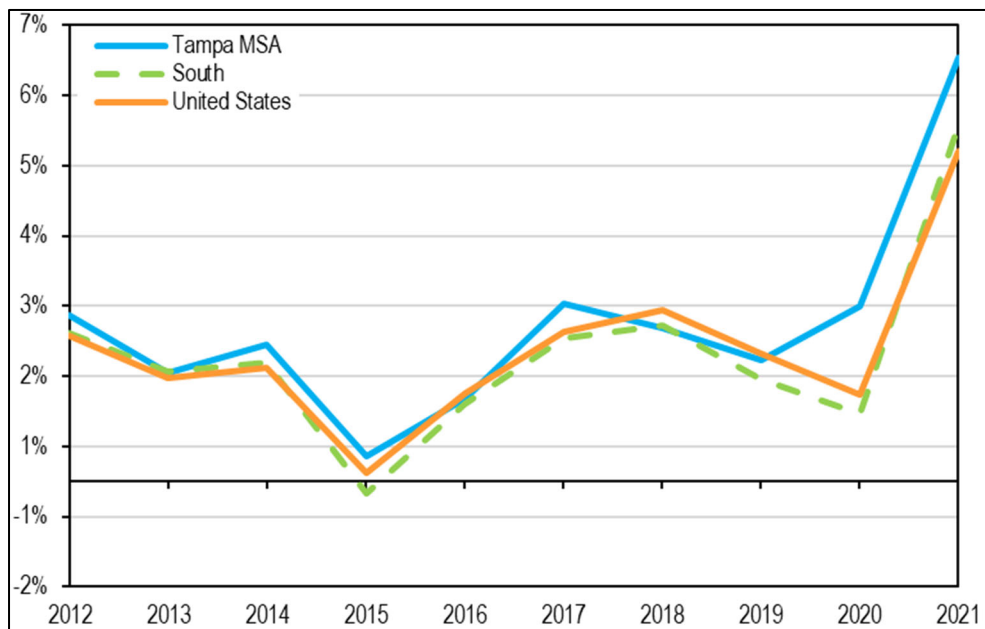
Source: Woods & Poole Economics, Inc., 2021

## 2.5 Consumer Price Index and Income

### 2.5.1 CONSUMER PRICE INDEX

The Consumer Price Index (CPI) measures the national average price of an average basket of goods and services compared to a fixed base period (indexing). CPI changes measure inflation. Historical annual inflation rates are shown in **Figure 2-4**. Historical inflation has typically hovered between 2.0 and 3.0 percent per year (except 2015). Inflation increased considerably in 2021, due to various COVID-19 related factors: spending increases from pent-up demand, supply chain constraints, and increases in intermediary production inputs (e.g., semiconductors, fuel, etc.). Aside from national CPI changes, data are also presented for the Tampa MSA (Orlando MSA is not tracked by the BLS) and the South Region (Southeastern U.S. States), which generally trend closely with national price changes. Overall, the change in CPI-U in the South averaged 5.08 percent in 2021, and this figure will be used in the annual indexing of toll rates for FY 2023.

**Figure 2-4  
Inflation (Annual CPI Change)  
2012 – 2021**



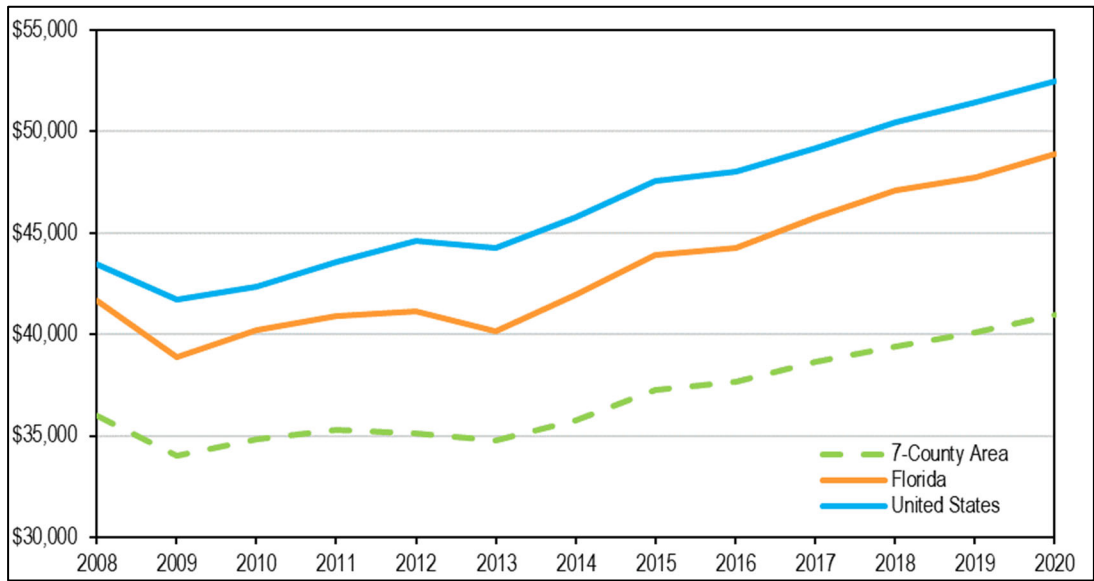
Source: Bureau of Labor Statistics

### 2.5.2 INCOME

Travel demand is sensitive to, among other things, disposable income, with a propensity to pay tolls in exchange for travel time savings dependent on personal income. Income is a key input in assessing value of time, with a correlative relationship between income and willingness to pay tolls. Real personal income is income adjusted for inflation.

Historical real per capita income trends are shown in **Figure 2-5**. Real personal income per capita for Florida and the study area steadily increased in the preceding decade, by 2.0 and 1.6 percent annually, respectively since 2010, while national income growth averaged 2.2 percent.

**Figure 2-5**  
**Real Personal Income Per Capita (2012 Dollars)**  
**2008 – 2020**

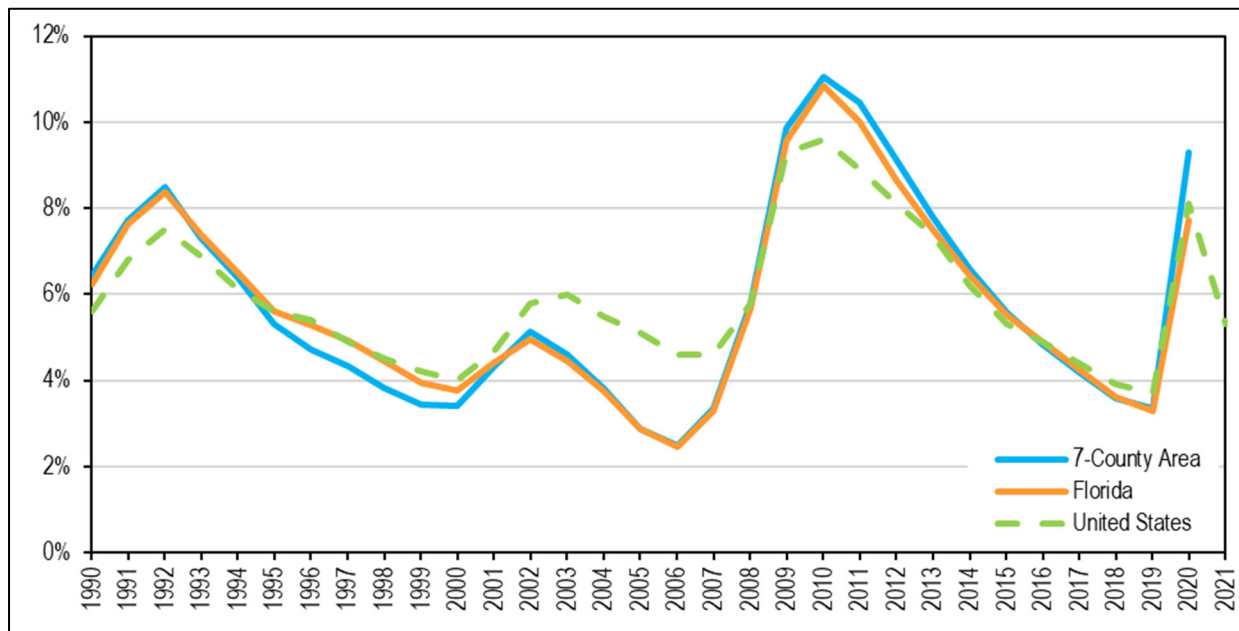


Source: Woods and Poole Economics, Inc., 2021

## 2.6 Unemployment

Regional unemployment rates historically paralleled Florida closely and were lower than national rates since 1994 excepting during and after the Great Recession (between 2009 and 2015). **Figure 2-6** shows historical unemployment rates, depicting the study area’s range from a low of 2.5 percent in 2006 to a high of 11.1 percent in 2010. In 2020, after years of steadily declining, the study area unemployment rate increased considerably to 9.3 percent, stemming from COVID-19. Regional unemployment data are currently unavailable for 2021, but the national rate declined to 5.3 percent after 8.1 percent in 2020. Florida’s and the study area’s unemployment rates have likely also returned close-to pre-pandemic levels.

**Figure 2-6  
Historical Unemployment Rates  
1990 – 2021**



Source: Bureau of Labor Statistics

### 2.7 Regional Tourism

As shown in **Table 2-14**, Orlando hosted a record 75.8 million visitors in 2019, a 1.0 percent increase over the 75.0 million visitors in 2018. Tourism stagnated after the September 11<sup>th</sup> terrorist attacks, and remained tepid during the Great Recession, but increased every year since 2011. Tourism declined significantly to only 35.3 million visitors, or by 53.5 percent, in 2020 due to the COVID-19 pandemic and the corresponding travel restrictions, including the closure of area attractions through the Summer of 2020. International tourists held steady in 2019 with 6.5 million visitors but declined considerably in 2020 to only 1.7 million.

**Table 2-14  
Orlando Visitors (Millions)  
2010 – 2020**

Visitors	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2010-'20 CAAGR
<b>Domestic</b>	47.8	51.4	52.9	54.4	57.4	60.6	62.3	65.9	68.6	69.3	33.6	-3.5%
<b>International</b>	3.7	3.8	4.3	4.9	5.4	5.9	5.7	6.2	6.5	6.5	1.7	-7.7%
<b>Total</b>	51.5	55.2	57.2	59.3	62.8	66.5	68.0	72.0	75.0	75.8	35.3	-3.7%

Source: Visit Orlando

As shown in **Table 2015**, the Metro Orlando area hotel occupancy rate was only 41.5 percent in 2020, a significant decrease from 2019 due to the travel restrictions during the COVID-19 pandemic and the overall reduction in tourism. The 2020 average daily room rate was \$109.74, which was a 13.6 percent decline compared to 2019. While room rates mostly rebounded in 2021 to \$121.40 per night, the occupancy rate, at 57.8 percent is still well below pre-pandemic levels. Most lodging units are concentrated around Walt Disney World, International Drive (near Universal Studios, SeaWorld, and the Orange County Convention Center), and in Kissimmee.

**Table 2-15  
Metro Orlando Area Lodging  
2011 – 2021**

Metro Orlando	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
<b>Occupancy Rate</b>	67.6%	68.8%	71.0%	71.9%	77.0%	75.5%	79.3%	77.5%	76.1%	41.5%	57.8%
<b>Average Daily Rate</b>	\$94.11	\$96.88	\$101.53	\$107.26	\$112.00	\$116.00	\$121.53	\$127.32	\$126.95	\$109.74	\$121.40
<b>Room-Night Demand (millions)</b>	28.5	29.3	30.1	N/A*	33.0	33.0	34.7	34.5	34.5	15.3	25.8

\*2014 room night demand not available

Source: Visit Orlando

The historical and projected enplanements, or boardings, at the Orlando International Airport (OIA) are shown in **Table 2-16** and **Table 2-17**. OIA enplanements increased over 6 million from 1990 to 2000, equating to 69.1 percent increase. Enplanements totaled 24.1 million in 2019, 64.0 percent above the 2000 total; however, the number almost halved in 2020 during COVID-19, down to under 14.0 million, about the same volumes as in 1999. The United States Department of Transportation Federal Aviation Administration (FAA) forecasts OIA enplanements will rebound to 2019 levels by 2024, with average of future growth of 2.4 percent per year through 2040. Enplanements are an indicator of tourism and economic growth.

**Table 2-16  
Historical OIA Enplanements  
1990 – 2020**

	1990	2000	2010	2020
<b>Enplanements</b>	8,683,491	14,683,594	16,651,359	13,987,850

Source: Federal Aviation Administration Terminal Area Forecasts

**Table 2-17  
Projected OIA Enplanement Growth  
2020 – 2040**

	2020-'21	2020-'30	2030-'40	2019-'40
<b>Enplanements</b>	3.2%	8.5%	2.3%	2.4%

Source: Federal Aviation Administration Terminal Area Forecasts

Metropolitan Orlando has several of the largest theme parks in the nation, which will continue contributing growth to Central Florida due to new and future attractions.

As shown in **Table 2-18**, the Magic Kingdom attracts the relatively highest number of visitors in all the area attractions, with 21.0 million in 2019. However, it, along with all other attractions, lost between 60 and 70 percent of annual visitors in 2020 due to COVID-19 related closures. Water parks exhibited a similar relative decline, with Blizzard Beach declining further, by over 84 percent. Typhoon Lagoon was closed in 2020 and into 2021. Annual declines stemmed from both temporary park closures for days-to-months, as well as the aversion effect from COVID-19, with prospective visitors declining or deferring attendance until vaccinations and/or low virus caseloads.

**Table 2-18**  
**Central Florida Attraction Attendance (Millions)**  
**2013- 2020**

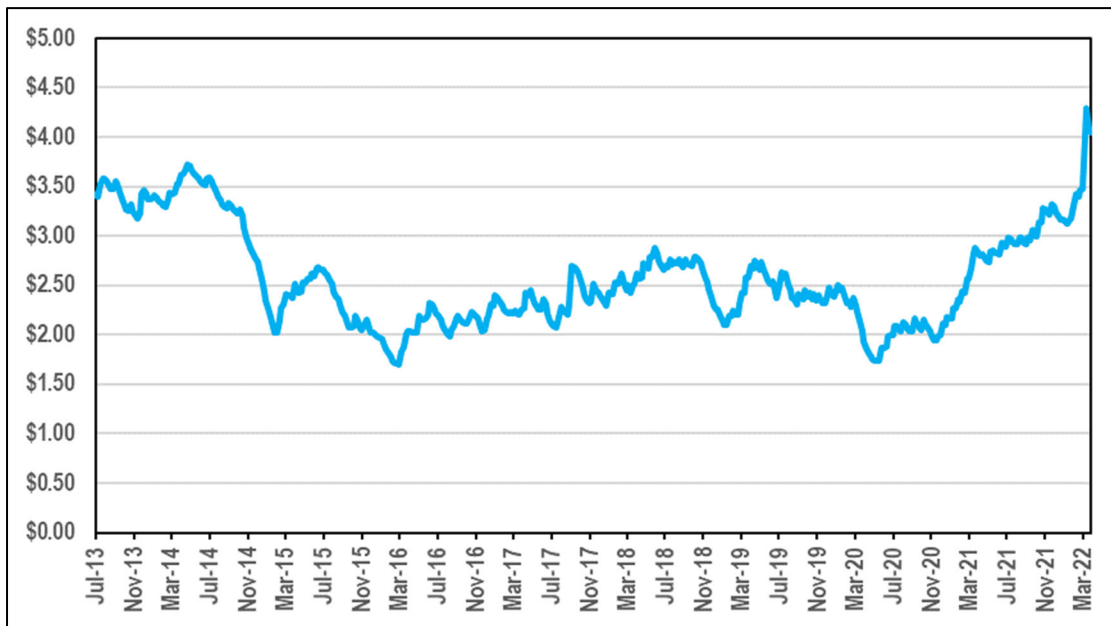
Theme Parks	2013	2014	2015	2016	2017	2018	2019	2020	2019-'20	2013-'20
Disney's Magic Kingdom	18.6	19.3	20.5	20.4	20.5	20.9	21.0	6.9	-66.9%	-13.1%
Disney's Epcot Center	11.2	11.5	11.8	11.7	12.2	12.4	12.4	4.0	-67.5%	-13.6%
Disney's Animal Kingdom	10.2	10.4	10.9	10.8	12.5	13.8	13.9	4.2	-70.0%	-12.0%
Disney's Hollywood Studios	10.1	10.3	10.8	10.8	10.7	11.3	11.5	3.7	-68.0%	-13.5%
Islands of Adventure at Universal Orlando	8.1	8.1	8.8	9.4	9.5	9.8	10.4	4.0	-61.4%	-9.6%
Universal Studios at Universal Orlando	7.1	8.3	9.6	10.0	10.2	10.7	10.9	4.1	-62.5%	-7.5%
Seaworld Orlando	5.1	4.7	4.8	4.4	4.0	4.6	4.6	1.6	-65.6%	-15.3%
<b>Water Parks</b>										
Typhoon Lagoon	2.1	2.2	2.3	2.3	2.3	2.3	2.2	Closed	#N/A	#N/A
Blizzard Beach	2.0	2.0	2.1	2.1	1.9	2.0	2.0	0.3	-84.1%	-23.0%
Aquatica	1.6	1.6	1.6	1.5	1.4	1.6	1.5	0.5	-65.6%	-14.3%
Volcano Bay (formerly Wet 'n Wild)	1.3	1.3	1.3	1.3	Closed	1.7	1.8	0.6	-69.6%	-11.1%

Source: Visit Orlando – Themed Entertainment Association (TEA) and AECOM

## 2.8 Fuel Prices

**Figure 2-7** contains an account of weekly retail prices for regular-grade Florida gasoline from July 2013 through early January 2022. From July 2013 through June 2014, gasoline prices fluctuated within a relatively narrow range around \$3.50 per gallon. Beginning October 2014, however, motor fuel prices declined noticeably. Since March 2016, prices increased slightly to \$2.79 at the beginning of October 2018, thereafter, fluctuating around low-\$2.00 through the end of December 2020. Prices increased to over \$3.00 by the end of 2021 and over \$4.00 in March 2022. U.S. Energy Information Administration Short-Term Energy Outlook forecasts continued prices about \$3.00 through 2022, with a reduction below in 2023.

**Figure 2-7**  
**Florida Gasoline Prices (Regular Grade/Gallon)**  
**June 2013 – March 2022**



Source: U.S. Energy Information Administration





# CHAPTER 3

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S.R. 528  
(MARTIN B. ANDERSEN BEACHLINE EXPRESSWAY)





# S.R. 528 (MARTIN B. ANDERSEN BEACHLINE EXPRESSWAY)

## 3.1 Facility Description

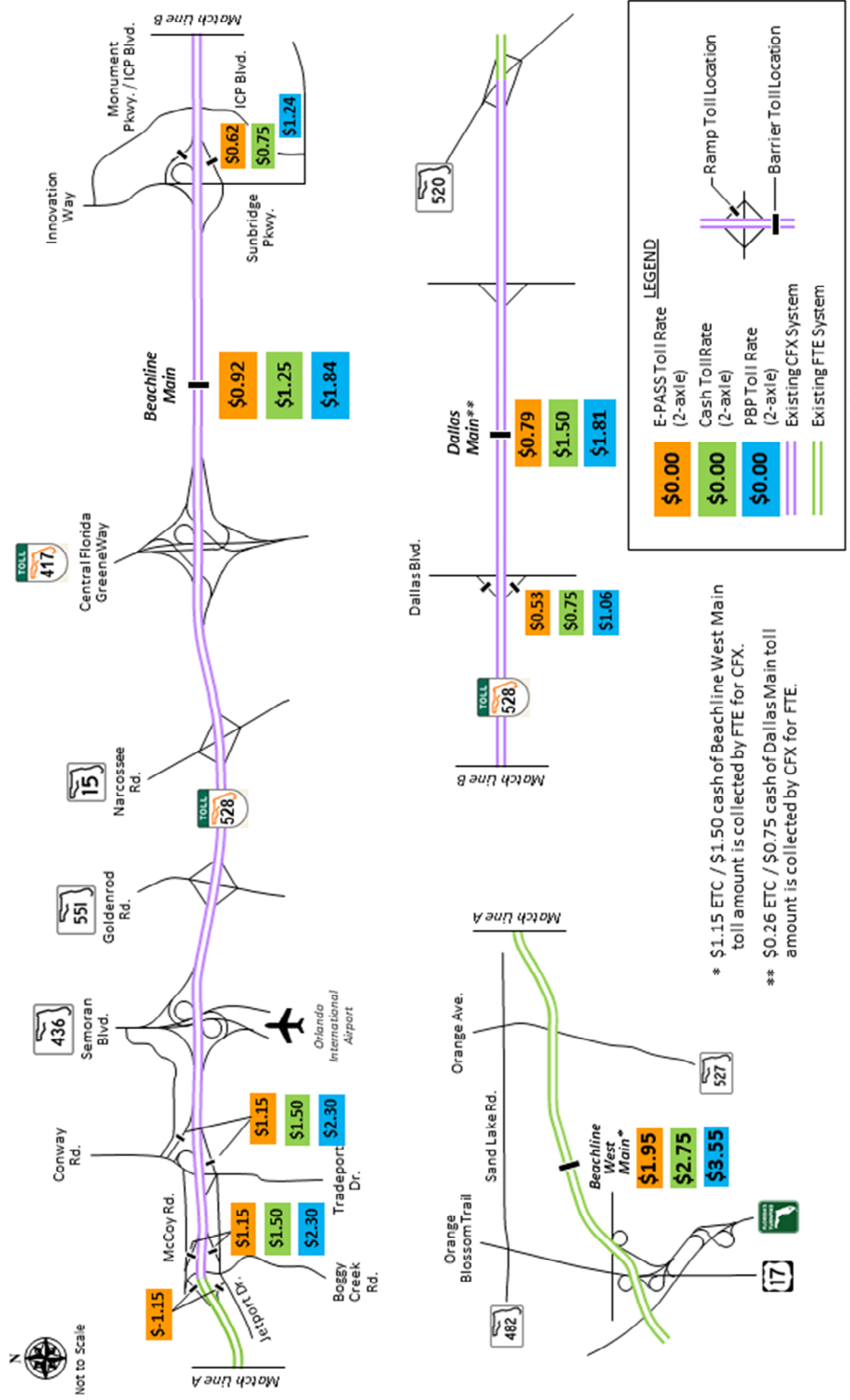
S. R. 528, also known as the Martin B. Andersen Beachline Expressway, is a 41-mile expressway that extends east from Interstate 4 (I-4) in the International Drive resort area to U.S. Highway 1 in Brevard County near the Atlantic Ocean. The Beachline Expressway is owned, operated and maintained by two agencies, CFX and FTE. CFX is responsible for the 23-mile portion of S.R. 528 from Boggy Creek Road/Sand Lake Road east to S.R. 520 with three mainline plaza groups including the Airport Main, Beachline Main and Dallas Main. Ramp tolls are located at the Boggy Creek Road/McCoy Road ramps to/from the east, the Conway Road/Tradeport Drive ramps to/from the east, the Innovation Way interchange to/from the east, and the Dallas Boulevard ramps to/from the west. FTE is responsible for the 8-mile segment of S.R. 528 from I-4 east to Boggy Creek Road known as the Beachline West Expressway with one mainline toll plaza. FTE is also responsible for the 15-mile portion of S.R. 528 from S.R. 520 east to Interstate 95 known as the Beachline East Expressway. A map of the CFX portion and the FTE western portion of S.R. 528, including the FY 2021 toll rates for the mainline and ramp toll plazas, is shown in **Figure 3-1**.



The original segment of S.R. 528 opened in 1967 as the Bee Line Expressway, providing a direct tolled route from Orlando starting at Narcoossee Road to the Space Coast. In July 1983, the segment of S.R. 528 from McCoy Road to S.R. 436/Semorán Boulevard was upgraded to a limited-access expressway, the Airport Main plaza was added, and the Airport Interchange was opened to traffic. The Airport Interchange connects the Orlando International Airport (OIA) with S.R. 528 and with S.R. 436. This 2.6-mile segment was a six-lane, limited-access expressway with frontage roads extending from an interchange with McCoy Road to the Airport interchange. S.R. 528 remained the only limited-access route into OIA until the south access road at Boggy Creek Road and John Young Parkway sections of S.R. 417 opened in July 1993.

In July 2009, the S.R. 528 Beachline Main plaza was converted to the express lane configuration. The express lanes allowed electronic customers to continue through the mainline toll collection point at highway speeds without having to stop or slow down. Automatic coin and manual cash customers were diverted off the main roadway to an adjacent traditional toll plaza and required to merge back into traffic after paying the toll. This provided a more efficient means of toll collection, greatly reducing delays to customers and increasing throughput at the toll plaza.

**Figure 3-1  
S.R. 528 Facilities and Toll Rates**



In May 2010, a roadway connection named Monument Parkway was completed between the S.R. 528/International Corporate Park (ICP) Interchange and the southern extension of Alafaya Trail/Innovation Way in east Orange County. This connection allowed traffic coming from Innovation Way to access S.R. 528 via the ICP interchange, which reduced travel times to S.R. 528. In March 2012, the Dallas Main plaza and Dallas Boulevard ramp plazas were opened to create toll equity for the traffic movements between S.R. 417 and the ICP interchange resulting from the Monument Parkway connection with Innovation Way. CFX collects \$0.26 per ETC transaction and \$0.75 per cash transaction for FTE tolls at the Dallas Main plaza.

Starting in FY 2013, S.R. 528 was the center of discussions for creation of a super corridor with intercity passenger rail service from All Aboard Florida, operating as Brightline, future utility needs, future expansion of S.R. 528, and possibly commuter rail. The acquisition phase of the super corridor was completed by the end of FY 2015 through negotiated purchases with the property owners and easements in favor of Virgin Trains USA, whose contributions offset the cost of the corridor. Construction on the West Palm Beach to Orlando section of Brightline started in June of 2019, with five contractors responsible for the 170-mile project and is expected to be completed in late 2022.

Starting in November 2014, CFX began removal of the Airport Main Plaza. The removal was due to several factors including on-going concerns that S.R. 528 customers heading west from the Orlando International Airport encountered two mainline toll plazas, as well as operational issues for ETC customers having to weave across cash lanes to reach the S.R. 436/Airport exit. In March 2016, an "Interagency Toll Collection Agreement" with FTE facilitated the transfer of toll collections from the Airport Main Plaza to FTE's Beachline West Main Plaza. The mainline toll plaza was removed and new ramp plazas were installed at the Conway Road and Boggy Creek Road Interchanges with tolls collected to and from the east. ETC customers with 2-axle vehicles now pay a combined toll of \$1.95 at the Beachline West Main Plaza; \$0.80 represents the FTE toll amount and \$1.15 represents the CFX toll amount. With the combined toll structure, ETC customers using the Boggy Creek Road interchange are eligible for a \$1.15 rebate when entering S.R. 528 westbound at Boggy Creek Road and passing through the Beachline West Plaza, and also when traveling eastbound on S.R. 528 passing through the Beachline West Plaza then exiting at Boggy Creek Road, because customers pay the full price at the Beachline West Plaza, but do not use CFX facilities. The Airport Main plaza group consists of the sum of T&R collected by FTE and the T&R collected by CFX.

In July 2016, CFX began construction of a new interchange between S.R. 528 and Innovation Way to improve connectivity to S.R. 528 in east Orange County and to accommodate the development of the Innovation Way corridor and to accommodate the Brightline train. The project included four ramps with two ramp plazas and the extension of Innovation Way to Aerospace Parkway with a connection to International Corporate Park Boulevard and the future Sunbridge Parkway. The ramp plazas feature both exact coin and ETC only lanes. This project also involved removal of the existing S.R. 528/ICP Boulevard interchange. The project was completed and the final ramps on the interchange opened to traffic in March 2018.

## 3.2 Historical Transactions and Toll Revenues

As defined in Chapter 1, CFX transactions and toll revenues are classified as either Paid In-Lane (ETC and cash) or Unpaid In-Lane (PBP and non-revenue). Total transactions are the sum of paid in-lane and unpaid in-lane transactions. Total revenue is the sum of paid in-lane revenue and the revenue collected through the PBP process, estimated as an accrued amount. The following section includes a breakdown of transactions and revenues by paid in-lane and then by PBP.

### 3.2.1 ANNUAL PAID IN-LANE TRANSACTION AND REVENUE TRENDS

A history of annual paid in-lane transactions on S.R. 528 at the Beachline Main, Airport Main and Dallas Main plaza groups from FY 2002 to FY 2021 is presented in the top half of **Table 3-1**. Annual paid in-lane revenues are also summarized and totaled in the bottom half of the table. The S.R. 528 annual paid in-lane transaction and revenue trends including annual growth are also presented visually in **Figure 3-2** and **Figure 3-3**. These historical tables do not include PBP transactions and revenues, only those that are paid in-lane. For this reason, the information presented in this section may differ slightly from the data presented in the FY 2021 Comprehensive Annual Financial Report (CAFR) and other information in this report.

In FY 2008, the Beachline Main plaza group experienced a decrease of 0.6 percent in paid in-lane transactions and a decrease of 1.1 percent in paid in-lane revenues. This was the first year of decline since the plaza opened and can be attributed to the start of the Great Recession.

In FY 2009, total paid in-lane transactions on S.R. 528 decreased by 9.2 percent and total paid in-lane revenues decreased by 4.0 percent compared to FY 2008. FY 2009 was affected by the Great Recession and then by the Systemwide toll rate adjustment. The toll rate adjustment occurred in April 2009 and impacted the last three months of FY 2009. Also, in FY 2009, tolls were suspended on the facility for nearly two days in August 2008 due to Tropical Storm Fay.

Paid in-lane transactions continued to decline in the Airport Main plaza group in FY 2010 by 0.8 percent due to the continued impacts of the economic recession and the toll rate adjustment. In FY 2010, paid in-lane revenues on the Airport Main and Beachline Main plaza groups increased significantly due to the additional revenue collected from the Systemwide toll rate adjustment. The toll rate adjustment impacted growth during the first nine months of the fiscal year. The Beachline Main plaza group had a slightly higher growth rate than the Airport Main plaza group, caused by the opening of the Monument Parkway connection between Innovation Way and S.R. 528/ International Corporate Park interchange, which provided alternative access in this area of east Orange County.

**Table 3-1**  
**S.R. 528 Plaza Groups – Historical Paid In-Lane Transactions and Revenue**  
**FY 2002 – FY 2021**

Fiscal Year	Airport Main	Beachline Main	Dallas Main	TOTAL	Airport Main	Beachline Main	Dallas Main	TOTAL
<b>TRANSACTIONS (millions)</b>				<b>PERCENT CHANGE</b>				
2002 <sup>A</sup>	19.0	12.6		31.6				
2003	20.0	13.7		33.7	5.3%	8.7%		6.6%
2004	22.6	14.9		37.5	13.0%	8.8%		11.3%
2005 <sup>B</sup>	24.6	15.1		39.7	8.8%	1.3%		5.9%
2006	26.5	15.9		42.4	7.7%	5.3%		6.8%
2007	27.8	16.7		44.5	4.9%	5.0%		5.0%
2008 <sup>C</sup>	28.2	16.6		44.8	1.4%	-0.6%		0.7%
2009 <sup>D</sup>	25.6	15.1		40.7	-9.2%	-9.0%		-9.2%
2010 <sup>E</sup>	25.4	15.5		40.9	-0.8%	2.6%		0.5%
2011	26.2	16.3		42.5	3.1%	5.2%		3.9%
2012 <sup>F</sup>	26.8	16.4	4.3	47.5	2.3%	0.6%		11.8%
2013 <sup>F,G</sup>	26.4	16.7	14.5	57.6	-1.4%	1.8%	237.2%	21.3%
2014	27.0	17.6	15.1	59.7	2.3%	5.4%	4.1%	3.6%
2015	28.8	19.0	16.4	64.2	6.7%	8.0%	8.6%	7.5%
2016 <sup>H</sup>	32.6	20.9	18.0	71.5	13.2%	10.0%	9.8%	11.4%
2017 <sup>I</sup>	36.6	21.7	18.5	76.8	12.3%	3.8%	2.8%	7.4%
2018 <sup>J</sup>	36.8	21.6	18.3	76.7	0.5%	-0.5%	-1.1%	-0.1%
2019 <sup>*</sup>	36.8	22.0	18.3	77.1	0.0%	1.9%	0.0%	0.5%
2020 <sup>*,K</sup>	31.9	19.6	16.5	68.0	-13.3%	-10.9%	-9.8%	-11.8%
2021 <sup>*,L</sup>	28.7	18.4	15.7	62.8	-10.0%	-6.1%	-4.8%	-7.6%
<b>TOLL REVENUES (millions)</b>				<b>PERCENT CHANGE</b>				
2002 <sup>A</sup>	\$15.0	\$13.7		\$28.7				
2003	\$15.7	\$14.9		\$30.6	4.7%	8.8%		6.6%
2004	\$17.9	\$16.4		\$34.3	14.0%	10.1%		12.1%
2005 <sup>B</sup>	\$19.4	\$16.7		\$36.1	8.4%	1.8%		5.2%
2006	\$20.9	\$17.5		\$38.4	7.7%	4.8%		6.4%
2007	\$21.8	\$18.2		\$40.0	4.3%	4.0%		4.2%
2008 <sup>C</sup>	\$22.1	\$18.0		\$40.1	1.4%	-1.1%		0.3%
2009 <sup>D</sup>	\$21.6	\$16.9		\$38.5	-2.3%	-6.1%		-4.0%
2010 <sup>E</sup>	\$26.2	\$20.4		\$46.6	21.3%	20.7%		21.0%
2011	\$27.0	\$21.4		\$48.4	3.1%	4.9%		3.9%
2012 <sup>F</sup>	\$27.5	\$19.0	\$2.2	\$48.7	1.9%	-11.2%		0.6%
2013 <sup>F,G</sup>	\$30.9	\$16.0	\$7.6	\$54.5	12.4%	-15.8%	243.9%	11.8%
2014	\$31.6	\$16.8	\$7.9	\$56.3	2.3%	5.1%	4.4%	3.4%
2015	\$33.6	\$18.2	\$8.6	\$60.4	6.3%	8.3%	8.9%	7.3%
2016 <sup>H</sup>	\$37.3	\$20.0	\$9.4	\$66.7	11.0%	9.9%	9.3%	10.4%
2017 <sup>I</sup>	\$41.4	\$20.7	\$9.7	\$71.8	11.0%	3.5%	3.2%	7.6%
2018 <sup>J</sup>	\$41.6	\$20.6	\$9.6	\$71.8	0.5%	-0.5%	-1.0%	0.0%
2019 <sup>*</sup>	\$42.0	\$21.3	\$10.5	\$73.8	1.0%	3.4%	9.4%	2.8%
2020 <sup>*,K</sup>	\$36.6	\$20.2	\$9.6	\$66.4	-12.9%	-5.2%	-8.6%	-10.0%
2021 <sup>*,L</sup>	\$33.7	\$19.3	\$9.4	\$62.4	-7.9%	-4.5%	-2.1%	-6.0%

\*Indicates systemwide toll rate increase according to Customer First Toll Policy

Notes:

A - Effects of the events on September 11, 2001.

B - Effects from 2004 hurricane season (4 storms with toll suspensions).

C - First effects of national economic recession.

D - Systemwide toll rate increase in April 2009. Beachline Main plaza converted to open road tolling in July of 2009.

E - Monument Parkway connection to ICP ramps opened to traffic.

F - Dallas Main Plaza opened to traffic on March 19, 2012. Beachline Main plaza toll reduced from \$1.50 to \$0.75.

G - Systemwide toll rate increase in July 2013. Implementation of cash and electronic toll rate differential.

H - Airport Main Plaza stopped collecting tolls on 1/31/16. All

transactions and toll revenues are from ramps or the FTE plaza.

I - Effects from Hurricane Matthew in October 2016.

J - Effects from Hurricane Irma in September 2017.

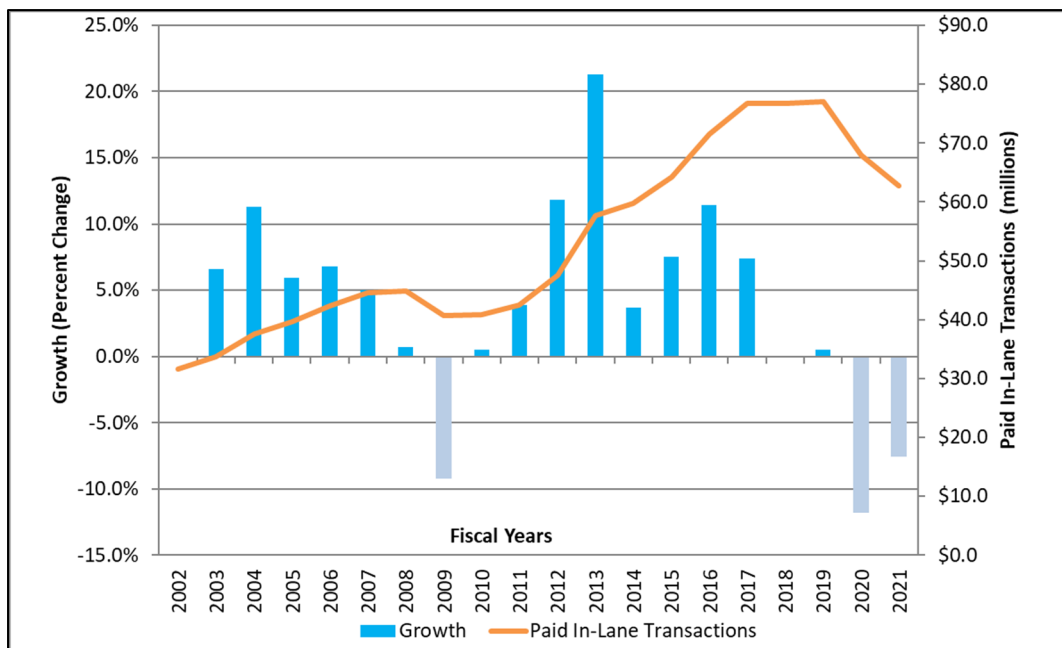
K - Effects from Hurricane Dorian in September 2019 and first effects of COVID-19 pandemic began in March 2020.

L - Continued effects of COVID-19 pandemic.

In FY 2011, total paid in-lane transactions and revenues both increased by 3.9 percent on S.R. 528. In FY 2012, the Dallas Main plaza opened to traffic to create toll equity for customers on S.R. 528 by collecting the same toll at two locations. At this time, tolls for 2-axle vehicles at the Beachline Main plaza were reduced from \$1.50 to \$0.75. The decrease in tolls resulted in a revenue decline of 11.2 percent on the Beachline Main plaza group compared to the prior year. The toll previously collected on behalf of FDOT at the Beachline Main plaza also shifted to the Dallas Main plaza. The Dallas Main plaza, which opened in March 2012, collected \$2.2 million in revenues and reported 4.3 million transactions during its first three months of operation in FY 2012. Overall, S.R. 528 transactions would have been relatively flat in FY 2012 compared to FY 2011 without the additional transactions from this new plaza.

In FY 2013, paid in-lane transactions at the Airport Main plaza group declined by 1.4 percent, while paid in-lane revenues increased by 12.4 percent over FY 2012. This was expected due to the recent systemwide toll rate adjustment that went into effect on July 1, 2012 (FY 2013). The Beachline Main plaza group experienced an increase of 1.8 percent in transactions and decrease of 15.8 percent in revenues in FY 2013. As previously mentioned, tolls at the Beachline Main plaza were reduced in March 2012 along with the opening of the Dallas Main plaza. The Beachline Main plaza was also included in the FY 2013 systemwide toll rate adjustment. In FY 2013, transactions at the Dallas Main plaza increased by 237.2 percent and revenues increased by 243.9 percent compared to FY 2012. This can be attributed to the first full year of toll collection at this new plaza. In FY 2013, the combined revenues collected at the Beachline Main and Dallas Main plazas were slightly less 0.9 percent than the amount collected at the single plaza in the prior year.

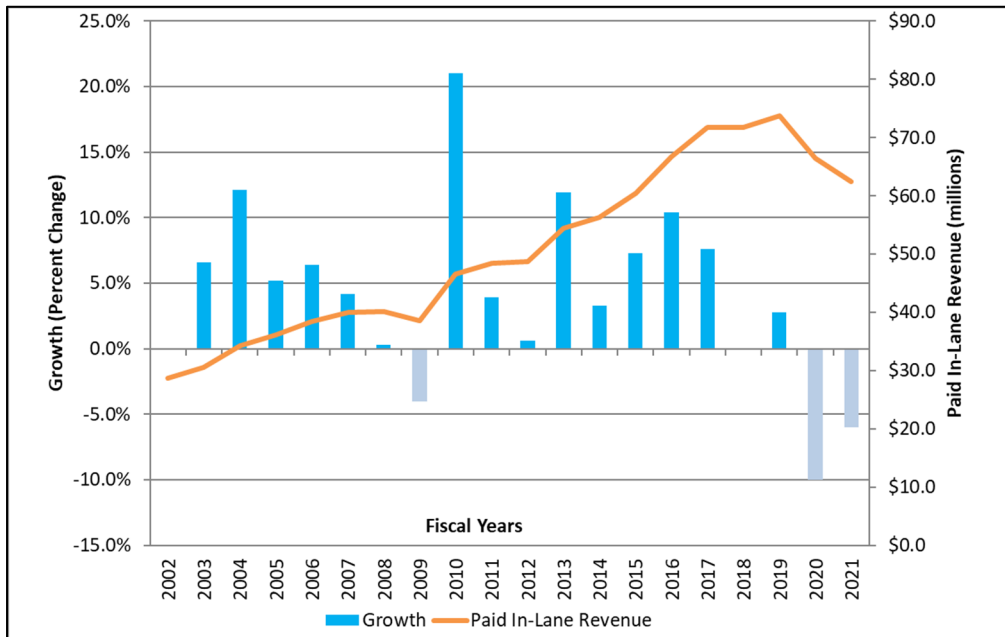
**Figure 3-2**  
**S.R. 528 Historical Paid In-Lane Transactions and Annual Growth**  
**FY 2002 – FY 2021**



Source: Monthly unaudited data provided by CFX



**Figure 3-3  
S.R. 528 Historical Paid In-Lane Revenue and Annual Growth  
FY 2002 – FY 2021**



Source: Monthly unaudited data provided by CFX

In FY 2014, total paid in-lane transactions and revenues on S.R. 528 increased by 3.6 percent and 3.4 percent, respectively. This growth rate is significantly reduced compared to the growth observed in FY 2013, primarily because FY 2013 was the first full year of transactions and toll revenues at the Dallas Main plaza group. All plaza groups experienced significant growth again in FY 2015.

In FY 2016, all plaza groups on S.R. 528 experienced growth in paid in-lane transactions and revenues compared to FY 2015. 2016 was a leap year so February 2016 included an extra day of transactions and toll revenue collection compared to February 2015. Part of the increase at the Airport Main plaza group is due to the change in the toll plan, or addition of the Boggy Creek Road and Conway Road ramp plazas, because of the mainline plaza removal. Transactions at the FTE Beachline West Main Plaza are included as part of the Airport Main plaza group.

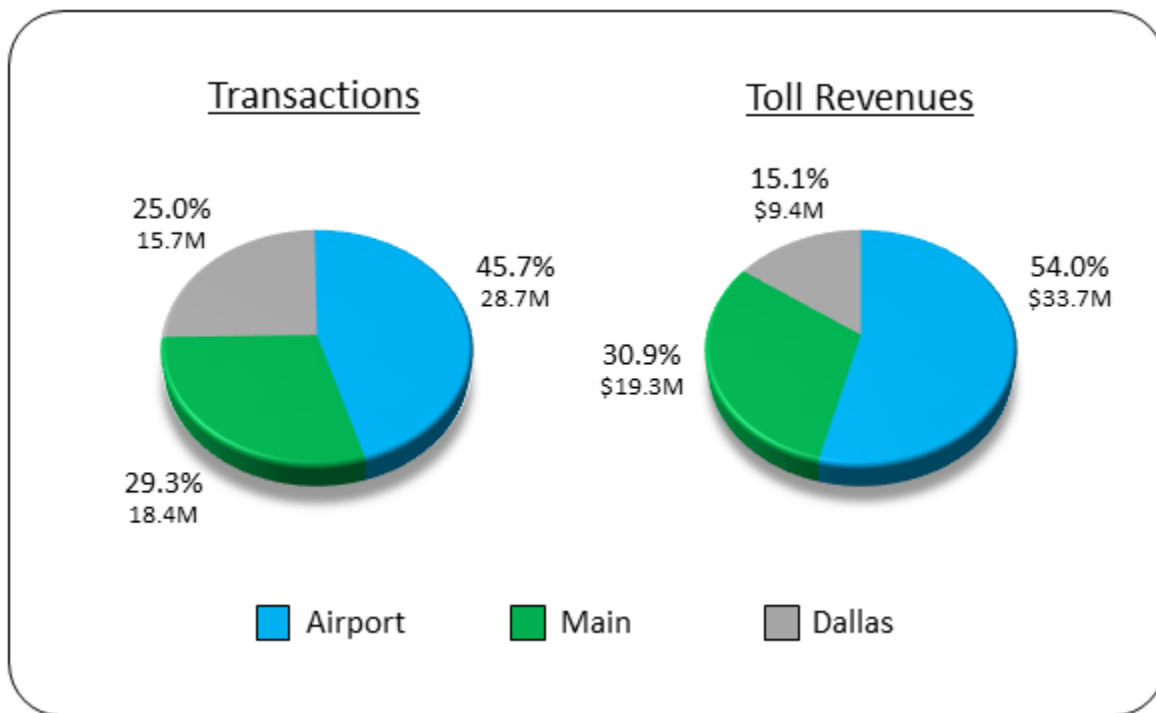
In October 2016 (FY 2017), Hurricane Matthew tracked parallel to the Florida coast as a Category 3 storm with winds up to 130 miles per hour. Tolls were suspended on the CFX System beginning at 8:00 p.m. on October 5, 2016 through early on October 10, 2016. The toll suspension resulted in a loss of approximately 0.8 million transactions and \$0.7 million in toll revenues on S.R. 528. In September 2017 (FY 2018), Hurricane Irma tracked parallel to the Florida coast as a Category 4 storm with winds up to 155 miles per hour. Tolls were suspended on CFX toll facilities beginning on September 5, 2017 through September 20, 2017 resulting in a transaction loss of approximately 3.4 million and a toll revenue loss of \$3.2 million on S.R. 528. Due to toll suspensions, S.R. 528 experienced no growth in total transactions and revenues in FY 2018.

In FY 2019, S.R. 528 total paid in-lane transactions increased by 0.5 percent and paid in-lane revenues increased by 2.8 percent compared to FY 2018. The slower growth in FY 2019 can be attributed to customers choosing to pay via the PBP program.

In FY 2020 and FY 2021, all S.R. 528 plaza groups experienced a decline in paid in-lane transactions and revenues, despite the FY 2020 and FY 2021 toll rate adjustments. The declines in both transactions and revenues can primarily be attributed to the continued negative impacts of the COVID-19 pandemic. In FY 2020, September 2019 transactions and revenues were also negatively impacted by toll suspensions during Hurricane Dorian.

The share by plaza group of total S.R. 528 paid in-lane transactions and toll revenues during FY 2021 are shown in **Figure 3-4**. The Airport Main plaza group represented 28.7 million transactions or 45.7 percent of total S.R. 528 transactions. The Beachline Main plaza group carried 18.4 million or 29.3 percent of total transactions on the facility. Finally, the Dallas Main plaza group represented 15.7 million or 25.0 percent of the total transactions in FY 2021.

**Figure 3-4**  
**S.R. 528 Paid In-Lane Transactions and Revenue by Plaza Group**  
**FY 2021**



Source: Monthly unaudited data provided by CFX

The annual totals and shares of paid in-lane revenues differ from those reported for annual paid in-lane transactions because of differences in toll rates. As shown, the Airport Main plaza group represented \$33.7 million in revenues or 54.0 percent of total revenues. The Beachline Main plaza group carried \$19.3 million or 30.9 percent of revenues on the facility. Finally, because of the lower toll, the Dallas Main plaza group represented \$9.4 million, or 15.1 percent of total transactions in FY 2021.

### 3.2.2 ANNUAL PBP TRANSACTION AND REVENUE TRENDS

A history of annual PBP transactions and revenue on S.R. 528 from FY 2012 to FY 2021 is presented in **Table 3-2**. PBP transactions and toll revenues are recorded by toll location and accrued monthly by plaza group, however Table 3-2 shows the annual totals for S.R. 528 as reported at year end.

**Table 3-2**  
**S.R. 528 – Historical PBP Transactions and Revenue**  
**FY 2012 – FY 2021**

Fiscal Year	Transactions (millions)	Percent Change	Toll Revenues (millions)	Percent Change
2012	0.7		\$0.6	
2013	1.0	42.9%	\$1.0	66.7%
2014	1.2	20.0%	\$1.2	20.0%
2015	1.6	33.3%	\$1.6	33.3%
2016	2.2	37.5%	\$2.3	43.8%
2017	2.7	22.7%	\$3.8	65.2%
2018	3.2	18.5%	\$3.8	0.0%
2019	6.0	87.5%	\$6.2	63.2%
2020	7.1	18.3%	\$7.9	27.4%
2021	7.9	11.3%	\$14.4	82.3%

Source: Monthly unaudited data provided by CFX

PBP transactions have increased from 0.7 million in FY 2012 to 7.9 million in FY 2021, while PBP revenues have increased from \$0.6 million to \$14.4 million over the same period. In FY 2021, PBP transactions increased 11.3 percent and PBP revenues increased 82.3 percent over FY 2020. As shown in the table, the rate of growth in PBP transactions is recently trending downward. During the early part of the COVID-19 pandemic, cash toll collection was suspended for several months. For this reason, PBP transactions and revenue increased in FY 2020. The significant increase in PBP revenues in FY 2021 can be attributed to the new PBP toll rate adopted by the CFX Board that went into effect on July 1, 2020 (FY 2021), at which time the PBP toll rate at all toll locations was increased to twice the ETC toll rate. Because of the new PBP toll rate, it is anticipated that going forward a portion of customers paying via PBP will switch to ETC to avoid the higher toll rate. Overall, the increase in customer preference for PBP in recent years has contributed to the slower growth in paid in-lane transactions and revenue.

### 3.2.3 MONTHLY PAID IN-LANE TRANSACTION SEASONAL VARIATION

In **Table 3-3**, monthly paid in-lane transactions are normalized to the average number of paid in-lane transactions per day. Using average number of transactions per day allows for an easy comparison of the variations in relative travel demand over the year. The pattern of seasonal usage changes slightly from year to year, based on the number of weekdays in each month, but in FY 2021 this seasonality was overshadowed by the impacts on travel demand from the COVID-19 pandemic. Therefore, the factors in Table 3-3 do not reflect the typical monthly seasonal trends on S.R. 528. Instead, these factors include the recovery from COVID-19.

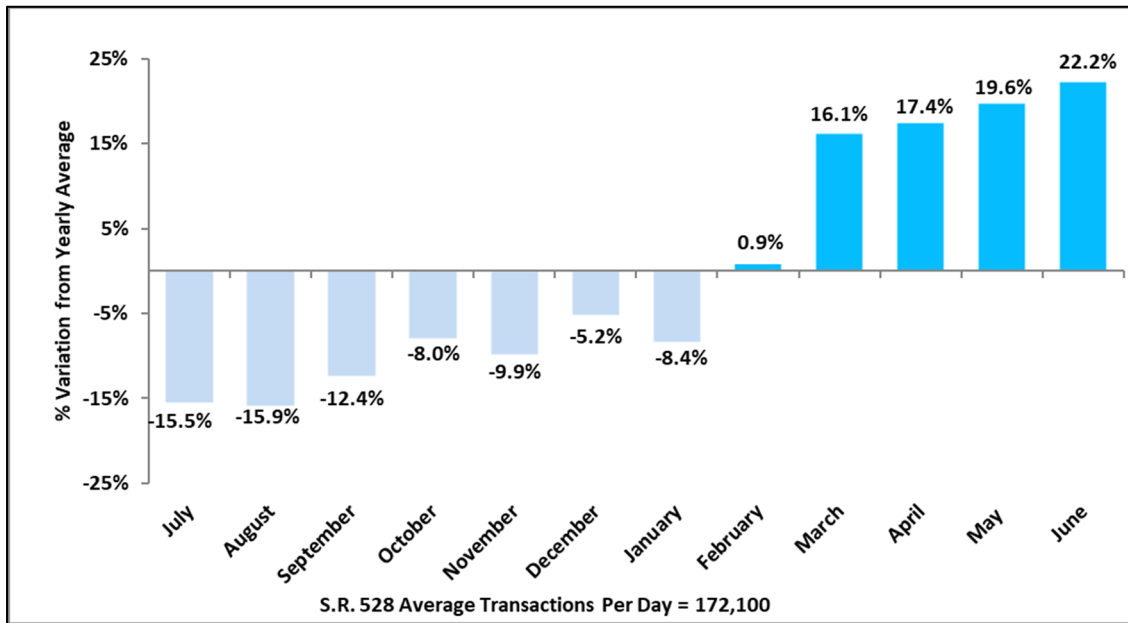
Average transactions per day in FY 2021 on S.R. 528 ranged from a low of approximately 144,700 in August 2020 to a high of 210,300 in June 2021. This data is presented in a graphical format in **Figure 3-5**. The transactions for each month appear as a percentage of the average for the fiscal year.

**Table 3-3**  
**S.R. 528 – Monthly Seasonal Variation in Paid In-Lane Transactions**  
**FY 2021**

Month	Number of Days in Month	Total Toll Paying Transactions	Average Transactions/day	Seasonal Factor
July	31	4,507,152	145,400	0.845
August	31	4,484,447	144,700	0.841
September	30	4,520,060	150,700	0.876
October	31	4,908,851	158,300	0.920
November	30	4,654,347	155,100	0.901
December	31	5,059,863	163,200	0.948
January	31	4,889,615	157,700	0.916
February	28	4,861,922	173,600	1.009
March	31	6,192,482	199,800	1.161
April	30	6,060,637	202,000	1.174
May	31	6,383,845	205,900	1.196
June	30	6,309,797	210,300	1.222
<b>Average</b>		<b>5,236,085</b>	<b>172,100</b>	<b>1.000</b>
<b>Total Year</b>	<b>365</b>	<b>62,833,018</b>		

Source: Monthly unaudited data provided by CFX

**Figure 3-5**  
**S.R. 528 Variation in Paid In-Lane Transactions Per Day, by Month**  
**FY 2021**



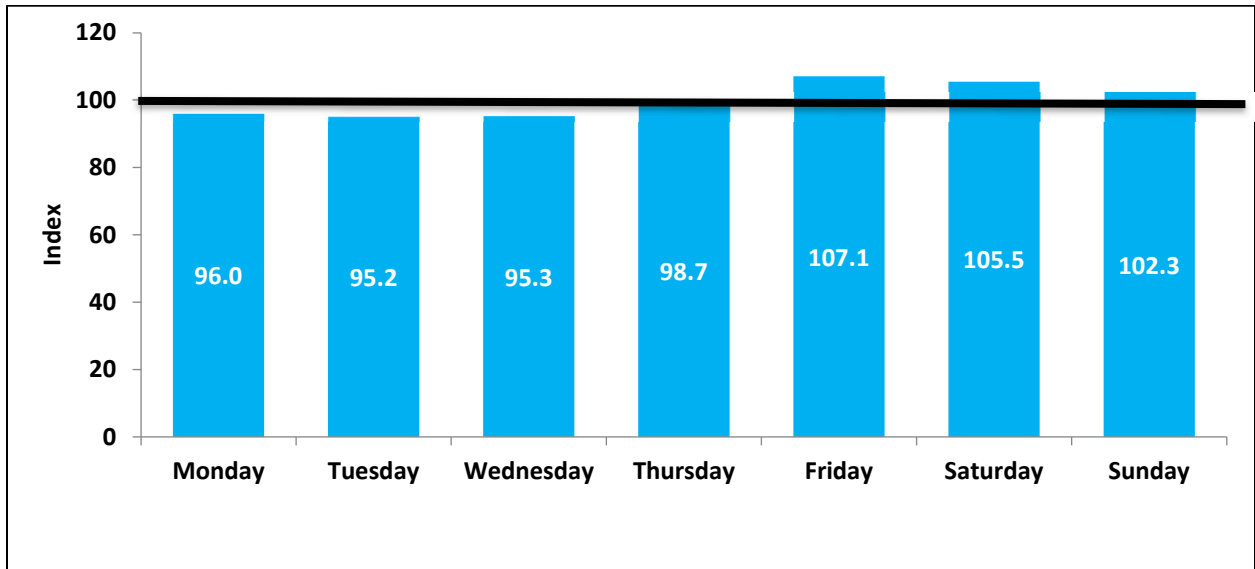
Source: Monthly unaudited data provided by CFX

**3.2.4 DAY-OF-WEEK TRANSACTION VARIATION**

Figure 3-6 contains a comparison of transactions by day of week in FY 2021. This data is presented as an index, where the average day equals 100. An index value of 100 for a given day of the week would indicate that day’s transactions were precisely the same volume as the facility’s average. A value of 120 would indicate a day that has 20 percent greater volume than the average. As was done in prior years, the data used for this analysis was for a typical week in May 2021, a month that may have had some impacts from COVID-19, but these impacts would not have disturbed the variation over the average week. The data includes transactions at mainline plazas only (no ramps).

FY 2021 weekday transactions on S.R. 528 fluctuated over the course of the five-day work week. Transactions were highest on Fridays, with an index value of 107.1 (7.1 percent higher than the average day), and volumes on Monday through Thursday ranged from index values of 95.2 to 98.7. Saturday volumes were similar to Friday volumes with an index value of 105.5. Volumes on Sunday were also higher than average with an index value of 102.3. The higher volumes on Fridays, Saturdays and Sundays can be attributed to tourism and beach-related travel using S.R. 528. It is unusual for a facility to have an index below average on weekdays and higher than average on weekend days.

**Figure 3-6**  
**S.R. 528 Variation in Transactions, by Day of Week**  
**FY 2021**



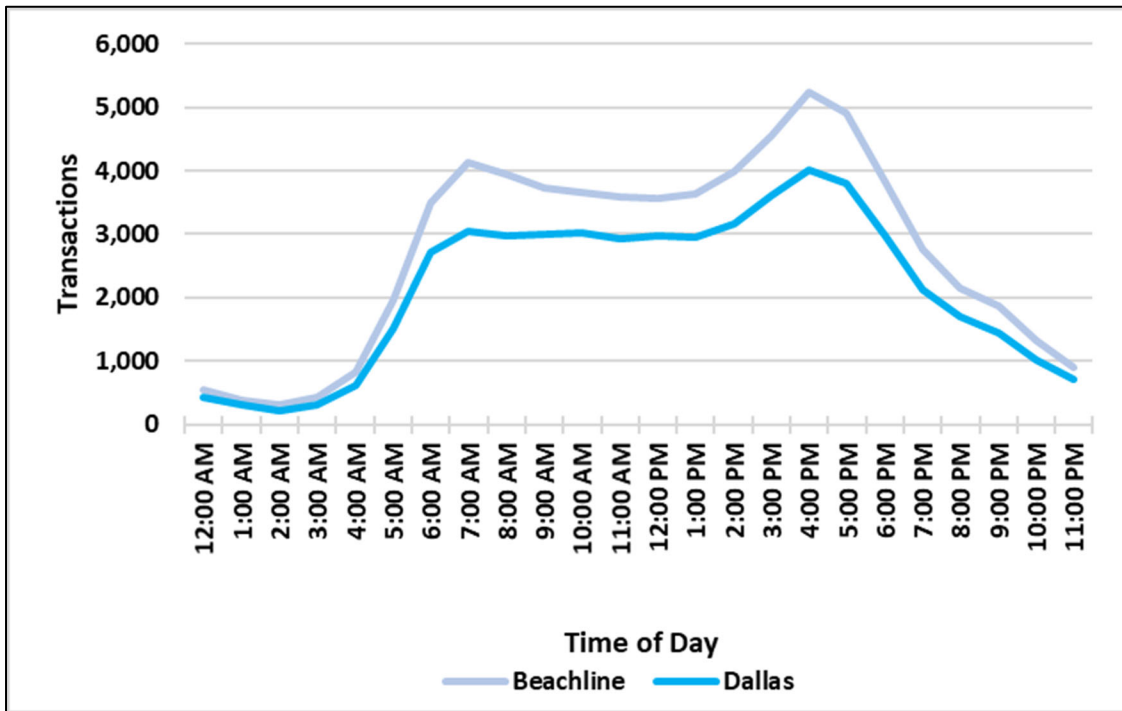
Source: Unaudited lane transaction data – May 2021

**3.2.5 HOURLY TRAFFIC DISTRIBUTION**

The hourly distribution of traffic volumes includes information on the usage characteristics of the facility. The hourly distributions represent counts taken during a typical week at the mainline toll plazas in the month of May. The typical weekday hourly distribution is shown in **Figure 3-7** and the weekend hourly distribution is shown in **Figure 3-8**. The figures contain the sum of traffic volumes in both directions.

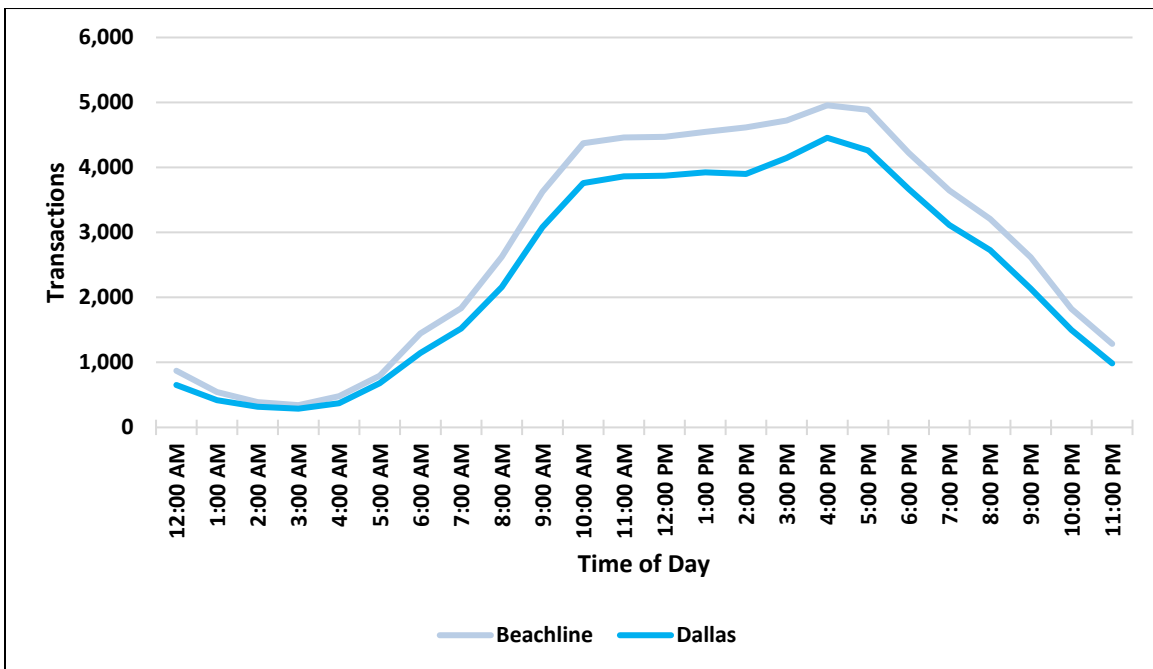
The two mainline toll plaza locations on S.R. 528 exhibit similar hourly traffic patterns. On weekdays, travel demand at both locations is bimodal, with both a morning and an evening peak hour. The Beachline and Dallas mainline plazas both experience slightly higher peak volumes in the evening hours than in the morning hours. The highest peak hour volumes during the week were 5,200 per hour beginning at 4:00 p.m. at the Beachline mainline plaza and 4,000 per hour beginning at 4:00 p.m. at the Dallas mainline plaza. On weekends, there is a clear peak between 10:00 a.m. and 11:00 a.m. and another peak in the afternoon at 5:00 p.m. reflecting traffic heading to the beach for the day.

**Figure 3-7**  
**S.R. 528 Hourly Two-Way Traffic Variation (Weekday)**  
**FY 2021 (May)**



Source: Unaudited lane traffic data – May 2021

**Figure 3-8**  
**S.R. 528 Hourly Two-Way Traffic Variation (Weekend)**  
**FY 2021 (May)**



Source: Unaudited lane traffic data – May 2021

### 3.2.6 TRANSACTIONS AND REVENUE BY PAYMENT TYPE

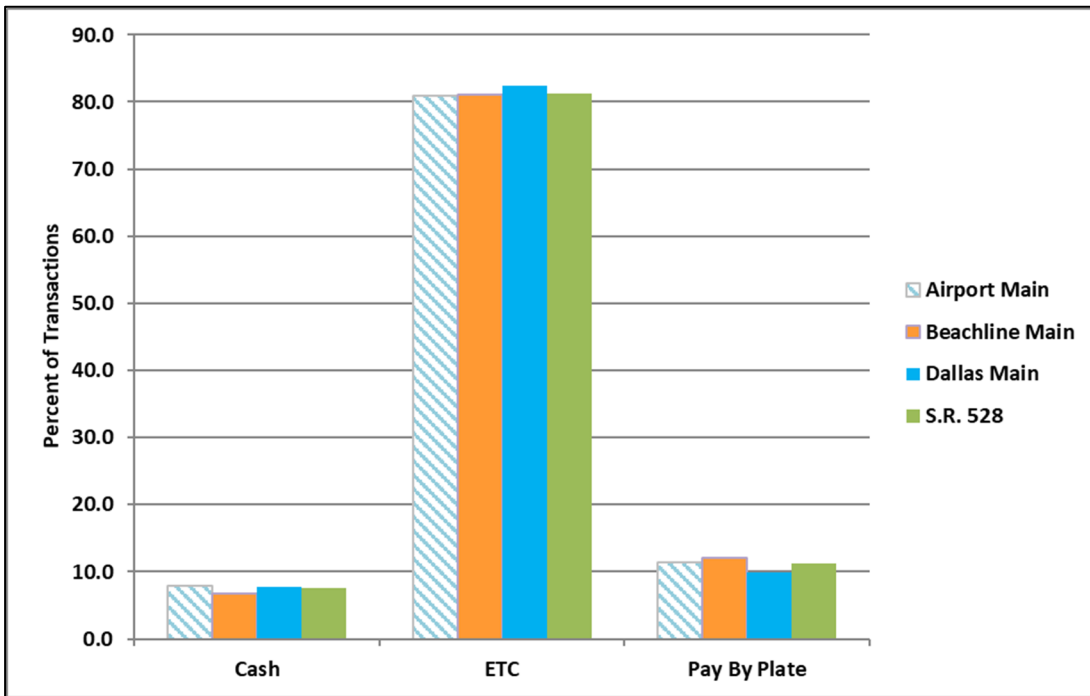
The distributions of transactions and revenue by payment type and plaza group during FY 2021 are presented in **Figure 3-9** and **Figure 3-10**. Customers pay tolls in one of three ways: cash, ETC, and PBP. As defined in Chapter 1 of this report, paid in-lane transactions and revenue include cash and ETC payments made when a customer travels through a CFX toll location. The remaining transactions and revenue are classified as unpaid in-lane, which includes PBP and a small portion of non-revenue transactions. PBP transactions and revenues are estimated monthly based on a FY 2021 accrual rate of 56 percent of all unpaid in-lane transactions. This means that the PBP transactions and revenue shown here are estimates of the levels that will eventually pay tolls through the PBP process. It is important to note that the data presented in the following two figures is based on unaudited transaction and toll revenue data and may not match the audited data shown in other tables and figures in this chapter.

As shown in Figure 3-9, the share of ETC transactions ranged from a low of 80.8 percent at the Airport Main plaza group to a high of 82.4 percent at the Dallas Main plaza group. Overall, ETC transactions on S.R. 528 accounted for 81.3 percent of total transactions on the facility. The share of cash transactions ranged from a low of 6.8 percent at the Beachline Main to a high of 7.8 percent at the Airport Main plaza group. Overall, cash transactions on S.R. 528 accounted for 7.5 percent of total transactions on the facility. The PBP transactions ranged from a low of 9.9 percent at the Dallas Main plaza group to a high of 12.1 percent of transactions at the Beachline Main plaza group. Overall, PBP transactions on S.R. 528 accounted for 11.2 percent of total transactions on the facility.

As shown in Figure 3-10, the share of toll revenues by payment type is comparable to the share of transactions, recognizing the differences in the toll paid by payment method. The share of ETC toll revenues ranged from a low of 72.7 percent at the Airport Main plaza group to a high of 75.7 percent at the Dallas Main plaza group. Overall, ETC toll revenues accounted for 73.4 percent of total toll revenues on S.R. 528. The share of cash toll revenues ranged from a low of 7.6 percent at the Beachline Main plaza group to a high of 9.0 percent at the Dallas Main plaza group. Overall, cash toll revenues accounted for 7.8 percent of total toll revenues on S.R. 528. The shares of PBP toll revenues ranged from a low of 15.4 percent at the Dallas Main plaza group to a high of 19.7 percent at the Airport Main plaza group. Overall, PBP toll revenues accounted for 18.8 percent of total toll revenues on S.R. 528.

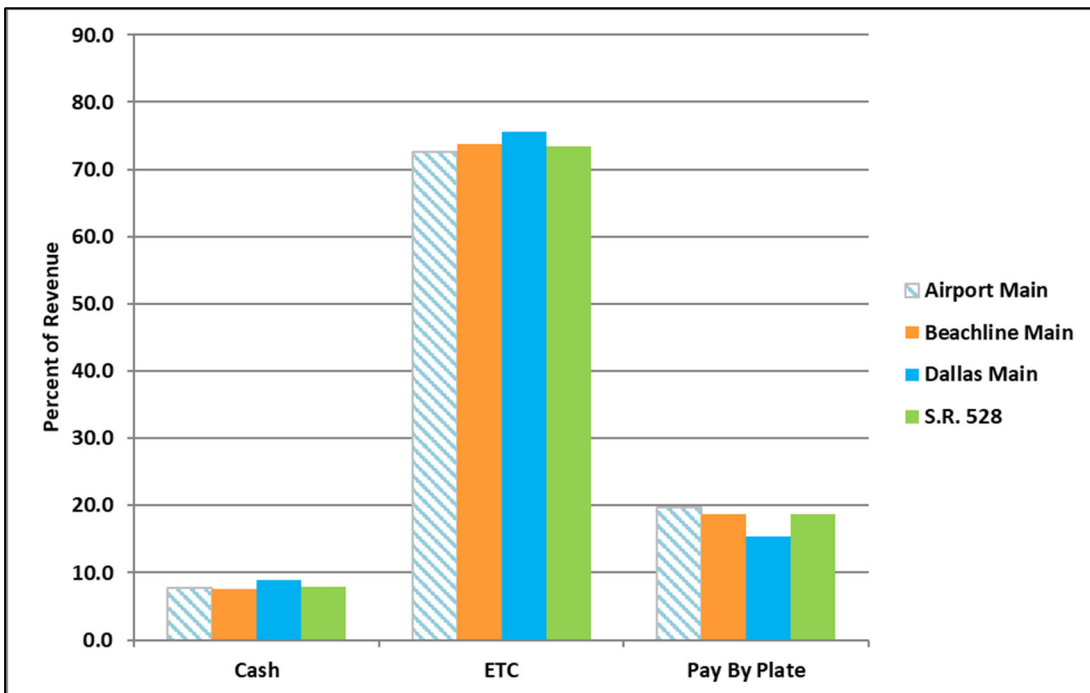


**Figure 3-9**  
**S.R. 528 Percent of Transactions by Payment Type**  
**FY 2021**



Source: Monthly unaudited transaction data provided by CFX

**Figure 3-10**  
**S.R. 528 Percent of Revenue by Payment Type**  
**FY 2021**



Source: Monthly unaudited toll revenue data provided by CFX

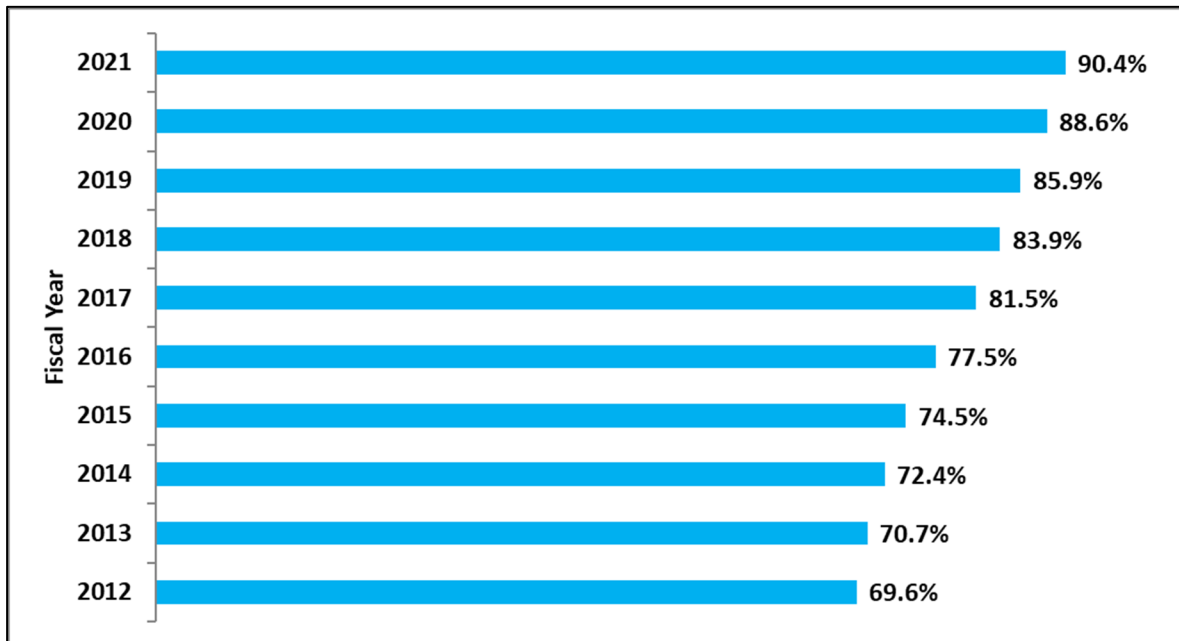
### 3.3 ETC Usage

The shares of paid in-lane revenues generated from ETC over the past ten fiscal years on S.R. 528 are shown in **Figure 3-11**. Cash payments are the other source of paid in-lane revenues. PBP revenues are not included. The proportion of ETC toll revenues collected by CFX has steadily increased on the facility. In FY 2012, ETC revenues represented 69.6 percent of total paid in-lane revenues on the facility. In FY 2021, ETC revenues were 90.4 percent. The data below differs from Figure 3-10 because it only includes the annual comparison of paid in-lane revenue and not all revenue types. ETC revenues are lower than the total System ETC revenues due to the significant number of tourists that use the facility. ETC usage is still expected to increase as customers shift to ETC to take advantage of the lower ETC toll rate, especially with the implementation of the PBP toll rates that are now twice the ETC toll rate as of July 2020 (FY 2021).

Beginning May 11, 2016, CFX implemented a pilot program called The Reload Lane to encourage and increase E-PASS usage. This program is the first of its kind in the continental United States and provides customer convenience and multiple payment options (cash, check, and debit/credit card). Due to the success of this program, the CFX Board approved the expansion of the Reload Lane capabilities to all manned, mainline toll plaza lanes, expected to be completed in FY 2022.

In June 2021, CFX also launched the Visitor Toll Pass program, which is a free temporary toll pass for rental car customers traveling through the Orlando International Airport. With the pass, rental car customers pay the ETC rates on Florida toll roads with no extra or hidden fees.

**Figure 3-11**  
**S.R. 528 Percent of Paid In-Lane Revenue from Electronic Toll Collection**  
**FY 2012 – FY 2021**



Source: Monthly unaudited data provided by CFX

### 3.4 Forecasted Transactions and Toll Revenues

Based on the recently adopted “Customer First Toll Policy,” toll rate adjustments (indexed tolls) were applied to the T&R forecasts every year based on the net change in CPI for the prior year, which equated to 0.96 percent in CY 2020. Because the change in CPI was lower than the 1.5 percent floor, CDM Smith used 1.5 percent to adjust the FY 2022 toll amounts. At the time of preparing the T&R estimates and this report, CDM Smith learned that the CPI during CY 2021 was 5.08 percent. Based on assurances from CFX, CDM Smith used this value to index toll rates for FY 2023. CDM Smith used the floor of 1.5 percent per year every year thereafter in the forecast period.

Future transportation improvements that could influence the T&R forecasts for S.R. 528 include the projects listed in **Table 3-4**, assumed completed in each model horizon year. System improvements, such as the S.R. 528 widening projects from S.R. 417 to Innovation Parkway and from S.R. 436 to S.R. 417 will help growth rates in the near term as these are areas of congestion. The improvement to FTE’s portion of S.R. 528 from I-4 to McCoy Road should result in higher growth rates in the near term. System improvements, such as S.R. 528 from Innovation Parkway to S.R. 520, will add to growth in the long term. The improvements to feeder roads, including Narcoossee Road and Conway Road positively impact the traffic and revenue growth on S.R. 528 throughout the forecast horizon.

**Table 3-4**  
**S.R. 528 - Key Transportation Improvements**

Facility	From	To	Year	Jurisdiction	Improvement
Interstate 4	SR 434	Kirkman Rd	2025	FDOT	Widen to 10 Lanes
Central Florida Pkwy	International Drive	SR 423 (John Young Pkwy)	2025	Orange County	Widen to 6 Lanes
Destination Pkwy	Universal Blvd	John Young Pkwy	2025	Orange County	Widen to 6 Lanes
International Dr	Hawaian Ct	SR 482	2025	Orange County	Widen to 6 Lanes
SR 15 (Narcoossee Rd)	SR 528 (BeachLine Expwy)	Lee Vista Blvd	2025	Orange County/FDOT	Widen to 6 Lanes
SR 482/Sand Lake Rd	Turkey Lake Rd	W. of John Young Pkwy	2025	FDOT	Widen to 6-lanes
SR 528	SR 417	Innovation Pkwy	2025	CFX	Widen to 6-lanes
SR 528	SR 436	SR 417	2025	CFX	Widen to 8-lanes
Kirkman Road Extension	SR 528 (BeachLine Expwy)	Sand Lake Rd	2025	Orange County	New 4 lane Highway
Florida's Turnpike	Minneola	Orange/Lake County Line	2025	FDOT	Widen to 6 lanes
Nova Rd (CR 532)	US 192	Eden Dr	2035	Osceola County	Widen to 4 Lanes
Nova Rd (CR 532)	Eden Dr	Deer Park Rd	2035	Osceola County	Widen to 4 Lanes
International Dr	SR 482	Kirkman Rd	2035	Orange County	Widen to 6 Lanes
Universal Blvd	SR 482	Pointe Plaza Ave	2035	Orange County	Widen to 6 Lanes
Florida's Turnpike	US 27	US 19	2035	FDOT	Widen to 6 lanes
Florida's Turnpike	US 19	Minneola/Hancock Rd	2035	FDOT	Widen to 6 lanes
Nova Rd (CR 532)	Deer Park Rd	Orange County Line	2045	Osceola County	Widen to 4 Lanes
Nova Rd	Alligator Lake Rd	US 192	2045	Osceola County	Widen to 4 Lanes
International Drive South	Westwood Blvd	Hawaiian Ct	2045	Orange County	Widen to 6 Lanes
US 192	Nova Rd	Pine Grove Rd	2045	FDOT	Widen to 6-lanes
SR 528	Innovation Pkwy	SR 520	2045	CFX	Widen to 6-lanes

Historical and projected transactions and toll revenues for each of the S.R. 528 plaza groups and for all of S.R. 528 are summarized in **Table 3-5** and **Table 3-6**. The tables are divided into Paid in-lane and PBP transactions and revenue. The paid in-lane transactions and revenue include ETC and cash collection. PBP is only reported as a total on the facility. The increase in transactions and revenue in FY 2016 over FY 2015 can partially be attributed to the opening of the two ramp plazas at Conway Road/Tradeport Drive and Boggy Creek Road/Sand Lake Road because of the relocation/removal of the Airport Main Plaza toll collection point to Beachline West.

The paid in-lane transactions on S.R. 528 are expected to grow 5.0 percent per year through FY 2031 and then lower rates through the end of the forecast period because of the impact of continued toll rate adjustments. PBP transactions are forecasted to decline an average of 0.4 percent per year through FY 2031 and then increase slightly through the forecast period. Total transactions on S.R. 528 are projected to increase during the forecast period from the actual of 70.7 million in FY 2021 to 133.1 million in FY 2051. Because FY 2021 T&R was still in recovery from the COVID-19 pandemic, higher growth rates are anticipated in the short-term forecasts with growth rates decreasing over the forecast period. The paid in-lane revenues on S.R. 528 are projected to increase over the forecast period, from the FY 2021 actual of \$62.4 million to \$168.2 million in FY 2051. PBP revenues are projected to increase from \$14.4 million in FY 2021 to \$21.6 million in FY 2051. Total revenues on S.R. 528 are projected to increase during the forecast period from the actual \$76.8 million in FY 2021 to \$189.8 million in FY 2051. Total transactions are forecasted to increase an average of 4.5 percent per year from FY 2021 to FY 2031. Total revenues during the same period are forecasted to increase an average of 4.8 percent per year. Total transactions and revenues are forecasted to increase at an average of 1.2 and 2.4 percent per year from FY 2031 to FY 2041, and 0.8 and 2.0 percent per year from FY 2041 to FY 2051, respectively.

**Table 3-5  
S.R. 528 Plaza Groups – Transaction Projections (Millions)  
FY 2022 – FY 2051**

Fiscal Year		Airport Main	Beachline Main	Dallas Main	Paid In-Lane	PBP	Total	Percent Annual Change
2010	Actual	25.4	15.5		40.9	0.3	41.2	
2011		26.2	16.3		42.5	0.5	43.0	4.4%
2012 <sup>A</sup>		26.8	16.4	4.3	47.5	0.7	48.2	12.1%
2013 <sup>B</sup>		26.4	16.7	14.5	57.6	1.0	58.6	21.6%
2014		27.0	17.6	15.1	59.7	1.2	60.9	3.9%
2015		28.8	19.0	16.4	64.2	1.6	65.8	8.0%
2016 <sup>C</sup>		32.6	20.9	18.0	71.5	2.2	73.7	12.0%
2017 <sup>D</sup>		36.6	21.7	18.5	76.8	2.7	79.5	7.9%
2018 <sup>E</sup>		36.8	21.6	18.3	76.7	3.2	79.9	0.5%
2019 <sup>F</sup>		36.8	22.0	18.3	77.1	6.0	83.1	4.0%
2020 <sup>G</sup>		31.9	19.6	16.5	68.0	7.1	75.1	-9.6%
2021 <sup>H</sup>	28.7	18.4	15.7	62.8	7.9	70.7	-5.9%	
2022 <sup>I</sup>	Forecast	35.3	21.0	17.9	74.2	7.3	81.5	15.3%
2023		39.7	23.6	20.3	83.6	6.9	90.5	11.0%
2024		42.9	25.4	21.7	90.0	6.6	96.6	6.7%
2025		44.1	26.3	22.4	92.8	6.8	99.6	3.1%
2026		45.0	26.8	22.8	94.6	6.9	101.5	1.9%
2027		45.8	27.3	23.2	96.3	7.2	103.5	2.0%
2028		46.6	27.7	23.6	97.9	7.2	105.1	1.5%
2029		47.4	28.1	23.9	99.4	7.3	106.7	1.5%
2030		48.1	28.5	24.3	100.9	7.3	108.2	1.4%
2031		48.8	28.9	24.7	102.4	7.6	110.0	1.7%
2032		49.5	29.3	25.0	103.8	7.6	111.4	1.3%
2033		50.2	29.7	25.4	105.3	7.7	113.0	1.4%
2034		50.9	30.1	25.7	106.7	7.7	114.4	1.2%
2035		51.5	30.4	26.0	107.9	7.8	115.7	1.1%
2036		52.1	30.8	26.3	109.2	8.0	117.2	1.3%
2037		52.7	31.2	26.6	110.5	8.0	118.5	1.1%
2038		53.3	31.5	26.9	111.7	8.1	119.8	1.1%
2039		53.9	31.8	27.2	112.9	8.1	121.0	1.0%
2040		54.5	32.1	27.5	114.1	8.1	122.2	1.0%
2041		55.0	32.4	27.8	115.2	8.2	123.4	1.0%
2042	55.6	32.7	28.0	116.3	8.2	124.5	0.9%	
2043	56.1	33.0	28.3	117.4	8.2	125.6	0.9%	
2044	56.7	33.3	28.5	118.5	8.3	126.8	1.0%	
2045	57.2	33.5	28.7	119.4	8.5	127.9	0.9%	
2046	57.7	33.8	28.9	120.4	8.5	128.9	0.8%	
2047	58.2	34.0	29.1	121.3	8.5	129.8	0.7%	
2048	58.6	34.2	29.3	122.1	8.5	130.6	0.6%	
2049	59.1	34.4	29.5	123.0	8.5	131.5	0.7%	
2050	59.5	34.6	29.7	123.8	8.5	132.3	0.6%	
2051	60.0	34.8	29.8	124.6	8.5	133.1	0.6%	

Fiscal Year	Compound Annual Average Growth Rate (CAAGR)					
2010 - 2021	1.1%	1.6%		4.0%	34.6%	5.0%
2021 - 2031	5.5%	4.6%	4.6%	5.0%	-0.4%	4.5%
2031 - 2041	1.2%	1.1%	1.2%	1.2%	0.8%	1.2%
2041 - 2051	0.9%	0.7%	0.7%	0.8%	0.4%	0.8%

Notes:

- Actual revenue data provided by CFX from Monthly Statistical Reports.
- A - Dallas Main plaza opened to traffic on March 19, 2012.
- B - Systemwide toll rate increase.
- C - Airport Main Plaza closed and new ramp plazas opened in March 2016.
- D - Effects from Hurricane Matthew in October 2016.
- E - Effects from Hurricane Irma in September 2017.
- F - First year of implementation of "Customer First" toll rate policy.
- G - Effects from Hurricane Dorian in September 2019 and first effects of COVID-19 pandemic began in March 2020.
- H - New toll rates for PBP customers, set at 2.0 times the ETC rate. Continued effects of COVID-19 pandemic.
- I - Completion of I-4 Ultimate project.

**Table 3-6**  
**S.R. 528 Plaza Groups – Toll Revenue Projections (Millions)**  
**FY 2022 – FY 2051**

Fiscal Year	Airport Main	Beachline Main	Dallas Main	Paid In-Lane	PBP	Total	Percent Annual Change
2010	\$26.2	\$20.4		\$46.6	\$0.3	\$46.9	
2011	\$27.0	\$21.4		\$48.4	\$0.5	\$48.9	4.3%
2012 <sup>A</sup>	\$27.5	\$19.0	\$2.2	\$48.7	\$0.6	\$49.3	0.8%
2013 <sup>B</sup>	\$30.9	\$16.0	\$7.6	\$54.5	\$1.0	\$55.5	12.6%
2014	\$31.6	\$16.8	\$7.9	\$56.3	\$1.2	\$57.5	3.6%
2015	\$33.6	\$18.2	\$8.6	\$60.4	\$1.6	\$62.0	7.8%
2016 <sup>C</sup>	\$37.3	\$20.0	\$9.4	\$66.7	\$2.3	\$69.0	11.3%
2017 <sup>D</sup>	\$41.4	\$20.7	\$9.7	\$71.8	\$3.8	\$75.6	9.6%
2018 <sup>E</sup>	\$41.6	\$20.6	\$9.6	\$71.8	\$3.8	\$75.6	0.0%
2019 <sup>F</sup>	\$42.0	\$21.3	\$10.5	\$73.8	\$6.2	\$80.0	5.8%
2020 <sup>G</sup>	\$36.6	\$20.2	\$9.6	\$66.4	\$7.9	\$74.3	-7.1%
2021 <sup>H</sup>	\$33.7	\$19.3	\$9.4	\$62.4	\$14.4	\$76.8	3.4%
2022 <sup>I</sup>	\$38.9	\$21.9	\$9.8	\$70.6	\$13.3	\$83.9	9.2%
2023	\$43.6	\$25.9	\$10.7	\$80.2	\$12.3	\$92.5	10.3%
2024	\$47.7	\$28.0	\$11.5	\$87.2	\$12.1	\$99.3	7.4%
2025	\$49.7	\$29.4	\$11.9	\$91.0	\$12.7	\$103.7	4.4%
2026	\$51.4	\$30.4	\$12.3	\$94.1	\$13.1	\$107.2	3.4%
2027	\$52.9	\$31.3	\$12.6	\$96.8	\$13.5	\$110.3	2.9%
2028	\$54.5	\$32.1	\$13.0	\$99.6	\$13.8	\$113.4	2.8%
2029	\$56.0	\$33.0	\$13.4	\$102.4	\$14.2	\$116.6	2.8%
2030	\$57.6	\$33.9	\$13.7	\$105.2	\$14.6	\$119.8	2.7%
2031	\$59.2	\$34.8	\$14.1	\$108.1	\$15.0	\$123.1	2.8%
2032	\$60.8	\$35.7	\$14.5	\$111.0	\$15.4	\$126.4	2.7%
2033	\$62.4	\$36.7	\$14.8	\$113.9	\$15.8	\$129.7	2.6%
2034	\$64.0	\$37.6	\$15.2	\$116.8	\$16.0	\$132.8	2.4%
2035	\$65.6	\$38.5	\$15.6	\$119.7	\$16.5	\$136.2	2.6%
2036	\$67.2	\$39.5	\$16.0	\$122.7	\$16.8	\$139.5	2.4%
2037	\$68.8	\$40.4	\$16.4	\$125.6	\$17.1	\$142.7	2.3%
2038	\$70.5	\$41.3	\$16.8	\$128.6	\$17.5	\$146.1	2.4%
2039	\$72.1	\$42.3	\$17.1	\$131.5	\$17.8	\$149.3	2.2%
2040	\$73.8	\$43.2	\$17.5	\$134.5	\$18.2	\$152.7	2.3%
2041	\$75.5	\$44.2	\$17.9	\$137.6	\$18.5	\$156.1	2.2%
2042	\$77.2	\$45.1	\$18.3	\$140.6	\$18.9	\$159.5	2.2%
2043	\$78.9	\$46.1	\$18.7	\$143.7	\$19.2	\$162.9	2.1%
2044	\$80.6	\$47.0	\$19.1	\$146.7	\$19.5	\$166.2	2.0%
2045	\$82.4	\$48.0	\$19.5	\$149.9	\$19.8	\$169.7	2.1%
2046	\$84.1	\$48.9	\$19.9	\$152.9	\$20.1	\$173.0	1.9%
2047	\$85.9	\$49.8	\$20.2	\$155.9	\$20.4	\$176.3	1.9%
2048	\$87.7	\$50.8	\$20.6	\$159.1	\$20.7	\$179.8	2.0%
2049	\$89.4	\$51.7	\$21.0	\$162.1	\$21.0	\$183.1	1.8%
2050	\$91.2	\$52.6	\$21.4	\$165.2	\$21.2	\$186.4	1.8%
2051	\$93.0	\$53.5	\$21.7	\$168.2	\$21.6	\$189.8	1.8%

Fiscal Year	Compound Annual Average Growth Rate (CAAGR)					
2010 - 2021	2.3%	-0.5%		2.7%	42.2%	4.6%
2021 - 2031	5.8%	6.1%	4.1%	5.6%	0.4%	4.8%
2031 - 2041	2.5%	2.4%	2.4%	2.4%	2.1%	2.4%
2041 - 2051	2.1%	1.9%	1.9%	2.0%	1.6%	2.0%

Notes:  
 Actual revenue data provided by CFX from Monthly Statistical Reports.  
 A - Dallas Main plaza opened to traffic on March 19, 2012.  
 B - Systemwide toll rate increase.  
 C - Airport Main Plaza closed and new ramp plazas opened in March 2016.  
 D - Effects from Hurricane Matthew in October 2016.  
 E - Effects from Hurricane Irma in September 2017.  
 F - First year of implementation of "Customer First" toll rate policy.  
 G - Effects from Hurricane Dorian in September 2019 and first effects of COVID-19 pandemic began in March 2020.  
 H - New toll rates for PBP customers, set at 2.0 times the ETC rate. Continued effects of COVID-19 pandemic.  
 I - Completion of I-4 Ultimate project.



# CHAPTER 4

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S.R. 408  
(SPESSARD LINDSAY HOLLAND  
EAST-WEST EXPRESSWAY)







# S.R. 408 (SPESSARD LINDSAY HOLLAND EAST-WEST EXPRESSWAY)

## 4.1 Facility Description

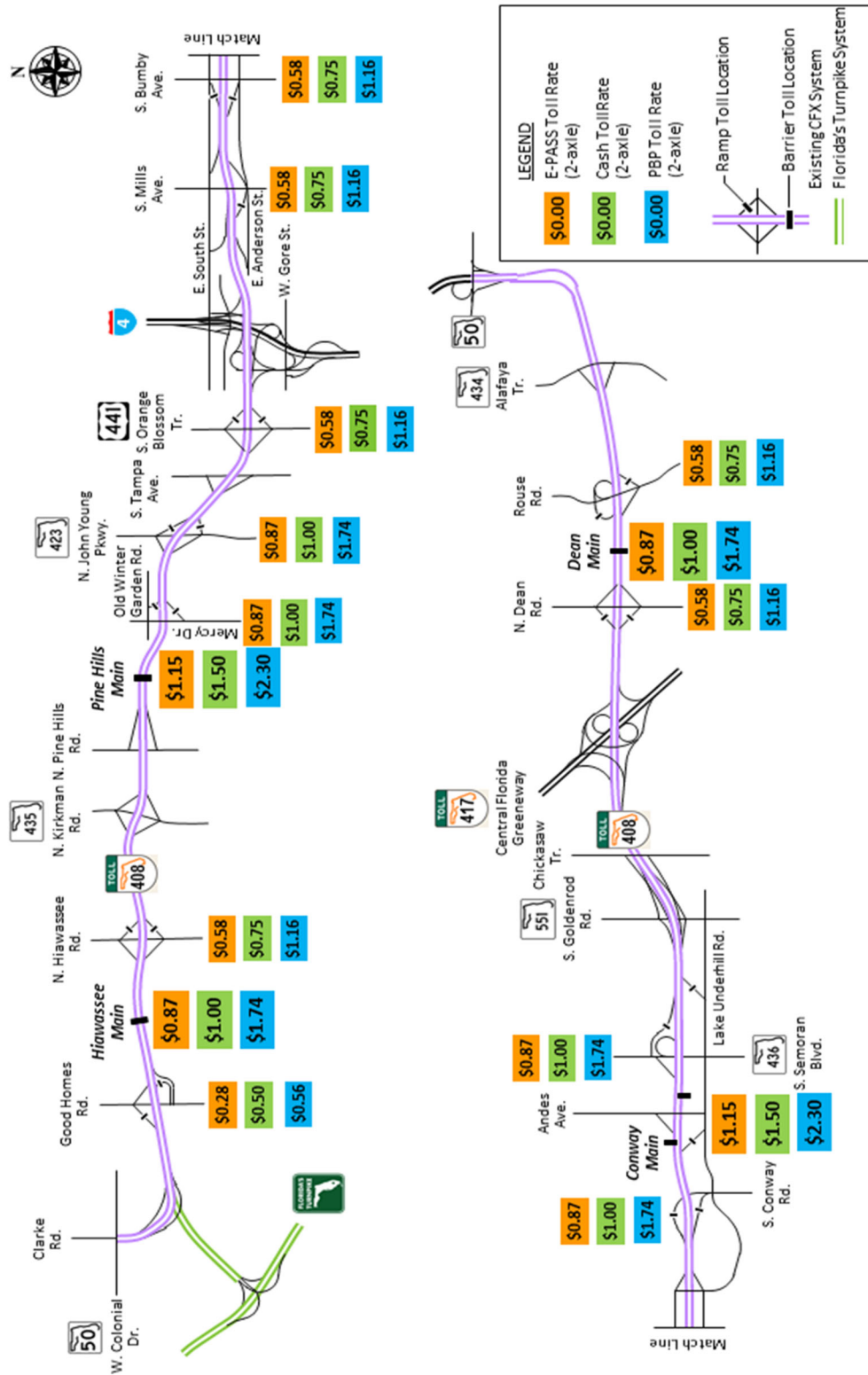
S.R. 408, also known as the Spessard Lindsay Holland East-West Expressway, is a 22-mile expressway that serves east-west commuter traffic across the Orlando urban area and provides fast and efficient access to and from the Orlando central business district. The East-West Expressway provides direct access to Interstate 4 (I-4) with an interchange that provides customers with a direct route to other major employment centers in the Metro Orlando area. A map of S.R. 408 including the FY 2021 CFX toll rates for the mainline and ramp toll plazas is shown in **Figure 4-1**. S.R. 408 has four plaza groups: the Hiawassee Main plaza group (including tolled interchanges at Good Homes Road and Hiawassee Road); the Pine Hills Main plaza group (including tolled interchanges at Old Winter Garden Road, John Young Parkway, U.S. 92/441 and Mills Avenue); the Conway Main plaza group (including tolled interchanges at Bumby Avenue, Conway Road and Andes Avenue/Semorán Boulevard); and the Dean Main plaza group (including tolled interchanges at Dean Road and Rouse Road).



The original 13.8-mile section of S.R. 408 opened to traffic in 1973, beginning on the west side of Orlando at an intersection with S.R. 50, west of Kirkman Road, and ending at S.R. 50 east of Goldenrod Road (S.R. 551). This included the Holland West Main plaza (relocated and renamed Pine Hills in 2006) and Holland East Main plaza (reconstructed and renamed Conway in 2008).

CFX completed a major expansion project in 1989 that extended S.R. 408 six miles eastward from its existing terminus near Goldenrod Road to a new interchange with S.R. 50, east of Alafaya Trail (S.R. 434). The expansion also included interchanges at Dean Road, Rouse Road and Alafaya Trail. The Dean Mainline plaza was also added, which is located between Dean Road and Rouse Road. In 1990, CFX, in cooperation with Florida's Turnpike Enterprise, completed another expansion that extended the S.R. 408 westward from its original western terminus at S.R. 50 near Hiawassee Road five miles to an interchange with Florida's Turnpike. This expansion included interchanges at Hiawassee Road, Good Homes Road and S.R. 50/Clarke Road. The Hiawassee Mainline plaza was added and located between Hiawassee Road and Good Homes Road. S.R. 408 currently extends from Florida's Turnpike on the west to S.R. 50 (east of S.R. 434) on the east.

Figure 4-1  
S.R. 408 Facilities and Toll Rates



The S.R. 408 mainline plazas have all been converted to the express toll lane configuration. In 2005 and 2006, the Hiawassee, Pine Hills and Dean Mainline plazas were converted. The Conway Mainline plaza was converted, and two express toll lanes were opened in each direction in 2008, with an additional lane added in each direction in 2009.

Starting in 2003, CFX commenced a significant widening project, from Hiawassee Road to Oxalis Avenue, adding one lane in each direction west of downtown Orlando and two lanes in each direction east of downtown. This \$600M widening project was completed in FY 2011.

In August 2006, the ramps to and from the west at Good Homes Road were added to connect with the new south-access ramp improvements at the junction with Florida's Turnpike. CFX also widened the Good Homes Road bridge to accommodate Orange County's widening of Good Homes Road between S.R. 50 and Old Winter Garden Road, which was completed in Spring 2011.

In March 2013, CFX completed the widening of S.R. 408 between Oxalis Avenue and S.R. 417 as well as the reconfiguration of the S.R. 408/S.R. 417 systems interchange. In January 2013, CFX completed the widening of S.R. 408 between Goldenrod Road and Chickasaw Trail from four to five lanes in each direction. This project included new ramps at Chickasaw Trail for travel to and from downtown Orlando, as well as a new frontage road to improve access to and from downtown Orlando for the communities around Valencia College Lane and Econlockhatchee Trail.

In July 2018, CFX completed the widening of S.R. 408 from Good Homes Road to east of Hiawassee Road. This two-mile project added a travel lane in each direction (from two to three lanes) and widened the ramp from westbound S.R. 408 to Good Homes Road from one to two lanes.

As part of a partnership project, FDOT started the reconstruction of the I-4/S.R. 408 interchange with the I-4 Ultimate project in 2015. The reconstruction will improve transitions between S.R. 408 and I-4, including new flyover ramps, direct connection ramps from the eastbound and westbound I-4 Express Lanes to S.R. 408, and the reconstruction of the S.R. 408 travel lanes over I-4 to include 3 lanes in each direction through the viaduct and a reconstructed off ramp to Orange Avenue. Construction is expected to be completed in Spring 2022.

In December 2017, CFX completed a milling and resurfacing project on SR. 408 from the Lake Underhill bridge to Yucatan Drive. This 1.7-mile project included the addition of one express toll lane in each direction at the Conway Road Main Plaza.

In FY 2020, CFX completed the widening of S.R. 408 from east of S.R. 417 to east of Alafaya Trail. This 3.24-mile project added one travel lane to S.R. 408 in each direction (two lanes to three lanes), widened the on-ramp from northbound Alafaya Trail to westbound S.R. 408 (one lane to two lanes), and added an additional Express Lane at the Dean Road Main Plaza.

In a partnership with the City of Orlando, CFX is currently designing improvements to the S.R. 408/Tampa Avenue interchange near Camping World Stadium. The planned improvements include completing the Tampa Avenue interchange to include ramps to and from the east on S.R.

408. The project will also relocate the U. S. 441 ramps to and from the west, which will be braided with the new Tampa Avenue ramps to avoid weaving issues between the ramps, as well as provide improved traffic flow and pedestrian safety at Tampa Avenue during events at Camping World Stadium. Design is expected to be completed by late 2022.

## **4.2 Historical Transactions and Toll Revenues**

As defined in Chapter 1, CFX transactions and toll revenues are classified as either Paid In-Lane (ETC and cash) or Unpaid In-Lane (PBP and non-revenue). Total transactions are the sum of paid in-lane and unpaid in-lane transactions. Total revenue is the sum of paid in-lane revenue and the revenue collected through the PBP process, estimated as an accrued amount. The following section includes a breakdown of transactions and revenues by paid in-lane and PBP.

### **4.2.1 ANNUAL PAID IN-LANE TRANSACTION AND REVENUE TRENDS**

A history of annual paid in-lane transactions on S.R. 408 at the Hiawassee Main, Pine Hills Main, Conway Main and Dean Main plaza groups from FY 2002 to FY 2021 is presented in the top half of **Table 4-1**. Annual paid in-lane revenues are also summarized and totaled in the bottom half of the table. The S.R. 408 annual paid in-lane transaction and revenue trends including annual growth are also presented visually in **Figure 4-2** and **Figure 4-3**. These historical tables do not include PBP transactions and revenues, only those that are paid in-lane. For these reasons, the information presented in this section may differ slightly from the data presented in the FY 2021 Comprehensive Annual Financial Report (CAFR) and other information in this report.

Paid in-lane transaction and revenue growth from FY 2002 through FY 2006 were stable with annual growth in all plaza groups. FY 2007 was the first year with a revenue decline at any plaza group on S.R. 408. The decline of 0.4 percent at the Pine Hills Main plaza group can be attributed to construction at the mainline plaza when it was being relocated to its current location. The new plaza opened in November 2006 and included express lanes for E-PASS and other interoperable transponder customers. Due to the relocation of the Pine Hills mainline plaza, the John Young Parkway ramp plazas to/from the west were demolished and new ramp plazas were constructed to/from the east. New ramp plazas were also constructed at the westbound Old Winter Garden Road exit ramp and at the eastbound Mercy Drive entrance ramp.

In FY 2008, paid in-lane transactions decreased at the Conway Main plaza group by 2.3 percent and revenues decreased by 2.4 percent. Paid in-lane transactions also decreased at the Dean Main plaza group by 2.8 percent while revenues decreased by 2.3 percent. These declines can be attributed to the beginning of the Great Recession, and to construction and widening of the facility which included the addition of express lanes at the Conway mainline plaza. Transactions declined at all four S.R. 408 plaza groups in FY 2009 because of the continuing impacts of the economic recession and the implementation of a Systemwide toll rate adjustment.

**Table 4-1  
S.R. 408 Plaza Groups – Historical Paid In-Lane Transactions and Revenue  
FY 2002 – FY 2021**

Fiscal Year	Hiwassee Main	Pine Hills Main	Conway Main	Dean Main	TOTAL	Hiwassee Main	Pine Hills Main	Conway Main	Dean Main	TOTAL
<b>TRANSACTIONS (millions)</b>					<b>PERCENT CHANGE</b>					
2002 <sup>A</sup>	18.7	26.7	43.8	20.9	110.1					
2003	20.2	28.0	45.5	22.4	116.1	8.0%	4.9%	3.9%	7.2%	5.4%
2004	22.0	29.9	48.5	24.3	124.7	8.9%	6.8%	6.6%	8.5%	7.4%
2005 <sup>B</sup>	22.7	30.8	49.1	25.2	127.8	3.2%	3.0%	1.2%	3.7%	2.5%
2006 <sup>C</sup>	24.1	32.2	51.8	27.3	135.4	6.2%	4.5%	5.5%	8.3%	5.9%
2007 <sup>D</sup>	25.7	32.5	51.9	28.2	138.3	6.6%	0.9%	0.2%	3.3%	2.1%
2008 <sup>E</sup>	27.2	33.7	50.7	27.4	139.0	5.8%	3.7%	-2.3%	-2.8%	0.5%
2009 <sup>F</sup>	25.2	30.9	49.3	25.9	131.3	-7.4%	-8.3%	-2.8%	-5.5%	-5.5%
2010 <sup>F</sup>	23.3	28.4	49.0	25.3	126.0	-7.5%	-8.1%	-0.6%	-2.3%	-4.0%
2011	23.2	28.4	50.0	25.1	126.7	-0.4%	0.0%	2.0%	-0.8%	0.6%
2012	23.1	28.4	50.1	24.6	126.2	-0.4%	0.0%	0.2%	-2.0%	-0.4%
2013 <sup>F</sup>	22.5	27.6	48.9	24.5	123.5	-2.5%	-3.0%	-2.3%	-0.5%	-2.1%
2014	24.1	29.2	51.1	25.3	129.7	7.1%	5.8%	4.5%	3.3%	5.0%
2015	26.4	31.6	53.9	26.3	138.2	9.5%	8.2%	5.5%	4.0%	6.6%
2016	28.6	33.7	56.4	27.5	146.2	8.3%	6.6%	4.6%	4.6%	5.8%
2017 <sup>G</sup>	29.6	34.2	56.4	27.5	147.7	3.5%	1.5%	0.0%	0.0%	1.0%
2018 <sup>H</sup>	29.8	34.2	54.6	26.6	145.2	0.7%	0.0%	-3.2%	-3.3%	-1.7%
2019 <sup>*</sup>	29.8	33.6	52.4	25.3	141.1	0.0%	-1.8%	-4.0%	-4.9%	-2.8%
2020 <sup>*,J</sup>	26.6	30.1	46.2	21.8	124.7	-10.7%	-10.4%	-11.8%	-13.8%	-11.6%
2021 <sup>*,J</sup>	27.1	31.4	50.3	22.1	130.9	1.9%	4.3%	8.9%	1.4%	5.0%
<b>TOLL REVENUES (millions)</b>					<b>PERCENT CHANGE</b>					
2002 <sup>A</sup>	\$9.1	\$19.5	\$31.3	\$9.8	\$69.7					
2003	\$9.9	\$20.3	\$32.5	\$10.5	\$73.2	8.8%	4.1%	3.8%	7.1%	5.0%
2004	\$10.8	\$21.8	\$34.7	\$11.4	\$78.7	9.1%	7.4%	6.8%	8.6%	7.5%
2005 <sup>B</sup>	\$11.2	\$22.5	\$35.0	\$11.7	\$80.4	3.7%	3.2%	0.9%	2.6%	2.2%
2006 <sup>C</sup>	\$11.8	\$23.6	\$36.9	\$12.8	\$85.1	5.4%	4.9%	5.4%	9.4%	5.8%
2007 <sup>D</sup>	\$12.7	\$23.5	\$37.0	\$13.3	\$86.5	7.6%	-0.4%	0.3%	3.9%	1.6%
2008 <sup>E</sup>	\$13.0	\$24.0	\$36.1	\$13.0	\$86.1	2.4%	2.1%	-2.4%	-2.3%	-0.5%
2009 <sup>F</sup>	\$13.3	\$23.7	\$37.6	\$13.7	\$88.3	2.3%	-1.3%	4.2%	5.4%	2.6%
2010 <sup>F</sup>	\$16.4	\$26.8	\$46.1	\$18.4	\$107.7	23.3%	13.1%	22.6%	34.3%	22.0%
2011	\$16.2	\$26.8	\$47.1	\$18.2	\$108.3	-1.2%	0.0%	2.2%	-1.1%	0.6%
2012	\$16.0	\$26.7	\$47.2	\$17.8	\$107.7	-1.2%	-0.4%	0.2%	-2.2%	-0.6%
2013 <sup>F</sup>	\$18.0	\$29.3	\$51.9	\$20.1	\$119.3	12.4%	9.6%	10.0%	13.2%	10.8%
2014	\$19.2	\$31.0	\$54.2	\$20.8	\$125.2	6.7%	5.9%	4.4%	3.3%	4.9%
2015	\$21.0	\$33.4	\$56.9	\$21.7	\$133.0	9.4%	7.7%	5.0%	4.3%	6.2%
2016	\$22.6	\$35.5	\$59.4	\$22.6	\$140.1	7.6%	6.3%	4.4%	4.1%	5.3%
2017 <sup>G</sup>	\$23.3	\$36.1	\$59.1	\$22.5	\$141.0	3.1%	1.7%	-0.5%	-0.4%	0.6%
2018 <sup>H</sup>	\$23.5	\$36.0	\$57.1	\$21.7	\$138.3	0.9%	-0.3%	-3.4%	-3.6%	-1.9%
2019 <sup>*</sup>	\$24.1	\$36.0	\$55.5	\$21.0	\$136.6	2.6%	0.0%	-2.8%	-3.2%	-1.2%
2020 <sup>*,J</sup>	\$22.1	\$32.7	\$50.1	\$18.4	\$123.3	-8.3%	-9.2%	-9.7%	-12.4%	-9.7%
2021 <sup>*,J</sup>	\$22.9	\$35.3	\$56.4	\$19.2	\$133.8	3.6%	8.0%	12.6%	4.3%	8.5%

\*Indicates systemwide toll rate increase according to Customer First Toll Policy

Notes:

A - Effects of the events on September 11, 2001.

B - Effects from 2004 hurricane season (4 storms with toll suspensions).

C - Mills Avenue on-ramp to westbound S.R. 408 permanently closed.

Dean Main plaza converted to open road tolling in August 2005.

D - Holland West plaza relocated to Pine Hills plaza on November 10, 2006.

Hiwassee and Pine Hills Main plazas converted to open road tolling in FY 2006.

E - First effects of national economic recession.

F - Systemwide toll rate increase in July 2013. Conway Main plaza converted to open road tolling in Nov 2008.

G - Effects from Hurricane Matthew in October 2016.

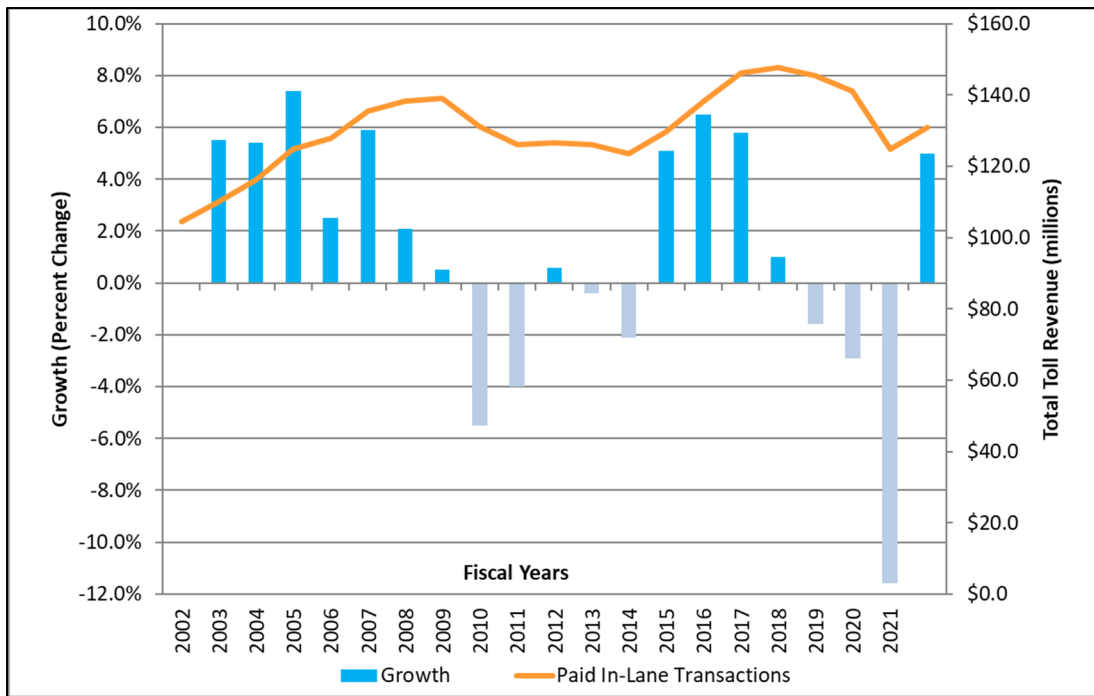
H - Effects from Hurricane Irma in September 2017.

I - Effects from Hurricane Dorian in September 2019 and

first effects of COVID-19 pandemic began in March 2020.

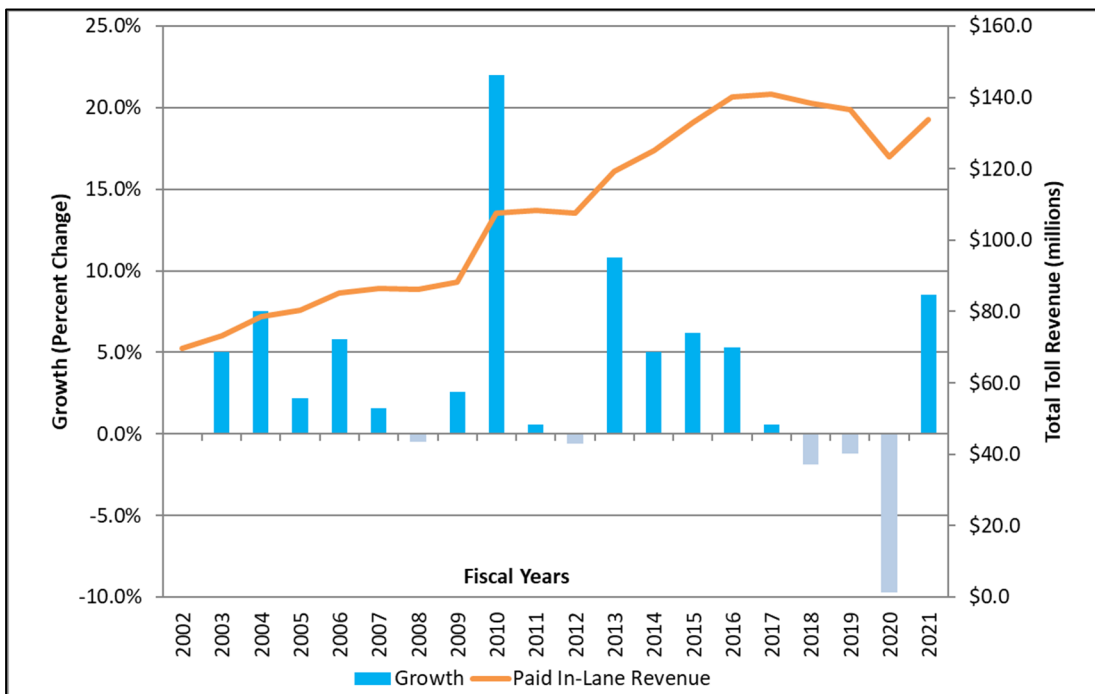
J - Continued effects of COVID-19 pandemic.

**Figure 4-2**  
**S.R. 408 Historical Paid In-Lane Transactions and Annual Growth**  
**FY 2002 – FY 2021**



Source: Monthly unaudited data provided by CFX

**Figure 4-3**  
**S.R. 408 Historical Paid In-Lane Revenue and Annual Growth**  
**FY 2002 – FY 2021**



Source: Monthly unaudited data provided by CFX

The toll rate adjustment impacted growth during the last three months of FY 2009. The largest paid in-lane transaction decline was seen at the Pine Hills Main plaza group which was 8.3 percent lower than the prior year with a corresponding revenue decline of 1.3 percent.

In FY 2010, annual paid in-lane transactions declined at all four plaza groups. Despite the decrease in transactions, revenues significantly increased at all plazas because of the first full year of revenue collection after the Systemwide toll rate adjustment, which impacted growth during the first nine months.

FY 2011 paid in-lane transactions decreased at the Hiawassee Main plaza group by 0.4 percent and at the Dean Main plaza group by 0.8 percent due to construction on S.R. 408. Revenues also declined at both facilities by approximately 1.0 percent. Transactions and revenues at the Pine Hills Main plaza group remained unchanged while the Conway Main plaza group showed very little growth compared to FY 2010. This slow growth continued in FY 2012 with all plaza groups experiencing transaction and revenue declines or no growth compared to the prior year.

Paid in-lane transactions declined while revenues increased at all four plaza groups in FY 2013, due to the toll rate adjustment that went into effect at the beginning of the fiscal year, on July 1, 2012. In FY 2014, transactions and revenues increased at all four plaza groups. The increase in transactions in FY 2014 was expected after the decline occurred in FY 2013 due to the toll rate adjustment, which impacted traffic for a short period.

In FY 2015, paid in-lane transactions and revenues increased over FY 2014 at all four plaza groups. The same trend continued in FY 2016 during which transactions increased by 5.8 percent and revenues increased by 5.3 percent. This increase in transactions and revenues can be partially attributed to customers using S.R. 429 as an alternative to I-4 during construction activities and traveling between Florida's Turnpike and S.R. 408.

In October 2016, Hurricane Matthew tracked parallel to the Florida coast as a Category 3 storm with winds up to 130 miles per hour. Tolls were suspended on the CFX System beginning at 8:00 p.m. on October 5, 2016 through early on October 10, 2016. The toll suspension resulted in a loss of approximately 1.7 million transactions and \$1.6 million in revenues on S.R. 408. In September 2017 (FY 2018), Hurricane Irma tracked parallel to the Florida coast as a Category 4 storm with winds up to 155 miles per hour. Tolls were suspended on CFX toll facilities beginning on September 5, 2017 through September 20, 2017 resulting in a transaction loss of approximately 6.7 million and a toll revenue loss of \$6.4 million on S.R. 408.

In FY 2018, paid in-lane transactions on S.R. 408 decreased by approximately 2.5 million, or 1.7 percent, compared to FY 2017. FY 2018 paid in-lane revenues decreased by \$2.7 million, or 1.9 percent compared to FY 2017. As previously mentioned, September 2017 transactions and revenues were negatively impacted by toll suspensions during Hurricane Irma.

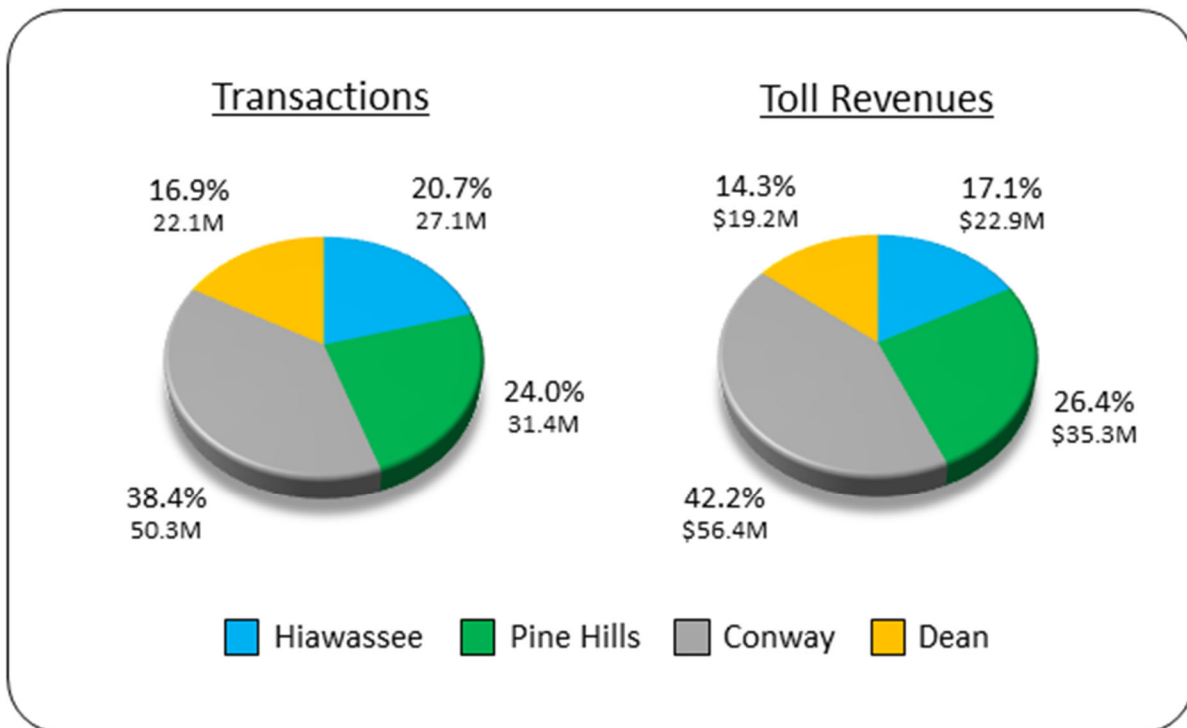
As shown, paid in-lane transactions on S.R. 408 in FY 2019 decreased by approximately 4.1 million, or 2.8 percent, compared to FY 2018. FY 2019 paid in-lane revenues decreased by \$1.7 million, or 1.2 percent compared to FY 2018. The slower growth in transactions and revenues in FY 2019 can be attributed in part to the increase in customers utilizing the PBP program.

In FY 2020, all S.R. 408 plaza groups experienced a decline in paid in-lane transactions and revenues, despite the FY 2020 toll rate adjustment. The declines in both transactions and revenues can primarily be attributed to the negative impacts of COVID-19 as explained in greater detail in Chapter 1. Out of the four plaza groups, the Dean Main plaza group was affected the most by COVID-19, due to its proximity to the University of Central Florida campus. September 2019 transactions and revenues were also negatively impacted by toll suspensions during Hurricane Dorian.

All S.R. 408 plaza groups experienced an increase in paid in-lane transactions and revenues in FY 2021. This increase can be attributed to FY 2020 being negatively impacted by the COVID-19 pandemic (i.e., a recovery from the worst of COVID-19) and the FY 2021 toll rate adjustment. The largest increase was experienced at the Conway Main plaza group with an increase of 8.9 percent in transactions and 12.6 percent in revenues.

The share by plaza group of total S.R. 408 paid in-lane transactions and toll revenues during FY 2021 are presented in **Figure 4-4**. The largest portion of the transactions during FY 2021 were reported at the Conway Main plaza group, with 50.3 million or 38.4 percent. The Pine Hills Main, Hiawassee Main, and Dean Main plaza groups reported 31.4, 27.1 and 22.1 million transactions respectively and each contributed between 16.9 and 24.0 percent of the total transactions for FY 2021.

**Figure 4-4**  
**S.R. 408 Paid In-Lane Transactions and Revenue by Plaza Group**  
**FY 2021**



Source: Monthly unaudited data provided by CFX



The annual totals and shares of paid in-lane toll revenues are similar to the results reported for annual paid in-lane transactions. As shown, the Conway Main plaza group represented \$56.4 million in toll revenues or 42.2 percent of the total. The Pine Hills Main plaza group represented \$35.3 million or 26.4 percent of the total revenues on the facility. The Hiawasse Main plaza group represented \$22.9 million or 17.1 percent and the Dean Main plaza group represented \$19.2 million or 14.3 percent of the total. Toll rates are higher and there are more supporting ramp locations with higher toll rates in the Pine Hills and Conway plaza groups therefore those plaza groups have a higher proportion of facility revenues than transactions.

#### 4.2.2 ANNUAL PBP TRANSACTION AND REVENUE TRENDS

A history of annual PBP transactions and toll revenues on S.R. 408 from FY 2012 to FY 2021 is presented in **Table 4-2**. PBP transactions and toll revenues are recorded by toll location and accrued monthly by plaza group, however Table 4-2 shows the annual totals for S.R. 408 as reported at year end.

**Table 4-2**  
**S.R. 408 – Historical PBP Transactions and Revenue**  
**FY 2012 – FY 2021**

Fiscal Year	Transactions (millions)	Percent Change	Toll Revenues (millions)	Percent Change
2012	1.8		\$2.4	
2013	2.2	22.2%	\$3.5	45.8%
2014	2.7	22.7%	\$4.2	20.0%
2015	3.4	25.9%	\$5.3	26.2%
2016	4.5	32.4%	\$6.9	30.2%
2017	5.1	13.3%	\$9.2	33.3%
2018	8.9	74.5%	\$9.8	6.5%
2019	16.2	82.0%	\$17.7	80.6%
2020	17.6	8.6%	\$19.3	9.0%
2021	19.4	10.2%	\$37.2	92.7%

Source: Monthly unaudited data provided by CFX

PBP transactions have increased from 1.8 million in FY 2012 to 19.4 million in FY 2021, while PBP revenues have increased from \$2.4 million to \$37.2 million over the same period. In FY 2021, PBP transactions increased 10.2 percent and PBP revenues increased 92.7 percent over FY 2020. The trends show that more customers are choosing the PBP method of payment. During the early part of COVID-19 pandemic, cash toll collection was suspended for several months. For this reason, PBP transactions and revenue increased in FY 2020. The significant increase in PBP revenues in FY 2021 can be attributed to the new PBP toll rate adopted by the CFX Board that went into effect on July 1, 2020 (FY 2021), at which time the PBP toll rate at all toll locations was increased to twice the ETC toll rate. Because of the new PBP toll rate, it is anticipated that going forward a portion of customers paying via PBP will switch to ETC to avoid the higher toll rate. Overall, the increase in customer preference for PBP in recent years has contributed to the slower growth in paid in-lane transactions and revenue.

### 4.2.3 MONTHLY PAID IN-LANE TRANSACTION SEASONAL VARIATION

In **Table 4-3**, monthly paid in-lane transactions are normalized to the average number of paid in-lane transactions per day. Using the average number of transactions per day allows for an easy comparison of the variations in relative travel demand over the year. The pattern of seasonal usage changes slightly from year to year, based on the number of weekdays in each month, but in FY 2021 this seasonality was overshadowed by the impacts on travel demand from the COVID-19 pandemic. Therefore, the factors in Table 4-3 do not reflect the typical monthly seasonal trends on S.R. 408. Instead, these factors include the recovery from COVID-19.

The average number of transactions per day in FY 2021 on S.R. 408 ranged from a low of 299,400 in July 2020 to a high of 412,700 in June 2021. Paid in-lane transactions steadily increased through the end of the fiscal year.

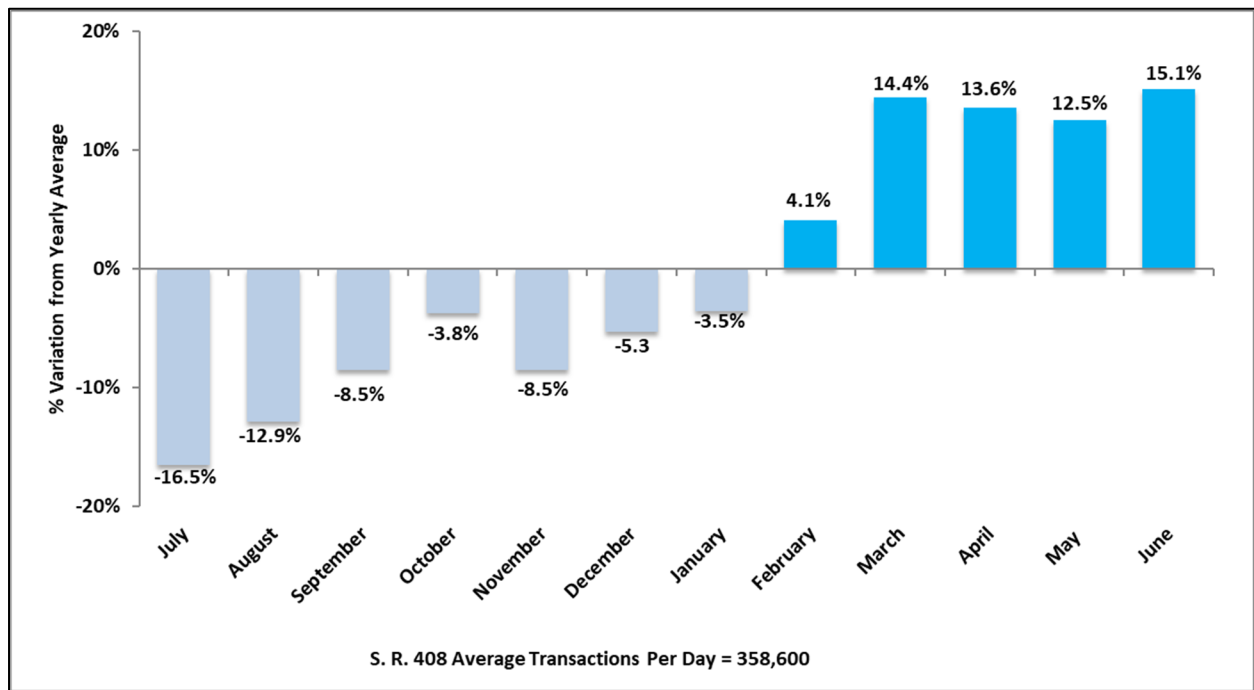
This data is presented in a graphical format in **Figure 4-5**. The paid in-lane transactions for each month appear as a percentage of the average for the fiscal year. As shown in the figure, July transactions were 16.5 percent below average and June transactions were 15.1 percent above average for the facility.

**Table 4-3**  
**S.R. 408 – Monthly Seasonal Variation in Paid In-Lane Transactions**  
**FY 2021**

Month	Number of Days in Month	Paid In-Lane Transactions	Average Transactions/Day	Seasonal Factor
July	31	9,282,105	299,400	0.835
August	31	9,688,144	312,500	0.871
September	30	9,842,262	328,100	0.915
October	31	10,699,442	345,100	0.962
November	30	9,842,990	328,100	0.915
December	31	10,531,938	339,700	0.947
January	31	10,724,422	345,900	0.965
February	28	10,448,701	373,200	1.041
March	31	12,717,131	410,200	1.144
April	30	12,216,104	407,200	1.136
May	31	12,506,521	403,400	1.125
June	30	12,381,317	412,700	1.151
<b>Average</b>		<b>10,906,756</b>	<b>358,600</b>	<b>1.000</b>
<b>Total Year</b>	<b>365</b>	<b>130,881,077</b>		

Source: Monthly unaudited data provided by CFX

**Figure 4-5**  
**S.R. 408 Variation in Paid In-Lane Transactions per Day, by Month**  
**FY 2021**



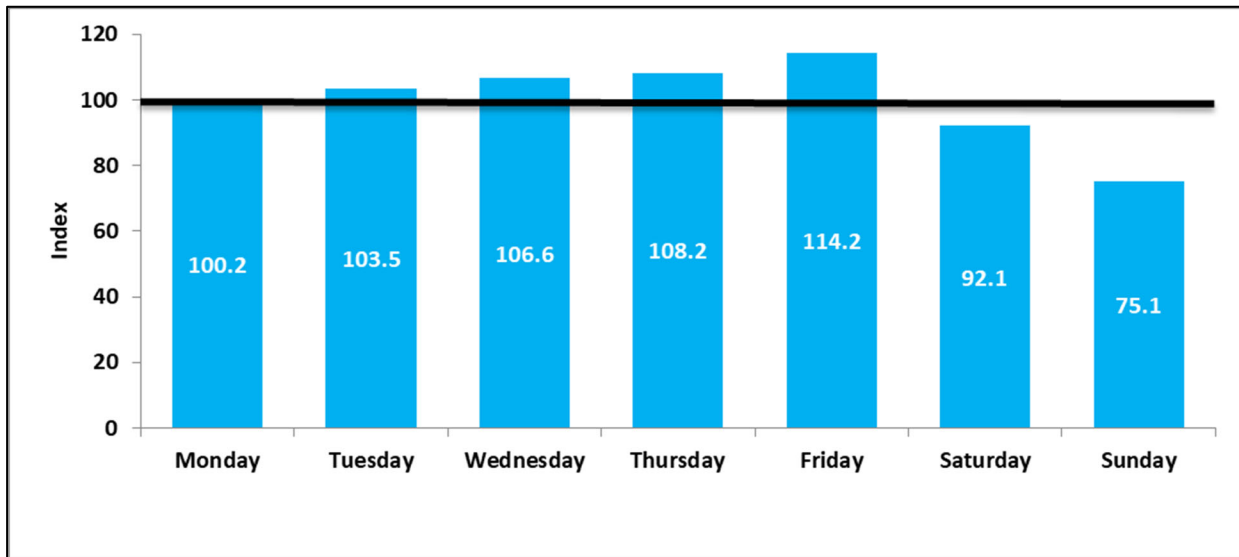
Source: Monthly unaudited data provided by CFX

**4.2.4 DAY-OF-WEEK TRANSACTION VARIATION**

Figure 4-6 contains a comparison of transactions by day of week in FY 2021. This data is presented as an index, where the average day equals 100. An index value of 100 for a given day of the week would indicate that day’s transactions were precisely the same volume as the facility average. A value of 120 would indicate a day that has 20 percent greater volume than the average. As was done in prior years, the data used for this analysis was for a typical week in May 2021, a month that still may have had some impacts from COVID-19, but these impacts would not have disturbed the variation over the average week. The data includes transactions at mainline plazas only (no ramps).

During FY 2021, transactions on S.R. 408 fluctuated over the course of the five-day work week. Transactions were highest on Fridays, with an index value of 114.2 (14.2 percent higher than the average day), volumes on Monday through Thursday ranged from index values of 100.2 to 108.2. This is consistent with prior year trends. Transactions decline significantly on Saturdays and Sundays, which have index values of 92.1 and 75.1, or 7.9 and 24.9 percent lower than the average day, also consistent with prior results.

**Figure 4-6**  
**S.R. 408 Variation in Transactions, by Day of Week**  
**FY 2021**



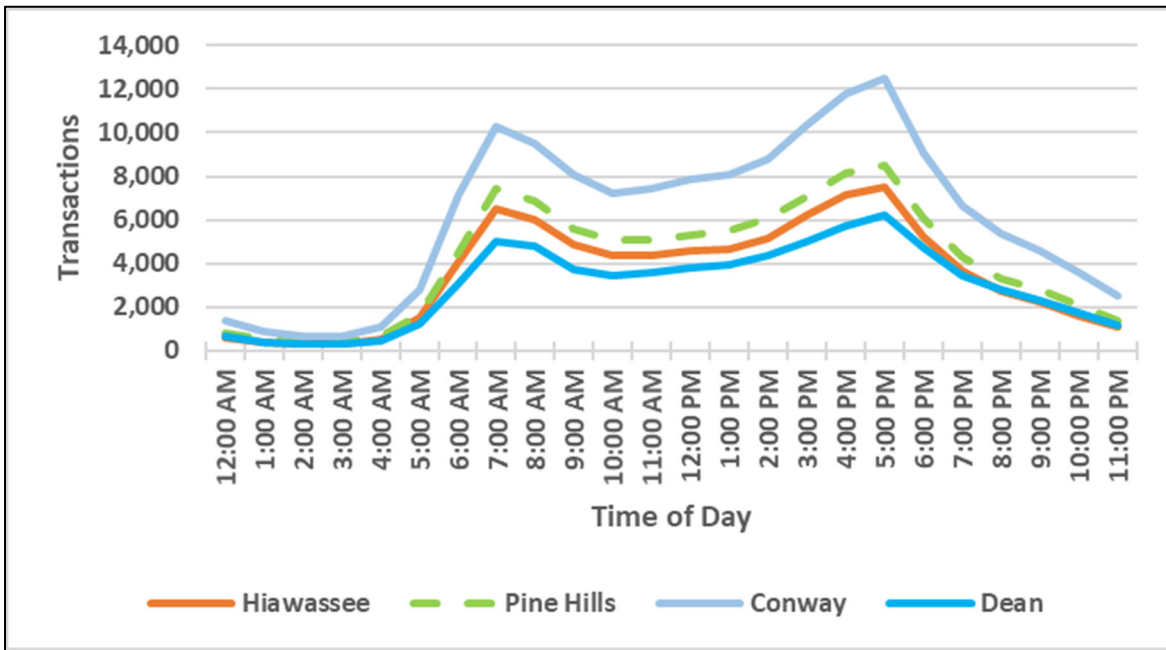
Source: Unaudited lane transaction data – May 2021

**4.2.5 HOURLY TRAFFIC DISTRIBUTION**

The hourly distribution of traffic volumes includes information on the usage characteristics of travel on the facility. The hourly distributions represent counts taken during a typical week at the mainline toll plazas in the month of May. The typical weekday hourly distribution is shown in **Figure 4-7** and the weekend hourly distribution is shown in **Figure 4-8**. The figures contain the sum of traffic volumes in both directions.

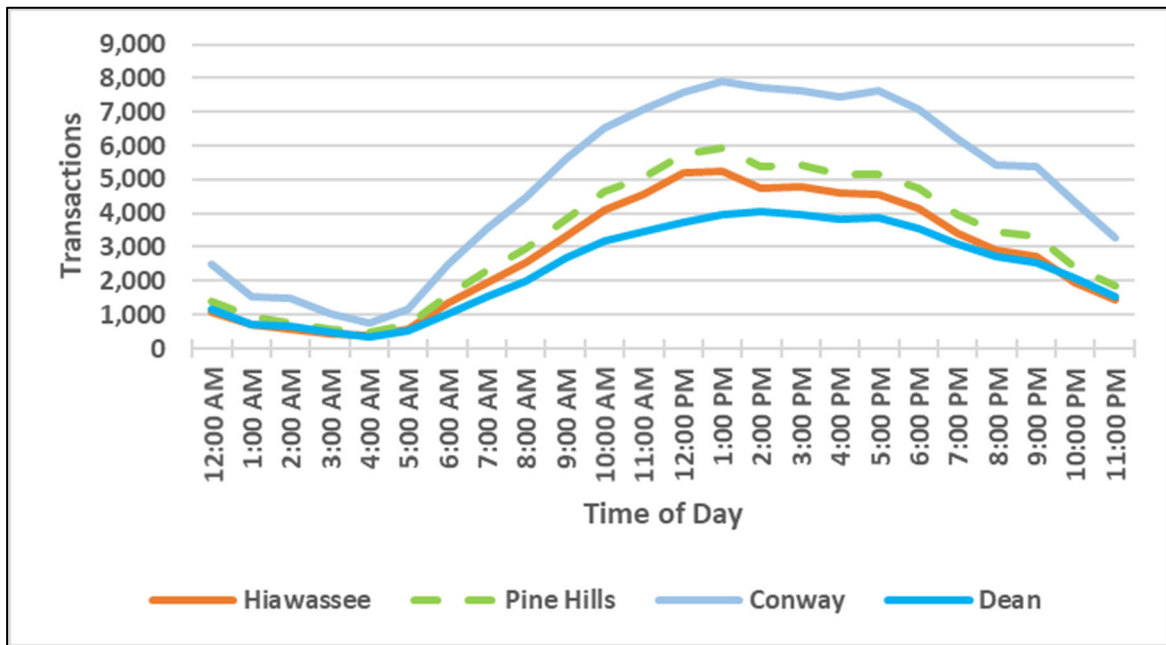
The four mainline locations on S.R. 408 exhibit similar hourly traffic patterns. On weekdays, travel demand at all four locations is bimodal, with both morning and evening peak hours. Traffic volumes in the evening peak hours at all four mainline plazas are higher than in the morning peak hours. The highest peak hour volumes during the week were 12,500 per hour beginning at 5:00 P.M. at the Conway mainline plaza, 8,500 per hour beginning at 5:00 p.m. at the Pine Hills mainline plaza, 7,500 per hour beginning at 5:00 p.m. at the Hiawassee mainline plaza and 6,300 per hour beginning at 5:00 p.m. at the Dean mainline plaza. On weekends, the distributions are unimodal with no clear morning or evening peak periods, indicating that many customers use the facility for non-work trip purposes. On weekends, traffic builds up during the day peaking in the early afternoon.

**Figure 4-7**  
**S.R. 408 Hourly Two-Way Traffic Variation (Weekday)**  
**FY 2021 (May)**



Source: Unaudited lane traffic data – May 2021

**Figure 4-8**  
**S.R. 408 Hourly Two-Way Traffic Variation (Weekend)**  
**FY 2021 (May)**



Source: Unaudited lane traffic data – May 2021

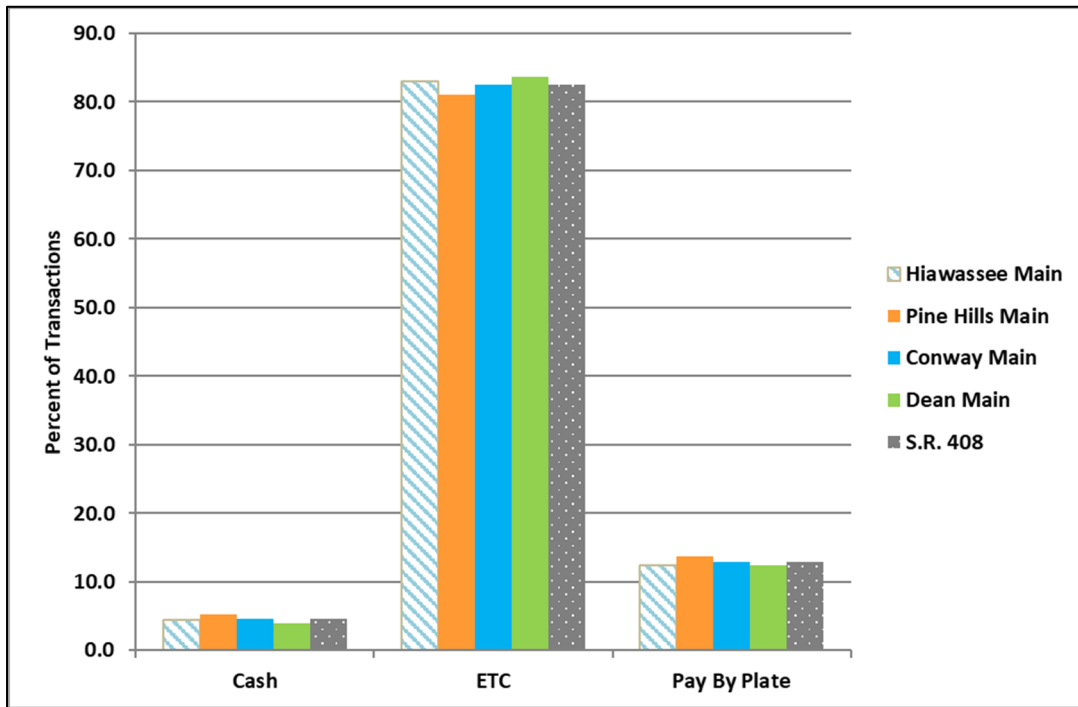
#### 4.2.6 TRANSACTIONS AND REVENUE BY PAYMENT TYPE

The distributions of transactions and revenue by payment type by plaza group during FY 2021 are presented in **Figure 4-9** and **Figure 4-10**. Customers pay tolls in one of three ways: cash, ETC, and PBP. As defined in Chapter 1 of this report, paid in-lane transactions and revenue include cash and ETC payments made when a customer travels through a CFX toll location. The remaining transactions and revenue are classified as unpaid in-lane, which includes PBP and a small portion of non-revenue transactions. PBP transactions and revenues are estimated monthly based on a FY 2021 accrual rate of 56 percent of all unpaid in-lane transactions. This means that the PBP transactions and revenue shown here are estimates of the levels that will eventually pay tolls through the PBP process. It is important to note that the data presented in the following two figures is based on unaudited transaction and toll revenue data and may not match the audited data shown in other tables and figures in this chapter.

As shown in Figure 4-9, the share of ETC transactions ranged from a low of 81.0 percent at the Pine Hills Main plaza group to a high of 83.7 percent at the Dean Main plaza group. Overall, ETC transactions on S.R. 408 accounted for 82.4 percent of total transactions on the facility. The cash transactions accounted for the smallest share, between 3.9 to 5.3 percent of transactions at all plaza groups. Overall, cash transactions on S.R. 408 accounted for 5.6 percent of total transactions on the facility. The share of PBP transactions ranged from a low of 12.4 percent at the Dean Main plaza group to a high of 13.7 percent at the Pine Hills Main plaza group. Overall, PBP transactions on S.R. 408 accounted for 12.9 percent of total transactions on the facility.

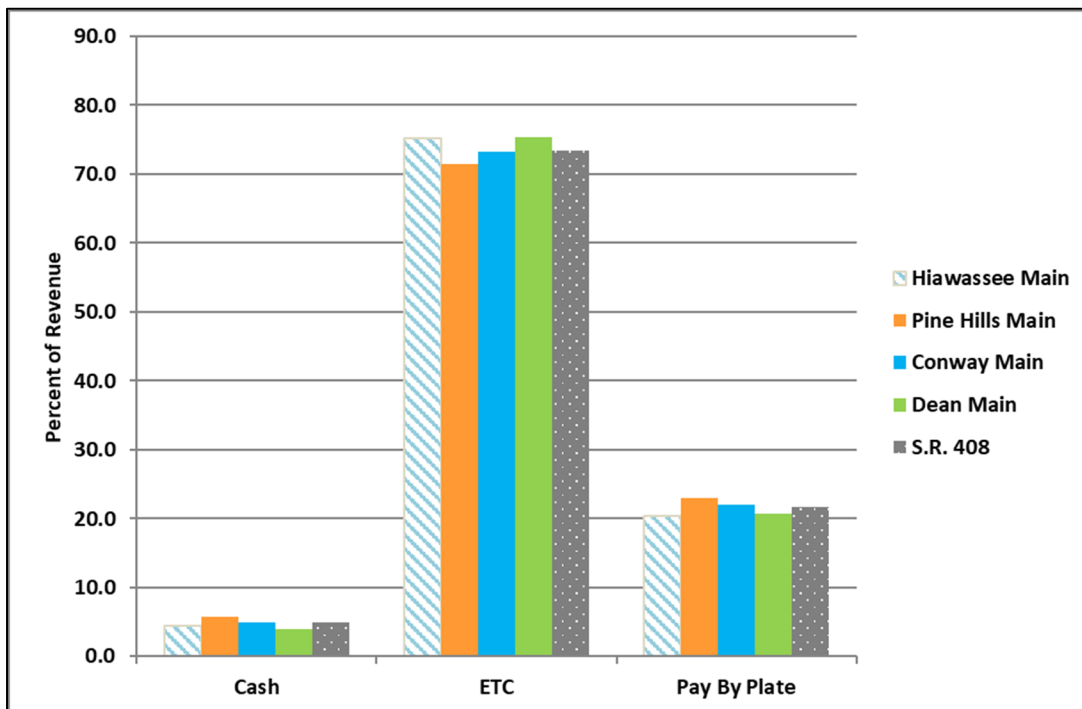
As shown in Figure 4-10, the share of toll revenues by payment type is comparable to the share of transactions, recognizing the differences in the toll paid by payment method. The share of ETC toll revenues ranged from a low of 71.4 percent at the Pine Hills Main plaza group to a high of 75.4 percent at the Dean Main plaza group. Overall, ETC toll revenues on S.R. 408 accounted for 73.4 percent of total toll revenues on the facility. The share of cash toll revenues ranged from a low of 3.9 percent at the Dean Main plaza group to a high of 5.7 percent at the Pine Hills Main plaza group. Overall, cash toll revenues on S.R. 408 accounted for 4.9 percent of total toll revenues on the facility. The share of PBP toll revenues ranged from a low of 20.4 percent at the Hiawassee Main plaza group to a high of 22.9 percent at the Pine Hills Main plaza group. Overall, PBP toll revenues on S.R. 408 accounted for 21.8 percent of total toll revenues on the facility.

**Figure 4-9**  
**S.R. 408 Percent of Transactions by Payment Type**  
**FY 2021**



Source: Monthly unaudited transaction data provided by CFX

**Figure 4-10**  
**S.R. 408 Percent of Revenue by Payment Type**  
**FY 2021**



Source: Monthly unaudited toll revenue data provided by CFX

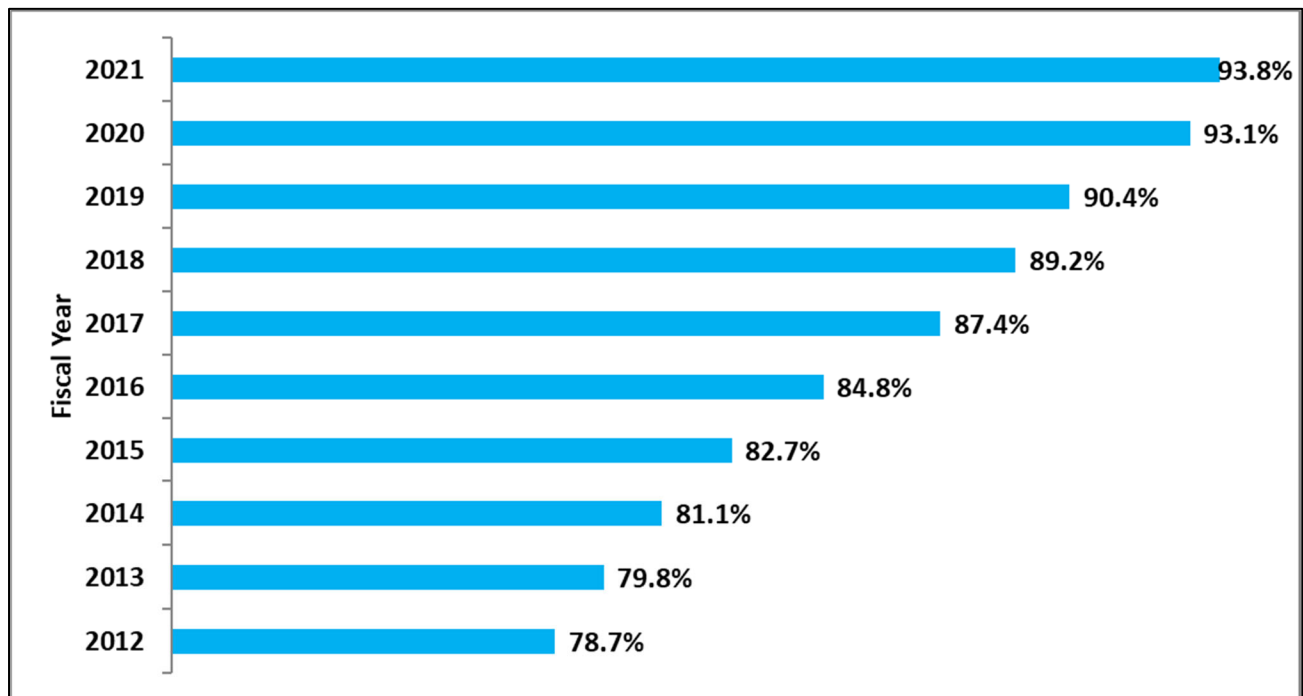
### 4.3 ETC Usage

The shares of paid in-lane revenues generated from ETC over the past ten fiscal years on S.R. 408 are shown in **Figure 4-11**. Cash payments are the other source of paid in-lane revenues. PBP revenues are not included in these results. The share of paid in-lane toll revenue collected through ETC has steadily increased on the facility, with a slight decline in FY 2021 compared to FY 2020. In FY 2012, ETC revenues totaled 78.7 percent of total paid in-lane revenues on the facility. By the end of FY 2021, ETC revenues reached 93.8 percent. The data below differs from Figure 4-10 because it only includes the annual comparison of paid in-lane revenue and not all revenue types. ETC usage is still expected to increase as customers shift to ETC to take advantage of the lower ETC toll rate, especially with implementation of PBP toll rates that are now twice the ETC toll rate as of July 2020 (FY 2021).

Beginning May 11, 2016, CFX implemented a pilot program called The Reload Lane to encourage and increase E-PASS usage. This program is the first of its kind in the continental United States and provides customer convenience and multiple payment options (cash, check, and debit/credit card). Due to the success of this program, the CFX Board approved the expansion of the Reload Lane capabilities to all manned, mainline toll plaza lanes, expected to be completed in FY 2022.

In June 2021, CFX also launched the Visitor Toll Pass program, which is a free temporary toll pass for rental car customers traveling through the Orlando International Airport. With the pass, rental car customers pay the ETC rates on Florida toll roads with no extra or hidden fees.

**Figure 4-11**  
**S.R. 408 Percent of Paid In-Lane Revenue from Electronic Toll Collection**  
**FY 2012 – FY 2021**



Source: Monthly unaudited data provided by CFX



## 4.4 Forecasted Transactions and Toll Revenues

Based on the recently adopted “Customer First Toll Policy,” toll rate adjustments (indexed tolls) were applied to the T&R forecasts every year based on the net change in CPI for the prior year, which equated to 0.96 percent in CY 2020. Because the change in CPI was lower than the 1.5 percent floor, CDM Smith used 1.5 percent to adjust the FY 2022 toll amounts. At the time of preparing the T&R estimates and this report, CDM Smith learned that the CPI during CY 2021 was 5.08 percent. Based on assurances from CFX, CDM Smith used this value to index toll rates for FY 2023. CDM Smith used the floor of 1.5 percent per year every year thereafter in the forecast period.

Future transportation improvements that influence the T&R forecasts for S.R. 408 include the projects listed in **Table 4-4**, assumed completed in each model horizon year. System improvements, such as the S.R. 408 widening projects from S.R. 417 to Alafaya Trail on the east and from Hiawassee Road to Clarke Road on the west will help growth rates in the near term as these are areas of congestion. The major improvements to S.R. 50 and feeder road improvements, including Alafaya Trail, John Young Parkway, Hiawassee Road and U.S. 441, will positively impact the traffic and revenue growth on S.R. 408 throughout the forecast horizon.

**Table 4-4**  
**S.R. 408 - Key Transportation Improvements**

Facility	From	To	Year	Jurisdiction	Improvement
Interstate 4	SR 434	Kirkman Rd	2025	FDOT	Widen to 10 lanes
SR 408	SR 417	Alafaya Trl	2025	CFX	Widen to 6-lanes
SR 408	Hiawassee Rd	Clark Rd	2025	CFX	Widen to 6-lanes
SR 423 (John Young Pkwy)	SR 50 (Colonial Dr)	Shader Rd	2025	Orange County/FDOT	Widen to 6 Lanes
SR 50	East of SR 417	Old Cheney Highway	2025	FDOT	Widen to 6-lanes
SR 50	SR 429	East of West Oaks Mall	2025	FDOT	Widen to 6-lanes
Florida's Turnpike	Minneola	Orange/Lake County Line	2025	FDOT	Widen to 6 lanes
Alafaya Trl	Huckleberry Finn Dr	Lake Underhill Rd	2035	Orange County	Widen to 6 Lanes
Hiawassee Rd	SR 50	Silver Star Rd	2035	Orange County	Widen to 6 Lanes
SR 50	East of Old Cheney Hwy	SR 520	2035	FDOT	Widen to 6-lanes
Florida's Turnpike	US 27	US 19	2035	FDOT	Widen to 6 lanes
Florida's Turnpike	US 19	Minneola/Hancock Rd	2035	FDOT	Widen to 6 lanes
US 441 (SR 500)	SR 44	N of SR 46	2035	FDOT	Widen to 6-lanes
SR 50	CR 565 (Villa City)	CR 565A (Montevista)	2035	FDOT	Widen to 4-lanes
SR 408 East Extension	Challenger Pkwy	SR 50	2045	CFX	New 4-lane expressway
US 441 (Orange Blossom Trl)	SR 50 (Colonial Dr)	John Young Pkwy	2045	FDOT	Widen to 6 Lanes
US 27	Florida Turnpike Ramps- N	South of SR 19	2045	FDOT	Widen to 6-lanes
CR 455/Hartle Rd	Lost Lake Rd	Good Hearth Blvd	2045	Lake County	Widen to 4-lanes
CR 455/Hartle Rd	Hartwood Marsh	Lost Lake Rd	2045	Lake County	New 2-lane roadway
CR 33	SR 50	Simon Brown Rd	2045	Lake County	Widen to 4-lanes

Historical and projected transactions and toll revenues for each of the S.R. 408 plaza groups and for all of S.R. 408 are shown in Tables 4-5 and 4-6. The tables are divided into paid in-lane and PBP transactions and revenue. The paid in-lane transactions and revenue include ETC and cash collection. PBP is only reported as a total on the facility.

The forecasts are based on the completion of the Interstate 4 Ultimate, especially the completion of the I-4/S.R. 408 interchange improvements. While these improvements provide congestion relief on I-4, there are positive impacts to the S.R. 408 T&R forecasts. The growth rates for the remainder of the forecast period are also moderate but steady. The paid in-lane transactions on S.R. 408 are expected to grow 2.5 percent per year through FY 2031 and then lower rates through the end of the forecast period because of the impact of continued toll rate adjustments. PBP transactions are forecasted to decrease 0.1 percent through 2031 and then increase at a slow pace through the remainder of the forecast period. Total transactions are expected to grow 2.2 percent per year through FY 2031, 0.8 percent per year from FY 2031 to FY 2041, and 0.5 percent per year from FY 2041 to FY 2051. Because FY 2021 T&R was still in recovery from the COVID-19 pandemic, higher growth rates are anticipated in the short-term forecasts with growth rates decreasing over the forecast period. The paid in-lane revenues on S.R. 408 are projected to increase significantly over the forecast period, from the FY 2021 actual of \$123.8 million to \$283.4 million in FY 2051. PBP revenues are projected to increase from \$37.2 million in FY 2021 to \$57.8 million in FY 2051. Total revenues are expected to grow from \$171.0 million in FY 2021 to \$341.2 million in FY 2051. S.R. 408 total revenues are forecasted to increase an average of 3.3 percent per year through FY 2031, 2.0 percent per year from FY 2031 to FY 2041, and 1.7 percent per year from FY 2041 to FY 2051.

**Table 4-5**  
**S.R. 408 Plaza Groups – Transaction Projections (Millions)**  
**FY 2022 – FY 2051**

Fiscal Year	Hiawassee Main	Pine Hills Main	Conway Main	Dean Main	Paid In-Lane	PBP	Total	Percent Annual Change
2010	23.3	28.4	49.0	25.3	126.0	0.8	126.8	
2011	23.2	28.4	50.0	25.1	126.7	1.4	128.1	1.0%
2012	23.1	28.4	50.1	24.6	126.2	1.8	128.0	-0.1%
2013 <sup>A</sup>	22.5	27.6	48.9	24.5	123.5	2.2	125.7	-1.8%
2014	24.1	29.2	51.1	25.3	129.7	2.7	132.4	5.3%
2015	26.4	31.6	53.9	26.3	138.2	3.4	141.6	6.9%
2016	28.6	33.7	56.4	27.5	146.2	4.5	150.7	6.4%
2017 <sup>B</sup>	29.6	34.2	56.4	27.5	147.7	5.1	152.8	1.4%
2018 <sup>C</sup>	29.8	34.2	54.6	26.6	145.2	8.9	154.1	0.9%
2019 <sup>D</sup>	29.8	33.6	52.4	25.3	141.1	16.2	157.3	2.1%
2020 <sup>E</sup>	26.6	30.1	46.2	21.8	124.7	17.6	142.3	-9.5%
2021 <sup>F</sup>	27.1	31.4	50.3	22.1	130.9	19.4	150.3	5.6%
2022 <sup>G</sup>	30.2	34.8	55.4	24.2	144.6	19.3	163.9	9.0%
2023	31.5	35.9	55.1	26.0	148.5	17.9	166.4	1.5%
2024	32.8	37.1	56.1	27.6	153.6	17.8	171.4	3.0%
2025	33.6	37.8	56.8	28.3	156.5	18.2	174.7	1.9%
2026	34.2	38.5	57.4	28.6	158.7	18.4	177.1	1.4%
2027	34.8	39.1	57.9	28.9	160.7	18.5	179.2	1.2%
2028	35.3	39.7	58.4	29.1	162.5	18.8	181.3	1.2%
2029	35.9	40.3	58.9	29.4	164.5	19.1	183.6	1.3%
2030	36.4	40.8	59.4	29.6	166.2	19.1	185.3	0.9%
2031	36.9	41.3	59.9	29.9	168.0	19.3	187.3	1.1%
2032	37.4	41.8	60.3	30.2	169.7	19.4	189.1	1.0%
2033	37.8	42.3	60.8	30.5	171.4	19.7	191.1	1.1%
2034	38.3	42.7	61.2	30.8	173.0	19.8	192.8	0.9%
2035	38.7	43.1	61.7	31.1	174.6	19.9	194.5	0.9%
2036	39.1	43.5	62.1	31.4	176.1	20.0	196.1	0.8%
2037	39.5	43.9	62.5	31.7	177.6	20.1	197.7	0.8%
2038	39.9	44.3	62.9	32.0	179.1	20.2	199.3	0.8%
2039	40.2	44.6	63.2	32.3	180.3	20.4	200.7	0.7%
2040	40.6	45.0	63.6	32.6	181.8	20.4	202.2	0.7%
2041	41.0	45.3	63.9	32.9	183.1	20.4	203.5	0.6%
2042	41.3	45.6	64.2	33.1	184.2	20.4	204.6	0.5%
2043	41.7	45.9	64.5	33.4	185.5	20.4	205.9	0.6%
2044	42.0	46.1	64.8	33.7	186.6	20.4	207.0	0.5%
2045	42.3	46.4	65.1	33.9	187.7	20.5	208.2	0.6%
2046	42.7	46.6	65.3	34.2	188.8	20.5	209.3	0.5%
2047	43.0	46.8	65.5	34.5	189.8	20.5	210.3	0.5%
2048	43.3	47.0	65.7	34.7	190.7	20.4	211.1	0.4%
2049	43.6	47.2	65.9	34.9	191.6	20.4	212.0	0.4%
2050	43.8	47.3	66.0	35.2	192.3	20.4	212.7	0.3%
2051	44.1	47.4	66.2	35.4	193.1	20.3	213.4	0.3%

Fiscal Year	Compound Annual Average Growth Rate (CAAGR)						
2010 - 2021	1.4%	0.9%	0.2%	-1.2%	0.3%	33.6%	1.6%
2021 - 2031	3.1%	2.8%	1.8%	3.1%	2.5%	-0.1%	2.2%
2031 - 2041	1.1%	0.9%	0.6%	1.0%	0.9%	0.6%	0.8%
2041 - 2051	0.7%	0.5%	0.4%	0.7%	0.5%	0.0%	0.5%

Notes:

- Actual transaction data provided by CFX from Monthly Statistical Reports.
- A - Systemwide toll rate increase.
- B - Effects from Hurricane Matthew in October 2016.
- C - Effects from Hurricane Irma in September 2017.
- D - First year of implementation of "Customer First" toll rate policy.
- E - Effects from Hurricane Dorian in September 2019 and first effects of COVID-19 pandemic began in March 2020.
- F - New toll rates for PBP customers, set at 2.0 times the ETC rate. Continued effects of COVID-19 pandemic.
- G - Completion of I-4 Ultimate project.

**Table 4-6**  
**S.R. 408 Plaza Groups – Toll Revenue Projections (Millions)**  
**FY 2022– FY 2051**

Fiscal Year		Hiawassee Main	Pine Hills Main	Conway Main	Dean Main	Paid In-Lane	PBP	Total	Percent Change
2010	Actual	\$16.4	\$26.8	\$46.1	\$18.4	\$107.7	\$1.0	\$108.7	
2011		\$16.2	\$26.8	\$47.1	\$18.2	\$108.3	\$1.8	\$110.1	1.3%
2012		\$16.0	\$26.7	\$47.2	\$17.8	\$107.7	\$2.4	\$110.1	0.0%
2013 <sup>A</sup>		\$18.0	\$29.3	\$51.9	\$20.1	\$119.3	\$3.5	\$122.8	11.5%
2014		\$19.2	\$31.0	\$54.2	\$20.8	\$125.2	\$4.2	\$129.4	5.4%
2015		\$21.0	\$33.4	\$56.9	\$21.7	\$133.0	\$5.3	\$138.3	6.9%
2016		\$22.6	\$35.5	\$59.4	\$22.6	\$140.1	\$6.9	\$147.0	6.3%
2017 <sup>B</sup>		\$23.3	\$36.1	\$59.1	\$22.5	\$141.0	\$9.2	\$150.2	2.2%
2018 <sup>C</sup>		\$23.5	\$36.0	\$57.1	\$21.7	\$138.3	\$9.8	\$148.1	-1.4%
2019 <sup>D</sup>		\$24.1	\$36.0	\$55.5	\$21.0	\$136.6	\$17.7	\$154.3	4.2%
2020 <sup>E</sup>		\$22.1	\$32.7	\$50.1	\$18.4	\$123.3	\$19.3	\$142.6	-7.6%
2021 <sup>F</sup>		\$22.9	\$35.3	\$56.4	\$19.2	\$133.8	\$37.2	\$171.0	19.9%
2022 <sup>G</sup>	Forecast	\$25.9	\$37.6	\$62.6	\$21.6	\$147.7	\$37.7	\$185.4	8.4%
2023		\$28.7	\$39.0	\$65.0	\$24.8	\$157.5	\$36.7	\$194.2	4.7%
2024		\$29.9	\$40.3	\$66.2	\$26.4	\$162.8	\$36.7	\$199.5	2.7%
2025		\$31.2	\$41.5	\$67.8	\$27.4	\$167.9	\$37.8	\$205.7	3.1%
2026		\$32.1	\$42.7	\$69.3	\$28.1	\$172.2	\$38.6	\$210.8	2.5%
2027		\$33.1	\$43.9	\$70.7	\$28.7	\$176.4	\$39.5	\$215.9	2.4%
2028		\$34.0	\$45.1	\$72.2	\$29.3	\$180.6	\$40.5	\$221.1	2.4%
2029		\$34.9	\$46.3	\$73.7	\$29.9	\$184.8	\$41.4	\$226.2	2.3%
2030		\$35.8	\$47.5	\$75.2	\$30.6	\$189.1	\$42.3	\$231.4	2.3%
2031		\$36.8	\$48.6	\$76.7	\$31.2	\$193.3	\$43.2	\$236.5	2.2%
2032		\$37.7	\$49.8	\$78.2	\$31.9	\$197.6	\$44.1	\$241.7	2.2%
2033		\$38.6	\$51.0	\$79.8	\$32.6	\$202.0	\$45.0	\$247.0	2.2%
2034		\$39.6	\$52.2	\$81.3	\$33.3	\$206.4	\$45.8	\$252.2	2.1%
2035		\$40.5	\$53.3	\$82.9	\$34.1	\$210.8	\$46.6	\$257.4	2.1%
2036		\$41.4	\$54.5	\$84.5	\$34.8	\$215.2	\$47.4	\$262.6	2.0%
2037		\$42.3	\$55.6	\$86.1	\$35.6	\$219.6	\$48.3	\$267.9	2.0%
2038		\$43.3	\$56.8	\$87.7	\$36.4	\$224.2	\$49.1	\$273.3	2.0%
2039		\$44.2	\$58.0	\$89.3	\$37.2	\$228.7	\$49.9	\$278.6	1.9%
2040		\$45.2	\$59.1	\$91.0	\$38.0	\$233.3	\$50.7	\$284.0	1.9%
2041		\$46.2	\$60.3	\$92.6	\$38.8	\$237.9	\$51.5	\$289.4	1.9%
2042		\$47.2	\$61.4	\$94.2	\$39.6	\$242.4	\$52.2	\$294.6	1.8%
2043		\$48.1	\$62.6	\$95.8	\$40.4	\$246.9	\$52.9	\$299.8	1.8%
2044		\$49.1	\$63.7	\$97.4	\$41.2	\$251.4	\$53.6	\$305.0	1.7%
2045		\$50.1	\$64.9	\$99.0	\$42.1	\$256.1	\$54.3	\$310.4	1.8%
2046		\$51.1	\$66.0	\$100.6	\$42.9	\$260.6	\$55.0	\$315.6	1.7%
2047		\$52.1	\$67.1	\$102.2	\$43.8	\$265.2	\$55.6	\$320.8	1.6%
2048	\$53.2	\$68.2	\$103.8	\$44.6	\$269.8	\$56.0	\$325.8	1.6%	
2049	\$54.2	\$69.3	\$105.3	\$45.5	\$274.3	\$56.7	\$331.0	1.6%	
2050	\$55.2	\$70.4	\$106.9	\$46.4	\$278.9	\$57.3	\$336.2	1.6%	
2051	\$56.2	\$71.5	\$108.4	\$47.3	\$283.4	\$57.8	\$341.2	1.5%	

Fiscal Year	Compound Annual Average Growth Rate (CAAGR)						
2010 - 2021	3.1%	2.5%	1.9%	0.4%	2.0%	38.9%	4.2%
2021 - 2031	4.9%	3.2%	3.1%	5.0%	3.7%	1.5%	3.3%
2031 - 2041	2.3%	2.2%	1.9%	2.2%	2.1%	1.8%	2.0%
2041 - 2051	2.0%	1.7%	1.6%	2.0%	1.8%	1.2%	1.7%

Notes:

Actual revenue data provided by CFX from Monthly Statistical Reports.

A - Systemwide toll rate increase.

B - Effects from Hurricane Matthew in October 2016.

C - Effects from Hurricane Irma in September 2017.

D - First year of implementation of "Customer First" toll rate policy.

E - Effects from Hurricane Dorian in September 2019 and first effects of COVID-19 pandemic began in March 2020.

F - New toll rates for PBP customers, set at 2.0 times the ETC rate. Continued effects of COVID-19 pandemic.

G - Completion of I-4 Ultimate project.



# CHAPTER 5

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S.R. 417  
(CENTRAL FLORIDA GREENEWAY)





# S.R. 417 (CENTRAL FLORIDA GREENEWAY)

## 5.1 Facility Description

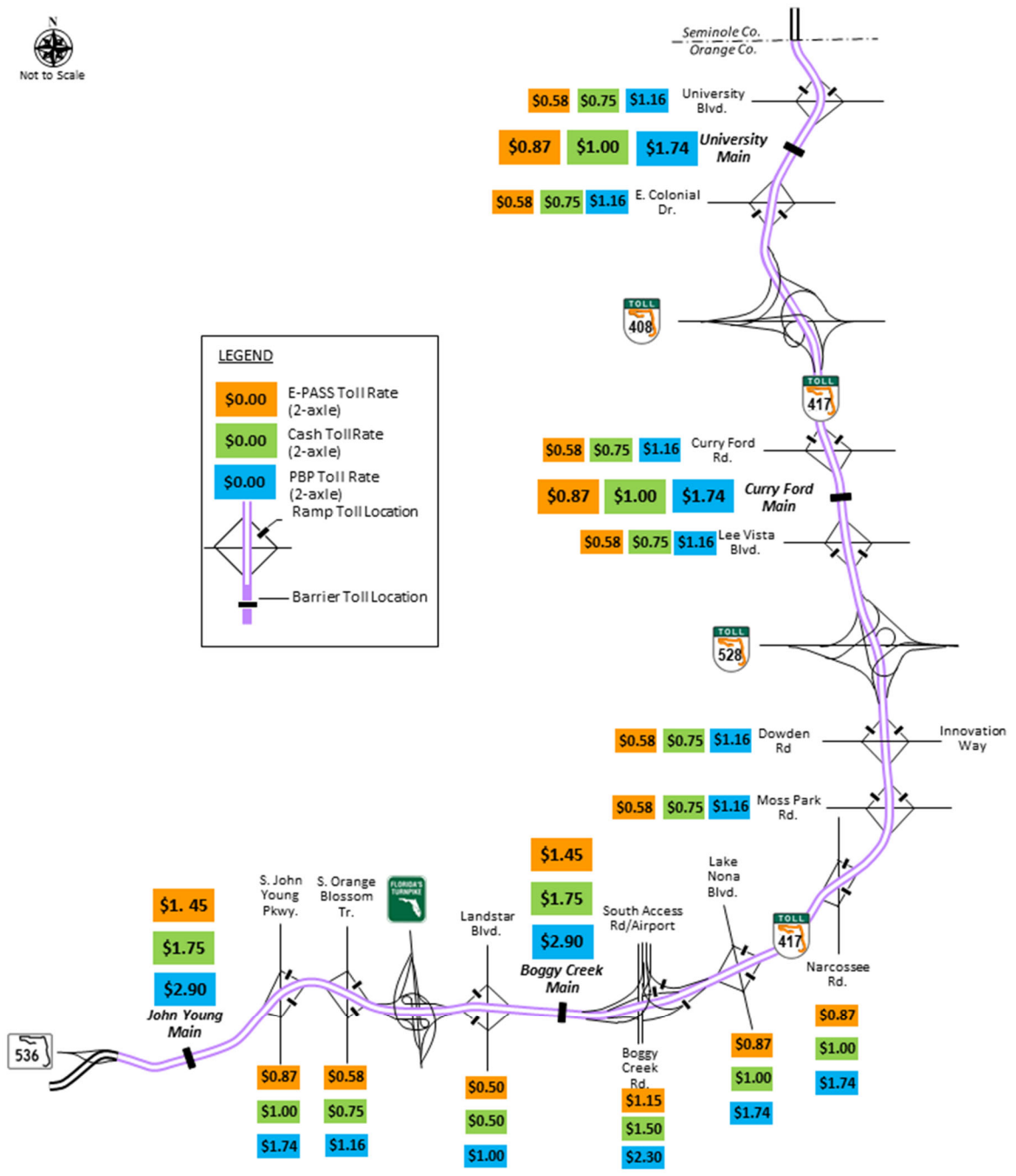
S. R. 417, also known as the Central Florida GreeneWay, is a 55-mile expressway that serves as an eastern and southern beltway around Orlando, providing a connection between the residential areas, northeast, east and southeast of Orlando in Orange, Seminole and Osceola Counties to S.R. 408 and downtown Orlando. It also significantly enhances access to the Orlando International Airport (OIA) as an alternative to S.R. 528 and S.R. 436. CFX owns and operates the largest portion of S.R. 417 (32 miles) extending east and north from International Drive to the Orange-Seminole County line. FTE extended S.R. 417 north and west from the Orange-Seminole County line to I-4. FTE also extended S.R. 417 in a westerly direction from International Drive to provide a connection to I-4 in the vicinity of the attractions. A map of CFX's portion of S.R. 417 including the FY 2021 CFX toll rates for the mainline and ramp toll plazas is shown in **Figure 5-1**.



The first section of S.R. 417 to be constructed by CFX was from S.R. 408 to the Orange-Seminole County line including the University Mainline plaza. This section opened to traffic in December 1988 and toll collection began at the plaza in January 1989. The University Main plaza group included interchanges at S.R. 408, Valencia College Lane, S.R. 50 and University Boulevard. The next section extended from S.R. 408 to S.R. 528, was completed in June 1990 and toll collection began in July 1990. The interchanges associated with the Curry Ford Main plaza group are S.R. 528, Lee Vista Boulevard and Curry Ford Road. The final section of S.R. 417 includes the Boggy Creek and John Young Mainline plaza groups, extending from International Drive to S.R. 528. This section opened to traffic with toll collection in July 1993. The Boggy Creek Main plaza group includes interchanges at Boggy Creek Road, Lake Nona Boulevard, Narcoossee Road, Moss Park Road and Innovation Way. The John Young Main plaza group includes interchanges at John Young Parkway, U.S. 441/Orange Blossom Trail and Landstar Boulevard. FTE opened the section of the limited-access expressway between International Drive and I-4 in June 1996 and the S.R. 417 connection to U.S. 17-92 in Seminole County in 1994 and from U.S. 17-92 to I-4 in Seminole County in September 2002.

In July 2003, the University Mainline toll plaza was the first plaza in Florida to be converted from conventional toll lanes to Open Road Tolling (ORT) lanes. CFX chose this plaza for the first conversion due to its heavy traffic and extensive ETC usage. Conversions followed at the Curry Ford Mainline plaza in July 2005 and the Boggy Creek and John Young Mainline plazas in March 2007.

**Figure 5-1  
S.R. 417 Facilities and Toll Rates**





In January 2012, CFX completed the widening of S.R. 417 from four to six lanes between S.R. 528 and Curry Ford Road to help reduce traffic congestion during peak periods. Also, in January 2013, CFX completed work on the modified S.R. 408/S.R. 417 Interchange project. As part of this interchange improvement project, the Valencia College Lane ramps to and from the north were closed and ramps to and from the south were rerouted to a new access point at Chickasaw Trail on S.R. 408. This new interchange improved access and mobility to those living and working in east Orange County.

In January 2015, CFX opened a partial interchange between S.R. 417 and Florida's Turnpike, providing ramps from southbound S.R. 417 to southbound Florida's Turnpike and from northbound Florida's Turnpike to northbound S.R. 417. In May 2016, FTE opened an additional ramp for motorists traveling southbound on S.R. 417 to access Florida's Turnpike northbound toward Interstate 4. Also, two new ramps were opened for motorists traveling north on S.R. 417 from Hunter's Creek to access Florida's Turnpike in both the north and south directions. This completed five of the eight ramps planned for the interchange. FTE recently opened the remaining three ramps in May 2021 to complete the system-to-system interchange and provide full access between these two major expressways in South Orlando.

In May 2015, CFX completed the widening of S.R. 417 between Curry Ford Road and Lake Underhill Road from four to six lanes. The project also included improvements to the southbound off ramp to Curry Ford Road and the Curry Ford Road northbound on ramp. In February 2016, CFX completed the interchange improvements at S.R. 417/Boggy Creek Road and opened the new airport ramps. This improvement provided better access to and from OIA for customers in South Orange and Osceola Counties.

CFX completed the reconstruction of several ramps in the S.R. 417/S.R. 408 interchange. Phase One of the project was the widening of S.R. 417 between Berry Dease Road and S.R. 408. This 1.6-mile project added travel lanes in both directions (from four to six lanes) and realigned the northbound S.R. 417 ramp to eastbound S.R. 408. This phase was completed in the fall of 2017. Phase Two included building new and realigned ramps from westbound S.R. 408 to southbound S.R. 417, northbound S.R. 417 to westbound S.R. 408, and eastbound S.R. 408 to southbound S.R. 417. This phase was completed in 2020.

In September 2018, CFX began widening S.R. 417 from south of Econlockhatchee Trail to the Orange/Seminole County line. The 3.2-mile project added a travel lane in both directions, expanding the expressway from four to six lanes. The project also included the elimination of one cash lane in each direction at the University Main Plaza and replacement with an Open Road Tolling (ORT) lane, for a total of three ORT lanes (dedicated ETC lanes) in each direction. The improvement was also completed in 2020.

Starting in FY 2020, CFX has initiated a significant widening program on S.R. 417 between S.R. 536/International Drive and S.R. 528. Approximately 21 miles of S.R. 417 will be widened from 4 to 6 lanes including a hardened shoulder for Part-Time Shoulder Use (PTSU) for a potential 8-lane section during peak hours. The S.R. 417 widening projects consist of five segments; the widening has been divided into contiguous parts to minimize the impact to motorists. Construction on all segments began in February 2021 and is scheduled to be completed by the end of 2023.

## 5.2 Historical Transactions and Toll Revenues

As defined in Chapter 1, CFX transactions and toll revenues are classified as either Paid In-Lane (ETC and cash) or Unpaid In-Lane (PBP and non-revenue). Total transactions are the sum of paid in-lane and unpaid in-lane transactions. Total revenue is the sum of paid in-lane revenue and the revenue collected through the PBP process, estimated as an accrued amount. The following section includes a breakdown of transactions and revenues by paid in-lane and PBP.

### 5.2.1 ANNUAL PAID IN-LANE TRANSACTION AND REVENUE TRENDS

S.R. 417 annual paid in-lane transactions at the John Young Main, Boggy Creek Main, Curry Ford Main and University Main plaza groups from FY 2002 to FY 2021 are presented in the top half of **Table 5-1**. The history of annual paid in-lane toll revenues is also summarized and totaled in the bottom half of the table. The facility data and annual growth are also presented visually in **Figure 5-2** and **Figure 5-3**. These historical tables do not include PBP transactions and revenues, only those that are paid in-lane. For this reason, the information presented in this section may differ slightly from the data presented in the FY 2021 Comprehensive Annual Financial Report (CAFR) and other information in this report.

Total facility paid in-lane transactions and revenues increased annually at approximately 10 percent from FY 2003 through FY 2008. CFX instituted a Systemwide toll rate adjustment in FY 2008 and 2009 in response to declining transactions and revenue associated with the Great Recession. Paid in-lane transactions decreased at all four plaza groups in FY 2009 due to both the economic downturn and the Systemwide toll rate adjustment. The April 2009 toll rate adjustment impacted the last three months of FY 2009. FY 2009 transactions and revenues were also impacted by Tropical Storm Fay in August 2008.

FY 2010 paid in-lane transactions continued to decline at all four plaza groups because of the economic downturn and the toll rate adjustment, which impacted the first nine months of the fiscal year. However, paid in-lane toll revenues increased significantly at all plaza groups due to the higher toll rates.

As shown, Curry Ford Main plaza group was the only one with a decline in paid in-lane transactions and revenues in FY 2011. The losses can be attributed to delays associated with the widening of S.R. 417 between Curry Ford and S.R. 528. This trend continued at the Curry Ford Main plaza group in FY 2012 with a decrease of 0.4 percent in transactions and no growth in revenues. Construction of the widening project was completed in FY 2013. Also, in FY 2012, the University Main plaza group experienced a decline of 2.8 percent in transactions and a decline of 1.5 percent in revenues. This plaza group was impacted by the construction of the S.R. 408/S.R. 417 systems interchange. FY 2012 was also the first full year that the Valencia College Lane ramps had been permanently closed.

**Table 5-1  
S.R. 417 Plaza Groups – Historical Paid In-Lane Transactions and Revenue  
FY 2002 – FY 2021**

Fiscal Year	John Young Main	Boggy Creek Main	Curry Ford Main	University Main	TOTAL	John Young Main	Boggy Creek Main	Curry Ford Main	University Main	TOTAL
<b>TRANSACTIONS (millions)</b>					<b>PERCENT CHANGE</b>					
2002 <sup>A</sup>	14.5	11.0	15.7	23.7	64.9					
2003	15.7	12.3	17.9	25.4	71.3	8.3%	11.8%	14.0%	7.2%	9.9%
2004 <sup>B</sup>	17.1	13.5	20.4	28.6	79.6	8.9%	9.8%	14.0%	12.6%	11.6%
2005 <sup>C</sup>	18.9	15.2	22.9	30.2	87.2	10.5%	12.6%	12.3%	5.6%	9.5%
2006 <sup>D</sup>	20.8	17.3	25.7	32.4	96.2	10.1%	13.8%	12.2%	7.3%	10.3%
2007 <sup>E</sup>	22.3	19.1	27.5	33.5	102.4	7.2%	10.4%	7.0%	3.4%	6.4%
2008	23.6	20.3	27.6	33.0	104.5	5.8%	6.3%	0.4%	-1.5%	2.1%
2009 <sup>F</sup>	21.5	18.4	24.9	30.0	94.8	-8.9%	-9.4%	-9.8%	-9.1%	-9.3%
2010 <sup>F</sup>	19.6	17.5	23.6	28.6	89.3	-8.8%	-4.9%	-5.2%	-4.7%	-5.8%
2011	20.1	18.6	23.2	29.0	90.9	2.6%	6.3%	-1.7%	1.4%	1.8%
2012 <sup>G</sup>	20.6	18.8	23.1	28.2	90.7	2.5%	1.1%	-0.4%	-2.8%	-0.2%
2013 <sup>H</sup>	21.0	19.7	23.4	26.2	90.3	1.8%	4.6%	1.3%	-7.0%	-0.5%
2014	22.6	21.9	25.2	27.5	97.2	7.6%	11.2%	7.7%	5.0%	7.6%
2015	25.7	25.3	28.3	30.0	109.3	13.7%	15.5%	12.3%	9.1%	12.4%
2016	30.6	31.0	32.5	33.3	127.4	19.1%	22.5%	14.8%	11.0%	16.6%
2017 <sup>I</sup>	34.8	34.6	34.2	34.5	138.1	13.7%	11.6%	5.2%	3.6%	8.4%
2018 <sup>J</sup>	37.2	38.1	35.8	34.8	145.9	6.9%	10.1%	4.7%	0.9%	5.6%
2019 <sup>*</sup>	36.9	39.3	35.4	33.9	145.5	-0.8%	3.1%	-1.1%	-2.6%	-0.3%
2020 <sup>*,K</sup>	30.7	34.2	31.8	29.2	125.9	-16.8%	-13.0%	-10.2%	-13.9%	-13.5%
2021 <sup>*,L</sup>	29.1	34.0	30.6	28.7	122.4	-5.2%	-0.6%	-3.8%	-1.7%	-2.8%
<b>TOLL REVENUE (millions)</b>					<b>PERCENT CHANGE</b>					
2002 <sup>A</sup>	\$12.7	\$10.8	\$8.1	\$11.0	\$42.6					
2003	\$13.6	\$12.0	\$9.2	\$11.7	\$46.5	7.1%	11.1%	13.6%	6.4%	9.2%
2004 <sup>B</sup>	\$14.6	\$13.1	\$10.5	\$13.4	\$51.6	7.4%	9.2%	14.1%	14.5%	11.0%
2005 <sup>C</sup>	\$16.0	\$14.7	\$11.7	\$14.3	\$56.7	9.6%	12.2%	11.4%	6.7%	9.9%
2006 <sup>D</sup>	\$17.4	\$16.6	\$13.2	\$15.4	\$62.6	8.7%	12.9%	12.8%	7.7%	10.4%
2007 <sup>E</sup>	\$18.7	\$18.2	\$14.0	\$16.0	\$66.9	7.5%	9.6%	6.1%	3.9%	6.9%
2008	\$19.7	\$19.2	\$13.9	\$15.7	\$68.5	5.3%	5.5%	-0.7%	-1.9%	2.4%
2009 <sup>F</sup>	\$19.0	\$18.1	\$13.9	\$15.8	\$66.8	-3.6%	-5.7%	0.0%	0.6%	-2.5%
2010 <sup>F</sup>	\$21.0	\$19.9	\$17.7	\$20.4	\$79.0	10.5%	9.9%	27.3%	29.1%	18.3%
2011	\$21.6	\$20.6	\$17.3	\$20.6	\$80.1	2.9%	3.5%	-2.3%	1.0%	1.4%
2012 <sup>G</sup>	\$22.1	\$20.8	\$17.3	\$20.3	\$80.5	2.3%	1.0%	0.0%	-1.5%	0.5%
2013 <sup>H</sup>	\$25.3	\$24.3	\$19.8	\$21.8	\$91.2	14.3%	16.9%	14.5%	7.5%	13.3%
2014	\$27.2	\$26.9	\$21.3	\$22.9	\$98.3	7.7%	10.7%	7.5%	5.0%	7.8%
2015	\$30.6	\$30.8	\$24.0	\$25.0	\$110.4	12.5%	14.5%	12.7%	9.2%	12.3%
2016	\$35.9	\$37.7	\$27.6	\$27.8	\$129.0	17.3%	22.4%	15.0%	11.2%	16.8%
2017 <sup>I</sup>	\$40.4	\$42.0	\$29.1	\$28.9	\$140.4	12.5%	11.4%	5.4%	4.0%	8.8%
2018 <sup>J</sup>	\$43.0	\$45.7	\$30.5	\$29.2	\$148.4	6.4%	8.8%	4.8%	1.0%	5.7%
2019 <sup>*</sup>	\$44.3	\$48.6	\$30.7	\$29.0	\$152.6	3.0%	6.3%	0.7%	-0.7%	2.8%
2020 <sup>*,K</sup>	\$37.1	\$42.6	\$28.6	\$25.6	\$133.9	-16.3%	-12.3%	-6.8%	-11.7%	-12.3%
2021 <sup>*,L</sup>	\$34.9	\$42.5	\$27.9	\$25.9	\$131.2	-5.9%	-0.2%	-2.4%	1.2%	-2.0%

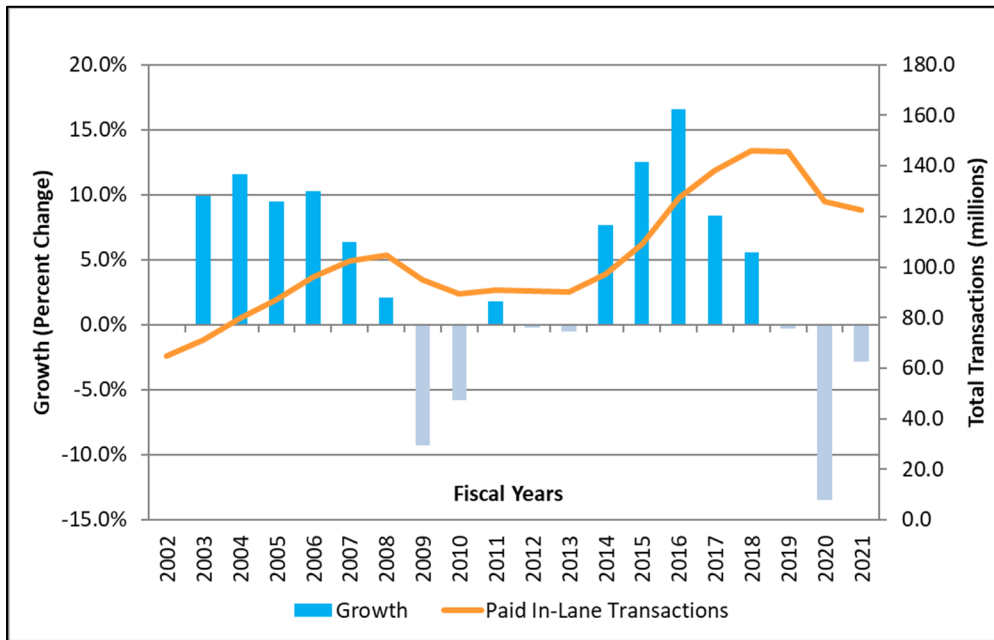
\*Indicates systemwide toll rate increase according to Customer First Toll Policy

Notes:

- A - Effects of the events on September 11, 2001.
- B - University Main plaza converted to open road tolling plaza in July 2003.
- C - Effects from 2004 hurricane season (4 storms with toll suspensions).
- D - Curry Ford Main plaza converted to open road tolling plaza in July 2005.
- E - Boggy Creek Main and John Young Main plazas converted to open road tolling plazas in March 2007.
- F - Systemwide toll rate increase in April 2009.
- G - Widening of S.R. 417 between S.R. 408 and S.R. 528. Valencia College Lane ramps closed.

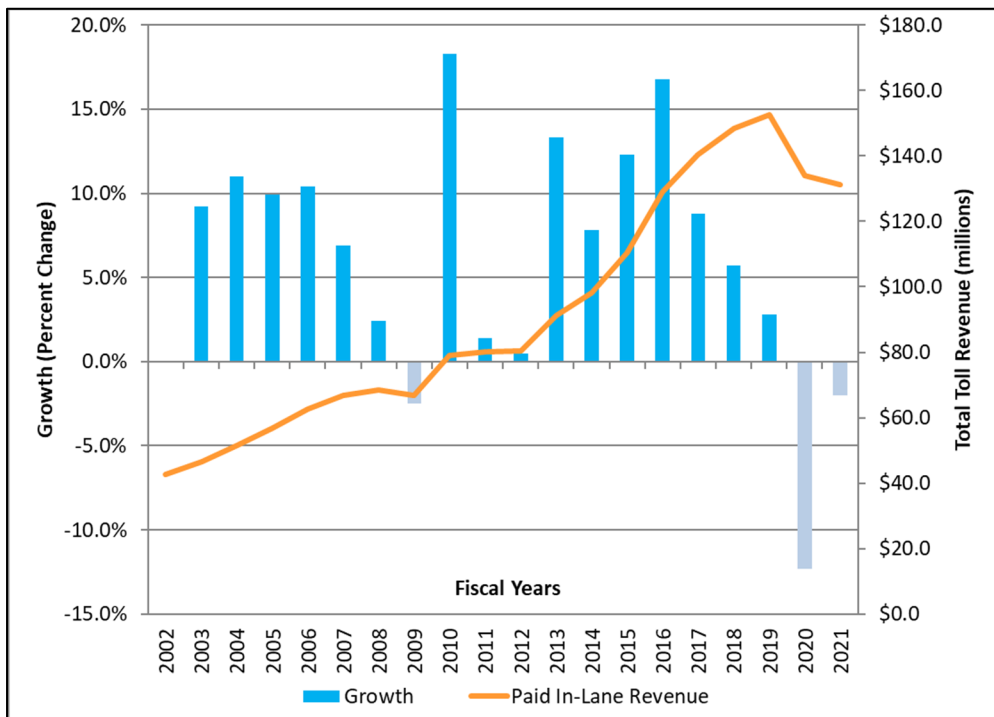
- H - Systemwide toll rate increase in July 2013. Implementation of cash and electronic toll rate differential.
- I - Effects from Hurricane Matthew in October 2016.
- J - Effects from Hurricane Irma in September 2017.
- K - Effects from Hurricane Dorian in September 2019 and first effects of COVID-19 pandemic began in March 2020.
- L - Continued effects of COVID-19 pandemic.

**Figure 5-2**  
**S.R. 417 Historical Paid In-Lane Transactions and Annual Growth**  
**FY 2002 – FY 2021**



Source: Monthly unaudited data provided by CFX

**Figure 5-3**  
**S.R. 417 Historical Paid In-Lane Revenue and Annual Growth**  
**FY 2002 – FY 2021**



Source: Monthly unaudited data provided by CFX

In FY 2013, the University Main plaza group was the only one that experienced a decline in paid in-lane transactions, a decrease of 7.0 percent as compared to FY 2012. All other plaza groups experienced an increase in paid in-lane transactions despite the July 2012 toll rate adjustment. Paid in-lane revenues at all plaza groups increased in FY 2013, overall 13.3 percent.

In FY 2014, all plaza groups experienced growth in paid in-lane transactions and revenues. Overall, S.R. 417 paid in-lane transactions increased 7.6 percent and revenues increased 7.8 percent over FY 2013. FY 2015 and FY 2016 experienced double-digit growth in both transactions and revenues, which is referred to as the period of extraordinary growth. In FY 2017, transactions increased 8.4 percent and revenues increased 8.8 percent compared to FY 2016. Boggy Creek Main, John Young Main and Curry Ford Main plaza groups continued transaction and revenue growth can be attributed to Medical City and Lake Nona developments along these sections of S.R. 417, as well as the opening of the partial interchange at Florida's Turnpike. Over the four-year period, paid in-lane transactions and revenue increased by more than 50 percent.

In October 2016 (FY 2017), Hurricane Matthew tracked parallel to the Florida coast as a Category 3 storm with winds up to 130 miles per hour. Tolls were suspended on the CFX System beginning at 8:00 p.m. on October 5, 2016 through early on October 10, 2016. The toll suspension resulted in a loss of approximately 1.5 million in transactions and \$1.5 million in toll revenues on S.R. 417. In September 2017 (FY 2018), Hurricane Irma tracked parallel to the Florida coast as a Category 4 storm with winds up to 155 miles per hour. Tolls were suspended on CFX toll facilities beginning on September 5, 2017 through September 20, 2017 resulting in a transaction loss of approximately 6.4 million and a toll revenue loss of \$6.5 million on S.R. 417.

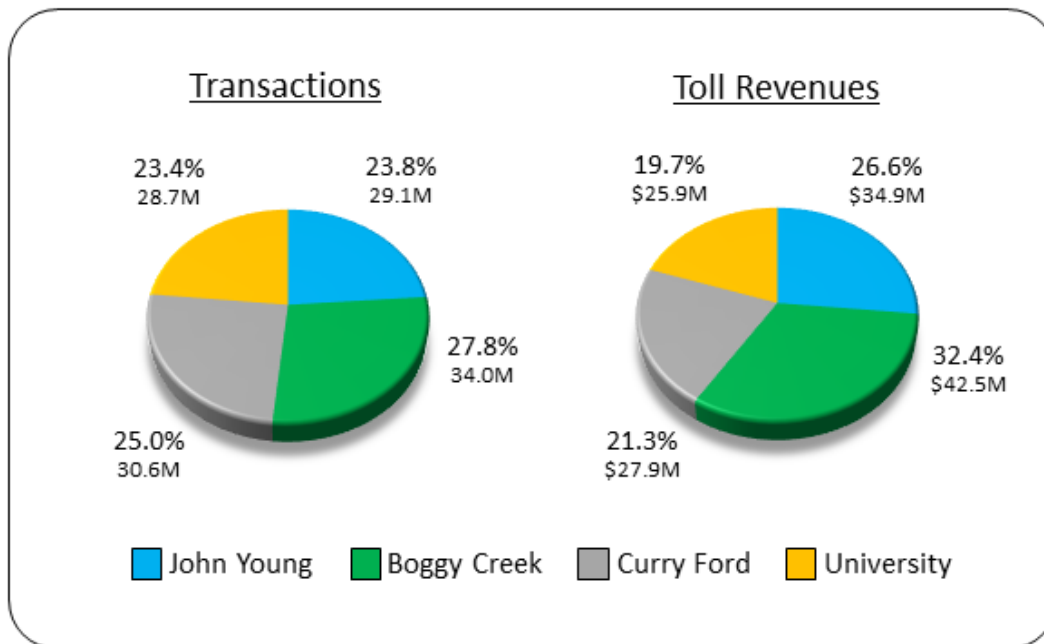
In FY 2018, all plaza groups experienced growth in paid in-lane transactions and revenues. Overall, S.R. 417 transactions increased 5.6 percent and toll revenues increased 5.7 percent over FY 2017. As previously mentioned, September 2017 transactions and toll revenues were negatively impacted by toll suspensions during Hurricane Irma.

In FY 2019, S.R. 417 paid in-lane transactions decreased by 0.3 percent and toll revenues increased 2.8 percent over FY 2018. Boggy Creek was the only plaza group that experienced growth in transactions of 3.1 percent in FY 2019. Paid in-lane revenues increased at all plaza groups except University Main, which decreased by 0.7 percent compared to FY 2018. The slower growth in transactions and revenues in FY 2019 can be attributed in part to the increase in customers utilizing the PBP program.

In FY 2020 and FY 2021, all S.R. 417 plaza groups experienced a decline in paid in-lane transactions. Almost all plaza groups also experienced a decline in revenues, despite the FY 2020 and FY 2021 toll rate adjustments. The declines in both transactions and revenues can primarily be attributed to the continuing negative impacts of COVID-19. The John Young Main was the plaza group affected the most from COVID-19 impacts due to its proximity to the attractions area, but Boggy Creek Main and University were also severely impacted due to their location near the airport and the University of Central Florida. September 2019 (FY 2020) transactions and revenues were also negatively impacted by toll suspensions during Hurricane Dorian.

The share by plaza group of total S.R. 417 paid in-lane transactions and toll revenues during FY 2021 are presented in **Figure 5-4**. As shown, the Boggy Creek Main plaza group represented 34.0 million transactions or 27.8 percent of total transactions. The Curry Ford Main plaza group had the second highest number of transactions at 30.6 million or 25.0 percent. The John Young Main and University Main plaza groups followed close behind with 29.1 and 28.7 million transactions, respectively. In years prior to FY 2016, the John Young Main plaza group consistently had more transactions than Boggy Creek Main, however the Boggy Creek Main plaza group has surpassed John Young Main four of the last five years. It is important to note that the Boggy Creek plaza group has more supporting ramp toll locations, some with high toll rates. The Curry Ford plaza group transactions were not as severely affected by COVID-19 as the other plaza groups on S.R. 417. University Main plaza group transactions were surpassed by Curry Ford Main plaza group transactions for the past four years.

**Figure 5-4**  
**S.R. 417 Paid In-Lane Transactions and Revenue by Plaza Group**  
**FY 2021**



Source: Monthly unaudited data provided by CFX

The annual totals and shares of paid in-lane revenues are also presented in Figure 5-4. The Boggy Creek Main and John Young Main plaza groups had the highest amounts of revenue. This is attributable to the fact that these two plaza groups have longer distances between mainline plazas which results in higher toll amounts and to the number of tolled ramp locations. The Boggy Creek Main plaza group reported the highest revenues of \$42.5 million or 32.4 percent of total revenues. The University Main plaza group represented the lowest amount of revenues with \$25.9 million or 19.7 percent of total revenues.

**5.2.2 ANNUAL PBP TRANSACTION AND REVENUE TRENDS**

A history of annual PBP transactions and toll revenues on S.R. 417 from FY 2012 to FY 2021 is presented in **Table 5-2**. PBP transactions and toll revenues are recorded by toll location and accrued monthly by plaza group, however Table 5-2 shows the annual totals for S.R. 417 as reported at year end.

**Table 5-2**  
**S.R. 417 – Historical PBP Transactions and Revenue**  
**FY 2012 – FY 2021**

Fiscal Year	Transactions (millions)	Percent Change	Toll Revenues (millions)	Percent Change
2012	1.3		\$1.2	
2013	1.6	23.1%	\$1.8	50.0%
2014	2.0	25.0%	\$2.2	22.2%
2015	2.7	35.0%	\$3.0	36.4%
2016	3.9	44.4%	\$4.7	56.7%
2017	4.8	23.1%	\$6.7	42.6%
2018	6.8	41.7%	\$7.6	13.4%
2019	14.9	119.1%	\$17.4	128.9%
2020	15.4	3.4%	\$18.8	8.0%
2021	15.8	2.6%	\$30.9	64.4%

Source: Monthly unaudited data provided by CFX

PBP transactions have increased from 1.3 million in FY 2012 to 15.8 million in FY 2021, while PBP revenues have increased from \$1.2 million to \$30.9 million over the same period. In FY 2021, PBP transactions increased 2.6 percent and PBP revenues increased 64.4 percent over FY 2020. As shown in the table, the rate of growth in PBP transactions is recently trending downward. The significant increase in PBP revenues in FY 2021 can be attributed to the new PBP toll rate adopted by the CFX Board that went into effect on July 1, 2020 (FY 2021), at which time the PBP toll rate at all toll locations was increased to twice the ETC toll rate. Because of the new PBP toll rate, it is anticipated that going forward a portion of customers paying via PBP will switch to ETC to avoid the higher toll rate. Overall, the increase in customer preference for PBP in recent years has contributed to the slower growth in paid in-lane transactions and revenue.

### 5.2.3 MONTHLY PAID IN-LANE TRANSACTION SEASONAL VARIATION

In **Table 5-3**, monthly paid in-lane transactions are normalized to average number of paid in-lane transactions per day. Using average number of paid in-lane transactions per day allows for an easy comparison of the variations in relative travel demand over the year. The pattern of seasonal usage changes slightly from year to year, based on the number of weekdays in each month, but in FY 2021 this seasonality was overshadowed by the impacts on travel demand from the COVID-19 pandemic. Therefore, the factors in Table 5-3 do not reflect the typical monthly seasonal trends on S.R. 417.

Average number of paid in-lane transactions per day in FY 2021 on S.R. 417 ranged from a low of 274,400 in July 2020 to a high of 397,700 in June 2021. This data is presented in a graphical format in **Figure 5-5**. The paid in-lane transactions for each month appear as a percentage of the average for the fiscal year. July paid in-lane transactions were 18.6 percent above average and June paid in-lane transactions were 18.1 percent below average for the facility.

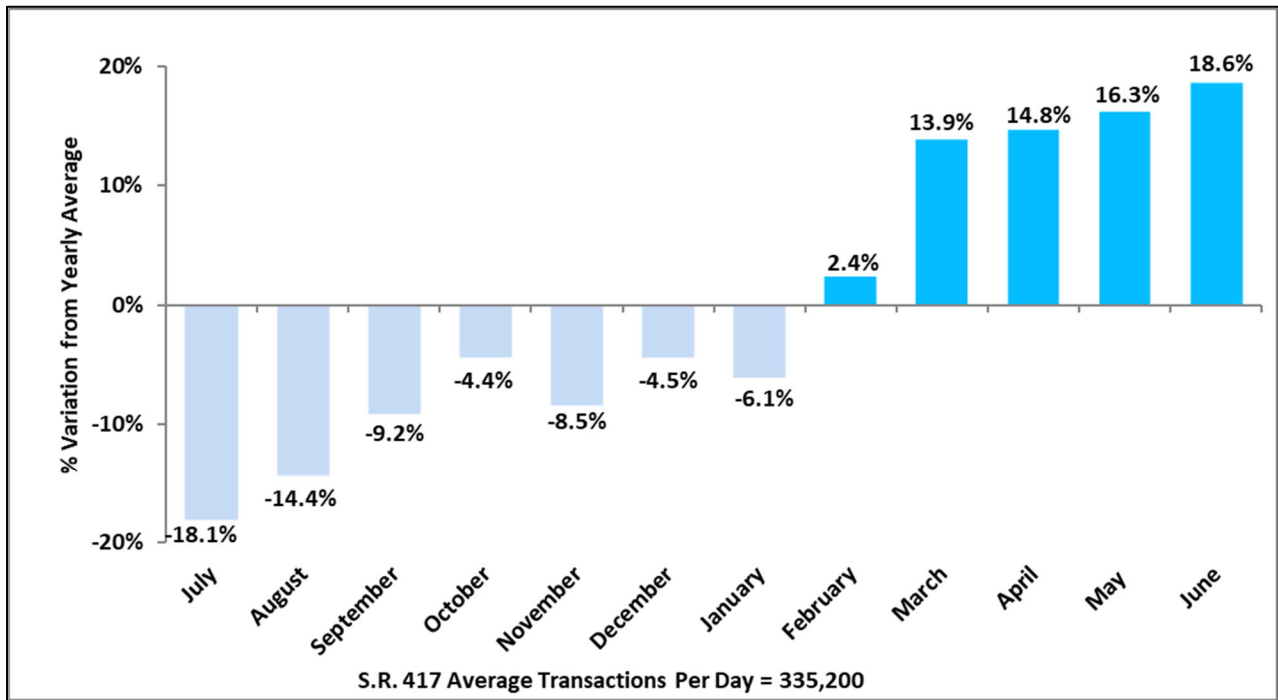
**Table 5-3**  
**S.R. 417 – Monthly Seasonal Variation in Paid In-Lane Transactions**  
**FY 2021**

Month	Number of Days in Month	Paid In-Lane Transactions	Average Transactions/Day	Seasonal Factor
July	31	8,507,889	274,400	0.819
August	31	8,895,872	287,000	0.856
September	30	9,134,087	304,500	0.908
October	31	9,929,212	320,300	0.956
November	30	9,201,249	306,700	0.915
December	31	9,925,573	320,200	0.955
January	31	9,752,304	314,600	0.939
February	28	9,614,136	343,400	1.024
March	31	11,839,184	381,900	1.139
April	30	11,542,202	384,700	1.148
May	31	12,086,762	389,900	1.163
June	30	11,931,201	397,700	1.186
<b>Average</b>		<b>10,196,639</b>	<b>335,200</b>	<b>1.000</b>
<b>Total Year</b>	<b>365</b>	<b>122,359,671</b>		

Source: Monthly unaudited data provided by CFX



**Figure 5-5**  
**S.R. 417 Variation in Paid In-Lane Transactions Per Day, by Month**  
**FY 2021**



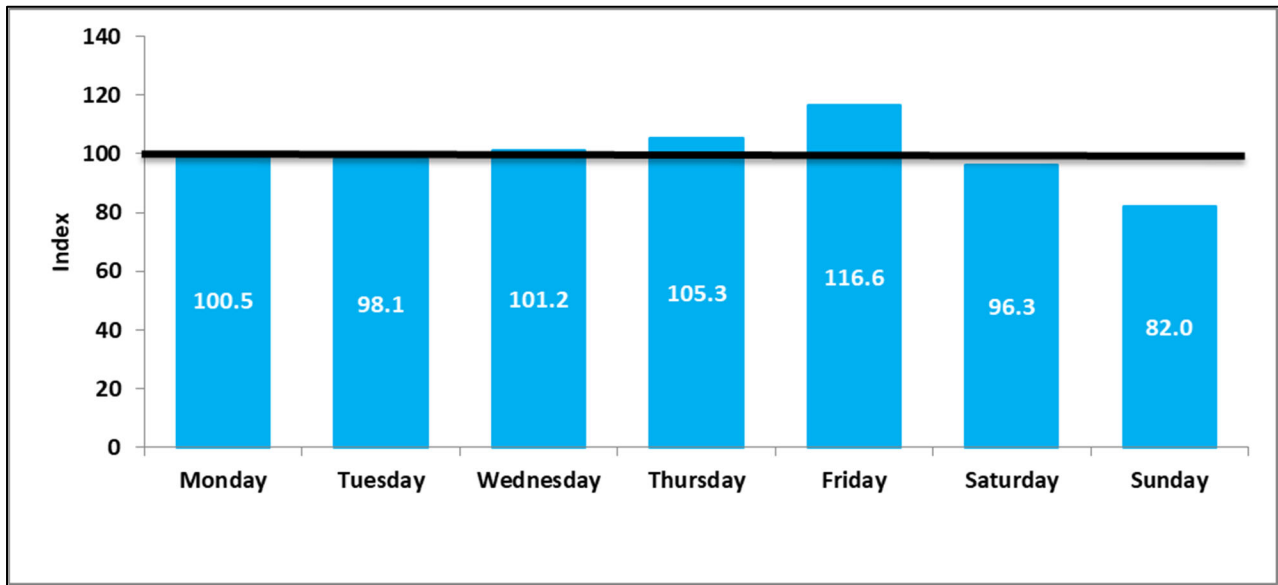
Source: Monthly unaudited data provided by CFX

**5.2.4 DAY-OF-WEEK TRANSACTION VARIATION**

Figure 5-6 contains a comparison of transactions by day of week in FY 2021. This data is presented as an index, where the average day equals 100. An index value of 100 for a given day of the week would indicate that day’s transactions were precisely the same volume as the facility average. A value of 120 would indicate a day that has 20 percent greater volume than the average. As was done in prior years, the data used for this analysis was for a typical week in May 2021, a month that still may have had some impacts from COVID-19. The data includes transactions at mainline plazas only (no ramps).

As shown, daily transactions on S.R. 417 fluctuated over the course of the week. Transactions were highest on Fridays, with an index value of 116.6 (16.6 percent higher than the average day). Volumes on Monday through Thursday ranged from index values of 98.1 to 105.3. Saturday volumes were closer to early weekday volumes with an index value of 96.3. Transactions decline significantly on Sundays, which have an index value of 82.0, or 18.0 percent lower than the average day.

**Figure 5-6**  
**S.R. 417 Variation in Transactions, by Day of Week**  
**FY 2021**



Source: Unaudited lane transaction data – May 2021

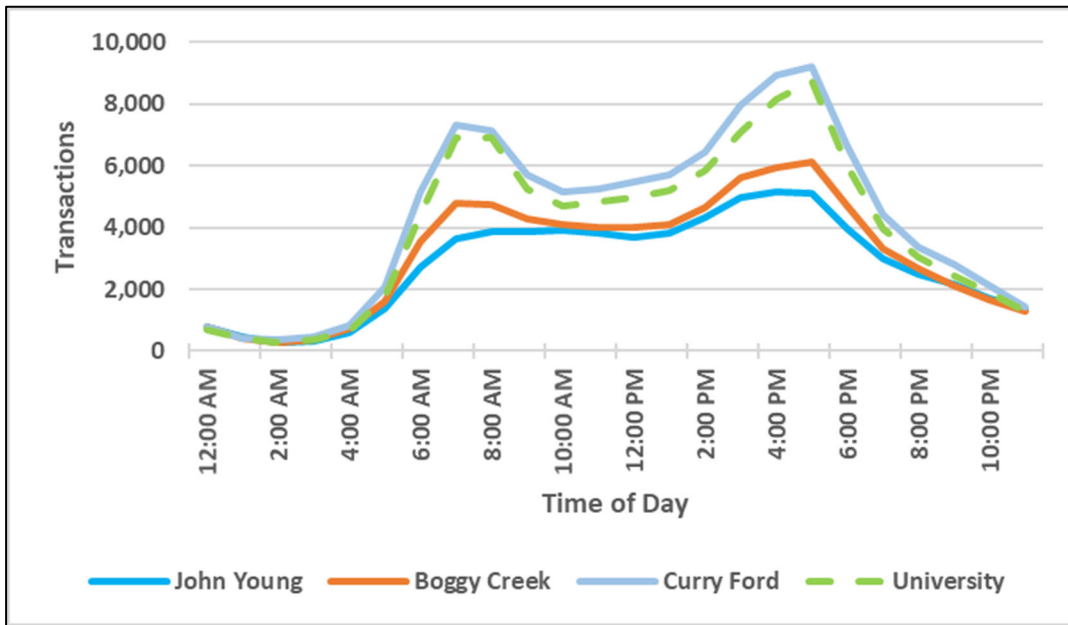
**5.2.5 HOURLY TRAFFIC DISTRIBUTION**

The hourly distribution of traffic volumes includes information on the usage characteristics of travel on the facility. The hourly distributions represent traffic counts taken during a typical week at the mainline plazas in the month of May. The typical weekday hourly distribution is shown in **Figure 5-7** and the weekend hourly distribution is shown in **Figure 5-8**. The figures contain the sum of traffic volumes in both directions.

The four mainline locations on S.R. 417 exhibit similar hourly traffic patterns. On weekdays, travel demand at all four locations is bimodal, with both morning and evening peak hours. Traffic volumes are higher in the evening peak hours than in the morning peak hours at all four mainline plazas. The highest peak hour volumes during the week were 9,200 per hour beginning at 5:00 p.m. at the Curry Ford mainline plaza, 8,700 per hour beginning at 5:00 p.m. at the University mainline plaza, 6,100 per hour beginning at 5:00 p.m. at the Boggy Creek mainline plaza and 5,100 per hour beginning at 4:00 p.m. at the John Young mainline plaza. The University and Curry Ford mainline plazas serve a relatively higher portion of trips in peak hours.

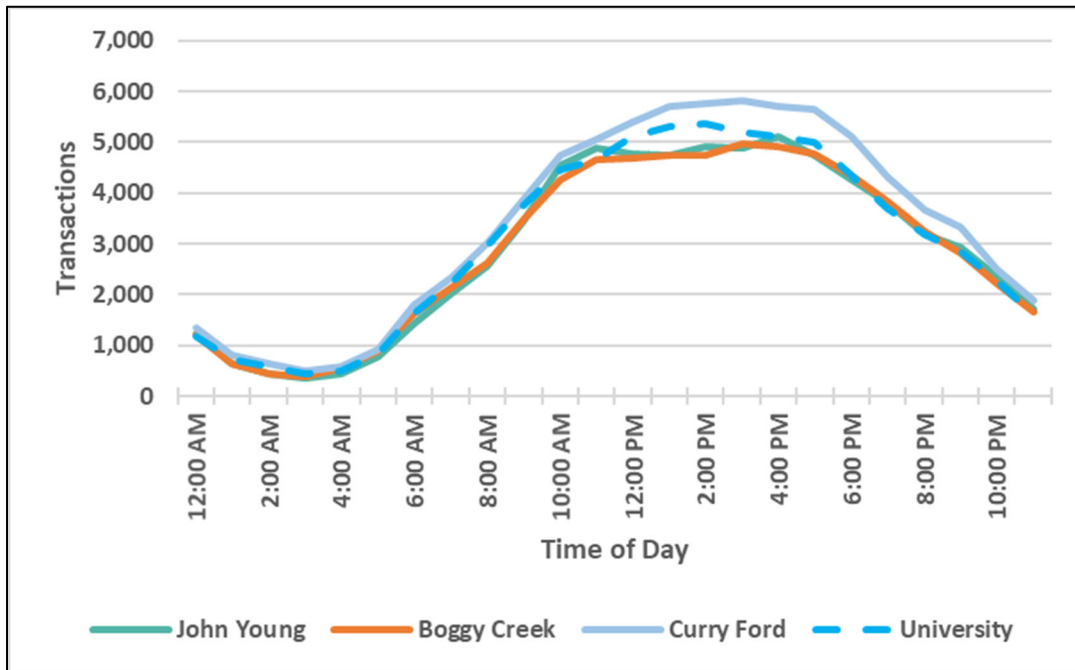
On weekends, the volumes are lower and the distributions are unimodal, with no clear morning or evening peak periods, indicating that many customers use the facility for non-work trip purposes. The Boggy Creek Main and John Young Main plaza groups both have lower transaction volumes at the mainline plazas than at ramp plazas, which are not included in the daily traffic distribution analysis. The daily traffic distribution at all plaza groups would be at similar levels if ramp transactions were included.

**Figure 5-7**  
**S.R. 417 Hourly Two-Way Traffic Variation (Weekday)**  
**FY 2021 (May)**



Source: Unaudited lane traffic data – May 2021

**Figure 5-8**  
**S.R. 417 Hourly Two-Way Traffic Variation (Weekend)**  
**FY 2021 (May)**



Source: Unaudited lane traffic data – May 2021

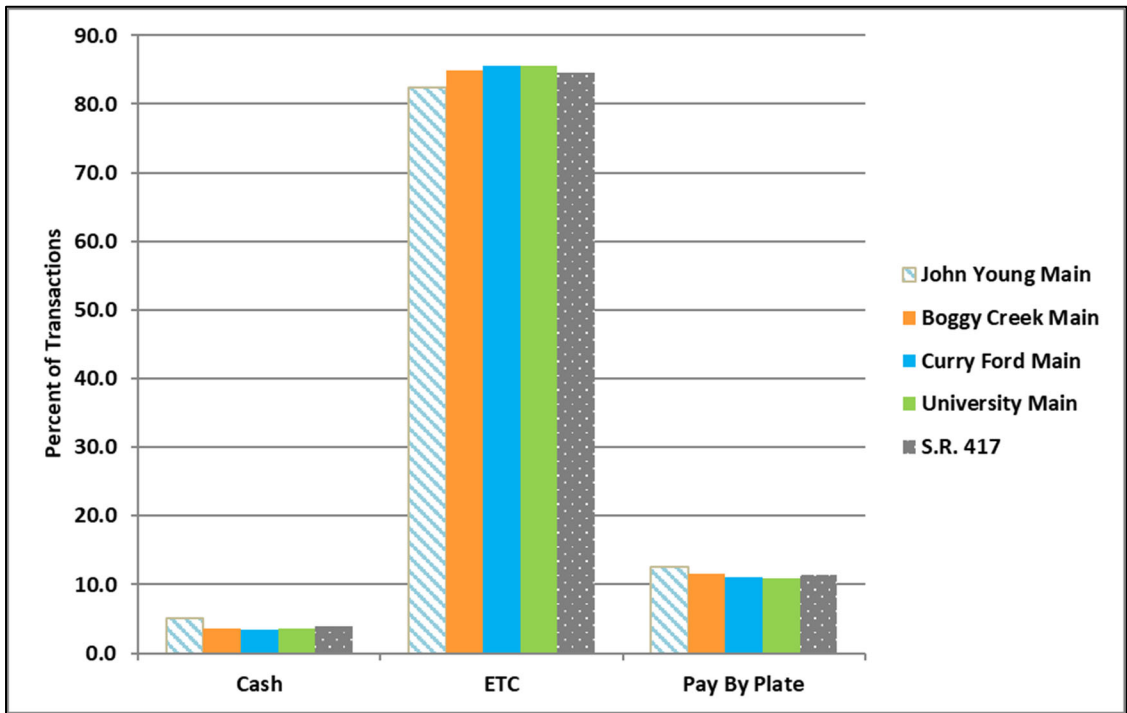
### 5.2.6 TRANSACTIONS AND REVENUE BY PAYMENT TYPE

The distributions of transactions and revenue by payment type by plaza group during FY 2021 are presented in **Figure 5-9** and **Figure 5-10**. Payment types can be classified in one of three ways: cash, ETC, and PBP. As defined in Chapter 1 of this report, paid in-lane transactions and revenue include cash and ETC payments made when a customer travels through a CFX toll location. The remaining transactions and revenue are classified as unpaid in-lane, which includes PBP and a small portion of non-revenue transactions. PBP transactions and revenues are estimated monthly based on a FY 2021 accrual rate of 56 percent of all unpaid in-lane transactions and revenues. It is important to note that the data presented in the following two figures is based on unaudited transaction and toll revenue data and may not match the audited data shown in other tables and figures in this chapter.

As shown in Figure 5-9, the share of ETC transactions ranged from a low of 82.4 percent at the John Young Main plaza group to a high of 85.6 percent at the Curry Ford Main plaza group. Overall, ETC transactions on S.R. 417 accounted for 84.6 percent of total transactions on the facility. The share of cash transactions ranged from a low of 3.4 percent at the Curry Ford Main plaza group to a high of 5.1 percent at the John Young Main plaza group. Overall, cash transactions on S.R. 417 accounted for 3.9 percent of total transactions on the facility. The share of PBP transactions ranged from a low of 10.8 percent at the University Main plaza group to a high of 12.5 percent at the John Young Main plaza group. Overall, PBP transactions on S.R. 417 accounted for 11.5 percent of total transactions on the facility.

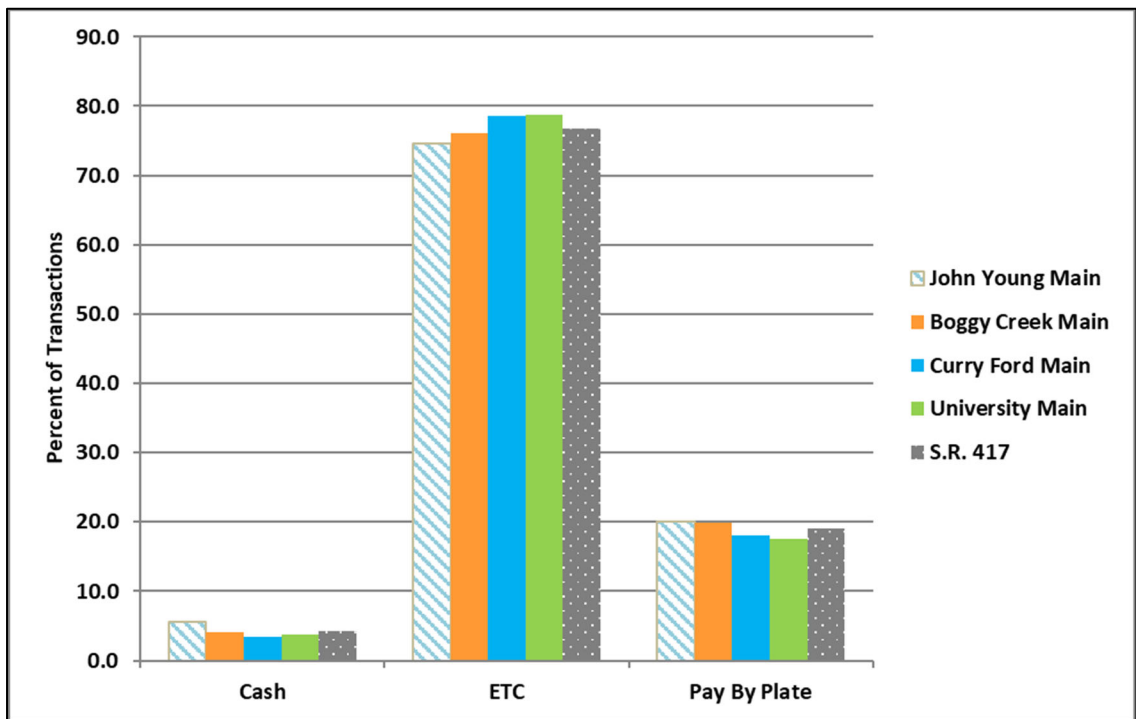
As shown in Figure 5-10, the share of toll revenues by payment type is comparable to the share in transactions, recognizing the differences in the toll paid by payment method. The share of ETC toll revenues ranged from a low of 74.5 percent at the John Young Main plaza group to a high of 78.8 percent at the University Main plaza group. Overall, ETC transactions on S.R. 417 accounted for 76.7 percent of total toll revenues on the facility. The share of cash toll revenues ranged from a low of 3.4 percent at the Curry Ford Main plaza group to a high of 5.5 percent at the John Young Main plaza group. Overall, cash toll revenues on S.R. 417 accounted for 4.3 percent of total toll revenues on the facility. The share of PBP toll revenues ranged from a low of 17.5 percent at the University Main plaza group to a high of 20.0 percent at the John Young Main plaza group. Overall, PBP toll revenues on S.R. 417 accounted for 19.1 percent of total toll revenues on the facility.

**Figure 5-9**  
**S.R. 417 Percent of Transactions by Payment Type**  
**FY 2021**



Source: Monthly unaudited data provided by CFX

**Figure 5-10**  
**S.R. 417 Percent of Revenue by Payment Type**  
**FY 2021**



Source: Monthly unaudited data provided by CFX

### 5.3 ETC Usage

The shares of paid in-lane revenues generated from ETC over the past ten fiscal years on S.R. 417 are shown in **Figure 5-11**. Cash payments are the other source of paid in-lane revenues. PBP revenues are not included in these results. Over this time, ETC revenues have steadily increased on the facility. In FY 2012, ETC revenues totaled 78.3 percent of total paid in-lane revenues on the facility. In FY 2021, ETC revenues reached 94.8 percent. The data below differs from Figure 5-10 because it only includes the annual comparison of paid in-lane revenue and not all revenue types. ETC usage is expected to increase as customers shift from cash to ETC to take advantage of the lower ETC toll rate, especially with implementation of PBP toll rates that are now twice the ETC toll rate as of July 2020 (FY 2021).

Beginning May 11, 2016, CFX implemented a pilot program called The Reload Lane to encourage and increase E-PASS usage. CFX now offers this drive-through lane on S.R. 408 at the Conway Main Plaza for customers to sign up for an E-PASS electronic transponder or replenish an existing E-PASS account from 6:00 a.m. to 8:00 p.m. daily. This program is the first of its kind in the continental United States and provides customer convenience and multiple payment options (cash, check, and debit/credit card). The program was expanded with the opening of a second Reload Lane at the John Young Main Plaza on S.R. 417 in March 2017 and a third location at the Forest Lake Main Plaza on S.R. 429 in May 2017. Due to the success of this program, the CFX Board approved the expansion of the Reload Lane capabilities to all manned, mainline toll plazas, expected to be completed in FY 2022.

In June 2021, CFX also launched the Visitor Toll Pass program, which is a free temporary toll pass for rental car customers traveling through the Orlando International Airport. With the pass, rental car customers pay the ETC rates on Florida toll roads with no extra or hidden fees.

**Figure 5-11**  
**S.R. 417 Percent of Paid In-Lane Revenue from Electronic Toll Collection**  
**FY 2012 – FY 2021**



Source: Monthly unaudited data provided by CFX

### 5.4 Forecasted Transactions and Toll Revenues

Based on the recently adopted “Customer First Toll Policy,” toll rate adjustments (indexed tolls) were applied to the T&R forecasts every year based on the net change in CPI for the prior year, which equated to 0.96 percent in CY 2020. Because the change in CPI was lower than the 1.5 percent floor, CDM Smith used 1.5 percent to adjust the FY 2022 toll amounts. At the time of preparing the T&R estimates and this report, CDM Smith learned that the CPI during CY 2021 was 5.08 percent. Based on assurances from CFX, CDM Smith used this value to index toll rates for FY 2023. CDM Smith used the floor of 1.5 percent per year every year thereafter in the forecast period.

Future transportation improvements that influence the T&R forecasts for S.R. 417 include the projects listed in **Table 5-4**, assumed completed in each model horizon year. The S.R. 417 widening program from International Drive to S.R. 528 will contribute to positive traffic and revenue growth starting in 2025 as these segments of S.R. 417 are programmed to be widened in the next three years. Feeder road improvements, on local roads such as Boggy Creek Road, Innovation Way, Lake Nona Blvd., and Narcoossee Road also positively impact the forecasted T&R growth on S.R. 417 through 2025. Continued investment and growth in the Medical City area contribute to positive transaction and revenue growth on S.R. 417. Improvements to competitors, including Osceola Parkway Extension and Northeast Connector Expressway, Phase 1, will have impacts on the long-term forecast.

**Table 5-4**  
**S.R. 417 - Key Transportation Improvements**

Facility	From	To	Year	Jurisdiction	Improvement
Interstate 4	SR 434	Kirkman Rd	2025	FDOT	Widen to 10 lanes
Jeff Fuqua Blvd	.13 miles South of Boggy Creek Rd	Heintzelman Blvd	2025	Orange County	Widen to 4 Lanes
Boggy Creek Rd	Orange Co Line	SR 417	2025	Orange County	Widen to 4-lanes
Boggy Creek Rd	SR 417	Wetherbee Rd	2025	Orange County	Widen to 4-lanes
SR 15 (Narcoossee Rd)	SR 528 (BeachLine Expwy)	Lee Vista Blvd	2025	Orange County/FDOT	Widen to 6 Lanes
SR 417	International Dr	Boggy Creek Rd	2025	CFX	Widen to 6-lanes
SR 417	Boggy Creek Rd	SR 528	2025	CFX	Widen to 6-lanes
SR 46	Mellonville Rd	SR 415	2025	FDOT	Widen to 6-lanes
Lake Nona Blvd	Tavistock Lakes Blvd	SR 417 (Greenway)	2025	Orange County	Widen to 6 Lanes
Innovation Way/Dowden Rd	SR 417	SR 528	2035	Orange County	New 4-lane Road
Orange Ave	Town Center Blvd	Osceola County Line	2035	Orange County/FDOT	Widen to 4-lanes
John Young Pkwy	Pleasant Hill Rd	Portage Rd	2035	FDOT	Widen to 6-lanes
Narcoossee Rd	US 192	Orange County Line	2035	Osceola County	Widen to 6 Lanes
Osceola Parkway Ext/SR 534	Boggy Creek Rd	Narcoossee Rd	2035	CFX	New 4-lane Expressway
US 17-92	Lake Mary Blvd	Airport Rd	2035	FDOT	Widen to 6-lanes
Wekiva Pkwy	Mount Plymouth Rd	Interstate 4	2035	FDOT	New 4 lane expressway
SR 426/CR 419	Pine Ave	West of Lockwood Blvd	2045	FDOT	Widen to 4-lanes
Osceola Parkway Ext/SR 534	Narcoossee Rd	Cyrils Rd	2045	CFX	New 4-lane Expressway
NE Connector/SR 534	Cyrils Rd	Nova Rd	2045	CFX	New 4-lane Expressway
US 17-92	Lake Mary Blvd	SR 417	2045	FDOT	Widen to 6-lanes

Transaction and toll revenue projections for each toll plaza group and for all of S.R. 417 are summarized in **Table 5-5** and **Table 5-6**. The tables are divided into paid in-lane transactions and revenue and PBP transactions and revenue. The paid in-lane transactions and revenue include ETC and cash collection. PBP is only reported as a total on the facility.

The paid in-lane transactions on S.R. 417 are expected to grow 4.0 percent per year through FY 2031 and then lower rates through the end of the forecast period because of the impact of continued toll rate adjustments. PBP transactions are forecasted to increase an average of 0.6 percent per year through FY 2031 and then increase slightly through the forecast period. Total transactions on S.R. 417 are projected to increase during the forecast period from the actual of 138.2 million in FY 2021 to 253.8 million in FY 2051. Because FY 2021 T&R was still in recovery from the COVID-19 pandemic, higher growth rates are anticipated in the short-term forecasts with growth rates decreasing over the forecast period. The paid in-lane revenues on S.R. 417 are projected to increase significantly over the forecast period, from the FY 2021 actual of \$131.2 million to \$380.0 million in FY 2051. PBP revenues are projected to increase from \$30.9 million in FY 2021 to \$60.5 million in FY 2051. Total revenues on S.R. 417 are projected to increase during the forecast period from the actual \$162.1 million in FY 2021 to \$440.5 million in FY 2051. Total transactions and revenues are forecasted to increase an average of 3.7 and 5.2 percent per year through FY 2031, 1.4 and 2.6 percent per year from FY 2031 to FY 2041, and 1.1 and 2.4 percent per year from FY 2041 to FY 2051, respectively.



**Table 5-5  
S.R. 417 Plaza Groups – Transaction Projections (Millions)  
FY 2022 – FY 2051**

Fiscal Year	John Young Main	Boggy Creek Main	Curry Ford Main	University Main	Paid In-Lane	PBP	Total	Percent Annual Change
2010	19.6	17.5	23.6	28.6	89.3	0.6	89.9	
2011	20.1	18.6	23.2	29.0	90.9	1.0	91.9	2.2%
2012 <sup>A</sup>	20.6	18.8	23.1	28.2	90.7	1.3	92.0	0.1%
2013 <sup>B</sup>	21.0	19.7	23.4	26.2	90.3	1.6	91.9	-0.1%
2014	22.6	21.9	25.2	27.5	97.2	2.0	99.2	7.9%
2015	25.7	25.3	28.3	30.0	109.3	2.7	112.0	12.9%
2016	30.6	31.0	32.5	33.3	127.4	3.9	131.3	17.2%
2017 <sup>C</sup>	34.8	34.6	34.2	34.5	138.1	4.8	142.9	8.9%
2018 <sup>D</sup>	37.2	38.1	35.8	34.8	145.9	6.8	152.7	6.9%
2019 <sup>E</sup>	36.9	39.3	35.4	33.9	145.5	14.9	160.4	5.0%
2020 <sup>F</sup>	30.7	34.2	31.8	29.2	125.9	15.4	141.3	-11.9%
2021 <sup>G</sup>	29.1	34.0	30.6	28.7	122.4	15.8	138.2	-2.2%
2022 <sup>H</sup>	34.2	38.7	33.9	31.6	138.4	15.9	154.3	11.6%
2023	37.4	40.8	37.6	33.8	149.6	15.1	164.7	6.7%
2024	39.7	43.6	41.0	35.7	160.0	14.9	174.9	6.2%
2025	40.7	44.5	42.5	36.3	164.0	15.3	179.3	2.5%
2026	41.5	45.3	43.5	36.6	166.9	15.6	182.5	1.8%
2027	42.3	46.2	44.5	36.8	169.8	15.8	185.6	1.7%
2028	43.1	47.1	45.4	37.0	172.6	16.1	188.7	1.7%
2029	43.9	47.9	46.3	37.2	175.3	16.4	191.7	1.6%
2030	44.7	48.8	47.3	37.3	178.1	16.6	194.7	1.6%
2031	45.6	49.7	48.2	37.5	181.0	16.8	197.8	1.6%
2032	46.4	50.5	49.1	37.6	183.6	17.1	200.7	1.5%
2033	47.2	51.4	50.1	37.7	186.4	17.3	203.7	1.5%
2034	48.0	52.2	51.0	37.8	189.0	17.4	206.4	1.3%
2035	48.8	53.1	51.9	37.9	191.7	17.7	209.4	1.5%
2036	49.6	53.9	52.9	38.0	194.4	18.0	212.4	1.4%
2037	50.4	54.8	53.8	38.1	197.1	18.0	215.1	1.3%
2038	51.2	55.7	54.8	38.2	199.9	18.3	218.2	1.4%
2039	52.0	56.5	55.7	38.2	202.4	18.5	220.9	1.2%
2040	52.8	57.4	56.6	38.3	205.1	18.6	223.7	1.3%
2041	53.6	58.2	57.6	38.4	207.8	18.9	226.7	1.3%
2042	54.4	59.1	58.5	38.5	210.5	19.0	229.5	1.2%
2043	55.2	59.9	59.4	38.5	213.0	19.1	232.1	1.1%
2044	56.0	60.8	60.4	38.6	215.8	19.3	235.1	1.3%
2045	56.8	61.6	61.3	38.7	218.4	19.3	237.7	1.1%
2046	57.6	62.5	62.2	38.7	221.0	19.6	240.6	1.2%
2047	58.3	63.3	63.1	38.8	223.5	19.6	243.1	1.0%
2048	59.1	64.1	64.0	38.8	226.0	19.8	245.8	1.1%
2049	59.9	65.0	64.9	38.9	228.7	19.9	248.6	1.1%
2050	60.6	65.8	65.8	39.0	231.2	20.0	251.2	1.0%
2051	61.4	66.6	66.7	39.0	233.7	20.1	253.8	1.0%

Fiscal Year	Compound Annual Average Growth Rate (CAAGR)						
2010 - 2021	3.7%	6.2%	2.4%	0.0%	2.9%	34.6%	4.0%
2021 - 2031	4.6%	3.9%	4.6%	2.7%	4.0%	0.6%	3.7%
2031 - 2041	1.6%	1.6%	1.8%	0.2%	1.4%	1.2%	1.4%
2041 - 2051	1.4%	1.4%	1.5%	0.2%	1.2%	0.6%	1.1%

Notes:

- Actual transaction data provided by CFX from Monthly Statistical Report.
- A - Widening of S.R. 417 between S.R. 408 and S.R. 528. Valencia College lane ramps closed.
- B - Systemwide toll rate increase.
- C - Effects from Hurricane Matthew in October 2016.
- D - Effects from Hurricane Irma in September 2017.
- E - First year of implementation of "Customer First" toll rate policy.
- F - Effects from Hurricane Dorian in September 2019 and first effects of COVID-19 pandemic began in March 2020.
- G - New toll rates for PBP customers, set at 2.0 times the ETC rate. Continued effects of COVID-19 pandemic.
- H - Completion of I-4 Ultimate project.

**Table 5-6**  
**S.R. 417 Plaza Groups – Toll Revenue Projections (Millions)**  
**FY 2022 – FY 2051**

Fiscal Year	John Young Main	Boggy Creek Main	Curry Ford Main	University Main	Paid In-Lane	PBP	Total	Percent Annual Change
2010	\$21.0	\$19.9	\$17.7	\$20.4	\$79.0	\$0.6	\$79.6	
2011	\$21.6	\$20.6	\$17.3	\$20.6	\$80.1	\$0.9	\$81.0	1.8%
2012 <sup>A</sup>	\$22.1	\$20.8	\$17.3	\$20.3	\$80.5	\$1.2	\$81.7	0.9%
2013 <sup>B</sup>	\$25.3	\$24.3	\$19.8	\$21.8	\$91.2	\$1.8	\$93.0	13.8%
2014	\$27.2	\$26.9	\$21.3	\$22.9	\$98.3	\$2.2	\$100.5	8.1%
2015	\$30.6	\$30.8	\$24.0	\$25.0	\$110.4	\$3.0	\$113.4	12.8%
2016	\$35.9	\$37.7	\$27.6	\$27.8	\$129.0	\$4.7	\$133.7	18.0%
2017 <sup>C</sup>	\$40.4	\$42.0	\$29.1	\$28.9	\$140.4	\$6.7	\$147.1	10.0%
2018 <sup>D</sup>	\$43.0	\$45.7	\$30.5	\$29.2	\$148.4	\$7.6	\$156.0	6.1%
2019 <sup>E</sup>	\$44.3	\$48.6	\$30.7	\$29.0	\$152.6	\$17.4	\$170.0	9.0%
2020 <sup>F</sup>	\$37.1	\$42.6	\$28.6	\$25.6	\$133.9	\$18.8	\$152.7	-10.2%
2021 <sup>G</sup>	\$34.9	\$42.5	\$27.9	\$25.9	\$131.2	\$30.9	\$162.1	6.2%
2022 <sup>H</sup>	\$41.9	\$50.1	\$31.0	\$28.8	\$151.8	\$32.1	\$183.9	13.4%
2023	\$48.3	\$56.5	\$36.3	\$32.8	\$173.9	\$31.9	\$205.8	11.9%
2024	\$51.3	\$60.4	\$39.5	\$34.6	\$185.8	\$31.9	\$217.7	5.8%
2025	\$53.2	\$62.6	\$41.3	\$35.7	\$192.8	\$33.0	\$225.8	3.7%
2026	\$55.0	\$64.6	\$42.8	\$36.4	\$198.8	\$34.2	\$233.0	3.2%
2027	\$56.7	\$66.7	\$44.2	\$37.1	\$204.7	\$35.2	\$239.9	3.0%
2028	\$58.5	\$68.7	\$45.7	\$37.7	\$210.6	\$36.3	\$246.9	2.9%
2029	\$60.3	\$70.8	\$47.2	\$38.4	\$216.7	\$37.2	\$253.9	2.8%
2030	\$62.1	\$73.0	\$48.7	\$39.0	\$222.8	\$38.2	\$261.0	2.8%
2031	\$64.0	\$75.1	\$50.3	\$39.6	\$229.0	\$39.3	\$268.3	2.8%
2032	\$65.9	\$77.4	\$51.9	\$40.2	\$235.4	\$40.3	\$275.7	2.8%
2033	\$67.9	\$79.6	\$53.5	\$40.9	\$241.9	\$41.3	\$283.2	2.7%
2034	\$69.9	\$82.0	\$55.1	\$41.5	\$248.5	\$42.5	\$291.0	2.8%
2035	\$71.9	\$84.3	\$56.9	\$42.1	\$255.2	\$43.5	\$298.7	2.6%
2036	\$74.0	\$86.7	\$58.6	\$42.7	\$262.0	\$44.5	\$306.5	2.6%
2037	\$76.2	\$89.2	\$60.4	\$43.3	\$269.1	\$45.6	\$314.7	2.7%
2038	\$78.3	\$91.7	\$62.2	\$43.9	\$276.1	\$46.7	\$322.8	2.6%
2039	\$80.6	\$94.3	\$64.0	\$44.5	\$283.4	\$47.7	\$331.1	2.6%
2040	\$82.8	\$96.9	\$65.9	\$45.2	\$290.8	\$48.8	\$339.6	2.6%
2041	\$85.1	\$99.5	\$67.8	\$45.8	\$298.2	\$49.9	\$348.1	2.5%
2042	\$87.4	\$102.2	\$69.7	\$46.5	\$305.8	\$51.0	\$356.8	2.5%
2043	\$89.8	\$105.0	\$71.7	\$47.1	\$313.6	\$52.0	\$365.6	2.5%
2044	\$92.2	\$107.8	\$73.7	\$47.8	\$321.5	\$53.2	\$374.7	2.5%
2045	\$94.6	\$110.6	\$75.8	\$48.4	\$329.4	\$54.1	\$383.5	2.3%
2046	\$97.1	\$113.5	\$77.9	\$49.1	\$337.6	\$55.3	\$392.9	2.5%
2047	\$99.6	\$116.4	\$80.0	\$49.7	\$345.7	\$56.4	\$402.1	2.3%
2048	\$102.2	\$119.4	\$82.1	\$50.4	\$354.1	\$57.4	\$411.5	2.3%
2049	\$104.7	\$122.5	\$84.3	\$51.1	\$362.6	\$58.4	\$421.0	2.3%
2050	\$107.4	\$125.6	\$86.5	\$51.8	\$371.3	\$59.4	\$430.7	2.3%
2051	\$110.0	\$128.7	\$88.8	\$52.5	\$380.0	\$60.5	\$440.5	2.3%

Fiscal Year	Compound Annual Average Growth Rate (CAAGR)						
2010 - 2021	4.7%	7.1%	4.2%	2.2%	4.7%	43.1%	6.7%
2021 - 2031	6.3%	5.9%	6.1%	4.3%	5.7%	2.4%	5.2%
2031 - 2041	2.9%	2.9%	3.0%	1.5%	2.7%	2.4%	2.6%
2041 - 2051	2.6%	2.6%	2.7%	1.4%	2.5%	1.9%	2.4%

Notes:

- Actual revenue data provided by CFX from Monthly Statistical Report.
- A - Widening of S.R. 417 between S.R. 408 and S.R. 528. Valencia College lane ramps closed.
- B - Systemwide toll rate increase.
- C - Effects from Hurricane Matthew in October 2016.
- D - Effects from Hurricane Irma in September 2017.
- E - First year of implementation of "Customer First" toll rate policy.
- F - Effects from Hurricane Dorian in September 2019 and first effects of COVID-19 pandemic began in March 2020.
- G - New toll rates for PBP customers, set at 2.0 times the ETC rate. Continued effects of COVID-19 pandemic.
- H - Completion of I-4 Ultimate project.



# CHAPTER 6

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S.R. 429  
(DANIEL WEBSTER WESTERN BELTWAY)





# S.R. 429 (DANIEL WEBSTER WESTERN BELTWAY AND WEKIVA PARKWAY)

## 6.1 Facility Description

S.R. 429, also known as the Daniel Webster Western Beltway/Wekiva Parkway, is a 34-mile expressway that extends north from I-4 in Osceola County to U.S. Highway 441 in Apopka. As its name suggests, it comprises a majority of the western beltway around Orlando. The Western Beltway is owned and operated by two agencies, CFX and FTE. CFX is responsible for the 31-mile portion of S.R. 429 from Seidel Road north to Mt. Plymouth Road and FTE is responsible for the 11-mile segment of S.R. 429 from I-4 north to Seidel Road. On the CFX portion there are four mainline toll plazas: the Independence Main Plaza, Forest Lake Main Plaza, Ponkan Main, and Mt. Plymouth Main. Ramp toll plazas associated with the Independence Main plaza group are located at the New Independence Parkway, Winter Garden Vineland Road, Stoneybrook West Parkway and Schofield Road interchanges. Ramp toll plazas associated with the Forest Lake Main plaza group are located at the East Plant Street (S.R. 438), West Road and Ocoee-Apopka Road interchanges. There are no ramp toll plazas associated with the Ponkan Main and Mt. Plymouth Main plaza groups. Of the 23 miles on S.R. 429, three miles are part of a dual route with S.R. 414. A map of CFX's portion of S.R. 429 including the FY 2021 CFX toll rates for the mainline and ramp toll plazas is shown in **Figure 6-1**.



The original 10-mile segment of S.R. 429, known as Part A, opened to traffic in July of 2000 from S.R. 50 to U.S. 441, with the connection to Florida's Turnpike opening in November 2001. It was the first expressway on the CFX System to have an open road tolling style toll plaza for ETC customers. This segment provided a direct connection from the Turnpike to Apopka and much needed access to West Orange County. The next segment, a 4.5-mile segment of S.R. 429, Part C, opened to traffic in December 2002 and connected to Winter Garden Vineland Road. CFX's segment from Winter Garden Vineland to Seidel Road was opened to traffic in December of 2005, in conjunction with FTE's first segment from Seidel Road to U.S. 192. FTE opened its segment of S.R. 429 Part C, connecting to I-4, in December of 2006.

In June of 2010, construction began on the westward extension of S.R. 414, the Apopka Expressway. The new connection of S.R. 414 and S.R. 429 required that approximately 1 mile of the then current S.R. 429 roadway be removed and in May of 2012 a new interchange opened from S.R. 429 northbound to S.R. 414 eastbound and from S.R. 414 westbound to S.R. 429 southbound. The old segment of S.R. 429 north of the current S.R. 414 interchange was designated as S.R. 451. The Ocoee-Apopka Road Interchange was also relocated south of the S.R.



414/S.R. 429 Interchange with new tolled ramps added to and from the north. S.R. 429 serves as an alternative route to I-4 and provides a direct connection from Florida's Turnpike to Walt Disney World and Tampa for travelers from the northern and western portions of the Orlando urban area. In May 2015, CFX opened the new full interchange between S.R. 429 and Schofield Road to provide additional access to this rapidly growing area of West Orange County.

The extension of S.R. 429, locally known as the Wekiva Parkway, is a 27-mile expressway that extends S.R. 429 into northwest Orange, northeast Lake, and east Seminole counties. From a CFX vision in the *Year 2000 Long Range Expressway Plan*, completed in 1983, the Wekiva Parkway – then known as the Western Bypass and later as the Western Beltway, Part B, is now opened to traffic. CFX started construction of its 9 miles in January of 2015 and completed its portion of the Wekiva Parkway with the opening on April 1, 2018. The project also added two additional plaza groups to S.R. 429 along CFX's section of the Wekiva Parkway: the Ponkan Main Plaza, about 3.2 miles north of the then current S.R. 429 terminus which opened July 28, 2017 (FY 2018); and the Mt. Plymouth Main Plaza, about 3.6 miles from the Ponkan Main Plaza which opened April 1, 2018 (FY 2018). These are all electronic toll (AET) locations, the first on the CFX System. Customers pay toll with ETC or through the PBP process. There are no toll booths to pay the toll with cash. The Wekiva Parkway also included construction of S.R. 453, discussed in Chapter 8. FDOT is still constructing its 18-mile portion of Wekiva Parkway, expected to open in 2022, except for the section from Mt. Plymouth Road to CR 46, which opened in January 2016.

In March 2016, CFX completed the improvements at the S.R. 429/Winter Garden Vineland Road (C.R. 535) interchange in west Orange County. This project extended the southbound S.R. 429 off ramp to C.R. 535/Stoneybrook West Parkway and included the resurfacing of approximately one-half mile of southbound S.R. 429 near the interchange. The improvement helped with afternoon traffic backups on the S.R. 429 mainline from the off ramp. In December 2018, CFX completed widening the entrance ramp to northbound S.R. 429 from C.R. 535/Winter Garden Vineland Road. This project, which runs from C.R. 535 to the Stoneybrook West Parkway overpass, will improve traffic flow with the additional lane on the entrance ramp.

In August 2019, CFX completed a ramp improvement project on S.R. 429 at Kelly Park Road which included adding a turn lane and widening the entrance ramp to Kelly Park Road to southbound S.R. 429. In May 2020, CFX completed a ramp improvement project on the S.R. 429/New Independence Parkway interchange, which included widening the S.R. 429 southbound ramp to New Independence Parkway.

In October 2020, CFX completed construction of a new set of ramps to S.R. 429 at Stoneybrook West Parkway. The new ramps provide access to and from the north, complementing the existing ramps at C.R. 535



and providing additional access for residents west of C.R. 535. These ramps feature all-electronic tolling for toll collection using ETC (such as E-PASS and other interoperable transponders) and PBP video toll collection.

CFX has programmed a significant widening program on SR 429 between Tilden Road and S.R. 414. Approximately 13 miles of S.R. 429 will be widened from 4 to 6 lanes including a hardened shoulder for Part Time Shoulder Use (PTSU) for an 8-lane section during peak hours. The S.R. 429 widening projects consist of three segments; the widening has been divided into contiguous parts to minimize the impact to motorists. Construction on all segments is anticipated to be start in early FY 2022 and be complete by the middle of 2024.

## **6.2 Historical Transactions and Toll Revenues**

As defined in Chapter 1, CFX transactions and toll revenues are classified as either Paid In-Lane (ETC and cash) or Unpaid In-Lane (PBP and non-revenue). Total transactions are the sum of paid in-lane and unpaid in-lane transactions. Total revenue is the sum of paid in-lane revenue and the revenue collected through the PBP process, estimated as an accrued amount. The following section includes a breakdown of transactions and revenues by paid in-lane and PBP.

### **6.2.1 ANNUAL PAID IN-LANE TRANSACTION AND REVENUE TRENDS**

The annual paid in-lane transactions for the Forest Lake Main, Independence Main, Ponkan Main and Mt. Plymouth Main plaza groups from FY 2002 to FY 2021 is presented in the top half of **Table 6-1**. Annual paid in-lane toll revenues are also summarized and totaled in the bottom half of the table. The facility data and annual growth are also presented visually in **Figure 6-2** and **Figure 6-3**. These historical tables and figures do not include PBP transactions and revenues, only those that are paid in-lane. For this reason, the information presented in this section may differ slightly from the data presented in the FY 2021 Comprehensive Annual Financial Report (CAFR) and other information in this report.

Since its opening, S.R. 429 had only three years of negative growth in paid in-lane transactions, which occurred in FY 2009, FY 2010, and FY 2020 due to the Great Recession, the toll rate adjustment in April 2009, and the COVID-19 pandemic. Paid in-lane revenues had a year of no growth in FY 2009 and negative growth in FY 2020. Much of the fluctuations in FY 2009 and FY 2010 can be attributed to the slowdown in the economy and the FY 2009 toll rate adjustment. The toll rate adjustment impacted transactions during the last three months of FY 2009 and the first nine months of FY 2010. With the toll rate adjustment, paid in-lane revenues in FY 2010 recovered with a growth of 23.7 percent, or \$4.5 million for the facility, while paid in-lane transactions only decreased by 0.4 percent. Another toll rate adjustment occurred in FY 2013 and caused similar impacts including a slow-down in transaction growth and an increase in revenue growth.

In FY 2014, all plaza groups experienced growth in paid in-lane transactions and toll revenues. Overall, S.R. 429 paid in-lane transactions increased 12.9 percent and toll revenues increased 14.0 percent over FY 2013. FY 2014 began a four-year period of extraordinary growth. FY 2015, FY 2016 and FY 2017 experienced double-digit growth in both paid in-lane transactions and revenues. Over the four-year period, paid in-lane transactions and revenue increased by more



than 50 percent. In FY 2018, S.R. 429 paid in-lane transactions increased by 13.6 percent over FY 2017 and revenues increased by 12.8 percent.

In October 2016 (FY 2017), Hurricane Matthew tracked parallel to the Florida coast as a Category 3 storm with winds up to 130 miles per hour. Tolls were suspended on the CFX System beginning at 8:00 p.m. on October 5, 2016 through early on October 10, 2016. The toll suspension resulted in a loss of approximately 0.5 million transactions and \$0.6 million in toll revenues on S.R. 429. In September 2017 (FY 2018), Hurricane Irma tracked parallel to the Florida coast as a Category 4 storm with winds up to 155 miles per hour. Tolls were suspended on CFX toll facilities beginning on September 5, 2017 through September 20, 2017 resulting in a transaction loss of approximately 2.2 million and a toll revenue loss of \$2.5 million on S.R. 429.

In FY 2019, all plaza groups experienced growth in paid in-lane transactions and toll revenues. FY 2019 was the first full year of toll collection at the Ponkan Main and Mt. Plymouth Main plaza groups. Overall, S.R. 429 paid in-lane transactions increased 11.4 percent and toll revenues increased 14.4 percent over FY 2018.

In FY 2020, all S.R. 429 plaza groups experienced a decline in paid in-lane transactions and revenues, despite the FY 2020 toll rate adjustment. The declines in both paid in-lane transactions and revenues can be attributed to the negative impacts of COVID-19 as explained in greater detail in Chapter 1. September 2019 transactions and revenues were also negatively impacted by toll suspensions during Hurricane Dorian.

All S.R. 429 plaza groups experienced an increase in paid in-lane transactions and revenues in FY 2021. This increase can be attributed to all of FY 2020 being negatively impacted by the COVID-19 pandemic (i.e., a recovery from the worst of COVID-19) and the FY 2021 toll rate adjustment. The largest increase was experienced at the Ponkan Main plaza group with an increase of 12.5 percent in transactions and 14.0 percent in revenues. This plaza is also still experiencing ramp-up since it's one of the more recently opened plazas.

**Table 6-1  
S.R. 429 Plaza Groups – Historical Paid In-Lane Transactions and Revenue  
FY 2002 – FY 2021**

Fiscal Year	Forest Lake Main <sup>A</sup>	Independence Main	Ponkan Main	Mt. Plymouth Main	TOTAL	Forest Lake Main <sup>A</sup>	Independence Main	Ponkan Main	Mt. Plymouth Main	TOTAL
TRANSACTIONS (millions)					PERCENT CHANGE					
2002 <sup>B</sup>	5.8				5.8					
2003 <sup>C</sup>	8.0	1.5			9.5	37.9%				63.8%
2004	9.5	4.3			13.8	18.8%	186.7%			45.3%
2005 <sup>D</sup>	10.8	5.6			16.4	13.7%	30.2%			18.8%
2006 <sup>E</sup>	12.8	7.4			20.2	18.5%	32.1%			23.2%
2007 <sup>F</sup>	14.1	10.3			24.4	10.2%	39.2%			20.8%
2008 <sup>G</sup>	14.2	12.4			26.6	0.7%	20.4%			9.0%
2009 <sup>H</sup>	12.9	12.2			25.1	-9.2%	-1.6%			-5.6%
2010	13.0	12.0			25.0	0.8%	-1.6%			-0.4%
2011	13.4	12.5			25.9	3.1%	4.2%			3.6%
2012	13.6	12.8			26.4	1.5%	2.4%			1.9%
2013 <sup>I</sup>	14.2	13.0			27.2	4.7%	1.6%			3.2%
2014	16.1	14.6			30.7	13.4%	12.3%			12.9%
2015	18.3	16.9			35.2	13.7%	15.8%			14.7%
2016	21.4	19.8			41.2	16.9%	17.2%			17.0%
2017 <sup>J</sup>	23.4	22.1			45.5	9.3%	11.6%			10.4%
2018 <sup>K,L</sup>	24.4	23.9	3.0	0.4	51.7	4.3%	8.1%			13.6%
2019 <sup>*</sup>	25.7	25.5	4.9	1.5	57.6	5.3%	6.7%	63.3%	275.0%	11.4%
2020 <sup>*,M</sup>	23.8	22.7	4.8	1.4	52.7	-7.4%	-11.0%	-2.0%	-6.7%	-8.5%
2021 <sup>*,N</sup>	24.5	22.8	5.4	1.4	54.1	2.9%	0.4%	12.5%	0.0%	2.7%
TOLL REVENUE (millions)					PERCENT CHANGE					
2002 <sup>B</sup>	\$5.1				\$5.1					
2003 <sup>C</sup>	\$6.8	\$0.4			\$7.2	33.3%				41.2%
2004	\$8.1	\$1.1			\$9.2	19.1%	175.0%			27.8%
2005 <sup>D</sup>	\$9.1	\$1.4			\$10.5	12.3%	27.3%			14.1%
2006 <sup>E</sup>	\$10.7	\$2.8			\$13.5	17.6%	100.0%			28.6%
2007 <sup>F</sup>	\$11.8	\$5.6			\$17.4	10.3%	100.0%			28.9%
2008 <sup>G</sup>	\$11.9	\$7.1			\$19.0	0.8%	26.8%			9.2%
2009 <sup>H</sup>	\$11.4	\$7.6			\$19.0	-4.2%	7.0%			0.0%
2010	\$13.7	\$9.8			\$23.5	20.2%	28.9%			23.7%
2011	\$14.1	\$10.3			\$24.4	2.9%	5.1%			3.8%
2012	\$14.2	\$10.7			\$24.9	0.7%	3.9%			2.0%
2013 <sup>I</sup>	\$17.1	\$12.3			\$29.4	20.6%	14.6%			18.1%
2014	\$19.5	\$14.0			\$33.5	13.8%	14.1%			14.0%
2015	\$22.1	\$16.8			\$38.9	13.3%	20.0%			16.1%
2016	\$25.9	\$20.1			\$46.0	17.2%	19.6%			18.3%
2017 <sup>J</sup>	\$28.4	\$23.3			\$51.7	9.7%	15.9%			12.4%
2018 <sup>K,L</sup>	\$29.6	\$25.8	\$2.6	\$0.3	\$58.3	4.2%	10.7%			12.8%
2019 <sup>*</sup>	\$32.1	\$29.1	\$4.2	\$1.3	\$66.7	8.4%	12.8%	61.5%	333.3%	14.4%
2020 <sup>*,M</sup>	\$30.4	\$26.6	\$4.3	\$1.2	\$62.5	-5.3%	-8.6%	2.4%	-7.7%	-6.3%
2021 <sup>*,N</sup>	\$31.7	\$27.1	\$4.9	\$1.2	\$64.9	4.3%	1.9%	14.0%	0.0%	3.8%

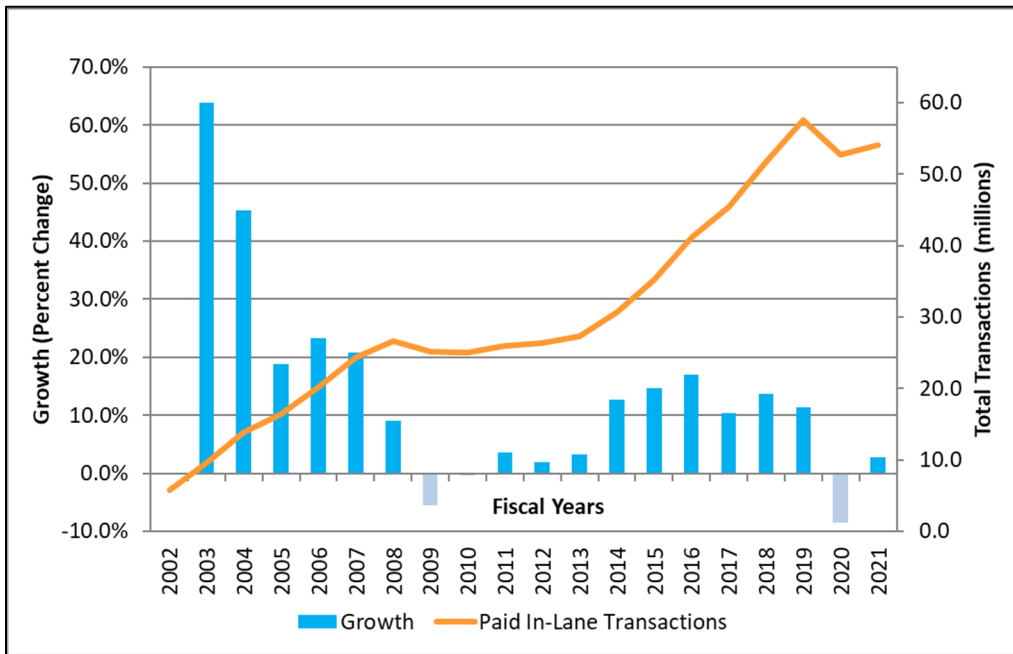
\*Indicates systemwide toll rate increase according to Customer First Toll Policy

Notes:

- A - Opened to traffic on July 8, 2000. Toll collection began one week after facility opened to traffic.
- B - Interchange ramps to/from existing S.R. 429 at Florida's Turnpike opened in November 2001.
- C - Interchange ramps to/from C.R. 535 opened in December 2002.
- D - Effects from 2004 hurricane season (4 storms with toll suspensions).
- E - Independence Main plaza opened in December 2005. FTE opened section to U.S. 192.
- F - FTE opened section from U.S. 192 to I-4 in December 2006.
- G - First effects of national economic recession.
- H - Systemwide toll rate increase in April 2009.
- I - Systemwide toll rate increase in July 2012. Implementation of cash and electronic toll rate differential.

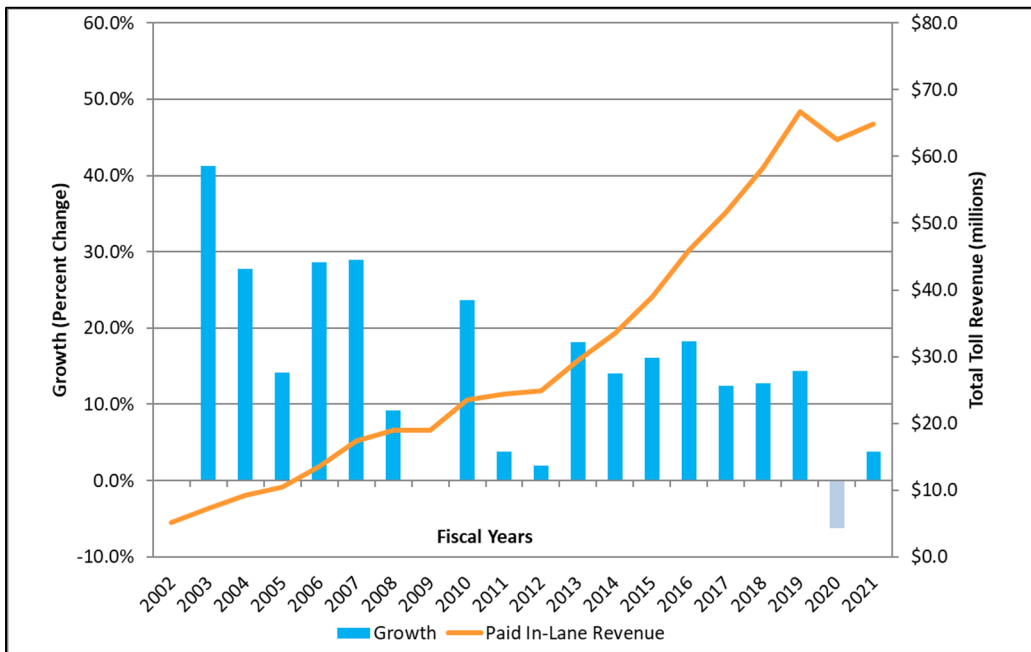
- J - Effects from Hurricane Matthew in October 2016.
- K - Ponkan Main plaza opened on July 28, 2017. Mt. Plymouth Main plaza opened on April 1, 2018.
- L - Effects from Hurricane Irma in September 2017.
- M - Effects from Hurricane Dorian in September 2019 and first effects of COVID-19 pandemic began in March 2020.
- N - Continued effects of COVID-19 pandemic.

**Figure 6-2**  
**S.R. 429 Historical Paid In-Lane Transactions and Annual Growth**  
**FY 2002 – FY 2021**



Source: Monthly unaudited data provided by CFX

**Figure 6-3**  
**S.R. 429 Historical Paid In-Lane Revenue and Annual Growth**  
**FY 2002 – FY 2021**

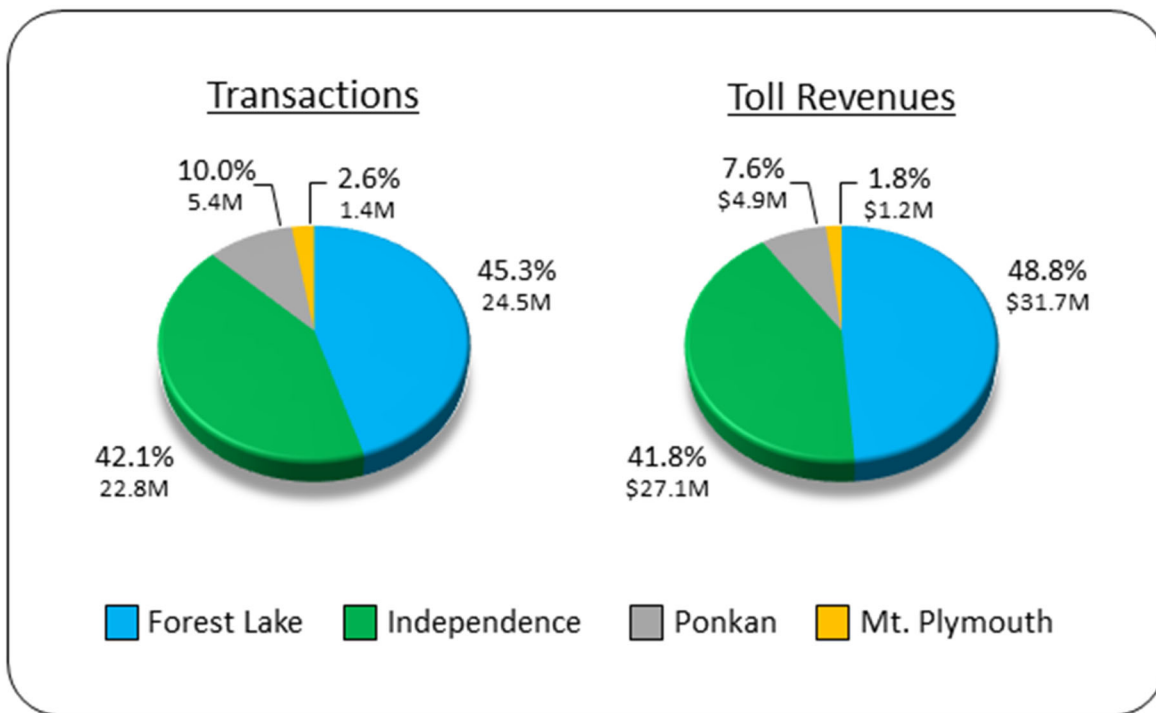


Source: Monthly unaudited data provided by CFX

The share by plaza group of total S.R. 429 paid in-lane transactions and toll revenues during FY 2021 are presented in **Figure 6-4**. As shown, the Forest Lake Main plaza group represented 24.5 million transactions or 45.3 percent of total transactions. Independence Main plaza group represented 22.8 million or 42.1 percent of total transactions on the facility. The Ponkan Main plaza represented 5.4 million transactions or 10.0 percent of the total, and the Mt. Plymouth Main plaza carried the remaining 1.4 million or 2.6 percent of the total transactions on the facility.

The annual totals and shares of paid in-lane toll revenues are similar to the results reported for annual paid in-lane transactions. Having more ramp toll plazas and a higher mainline toll rate, the Forest Lake Main plaza group represented \$31.7 million in toll revenues or 48.8 percent of the total. Independence Main plaza group represented \$27.1 million, or 41.8 percent of total revenue on the facility. The Ponkan Main plaza represented \$4.9 million or 7.6 percent of the total, and the Mt. Plymouth Main plaza carried the remaining \$1.2 million, or 1.8 percent of total toll revenues on the facility.

**Figure 6-4**  
**S.R. 429 Paid In-Lane Transactions and Revenue by Plaza Group**  
**FY 2021**



Source: CFX Statistical Report June 2021

**6.2.2 ANNUAL PBP TRANSACTION AND REVENUE TRENDS**

A history of annual PBP transactions and toll revenues on S.R. 429 from FY 2012 to FY 2021 is presented in **Table 6-2**. PBP transactions and toll revenues are recorded by toll location and accrued monthly by plaza group, however Table 6-2 shows the annual totals for S.R. 429 as reported at year end.

**Table 6-2**  
**S.R. 429 – Historical PBP Transactions and Revenue**  
**FY 2012 – FY 2021**

Fiscal Year	Transactions (millions)	Percent Change	Toll Revenues (millions)	Percent Change
2012	0.4		\$0.3	
2013	0.5	25.0%	\$0.4	33.3%
2014	0.6	20.0%	\$0.6	50.0%
2015	0.9	50.0%	\$0.8	33.3%
2016	1.3	44.4%	\$1.4	75.0%
2017	1.6	23.1%	\$2.0	42.9%
2018	2.0	25.0%	\$2.5	25.0%
2019	5.0	150.0%	\$6.9	176.0%
2020	6.0	20.0%	\$8.6	24.6%
2021	6.6	10.0%	\$14.3	66.3%

Source: Unaudited data provided by CFX

PBP transactions have increased from 0.4 million in FY 2012 to 6.6 million in FY 2021, while PBP revenues have increased from \$0.3 million to \$14.3 million over the same period. In FY 2021, PBP transactions increased 10.0 percent and PBP revenues increased 66.3 percent over FY 2020. As shown in the table, the rate of growth in PBP transactions is recently trending downward. The significant increase in PBP revenues in FY 2021 can be attributed to the new PBP toll rate adopted by the CFX Board that went into effect on July 1, 2020 (FY 2021), at which time the PBP toll rate at all toll locations was increased to twice the ETC toll rate. Because of the new PBP toll rate, it is anticipated that going forward, a portion of customers paying via PBP will switch to ETC to avoid the higher toll rate.

### 6.2.3 MONTHLY PAID IN-LANE TRANSACTION SEASONAL VARIATION

In **Table 6-3**, monthly paid in-lane transactions are normalized to average number of paid in-lane transactions per day in each month. Using average number of transactions per day allows for an easy comparison of the variations in relative travel demand over the year. The pattern of seasonal usage changes slightly from year to year, based on the number of weekdays in each month, but in FY 2021 this seasonality was overshadowed by the impacts on travel demand from the COVID-19 pandemic. Therefore, the factors in Table 6-3 do not reflect the typical monthly seasonal trends on S.R. 429. Instead, these factors include the recovery from COVID-19.

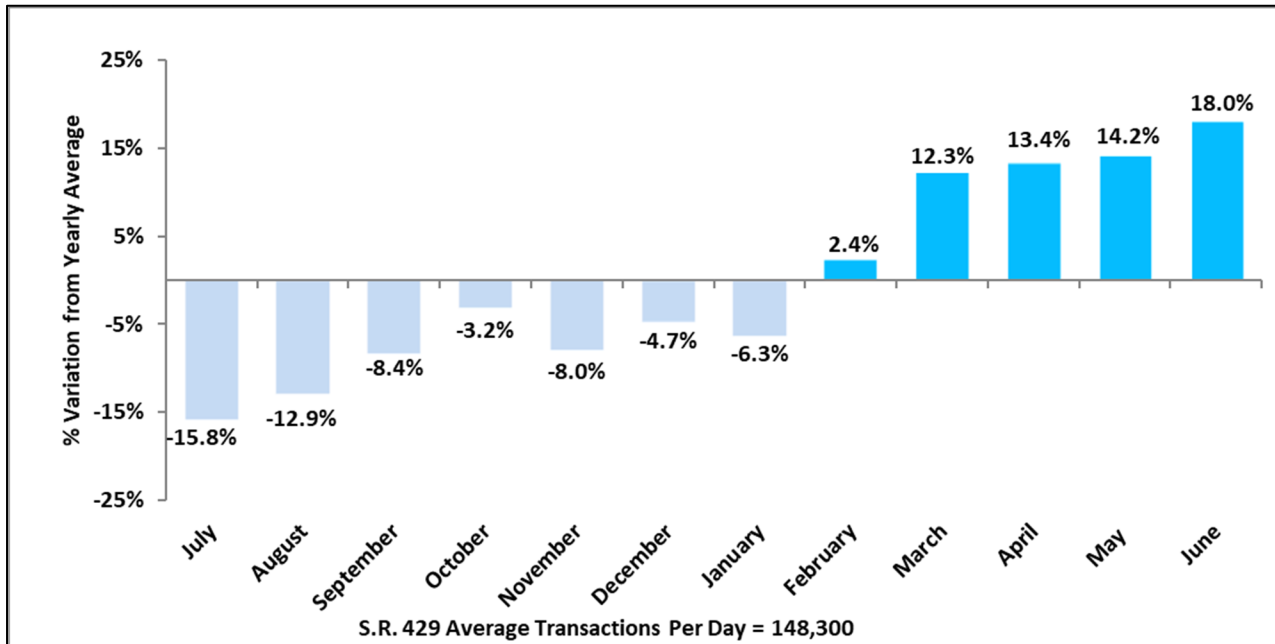
Average paid in-lane transactions per day in FY 2021 on S.R. 429 ranged from a low of 124,800 in July 2020 to a high of approximately 175,000 in June 2021. This data is presented in a graphical format in **Figure 3-5**. The paid in-lane transactions for each month appear as a percentage of the average for the fiscal year.

**Table 6-3**  
**S.R. 429 – Monthly Seasonal Variation in Paid In-Lane Transactions**  
**FY 2021**

Month	Number of Days in Month	Paid In-Lane Transactions	Average Transactions/Day	Seasonal Factor
July	31	3,869,716	124,800	0.842
August	31	4,002,901	129,100	0.871
September	30	4,073,786	135,800	0.916
October	31	4,449,882	143,500	0.968
November	30	4,092,492	136,400	0.920
December	31	4,379,475	141,300	0.953
January	31	4,307,049	138,900	0.937
February	28	4,251,658	151,800	1.024
March	31	5,160,365	166,500	1.123
April	30	5,045,346	168,200	1.134
May	31	5,249,022	169,300	1.142
June	30	5,250,446	175,000	1.180
<b>Average</b>		<b>4,511,012</b>	<b>148,300</b>	<b>1.000</b>
<b>Total Year</b>	<b>365</b>	<b>54,132,138</b>		

Source: CFX Statistical Report June 2021

**Figure 6-5**  
**S.R. 429 Variation in Paid In-Lane Transactions Per Day, by Month**  
**FY 2021**



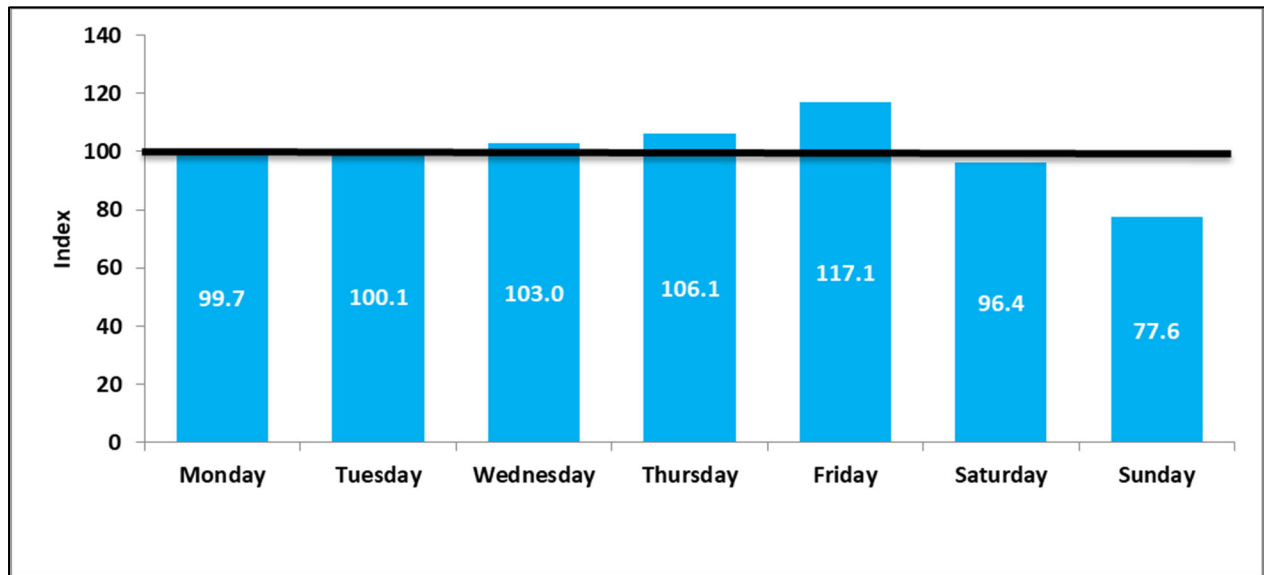
Source: CFX Statistical Report June 2021

### 6.2.4 DAY-OF-WEEK TRANSACTION VARIATION

Figure 6-6 contains a comparison of transactions by day of week in FY 2021. This data is presented as an index, where the average day equals 100. An index value of 100 for a given day of the week would indicate that day's transactions were precisely the same as the facility average. A value of 120 would indicate a day that has 20 percent greater volume than the average. As was done in prior years, the data used for this analysis was for a typical week in May 2021, a month that still had some impacts from COVID-19, but these impacts would not have disturbed the variation over the average week. The data includes transactions at mainline plazas only (no ramps).

As shown, weekday transactions on S.R. 429 fluctuated over the course of the week. Transactions were highest on Fridays, with an index value of 117.1 (17.1 percent higher than the average day), volumes on Thursdays had an index value of 106.1, and volumes on Monday through Wednesday ranged from index values of 99.7 to 103.0. Saturday volumes were lower than early weekday volumes with an index value of 96.4 but higher than other commuter facilities. Transactions decline significantly on Sundays, which have an index value of 77.6, or 23.4 percent lower than the average day also consistent with prior results.

**Figure 6-6**  
**S.R. 429 Variation in Transactions, by Day of Week**  
**FY 2021**



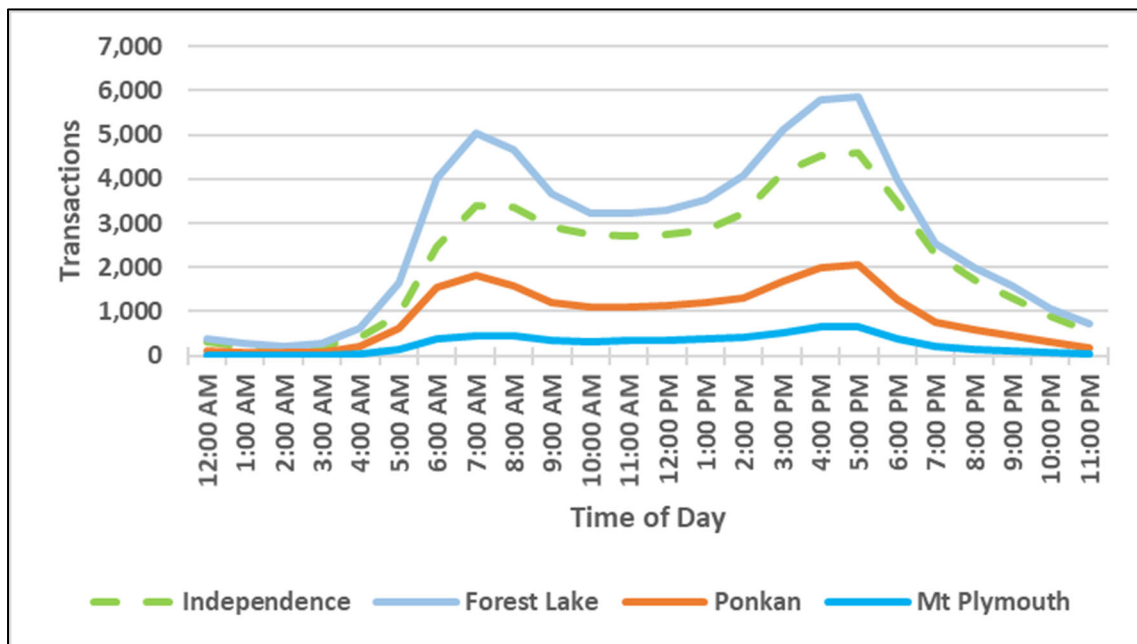
Source: Unaudited lane transaction data – May 2021

### 6.2.5 HOURLY TRAFFIC DISTRIBUTION

The hourly distribution of traffic volumes includes information on the usage characteristics of travel on the facility. The hourly distributions represent counts taken during a typical week at the mainline plazas in the month of May. The typical weekday hourly distribution is shown in **Figure 6-7** and the weekend hourly distribution is shown in **Figure 6-8**. The figures contain the sum of traffic volumes in both directions.

The four mainline toll locations on S.R. 429 exhibit similar hourly traffic patterns. On weekdays, travel demand at all four locations is bimodal, with both morning and evening peak hours. Traffic volumes in the evening peak hours at all mainline plazas are higher than in the morning peak hours. The highest peak hour volumes during the week were 5,900 per hour beginning at 5:00 p.m. at the Forest Lake mainline plaza, 4,600 per hour beginning at 5:00 p.m. at the Independence mainline plaza, 2,000 per hour beginning at 5:00 p.m. at the Ponkan mainline plaza, and 660 per hour beginning at 4:00 p.m. at the Mt. Plymouth mainline plaza. On weekends, the volumes are lower and the distributions unimodal. There are single peak periods (no morning or evening peaks), indicating that many customers use the facility for non-work trip purposes in the middle of the weekend days.

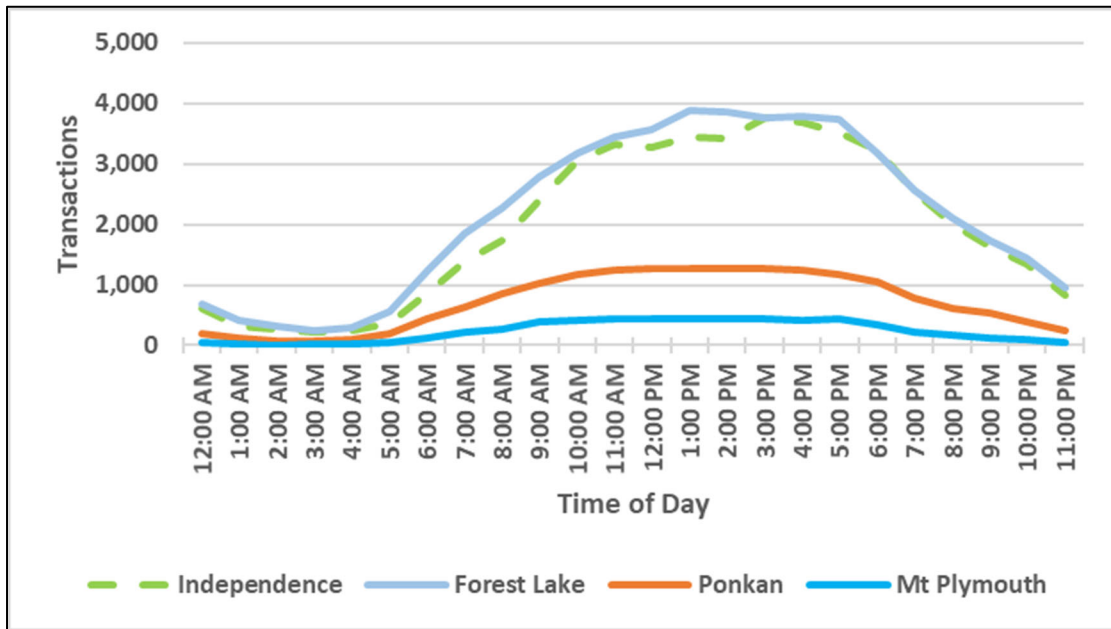
**Figure 6-7**  
**S.R. 429 Hourly Two-Way Traffic Variation (Weekday)**  
**FY 2021 (May)**



Source: Unaudited lane traffic data – May 2021



**Figure 6-8**  
**S.R. 429 Hourly Two-Way Traffic Variation (Weekend)**  
**FY 2021 (May)**



Source: Unaudited lane traffic data – May 2021

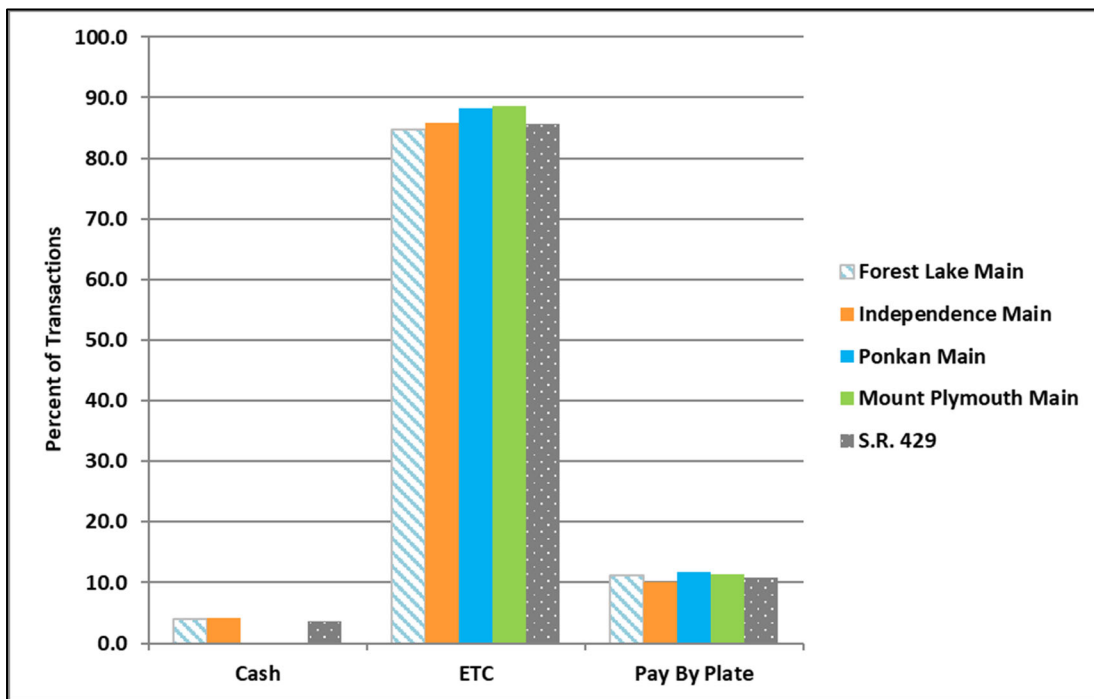
**6.2.6 TRANSACTIONS AND REVENUE BY PAYMENT TYPE**

The distributions of transactions and revenue by payment type by plaza group during FY 2021 are presented in **Figure 6-9** and **Figure 6-10**. Payment types can be classified in one of three ways: cash, ETC, and PBP. As defined in Chapter 1 of this report, paid in-lane transactions and revenue include cash and ETC payments made when a customer travels through a CFX toll location. The remaining transactions and revenue are classified as unpaid in-lane, which includes PBP and a small portion of non-revenue transactions. PBP transactions and revenues are estimated monthly based on a FY 2021 accrual rate of 56 percent of all unpaid in-lane transactions. This means that the PBP transactions and revenue shown here are estimates of the levels that will eventually pay the toll through the PBP process. It is important to note that the data presented in the following two figures is based on unaudited transaction and toll revenue data and may not match the audited data shown in other tables and figures in this chapter. The Ponkan Main and Mount Plymouth Main plazas are AET locations, cash toll collection is not provided.

As shown in Figure 6-9, the share of ETC transactions ranged from a low of 84.7 percent at the Forest Lake Main plaza group to a high of 88.6 percent at the Mount Plymouth Main plaza group. The Mount Plymouth and Ponkan mainline plazas, as part of the Wekiva Parkway, both have AET collection. Overall, ETC transactions on S.R. 429 accounted for 85.6 percent of total transactions on the facility. The share of cash transactions was 4.1 percent at the Forest Lake Main and Independence Main plaza groups. Overall, cash transactions on S.R. 429 accounted for 3.6 percent of total transactions on the facility. The PBP transactions accounted for between 10.1 and 11.8 percent of transactions at all plaza groups. Overall, PBP transactions on S.R. 429 accounted for 10.8 percent of total transactions on the facility.

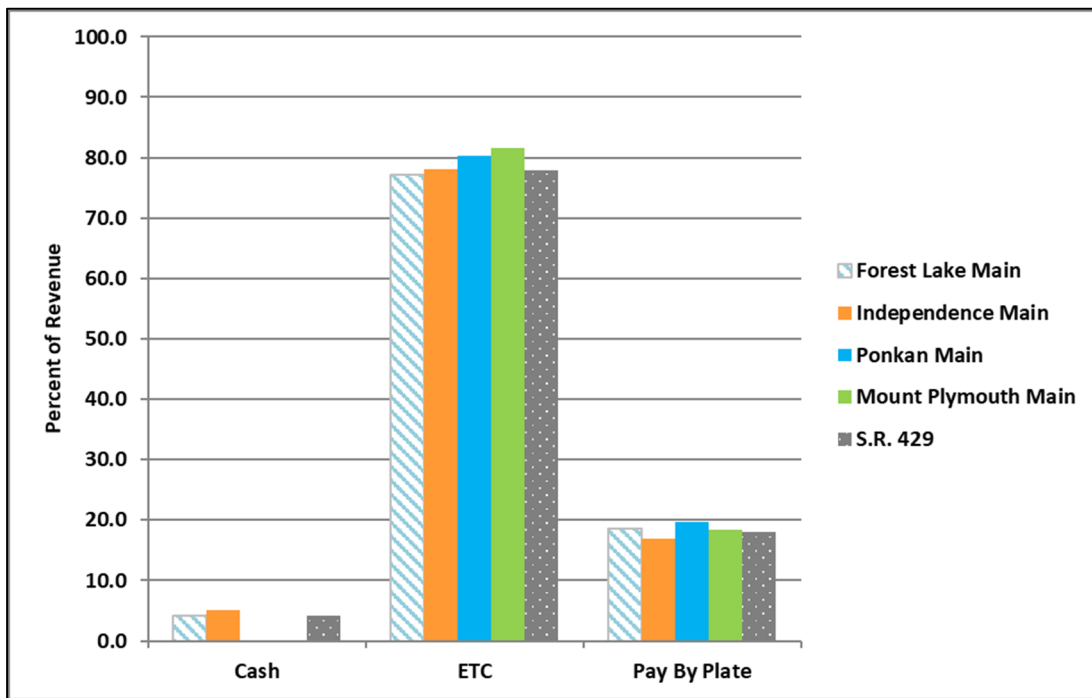
As shown in Figure 6-10, the share of toll revenues by payment type is comparable to the share in transactions, recognizing the differences in the toll paid by payment method. The share of ETC toll revenues ranged from a low of 77.2 percent at the Forest Lake Main plaza group to a high of 81.6 percent at the Mount Plymouth Main plaza. The share of cash toll revenues ranged from a low of 4.1 percent at the Forest Lake Main plaza group to a high of 5.0 percent at the Independence Main plaza group. The share of PBP toll revenues ranged from a low of 17.0 percent to a high of 19.6 percent at all plaza groups. Overall, PBP toll revenues on S.R. 429 accounted for 18.0 percent of total toll revenues on the facility.

**Figure 6-9**  
**S.R. 429 Percent of Transactions by Payment Type**  
**FY 2021**



Source: Unaudited transaction data provided by CFX

**Figure 6-10**  
**S.R. 429 Percent of Revenue by Payment Type**  
**FY 2021**



Source: Unaudited toll revenue data provided by CFX

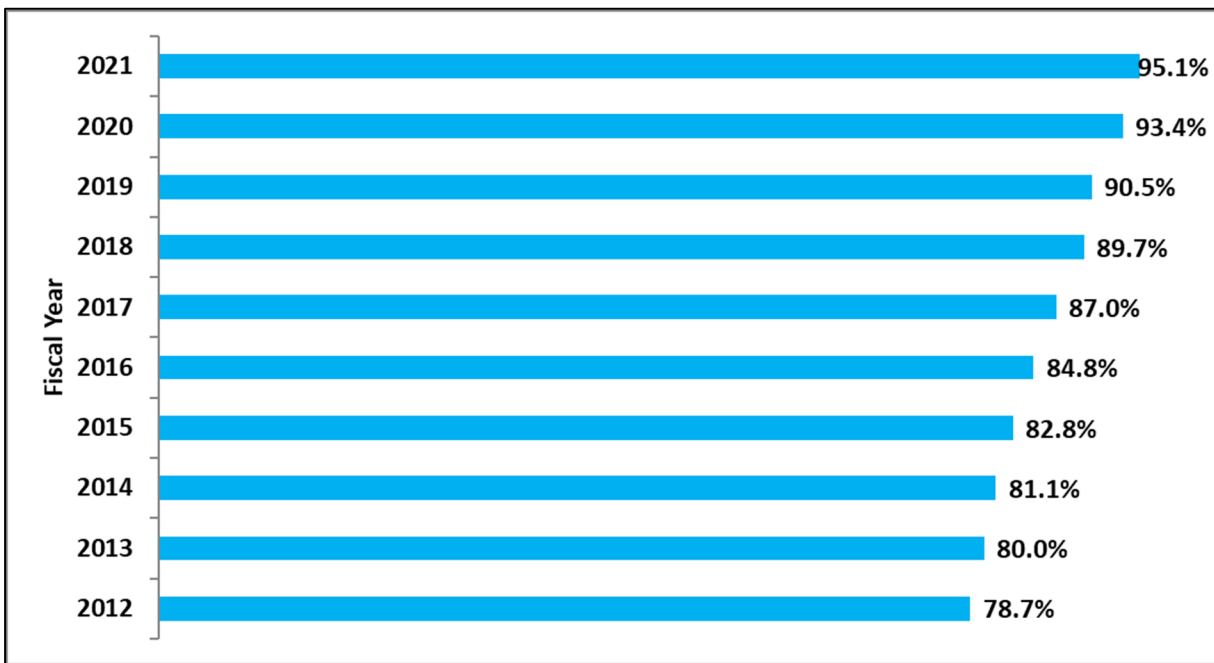
### 6.3 ETC Usage

The shares of paid in-lane revenues collected from ETC over the past ten fiscal years on S.R. 429 are shown in **Figure 6-11**. Cash payments are the other source of paid in-lane revenues. PBP revenues are not included in these results. Over this time, ETC revenues have steadily increased on the facility. In FY 2012, ETC revenues totaled 78.7 percent of total paid in-lane revenues. By the end of FY 2021, ETC revenues reached 95.1 percent. The data below differs from Figure 6-10 because it only includes the annual comparison of paid in-lane revenue and not all revenue types. ETC usage is expected to increase as customers shift from cash to ETC to take advantage of the lower ETC rate especially with implementation of PBP toll rates that are now twice the ETC toll rate as of July 2020 (FY 2021). Also, two plaza groups are AET and cash collection is not allowed.

Beginning on May 11, 2016, CFX implemented a pilot program called The Reload Lane to encourage and increase E-PASS usage. This program is the first of its kind in the continental United States and provides customer convenience and multiple payment options (cash, check, and debit/credit card). The program was expanded to S.R. 429 at the Forest Lake mainline plaza to assist customers with the opening of the Wekiva Parkway as an AET facility. Due to the success of the Reload program, the CFX Board approved the expansion of the Reload Lane capabilities to all manned, mainline toll plaza lanes, expected to be completed in FY 2022.

In June 2021, CFX also launched the Visitor Toll Pass program, which is a free temporary toll pass for rental car customers traveling through the Orlando International Airport. With the pass, rental car customers pay the ETC rates on Florida toll roads with no extra or hidden fees.

**Figure 6-11**  
**S.R. 429 Percent of Paid In-Lane Revenue from Electronic Toll Collection**  
**FY 2012 – FY 2021**



Source: CFX Statistical Report June 2021

### 6.4 Forecasted Transactions and Toll Revenues

Based on the recently adopted “Customer First Toll Policy,” toll rate adjustments (indexed tolls) were applied to the T&R forecasts every year based on the net change in CPI for the prior year, which equated to 0.96 percent in CY 2020. Because the change in CPI was lower than the 1.5 percent floor, CDM Smith used 1.5 percent to adjust the FY 2022 toll amounts. At the time of preparing the T&R estimates and this report, CDM Smith learned that the CPI during CY 2021 was 5.08 percent. Based on assurances from CFX, CDM Smith used this value to index toll rates for FY 2023. CDM Smith used the floor of 1.5 percent per year every year thereafter in the forecast period.

In addition to the Wekiva Parkway, future transportation improvements that could influence the T&R forecasts for S.R. 429 include the projects listed in **Table 6-4**. Completion of these projects was assumed in each model horizon year.

Several important growth areas in the Orlando metropolitan areas are along S.R. 429. Developments in Horizon West area of West Orange County are actively constructing, specifically near the Schofield Road and New Independence Parkway Interchanges. Growth in this part of Orange County is reflected in the T&R forecast for the Independence Main Plaza Group.

**Table 6-4**  
**S.R. 429 - Key Transportation Improvements**

Facility	From	To	Year	Jurisdiction	Improvement
Interstate 4	SR 434	Kirkman Rd	2025	FDOT	Widen to 10 lanes
SR 429	SR 50	SR 414	2025	CFX	Widen to 6-lanes
SR 429	CR 535	SR 50	2025	CFX	Widen to 6-Lanes
Wekiva Pkwy	Mount Plymouth Rd	Interstate 4	2025	FDOT	New 4 lane expressway
Osceola Polk Line Rd (CR 532)	US 17/92	Lake Wilson Rd	2025	Osceola County/CFX	Widen to 4-lanes
Poinciana Pkwy (SR 538)	Cypress Pkwy	Kinney Harmon Rd	2025	CFX	Widen to 4-lanes
Poinciana Parkway Ext. (SR 538)	Kinney Harmon Rd	Osceola Polk Line Rd (CR 532)	2025	CFX	New 4-lane Expressway
Florida's Turnpike	Minneola	Orange/Lake County Line	2025	FDOT	Widen to 6 lanes
SR 429	Schofield Road	CR 535	2035	CFX	Widen to 6-Lanes
Lake/Orange County Connector (SR 516)	US 27	SR 429	2035	CFX	New 4 lane expressway
Old Lake Wilson Rd	Osceola Polk Line Rd (CR 532)	Sinclair Rd	2035	Osceola County	Widen to 4-lanes
Funie Steed Rd	Westside Blvd	Old Lake Wilson Rd (CR 545)	2035	Osceola County	Widen to 4 Lanes
New Independence Pkwy	Lake County Line	SR 429	2035	Orange County	New/Widen 4 Lanes
SR 438/Silver Star Rd	SR 429	Bluford Ave	2035	FDOT	Widen to 6-lanes
Avalon Rd (CR 545)	Hartzog Rd	Seidel Rd	2035	Orange County	Widen to 4 Lanes
Avalon Rd (CR 545)	Seidel Rd	New Independence Pkwy	2035	Orange County	Widen to 4 Lanes
Avalon Rd (CR 545)	New Independence Pkwy	SR 50	2035	Orange County	Widen to 4 Lanes
Ocoee-Apopka Rd	Silver Star Rd	Clarcona-Ocoee Rd	2035	Orange County	Widen to 4 Lanes
SR 414 Expressway Ext	US 441	SR 434/Forest City Rd	2035	FDOT/CFX	New 4-lane expressway
Florida's Turnpike	US 27	US 19	2035	FDOT	Widen to 6 lanes
Florida's Turnpike	US 19	Minneola/Hancock Rd	2035	FDOT	Widen to 6 lanes
US 441 (SR 500)	SR 44	N of SR 46	2035	FDOT	Widen to 6-lanes
SR 50	CR 565 (Villa City)	CR 565A (Montevista)	2035	FDOT	Widen to 4-lanes
Plant Street (SR 438)	9th Street	West Crown Point Rd	2045	FDOT	Widen to 4-lanes
Plymouth Sorrento Rd	US 441	Orange County Line	2045	Orange County	Widen to 6-lanes
Ponkan Rd	Plymouth Sorrento Rd	CR 437	2045	Orange County	Widen to 6-lanes
Sadler Rd	US 441	Mt Plymouth Rd	2045	Orange County	Widen to 6-lanes
US 17-92	Pleasant Hill Rd	Portage Rd	2035	FDOT	Widen to 6-lanes
US 17-92	Ham Brown Rd	Pleasant Hill Rd	2045	Osceola County/FDOT	Widen to 6-Lanes
US 17-92	Old Tampa Hwy	Poinciana Blvd	2045	Osceola County/FDOT	Widen to 4 Lanes
SR 44	US 441	E. of Orange Ave	2045	FDOT	Widen to 4-lanes
SR 44	SR 44 & Orange Ave	CR 46A	2045	FDOT	Widen to 4-lanes
CR 437 Realignment	Oak Tree Dr	SR 46	2045	Lake County	Widen to 2-lanes
US 27	Florida Turnpike Ramps- N	South of SR 19	2045	FDOT	Widen to 6-lanes
SR 19	CR 48	CR 561	2045	FDOT	Widen to 4-lanes
SR 19	CR 455	CR 48	2045	FDOT	Widen to 4-lanes
SR 19	SR 50	CR 455	2045	FDOT	Widen to 4-lanes
CR 455/Hartle Rd	Lost Lake Rd	Good Hearth Blvd	2045	Lake County	Widen to 4-lanes
CR 455/Hartle Rd	Hartwood Marsh	Lost Lake	2045	Lake County	New 2-lane roadway
CR 33	SR 50	Simon Brown Rd	2045	Lake County	Widen to 4-lanes

CFX System improvements including the Wekiva Parkway have improved access and the potential for growth in NW Orange County. The growth potential is also demonstrated by the planned improvements to the CFX System including S.R. 429 from S.R. 50 to S.R. 414 and C.R. 535 to S.R. 50, as well as a planned expansion project, the Lake Orange County Connector, between S.R. 429 and U.S. 27. Planned improvements to the local street system including Silver Star Road, Plant Street and Avalon Road, serve as feeder roads to S.R. 429 and positively impact T&R in the near term and long-term forecasts.

Transaction and toll revenue forecasts for S.R. 429 are summarized in **Table 6-5** and **Table 6-6**. The tables are divided into paid in-lane transactions and revenue and PBP transactions and revenue. The paid in-lane transactions and revenue include ETC and cash collection. PBP is only reported as a total on the facility.

The paid in-lane transactions on S.R. 429 are expected to grow 4.8 percent per year through FY 2031 and then lower rates through the end of the forecast period because of the impact of continued toll rate adjustments. PBP transactions are forecasted to increase an average of 1.0 percent per year through FY 2031 and then increase through the forecast period. Total transactions on S.R. 429 are projected to increase during the forecast period from the actual of 60.7 million in FY 2021 to 132.8 million in FY 2051. Because FY 2021 T&R was still in recovery from the COVID-19 pandemic, higher growth rates are anticipated in the short-term forecasts with growth rates decreasing over the forecast period. The paid in-lane revenues on S.R. 429 are projected to increase over the forecast period, from the FY 2021 actual of \$64.9 million to \$210.8 million in FY 2051. PBP revenues are projected to increase from \$14.3 million in FY 2021 to \$34.5 million in FY 2051. Total revenues are projected to increase over the forecast period from the actual of \$79.2 million in FY 2021 to \$245.3 million in FY 2051. Total transactions and revenues are forecasted to increase at an average of 2.0 and 3.1 percent per year from FY 2031 to FY 2041, and 1.6 and 2.7 percent per year from FY 2041 to FY 2051, respectively.

**Table 6-5  
S.R. 429 Plaza Groups – Transaction Projections (Millions)  
FY 2022 – FY 2051**

Fiscal Year	Forest Lake Main	Independence Main	Ponkan Main	Mount Plymouth Main	Paid In-Lane	PBP	Total	Percent Annual Change
2010	13.0	12.0			25.0	0.2	25.2	
2011	13.4	12.5			25.9	0.3	26.2	4.0%
2012	13.6	12.8			26.4	0.4	26.8	2.3%
2013 <sup>A</sup>	14.2	13.0			27.2	0.5	27.7	3.4%
2014	16.1	14.6			30.7	0.6	31.3	13.0%
2015	18.3	16.9			35.2	0.9	36.1	15.4%
2016	21.4	19.8			41.2	1.3	42.5	17.6%
2017 <sup>B</sup>	23.4	22.1			45.5	1.6	47.1	10.9%
2018 <sup>C,D</sup>	24.4	23.9	3.0	0.4	51.7	2.0	53.7	14.0%
2019 <sup>E</sup>	25.7	25.5	4.9	1.5	57.6	5.0	62.6	16.6%
2020 <sup>F</sup>	23.8	22.7	4.8	1.4	52.7	6.0	58.7	-6.2%
2021 <sup>G</sup>	24.5	22.8	5.4	1.4	54.1	6.6	60.7	3.4%
2022 <sup>H</sup>	27.2	26.6	6.7	2.0	62.5	6.6	69.1	13.8%
2023	30.7	27.3	6.8	2.8	67.6	6.1	73.7	6.7%
2024	32.8	28.2	7.4	3.6	72.0	6.2	78.2	6.1%
2025	33.9	28.7	7.6	4.1	74.3	6.3	80.6	3.1%
2026	34.7	29.4	7.8	4.4	76.3	6.5	82.8	2.7%
2027	35.3	30.2	8.1	4.6	78.2	6.6	84.8	2.4%
2028	35.9	30.9	8.4	4.8	80.0	6.8	86.8	2.4%
2029	36.6	31.7	8.8	5.1	82.2	7.0	89.2	2.8%
2030	37.2	32.4	9.1	5.3	84.0	7.2	91.2	2.2%
2031	37.9	33.2	9.4	5.6	86.1	7.3	93.4	2.4%
2032	38.5	34.0	9.7	5.8	88.0	7.4	95.4	2.1%
2033	39.1	34.7	10.1	6.0	89.9	7.5	97.4	2.1%
2034	39.7	35.4	10.4	6.2	91.7	7.6	99.3	2.0%
2035	40.3	36.2	10.7	6.5	93.7	7.9	101.6	2.3%
2036	41.0	36.9	11.1	6.7	95.7	8.0	103.7	2.1%
2037	41.6	37.6	11.4	6.9	97.5	8.1	105.6	1.8%
2038	42.2	38.3	11.7	7.1	99.3	8.3	107.6	1.9%
2039	42.8	39.0	12.1	7.4	101.3	8.4	109.7	2.0%
2040	43.4	39.7	12.5	7.6	103.2	8.4	111.6	1.7%
2041	44.0	40.4	12.8	7.8	105.0	8.6	113.6	1.8%
2042	44.6	41.0	13.2	8.1	106.9	8.7	115.6	1.8%
2043	45.2	41.7	13.6	8.3	108.8	8.8	117.6	1.7%
2044	45.8	42.3	14.0	8.5	110.6	9.0	119.6	1.7%
2045	46.4	42.9	14.4	8.8	112.5	9.0	121.5	1.6%
2046	47.0	43.5	14.8	9.0	114.3	9.1	123.4	1.6%
2047	47.6	44.1	15.2	9.3	116.2	9.3	125.5	1.7%
2048	48.2	44.6	15.6	9.5	117.9	9.3	127.2	1.4%
2049	48.8	45.2	16.0	9.8	119.8	9.4	129.2	1.6%
2050	49.4	45.7	16.4	10.0	121.5	9.4	130.9	1.3%
2051	49.9	46.2	16.8	10.3	123.2	9.6	132.8	1.5%

Fiscal Year	Compound Annual Average Growth Rate (CAAGR)						
2010 - 2021	5.9%	6.0%			7.3%	37.4%	8.3%
2021 - 2031	4.5%	3.8%	5.7%	14.9%	4.8%	1.0%	4.4%
2031 - 2041	1.5%	2.0%	3.1%	3.4%	2.0%	1.7%	2.0%
2041 - 2051	1.3%	1.4%	2.8%	2.8%	1.6%	1.1%	1.6%

Notes:

- Actual transaction data provided by CFX from Monthly Statistical Reports.
- A - Systemwide toll rate increase.
- B - Effects from Hurricane Matthew in October 2016.
- C - Ponkan Main plaza opened on July 27, 2017 and Mount Plymouth Main opened on April 1, 2018.
- D - Effects from Hurricane Irma in September 2017.
- E - First year of implementation of "Customer First" toll rate policy.
- F - Effects from Hurricane Dorian in September 2019 and first effects of COVID-19 pandemic began in March 2020.
- G - New toll rates for PBP customers, set at 2.0 times the ETC rate. Continued effects of COVID-19 pandemic.
- H - Completion of I-4 Ultimate project.

**Table 6-6**  
**S.R. 429 Plaza Groups – Toll Revenue Projections (Millions)**  
**FY 2022 – FY 2051**

Fiscal Year	Forest Lake Main	Independence Main	Ponkan Main	Mount Plymouth Main	Paid In-Lane	PBP	Total	Percent Annual Change
2010	\$13.7	\$9.8			\$23.5	\$0.1	\$23.6	
2011	\$14.1	\$10.3			\$24.4	\$0.2	\$24.6	4.2%
2012	\$14.2	\$10.7			\$24.9	\$0.3	\$25.2	2.4%
2013 <sup>A</sup>	\$17.1	\$12.3			\$29.4	\$0.4	\$29.8	18.3%
2014	\$19.5	\$14.0			\$33.5	\$0.6	\$34.1	14.4%
2015	\$22.1	\$16.8			\$38.9	\$0.8	\$39.7	16.5%
2016	\$26.0	\$20.1			\$46.0	\$1.4	\$47.4	19.4%
2017 <sup>B</sup>	\$28.4	\$23.3			\$51.7	\$2.0	\$53.7	13.2%
2018 <sup>C,D</sup>	\$29.6	\$25.8	\$2.6	\$0.3	\$58.3	\$2.5	\$60.8	13.2%
2019 <sup>E</sup>	\$32.1	\$29.1	\$4.2	\$1.3	\$66.7	\$6.9	\$73.6	21.1%
2020 <sup>F</sup>	\$30.4	\$26.6	\$4.3	\$1.2	\$62.5	\$8.6	\$71.1	-3.4%
2021 <sup>G</sup>	\$31.7	\$27.1	\$4.9	\$1.2	\$64.9	\$14.3	\$79.2	11.4%
2022 <sup>H</sup>	\$35.6	\$31.2	\$6.1	\$1.7	\$74.6	\$15.5	\$90.1	13.8%
2023	\$42.2	\$33.0	\$6.7	\$2.5	\$84.4	\$16.2	\$100.6	11.7%
2024	\$45.2	\$34.2	\$7.2	\$3.2	\$89.8	\$16.4	\$106.2	5.6%
2025	\$47.7	\$35.6	\$7.6	\$3.6	\$94.5	\$17.1	\$111.6	5.1%
2026	\$49.5	\$37.0	\$8.0	\$3.9	\$98.4	\$17.9	\$116.3	4.2%
2027	\$51.0	\$38.4	\$8.4	\$4.2	\$102.0	\$18.4	\$120.4	3.5%
2028	\$52.6	\$39.8	\$8.8	\$4.5	\$105.7	\$19.1	\$124.8	3.7%
2029	\$54.1	\$41.2	\$9.3	\$4.7	\$109.3	\$19.7	\$129.0	3.4%
2030	\$55.7	\$42.7	\$9.7	\$5.0	\$113.1	\$20.4	\$133.5	3.5%
2031	\$57.4	\$44.2	\$10.2	\$5.3	\$117.1	\$21.0	\$138.1	3.4%
2032	\$59.0	\$45.8	\$10.7	\$5.6	\$121.1	\$21.7	\$142.8	3.4%
2033	\$60.7	\$47.4	\$11.1	\$5.9	\$125.1	\$22.3	\$147.4	3.2%
2034	\$62.4	\$49.0	\$11.6	\$6.2	\$129.2	\$23.0	\$152.2	3.3%
2035	\$64.2	\$50.6	\$12.2	\$6.5	\$133.5	\$23.8	\$157.3	3.4%
2036	\$65.9	\$52.2	\$12.7	\$6.8	\$137.6	\$24.4	\$162.0	3.0%
2037	\$67.8	\$53.9	\$13.3	\$7.1	\$142.1	\$25.1	\$167.2	3.2%
2038	\$69.6	\$55.6	\$13.8	\$7.4	\$146.4	\$25.7	\$172.1	2.9%
2039	\$71.5	\$57.3	\$14.4	\$7.7	\$150.9	\$26.5	\$177.4	3.1%
2040	\$73.4	\$59.0	\$15.0	\$8.1	\$155.5	\$27.2	\$182.7	3.0%
2041	\$75.3	\$60.7	\$15.7	\$8.4	\$160.1	\$27.7	\$187.8	2.8%
2042	\$77.3	\$62.5	\$16.3	\$8.8	\$164.9	\$28.6	\$193.5	3.0%
2043	\$79.3	\$64.2	\$17.0	\$9.1	\$169.6	\$29.2	\$198.8	2.7%
2044	\$81.4	\$66.0	\$17.7	\$9.5	\$174.6	\$29.9	\$204.5	2.9%
2045	\$83.4	\$67.8	\$18.4	\$9.9	\$179.5	\$30.6	\$210.1	2.7%
2046	\$85.6	\$69.6	\$19.1	\$10.3	\$184.6	\$31.2	\$215.8	2.7%
2047	\$87.7	\$71.4	\$19.9	\$10.7	\$189.7	\$32.0	\$221.7	2.7%
2048	\$89.9	\$73.1	\$20.7	\$11.2	\$194.9	\$32.5	\$227.4	2.6%
2049	\$92.1	\$74.9	\$21.5	\$11.6	\$200.1	\$33.2	\$233.3	2.6%
2050	\$94.3	\$76.7	\$22.3	\$12.0	\$205.3	\$33.9	\$239.2	2.5%
2051	\$96.6	\$78.5	\$23.2	\$12.5	\$210.8	\$34.5	\$245.3	2.6%

Fiscal Year	Compound Annual Average Growth Rate (CAAGR)							
2010 - 2021	7.9%	9.7%			9.7%	57.0%	11.6%	
2021 - 2031	6.1%	5.0%	7.6%	16.0%	6.1%	3.9%	5.7%	
2031 - 2041	2.8%	3.2%	4.4%	4.7%	3.2%	2.8%	3.1%	
2041 - 2051	2.5%	2.6%	4.0%	4.1%	2.8%	2.2%	2.7%	

Notes:

- Actual revenue data provided by CFX from Monthly Statistical Reports.
- A - Systemwide toll rate increase.
- B - Effects from Hurricane Matthew in October 2016.
- C - Ponkan Main plaza opened on July 27, 2017 and Mount Plymouth Main opened on April 1, 2018.
- D - Effects from Hurricane Irma in September 2017.
- E - First year of implementation of "Customer First" toll rate policy.
- F - Effects from Hurricane Dorian in September 2019 and first effects of COVID-19 pandemic began in March 2020.
- G - New toll rates for PBP customers, set at 2.0 times the ETC rate. Continued effects of COVID-19 pandemic.
- H - Completion of I-4 Ultimate project.





# CHAPTER 7

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S.R. 414  
(JOHN LAND APOPKA EXPRESSWAY)





# S.R. 414 (JOHN LAND APOPKA EXPRESSWAY)

## 7.1 Facility Description

S.R. 414, also known as the John Land Apopka Expressway, is a 9-mile expressway that extends east from S.R. 429 to Maitland Boulevard at U.S. 441 (N. Orange Blossom Trail). Three of these miles are part of a dual route with S.R. 429. This long-awaited expressway improved access between S.R. 429, I-4 and employment centers such as Maitland Center office park. While relieving congestion on U.S. 441 and many local roads in the greater Apopka area, it was the first new, major east-west corridor built in Central Florida in many years. S.R. 414 consists of the Coral Hills Main plaza group. The plaza group has two pairs of ramp toll plazas at the Keene Road and the Hiwassee Road interchanges. Other existing interchanges include S.R. 429, Marden Road, S.R. 451 and U.S. 441/Orange Blossom Trail. A map of S.R. 414 including the FY 2021 CFX toll rates for the mainline and ramp toll plazas is shown in **Figure 7-1**.

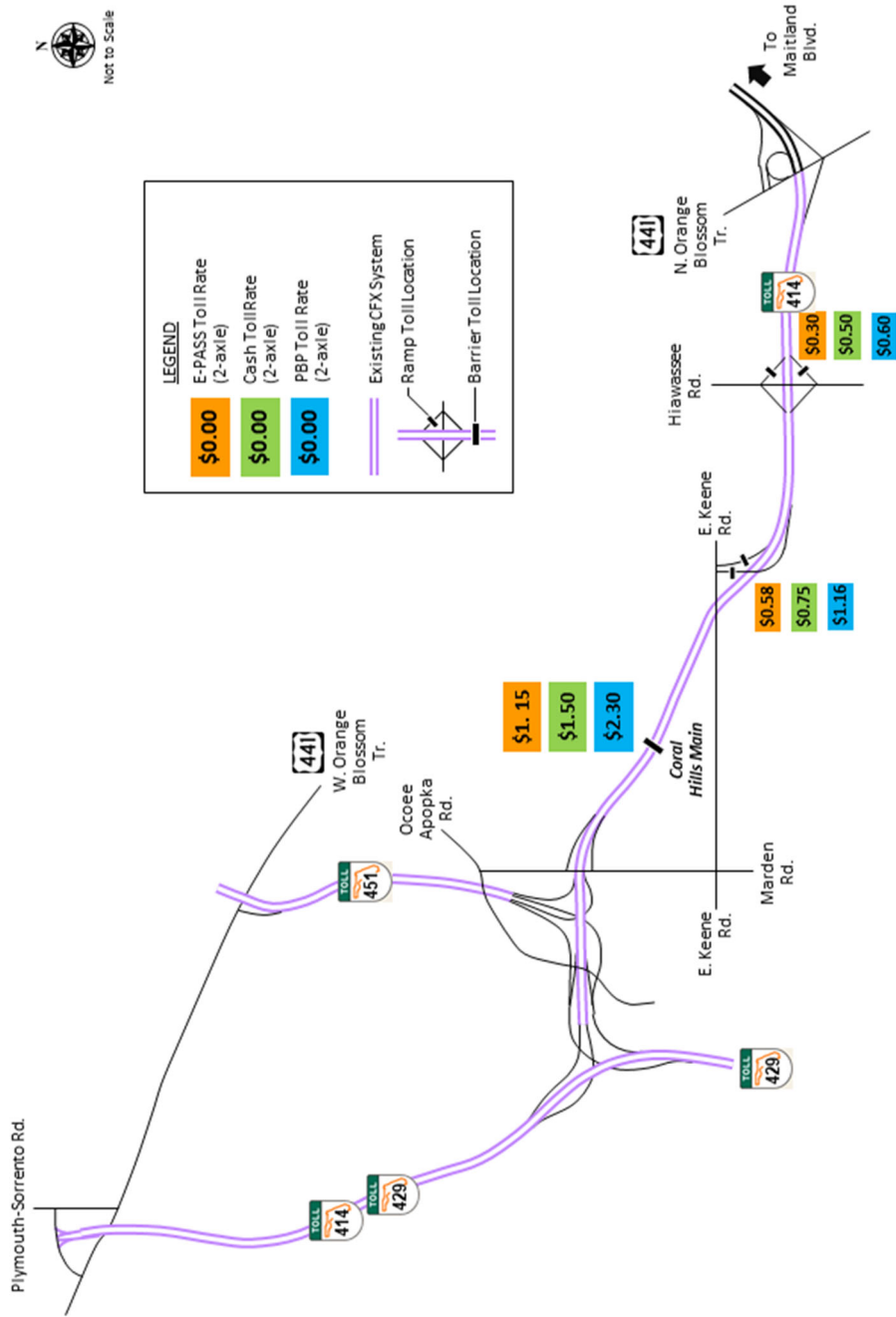


CFX began construction on Phase I of the S.R. 414 in January 2007. CFX was able to partially open the new expressway to electronic toll collection customers from S.R. 429 to Hiwassee Road on February 14, 2009, because construction was ahead of schedule. The entire length of Phase I was opened to traffic on May 15, 2009, earlier than originally scheduled.

In June 2010, construction began on Phase II of S.R. 414, which included a new interchange between S.R. 414 and S.R. 429 and an extension of S.R. 429/S.R. 414 northwest to U.S. 441 near Plymouth Sorrento Road. This interchange, completed in October 2012, improved traffic flow between S.R. 429 and S.R. 414, accommodated future growth in west Orange County and provided improved access to I-4 and the attractions. The extension of S.R. 429/S.R. 414 to U.S. 441 near Plymouth Sorrento Road opened in January 2013. This expressway featured sections with up to six travel lanes (three in each direction) and a new connector road that allowed access between S.R. 429 and U.S. 441 near Plymouth Sorrento Road. In addition, the section of S.R. 429 from north of S.R. 414 to U.S. 441 was designated S.R. 451.

In June 2017, a partial interchange opened on S.R. 414 at Marden Road, which allowed traffic traveling west on S.R. 414 to exit at Marden Road while traffic on Marden Road can enter on to eastbound S.R. 414. This interchange provides additional local access from S.R. 414, specifically to the new Florida Hospital Apopka and nearby land developments.

**Figure 7-1  
S.R. 414 Facilities and Toll Rates**



## 7.2 Historical Transactions and Toll Revenues

As defined in Chapter 1, CFX transactions and toll revenues are classified as either Paid In-Lane (ETC and cash) or Unpaid In-Lane (PBP and non-revenue). Total transactions are the sum of paid in-lane and unpaid in-lane transactions. Total revenue is the sum of paid in-lane revenue and the revenue collected through PBP, estimated as an accrued amount. The following section includes a breakdown of transactions and revenues by paid in-lane and PBP.

### 7.2.1 ANNUAL PAID IN-LANE TRANSACTION AND REVENUE TRENDS

The annual paid in-lane transactions for the Coral Hills Main plaza group through FY 2021 is presented in the top half of **Table 7-1**. Annual historical paid in-lane toll revenues are summarized and totaled in the bottom half of the table. The facility data and annual growth are also presented visually in **Figure 7-2** and **Figure 7-3**. These historical tables do not include PBP transactions and revenues, only those that are paid in-lane. For this reason, the information presented in this section may differ slightly from the data presented in the FY 2021 Comprehensive Annual Financial Report (CAFR) and other information in this report.

The facility has only been open for 12 years with the first full year of operation in FY 2010. There was no toll rate increase at the Coral Hills Main plaza in FY 2009 since the road was not fully opened until after the toll adjustment went into effect, however tolls did increase during the FY 2013, FY 2019, FY 2020 and FY 2021 Systemwide toll rate adjustment.

In October 2016 (FY 2017), Hurricane Matthew tracked parallel to the Florida east coast as a Category 3 storm with winds up to 130 miles per hour. Tolls were suspended on the CFX System beginning at 8:00 p.m. on October 5, 2016 through early on October 10, 2016. The toll suspension resulted in a loss of approximately 0.1 million in transactions and \$0.1 million in toll revenues on S.R. 414. In September 2017 (FY 2018), Hurricane Irma tracked parallel to the Florida coast as a Category 4 storm with winds up to 155 miles per hour. Tolls were suspended on CFX toll facilities beginning on September 5, 2017 through September 20, 2017 resulting in a transaction loss of approximately 0.6 million and a revenue loss of \$0.6 million on S.R. 414.

Total paid in-lane transactions on S.R. 414 in FY 2019 increased by 0.5 million transactions, or 3.7 percent, over FY 2018. Paid in-lane toll revenues increased by \$0.8 million, or 5.8 percent, in the same year. The slower growth in transactions and revenues in FY 2019 can be attributed in part to the increase in customers utilizing the PBP program.

FY 2020 total paid in-lane transactions on S.R. 414 decreased by 0.8 million, or 5.8 percent, compared to FY 2019. Paid in-lane revenues experienced a decline of 3.4 percent during the same period. FY 2020 transactions and revenues were negatively impacted by the effects of the COVID-19 pandemic beginning in March 2020. CFX temporarily suspended cash toll collections and shifted to PBP from March 19, 2020 to May 31, 2020 to reduce the potential exposure of both drivers and employees to the COVID-19 virus. Cash toll collections resumed on June 1, 2020. September 2019 transactions and revenues were also negatively impacted by toll suspensions during Hurricane Dorian. The slower growth in transactions and revenues in FY 2020 can also be attributed to an increase in customers utilizing the PBP program.

FY 2021 paid in-lane transactions increased by 0.3 million, or 2.3 percent, compared to FY 2020. Paid in-lane revenues experienced an increase of 5.0 percent during the same period. FY 2021 transactions and revenues were negatively impacted by the effects of the COVID-19 pandemic (i.e., a recovery from the worst of COVID-19) and the FY 2021 toll rate adjustment. This facility is expected to continue experiencing growth due to the recent opening of the Wekiva Parkway (S.R. 429).

**Table 7-1**  
**S.R. 414 Plaza Group – Historical Paid In-Lane Transactions and Revenue**  
**FY 2009 – FY 2021**

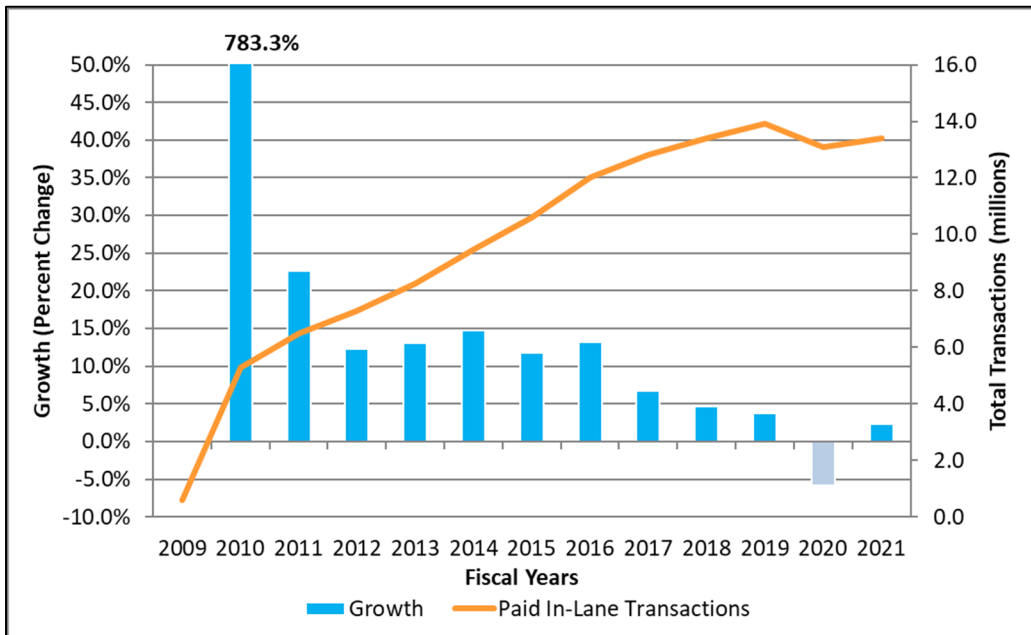
Fiscal Year	Coral Hills Main	
	TRANSACTIONS (millions)	PERCENT CHANGE
2009 <sup>A</sup>	0.6	
2010	5.3	783.3%
2011	6.5	22.6%
2012	7.3	12.3%
2013 <sup>B</sup>	8.3	13.1%
2014	9.5	14.5%
2015	10.6	11.6%
2016	12.0	13.2%
2017 <sup>C</sup>	12.8	6.7%
2018 <sup>D</sup>	13.4	4.7%
2019 <sup>*</sup>	13.9	3.7%
2020 <sup>*,E</sup>	13.1	-5.8%
2021 <sup>*,F</sup>	13.4	2.3%
	TOLL REVENUE (millions)	PERCENT CHANGE
2009 <sup>A</sup>	\$0.6	
2010	\$4.2	600.0%
2011	\$5.1	21.4%
2012	\$5.7	11.8%
2013 <sup>B</sup>	\$7.7	35.4%
2014	\$9.1	18.2%
2015	\$10.4	14.3%
2016	\$12.0	15.4%
2017 <sup>C</sup>	\$13.0	8.3%
2018 <sup>D</sup>	\$13.8	6.2%
2019 <sup>*</sup>	\$14.6	5.8%
2020 <sup>*,E</sup>	\$14.1	-3.4%
2021 <sup>*,F</sup>	\$14.8	5.0%

\*Indicates systemwide toll rate increase according to Customer First Toll Policy

Notes:

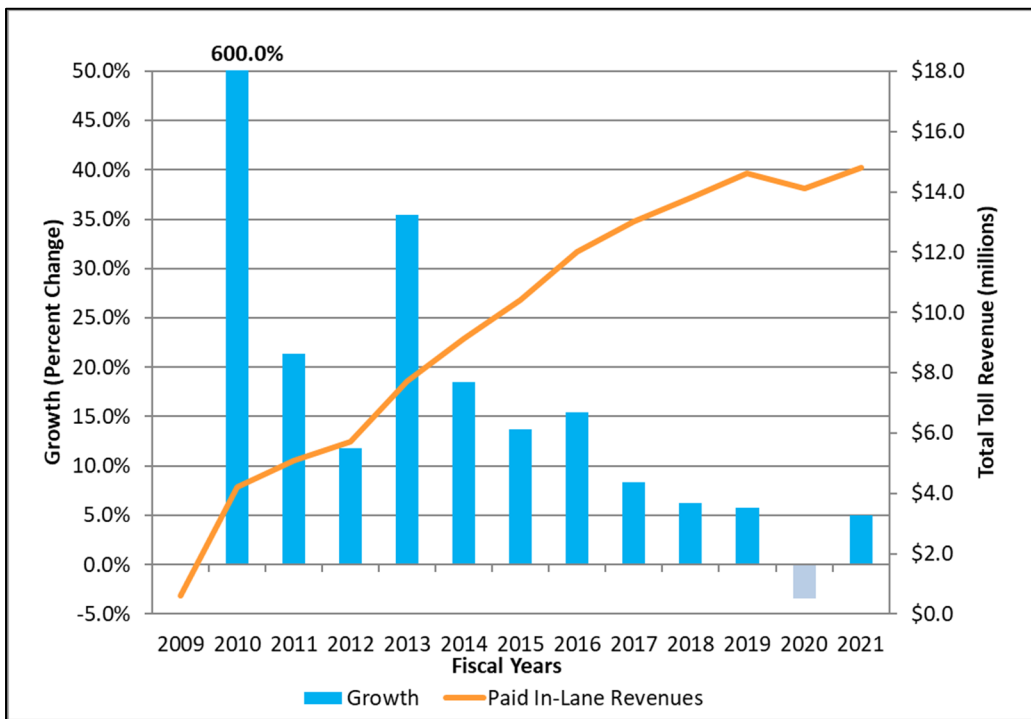
- A - Opened to electronic traffic on February 14, 2009 and all traffic on May 15, 2009.
- B - Systemwide toll rate increase in July 2013. Implementation of cash and electronic toll rate differential. Extension of S.R. 414 to U.S. 441 opened in January 2013.
- C - Effects from Hurricane Matthew in October 2016. Marden Rd. interchange opened in June 2017.
- D - Effects from Hurricane Irma in September 2017.
- E - Effects from Hurricane Dorian in September 2019 and first effects of COVID-19 pandemic began in March 2020.
- F - Continued effects of COVID-19 pandemic.

**Figure 7-2**  
**S.R. 414 Historical Paid In-Lane Transactions and Annual Growth**  
**FY 2009 – FY 2021**



Source: Monthly unaudited data provided by CFX

**Figure 7-3**  
**S.R. 414 Historical Paid In-Lane Revenue and Annual Growth**  
**FY 2009 – FY 2021**



Source: Monthly unaudited data provided by CFX

**7.2.2 ANNUAL PBP TRANSACTION AND REVENUE TRENDS**

A history of annual PBP transactions and toll revenues on S.R. 414 from FY 2012 to FY 2021 is presented in **Table 3-2**. PBP transactions and toll revenues are recorded by toll location and accrued monthly by plaza group, however Table 3-2 shows the annual totals for S.R. 414 as reported at year end.

**Table 7-2**  
**S.R. 414 – Historical PBP Transactions and Revenue**  
**FY 2012 – FY 2021**

Fiscal Year	Transactions (millions)	Percent Change	Toll Revenues (millions)	Percent Change
2012	0.1		\$0.1	
2013	0.1	0.0%	\$0.1	0.0%
2014	0.2	100.0%	\$0.2	100.0%
2015	0.3	50.0%	\$0.3	50.0%
2016	0.4	33.3%	\$0.4	33.3%
2017	0.4	0.0%	\$0.6	50.0%
2018	0.7	75.0%	\$0.7	16.7%
2019	1.3	85.7%	\$1.5	114.3%
2020	1.6	23.1%	\$1.9	26.7%
2021	1.7	6.2%	\$3.3	73.7%

Source: Monthly unaudited data provided by CFX

PBP transactions have increased from 0.1 in FY 2012 to 1.7 million in FY 2021, while PBP revenues have increased from \$0.1 to \$3.3 million over the same period. In FY 2021, PBP transactions increased 6.2 percent and PBP revenues increased 73.7 percent over FY 2020. As shown in the table, the rate of growth in PBP transactions is recently trending downward. The significant increase in PBP revenues in FY 2021 can be attributed to the new PBP toll rate adopted by the CFX Board that went into effect on July 1, 2020 (FY 2021), at which time the PBP toll rate at all toll locations was increased to twice the ETC toll rate. Because of the new PBP toll rate, it is anticipated that going forward, portion of customers paying via PBP will switch to ETC to avoid the higher toll rate.



### 7.2.3 MONTHLY PAID IN-LANE TRANSACTION SEASONAL VARIATION

In **Table 7-3**, monthly paid in-lane transactions are normalized to average number of paid in-lane transactions per day in each month. Using average number of paid in-lane transactions per day allows for an easy comparison of the variations in relative travel demand over the year. The pattern of seasonal usage changes slightly from year to year, based on the number of weekdays in each month, but in FY 2021 this seasonality was overshadowed by the impacts on travel demand from the COVID-19 pandemic. Therefore, the factors in Table 7-3 do not reflect the typical monthly seasonal trends on S.R. 414. Instead, these factors include the recovery from COVID-19.

As presented, average paid in-lane transactions per day in FY 2021 on S.R. 414 ranged from a low of 32,000 in July 2020 to a high of 41,500 in June 2021. Like other CFX facilities, peak season is typically during spring months as there are more tourists in the area (possibly snowbirds) during the second half of the fiscal year.

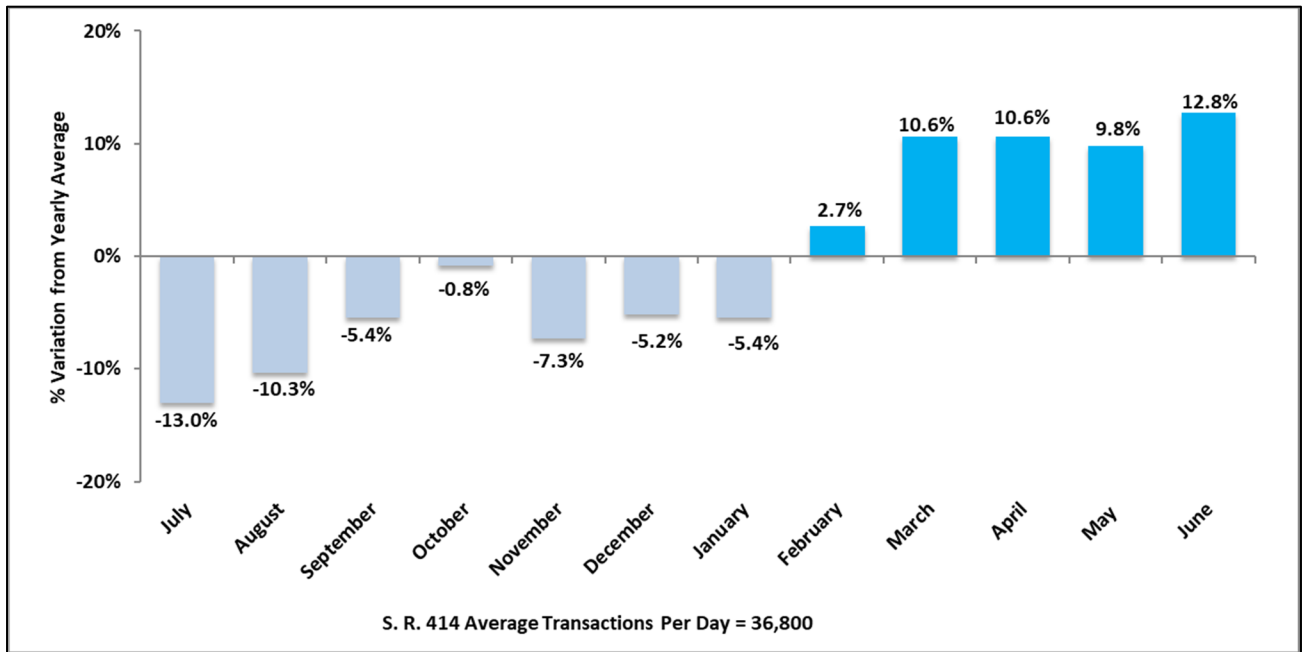
This data is presented in a graphical format in **Figure 7-4**. Each month's average paid in-lane transactions per day appear as a percentage of the average for the fiscal year. As shown in the figure, July paid in-lane transactions were 13.0 percent below average and June paid in-lane transactions were 12.8 percent above average for the facility.

**Table 7-3**  
**S.R. 414 – Monthly Seasonal Variation in Paid In-Lane Transactions**  
**FY 2021**

Month	Number of Days in Month	Paid In-Lane Transactions	Average Transactions/Day	Seasonal Factor
July	31	991,525	32,000	0.870
August	31	1,023,200	33,000	0.897
September	30	1,044,941	34,800	0.946
October	31	1,131,233	36,500	0.992
November	30	1,023,947	34,100	0.927
December	31	1,083,313	34,900	0.948
January	31	1,077,626	34,800	0.946
February	28	1,057,723	37,800	1.027
March	31	1,262,481	40,700	1.106
April	30	1,219,939	40,700	1.106
May	31	1,253,697	40,400	1.098
June	30	1,245,340	41,500	1.128
<b>Average</b>		<b>1,117,914</b>	<b>36,800</b>	<b>1.000</b>
<b>Total Year</b>	<b>365</b>	<b>13,414,965</b>		

Source: Monthly unaudited data provided by CFX

**Figure 7-4**  
**S.R. 414 Variation in Paid In-Lane Transactions Per Day, by Month**  
**FY 2021**



Source: Monthly unaudited data provided by CFX

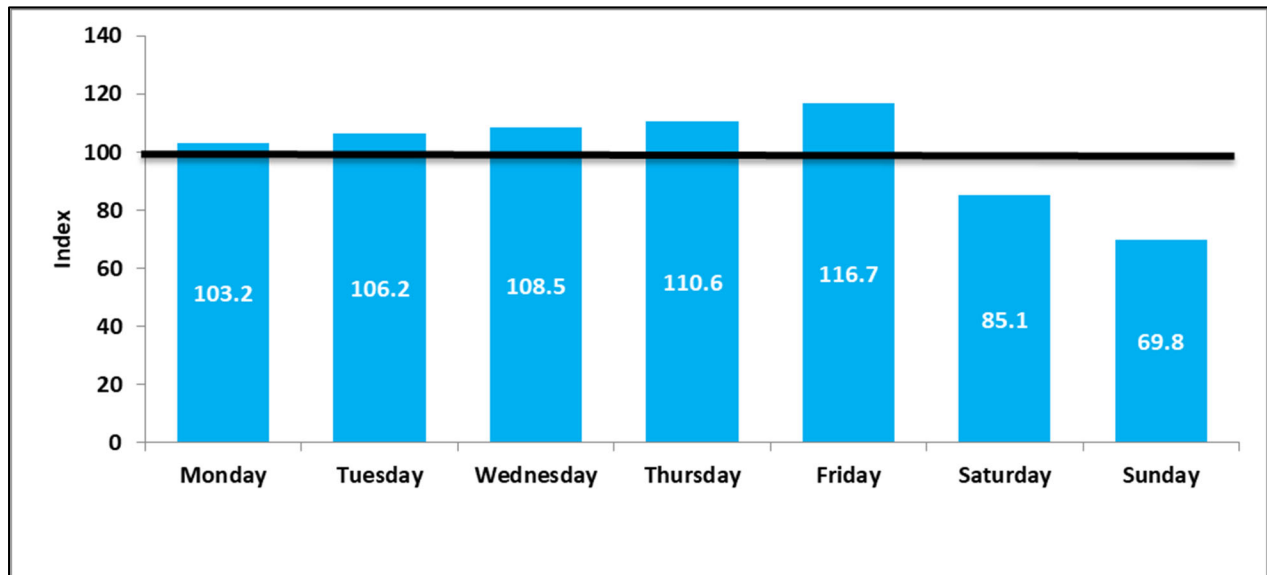


### 7.2.4 DAY-OF-WEEK TRANSACTION VARIATION

**Figure 7-5** contains a comparison of transactions by day of week for FY 2021. This data is presented as an index, where the average day equals 100. An index value of 100 would indicate that a day's transactions were precisely the same as the facility average. A value of 120 would indicate a day that has 20 percent greater volume than the average. As was done in prior years, the data used for this analysis was for a typical week in May 2021, a month that still had some impacts from COVID-19, but these impacts would not have disturbed the variation over the average week. The data includes transactions at mainline plazas only (no ramps).

As shown, weekday transactions on S.R. 414 grew over the course of the week. Transactions were highest on Fridays, with an index value of 116.7 (16.7 percent higher than the average day), volumes on Thursdays had an index value of 110.6, and volumes on Monday through Wednesday ranged from index values of 103.2 to 108.5. Transactions decline significantly on Saturdays and Sundays, which have index values of 85.1 and 69.8, or 14.9 and 30.3 percent lower than the average day also consistent with prior results. This is lower than other CFX facilities probably due to employers in Maitland Center at east end of S.R. 414 being closed on weekends.

**Figure 7-5**  
**S.R. 414 Variation in Transactions, by Day of Week**  
**FY 2021**



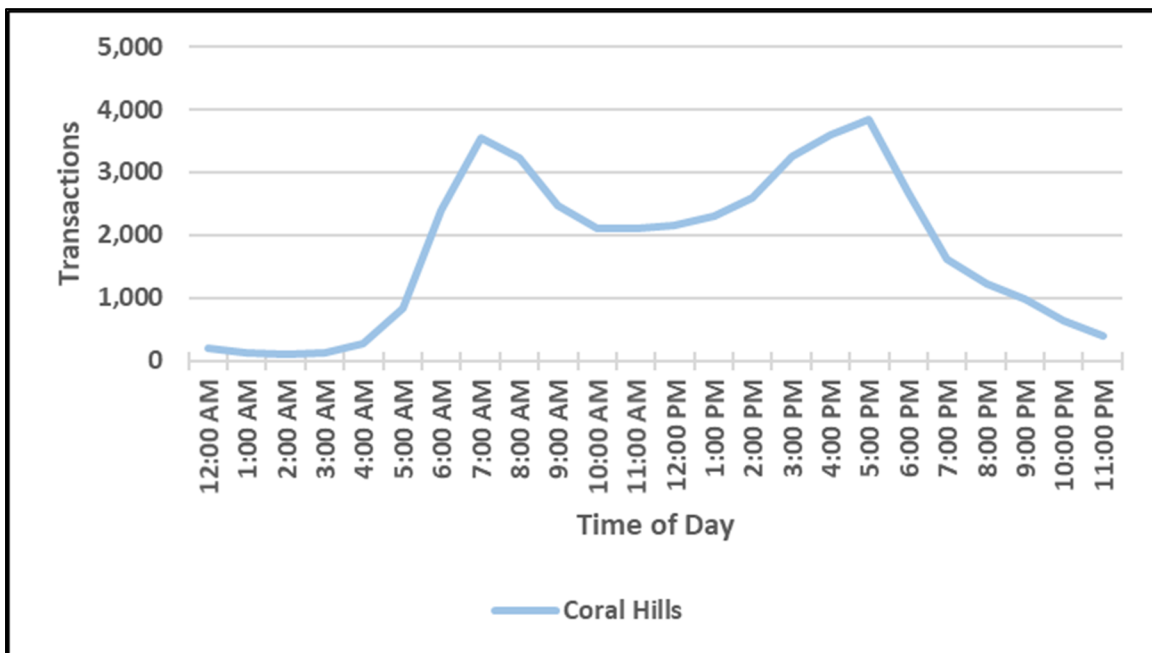
Source: Unaudited lane transaction data – May 2021

### 7.2.5 HOURLY TRAFFIC DISTRIBUTION

The hourly distribution of traffic volumes includes information on the usage characteristics of travel on the facility. The hourly distributions represent counts taken during a typical week at the mainline plaza in the month of May. The typical weekday hourly distribution is shown in **Figure 7-6** and the weekend hourly distribution is shown in **Figure 7-7**. The figures contain the sum of traffic volumes in both directions.

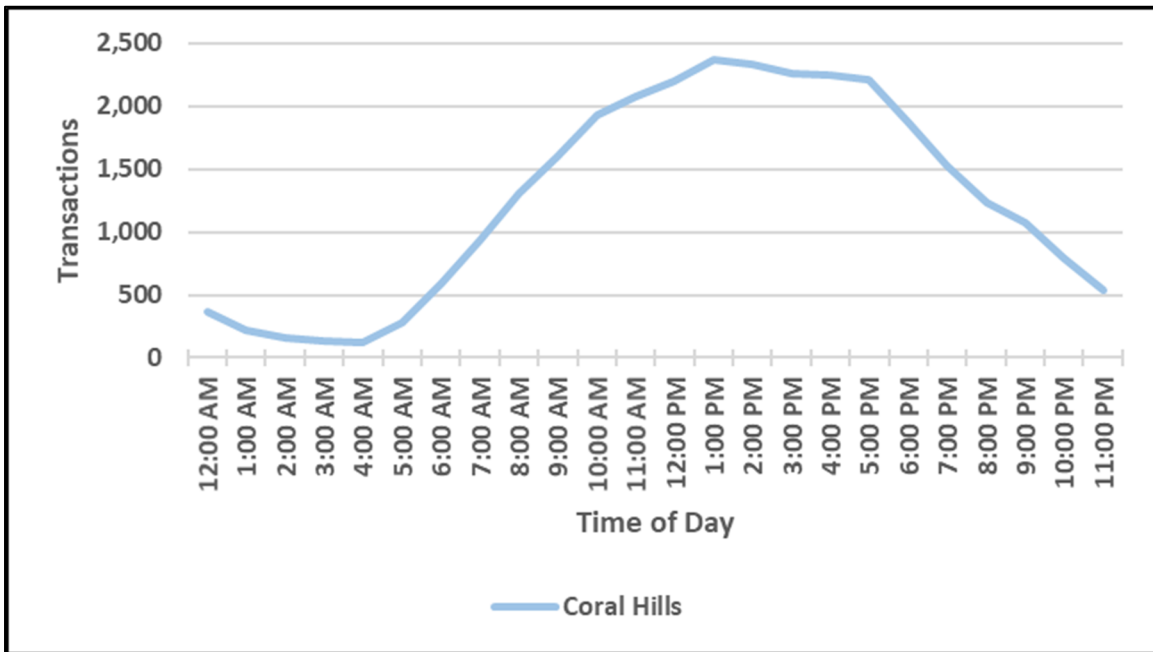
On weekdays, travel demand at the Coral Hills plaza is bimodal, with both morning and evening peak hours. Traffic volumes in the evening peak hours are only slightly higher than in the morning peak hours. The highest peak hour volumes during the week were 3,800 per hour beginning at 5:00 P.M. On weekends, traffic volumes are lower and unimodal in shape. There is no clear morning or evening peak periods, indicating that many customers use the facility for non-work trip purposes during the middle of the weekend day. This weekend pattern is typical of the weekend usage of other CFX facilities.

**Figure 7-6**  
**S.R. 414 Hourly Two-Way Traffic Variation (Weekday)**  
**FY 2021 (May)**



Source: Unaudited lane traffic data – May 2021

**Figure 7-7**  
**S.R. 414 Hourly Two-Way Traffic Variation (Weekend)**  
**FY 2021 (May)**



Source: Unaudited lane traffic data – May 2021

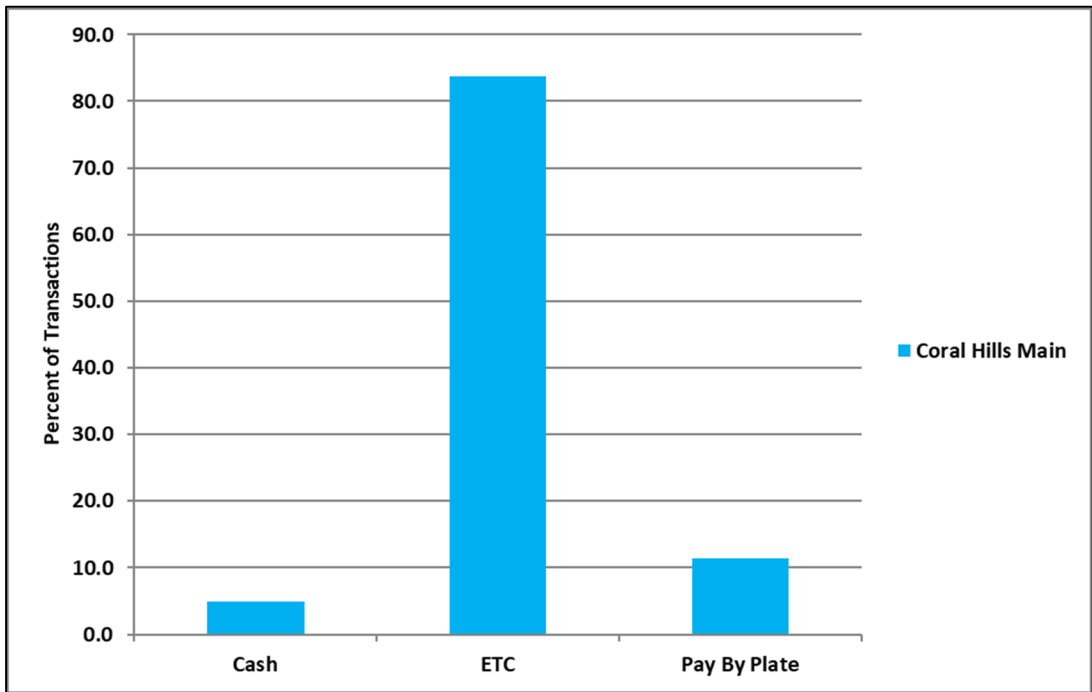
**7.2.6 TRANSACTIONS AND REVENUE BY PAYMENT TYPE**

The distributions of transactions and revenue by payment type for the Coral Hills Main plaza group during FY 2021 are presented in **Figure 7-8** and **Figure 7-9**. Payment types can be classified in one of three ways: cash, ETC, and PBP. As defined in Chapter 1 of this report, paid in-lane transactions and revenue include cash and ETC payments made when a customer travels through a CFX toll location. The remaining transactions and revenue are classified as unpaid in-lane, which includes PBP and a small portion of non-revenue transactions. PBP transactions and revenues are estimated monthly based on a FY 2021 accrual rate of 56 percent of all unpaid in-lane transactions. This means that the PBP transactions and revenue shown here are estimates of the levels that will eventually pay the toll through the PBP process. It is important to note that the data presented in the following two figures is based on unaudited transaction and toll revenue data and may not match the audited data shown in other tables and figures in this chapter.

As shown in Figure 7-8, the share of ETC transactions at the Coral Hills Main plaza group accounted for 83.7 percent, cash transactions accounted for 4.9 percent, and the remaining 11.4 percent were PBP transactions.

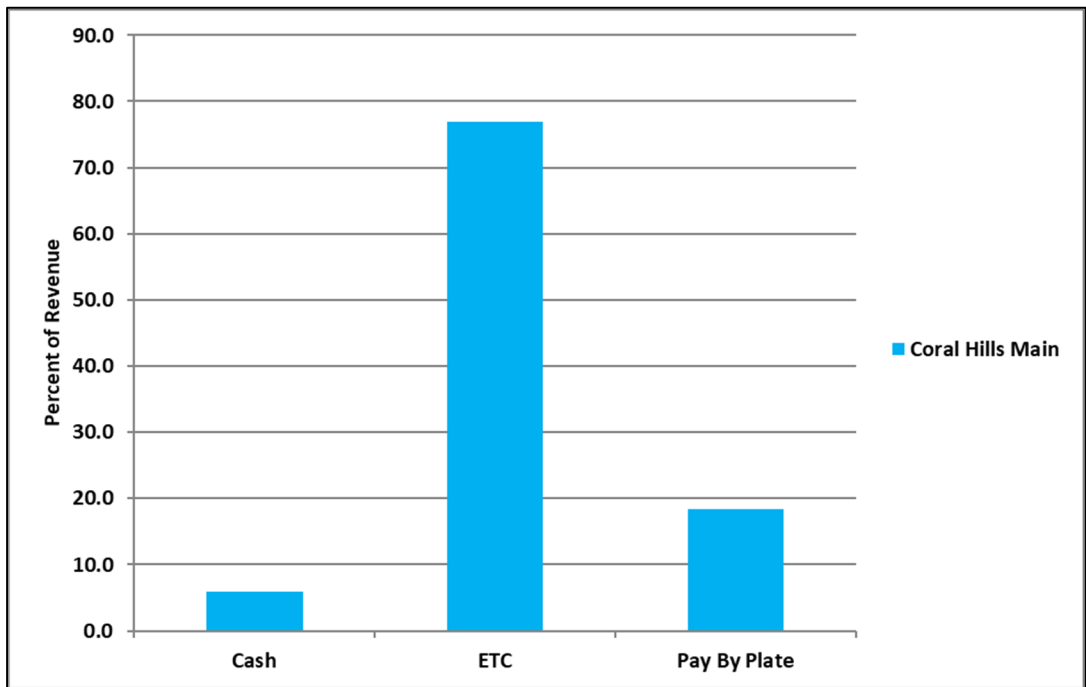
As shown in Figure 7-9, the share of toll revenues by payment type are comparable to the share in transactions, recognizing the differences in the toll paid by payment method. The share of ETC toll revenues accounted for 77.0 percent of toll revenues at the Coral Hills Main plaza group, cash toll revenues accounted for 4.7 percent, and the remaining 18.3 percent were PBP toll revenues.

**Figure 7-8**  
**S.R. 414 Percent of Transactions by Payment Type**  
**FY 2021**



Source: Monthly unaudited data provided by CFX

**Figure 7-9**  
**S.R. 414 Percent of Revenue by Payment Type**  
**FY 2021**



Source: Monthly unaudited data provided by CFX

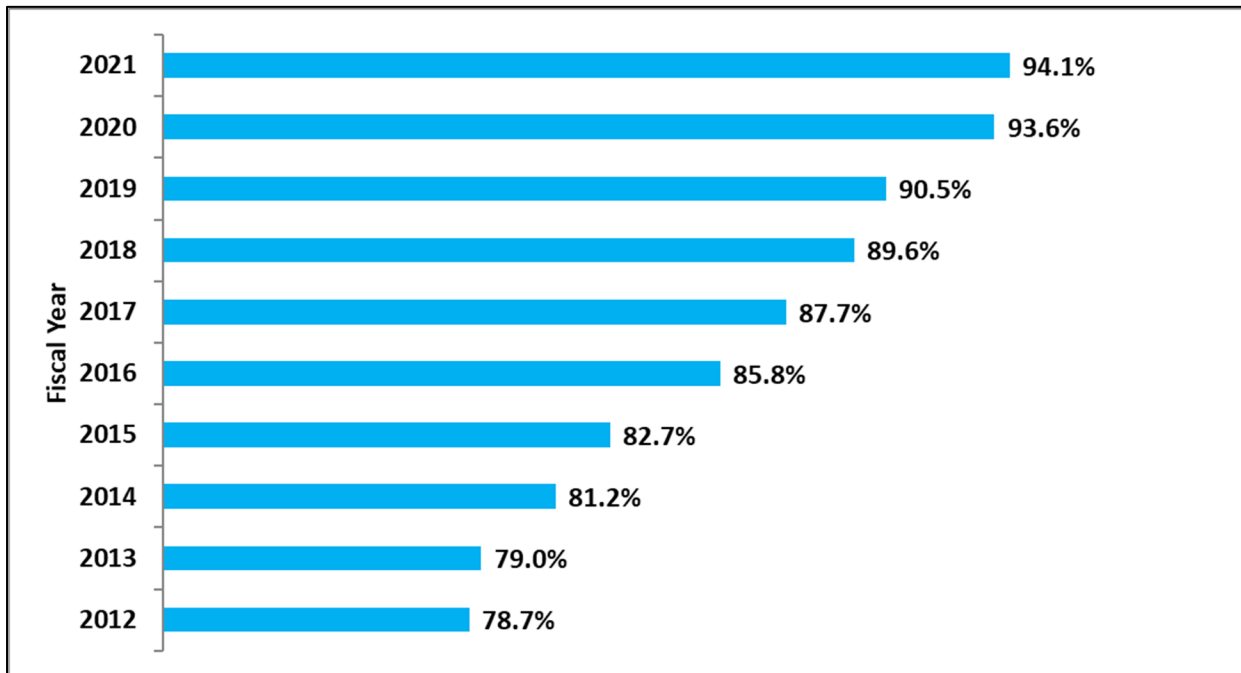
### 7.3 ETC Usage

The shares of paid in-lane revenues generated from ETC over the past ten fiscal years on S.R. 414 are shown in **Figure 7-10**. Cash payments are the other source of paid in-lane revenues. PBP revenues are not included in these results. Over this time, ETC revenues have steadily increased on the facility. In FY 2012, ETC revenues totaled 78.7 percent of total paid in-lane revenues. By the end of FY 2021, ETC revenues reached 94.1 percent. The data below differs from Figure 7-9 because it only includes the annual comparison of paid in-lane revenue and not all revenue types. ETC usage is expected to increase as customers shift from cash to ETC to take advantage of the lower ETC rate especially with implementation of PBP toll rates that are now twice the ETC toll rate as of July 2020 (FY 2021).

Beginning on May 11, 2016, CFX implemented a pilot program called The Reload Lane to encourage and increase E-PASS usage. This program is the first of its kind in the continental United States and provides customer convenience and multiple payment options (cash, check, and debit/credit card). Due to the success of the Reload program, the CFX Board approved the expansion of the Reload Lane capabilities to all manned, mainline toll plaza lanes, expected to be completed in FY 2022.

In June 2021, CFX also launched the Visitor Toll Pass program, which is a free temporary toll pass for rental car customers traveling through the Orlando International Airport. With the pass, rental car customers pay the ETC rates on Florida toll roads with no extra or hidden fees.

**Figure 7-10**  
**S.R. 414 Percent of Paid In-Lane Revenue from Electronic Toll Collection**  
**FY 2012 – FY 2021**



Source: Monthly unaudited data provided by CFX

## 7.4 Forecasted Transactions and Toll Revenues

Based on the recently adopted “Customer First Toll Policy,” toll rate adjustments (indexed tolls) were applied to the T&R forecasts every year based on the net change in CPI for the prior year, which equated to 0.96 percent in CY 2020. Because the change in CPI was lower than the 1.5 percent floor, CDM Smith used 1.5 percent to adjust the FY 2022 toll amounts. At the time of preparing the T&R estimates and this report, CDM Smith learned that the CPI during CY 2021 was 5.08 percent. Based on assurances from CFX, CDM Smith used this value to index toll rates for FY 2023. CDM Smith used the floor of 1.5 percent per year every year thereafter in the forecast period.

Future transportation improvements that could influence the T&R forecasts for S.R. 414, are similar to those that could influence S.R. 429 and include the projects listed in **Table 7-4**, assumed to be completed in each horizon year.

In addition to the S.R. 429/Wekiva Parkway, the major improvements that do not directly connect to S.R. 414 but influence traffic growth on the facility include the I-4 Ultimate project, S.R. 434/Forest City Road from Edgewater Drive to S.R. 414/Maitland Boulevard, and S.R. 414/Maitland Boulevard from Maitland Avenue to I-4. Improvements at S.R. 451 and U.S. 441 are important to T&R estimates in the early years. This feeder road improvement, completed in 2013, extends Vick Road to U.S 441 and the interchange with S.R. 451, to provide a direct connection onto the expressway system. The impacts from the planned S.R. 414 Expressway Extension are not included in these forecasts.

**Table 7-4**  
**S.R. 414 - Key Transportation Improvements**

Facility	From	To	Year	Jurisdiction	Improvement
Interstate 4	SR 434	Kirkman Rd	2025	FDOT	Widen to 10 lanes
SR 429	SR 50	SR 414	2025	CFX	Widen to 6-Lanes
SR 429	CR 535	SR 50	2025	CFX	Widen to 6-Lanes
Wekiva Pkwy	Mount Plymouth Rd	Interstate 4	2025	FDOT	New 4 lane expressway
SR 434/Forest City Rd	Edgewater Drive	Orange County Line	2025	FDOT	Widen to 6-lanes
SR 414/Maitland Blvd	Interstate 4	Maitland Ave	2025	FDOT	Widen to 6-lanes
Kennedy Blvd	Wymore Rd	Forest City Rd (SR 434)	2025	Orange Co	Widen to 4-lanes
SR 414 Direct Connect	US 441	SR 434/Forest City Rd	2025	FDOT/CFX	New 4-lane expressway
SR 434	SR 436	Montgomery Rd	2035	FDOT	Widen to 6-lanes
Pine Hills Road Ext	Beggs Rd	US 441	2035	Orange Co	New 4-lane road
Edgewater Dr	Clarcona Rd	Pine Hills Rd	2035	Orange Co	Widen to 4-lanes



Historical and projected transactions and toll revenues for S.R. 414 are summarized in **Table 7-5** and **Table 7-6**. The tables are divided into paid in-lane transactions and revenue and PBP transactions and revenue. The paid in-lane transactions and revenue include ETC and cash collection.

The paid in-lane transactions on S.R. 414 are expected to grow 4.0 percent per year through FY 2031 and then lower rates through the end of the forecast period. PBP transactions are forecasted to grow an average of 0.6 percent per year through FY 2031, 1.0 percent per year through 2041, and then grow 0.5 percent per year through the forecast period. Total transactions on S.R. 414 are projected to increase during the forecast period from the actual of 15.1 million in FY 2021 to 27.4 million in FY 2051. Because FY 2021 T&R was still in recovery from the COVID-19 pandemic, higher growth rates are anticipated in the short-term forecasts with growth rates decreasing over the forecast period. The paid in-lane revenues on S.R. 414 are projected to increase over the forecast period, from the FY 2021 actual of \$14.8 million to \$43.3 million in FY 2051. PBP revenues are projected to increase from \$3.3 million in FY 2021 to \$7.1 million in FY 2051. Total revenues on S.R. 414 are projected to increase during the forecast period from the actual \$18.1 million in FY 2021 to \$50.4 million in FY 2051. Total transactions and revenues are forecasted to increase an average of 3.7 and 5.7 percent per year through FY 2031, 1.4 and 2.6 percent per year from FY 2031 to FY 2041, and 0.9 and 2.1 percent per year from FY 2041 to FY 2051, respectively.

**Table 7-5**  
**S.R. 414 Plaza Group – Transaction Projections (Millions)**  
**FY 2022 – FY 2051**

Fiscal Year	Coral Hills Main	Paid In-Lane	PBP	Total	Percent Annual Change
2010	5.3	5.3	0.0	5.3	
2011	6.5	6.5	0.1	6.6	24.5%
2012	7.3	7.3	0.1	7.4	12.1%
2013 <sup>A</sup>	8.3	8.3	0.1	8.4	13.5%
2014	9.5	9.5	0.2	9.7	15.5%
2015	10.6	10.6	0.3	10.9	12.4%
2016	12.0	12.0	0.4	12.4	13.8%
2017 <sup>B</sup>	12.8	12.8	0.4	13.2	6.5%
2018 <sup>C,D</sup>	13.4	13.4	0.7	14.1	6.8%
2019 <sup>E</sup>	13.9	13.9	1.3	15.2	7.8%
2020 <sup>F</sup>	13.1	13.1	1.6	14.7	-3.3%
2021 <sup>G</sup>	13.4	13.4	1.7	15.1	2.7%
2022 <sup>H</sup>	14.8	14.8	1.8	16.6	9.9%
2023	16.2	16.2	1.7	17.9	7.8%
2024	17.3	17.3	1.6	18.9	5.6%
2025	17.8	17.8	1.6	19.4	2.6%
2026	18.2	18.2	1.6	19.8	2.1%
2027	18.5	18.5	1.7	20.2	2.0%
2028	18.9	18.9	1.7	20.6	2.0%
2029	19.3	19.3	1.7	21.0	1.9%
2030	19.6	19.6	1.8	21.4	1.9%
2031	19.9	19.9	1.8	21.7	1.4%
2032	20.3	20.3	1.8	22.1	1.8%
2033	20.6	20.6	1.9	22.5	1.8%
2034	20.9	20.9	1.9	22.8	1.3%
2035	21.2	21.2	1.9	23.1	1.3%
2036	21.5	21.5	1.9	23.4	1.3%
2037	21.8	21.8	1.9	23.7	1.3%
2038	22.1	22.1	2.0	24.1	1.7%
2039	22.4	22.4	2.0	24.4	1.2%
2040	22.7	22.7	2.0	24.7	1.2%
2041	23.0	23.0	2.0	25.0	1.2%
2042	23.3	23.3	2.0	25.3	1.2%
2043	23.5	23.5	2.0	25.5	0.8%
2044	23.8	23.8	2.1	25.9	1.6%
2045	24.0	24.0	2.1	26.1	0.8%
2046	24.3	24.3	2.1	26.4	1.1%
2047	24.5	24.5	2.1	26.6	0.8%
2048	24.7	24.7	2.1	26.8	0.8%
2049	24.9	24.9	2.1	27.0	0.7%
2050	25.1	25.1	2.1	27.2	0.7%
2051	25.3	25.3	2.1	27.4	0.7%

Fiscal Year	Compound Annual Average Growth Rate (CAAGR)			
2010 - 2021	8.8%	8.8%		10.0%
2021 - 2031	4.0%	4.0%	0.6%	3.7%
2031 - 2041	1.5%	1.5%	1.1%	1.4%
2041 - 2051	1.0%	1.0%	0.5%	0.9%

Notes:  
 Actual transaction data provided by CFX from Monthly Statistical Reports.  
 A - Systemwide toll rate increase.  
 B - Effects from Hurricane Matthew in October 2016.  
 C - Effects from Hurricane Irma in September 2017.  
 D - Wekiva Parkway opening in FY 2018.  
 E - First year of implementation of "Customer First" toll rate policy.  
 F - Effects from Hurricane Dorian in September 2019 and first effects of COVID-19 pandemic began in March 2020.  
 G - New toll rates for PBP customers, set at 2.0 times the ETC rate. Continued effects of COVID-19 pandemic.  
 H - Completion of I-4 Ultimate project.

**Table 7-6  
S.R. 414 Plaza Group – Toll Revenue Projections (Millions)  
FY 2022 – FY 2051**

Fiscal Year		Coral Hills Main	Paid In-Lane	PBP	Total	Percent Annual Change
2010	Actual	\$4.2	\$4.2	\$0.0	\$4.2	
2011		\$5.1	\$5.1	\$0.1	\$5.2	23.8%
2012		\$5.7	\$5.7	\$0.1	\$5.8	11.5%
2013 <sup>A</sup>		\$7.7	\$7.7	\$0.1	\$7.8	34.5%
2014		\$9.1	\$9.1	\$0.2	\$9.3	19.2%
2015		\$10.4	\$10.4	\$0.3	\$10.7	15.1%
2016		\$12.0	\$12.0	\$0.4	\$12.4	15.9%
2017 <sup>B</sup>		\$13.0	\$13.0	\$0.6	\$13.6	9.7%
2018 <sup>C,D</sup>		\$13.8	\$13.8	\$0.7	\$14.5	6.6%
2019 <sup>E</sup>		\$14.6	\$14.6	\$1.5	\$16.1	11.0%
2020 <sup>F</sup>		\$14.1	\$14.1	\$1.9	\$16.0	-0.6%
2021 <sup>G</sup>		\$14.8	\$14.8	\$3.3	\$18.1	13.1%
2022 <sup>H</sup>	Forecast	\$16.4	\$16.4	\$3.9	\$20.3	12.2%
2023		\$19.5	\$19.5	\$3.9	\$23.4	15.3%
2024		\$20.8	\$20.8	\$3.8	\$24.6	5.1%
2025		\$22.0	\$22.0	\$4.0	\$26.0	5.7%
2026		\$22.9	\$22.9	\$4.1	\$27.0	3.8%
2027		\$23.6	\$23.6	\$4.3	\$27.9	3.3%
2028		\$24.4	\$24.4	\$4.4	\$28.8	3.2%
2029		\$25.1	\$25.1	\$4.5	\$29.6	2.8%
2030		\$25.9	\$25.9	\$4.6	\$30.5	3.0%
2031		\$26.7	\$26.7	\$4.8	\$31.5	3.3%
2032		\$27.5	\$27.5	\$4.9	\$32.4	2.9%
2033		\$28.3	\$28.3	\$5.0	\$33.3	2.8%
2034		\$29.0	\$29.0	\$5.2	\$34.2	2.7%
2035		\$29.8	\$29.8	\$5.3	\$35.1	2.6%
2036		\$30.6	\$30.6	\$5.4	\$36.0	2.6%
2037		\$31.5	\$31.5	\$5.5	\$37.0	2.8%
2038		\$32.3	\$32.3	\$5.7	\$38.0	2.7%
2039		\$33.1	\$33.1	\$5.8	\$38.9	2.4%
2040		\$33.9	\$33.9	\$5.9	\$39.8	2.3%
2041		\$34.8	\$34.8	\$6.0	\$40.8	2.5%
2042	\$35.6	\$35.6	\$6.2	\$41.8	2.5%	
2043	\$36.4	\$36.4	\$6.3	\$42.7	2.2%	
2044	\$37.3	\$37.3	\$6.4	\$43.7	2.3%	
2045	\$38.1	\$38.1	\$6.5	\$44.6	2.1%	
2046	\$39.0	\$39.0	\$6.6	\$45.6	2.2%	
2047	\$39.9	\$39.9	\$6.7	\$46.6	2.2%	
2048	\$40.7	\$40.7	\$6.8	\$47.5	1.9%	
2049	\$41.6	\$41.6	\$6.9	\$48.5	2.1%	
2050	\$42.4	\$42.4	\$7.0	\$49.4	1.9%	
2051	\$43.3	\$43.3	\$7.1	\$50.4	2.0%	

Fiscal Year	Compound Annual Average Growth Rate (CAAGR)			
2010 - 2021	12.1%			14.2%
2021 - 2031	6.1%	6.1%	3.8%	5.7%
2031 - 2041	2.7%	2.7%	2.3%	2.6%
2041 - 2051	2.2%	2.2%	1.7%	2.1%

Notes:

Actual revenue data provided by CFX from Monthly Statistical Reports.

A - Systemwide toll rate increase.

B - Effects from Hurricane Matthew in October 2016.

C - Effects from Hurricane Irma in September 2017.

D - Wekiva Parkway opening in FY 2018.

F - Effects from Hurricane Dorian in September 2019 and first effects of COVID-19 pandemic began in March 2020.

G - New toll rates for PBP customers, set at 2.0 times the ETC rate. Continued effects of COVID-19 pandemic.

H - Completion of I-4 Ultimate project.

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# CHAPTER 8

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S.R. 453





# S.R. 453

## 8.1 Facility Description

S.R. 453 is a 2.0-mile portion of the CFX System locally known as the Wekiva Parkway, which is a new 27-mile expressway that extends S.R. 429 into northwest Orange, northeast Lake, and west Seminole counties. From a CFX vision in the *Year 2000 Long Range Expressway Plan*, completed in 1983, the CFX portion of the Wekiva Parkway is now completed, with the final section opened on April 1, 2018. The FDOT portions of the project are still under construction and are expected to be fully open in 2022. This long-awaited expressway completes a portion of the Western Beltway around the Orlando metropolitan region.



S.R. 453 provides a connection from the Wekiva Parkway northwest to Mount Dora via S.R. 46 in Lake County. S.R. 453 has one mainline toll plaza, the Coronado Main plaza, which opened on April 1, 2018 (FY 2018) with no associated ramp plazas. A map that includes the CFX portion of the Wekiva Parkway (S.R. 453) with the FY 2021 toll rates for the plaza is shown in **Figure 8-1**.

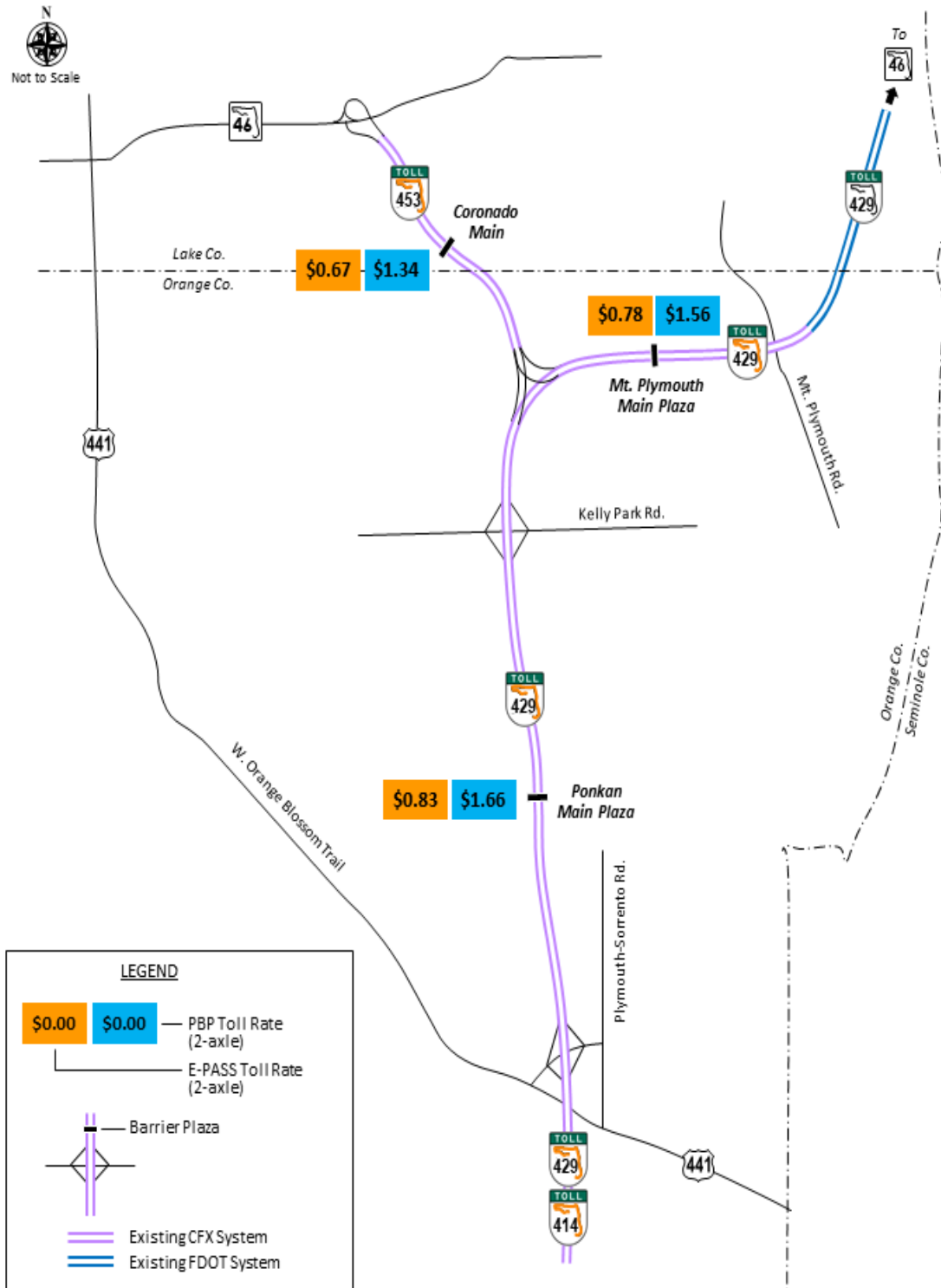
S.R. 453 is a spur or extension of S.R. 429, locally known as “Mount Dora Connector,” that connects to S.R. 46. S.R. 453 runs about 2.2 miles from the Wekiva Parkway, across the Lake County Line to connect to S.R. 46.



Toll collection on the Wekiva Parkway utilizes an all-electronic toll (AET) collection system, i.e., customers are unable to pay cash on the roadway as there are no toll booths, only toll gantries. On the CFX portion of the Wekiva Parkway, customers either

pay with E-PASS or another interoperable transponder or through the PBP video billing process. Video billing customers pay the PBP toll rate, which is twice the ETC rate per transaction and is designed to cover the administrative cost of video billing.

**Figure 8-1  
S.R. 453 Facilities and Toll Rates**





## 8.2 Historical Transactions and Toll Revenues

As defined in Chapter 1, CFX transactions and toll revenues are classified as either Paid In-Lane (ETC and cash) or Unpaid In-Lane (PBP and non-revenue). Total transactions are the sum of paid in-lane and unpaid in-lane transactions. Total revenue is the sum of paid in-lane revenue and the revenue collected through PBP, estimated as an accrued amount. The following section includes a breakdown of transactions and revenues by paid in-lane and PBP.

### 8.2.1 ANNUAL PAID IN-LANE TRANSACTION AND REVENUE TRENDS

The annual paid in-lane transactions for the Coronado Main plaza group through FY 2021 is presented in the top half of **Table 8-1**. Annual historical paid in-lane toll revenues are also summarized and totaled in the bottom half of the table. The facility data and annual growth are also presented visually in **Figure 8-2** and **Figure 8-3**. This table and figures do not include PBP transactions and revenues, only those that are paid in-lane. For this reason, the information presented in this section may differ slightly from the data presented in the FY 2021 Comprehensive Annual Financial Report (CAFR) and other information in this report.

S.R. 453 opened on April 1, 2018 (FY 2018), for a total of three months in FY 2018. FY 2019 was the first full year of toll collection. Total paid in-lane transactions on S.R. 453 at the Coronado Main plaza in FY 2019 were 2.2 million and paid in-lane toll revenues during the same period were \$1.3 million.

As shown, total paid in-lane transactions on S.R. 453 in FY 2020 increased by 0.1 million, or 4.5 percent, compared to FY 2019. Paid in-lane revenues experienced an increase of 23.1 percent during the same period. FY 2020 transactions and revenues were negatively impacted by the effects of the COVID-19 pandemic beginning in March 2020, but also experienced ramp-up, which was greater than the COVID-19 impacts. In FY 2020, September 2019 transactions and revenues were also negatively impacted by toll suspensions during Hurricane Dorian.

FY 2021 paid in-lane transactions increased by 0.7 million, or 30.4 percent, compared to FY 2020. Paid in-lane revenues experienced an increase of \$0.5 million or 31.3 percent during the same period. FY 2021 transactions and revenues were negatively impacted by the continued effects of the COVID-19 pandemic.

**Table 8-1**  
**S.R. 453 Plaza Group – Historical Paid In-Lane Transactions and Revenue**  
**FY 2018 – FY 2021**

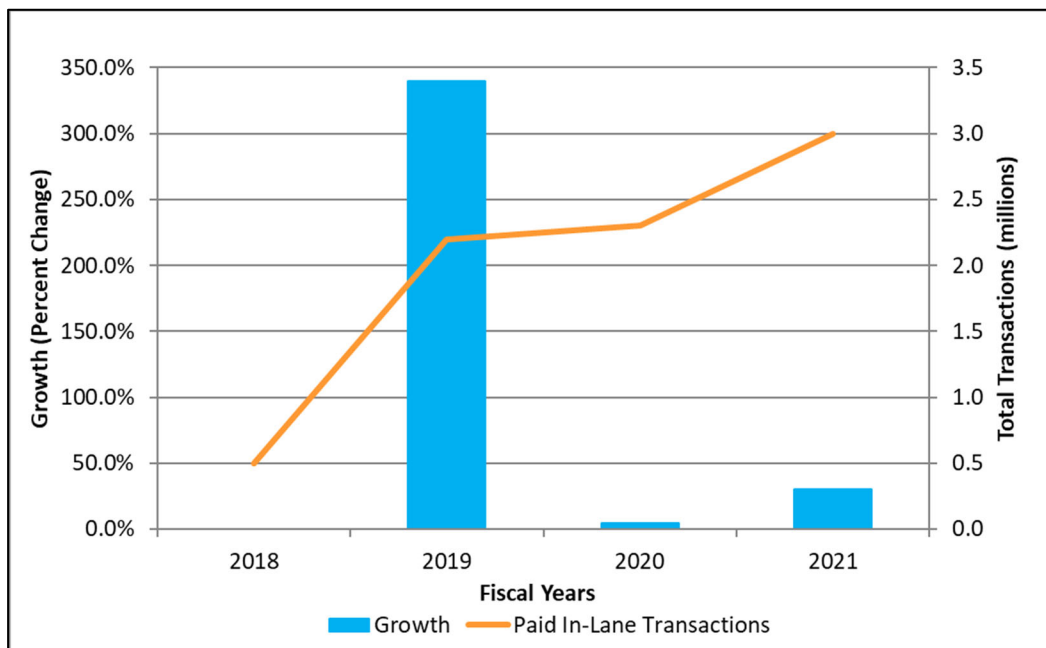
Fiscal Year	Coronado Main	
	TRANSACTIONS (millions)	PERCENT CHANGE
2018 <sup>A</sup>	0.5	
2019	2.2	340.0%
2020 <sup>*,B</sup>	2.3	4.5%
2021 <sup>*,C</sup>	3.0	30.4%
	TOLL REVENUE (millions)	PERCENT CHANGE
2018 <sup>A</sup>	\$0.3	
2019	\$1.3	333.3%
2020 <sup>*,B</sup>	\$1.6	23.1%
2021 <sup>*,C</sup>	\$2.1	31.3%

\*Indicates systemwide toll rate increase according to Customer First Toll Policy

Notes:

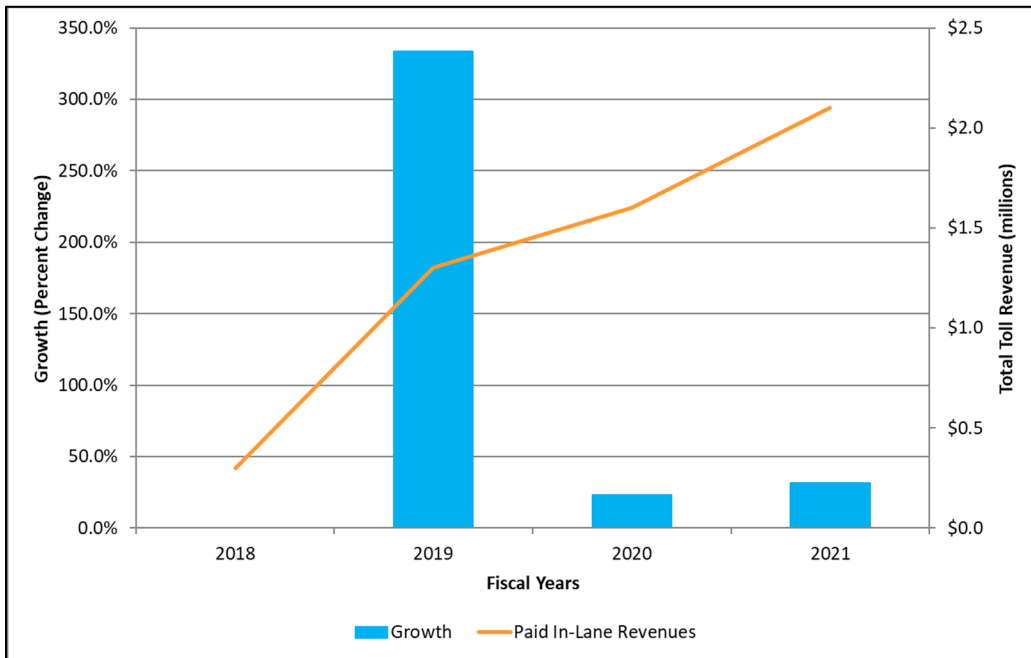
- A - Coronado Main plaza opened on April 1, 2018.
- B - Effects from Hurricane Dorian in September 2019 and first effects of COVID-19 pandemic began in March 2020.
- C - Continued effects of COVID-19 pandemic.

**Figure 8-2**  
**S.R. 453 Historical Paid In-Lane Transactions and Annual Growth**  
**FY 2018 – FY 2021**



Source: Monthly unaudited data provided by CFX

**Figure 8-3**  
**S.R. 453 Historical Paid In-Lane Revenue and Annual Growth**  
**FY 2018 – FY 2021**



Source: CFX Statistical Report June 2021

**8.2.2 ANNUAL PBP TRANSACTION AND REVENUE TRENDS**

A history of annual PBP transactions and toll revenues on S.R. 453 from FY 2018 to FY 2021 is presented in **Table 8-2**. PBP transactions and toll revenues are recorded and accrued monthly, however Table 8-2 shows the annual totals for S.R. 453 as reported at year end.

**Table 8-2**  
**S.R. 453 – Historical PBP Transactions and Revenue**  
**FY 2018 – FY 2021**

Fiscal Year	Transactions (millions)	Percent Change	Toll Revenues (millions)	Percent Change
2018	0.0		\$0.0	
2019	0.2	0.0%	\$0.2	0.0%
2020	0.3	50.0%	\$0.3	50.0%
2021	0.4	33.3%	\$0.6	100.0%

Source: Monthly unaudited data provided by CFX

PBP transactions have increased to 0.4 million in FY 2021, while PBP revenues have increased to \$0.6 million over the same period. The facility still has a small amount of PBP transactions and revenues due to its recent opening in FY 2018 and FY 2019 being the first full year of toll collection. As shown in the table, the rate of growth in PBP transactions has flattened, but with only a few years of data it is difficult to determine a trend. The significant increase in PBP revenues in FY 2021 can be attributed to the new PBP toll rate adopted by the CFX Board that

went into effect on July 1, 2020 (FY 2021), at which time the PBP toll rate at all toll locations was increased to twice the ETC toll rate. Because of the new PBP toll rate, it is anticipated that going forward a portion of customers paying via PBP will switch to ETC to avoid the higher toll rate.

### 8.2.3 MONTHLY PAID IN-LANE TRANSACTION SEASONAL VARIATION

In **Table 8-3**, monthly paid in-lane transactions are normalized to average number of paid in-lane transactions per day in each month. Using average number of paid in-lane transactions per day allows for an easy comparison of the variations in relative travel demand over the year. The pattern of seasonal usage changes slightly from year to year, based on the number of weekdays in each month, but in FY 2021 this seasonality was overshadowed by the impacts on travel demand from the COVID-19 pandemic. Therefore, the factors in Table 8-3 do not reflect the typical monthly seasonal trends on S.R. 453. Instead, these factors include the recovery from COVID-19.

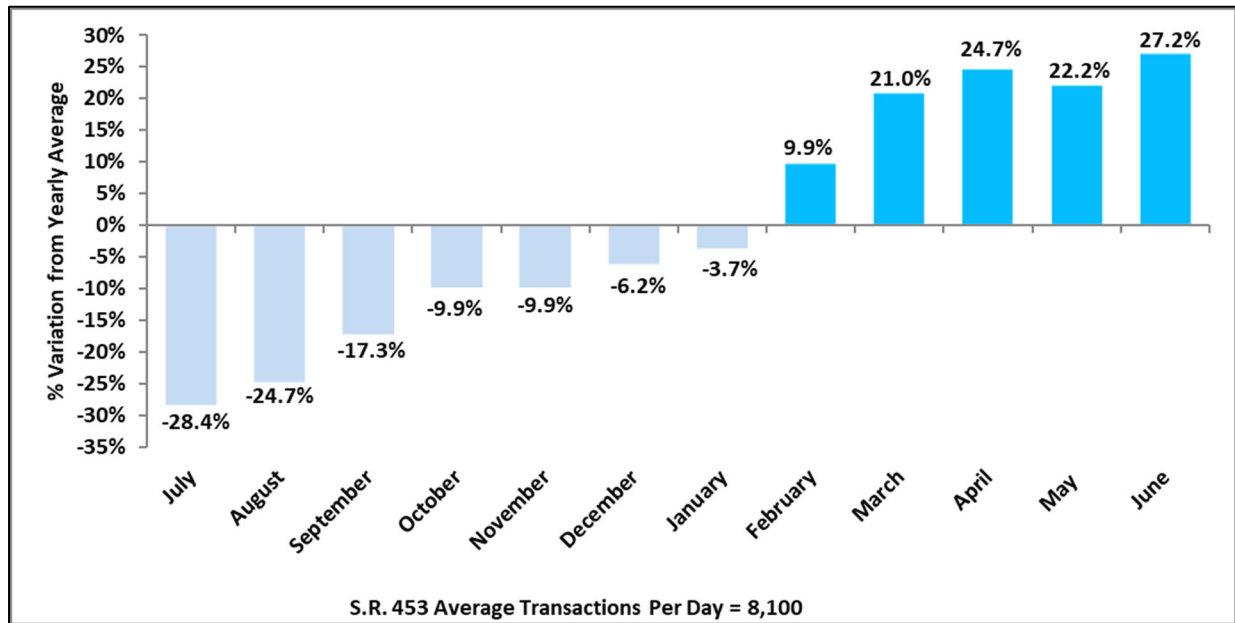
As presented, average paid in-lane transactions per day in FY 2021 on S.R. 453 ranged from a low of 5,800 in July 2020 to a high of 10,300 in June 2021. Like other CFX facilities, peak season is typically during spring months as there are more tourists in the area (possibly snowbirds) during the second half of the fiscal year. This data is presented in a graphical format in **Figure 8-4**. Each month's average paid in-lane transactions per day appear as a percentage of the average for the fiscal year. June paid in-lane transactions were 27.2 percent above average and July paid in-lane transactions were 28.4 percent below average for the facility.

**Table 8-3**  
**S.R. 453 – Monthly Seasonal Variation in Paid In-Lane Transactions**  
**FY 2021**

Month	Number of Days in Month	Total Toll Paying Transactions	Average Transactions/day	Seasonal Factor
July	31	181,069	5,800	0.716
August	31	189,575	6,100	0.753
September	30	202,064	6,700	0.827
October	31	227,577	7,300	0.901
November	30	217,566	7,300	0.901
December	31	236,251	7,600	0.938
January	31	242,051	7,800	0.963
February	28	249,086	8,900	1.099
March	31	303,841	9,800	1.210
April	30	303,156	10,100	1.247
May	31	305,900	9,900	1.222
June	30	308,015	10,300	1.272
<b>Average</b>		<b>988,717</b>	<b>8,100</b>	<b>1.000</b>
<b>Total Year</b>	<b>365</b>	<b>2,966,151</b>		

Source: Monthly unaudited data provided by CFX

**Figure 8-4**  
**S.R. 453 Variation in Paid In-Lane Transactions Per Day, by Month**  
**FY 2021**



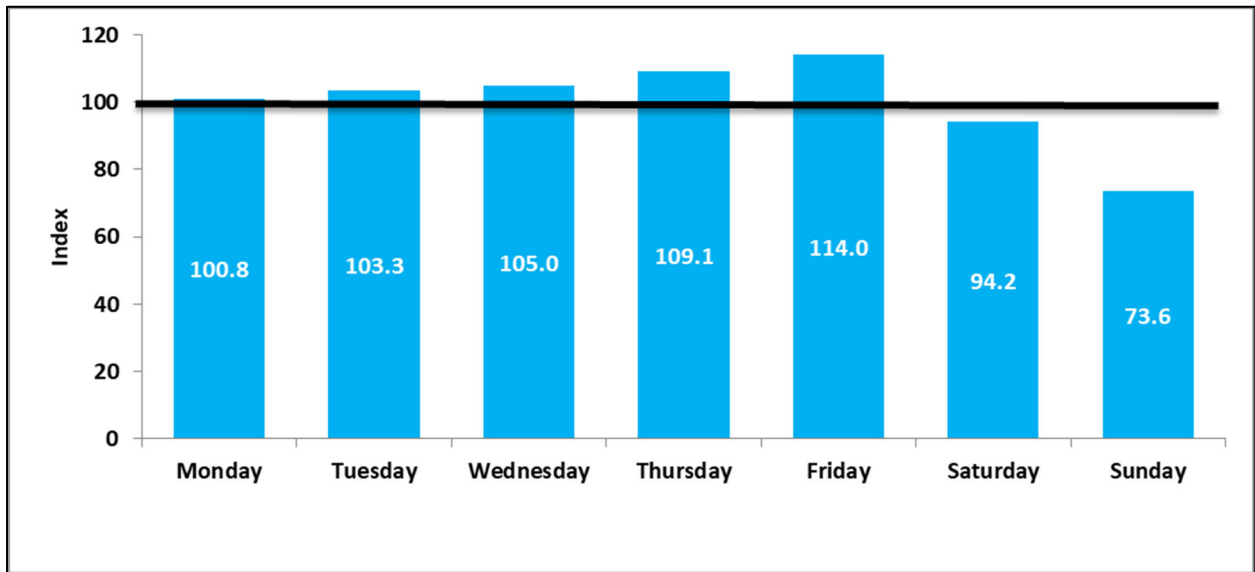
Source: Monthly unaudited data provided by CFX

**8.2.4 DAY-OF-WEEK TRANSACTION VARIATION**

Figure 8-5 contains a comparison of transactions by day of the week for FY 2021. This data is presented as an index, where the average day equals 100. An index value of 100 would indicate that the day’s transactions were precisely the same volume as the facility average. A value of 120 would indicate a day that has 20 percent greater volume than the average. As was done in prior years, the data used for this analysis was for a typical week in May 2021, a month that may have had some impacts from COVID-19, but these impacts would not have disturbed the variation over the average week. The data includes transactions at mainline plazas only (no ramps).

FY 2021 weekday transactions on S.R. 453 fluctuated over the course of the five-day work week. Transactions were highest on Fridays, with an index value of 114.0 (14.0 percent higher than the average day), volumes on Monday through Thursday ranged from index values of 100.8 to 109.1. Saturday volumes were slightly lower than weekday volumes with an index value of 94.2, which is still high for a weekend day. Transactions decline on Sunday, which has an index value of 73.6, or 26.4 percent lower than the average day.

**Figure 8-5**  
**S.R. 453 Variation in Transactions, by Day of Week**  
**FY 2021**



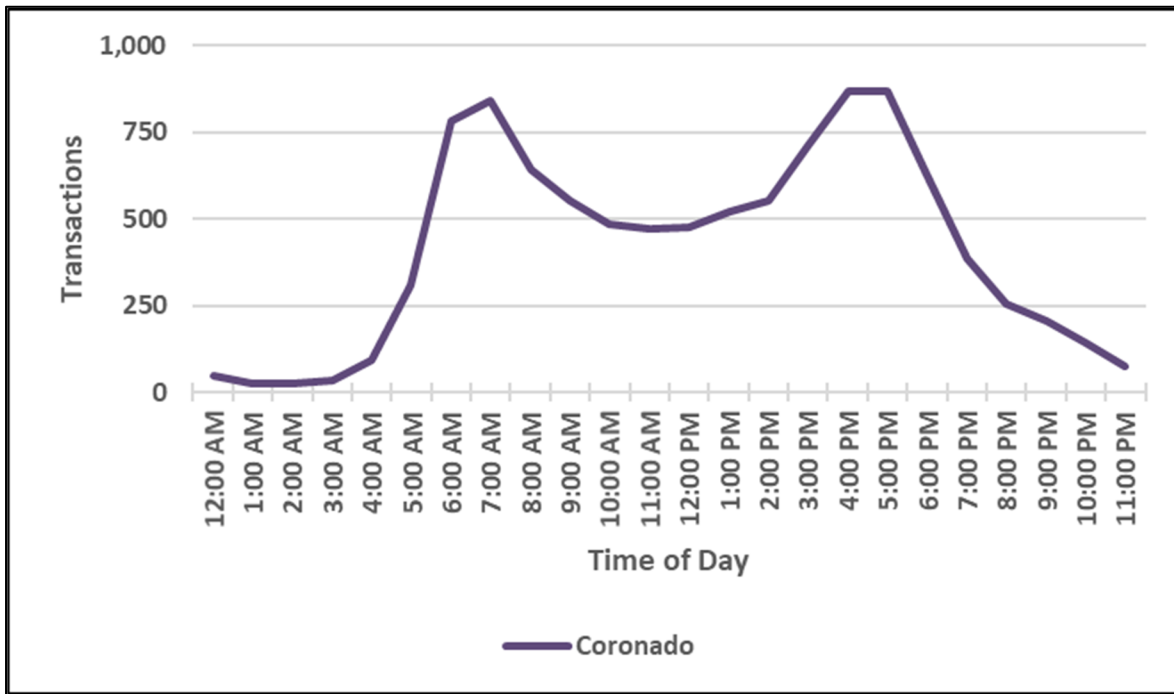
Source: Unaudited lane transaction data – May 2021

**8.2.5 HOURLY TRAFFIC DISTRIBUTION**

The hourly distribution of traffic volumes includes information on the usage characteristics of the facility. The hourly distributions represent counts taken during a typical week at the mainline toll plazas in the month of May. The typical weekday hourly distribution is shown in **Figure 8-6** and the weekend hourly distribution is shown in **Figure 8-7**. The figures contain the sum of traffic volumes in both directions.

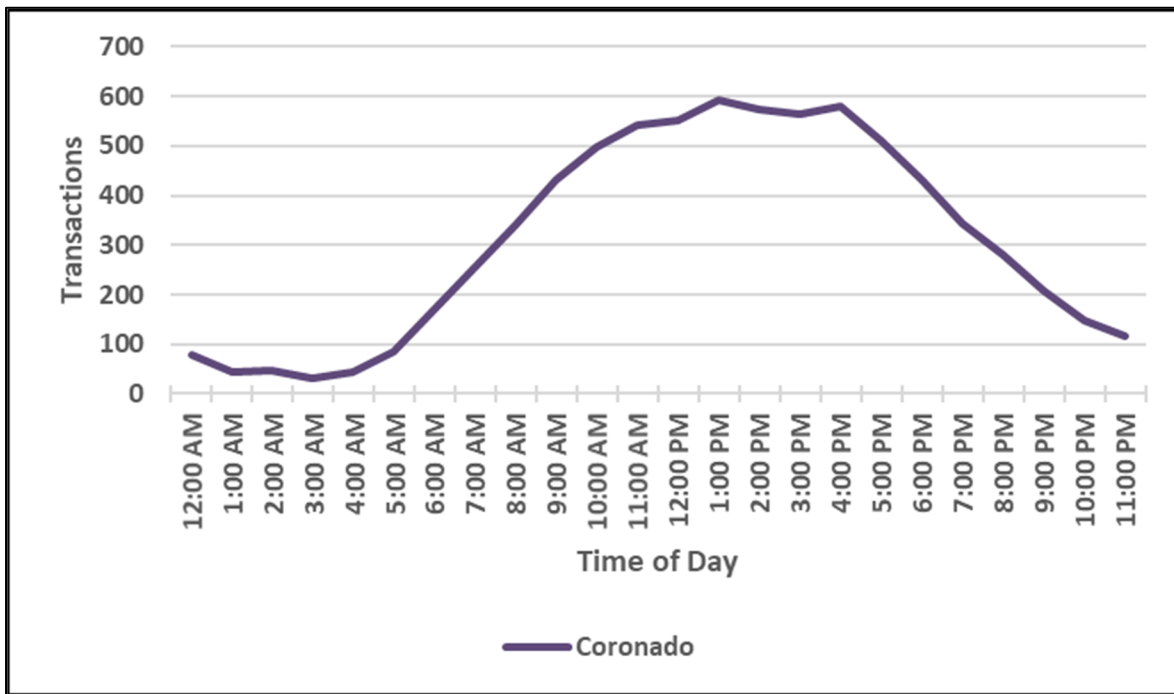
On weekdays on S.R. 453, demand for travel is bimodal, with both morning and evening peak hours. The Coronado mainline plaza experiences slightly higher peak hour volumes in the evening than in the morning, but the peak volumes in morning and evening are very close indicating a commuter type pattern. The highest peak hour volumes during the week were 1,100 per hour beginning at 5:00 p.m. On weekends, the distribution of traffic over the day is unimodal, with uniformly high volumes from 10:00 a.m. through 5:00 p.m.

**Figure 8-6**  
**S.R. 453 Hourly Two-Way Traffic Variation (Weekday)**  
**FY 2021 (May)**



Source: Unaudited lane traffic data – May 2021

**Figure 8-7**  
**S.R. 453 Hourly Two-Way Traffic Variation (Weekend)**  
**FY 2021 (May)**



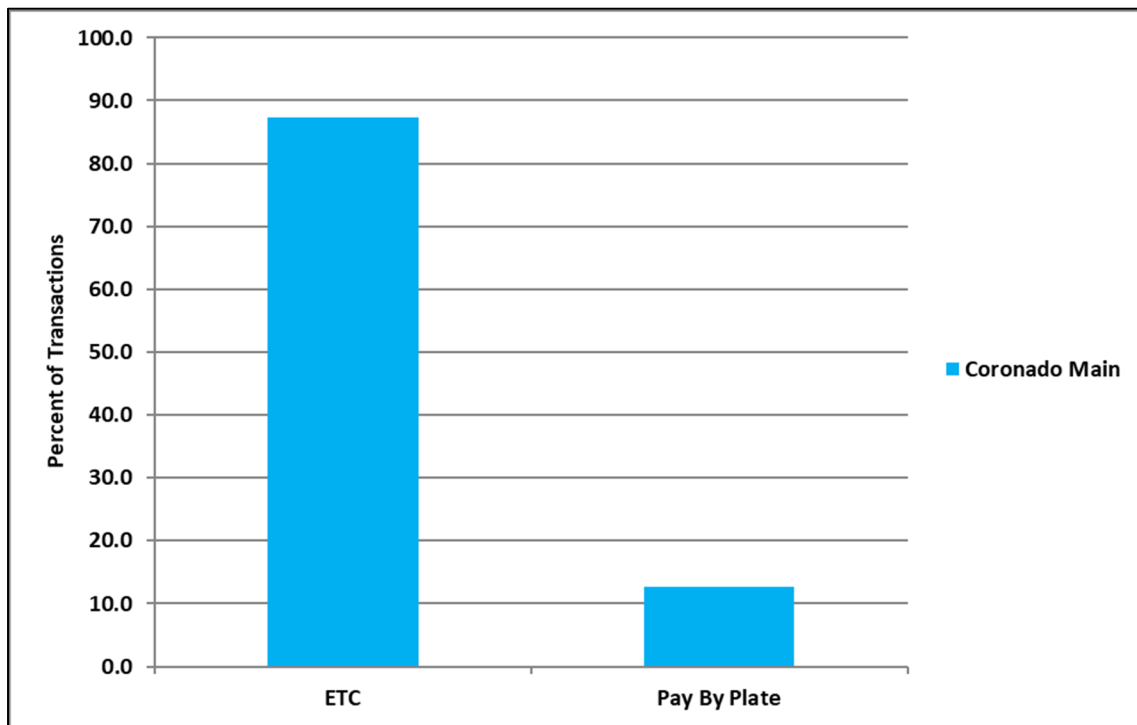
Source: Unaudited lane traffic data – May 2021

### 8.2.6 TRANSACTIONS AND REVENUE BY PAYMENT TYPE

The distributions of transactions and revenue by payment type during FY 2021 are presented in **Figure 8-8** and **Figure 8-9**. Payment types on S.R. 453 can be classified in one of two ways: ETC and PBP. The Coronado Main plaza is an AET facility, so there is no cash collection. PBP transactions and revenues are estimated monthly based on a FY 2021 accrual rate of 56 percent of all unpaid in-lane transactions. This means that the PBP transactions and revenue shown here are estimates of the levels that will eventually pay tolls through the PBP process. It is important to note that the data presented in the following two figures is based on unaudited transaction and toll revenue data and may not match the audited data shown in other tables and figures in this chapter.

As shown in Figure 8-8, the share of ETC transactions at the Coronado Main plaza accounted for 87.4 percent and the remaining 12.6 percent were PBP transactions. As shown in Figure 8-9, the share of toll revenues by payment type is comparable to the share in transactions, recognizing the differences in the toll paid by payment method. The share of ETC toll revenues accounted for 78.9 percent of toll revenues at the Coronado Main plaza and 21.1 percent PBP toll revenues, higher due to the new PBP toll rate policy implemented in FY 2021.

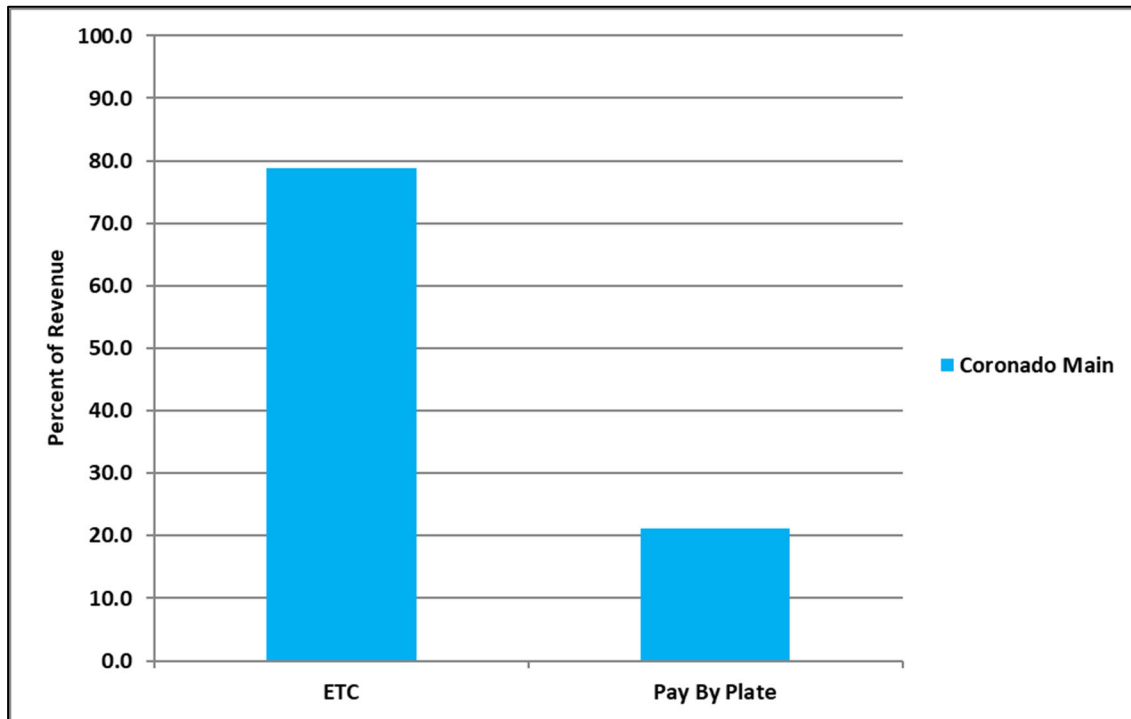
**Figure 8-8**  
**S.R. 453 Percent of Transactions by Payment Type**  
**FY 2021**



Source: Monthly unaudited data provided by CFX



**Figure 8-9**  
**S.R. 453 Percent of Revenue by Payment Type**  
**FY 2021**



Source: Monthly unaudited data provided by CFX

### 8.3 Forecasted Transactions and Toll Revenues

Based on the recently adopted “Customer First Toll Policy,” toll rate adjustments (indexed tolls) were applied to the T&R forecasts every year based on the net change in CPI for the prior year, which equated to 0.96 percent in CY 2020. Because the change in CPI was lower than the 1.5 percent floor, CDM Smith used 1.5 percent to adjust the FY 2022 toll amounts. At the time of preparing the T&R estimates and this report, CDM Smith learned that the CPI during CY 2021 was 5.08 percent. Based on assurances from CFX, CDM Smith used this value to index toll rates for FY 2023. CDM Smith used the floor of 1.5 percent per year every year thereafter in the forecast period.

Future transportation improvements that influence the T&R forecasts for S.R. 453, are similar to those that could influence S.R. 429, which include the projects listed in **Table 8-4**, assumed to be completed in each forecast year. Several of the planned improvements listed in Metroplan Orlando’s Long Range Transportation Plan and Orange County’s 10 Year Transportation Plan provide an upgrade to the transportation system to NW Orange County. Many facilities including Silver Star Road, Plant Street and Avalon Road, serve as feeder roads to S.R. 429 and positively impact T&R in the near term and long-term forecasts. System improvements impacting S.R. 453 include the widening of S.R. 429 from C.R. 535 to S.R. 414 in the near term and from C.R. 535 to Seidel Road in the long-term forecast. Also, the completion of the S.R. 429/Wekiva Parkway has changed travel patterns in this area of NW Orange County and NE Lake County. Virtually any

improvement which provides additional connectivity to S.R. 429 from the south and east will inherently benefit S.R. 453 as well. The construction of the Wekiva Parkway has delayed the need to improve some of the parallel facilities such as Plymouth–Sorrento Road, Round Lake Road and Rock Springs Road.

**Table 8-4**  
**S.R. 453 - Key Transportation Improvements**

Facility	From	To	Year	Jurisdiction	Improvement
Interstate 4	SR 434	Kirkman Road	2025	FDOT	Widen to 10 lanes
SR 429	SR 50	SR 414	2025	CFX	Widen to 6-Lanes
SR 429	CR 535	SR 50	2025	CFX	Widen to 6-Lanes
Wekiva Parkway	Mount Plymouth Road	Interstate 4	2025	FDOT	New 4 lane expressway
Lake/Orange County Connector (SR 516)	US 27	SR 429	2025	CFX	New 4 lane expressway
New Independence Pkwy	Lake County Line	SR 429	2035	Orange County	New/Widen 4 Lanes
SR 438/Silver Star Rod	SR 429	Bluford Avenue	2035	FDOT	Widen to 4-lanes
Avalon Road (CR 545)	Seidel Road	New Independence Pkwy	2035	Orange County	Widen to 4 Lanes
Avalon Road (CR 545)	New Independence Pkwy	SR 50	2035	Orange County	Widen to 4 Lanes
Ocoee-Apopka Road	Silver Star Road	Clarcona-Ocoee Road	2035	Orange County	Widen to 4 Lanes
SR 414 Expressway Extension	US 441	SR 434/Forest City Road	2035	FDOT/CFX	New 4-lane expressway
SR 429	Schofield Road	CR 535	2035	CFX	Widen to 6-Lanes
Plymouth Sorrento Road	US 441	Orange County Line	2045	Orange County	Widen to 6-lanes
Ponkan Road	Plymouth Sorrento Road	CR 437	2045	Orange County	Widen to 6-lanes
Sadler Road	US 441	Mt Plymouth Road	2045	Orange County	Widen to 6-lanes
Plant Street (SR 438)	9th Street	West Crown Point Rd	2045	FDOT	Widen to 4-lanes

The Coronado Main plaza opened on April 1, 2018 (FY 2018). Historical and projected transactions and toll revenues for S.R. 453 are summarized in **Table 8-5** and **Table 8-6**. The tables are divided into paid in-lane transactions and revenue and PBP transactions and revenue. Paid in-lane transactions and revenue include ETC as cash collection is not an option.

The paid in-lane transactions on S.R. 453 are expected to grow 6.1 percent per year through FY 2031 and then lower rates through the end of the forecast period because of the impact of continued toll rate adjustments. PBP transactions are forecasted to increase 2.3 percent per year through FY 2031, 3.4 percent per year through FY 2041, and then remain flat through the forecast period. Total transactions on S.R. 453 are projected to increase during the forecast period from the actual of 3.4 million in FY 2021 to 9.2 million in FY 2051. Because FY 2021 T&R was still in recovery from the COVID-19 pandemic, higher growth rates are anticipated in the short-term forecasts with growth rates decreasing over the forecast period. During the FY 2022 through FY 2051 forecast period, S.R. 453 traffic is expected to increase an average of 5.7 percent per year from FY 2021 to FY 2031 (due to ramp-up), 2.7 percent per year from FY 2031 to FY 2041 and 1.8 percent per year from FY 2041 to FY 2051. The paid in-lane revenues on S.R. 453 are projected to increase over the forecast period, from the FY 2021 actual of \$2.1 million to \$9.2 million in FY 2051. PBP revenues are projected to increase from \$0.6 million in FY 2021 to \$1.4 million in FY 2051. Total revenue on S.R. 453 is projected to increase from the actual of \$2.7 million in FY 2021 to \$10.6 million in FY 2051. Revenue is expected to increase an average of 7.0 percent per year from FY 2021 to FY 2031 (again due to ramp-up), 3.9 percent per year from FY 2031 to FY 2041 and 3.1 percent per year from FY 2041 to FY 2051.

**Table 8-5**  
**S.R. 453 Plaza Group – Transaction Projections (Millions)**  
**FY 2022 – FY 2051**

Fiscal Year	Coronado Main	Paid In-Lane	PBP	Total	Percent Annual Change
2010					
2011					
2012					
2013					
2014					
2015					
2016					
2017					
2018 <sup>A</sup>	0.5	0.5	0.0	0.5	
2019 <sup>B</sup>	2.2	2.2	0.2	2.4	380.0%
2020 <sup>C</sup>	2.3	2.3	0.3	2.6	8.3%
2021 <sup>D</sup>	3.0	3.0	0.4	3.4	30.8%
2022 <sup>E</sup>	3.6	3.6	0.5	4.1	20.6%
2023	4.0	4.0	0.4	4.4	7.3%
2024	4.4	4.4	0.4	4.8	9.1%
2025	4.6	4.6	0.4	5.0	4.2%
2026	4.7	4.7	0.5	5.2	4.0%
2027	4.8	4.8	0.5	5.3	1.9%
2028	5.0	5.0	0.5	5.5	3.8%
2029	5.1	5.1	0.5	5.6	1.8%
2030	5.2	5.2	0.5	5.7	1.8%
2031	5.4	5.4	0.5	5.9	3.5%
2032	5.5	5.5	0.5	6.0	1.7%
2033	5.7	5.7	0.5	6.2	3.3%
2034	5.9	5.9	0.6	6.5	4.8%
2035	6.0	6.0	0.6	6.6	1.5%
2036	6.2	6.2	0.6	6.8	3.0%
2037	6.4	6.4	0.6	7.0	2.9%
2038	6.5	6.5	0.6	7.1	1.4%
2039	6.7	6.7	0.6	7.3	2.8%
2040	6.9	6.9	0.6	7.5	2.7%
2041	7.0	7.0	0.7	7.7	2.7%
2042	7.2	7.2	0.7	7.9	2.6%
2043	7.3	7.3	0.7	8.0	1.3%
2044	7.5	7.5	0.7	8.2	2.5%
2045	7.6	7.6	0.7	8.3	1.2%
2046	7.8	7.8	0.7	8.5	2.4%
2047	7.9	7.9	0.7	8.6	1.2%
2048	8.1	8.1	0.7	8.8	2.3%
2049	8.2	8.2	0.7	8.9	1.1%
2050	8.3	8.3	0.7	9.0	1.1%
2051	8.5	8.5	0.7	9.2	2.2%

Fiscal Year	Compound Annual Average Growth Rate (CAAGR)			
2018 - 2021	81.7%	81.7%		89.5%
2021 - 2031	6.1%	6.1%	2.3%	5.7%
2031 - 2041	2.6%	2.6%	3.4%	2.7%
2041 - 2051	2.0%	2.0%	0.0%	1.8%

Notes:

Actual transaction data provided by CFX from Monthly Statistical Reports.

A - Coronado Main opened on April 1, 2018 (FY 2018).

B - First year of implementation of "Customer First" toll rate policy.

C - Effects from Hurricane Dorian in September 2019 and first effects of COVID-19 pandemic began in March 2020.

D - New toll rates for PBP customers, set at 2.0 times the ETC rate. Continued effects of COVID-19 pandemic.

E - Completion of I-4 Ultimate project.

**Table 8-6**  
**S.R. 453 Plaza Group – Toll Revenue Projections (Millions)**  
**FY 2022 – FY 2051**

Fiscal Year	Coronado Main	Paid In-Lane	PBP	Total	Percent Annual Change
2010					
2011					
2012					
2013					
2014					
2015					
2016					
2017					
2018 <sup>A</sup>	\$0.3	\$0.3	\$0.0	\$0.3	
2019 <sup>B</sup>	\$1.3	\$1.3	\$0.2	\$1.5	400.0%
2020 <sup>C</sup>	\$1.6	\$1.6	\$0.3	\$1.9	26.7%
2021 <sup>D</sup>	\$2.1	\$2.1	\$0.6	\$2.7	42.1%
2022 <sup>E</sup>	\$2.6	\$2.6	\$0.6	\$3.2	18.5%
2023	\$3.1	\$3.1	\$0.6	\$3.7	15.6%
2024	\$3.4	\$3.4	\$0.6	\$4.0	8.1%
2025	\$3.6	\$3.6	\$0.6	\$4.2	5.0%
2026	\$3.7	\$3.7	\$0.6	\$4.3	2.4%
2027	\$3.9	\$3.9	\$0.7	\$4.6	7.0%
2028	\$4.0	\$4.0	\$0.7	\$4.7	2.2%
2029	\$4.2	\$4.2	\$0.7	\$4.9	4.3%
2030	\$4.4	\$4.4	\$0.7	\$5.1	4.1%
2031	\$4.5	\$4.5	\$0.8	\$5.3	3.9%
2032	\$4.7	\$4.7	\$0.8	\$5.5	3.8%
2033	\$4.9	\$4.9	\$0.8	\$5.7	3.6%
2034	\$5.1	\$5.1	\$0.9	\$6.0	5.3%
2035	\$5.3	\$5.3	\$0.9	\$6.2	3.3%
2036	\$5.6	\$5.6	\$0.9	\$6.5	4.8%
2037	\$5.8	\$5.8	\$1.0	\$6.8	4.6%
2038	\$6.0	\$6.0	\$1.0	\$7.0	2.9%
2039	\$6.2	\$6.2	\$1.0	\$7.2	2.9%
2040	\$6.5	\$6.5	\$1.1	\$7.6	5.6%
2041	\$6.7	\$6.7	\$1.1	\$7.8	2.6%
2042	\$6.9	\$6.9	\$1.1	\$8.0	2.6%
2043	\$7.2	\$7.2	\$1.2	\$8.4	5.0%
2044	\$7.4	\$7.4	\$1.2	\$8.6	2.4%
2045	\$7.7	\$7.7	\$1.2	\$8.9	3.5%
2046	\$7.9	\$7.9	\$1.3	\$9.2	3.4%
2047	\$8.2	\$8.2	\$1.3	\$9.5	3.3%
2048	\$8.4	\$8.4	\$1.3	\$9.7	2.1%
2049	\$8.7	\$8.7	\$1.4	\$10.1	4.1%
2050	\$8.9	\$8.9	\$1.4	\$10.3	2.0%
2051	\$9.2	\$9.2	\$1.4	\$10.6	2.9%

Fiscal Year	Compound Annual Average Growth Rate (CAAGR)			
2018 - 2021	91.3%	91.3%		108.0%
2021 - 2031	7.9%	7.9%	2.9%	7.0%
2031 - 2041	4.1%	4.1%	3.2%	3.9%
2041 - 2051	3.2%	3.2%	2.4%	3.1%

Notes:

Actual revenue data provided by CFX from Monthly Statistical Reports.

A - Coronado Main opened on April 1, 2018 (FY 2018).

B - First year of implementation of "Customer First" toll rate policy.

C - Effects from Hurricane Dorian in September 2019 and first effects of COVID-19 pandemic began in March 2020.

D - New toll rates for PBP customers, set at 2.0 times the ETC rate. Continued effects of COVID-19 pandemic.

E - Completion of I-4 Ultimate project.



# CHAPTER 9

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S.R. 538

(POINCIANA PARKWAY)





# S.R. 538 (POINCIANA PARKWAY)

## 9.1 Facility Description

The Poinciana Parkway is a 7.2 mile-long, two-lane, two-way, limited access toll road extending from the Cypress Parkway in Poinciana north to an intersection with US 17/92 near the Polk-Osceola County line. The Poinciana Parkway was developed by the Osceola County Expressway Authority (OCX) and opened to traffic in April of 2016. The facility has been operated by CFX for the County since opening. In 2014, the Florida Legislature required that CFX consider acquiring the Poinciana Parkway as part of the legislation (SB 230) creating and expanding the geographic base of CFX. At their December 2019 Board meeting, the CFX Board unanimously approved the acquisition of the Poinciana Parkway, effective December 31, 2019, CFX assumed all governance, control, and maintenance of the Poinciana Parkway. The Parkway has two mainline toll plazas, the Marigold Main and Koa Main, with no associated ramp plazas.

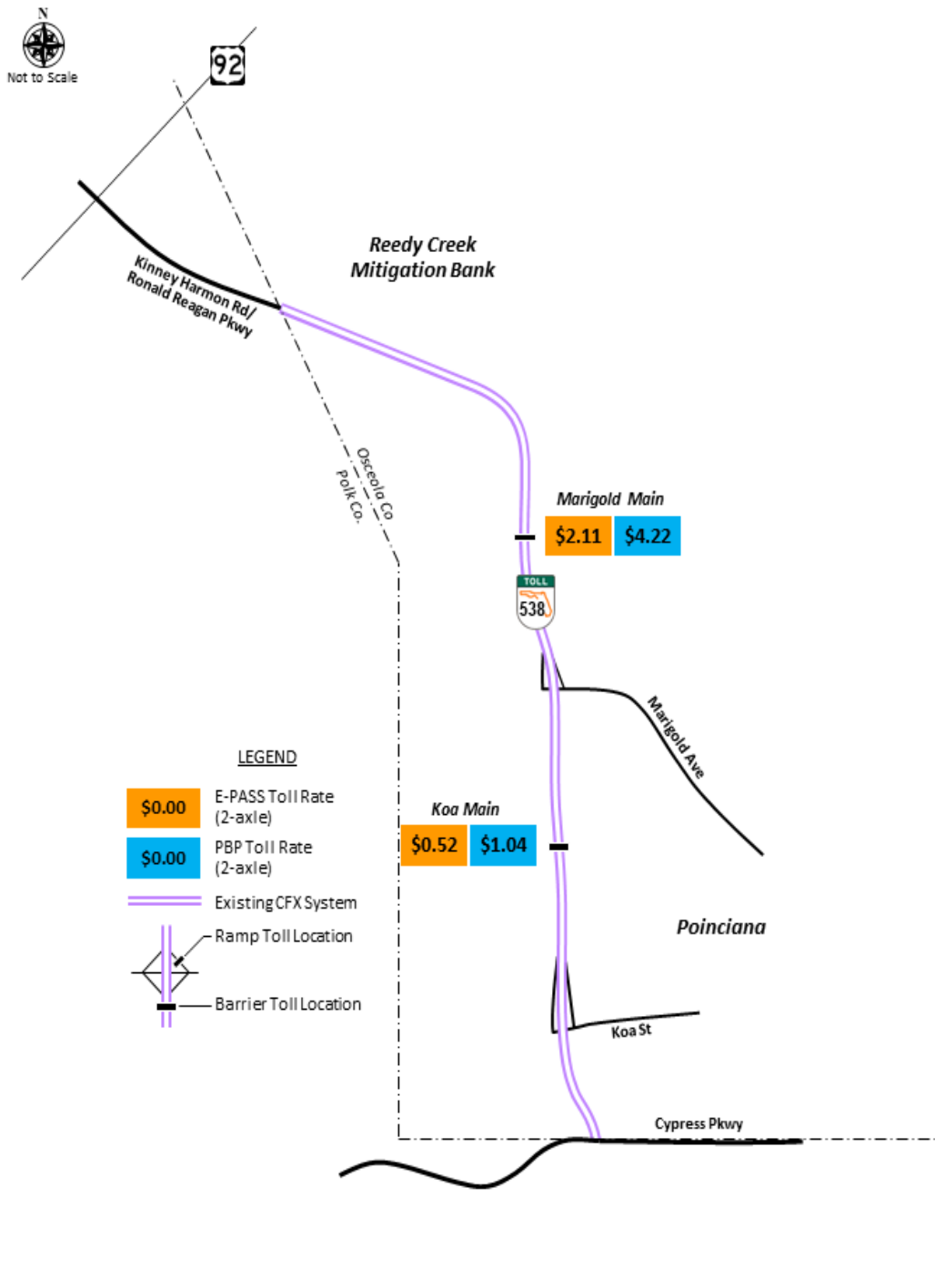


The highway is contiguous with Kinney Harmon Road/Ronald Reagan Parkway in Polk County and connects the Poinciana Parkway to US 17/92 in Loughman. The construction of the Poinciana Parkway included rebuilding Kinney Harmon Road/Ronald Reagan Parkway as a two-lane arterial, building a new mile-long two-lane bridge over the Reedy Creek Mitigation Bank (RCMB), and constructing a two-lane, limited access roadway from the bridge to CR 580/Cypress Parkway. From the northwest, the Poinciana Parkway passes through the RCMB, over the bridge, and then makes a turn south. South of the bridge, the Poinciana Parkway has grade-separated, half intersections to and from the north (i.e., southbound exit ramps and northbound entrance ramps) with Marigold Avenue and Koa Street and terminates in an at-grade T-intersection with Cypress Parkway. A map of S.R. 538 including the FY 2021 CFX toll rates for the two mainline toll plazas is shown in **Figure 9-1**.

The Poinciana Parkway provides a critical north-south connection to US 17-92 for the residents of the Poinciana community in Osceola and Polk Counties, facilitating access to regional transportation networks, theme parks and the Orlando metropolitan area. Toll collection on the facility is AET at the Marigold Main and Koa Main toll plazas. Customers can pay the toll with either E-PASS and other interoperable transponders or by Pay by Plate (PBP) video billing.

In November of 2018, CDM Smith completed Preliminary T&R forecasts for the potential acquisition of the Poinciana Parkway by CFX. This study evaluated the current two-lane facility as well as an improvement to four lanes which included a new extension to US 17-92 and assumed the toll rate policy implemented by OCX for the existing segment of Poinciana Parkway and \$0.18 per mile for the extension segment increased at 1.5% per year, per the CFX Customer First Toll Policy.

**Figure 9-1  
S.R. 538 Facilities and Toll Rates**





The forecast considered the transactions and revenues collected since starting revenue collection in August of 2016 as well as travel demand forecasts using an updated version of the regional travel demand model, CFX Model 3.2. This model incorporated socioeconomic forecasts developed by an independent economist for Osceola County and portions of Orange County, as well as network updates and assumptions of road improvements.

In June 2020, CFX began design on the Poinciana Parkway Extension, which has been separated into two segments. The improvements will improve traffic flow and operations. The first 1.9-mile segment includes the design of the new four-lane expressway from Kinney Harmon Road/Ronald Reagan Parkway to south of US 17/92. The second 1.2-mile segment includes the design of the new four-lane expressway from south of US 17/92 to CR 532. Design also includes an interchange at US 17/92, tolled ramps at CR 532, and bridges over the CSX railroad, Old Tampa Highway, and US 17/92. Design for both segments is expected to be completed in 2022.

In February 2021, CFX began widening the existing section of S.R. 538 to create a divided four lane expressway from Ronald Reagan Parkway to Cypress Parkway. This 7-mile widening will improve traffic flow and operations in the area. The project includes four proposed sound walls; re-aligning the intersection with Cypress Parkway at Solivita Boulevard; building a second bridge over the Reedy Creek Mitigation Bank; building new bridges at Marigold Avenue and Koa Street; and two new ramps at the existing interchange with Marigold Avenue. The project is expected to be completed by mid-2023.

## 9.2 Historical Transactions and Toll Revenues

As defined in Chapter 1, CFX transactions and toll revenues are classified as either Paid In-Lane (ETC and cash) or Unpaid In-Lane (PBP and non-revenue). Total transactions are the sum of paid in-lane and unpaid in-lane transactions. Total revenue is the sum of paid in-lane revenue and the revenue collected through PBP, estimated as an accrued amount. The following section includes a breakdown of transactions and revenues by paid in-lane and PBP.

### 9.2.1 ANNUAL PAID IN-LANE TRANSACTION AND REVENUE TRENDS

The annual paid in-lane transactions at the Marigold Main and Koa Main plaza groups from FY 2020 to FY 2021 are presented in the top half of **Table 9-1**. The history of annual paid in-lane toll revenues is also summarized and totaled in the bottom half of the table. The facility data and annual growth are also presented visually in **Figure 9-2** and **Figure 9-3**. This table and figures do not include PBP transactions and revenues, only those that are paid in-lane. For this reason, the information presented in this section may differ slightly from the data presented in the FY 2021 Comprehensive Annual Financial Report (CAFR) and other information in this report.

**Table 9-1**  
**S.R. 538 Plaza Groups – Historical Paid In-Lane Transactions and Revenue**  
**FY 2020 – FY 2021**

Fiscal Year	Marigold Main <sup>A</sup>	Koa Main <sup>A</sup>	TOTAL	Marigold Main	Koa Main	TOTAL
	TRANSACTIONS (millions)			PERCENT CHANGE		
2020 <sup>B</sup>	1.2	0.5	1.7			
2021 <sup>C</sup>	2.7	1.2	3.9	125.0%	140.0%	129.4%
	TOLL REVENUE (millions)			PERCENT CHANGE		
2020 <sup>B</sup>	\$2.5	\$0.3	\$2.8			
2021 <sup>C</sup>	\$5.9	\$0.7	\$6.6	136.0%	133.3%	135.7%

Notes:

A - Acquired by CFX in December 2019 (FY 2020).

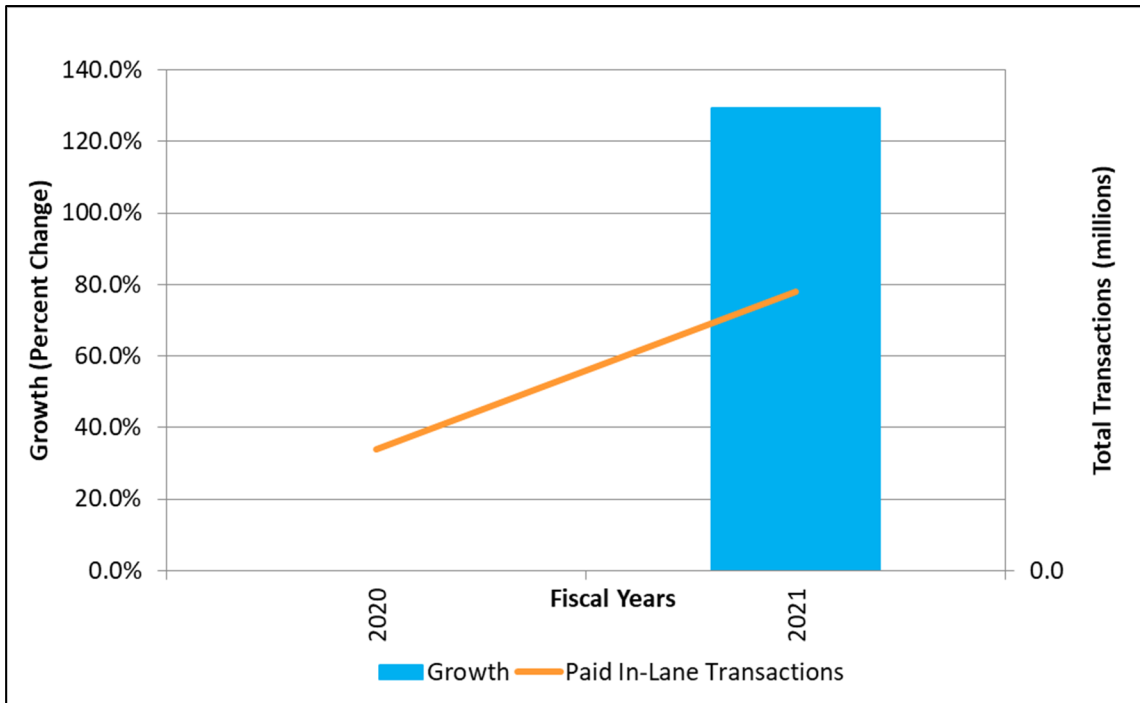
B - First effects of COVID-19 pandemic began in March 2020.

C - Systemwide toll rate increase in July 2020. Continued effects of COVID-19 pandemic.

As previously mentioned, CFX acquired S.R. 538 in December 2019 (FY 2020), for a total of seven months in FY 2020. Total paid in-lane transactions on S.R. 538 in FY 2020 were 1.7 million and paid in-lane toll revenues during the same period were \$2.8 million. FY 2020 transactions and revenues were negatively impacted by the effects of the COVID-19 pandemic beginning in March 2020.

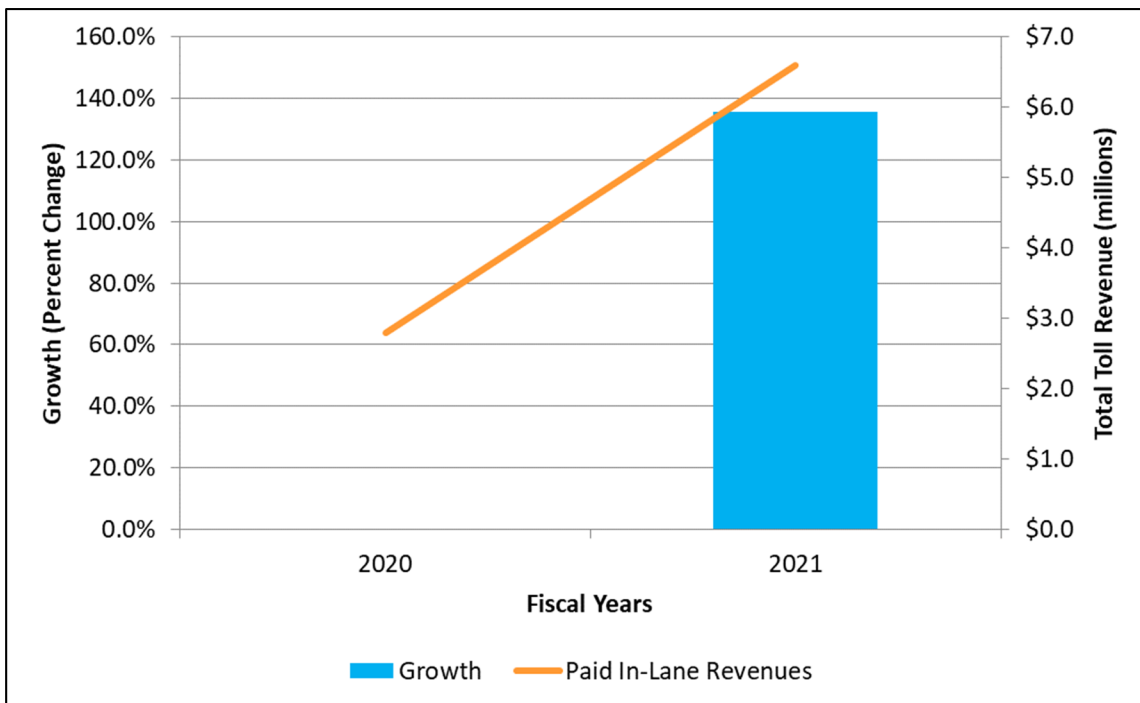
FY 2021 paid in-lane transactions increased by 2.2 million, or 129.4 percent, compared to FY 2020. Paid in-lane revenues experienced an increase of 135.7 percent during the same period. FY 2021 transactions and revenues were negatively impacted by the continued effects of the COVID-19 pandemic.

**Figure 9-2**  
**S.R. 538 Historical Paid In-Lane Transactions and Annual Growth**  
**FY 2020 – FY 2021**



Source: Monthly unaudited data provided by CFX

**Figure 9-3**  
**S.R. 538 Historical Paid In-Lane Revenue and Annual Growth**  
**FY 2020 – FY 2021**

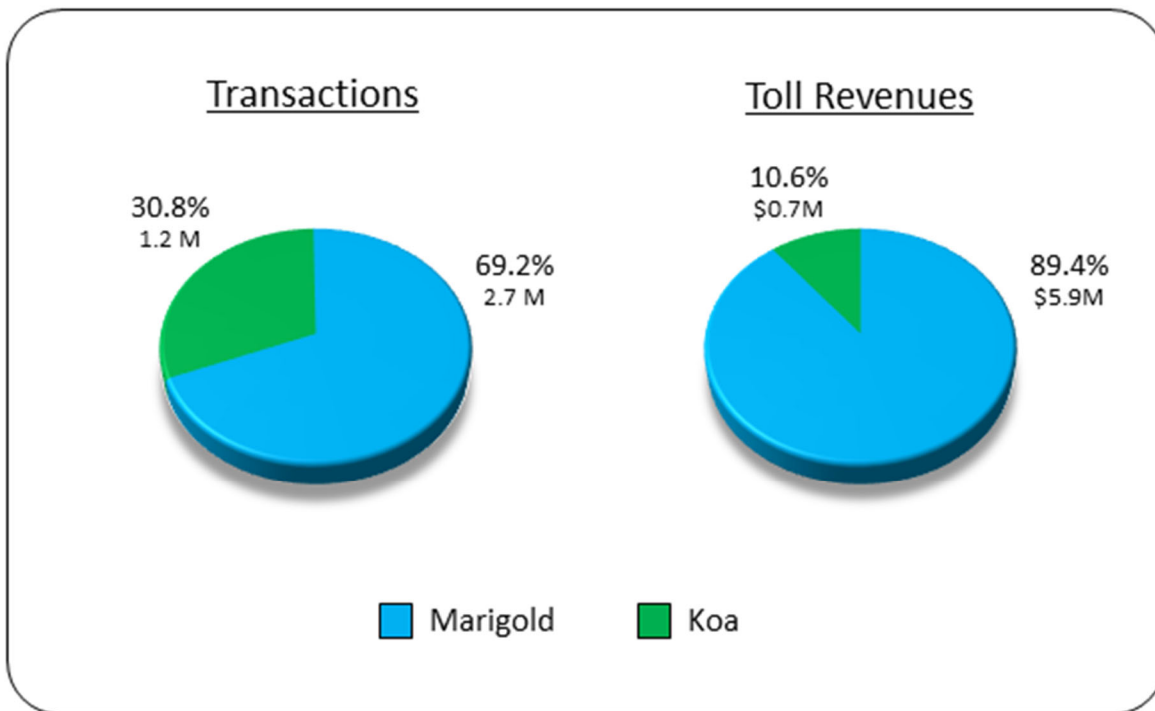


Source: Monthly unaudited data provided by CFX

The share by plaza group of total S.R. 538 paid in-lane transactions and toll revenues during FY 2021 are presented in **Figure 9-4**. As shown, the Marigold Main plaza group represented 2.7 million paid in-lane transactions or 69.2 percent of total paid in-lane transactions. Koa Main plaza group represented 1.2 million or 30.8 percent of the total on the facility.

The annual totals and shares of paid in-lane toll revenues are similar to the results reported for annual paid in-lane transactions. The Marigold Main plaza group represented \$5.9 million in paid in-lane toll revenues or 89.4 percent of total paid in-lane toll revenues. Koa Main plaza group represented \$0.7 million or 10.6 percent of total paid in-lane revenue on the facility. The Marigold Main plaza group represented a significantly higher amount of revenue due to the higher toll rate of \$2.11 compared to the \$0.52 toll at the Koa Main plaza group.

**Figure 9-4**  
**S.R. 538 Paid In-Lane Transactions and Revenue by Plaza Group**  
**FY 2021**



Source: Monthly unaudited data provided by CFX

### 9.2.2 ANNUAL PBP TRANSACTION AND REVENUE TRENDS

PBP transactions and toll revenues on S.R. 538 for FY 2020 – FY 2021 are presented in **Table 9-2**. PBP transactions and toll revenues are recorded by toll location and accrued monthly by plaza group, however Table 9-2 shows the annual totals for S.R. 453 as reported at year end.

**Table 9-2**  
**S.R. 538 – Historical PBP Transactions and Revenue**  
**FY 2020 – FY 2021**

Fiscal Year	Transactions (millions)	Percent Change	Toll Revenues (millions)	Percent Change
2020	0.6		\$1.0	
2021	1.0	66.7%	\$3.2	220.0%

Source: Monthly unaudited data provided by CFX

PBP transactions have increased to 1.0 million in FY 2021, while PBP revenues have increased to \$3.2 million over the same period. The significant increase in PBP revenues in FY 2021 can be attributed to the new PBP toll rate adopted by the CFX Board that went into effect on July 1, 2020 (FY 2021), at which time the PBP toll rate at all toll locations was increased to twice the ETC toll rate. Because of the new PBP toll rate, it is anticipated that going forward a portion of customers paying via PBP will switch to ETC to avoid the higher toll rate. The increase was also attributable to the recovery from COVID-19 impacts on transactions and revenue in FY 2020.

### 9.2.3 MONTHLY PAID IN-LANE TRANSACTION SEASONAL VARIATION

In **Table 9-3**, monthly paid in-lane transactions are normalized to average number of paid in-lane transactions per day in each month. Using average number of paid in-lane transactions per day allows for an easy comparison of the variations in relative travel demand over the year. Normally, the seasonal pattern of usage changes slightly from year to year based on the number of weekdays in a given month. But in FY 2021, the normal pattern of seasonal variation in traffic was overshadowed by the impacts on travel demand from the COVID-19 pandemic. Therefore, the factors in Table 9-3 do not reflect the typical monthly seasonal trends on S.R. 538. Instead, these factors include the recovery from COVID-19.

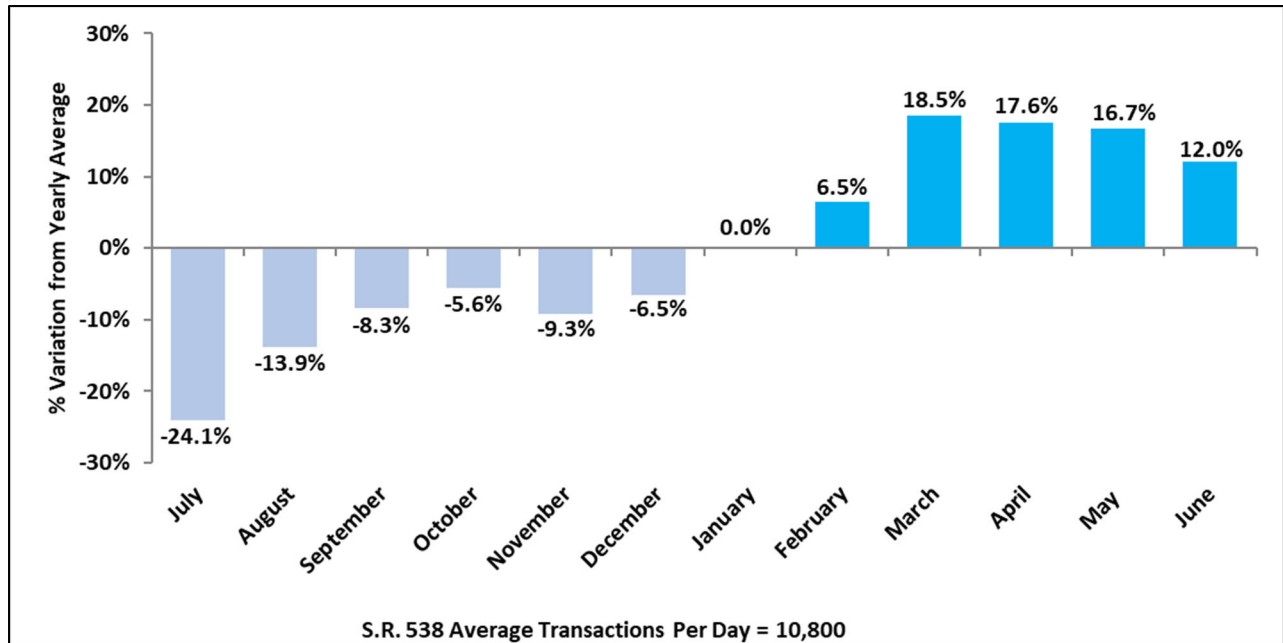
As presented, average paid in-lane transactions per day in FY 2021 on S.R. 538 ranged from a low of 8,200 in July 2020 to a high of 12,800 in March 2021. Like other CFX facilities, peak season is typically during spring months as there are more tourists in the area (possibly snowbirds) during the second half of the fiscal year. This data is presented in a graphical format in **Figure 9-5**. Each month's average paid in-lane transactions per day appear as a percentage of the average for the fiscal year. March paid in-lane transactions were 18.5 percent above average and June paid in-lane transactions were 24.1 percent below average for the facility.

**Table 9-3**  
**S.R. 538 – Monthly Seasonal Variation in Paid In-Lane Transactions**  
**FY 2021**

Month	Number of Days in Month	Paid In-Lane Transactions	Average Transactions/Day	Seasonal Factor
July	31	255,598	8,200	0.759
August	31	289,076	9,300	0.861
September	30	297,452	9,900	0.917
October	31	315,476	10,200	0.944
November	30	293,104	9,800	0.907
December	31	312,829	10,100	0.935
January	31	334,776	10,800	1.000
February	28	322,205	11,500	1.065
March	31	395,648	12,800	1.185
April	30	382,101	12,700	1.176
May	31	391,336	12,600	1.167
June	30	361,605	12,100	1.120
<b>Average</b>		<b>329,267</b>	<b>10,800</b>	<b>1.000</b>
<b>Total Year</b>	<b>365</b>	<b>3,951,206</b>		

Source: Monthly unaudited data provided by CFX

**Figure 9-5**  
**S.R. 538 Variation in Paid In-Lane Transactions Per Day, by Month**  
**FY 2021**



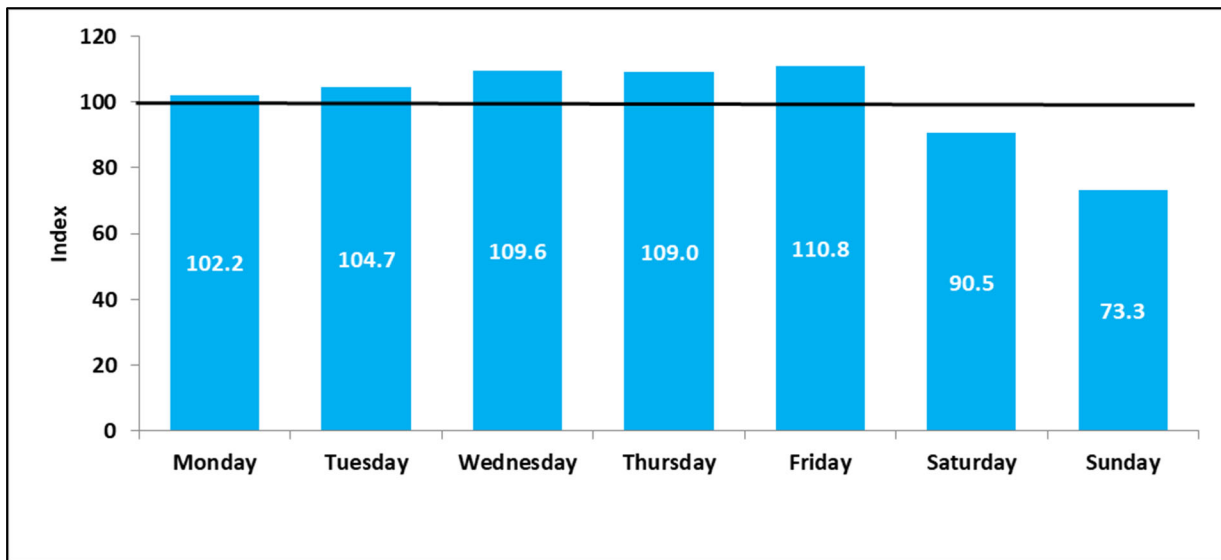
Source: Monthly unaudited data provided by CFX

### 9.2.4 DAY-OF-WEEK TRANSACTION VARIATION

Figure 9-6 contains a comparison of transactions by day of the week for FY 2021. This data is presented as an index, where the average day equals 100. An index value of 100 would indicate that the day's transactions were precisely the same volume as the facility average. A value of 120 would indicate a day that has 20 percent greater volume than the average. As was done in prior years, the data used for this analysis was for a typical week in May 2021, a month that may have had some impacts from COVID-19, but these impacts would not have disturbed the variation over the average week. The data includes transactions at mainline plazas only (no ramps).

FY 2021 weekday transactions on S.R. 538 fluctuated over the course of the five-day work week. Transactions were highest on Fridays, with an index value of 110.8 (10.8 percent higher than the average day), volumes on Monday through Thursday ranged from index values of 102.2 to 109.0. Saturday volumes were slightly lower than weekday volumes with an index value of 90.5, which is still high for a weekend day. Transactions decline on Sunday, which has an index value of 73.3, or 26.7 percent lower than the average day.

**Figure 9-6**  
**S.R. 538 Variation in Transactions, by Day of Week**  
**FY 2021**



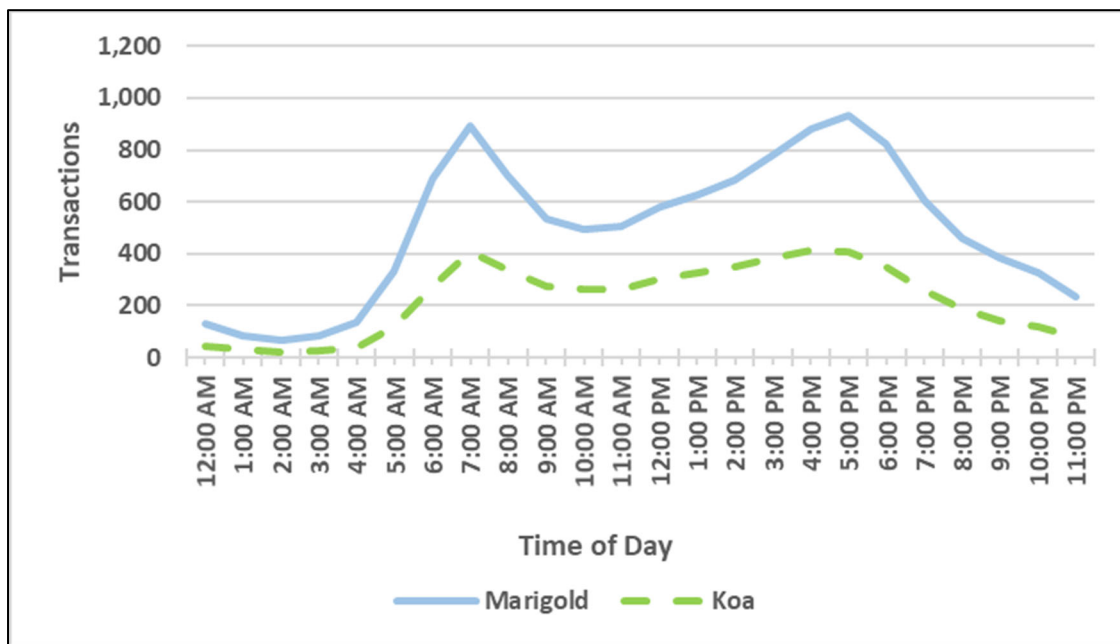
Source: Unaudited lane transaction data – May 2021

### 9.2.5 HOURLY TRAFFIC DISTRIBUTION

The hourly distribution of traffic volumes includes information on the usage characteristics of the facility. The hourly distributions represent counts taken during a typical week at the mainline toll plazas during the month of May. The typical weekday hourly distribution is shown in **Figure 9-7** and the weekend hourly distribution is shown in **Figure 9-8**. The figures contain the sum of traffic volumes in both directions.

The two mainline toll plaza locations on S.R. 538 exhibit similar hourly traffic patterns. On weekdays, travel demand at both locations is bimodal, with both a morning and an evening peak hour. The Marigold and Koa mainline plazas both experience slightly higher peak volumes in the evening hours than in the morning hours. The highest peak hour volumes during the week were 940 per hour beginning at 5:00 p.m. at the Marigold mainline plaza and 420 per hour beginning at 4:00 p.m. at the Koa mainline plaza. On weekends, traffic builds all day with a peak of 640 vehicles per hour at 2:00 p.m. at the Marigold mainline plaza and 270 per hour at 2:00 p.m. at the Koa mainline plaza.

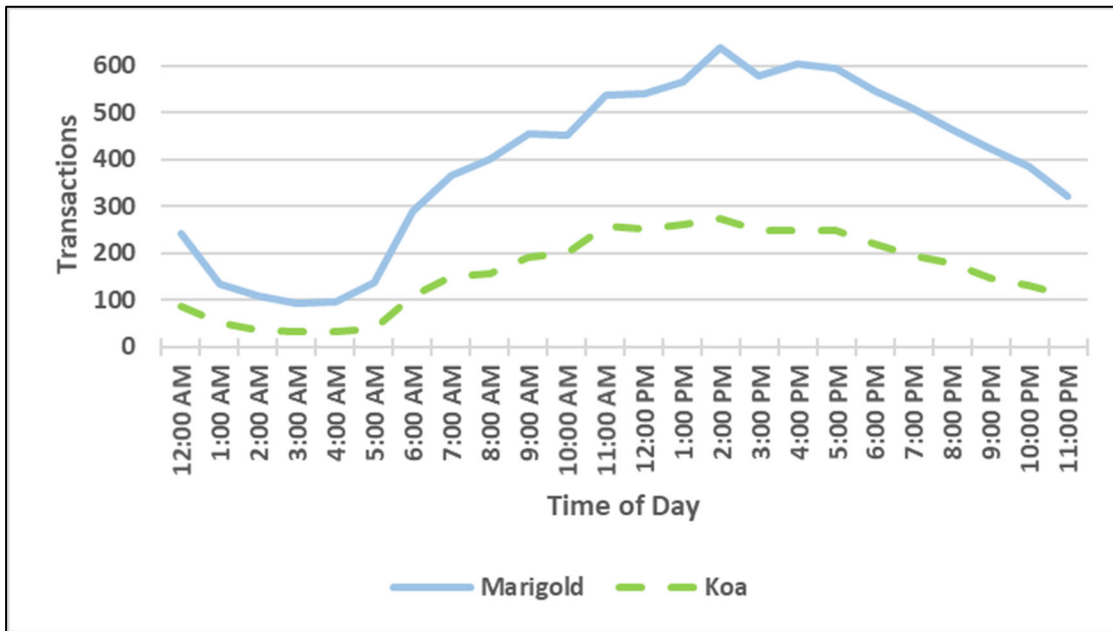
**Figure 9-7**  
**S.R. 538 Hourly Two-Way Traffic Variation (Weekday)**  
**FY 2021 (May)**



Source: Unaudited lane traffic data – May 2021



**Figure 9-8**  
**S.R. 538 Hourly Two-Way Traffic Variation (Weekend)**  
**FY 2021 (May)**



Source: Unaudited lane traffic data – May 2021

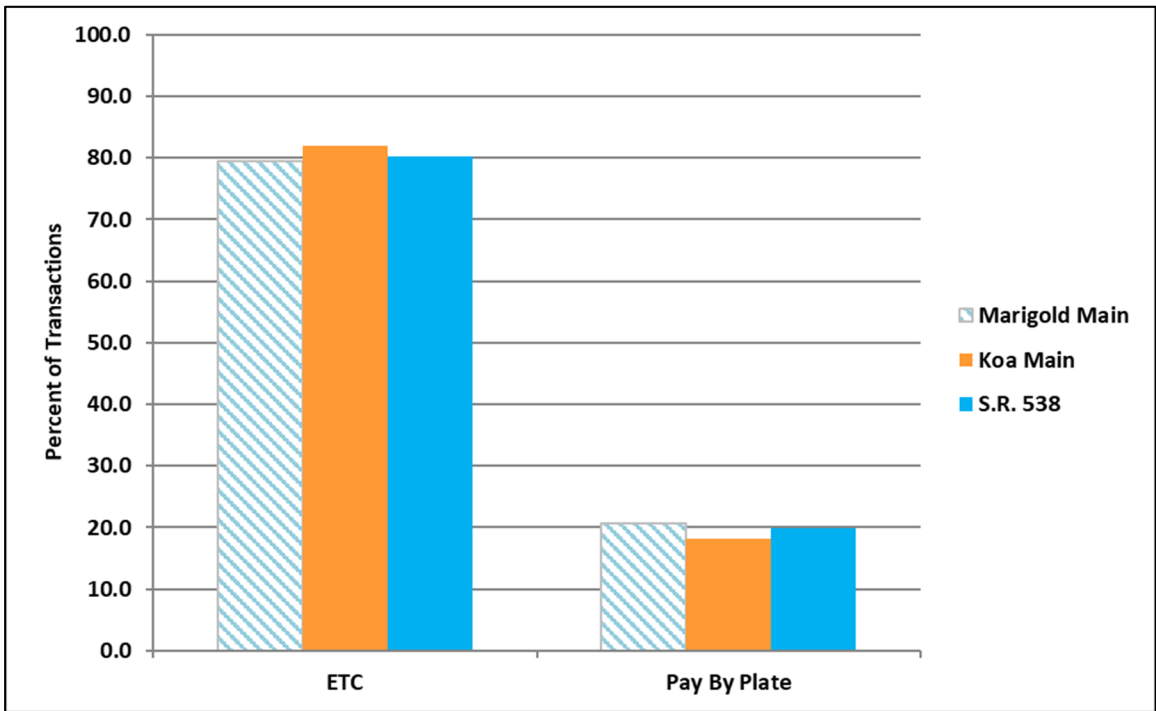
**9.2.6 TRANSACTIONS AND REVENUE BY PAYMENT TYPE**

The distributions of transactions and revenue by payment type during FY 2021 are presented in **Figure 9-9** and **Figure 9-10**. Payment types on S.R. 538 can be classified in one of two ways: ETC and PBP. The Marigold and Koa Main plazas are both AET facilities, so there is no cash collection. PBP transactions and revenues are estimated monthly based on a FY 2021 accrual rate of 56 percent of all unpaid in-lane transactions. This means that the PBP transactions and revenue shown here are estimates of the levels that will eventually pay tolls through the PBP process. It is important to note that the data presented in the following two figures is based on unaudited transaction and toll revenue data and may not match the audited data shown in other tables and figures in this chapter.

As shown in Figure 9-9, ETC transactions on S.R. 538 accounted for 80.2 percent of total transactions on the facility while PBP transactions accounted for the remaining 19.8 percent. The share of ETC transactions at the Marigold Main plaza accounted for 79.4 percent and the remaining 20.6 percent were PBP transactions. At the Koa Main plaza, ETC transactions accounted for 81.9 percent and the remaining 18.1 percent were PBP transactions.

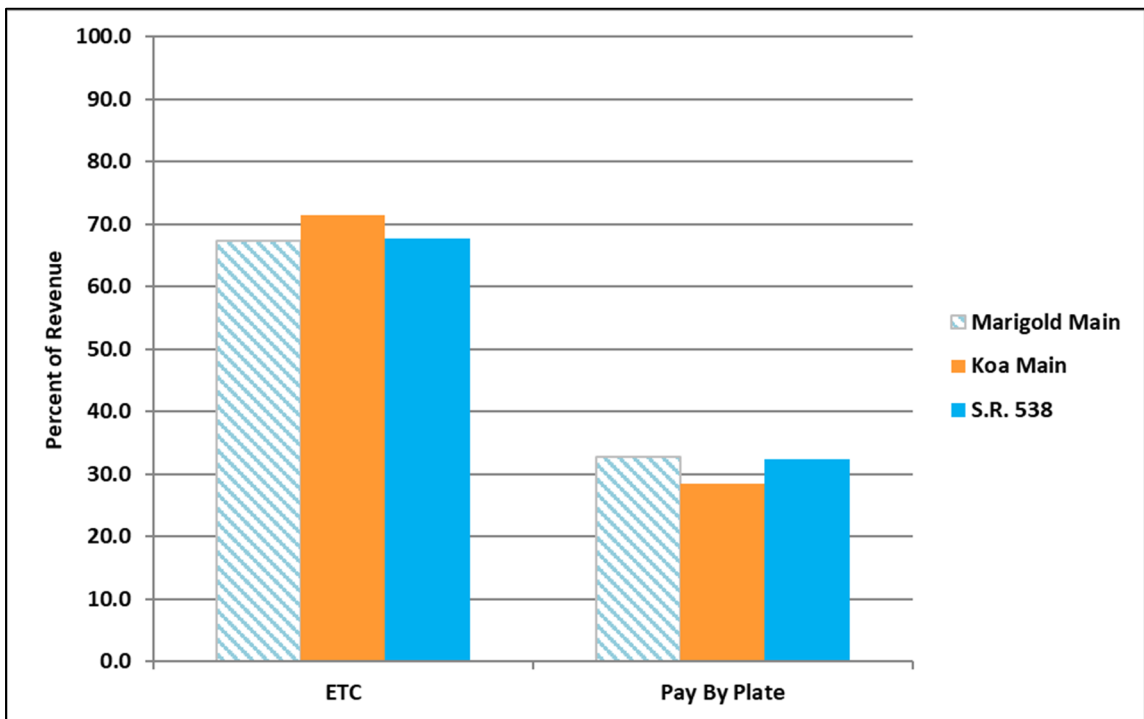
As shown in Figure 9-10, the share of toll revenues by payment type is comparable to the share in transactions. The share of ETC toll revenues accounted for 67.7 percent of toll revenues on S.R. 538 and the remaining 32.3 percent were PBP toll revenues. The share of ETC toll revenues at the Marigold Main plaza accounted for 67.3 percent and the remaining 32.7 percent were PBP toll revenues. At the Koa Main plaza, ETC toll revenues accounted for 71.5 percent and the remaining 28.5 percent were PBP toll revenues.

**Figure 9-9**  
**S.R. 538 Percent of Transactions by Payment Type**  
**FY 2021**



Source: Monthly unaudited data provided by CFX

**Figure 9-10**  
**S.R. 538 Percent of Revenue by Payment Type**  
**FY 2021**



Source: Monthly unaudited data provided by CFX

### 9.3 Forecasted Transactions and Toll Revenues

Based on the recently adopted “Customer First Toll Policy,” toll rate adjustments (indexed tolls) were applied to the T&R forecasts every year based on the net change in CPI for the prior year, which equated to 0.96 percent in CY 2020. Because the change in CPI was lower than the 1.5 percent floor, CDM Smith used 1.5 percent to adjust the FY 2022 toll amounts. At the time of preparing the T&R estimates and this report, CDM Smith learned that the CPI during CY 2021 was 5.08 percent. Based on assurances from CFX, CDM Smith used this value to index toll rates for FY 2023. CDM Smith used the floor of 1.5 percent per year every year thereafter in the forecast period.

Future transportation improvements that could influence the T&R forecasts for S.R. 538 include the projects listed in **Table 9-4**, assumed completed in each model horizon year.

Several of the planned improvements provide significant improvements to the transportation system to this area of Osceola County. Many facilities including Osceola Polk Line Road (CR 532), Poinciana Boulevard, Old Lake Wilson Road, US 17-92 and John Young Parkway, serve as feeder roads to S.R. 538 and positively impact T&R in the near term and long-term forecasts. System improvements impacting S.R. 538 include the widening of S.R. 538 from Cypress Parkway to Kinney Harmon Road to a 4-lane expressway, the extension of the S.R. 538 to C.R. 532 and improvements to the I-4/C.R. 532 interchange in the near term. Virtually any improvement which provides additional connectivity in this area of Osceola County will inherently benefit S.R. 538 as well.

**Table 9-4**  
**S.R. 538 - Key Transportation Improvements**

Facility	From	To	Year	Jurisdiction	Improvement
Interstate 4	SR 434	Kirkman Road	2025	FDOT	Widen to 10 lanes
Interstate 4	Osceola Polk Line Rd (CR 532)	-	2025	Osceola County/FDOT	Interchange Imp
Osceola Polk Line Rd (CR 532)	US 17/92	Lake Wilson Road	2025	Osceola County/CFX	Widen to 4-lanes
Poinciana Parkway (SR 538)	Cypress Parkway	Kinney Harmon Road	2025	CFX	Widen to 4-lanes
Poinciana Parkway Ext. (SR 538)	Kinney Harmon Road	Osceola Polk Line Rd (CR 532)	2025	CFX	New 4-lane Expressway
Poinciana Blvd	Pleasant Hill Road	Crescent Lakes Blvd	2025	Osceola County	Widen to 4-lanes
US 17-92	Poinciana Blvd	Ham Brown Road/CR 535	2025	FDOT	Widen to 4-lanes
Old Lake Wilson Road	Osceola Polk Line Rd (CR 532)	Sinclair Road	2035	Osceola County	Widen to 4-lanes
Interstate 4	SR 429	Osceola Polk Line Rd (CR 532)	2035	FDOT	Auxiliary Lanes
Apopka-Vineland Road (SR 535)	SR 536	I-4 WB Ramp	2035	Orange County/FDOT	Widen to 8 Lanes
Apopka-Vineland Road (SR 535)	Osceola County Line	SR 536	2035	Orange County/FDOT	Widen to 6 Lanes
US 17-92	Pleasant Hill Road	Portage Road	2035	FDOT	Widen to 6-lanes
John Young Parkway	Pleasant Hill Road	Portage Road	2035	FDOT	Widen to 6-lanes
Narcoossee Rd	US 192	Orange County Line	2035	Osceola County	Widen to 6 Lanes
Vineland Rd (SR 535)	US 192	Orange County Line	2045	Osceola County/FDOT	Widen to 6 Lanes

As previously mentioned, the Poinciana Parkway was acquired by CFX in December 2019 (FY 2020). Historical and projected transactions and toll revenues for S.R. 538 are summarized in **Table 9-5** and **Table 9-6**. The tables are divided into paid in-lane transactions and revenue and PBP transactions and revenue. Paid in-lane transactions and revenue include only ETC as cash collection is not possible.

The paid in-lane transactions on S.R. 538 are expected to grow 4.4 percent per year through FY 2031, 1.8 percent per year through FY 2041, and then 1.1 percent per year through the end of the forecast period because of the impact of toll rate adjustments. PBP transactions are forecasted to decline by 1.0 percent per year through FY 2031, increase by 1.1 percent per year through FY 2031, then remain the same through the forecast period. Total transactions on S.R. 538 are projected to increase during the forecast period from the actual of 4.9 million in FY 2021 to 9.0 million in FY 2051. During the FY 2022 through FY 2051 forecast period, S.R. 538 traffic is expected to increase an average of 3.5 percent per year from FY 2021 to FY 2031 (due to ramp-up and improvements), 1.7 percent per year from FY 2031 to FY 2041 and 0.9 percent per year from FY 2041 to FY 2051. The paid in-lane revenues on S.R. 538 are projected to increase over the forecast period, from the FY 2021 actual of \$6.6 million to \$19.3 million in FY 2051. PBP revenues are projected to increase from \$3.2 million in FY 2021 to \$4.6 million in FY 2051. Total revenue on S.R. 538 is projected to increase from the actual of \$9.8 million in FY 2021 to \$23.9 million in FY 2051. Revenue is expected to increase an average of 3.9 percent per year from FY 2021 to FY 2031 (again due to ramp-up and improvements), 3.0 percent per year from FY 2031 to FY 2041 and 2.1 percent per year from FY 2041 to FY 2051.

**Table 9-5**  
**S.R. 538 Plaza Groups – Transaction Projections (Millions)**  
**FY 2022 – FY 2051**

Fiscal Year		Marigold Main	Koa Main	Paid In-Lane	PBP	Total	Percent Annual Change
2010	Actual						
2011							
2012							
2013							
2014							
2015							
2016							
2017							
2018							
2019							
2020 <sup>A,B</sup>		1.2	0.5	1.7	0.6	2.3	
2021 <sup>C</sup>		2.7	1.2	3.9	1.0	4.9	113.0%
2022 <sup>D</sup>	Forecast	2.9	1.3	4.2	0.7	4.9	0.0%
2023		3.0	1.4	4.4	0.6	5.0	2.0%
2024		3.3	1.6	4.9	0.7	5.6	12.0%
2025		3.5	1.6	5.1	0.7	5.8	3.6%
2026		3.6	1.7	5.3	0.7	6.0	3.4%
2027		3.7	1.7	5.4	0.7	6.1	1.7%
2028		3.8	1.8	5.6	0.8	6.4	4.9%
2029		3.9	1.8	5.7	0.8	6.5	1.6%
2030		4.0	1.9	5.9	0.9	6.8	4.6%
2031		4.1	1.9	6.0	0.9	6.9	1.5%
2032		4.2	2.0	6.2	0.9	7.1	2.9%
2033		4.3	2.0	6.3	0.9	7.2	1.4%
2034		4.4	2.1	6.5	0.9	7.4	2.8%
2035		4.5	2.1	6.6	0.9	7.5	1.4%
2036		4.6	2.1	6.7	0.9	7.6	1.3%
2037		4.6	2.2	6.8	0.9	7.7	1.3%
2038		4.7	2.2	6.9	0.9	7.8	1.3%
2039		4.8	2.2	7.0	0.9	7.9	1.3%
2040		4.9	2.3	7.2	1.0	8.2	3.8%
2041		4.9	2.3	7.2	1.0	8.2	0.0%
2042	5.0	2.3	7.3	1.0	8.3	1.2%	
2043	5.1	2.4	7.5	1.0	8.5	2.4%	
2044	5.1	2.4	7.5	1.0	8.5	0.0%	
2045	5.2	2.4	7.6	1.0	8.6	1.2%	
2046	5.3	2.4	7.7	1.0	8.7	1.2%	
2047	5.3	2.5	7.8	1.0	8.8	1.1%	
2048	5.4	2.5	7.9	1.0	8.9	1.1%	
2049	5.4	2.5	7.9	1.0	8.9	0.0%	
2050	5.4	2.5	7.9	1.0	8.9	0.0%	
2051	5.5	2.5	8.0	1.0	9.0	1.1%	

Fiscal Year	Compound Annual Average Growth Rate (CAAGR)					
2021 - 2031	4.3%	4.7%	4.4%	-1.0%	3.5%	
2031 - 2041	1.8%	1.9%	1.8%	1.1%	1.7%	
2041 - 2051	1.2%	0.8%	1.1%	0.0%	0.9%	

Notes:

Actual transaction data provided by CFX from Monthly Statistical Reports.

A - The Poinciana Parkway was acquired by CFX in December 2019 (FY 2020) and is only a partial year.

B - First effects of COVID-19 pandemic began in March 2020.

C - New toll rates for PBP customers, set at 2.0 times the ETC rate. Continued effects of COVID-19 pandemic.

D - Completion of I-4 Ultimate project.

**Table 9-6**  
**S.R. 538 Plaza Groups – Toll Revenue Projections (Millions)**  
**FY 2022 – FY 2051**

Fiscal Year	Marigold Main	Koa Main	Paid In-Lane	PBP	Total	Percent Annual Change
2010						
2011						
2012						
2013						
2014						
2015						
2016						
2017						
2018						
2019						
2020 <sup>A,B</sup>	\$2.5	\$0.3	\$2.8	\$1.0	\$3.8	
2021 <sup>C</sup>	\$5.9	\$0.7	\$6.6	\$3.2	\$9.8	157.9%
2022 <sup>D</sup>	\$6.5	\$0.7	\$7.2	\$2.3	\$9.5	-3.1%
2023	\$7.0	\$0.8	\$7.8	\$2.0	\$9.8	3.2%
2024	\$7.6	\$0.8	\$8.4	\$2.2	\$10.6	8.2%
2025	\$8.1	\$0.9	\$9.0	\$2.3	\$11.3	6.6%
2026	\$8.5	\$0.9	\$9.4	\$2.4	\$11.8	4.4%
2027	\$8.9	\$1.0	\$9.9	\$2.6	\$12.5	5.9%
2028	\$9.2	\$1.0	\$10.2	\$2.7	\$12.9	3.2%
2029	\$9.6	\$1.0	\$10.6	\$2.8	\$13.4	3.9%
2030	\$10.0	\$1.1	\$11.1	\$2.9	\$14.0	4.5%
2031	\$10.3	\$1.1	\$11.4	\$3.0	\$14.4	2.9%
2032	\$10.7	\$1.2	\$11.9	\$3.1	\$15.0	4.2%
2033	\$11.1	\$1.2	\$12.3	\$3.2	\$15.5	3.3%
2034	\$11.4	\$1.2	\$12.6	\$3.3	\$15.9	2.6%
2035	\$11.8	\$1.3	\$13.1	\$3.3	\$16.4	3.1%
2036	\$12.1	\$1.3	\$13.4	\$3.4	\$16.8	2.4%
2037	\$12.5	\$1.4	\$13.9	\$3.5	\$17.4	3.6%
2038	\$12.9	\$1.4	\$14.3	\$3.7	\$18.0	3.4%
2039	\$13.2	\$1.4	\$14.6	\$3.8	\$18.4	2.2%
2040	\$13.6	\$1.5	\$15.1	\$3.9	\$19.0	3.3%
2041	\$14.0	\$1.5	\$15.5	\$3.9	\$19.4	2.1%
2042	\$14.3	\$1.5	\$15.8	\$4.0	\$19.8	2.1%
2043	\$14.7	\$1.6	\$16.3	\$4.1	\$20.4	3.0%
2044	\$15.0	\$1.6	\$16.6	\$4.1	\$20.7	1.5%
2045	\$15.4	\$1.7	\$17.1	\$4.2	\$21.3	2.9%
2046	\$15.7	\$1.7	\$17.4	\$4.3	\$21.7	1.9%
2047	\$16.1	\$1.7	\$17.8	\$4.3	\$22.1	1.8%
2048	\$16.4	\$1.8	\$18.2	\$4.4	\$22.6	2.3%
2049	\$16.7	\$1.8	\$18.5	\$4.5	\$23.0	1.8%
2050	\$17.1	\$1.8	\$18.9	\$4.5	\$23.4	1.7%
2051	\$17.4	\$1.9	\$19.3	\$4.6	\$23.9	2.1%

Fiscal Year	Compound Annual Average Growth Rate (CAAGR)				
2021 - 2031	5.7%	4.6%	5.6%	-0.6%	3.9%
2031 - 2041	3.1%	3.2%	3.1%	2.7%	3.0%
2041 - 2051	2.2%	2.4%	2.2%	1.7%	2.1%

Notes:

Actual revenue data provided by CFX from Monthly Statistical Reports.

A - The Poinciana Parkway was acquired by CFX in December 2019 (FY 2020) and is only a partial year.

B - First effects of COVID-19 pandemic began in March 2020.

C - New toll rates for PBP customers, set at 2.0 times the ETC rate. Continued effects of COVID-19 pandemic.

D - Completion of I-4 Ultimate project.

# APPENDIX A

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TRAFFIC PROFILES  
FY 2021 - FY 2051







# S.R. 528 - Two-Way Daily Revenue Traffic (AWDT)

Cross Street		FY 2021	FY 2031	FY 2041	FY 2051
	<b>To S.R. 528 (FL Turnpike)</b>				
		<b>77,900</b>	<b>120,400</b>	<b>134,000</b>	<b>144,000</b>
Boggy Creek Road		5,300	9,000	10,200	11,100
		12,500	21,200	23,900	26,100
		<b>85,100</b>	<b>132,600</b>	<b>147,700</b>	<b>159,000</b>
Tradeport Drive / Conway Road		4,900	8,300	9,500	10,300
		4,400	7,500	8,400	9,200
		<b>84,600</b>	<b>131,800</b>	<b>146,600</b>	<b>157,900</b>
Semorran Boulevard		38,300	60,000	67,700	74,100
		28,700	45,000	50,800	55,600
		<b>75,000</b>	<b>116,800</b>	<b>129,700</b>	<b>139,400</b>
Goldenrod Road		4,800	7,500	8,500	9,400
		8,300	13,000	14,700	16,200
		<b>78,500</b>	<b>122,300</b>	<b>135,900</b>	<b>146,200</b>
Narcoossee Road		21,000	32,900	37,100	40,600
		5,900	9,100	10,400	11,300
		<b>63,400</b>	<b>98,500</b>	<b>109,200</b>	<b>116,900</b>
S.R. 417		34,300	55,500	63,200	65,500
		25,200	42,200	49,400	51,100
<b>Beachline Main</b>		<b>54,300</b>	<b>85,200</b>	<b>95,400</b>	<b>102,500</b>
Innovation Way		7,900	12,800	14,000	15,200
		1,600	2,500	2,900	3,100
		<b>48,000</b>	<b>74,900</b>	<b>84,300</b>	<b>90,400</b>
Dallas Boulevard		4,400	6,800	7,600	8,200
<b>Dallas Main</b>		<b>43,600</b>	<b>68,100</b>	<b>76,700</b>	<b>82,200</b>
S.R. 520		3,200	5,000	5,700	6,100
		2,600	4,000	4,600	4,900
	<b>To S.R. 528 (FL Turnpike)</b>	<b>43,000</b>	<b>67,100</b>	<b>75,600</b>	<b>81,000</b>

Note: Two-Way Daily Revenue Traffic is a balanced traffic profile of existing and forecasted revenue generating traffic on System facilities, which excludes non-revenue traffic and non-accrued Pay by Plate traffic. This profile should not be used for design traffic purposes.

# S.R. 408 - Two-Way Daily Revenue Traffic (AWDT)

Cross Street		FY 2021	FY 2031	FY 2041	FY 2051
Turnpike Spur		52,700	76,200	84,500	89,900
		<b>52,700</b>	<b>76,200</b>	<b>84,500</b>	<b>89,900</b>
S.R. 50 West		8,300	11,300	12,500	13,500
		<b>61,000</b>	<b>87,500</b>	<b>97,000</b>	<b>103,400</b>
Good Homes Road		10,100	13,700	15,200	16,300
		8,500	11,600	13,000	13,900
<b>Hiawassee Main</b>		<b>59,400</b>	<b>85,400</b>	<b>94,800</b>	<b>101,000</b>
Hiawassee Road		6,200	10,100	11,700	13,100
		9,500	12,900	14,400	15,400
		<b>62,700</b>	<b>88,200</b>	<b>97,500</b>	<b>103,300</b>
Kirkman Road		8,100	12,800	15,200	17,300
		9,800	13,700	15,000	15,500
		<b>64,400</b>	<b>89,100</b>	<b>97,300</b>	<b>101,500</b>
Pine Hills Road		5,500	7,200	8,300	8,900
<b>Pine Hills Main</b>		<b>69,900</b>	<b>96,300</b>	<b>105,600</b>	<b>110,400</b>
Old Winter Garden Rd		4,400	5,800	6,400	6,700
		<b>74,300</b>	<b>102,100</b>	<b>112,000</b>	<b>117,100</b>
John Young Blvd		8,100	11,100	12,300	13,200
		8,400	11,000	12,000	12,600
		<b>74,600</b>	<b>102,000</b>	<b>111,700</b>	<b>116,500</b>
Tampa Avenue		3,100	4,900	5,700	6,300
		<b>71,500</b>	<b>97,100</b>	<b>106,000</b>	<b>110,200</b>
Orange Blossom Trail		6,600	9,500	10,500	11,200
		8,100	10,600	11,600	12,200
		<b>73,000</b>	<b>98,200</b>	<b>107,100</b>	<b>111,200</b>
Interstate-4		16,800	25,200	28,700	29,400
		56,100	67,700	70,400	72,300
		<b>112,300</b>	<b>140,700</b>	<b>148,800</b>	<b>154,100</b>

S.R. 408 - Two-Way Daily Revenue Traffic (AWDT)

Cross Street		FY 2021	FY 2031	FY 2041	FY 2051
Orange Avenue/ Rosalind Avenue		10,700 17,100	13,900 21,000	14,800 21,700	15,200 22,400
		<b>118,700</b>	<b>147,800</b>	<b>155,700</b>	<b>161,300</b>
Mills Avenue		1,300 9,200	1,700 11,200	1,900 13,100	2,000 14,100
		<b>126,600</b>	<b>157,300</b>	<b>166,900</b>	<b>173,400</b>
Bumby Avenue		12,100	14,400	15,300	15,900
		<b>114,500</b>	<b>142,900</b>	<b>151,600</b>	<b>157,500</b>
Crystal Lake Drive		12,300	14,000	14,700	15,200
		<b>126,800</b>	<b>156,900</b>	<b>166,300</b>	<b>172,700</b>
Conway Road		10,400	12,300	13,100	13,600
		<b>116,400</b>	<b>144,600</b>	<b>153,200</b>	<b>159,100</b>
Andes Ave/Semorán		8,700	10,400	11,100	11,500
<b>Conway Main</b>		<b>107,700</b>	<b>134,200</b>	<b>142,100</b>	<b>147,600</b>
Semorán Boulevard/ Yucatan Drive		12,700 8,800	14,300 10,500	15,700 11,200	16,300 11,600
		<b>103,800</b>	<b>130,400</b>	<b>137,600</b>	<b>142,900</b>
Goldenrod Road		11,500 10,700	14,400 13,600	15,100 14,200	15,300 14,800
		<b>103,000</b>	<b>129,600</b>	<b>136,700</b>	<b>142,400</b>
Chickasaw Trail		9,800	12,400	13,100	13,500
		<b>93,200</b>	<b>117,200</b>	<b>123,600</b>	<b>128,900</b>
S.R. 417		52,800 24,200	58,100 28,200	58,400 30,900	58,600 33,100
		<b>64,600</b>	<b>87,300</b>	<b>96,100</b>	<b>103,400</b>
Dean Road		9,500 1,600	12,800 2,100	14,100 2,300	15,200 2,500

S.R. 408 - Two-Way Daily Revenue Traffic (AWDT)


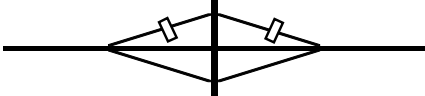

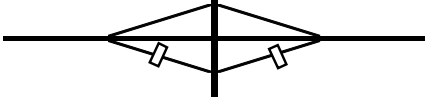
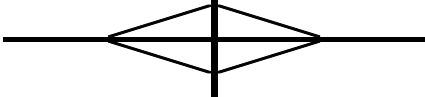
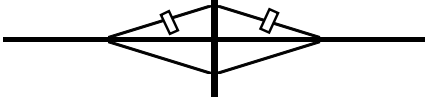
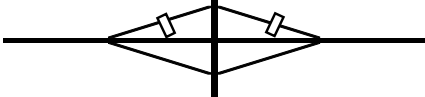


Cross Street		FY 2021	FY 2031	FY 2041	FY 2051
<b>Dean Main</b>		<b>56,700</b>	<b>76,600</b>	<b>84,300</b>	<b>90,700</b>
Rouse Road		7,600 1,000	10,300 1,300	10,900 1,400	11,300 1,500
		<b>50,100</b>	<b>67,600</b>	<b>74,800</b>	<b>80,900</b>
Alafaya Trail		22,100	27,800	29,300	30,600
		<b>28,000</b>	<b>39,800</b>	<b>45,500</b>	<b>50,300</b>
S.R. 50		20,300	26,700	30,000	33,200
		<b>7,700</b>	<b>13,100</b>	<b>15,500</b>	<b>17,100</b>
	To Challenger Parkway				

Note: Two-Way Daily Revenue Traffic is a balanced traffic profile of existing and forecasted revenue generating traffic on System facilities, which excludes non-revenue traffic and non-accrued Pay by Plate traffic. This profile should not be used for design traffic purposes.

# S.R. 417 - Two-Way Daily Revenue Traffic (AWDT)

Cross Street		FY 2021	FY 2031	FY 2041	FY 2051
		<b>53,000</b>	<b>86,400</b>	<b>110,300</b>	<b>133,900</b>
University Boulevard		5,800 19,700	7,600 25,700	7,800 26,200	7,900 26,600
<b>University Main</b>		<b>66,900</b>	<b>104,500</b>	<b>128,700</b>	<b>152,600</b>
S.R. 50		5,200 7,300	5,900 9,500	6,600 9,700	7,000 9,900
		<b>69,000</b>	<b>108,100</b>	<b>131,800</b>	<b>155,500</b>
S.R. 408		34,000 43,000	36,400 49,900	38,500 50,800	40,700 51,000
		<b>78,000</b>	<b>121,600</b>	<b>144,100</b>	<b>165,800</b>
Curry Ford Road		7,200 11,200	11,400 19,000	13,600 23,800	15,700 28,600
<b>Curry Ford Main</b>		<b>82,000</b>	<b>129,200</b>	<b>154,300</b>	<b>178,700</b>
Lee Vista Boulevard		5,300 3,600	8,300 5,700	9,700 6,800	10,700 7,900
		<b>80,300</b>	<b>126,600</b>	<b>151,400</b>	<b>175,900</b>
S.R. 528		41,800 17,700	69,100 28,600	78,300 34,300	81,900 34,700
		<b>56,200</b>	<b>86,100</b>	<b>107,400</b>	<b>128,700</b>
Innovation Way/ Dowden Road		4,100 3,400	6,000 4,200	7,000 4,500	8,000 4,700
		<b>55,500</b>	<b>84,300</b>	<b>104,900</b>	<b>125,400</b>
Moss Park Road		7,000 3,900	10,200 5,000	12,000 5,400	13,700 5,700
		<b>52,400</b>	<b>79,100</b>	<b>98,300</b>	<b>117,400</b>
Narcoossee Road		12,900 9,500	18,900 14,400	22,100 16,100	25,300 17,700
		<b>49,000</b>	<b>74,600</b>	<b>92,300</b>	<b>109,800</b>

## S.R. 417 - Two-Way Daily Revenue Traffic (AWDT)

Cross Street		FY 2021	FY 2031	FY 2041	FY 2051
Lake Nona Road		5,700	8,300	9,800	11,200
		8,900	11,000	11,700	12,300
		<b>52,200</b>	<b>77,300</b>	<b>94,200</b>	<b>110,900</b>
Boggy Creek Road		7,800	11,400	13,300	15,200
		20,600	29,100	30,300	31,500
<b>Boggy Creek Main</b>		<b>65,000</b>	<b>95,000</b>	<b>111,200</b>	<b>127,200</b>
Landstar Boulevard		7,700	11,100	13,000	14,900
		13,600	21,200	24,900	28,600
		<b>70,900</b>	<b>105,100</b>	<b>123,100</b>	<b>140,900</b>
Florida's Turnpike		16,800	26,000	31,700	37,400
		9,100	16,100	20,100	23,900
		<b>63,200</b>	<b>95,200</b>	<b>111,500</b>	<b>127,400</b>
Orange Blossom Trail		7,600	11,900	14,000	16,000
		5,900	11,100	13,000	14,900
		<b>61,500</b>	<b>94,400</b>	<b>110,500</b>	<b>126,300</b>
John Young Parkway		10,800	16,900	19,900	22,800
		5,700	10,800	13,200	15,400
<b>John Young Main</b>		<b>56,400</b>	<b>88,300</b>	<b>103,800</b>	<b>118,900</b>
World Center Drive		27,400	42,500	52,300	61,800
	to Turnpike S.R. 417	<b>29,000</b>	<b>45,800</b>	<b>51,500</b>	<b>57,100</b>

Note: Two-Way Daily Revenue Traffic is a balanced traffic profile of existing and forecasted revenue generating traffic on System facilities, which excludes non-revenue traffic and non-accrued Pay by Plate traffic. This profile should not be used for design traffic purposes.

# S.R. 429 - Two-Way Daily Revenue Traffic (AWDT)

Cross Street		FY 2021	FY 2031	FY 2041	FY 2051
	To FDOT Section of S.R. 429 (Wekiva Parkway)				
<b>Mount Plymouth Main</b>		<b>4,200</b>	<b>17,000</b>	<b>23,600</b>	<b>31,200</b>
S.R. 453		800 8,300	3,700 12,700	5,900 15,300	8,700 17,100
		<b>11,700</b>	<b>26,000</b>	<b>33,000</b>	<b>39,600</b>
Kelly Park Road		300 2,500	500 3,000	800 4,200	1,200 6,000
<b>Ponkan Main</b>		<b>13,900</b>	<b>28,500</b>	<b>36,400</b>	<b>44,400</b>
U.S. 441		500 16,500	900 24,100	1,200 24,900	1,300 30,400
		<b>29,900</b>	<b>51,700</b>	<b>60,100</b>	<b>73,500</b>
S.R. 414		9,100 30,700	14,200 41,300	15,700 47,700	19,000 50,600
		<b>51,500</b>	<b>78,800</b>	<b>92,100</b>	<b>105,100</b>
C.R. 437A/ Ocoee Apopka Rd		1,700 3,500	2,700 6,400	3,100 6,700	3,500 7,000
<b>Forest Lake Main</b>		<b>53,300</b>	<b>82,500</b>	<b>95,700</b>	<b>108,600</b>
West Road		2,300 9,900	3,300 15,400	3,900 17,800	4,500 20,200
		<b>60,900</b>	<b>94,600</b>	<b>109,600</b>	<b>124,300</b>
S.R. 438/ Plant Street		4,300 9,400	8,700 14,500	9,400 16,800	9,800 19,100
		<b>66,000</b>	<b>100,400</b>	<b>117,000</b>	<b>133,600</b>
S.R. 50		7,400 4,600	10,800 5,200	11,800 5,800	12,800 6,200
		<b>63,200</b>	<b>94,800</b>	<b>111,000</b>	<b>127,000</b>
Florida's Turnpike		32,700 30,300	48,500 42,500	55,600 53,100	62,500 60,400

## S.R. 429 - Two-Way Daily Revenue Traffic (AWDT)

Cross Street		FY 2021	FY 2031	FY 2041	FY 2051
		<b>60,800</b>	<b>88,800</b>	<b>108,500</b>	<b>124,900</b>
C.R. 535/Stoneybrook Dr.		27,100	39,300	47,800	54,700
		5,300	7,100	8,100	8,500
<b>Independence Main</b>		<b>39,000</b>	<b>56,600</b>	<b>68,800</b>	<b>78,700</b>
New Independence Parkway		9,400	13,600	16,800	19,300
		2,700	3,900	4,800	5,500
		<b>32,300</b>	<b>46,900</b>	<b>56,800</b>	<b>64,900</b>
Schofield Road		7,500	11,300	13,600	15,000
		700	1,000	1,200	1,300
		<b>25,500</b>	<b>36,600</b>	<b>44,400</b>	<b>51,200</b>
	To Turnpike Section of SR 429				

Note: Two-Way Daily Revenue Traffic is a balanced traffic profile of existing and forecasted revenue generating traffic on System facilities, which excludes non-revenue traffic and non-accrued Pay by Plate traffic. This profile should not be used for design traffic purposes.



## S.R. 453 - Two-Way Daily Revenue Traffic (AWDT)

Cross Street		FY 2021	FY 2031	FY 2041	FY 2051
S.R. 46/Mt. Dora		9,100	16,400	21,200	25,800
<b>Coronado Main</b>		<b>9,100</b>	<b>16,400</b>	<b>21,200</b>	<b>25,800</b>
S.R. 429		9,100	16,400	21,200	25,800

Note: Two-Way Daily Revenue Traffic is a balanced traffic profile of existing and forecasted revenue generating traffic on System facilities, which excludes non-revenue traffic and non-accrued Pay by Plate traffic. This profile should not be used for design traffic purposes.

# S.R. 414 - Two-Way Daily Revenue Traffic (AWDT)

Cross Street		FY 2021	FY 2031	FY 2041	FY 2051
S.R. 429		39,800	55,500	63,400	69,600
		<b>39,800</b>	<b>55,500</b>	<b>63,400</b>	<b>69,600</b>
U.S. 441 via S.R. 451		11,300	14,700	17,000	18,400
		3,600	6,300	7,600	8,300
		<b>32,100</b>	<b>47,100</b>	<b>54,000</b>	<b>59,500</b>
Marden Road		400	1,100	1,700	1,800
<b>Coral Hills Main</b>		<b>32,500</b>	<b>48,200</b>	<b>55,700</b>	<b>61,300</b>
C.R. 435/Keene Rd		4,000	5,900	6,800	7,500
		<b>36,500</b>	<b>54,100</b>	<b>62,500</b>	<b>68,800</b>
Hiawassee Road		5,500	8,200	9,400	10,300
		4,300	6,400	7,300	8,100
		<b>35,300</b>	<b>52,300</b>	<b>60,400</b>	<b>66,600</b>
U.S. 441		4,800	7,400	8,500	9,200
		10,300	14,900	15,800	16,000
		<b>40,800</b>	<b>59,800</b>	<b>67,700</b>	<b>73,400</b>
	To Maitland Blvd.				

Note: Two-Way Daily Revenue Traffic is a balanced traffic profile of existing and forecasted revenue generating traffic on System facilities, which excludes non-revenue traffic and non-accrued Pay by Plate traffic. This profile should not be used for design traffic purposes.

# S.R. 538 - Two-Way Daily Revenue Traffic (AWDT)

Cross Street	FY 2021	FY 2031	FY 2041	FY 2051
U.S. 17-92	8,200	12,400	14,800	16,700
<b>Marigold Main</b>	<b>8,200</b>	<b>12,400</b>	<b>14,800</b>	<b>16,700</b>
Marigold Avenue	4,600	6,600	7,800	9,100
<b>Koa Main</b>	<b>3,600</b>	<b>5,800</b>	<b>7,000</b>	<b>7,600</b>
Koa Street	1,200	1,800	2,400	2,800
	<b>2,400</b>	<b>4,000</b>	<b>4,600</b>	<b>4,800</b>
Cypress Parkway	2,400	4,000	4,600	4,800

Note: Two-Way Daily Revenue Traffic is a balanced traffic profile of existing and forecasted revenue generating traffic on System facilities, which excludes non-revenue traffic and non-accrued Pay by Plate traffic. This profile should not be used for design traffic purposes.





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