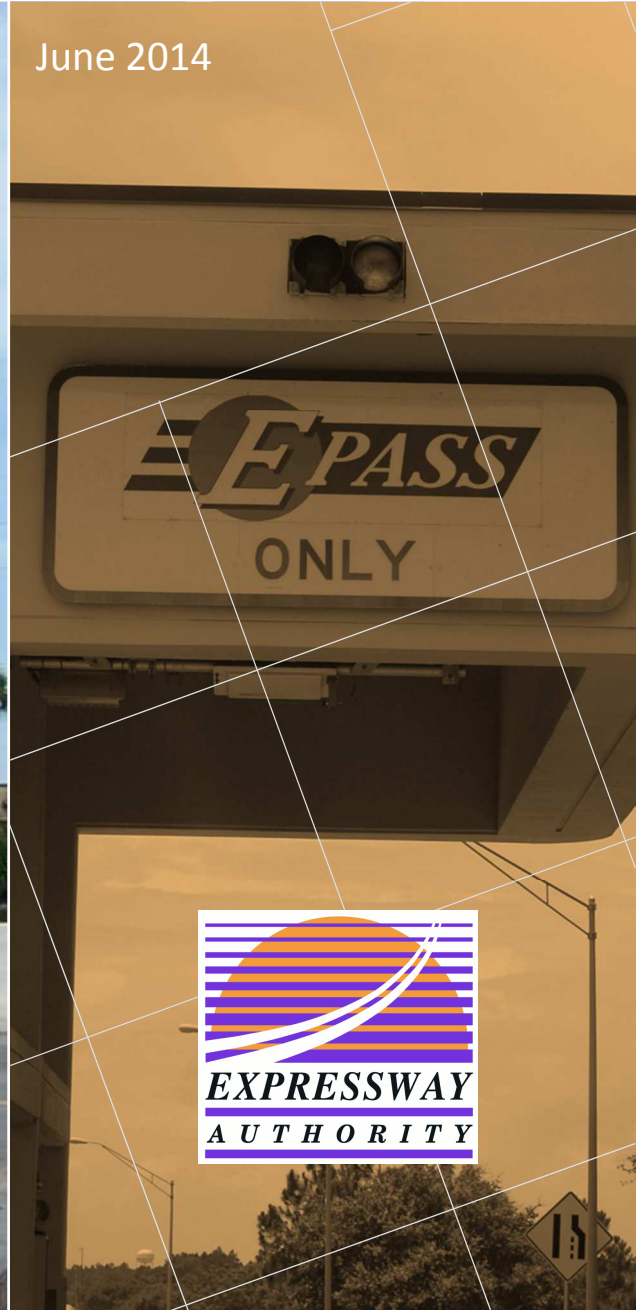


Orlando-Orange County
Expressway Authority
FY 2013
General Traffic and Earnings
Consultant's Annual Report



June 2014



**CDM
Smith**



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June 16, 2014

Mr. Joseph A. Berenis, P.E.
Deputy Executive Director
Orlando-Orange County Expressway Authority
4947 ORL Tower Road
Orlando, FL 32807

Dear Mr. Berenis:

As the Orlando-Orange County Expressway Authority (OOCEA) Traffic and Earnings Consultant, CDM Smith is pleased to submit the FY 2013 General Traffic and Earnings Consultant's Annual Report.

This report includes a summary of traffic and revenue (T&R) performance characteristics for the five toll facilities on the OOCEA System, including S.R. 528 (Martin B. Andersen Beachline Expressway), S.R. 408 (Spessard Lindsay Holland East-West Expressway), S.R. 417 (Central Florida Greenway), S.R. 429 (Daniel Webster Western Beltway), and S.R. 414 (John Land Apopka Expressway). In addition to historical trends, this report contains future year T&R forecasts.

We acknowledge with thanks the assistance of you and staff in furnishing the background data for this report and express our appreciation for the opportunity to serve as the General Traffic and Earnings Consultant.

Respectfully submitted,

CDM Smith

Hugh W. Miller, Jr. P.E., PhD
Project Manager



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Chapter 1
Introduction and
System Overview





INTRODUCTION AND SYSTEM OVERVIEW

1.1 INTRODUCTION

This annual report is prepared for the Orlando - Orange County Expressway Authority (OOCEA) and is a summary of the FY 2013 traffic and revenue (T&R) annual performance characteristics and 30-year forecasts of T&R for the five toll facilities that constitute the OOCEA System (the "System"). This analysis also includes a brief discussion of the external factors that influence future T&R. Any changes in sources or methodologies that have occurred since the last report are noted in the text.

The purpose of this report is to describe current T&R trends for the System, to summarize the forecasting methodology used to develop the projections included in this report and to provide both a short-term and long-term T&R projection for the System. This report contains a description of the historical T&R from Fiscal Year (FY) 1994 through FY 2013. This report also documents the projected annual T&R for FY 2014 through FY 2043. OOCEA's fiscal year ends on June 30th and begins on July 1st of the preceding calendar year. Future year traffic projections will also be presented as Annual Average Daily Traffic (AADT) on a calendar year basis.



This chapter is an overview including the OOCEA System description, a description of the previous and current toll rate schedules, a comparison of OOCEA toll rates with other toll facilities across the nation, a summary of historical annual transactions and revenue for the System with percentages by facility, System monthly transactions and revenue, System historical E-PASS usage, and System forecasted transactions and revenues.

Chapter 2 contains a presentation of historical trends and current socioeconomic conditions. While economic conditions are always an important driver of T&R performance, the recession of 2007 through 2009 and recent recovery deserve special attention. Florida, particularly the Orlando Metropolitan Area, was amongst the hardest hit in the nation, especially with respect to the real estate market and unemployment. The ongoing recovery and the speed and strength with which it progresses will continue to play a major role in the performance of the OOCEA toll facilities. Subsequent chapters present T&R performance and forecasts for each of OOCEA's five toll facilities.



1.2 SYSTEM DESCRIPTION

The OOCEA System consists of five toll facilities: S.R. 528 – Martin B. Andersen Beachline Expressway, S.R. 408 – Spessard Lindsay Holland East-West Expressway, S.R. 417 – Central Florida Greenway, S.R. 429/S.R. 451 – Daniel Webster Western Beltway, and S.R. 414 – John Land Apopka Expressway. A location map of the five 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 individual projects, constructed over the 50 year period between 1963 and 2013. The first facility was the 23-mile S.R. 528 Beachline Expressway, which opened to traffic in 1967. The facility extends from the S.R. 492/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. It has three mainline toll plazas: the Airport Main Plaza, the Beachline Main Plaza and the Dallas Main Plaza, and two pairs of ramp plazas. Florida's Turnpike Enterprise (FTE) operates the western 8 miles of S.R. 528 from Boggy Creek Road to Interstate 4 (I-4), and the Florida Department of Transportation (FDOT) operates the eastern end from S.R. 520 to S.R. 407 and U.S. 1 in Brevard County.

The second facility was the 22-mile S.R. 408 East-West Expressway, which first opened to traffic in 1973. This facility runs 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 the main parallel highway. S.R. 408 has four mainline toll plazas: Hiawassee Main, Pine Hills Main, Conway Main, and Dean Main, along with 10 pairs of ramp plazas plus two single ramp plazas.

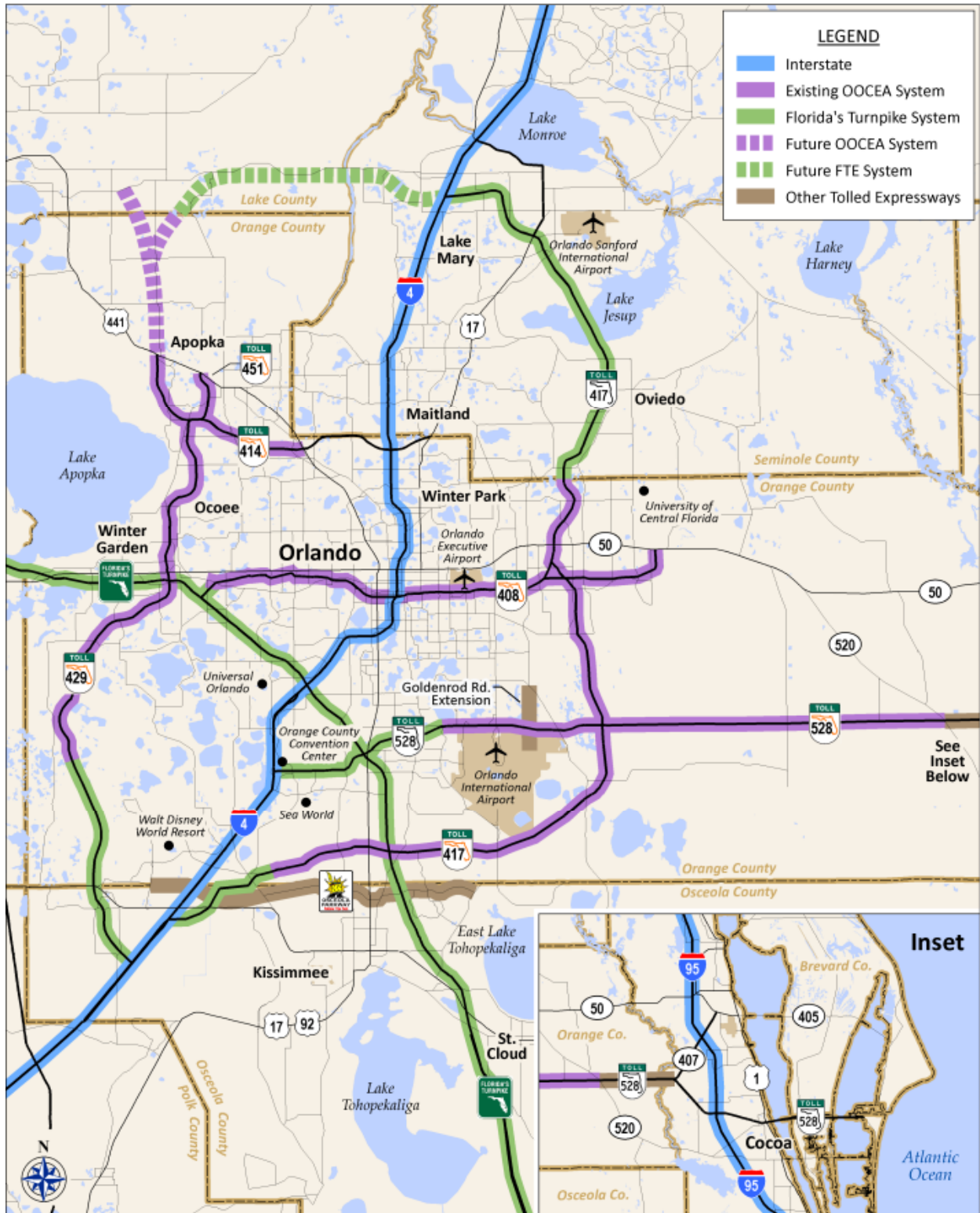
The next facility was the 33-mile S.R. 417 Central Florida Greenway, which first opened to traffic in 1988. S.R. 417 is the eastern beltway around Orlando with the OOCEA portion extending from International Drive on the southern end to the Aloma Avenue/Seminole County Line on the northern end. It has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

The fourth facility was the 22-mile S.R. 429 Western Beltway, which as its name suggests is the western beltway around Orlando. S.R. 429 first opened to traffic in 2000. The OOCEA portion of S.R. 429 extends from Seidel Road in west Orange County on the southern end to U.S. 441 in the City of Apopka on the northern end. It has two mainline toll plazas: Forest Lake Main and Independence Main, along with five pairs of ramp plazas. The 2-mile Western Beltway Connector Road (S.R. 451) is the former S.R. 429 connection to U.S. 441 extending from the Apopka Expressway on the southern end to U.S. 441 on the northern end. FTE operates the toll facility on S.R. 429 from Seidel Road to I-4 in Osceola County.

The fifth facility, which opened to traffic in 2009, was the 6-mile S.R. 414 Apopka Expressway. S.R. 414 extends Maitland Boulevard from U.S. 441 easterly to S.R. 429/Western Beltway, to relieve congestion on U.S. 441. The Apopka Expressway has one mainline plaza at Coral Hills Main and two pairs of ramp plazas.



Figure 1-1
CENTRAL FLORIDA EXPRESSWAY SYSTEM





Goldenrod Road Extension is a 2-mile toll facility built and operated by OOCEA, but not part of the OOCEA System. Opened to traffic in 2003, this toll facility extends Goldenrod Road from S.R. 15/Narcoosee Road southerly to Heintzelman Boulevard, and serves as a reliever to S.R. 15/Narcoosee Road. The facility has an interchange with S.R. 528 and one mainline toll plaza, the Goldenrod Main. OOCEA System facilities with the corresponding lengths and opening years are presented in Table 1-1.

The Wekiva Parkway, which will complete the western beltway around Orlando, is a 25 mile planned toll facility that will connect the northern end of S.R. 429 in Apopka to Interstate 4 and S.R. 417 near Sanford. This \$1.6B project will be built as a partnership between OOCEA, FDOT and FTE. The first phases of the OOCEA portion of the project will be under construction in the first quarter of calendar year 2015.

**TABLE 1-1
OOCEA SYSTEM FACILITIES**

OOCEA System	Length (miles)	Year
S.R. 528 - Martin Andersen Beachline Expressway	23.0	1967
S.R. 408 - Spessard Holland East West Expressway	22.0	1973
S.R. 417 - Central Florida Greenway	33.0	1988
S.R. 429 - Daniel Webster Western Beltway	22.0	2000
S.R. 414 - John Land Apopka Expressway	6.0	2009
S.R. 451 - Western Beltway Connector Road	2.0	2012
Total	108.0	
OOCEA Non-System		
Goldenrod Road Extension	2.0	2003

1.3 TOLL RATES

On February 26, 2009, the OOCEA 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 one-time adjustment occurred on April 5, 2009, in which toll rates at all fully open mainline plazas (except Coral Hills) and most toll ramp locations increased by \$0.25. The purpose of the rate increase was to counterbalance declining System revenues, to stabilize the fiscal integrity of OOCEA, and to fortify the ability to improve and expand the System in the future. The toll rates presented in Table 1-2 reflect the rates adopted in 2009. Since 2009 there have been several changes to main and ramp plazas, including the addition of the Dallas Main plaza and Dallas ramp plazas, the addition of C.R. 437A ramp plazas, and the removal of the Valencia College Lane ramp plazas.

As a result, on July 1, 2012 (the beginning of FY 2013), OOCEA implemented a rate differential for the first time for cash and electronic customers. Customers who pay tolls with E-Pass now pay a lower toll rate than cash customers. Prior to this toll rate increase, cash and electronic



customers paid the same toll rate at all OOCEA toll plazas. The rate differential encourages electronic participation, thereby helping OOCEA maintain lower toll collection costs. The FY 2013 toll rates are presented in Table 1-3. The rates shown in this table continue to represent the current tolling schedule. In accordance with OOCEA's Toll Policy, the next toll rate increase is scheduled for July 1, 2017 (FY 2018).





**Table 1-2
OOCEA SYSTEM TOLL RATES, FY 2009**

Roadway	Toll Schedule				
	2 Axles ^A	3 Axles	4 Axles	5 Axles	6 Axles
S.R. 528					
Airport Plaza	\$1.00	\$1.50	\$1.75	\$2.25	\$2.25
Beachline Main Plaza	\$0.75	\$1.50	\$1.75	\$2.25	\$2.25
International Corporate Park	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50
S.R. 408					
Good Homes Road	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25
Hiawassee Main Plaza	\$0.75	\$1.50	\$1.75	\$2.25	\$2.25
Hiawassee Road	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50
Pine Hills Main Plaza	\$1.00	\$1.50	\$1.75	\$2.25	\$2.25
Old Winter Garden Road	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75
John Young Parkway (S.R. 423)	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75
Orange Blossom Trail	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50
Mills Avenue	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50
Bumby Avenue	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50
Conway Road	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75
Andes/Semorán Blvd.	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00
Conway Main Plaza	\$1.00	\$1.50	\$1.75	\$2.25	\$2.25
Semorán Blvd. (S.R. 436)	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75
Dean Road	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50
Dean Main Plaza	\$0.75	\$1.50	\$1.75	\$2.25	\$2.25
Rouse Road	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50
S.R. 417					
John Young Main Plaza	\$1.25	\$1.75	\$2.25	\$2.75	\$2.75
John Young Parkway (S.R. 423)	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75
Orange Blossom Trail	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50
Landstar Blvd.	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50
Boggy Creek Main Plaza	\$1.25	\$1.75	\$2.25	\$2.75	\$2.75
Boggy Creek Road	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00
Lake Nona Blvd.	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75
Narcoossee Road	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75
Moss Park Road	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50
Innovation Way	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50
Lee Vista Blvd.	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50
Curry Ford Main Plaza	\$0.75	\$1.50	\$1.75	\$2.25	\$2.25
Curry Ford Road (S.R. 552)	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50
Colonial Drive (S.R. 50)	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50
University Main Plaza	\$0.75	\$1.50	\$1.75	\$2.25	\$2.25
University Blvd.	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50
S.R. 429					
New Independence Parkway	\$0.75	\$0.75	\$75.00	\$0.75	\$0.75
Independence Main Plaza	\$1.25	\$1.75	\$2.25	\$2.75	\$2.75
C.R. 535	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50
S.R. 438	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25
West Road	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75
Forest Lake Main Plaza	\$1.25	\$1.75	\$2.25	\$2.75	\$2.75
S.R. 414					
Coral Hills Main Plaza	\$1.00	\$1.50	\$2.00	\$2.50	\$2.50
Keene Road	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50
Hiawassee Road	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25

Notes:

A - Includes motorcycles.

B - The toll listed for this plaza is the amount collected by the Authority. In addition, customers also pay a toll based on a per axle toll rate of \$0.25 (for each axle above the first axle), which is allocated to FDOT and, therefore, is not listed in the table.



**TABLE 1-3
OOCEA SYSTEM TOLL RATES, FY 2013**

Roadway	Electronic Toll Schedule					Cash Toll Schedule				
	2 Axles ^A	3 Axles	4 Axles	5 Axles	6 Axles	2 Axles ^A	3 Axles	4 Axles	5 Axles	6 Axles
S.R. 528										
Airport Plaza	\$1.09	\$1.64	\$1.91	\$2.46	\$2.46	\$1.25	\$1.75	\$2.00	\$2.50	\$2.50
Beachline Main Plaza	\$0.87	\$1.71	\$2.00	\$2.55	\$2.55	\$1.00	\$1.75	\$2.00	\$2.75	\$2.75
International Corporate Park	\$0.59	\$0.59	\$0.59	\$0.59	\$0.59	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75
Dallas Blvd.	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50
Dallas Main Plaza ^B	\$0.75	\$1.00	\$1.25	\$1.25	\$1.25	\$1.00	\$1.25	\$1.50	\$1.50	\$1.50
S.R. 408										
Good Homes Road	\$0.28	\$0.28	\$0.28	\$0.28	\$0.28	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50
Hiawassee Main Plaza	\$0.82	\$1.64	\$1.91	\$2.46	\$2.46	\$1.00	\$1.75	\$2.00	\$2.50	\$2.50
Hiawassee Road	\$0.55	\$0.55	\$0.55	\$0.55	\$0.55	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75
Pine Hills Main Plaza	\$1.09	\$1.64	\$1.91	\$2.46	\$2.46	\$1.25	\$1.75	\$2.00	\$2.50	\$2.50
Old Winter Garden Road	\$0.82	\$0.82	\$0.82	\$0.82	\$0.82	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00
John Young Parkway (S.R. 423)	\$0.82	\$0.82	\$0.82	\$0.82	\$0.82	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00
Orange Blossom Trail	\$0.55	\$0.55	\$0.55	\$0.55	\$0.55	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75
Mills Avenue	\$0.55	\$0.55	\$0.55	\$0.55	\$0.55	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75
Bumby Avenue	\$0.55	\$0.55	\$0.55	\$0.55	\$0.55	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75
Conway Road	\$0.82	\$0.82	\$0.82	\$0.82	\$0.82	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00
Andes/Semorán Blvd.	\$1.09	\$1.09	\$1.09	\$1.09	\$1.09	\$1.25	\$1.25	\$1.25	\$1.25	\$1.25
Conway Main Plaza	\$1.09	\$1.64	\$1.91	\$2.46	\$2.46	\$1.25	\$1.75	\$2.00	\$2.50	\$2.50
Semorán Blvd. (S.R. 436)	\$0.82	\$0.82	\$0.82	\$0.82	\$0.82	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00
Dean Road	\$0.55	\$0.55	\$0.55	\$0.55	\$0.55	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75
Dean Main Plaza	\$0.82	\$1.64	\$1.91	\$2.46	\$2.46	\$1.00	\$1.75	\$2.00	\$2.50	\$2.50
Rouse Road	\$0.55	\$0.55	\$0.55	\$0.55	\$0.55	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75
S.R. 417										
John Young Main Plaza	\$1.37	\$1.91	\$2.46	\$3.00	\$3.00	\$1.50	\$2.00	\$2.50	\$3.00	\$3.00
John Young Parkway (S.R. 423)	\$0.82	\$0.82	\$0.82	\$0.82	\$0.82	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00
Orange Blossom Trail	\$0.55	\$0.55	\$0.55	\$0.55	\$0.55	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75
Landstar Blvd.	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50
Boggy Creek Main Plaza	\$1.37	\$1.91	\$2.46	\$3.00	\$3.00	\$1.50	\$2.00	\$2.50	\$3.00	\$3.00
Boggy Creek Road	\$1.09	\$1.09	\$1.09	\$1.09	\$1.09	\$1.25	\$1.25	\$1.25	\$1.25	\$1.25
Lake Nona Blvd.	\$0.82	\$0.82	\$0.82	\$0.82	\$0.82	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00
Narcoossee Road	\$0.82	\$0.82	\$0.82	\$0.82	\$0.82	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00
Moss Park Road	\$0.55	\$0.55	\$0.55	\$0.55	\$0.55	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75
Innovation Way	\$0.55	\$0.55	\$0.55	\$0.55	\$0.55	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75
Lee Vista Blvd.	\$0.55	\$0.55	\$0.55	\$0.55	\$0.55	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75
Curry Ford Main Plaza	\$0.82	\$1.64	\$1.91	\$2.46	\$2.46	\$1.00	\$1.75	\$2.00	\$2.50	\$2.50
Curry Ford Road (S.R. 552)	\$0.55	\$0.55	\$0.55	\$0.55	\$0.55	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75
Colonial Drive (S.R. 50)	\$0.55	\$0.55	\$0.55	\$0.55	\$0.55	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75
University Main Plaza	\$0.82	\$1.64	\$1.91	\$2.46	\$2.46	\$1.00	\$1.75	\$2.00	\$2.50	\$2.50
University Blvd.	\$0.55	\$0.55	\$0.55	\$0.55	\$0.55	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75
S.R. 429										
New Independence Parkway	\$0.82	\$0.82	\$0.82	\$0.82	\$0.82	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00
Independence Main Plaza	\$1.37	\$1.91	\$2.46	\$3.00	\$3.00	\$1.50	\$2.00	\$2.50	\$3.00	\$3.00
C.R. 535	\$0.55	\$0.55	\$0.55	\$0.55	\$0.55	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75
S.R. 438	\$0.28	\$0.28	\$0.28	\$0.28	\$0.28	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50
West Road	\$0.82	\$0.82	\$0.82	\$0.82	\$0.82	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00
Forest Lake Main Plaza	\$1.37	\$1.91	\$2.46	\$3.00	\$3.00	\$1.50	\$2.00	\$2.50	\$3.00	\$3.00
C.R. 437A	\$0.55	\$0.55	\$0.55	\$0.55	\$0.55	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75
S.R. 414										
Coral Hills Main Plaza	\$1.09	\$1.64	\$2.18	\$2.73	\$2.73	\$1.25	\$1.75	\$2.25	\$2.75	\$2.75
Keene Road	\$0.55	\$0.55	\$0.55	\$0.55	\$0.55	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75
Hiawassee Road	\$0.28	\$0.28	\$0.28	\$0.28	\$0.28	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50

Notes:

A - Includes motorcycles.

B - The toll listed for this plaza includes the toll collected for FDOT, which is \$0.25 for transponder transactions or \$0.50 for cash transactions regardless of the number of axles.



1.3.1 E-PASS DISCOUNT

In 1998, OOCEA began a program to offer discounts to electronic toll users who frequent the System. The discount program was started to encourage customers to utilize E-PASS transponders. The discount program has helped OOCEA with a Florida Transportation Commission (FTC) performance measure that requires 75 percent of the total transactions to be completed utilizing E-PASS transponders. This performance measure was instituted by the FTC in 2007. The E-PASS discount program offers a five percent rebate to E-PASS customers with 40 or more OOCEA electronic transactions per month and a ten percent rebate to customers with 80 or more OOCEA electronic transactions per month. While E-PASS is compatible with SunPass (FDOT/Turnpike) and LeeWay (Lee County) Electronic Toll Collection (ETC) systems, transactions on these systems do not apply toward OOCEA's discount program. In the first fiscal year of implementation, the rebates totaled approximately \$0.7 million, or approximately 0.7 percent of the total System revenues. In FY 2013, the discount program has grown to \$10.8 million, or 3.6 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 2013 the E-PASS participation rate reached 78.1 percent, exceeding the 75 percent goal.

1.3.2 TOLL RATE COMPARISON TO OTHER US TOLL FACILITIES

As shown in Table 1-4, the FY 2013 average toll rates per mile on OOCEA's five facilities are comparable to the average toll rates on other toll facilities across the United States. Even with the FY 2013 toll rate adjustment, the average toll rates are still comparable to average rates per mile for other similar toll roads. The average rates per mile for OOCEA's facilities are between 12.0 and 20.8 cents per mile for cash rates, and 10.7 and 18.2 cents per mile for electronic toll rates. The average cash rate for the OOCEA System is 15.3 cents per mile and the average electronic toll rate is 13.4 cents per mile. The higher rates are seen on newer OOCEA facilities.





**Table 1-4
Toll Rate Comparison with Other U.S. Toll Facilities**

	Toll Facility	Initial Opening Year	Most Recent Toll Increase	Facility Type	Length (miles)	Passenger Cars			
						Toll Rates		Rate-Per-Mile (cents)	
						Base (Cash/Video)	Electronic	Base (Cash/Video)	Electronic
TX	TX DOT, Grand Parkway	2011	14-Feb	U	22	-	\$4.10	-	19.0
TX	Harris County Toll Road Authority - Westpark Tollway	2004	Sep-13	U	13	-	\$2.90	-	22.3
CA	San Joaquin Hills Corridor (SR 73)	1996	Jul-13	R/U	15	\$6.75	\$6.05	45.0	40.3
CO	Northwest Parkway	2003	Jan-14	U	10	\$3.70	\$3.50	38.9	36.8
CA	Eastern Toll Road (SR 241)	1998	Jul-13	R/U	24	\$9.00	\$6.45	37.5	26.9
VA	Chesapeake Expressway (Route 168)	2001	May-11	R	16	\$6.00	\$6.00	37.5	37.5
FL	Miami Dade Expressway, Gratigny Parkway, SR 924	1992	Jul-13	U	5	\$2.00	\$1.00	37.0	18.5
DE	Delaware Turnpike (I-95)	1963	Oct-07	R/U	11	\$4.00	\$4.00	35.7	35.7
CO	E-470	1991	Jan-14	R/U	47	\$16.65	\$13.25	35.7	28.4
CA	South Bay Expressway	2007	Jun-12	C	10	\$3.50	\$2.75	35.0	27.5
VA	Dulles Greenway	1995	Jan-13	R/U	14	\$4.90	\$4.90	35.0	35.0
MD	Maryland Inter County Connector	2011	Dec-11	P	18	\$6.00	\$4.00	33.5	22.3
FL	Miami Dade Expressway, Don Shula Expressway (SR 874)	1971	Jul-13	U	7	\$2.00	\$1.00	28.6	14.3
VA	Dulles Toll Road	1984	Jan-14	C	13	\$3.50	\$3.50	26.1	26.1
IL	Veterans Memorial Tollway	1989	Jan-12	R/U	30	\$7.60	\$3.80	25.5	12.7
TX	North Texas Tollway Authority - President George Bush TPK	1998	Jul-13	U	40	\$9.68	\$6.44	24.4	16.2
TX	North Texas Tollway Authority - Sam Rayburn Tollway	2006	Jul-13	U	24	\$5.74	\$3.82	24.4	16.2
TX	North Texas Tollway Authority - Dallas North Tollway	1968	Jul-13	U	30	\$7.34	\$4.89	24.4	16.3
FL	Miami Dade Expressway, Airport Expressway, SR 112	1961	Jul-13	U	4	\$1.00	\$0.50	23.8	11.9
FL	Lee Roy Selmon Crosstown Expressway (SR 618)	1976	Sep-10	U	14	\$3.00	\$2.50	21.4	17.9
FL	Miami Dade Expressway Authority - Dolphin Expressway (SR 836)	1965	Jul-13	U	14	\$3.00	\$1.50	21.4	10.7
FL	OOCEA S.R. 414 (Apopka Expressway)	2009	Jul-12	R/U	6	\$1.25	\$1.09	20.8	18.2
FL	OOCEA S.R. 408 (East-West Expressway)	1973	Jul-12	U	22	\$4.50	\$3.82	20.3	17.3
SC	Greenville Southern Connector	2001	Jan-12	R/U	16	\$3.00	\$2.70	18.8	16.9
TX	Harris County Toll Road Authority - Sam Houston Tollway	1987	Sep-13	U	70	\$11.65	\$11.65	16.6	16.6
TX	Harris County Toll Road Authority - Hardy Toll Road	1988	Sep-13	U	21	\$3.50	\$2.90	16.6	13.7
FL	OOCEA S.R. 417 (Central Florida Greenway)	1988	Jul-12	R/U	33	\$5.00	\$4.38	15.3	13.4
FL	OOCEA System (All Five Facilities)	-	Jul-12	R/U	108	\$16.50	\$14.49	15.3	13.4
FL	Florida's Turnpike, Polk Parkway	1998	Jun-13	U	25	\$3.75	\$3.06	15.0	12.2
FL	Florida's Turnpike, Veterans Expressway	1994	Jun-13	U	15	\$2.25	\$1.79	15.0	11.9
FL	Osceola Parkway (S.R. 522)	1995	Apr-09	U	12	\$1.75	\$1.75	14.1	14.1
FL	OOCEA S.R. 429 (Western Beltway)	2000	Jul-12	R/U	22	\$3.00	\$2.74	13.6	12.5
NH	Blue Star Turnpike	1950	Jul-09	R	16	\$2.00	\$1.40	12.3	8.6
FL	Florida's Turnpike, Beachline West	1973	Jun-13	U	8	\$1.00	\$0.77	12.3	9.4
FL	OOCEA S.R. 528 (Beachline Expressway)	1967	Jul-12	R/U	23	\$2.75	\$2.46	12.0	10.7
NJ	New Jersey Turnpike	1951	Jan-12	R/U	118	\$13.85	\$13.85	11.7	11.7
IL	Tri-State Tollway	1958	Jan-12	U	77	\$9.00	\$4.50	11.6	5.8
PA	Pennsylvania Turnpike	1940	Jan-14	R	360	\$40.95	\$29.31	11.4	8.1
FL	Florida's Turnpike, Western Beltway	2005	Jul-13	R/U	11	\$1.25	\$1.02	11.4	9.3
FL	Florida's Turnpike, Sawgrass Expressway	1990	Jun-13	U	23	\$2.50	\$2.04	10.9	8.9
IL	Reagan Memorial Tollway	1958	Jan-12	C	96	\$10.20	\$5.10	10.6	5.3
FL	Florida's Turnpike, Homestead Extension	1974	Jun-12	U	47	\$4.86	\$3.83	10.3	8.1
IL	Jane Addams Memorial Tollway	1958	Jan-12	C	79	\$7.90	\$3.95	10.1	5.0
FL	Florida's Turnpike, Suncoast Parkway	2001	Jun-13	U	42	\$3.75	\$3.06	8.9	7.3
FL	Florida's Turnpike, Ticket System	1957	Jun-13	R	155	\$12.90	\$9.79	8.3	6.3
FL	Florida's Turnpike, Southern Coin System	1957	Jun-13	U	43	\$3.50	\$2.81	8.1	6.5
DE	Korean War Veterans Memorial Highway (SR 1)	1991	Oct-07	R/U	51	\$4.00	\$4.00	7.8	7.8
OH	Ohio Turnpike	1954	Jan-14	R	241	\$17.00	\$11.50	7.0	4.8
WV	West Virginia Turnpike	1954	Aug-09	R	88	\$6.00	\$3.90	6.8	4.4
FL	Florida's Turnpike, Northern Coin System	1957	Jun-12	U	67	\$4.50	\$4.09	6.7	6.1
ME	Maine Turnpike	1947	Nov-12	R	109	\$7.00	\$6.45	6.4	5.9
IN	Indiana Toll Road	1956	Jul-13	R	157	\$9.70	\$4.65	6.2	3.0
NY	New York State Thruway	1954	Jan-10	R/U	496	\$25.25	\$23.99	5.1	4.8
KS	Kansas Turnpike	1956	Feb-13	R	236	\$12.00	\$9.75	5.1	4.1
NJ	Garden State Parkway ^A	1954	Jan-12	R/U	173	\$8.25	\$8.25	4.8	4.8
NH	Spaulding Turnpike	1957	7-Oct	R	33	\$1.50	\$1.06	4.5	3.2
FL	FDOT, Alligator Alley	1969	Jun-13	R	78	\$3.00	\$2.81	3.8	3.6
MA	Massachusetts Turnpike ^B	1957	13-Oct	C	123	\$4.70	\$4.70	3.8	3.8

R:Rural, U:Urban, C:Commuter

Notes:

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

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



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 a result of a relative change in toll rate with other factors held constant. Generally, a number of factors can affect elasticity, including diversion to competing facilities, changes in travel modes, trip consolidation/trip chaining, timeframe of driver adjustments, and other influences such as trip purposes, etc. The effects of changes in toll rate on the various facilities of the OOCEA System depend on 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 OOCEA 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 a reduction in traffic is expected from an increase in toll. 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) – e.g., percent change in traffic corresponds to an equivalent percent change in toll rate. That is, the relative change in revenue would be the same as the change in toll rate. Expected traffic elasticity values are lower than 1.0, or relatively inelastic, which would yield smaller percentage decreases in traffic, and consequently revenue increases.

The effect of the July 2012 toll rate increase on traffic was not profound for several reasons. This rate increase created a toll differential for the first time on OOCEA 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 E-PASS as a result of the rate increase. Customers wanted to take 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 1-5.

Table 1-5
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 were -0.14, with a very minor impact to the traffic. This elasticity is comparable to Florida's Turnpike Southern Connector Extension elasticity of -0.07 and Seminole Expressway elasticity of -0.21¹ for the toll rate adjustment that occurred in June of 2012. 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 are newer with higher initial annual growth rates and have influences beyond the toll rate change. These facilities also serve areas that are still experiencing development growth, as compared to S.R. 408 and S.R. 417 that serve developed urban areas of Orlando.

S.R. 408 and S.R. 417 show 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 E-PASS. For the entire OOCEA System, E-PASS participation increased approximately 4.0 percent over the prior year (July – October). The 4.0 percent increase is not entirely a result of the conversion of cash customers to E-PASS because normal growth is embedded in the T&R calculations and it is difficult to identify and remove.

1.4 SYSTEM HISTORICAL TOLL TRANSACTIONS AND REVENUE

1.4.1 HISTORICAL ANNUAL TOLL TRANSACTIONS AND REVENUE

The annual historical transactions and revenue for the five facilities from FY 1994 to FY 2013 are presented in Table 1-6. The annual data is based on the OOCEA Monthly Statistical Reports and is not reconciled to the Unpaid Toll Notice Allowance Report and the fiscal year end. For these reasons, the information presented in this section may differ slightly from the data presented in the FY 2013 Comprehensive Annual Financial Report (CAFR) and other information in this report.

S.R. 408 has the largest number of annual transactions with 123.5 million and the greatest amount of toll revenue with \$119.3 million in FY 2013. In FY 2013 S.R. 417 had 90.3 million transactions and \$91.2 million in toll revenue, and S.R. 528 had 57.6 million transactions and \$54.5 million in toll revenue. With the northern section of S.R. 429 opened in 2000 and the southern section opened in 2006, transactions and revenue have steadily grown on S.R. 429 to 27.2 million transactions and \$29.4 million in toll revenue for FY 2013. S.R. 414, being the newest facility on the OOCEA System, has been open to traffic for just four years and is still in "ramp-up" with 8.3 million transactions and \$7.7 million in toll revenue for FY 2013.

As shown in the table, total System transactions in FY 2013 have increased by 8.8 million transactions or 2.9 percent over FY 2012. The increase is due primarily to the first full year of operation of the Dallas Main Plaza on S.R. 528. As a result of the toll increase, S.R. 408 and S.R. 417 had slight decreases in transactions for FY 2013 over FY 2012, while S.R. 429 and S.R. 414 have modest increases in transactions in FY 2013. Total System revenues in FY 2013 increased

¹ October 2012 Traffic and Earnings Report for Florida's Turnpike System



\$34.6 million or 12.9 percent over FY 2012, primarily due to the toll rate adjustment in FY 2013. All facilities had increases in revenue.

**TABLE 1-6
SYSTEM TOTALS – HISTORICAL TRANSACTIONS AND TOLL REVENUES**

Fiscal Year Ending	S.R. 528	S.R. 408	S.R. 417	S.R. 429	S.R. 414	TOTAL	Percent Change
TRANSACTIONS (millions)							
1994	18.8	52.1	21.1			92.0	
1995	20.2	56.4	30.0			106.6	15.9%
1996	22.0	63.4	34.3			119.7	12.3%
1997	23.7	70.3	40.3			134.3	12.2%
1998	25.2	79.4	45.1			149.7	11.5%
1999	27.3	88.2	50.9			166.4	11.2%
2000	30.8	97.6	57.9			186.3	12.0%
2001 ^A	32.4	104.4	62.3	3.5		202.6	8.7%
2002 ^{B,C}	31.6	110.1	64.9	5.8		212.4	4.8%
2003	33.7	116.1	71.3	9.5		230.6	8.6%
2004 ^D	37.5	124.7	79.6	13.8		255.6	10.8%
2005 ^{E,F}	39.7	127.8	87.2	16.4		271.1	6.1%
2006 ^G	42.4	135.4	96.2	20.2		294.2	8.5%
2007 ^H	44.5	138.3	102.4	24.4		309.6	5.2%
2008 ^{I,J}	44.8	139.0	104.5	26.6		314.9	1.7%
2009 ^{K,L}	40.7	131.3	94.8	25.1	0.6	292.5	-7.1%
2010	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 ^M	47.5	126.2	90.7	26.4	7.3	298.1	1.9%
2013 ^N	57.6	123.5	90.3	27.2	8.3	306.9	2.9%
TOLL REVENUES (millions)							
1994	\$17.4	\$34.0	\$13.2			\$64.6	
1995	\$18.1	\$36.7	\$18.8			\$73.6	13.9%
1996	\$19.7	\$41.1	\$21.8			\$82.6	12.2%
1997	\$21.2	\$45.5	\$26.4			\$93.1	12.7%
1998	\$22.6	\$51.3	\$30.0			\$103.9	11.6%
1999	\$24.6	\$56.6	\$33.4			\$114.6	10.3%
2000	\$27.7	\$62.3	\$38.3			\$128.3	12.0%
2001 ^A	\$29.2	\$66.2	\$41.3	\$3.3		\$140.0	9.1%
2002 ^{B,C}	\$28.7	\$69.7	\$42.6	\$5.1		\$146.1	4.4%
2003	\$30.6	\$73.2	\$46.5	\$7.2		\$157.5	7.8%
2004 ^D	\$34.3	\$78.7	\$51.6	\$9.2		\$173.8	10.3%
2005 ^{E,F}	\$36.1	\$80.4	\$56.7	\$10.5		\$183.7	5.7%
2006 ^G	\$38.4	\$85.1	\$62.6	\$13.5		\$199.6	8.7%
2007 ^H	\$40.0	\$86.5	\$66.9	\$17.4		\$210.8	5.6%
2008 ^{I,J}	\$40.1	\$86.1	\$68.5	\$19.0		\$213.7	1.4%
2009 ^{K,L}	\$38.5	\$88.3	\$66.8	\$19.0	\$0.6	\$213.2	-0.2%
2010	\$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 ^M	\$48.7	\$107.7	\$80.5	\$24.9	\$5.7	\$267.5	0.5%
2013 ^N	\$54.5	\$119.3	\$91.2	\$29.4	\$7.7	\$302.1	12.9%

Notes:

- A - Forest Lake Plaza on S.R. 429 opened in 2000.
- 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 suspensions).
- 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 9, 2012.
- N - Tolls increased Systemwide in July 2012.



Historical System transactions with annual growth since FY 2000 are displayed in Figure 1-2. The orange line represents the number of transactions and shows how overall transactions have increased over the last 13 years. The blue bars represent the annual growth (percent change) of transactions. The same information for toll revenues is depicted in Figure 1-3. Transaction and toll revenue growth patterns exhibited on the System roughly follow the same growth patterns historically. This pattern does shift in times of toll rate increases, as shown in the revenue growth in FY 2010 and FY 2013.

Transaction and revenue growth on the System was consistently strong from FY 2000 through FY 2007. Transactions and revenue exhibited double-digit growth in FY 2000 and FY 2004. Transactions and revenue fell to below 5 percent growth 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 with the national slowdown of travel following 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 OOCEA plazas for 21 days in August and September of 2004. In FY 2008 the first signs of the most recent recession appeared with transaction and revenue growth slowing down as the housing and construction industry across the State of Florida slowed down.

FY 2007 started the trend of four consecutive years of declines in the transaction growth rate on the System. In FY 2009, transactions actually decreased by 7.1 percent, which can be attributed to the economic recession and the Systemwide toll rate increase. Revenues only dipped into negative growth in FY 2009. The April 2009 toll rate increase slowed the negative 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 revenues increasing 22.3 percent in FY 2010, while 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 has shown stable transaction growth with each year increasing 2 to 3 percent despite the toll rate increase at the beginning of FY 2013. Revenues have climbed to over \$300 million in FY 2013 in part due to the toll rate adjustment.





FIGURE 1-2
OOCEA SYSTEM HISTORICAL TRANSACTIONS AND ANNUAL GROWTH

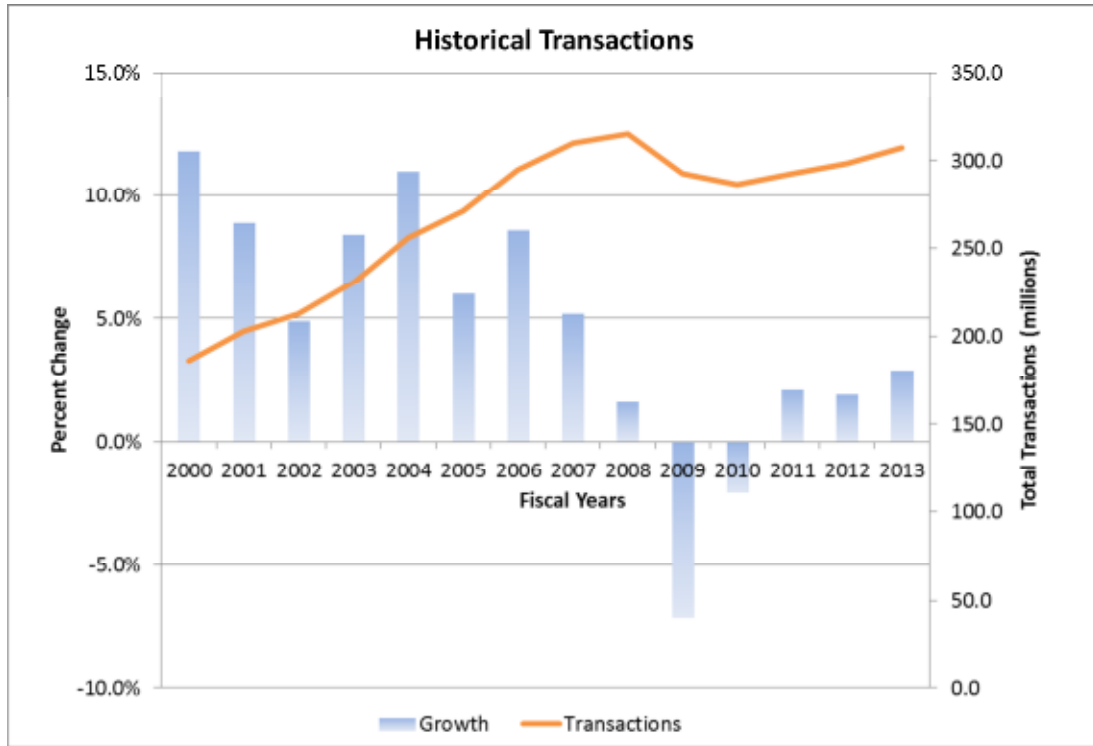
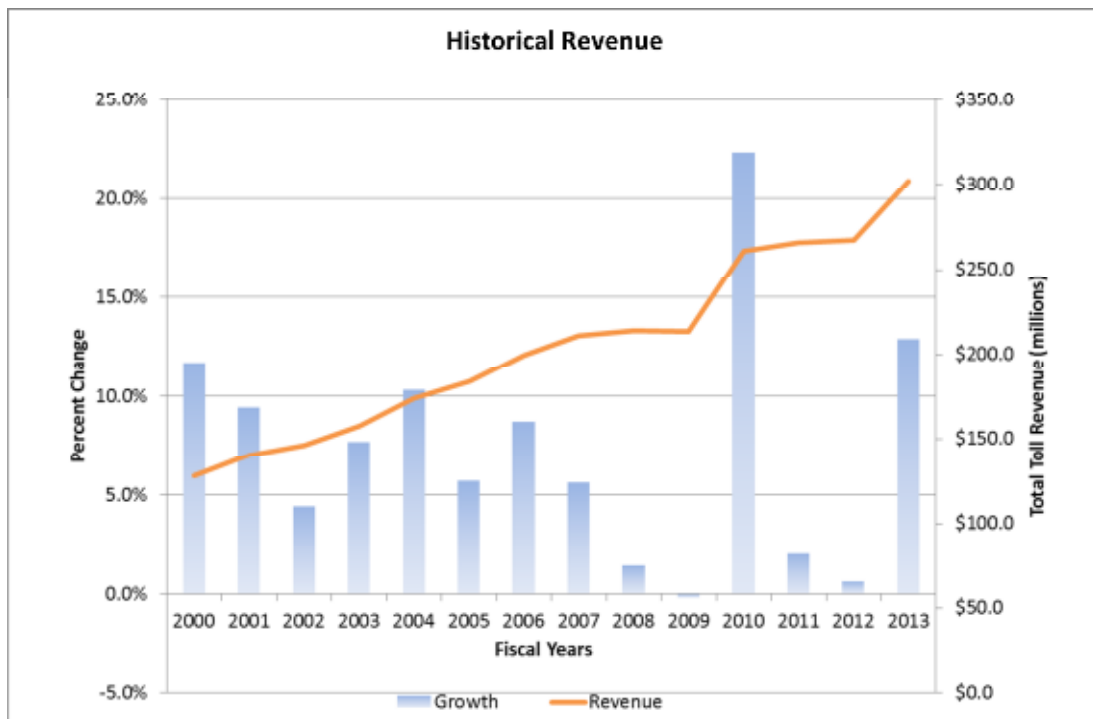


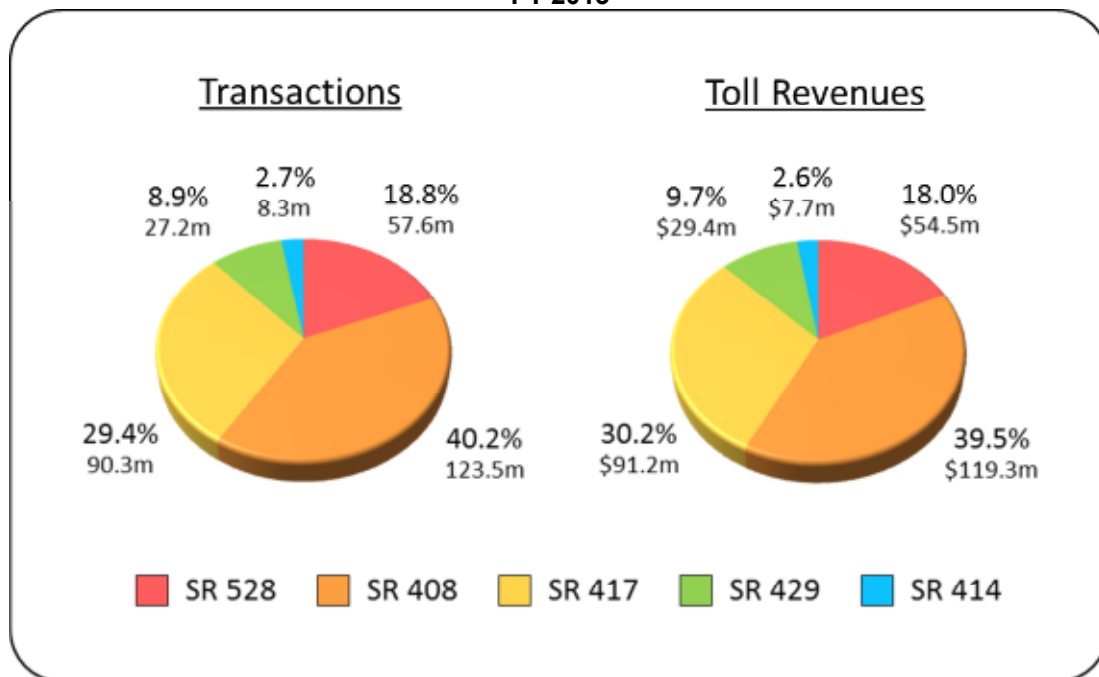
FIGURE 1-3
OOCEA SYSTEM HISTORICAL TOLL REVENUE AND ANNUAL GROWTH





The transactions and toll revenues by facility and as a percentage of System transactions and toll revenues for FY 2013 are presented in Figure 1-4. The largest portion of the transactions and revenue were reported on S.R. 408, with 40.2 percent, or 123.5 million of the transactions and 39.5 percent, or \$119.3 million of the revenues. Transactions and revenue on S.R. 417 are both approximately 30 percent of the System, 90.3 million and \$91.2 million, respectively, while S.R. 528 comprises 19 percent, or 57.6 million of the transactions and 18 percent, or \$54.5 million of the revenues. S.R. 429 transactions represent 9 percent, or 27.2 million of the System transactions and 10 percent, or \$29.4 million of the System revenues. S.R. 414 transactions were reported at 8.3 million or nearly 3 percent, while revenues were reported at \$7.7 million or 3 percent of the System revenues for FY 2013.

FIGURE 1-4
OOCEA SYSTEM TRANSACTIONS AND TOLL REVENUES BY FACILITY
FY 2013



1.4.2 MONTHLY TRANSACTION SEASONAL VARIATION

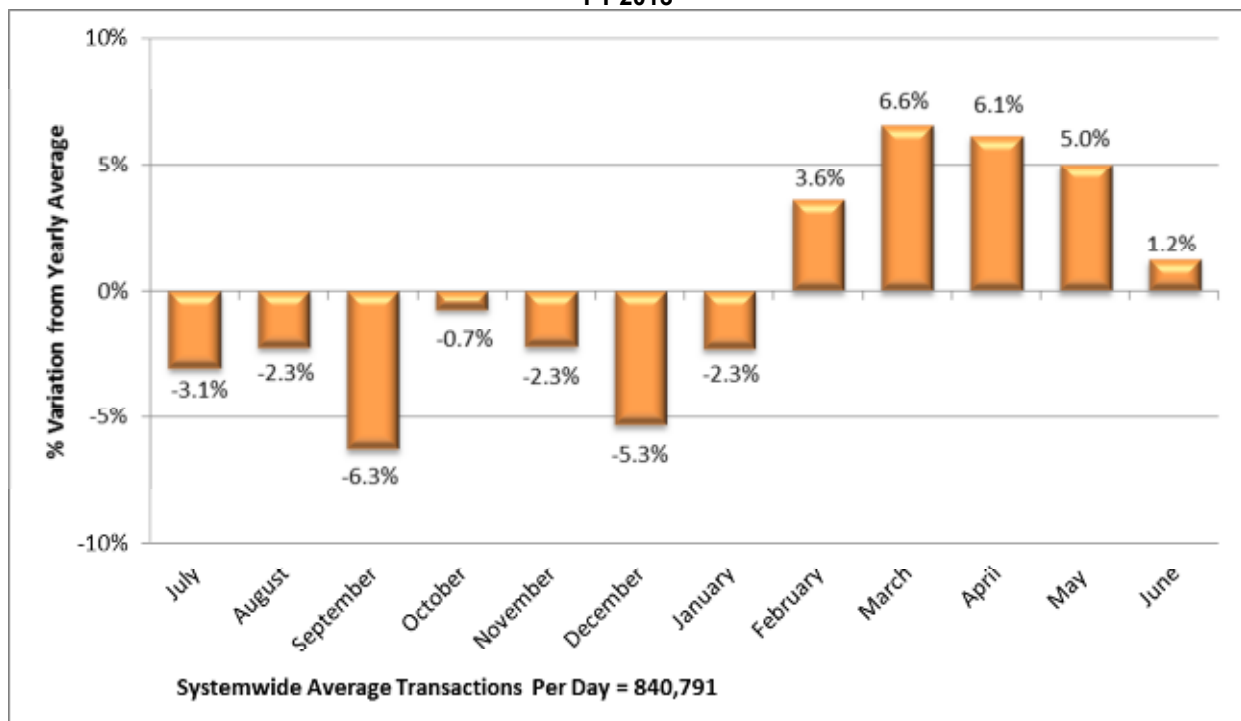
As presented in Table 1-7, average transactions per day on the System in FY 2013 ranged from a high of 896,093 in March 2013 to a low of 788,027 in September of 2012. This data is presented in a graphical format in Figure 1-5. Each month's average transactions per day appear as a percentage of the average for the fiscal year. As shown in the figure, March transactions were 6.6 percent above average and September transactions were 6.3 percent below the average. For FY 2013, the transactions were 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 extra number of tourists and seasonal residents in the area. The seasonality varies on different facilities, with the Beachline Expressway having the strongest seasonal variation due to its proximity to the Orlando International Airport (OIA) and tourist attractions.



**TABLE 1-7
OOCEA SYSTEM - MONTHLY SEASONAL VARIATION IN TOLL-PAYING TRAFFIC
FY 2013**

Month	Number of Days in Month	Total Toll Paying Transactions	Average Transactions Per Day	Seasonal Factor
July	31	25,263,943	814,966	0.969
August	31	25,472,034	821,679	0.977
September	30	23,640,806	788,027	0.937
October	31	25,877,393	834,755	0.993
November	30	24,656,132	821,871	0.977
December	31	24,675,281	795,977	0.947
January	31	25,458,784	821,251	0.977
February	28	24,390,986	871,107	1.036
March	31	27,778,882	896,093	1.066
April	30	26,773,139	892,438	1.061
May	31	27,370,929	882,933	1.050
June	30	25,530,376	851,013	1.012
Average		25,574,057	840,791	1.000
Total Year	365	306,888,685		

**FIGURE 1-5
OOCEA SYSTEM VARIATION IN TRANSACTIONS PER DAY, BY MONTH
FY 2013**

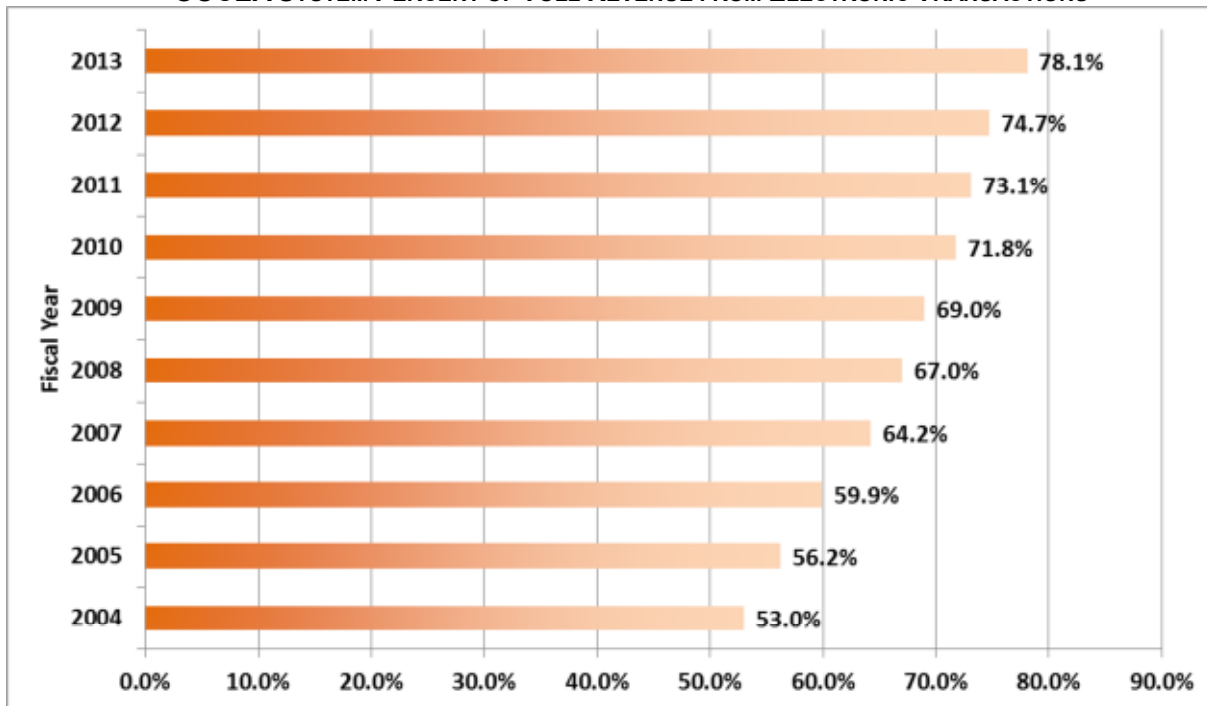




1.5 HISTORICAL E-PASS USAGE (REVENUE)

In 1994, OOCEA introduced its E-PASS electronic toll collection (ETC) program. During that year there were approximately 2,300 E-PASS transponders in use on the System. As of FY 2013 the number has grown to 529,900 transponders and approximately 291,370 active E-PASS accounts. As shown in Figure 1-6, revenues collected through E-PASS during FY 2013 account for just over 78 percent of the total System revenues. The percent of toll revenues from E-PASS has grown steadily for the past 10 years, from only 53.0 percent in FY 2004. E-PASS transactions account for over 80% of daily revenue at the University, Curry Ford, Dean, Hiwassee and Forest Lake Mainline plazas. The percentage of revenues collected through E-PASS is over 70 percent at the remainder of the mainline toll plazas. The 3.4 percentage point increase in the participation rate observed in FY 2013 is due in part to the implementation of the toll rate differential. Many customers purchased E-PASS in FY 2013 to take advantage of the lower electronic toll rate. In FY 2013, OOCEA became interoperable with North Carolina Quick Pass. This means that Quick Pass transponders are accepted on OOCEA facilities and E-PASS transponders are accepted on the North Carolina Turnpike facilities.

**FIGURE 1-6
OOCEA SYSTEM PERCENT OF TOLL REVENUE FROM ELECTRONIC TRANSACTIONS**



1.6 FORECASTING METHODOLOGY

This annual report contains estimates of future annual T&R for OOCEA. This section of the report provides an overview of the forecasting methodology and general approach used to estimate T&R taking into account the future toll rate schedule, economic indicators, and other factors. In general, a new travel demand model was developed and then used to estimate T&R with appropriate key assumptions. At the risk of over simplification, toll revenues are estimated



as the product of the number of transactions and the toll rates at each of the tolling points on the facility.

Estimates of future toll revenue on existing toll facilities are normally more reliable because traffic patterns are known and a significant amount of historical T&R data have been collected. With local knowledge of land use and motorist travel patterns, these forecasts are developed based on actual T&R performance adjusted for future known events, such as toll rate increases and roadway improvements. Existing T&R data used in the forecasting process excludes violations. As reported by OOCEA, violation transactions are removed from the T&R data and reported separately. In developing forecasts for OOCEA, a new travel demand model was developed and then used to establish future traffic patterns and traffic growth rates on each of the facilities. Historical traffic counts were used to validate and calibrate the model for mainline and ramp segments of the OOCEA System.

Travel demand modeling was performed estimating peak season weekday travel on the OOCEA System. The new OOCEA Model used as a foundation for the 2004 base-year version of Orlando Urban Area Transportation System (OUATS) Model along with components of the 2005 base-year version of the Central Florida Regional Planning Model (CFRPM). The OUATS Model was developed by METROPLAN ORLANDO, the Metropolitan Planning Organization (MPO) for the Orlando urban area comprising Orange, Seminole and Osceola Counties. THE CFRPM Model was developed by the FDOT District 5 in coordination with the local counties and MPOs. The OOCEA model was updated to a 2010 base year using 2010 U.S. Census and other planning data. U.S. Census data was used for the 2010 base year socioeconomic data sets. The planning horizon years of 2018, 2023, 2028, 2033, and 2038 were developed to correspond with the future year toll rate adjustments. The growth rates for the socioeconomic data sets were developed by CDM Smith economists for the horizon years. Population growth rates reflect the medium population projections from the most recent publication by the Bureau of Economic and Business Research (BEBR), College of Business Administration at the University of Florida. Control totals for each county by data set were developed and applied to the distribution of growth by zone as adopted by the MPOs.

The 2010 network was verified using 2010 aerial photography. Future year networks were based on the Long-Range Transportation Plans (LRTPs), Transportation Improvement Programs (TIPs), and the OOCEA FY 2013 - 2017 Five-Year Work Plan and related 10-Year Outlook – Planned Alternative. Model runs define the traffic levels on each of the OOCEA System facilities in the base year and future years. The base year is verified with year 2010 counts. The traffic for the base year is compared to the projected future year to derive a growth rate percentage. This growth rate is used to interpolate for the traffic profile in each year. The growth rates are applied to actual T&R conditions on OOCEA facilities. Documentation of the model development process is available under separate cover.

1.6.1 FORECASTING ASSUMPTIONS

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



- Toll rates on the facility are in nominal or future year dollars and are set forth according to the toll rate policy adopted by the OOCEA Board. Toll rate increments (indexed tolls) will be applied every fifth year based on net change of a minimum adjustment rate of 3.0 percent per year (linear) with calculations beginning FY 2013.
- Inflation is assumed to be 2.5% annually which includes the adjustment for real income growth.
- Future transportation projects were assumed according to locally adopted plans. The projects listed in the locally adopted Transportation Improvement Programs (TIP) and the 2030 or 2035 Long Range Transportation Plan (LRTP) were reviewed and compared with the OUATS and CFRPM network coding. The majority of the TIP projects were assumed to be built by FY 2018. The Cost Feasible LRTP projects were reviewed and included in the corresponding future year networks. OOCEA improvements were assumed and included those projects in the FY 2013 – FY 2017 Five Year Work Plan, and the FY 2013 – FY 2022 10 Year Outlook – Planned Alternative. Future projects that impact specific system components are provided in each chapter.
- The Wekiva Parkway was not included in the OOCEA Model. T&R from the Wekiva Parkway are not included in the System totals reported in this annual report. The Wekiva Parkway will be reviewed under separate analysis.
- No local, regional or national emergency 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 OOCEA System will be well-maintained, efficiently operated and effectively signed and promoted to encourage maximum usage.
- The forecasted traffic is revenue traffic and forecasted revenues are indicated toll revenues. The forecasts assume any variance due to toll violations. Allowances for the E-PASS discount and revenue recaptured from Unpaid Toll Notices (UTN) are included separately on a Systemwide basis.

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

1.7 SYSTEM FORECASTS

1.7.1 SYSTEM TRANSACTION AND TOLL REVENUE FORECASTS

The total System transactions and toll revenue by facility and for the System are summarized in Table 1-8 and Table 1-9. This information is presented for historical transactions and toll



revenue since FY 2000 and estimates in a 30-year forecast. The forecasts were produced by mainline plaza groups, aggregated to toll facility and then to the OOCEA System.

**TABLE 1-8
OOCEA SYSTEM TRANSACTION FORECAST (MILLIONS)**

Fiscal Year	S.R. 528		S.R. 408		S.R. 417		S.R. 429		S.R. 414		TOTAL		Percent Annual Change
	Actual ^A	Projected	Actual ^A	Projected	Actual ^A	Projected	Actual ^A	Projected	Actual ^A	Projected	Actual ^A	Projected	
2000	30.8		97.6		57.9						186.3		11.9%
2001	32.4		104.4		62.3		3.5				202.6		8.7%
2002 ^B	31.6		110.1		64.9		5.8				212.4		4.8%
2003	33.7		116.1		71.3		9.5				230.6		8.6%
2004	37.5		124.7		79.6		13.8				255.6		10.8%
2005 ^C	39.7		127.8		87.2		16.4				271.1		6.1%
2006	42.4		135.4		96.2		20.2				294.2		8.5%
2007	44.5		138.3		102.4		24.4				309.6		5.2%
2008 ^D	44.8		139.0		104.5		26.6				314.9		1.7%
2009 ^E	40.7		131.3		94.8		25.1		0.6		292.5		-7.1%
2010	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	47.5		126.2		90.7		26.4		7.3		298.1		1.9%
2013 ^F	57.6		123.5		90.3		27.2		8.3		306.9		2.9%
2014		58.5		126.8		95.7		29.1		8.7		318.9	3.9%
2015		59.5		130.6		100.3		29.9		8.8		329.0	3.2%
2016 ^F		41.4		134.3		104.8		30.7		8.9		320.1	-2.7%
2017		42.1		138.0		109.3		31.4		9.0		329.9	3.1%
2018 ^F		41.5		137.1		108.9		30.8		8.7		327.0	-0.9%
2019		42.9		139.6		111.2		31.5		8.9		334.1	2.2%
2020		44.3		142.0		113.5		32.3		9.0		341.1	2.1%
2021		45.7		144.5		115.7		33.0		9.2		348.2	2.1%
2022		47.1		146.9		118.0		33.8		9.4		355.2	2.0%
2023 ^F		47.3		145.0		116.5		33.2		9.1		351.1	-1.2%
2024		48.3		147.0		118.9		34.0		9.2		357.3	1.7%
2025		49.2		149.0		121.3		34.7		9.3		363.4	1.7%
2026		50.2		150.9		123.6		35.4		9.4		369.5	1.7%
2027		51.1		152.9		126.0		36.2		9.4		375.7	1.7%
2028 ^F		50.9		150.5		124.8		35.7		9.1		371.0	-1.2%
2029		51.6		152.3		127.1		36.3		9.3		376.6	1.5%
2030		52.4		154.2		129.4		36.9		9.4		382.2	1.5%
2031		53.1		156.0		131.7		37.4		9.5		387.7	1.5%
2032		53.8		157.8		133.9		38.0		9.7		393.3	1.4%
2033 ^F		53.5		156.4		133.1		37.3		9.5		389.8	-0.9%
2034		53.9		157.6		135.2		37.7		9.6		394.0	1.1%
2035		54.2		158.8		137.3		38.1		9.8		398.1	1.1%
2036		54.5		160.0		139.4		38.4		9.9		402.3	1.0%
2037		54.9		161.3		141.5		38.8		10.0		406.5	1.0%
2038 ^F		54.3		159.3		140.8		37.9		9.8		402.1	-1.1%
2039		54.6		160.5		142.9		38.3		9.9		406.2	1.0%
2040		54.9		161.7		145.0		38.7		10.1		410.4	1.0%
2041		55.3		163.0		147.1		39.0		10.2		414.6	1.0%
2042		55.6		164.2		149.2		39.4		10.3		418.7	1.0%
2043		55.9		165.4		151.3		39.8		10.5		422.9	1.0%

Fiscal Year	Compound Annual Average Growth Rate (CAAGR)							
	2000 - 2008	4.8%		4.5%		7.7%		
2008 - 2013	5.2%		-2.3%		-2.9%		0.5%	-0.5%
2013 - 2020	-3.7%		2.0%		3.3%		2.4%	1.5%
2020 - 2030	1.7%		0.8%		1.3%		1.3%	1.1%
2030 - 2040	0.5%		0.5%		1.1%		0.5%	0.7%

Notes:
A - Actual transaction data provided by OOCEA from Monthly Statistical Reports, which are unaudited.
B - Effects of the events of September 11, 2001.
C - Effects from 2004 hurricane season (4 storms with toll suspensions).
D - First effects of national economic recession.
E - Systemwide toll rate increase.
F - Airport Main Plaza closes, new ramp plazas open at beginning of FY2016. Transactions for tolls collected at the Turnpike plaza not included.



**TABLE 1-9
OOCEA SYSTEM TOLL REVENUE FORECAST - BEFORE E-PASS DISCOUNT AND UTN COLLECTIONS (MILLIONS)**

Fiscal Year	S.R. 528		S.R. 408		S.R. 417		S.R. 429		S.R. 414		TOTAL		Percent Annual Change
	Actual ^A	Projected	Actual ^A	Projected	Actual ^A	Projected	Actual ^A	Projected	Actual ^A	Projected	Actual ^A	Projected	
2000	\$27.7		\$62.3		\$38.3						\$128.3		11.7%
2001	29.2		66.2		41.3		\$3.3				140.0		9.1%
2002 ^B	28.7		69.7		42.6		5.1				146.1		4.4%
2003	30.6		73.2		46.5		7.2				157.5		7.8%
2004	34.3		78.7		51.6		9.2				173.8		10.3%
2005 ^C	36.1		80.4		56.7		10.5				183.7		5.7%
2006	38.4		85.1		62.6		13.5				199.6		8.7%
2007	40.0		86.5		66.9		17.4				210.8		5.6%
2008 ^D	40.1		86.1		68.5		19.0				213.7		1.4%
2009 ^E	38.5		88.3		66.8		19.0		\$0.6		213.2		-0.2%
2010	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	48.7		107.7		80.5		24.9		5.7		267.5		0.5%
2013 ^E	54.5		119.3		91.2		29.4		7.7		302.1		12.9%
2014		\$55.2		\$122.0		\$95.6		\$32.0		\$8.3		\$313.0	3.6%
2015		56.1		125.1		98.8		33.3		8.6		321.7	2.8%
2016 ^F		59.8		128.1		102.0		34.5		8.8		333.4	3.6%
2017		60.8		131.2		105.3		35.8		9.0		342.1	2.6%
2018 ^E		67.1		144.4		116.5		40.3		9.7		378.1	10.5%
2019		68.7		147.1		119.4		41.6		9.9		386.8	2.3%
2020		70.2		149.7		122.4		42.9		10.2		395.4	2.2%
2021		71.8		152.4		125.3		44.2		10.4		404.1	2.2%
2022		73.4		155.0		128.2		45.5		10.6		412.8	2.1%
2023 ^E		81.3		174.0		142.3		49.6		11.6		458.8	11.2%
2024		83.0		176.3		145.3		50.9		11.8		467.3	1.8%
2025		84.8		178.5		148.3		52.2		11.9		475.7	1.8%
2026		86.5		180.8		151.2		53.5		12.1		484.1	1.8%
2027		88.2		183.0		154.2		54.8		12.2		492.5	1.7%
2028 ^E		98.7		200.0		170.1		60.3		13.1		542.2	10.1%
2029		100.2		202.1		172.1		61.2		13.3		549.0	1.3%
2030		101.6		204.3		174.2		62.1		13.6		555.8	1.2%
2031		103.1		206.4		176.3		63.0		13.8		562.6	1.2%
2032		104.5		208.6		178.3		63.9		14.1		569.4	1.2%
2033 ^E		111.8		226.2		195.3		69.2		14.8		617.2	8.4%
2034		113.0		228.0		198.2		69.8		15.0		624.1	1.1%
2035		114.1		229.9		201.1		70.5		15.3		630.9	1.1%
2036		115.3		231.7		204.0		71.2		15.6		637.7	1.1%
2037		116.4		233.5		206.9		71.8		15.9		644.6	1.1%
2038 ^E		126.5		250.9		222.5		76.5		16.9		693.4	7.6%
2039		127.7		252.8		225.4		77.1		17.2		700.2	1.0%
2040		128.8		254.6		228.3		77.8		17.5		707.1	1.0%
2041		130.0		256.5		231.2		78.5		17.8		713.9	1.0%
2042		131.1		258.3		234.1		79.1		18.1		720.7	1.0%
2043		132.3		260.1		237.0		79.8		18.3		727.6	0.9%

Fiscal Year	Compound Annual Average Growth Rate (CAAGR)							
2000 - 2008	4.7%		4.1%		7.5%			6.6%
2008 - 2013	6.3%		6.7%		5.9%		9.1%	7.2%
2013 - 2020	3.7%		3.3%		4.3%		5.6%	4.0%
2020 - 2030	3.8%		3.2%		3.6%		3.8%	2.9%
2030 - 2040	2.4%		2.2%		2.7%		2.3%	2.6%

Notes:
A - Actual revenue data provided by OOCEA from Monthly Statistical Reports, which are unaudited.
B - Effects of the events of September 11, 2001.
C - Effects from 2004 hurricane season (4 storms with toll suspensions).
D - First effects of national economic recession.
E - Systemwide toll rate increase.
F - Airport Main Plaza closes, new ramp plazas open at beginning of FY 2016.



1.7.2 AVAILABLE SYSTEM TOLL REVENUES

The total System revenue less the E-PASS discount is summarized in Table 1-10. The total System toll revenue less the E-PASS discount is expected to increase from the actual of \$298.2 million in FY 2013 to \$442.0 million in FY 2023, \$593.6 million in FY 2033 and \$698.6 million in FY 2043.

The System currently experiences a relatively low violation rate. In FY 2013, the unadjusted violations of all System transactions recorded as violations were 3.69 percent. This low violation rate is experienced despite providing open road tolling at all System mainline plazas except S.R. 528 Airport Plaza. The System revenue forecasts assume the same level of violations as in the existing conditions.

The System toll revenue forecasts in Table 1-9 do not include any of the recaptured toll revenue from these violations. Historically, the recaptured toll revenue from these violations was relatively minor. However, in recent years, changes in OOCEA's toll collection policy concerning violators have resulted in an increased recapture rate of the toll revenues. OOCEA instituted a more convenient method of payment for toll violations using unpaid toll notices (UTN) in June 2009. OOCEA's toll collection policy was also modified to require all violations be paid in order for a customer to renew their Florida vehicle registration. A document fee of \$3.00 was added to the Unpaid Toll Notice (UTN) in addition to a \$0.10 charge for each photograph (violation) on the monthly UTN. In August 2010, OOCEA approved a change to the violation threshold for issuance of the unpaid toll notices from three or more violations within a calendar month to two or more violations within a calendar month. These policy changes allowed OOCEA to recapture 71.5 percent of the violations revenue over FY 2012 and FY 2013, at \$6.5 and \$6.7 million respectively.

In addition to the System toll revenues less the E-PASS discount, Table 1-10 also shows the additional revenue recaptured from the unpaid toll notices during the fiscal year. The resulting total available System revenue can be used by OOCEA for their operating and maintenance budget and debt service. The total available System toll revenues are projected to increase from the actual \$304.9 million in FY 2013 to estimated amounts of \$452.0 million in FY 2023, \$606.9 million in FY 2033 and \$714.3 million in FY 2043.



**TABLE 1-10
OOCEA SYSTEM TOLL REVENUES AVAILABLE (MILLIONS)**

Fiscal Year	System Toll Revenues	E-PASS Discount	System Toll Revenues less E-PASS Discount	Revenue Recaptured from UTN ^(C)	Total System Revenues Available	Percent Annual Change
2000 ^B	\$128.1	\$2.6	\$125.5		\$125.5	11.7%
2001 ^B	140.1	3.2	136.9		136.9	9.1%
2002 ^B	146.2	3.9	142.3		142.3	3.9%
2003 ^B	157.5	4.2	153.3		153.3	7.7%
2004 ^B	173.7	4.9	168.8		168.8	10.1%
2005 ^B	183.6	5.9	177.7		177.7	5.3%
2006 ^B	199.7	6.7	193.0		193.0	8.6%
2007 ^B	210.8	7.4	203.4		203.4	5.4%
2008 ^B	213.8	7.9	205.9		205.9	1.2%
2009 ^{A,B}	213.2	6.8	206.4		206.4	0.2%
2010	262.2	9.4	252.8	\$3.0	255.8	23.9%
2011	269.5	9.5	260.0	4.7	264.7	3.5%
2012	272.2	9.6	262.6	6.5	269.1	1.7%
2013 ^A	309.0	10.8	298.2	6.7	304.9	13.3%
2014	313.0	11.0	302.0	6.8	308.8	1.3%
2015	321.7	11.4	310.4	7.0	317.3	2.8%
2016	333.4	11.8	321.5	7.2	328.8	3.6%
2017	342.1	12.2	329.9	7.4	337.3	2.6%
2018 ^A	378.1	13.5	364.5	8.2	372.7	10.5%
2019	386.8	13.9	372.8	8.4	381.2	2.3%
2020	395.4	14.3	381.1	8.6	389.7	2.2%
2021	404.1	14.7	389.4	8.8	398.2	2.2%
2022	412.8	15.1	397.7	8.9	406.7	2.1%
2023 ^A	458.8	16.8	442.0	9.9	452.0	11.1%
2024	467.3	17.2	450.0	10.1	460.2	1.8%
2025	475.7	17.6	458.1	10.3	468.4	1.8%
2026	484.1	18.0	466.1	10.5	476.6	1.8%
2027	492.5	18.4	474.1	10.7	484.8	1.7%
2028 ^A	542.2	20.3	521.8	11.7	533.6	10.1%
2029	549.0	20.7	528.3	11.9	540.2	1.2%
2030	555.8	21.0	534.7	12.0	546.8	1.2%
2031	562.6	21.4	541.2	12.2	553.4	1.2%
2032	569.4	21.7	547.6	12.3	560.0	1.2%
2033 ^A	617.2	23.7	593.6	13.4	606.9	8.4%
2034	624.1	24.0	600.0	13.5	613.5	1.1%
2035	630.9	24.4	606.5	13.6	620.1	1.1%
2036	637.7	24.8	613.0	13.8	626.8	1.1%
2037	644.6	25.1	619.4	13.9	633.4	1.1%
2038 ^A	693.4	27.2	666.2	15.0	681.2	7.6%
2039	700.2	27.5	672.7	15.1	687.8	1.0%
2040	707.1	27.9	679.1	15.3	694.4	1.0%
2041	713.9	28.3	685.6	15.4	701.0	0.9%
2042	720.7	28.7	692.0	15.6	707.6	0.9%
2043	727.6	29.0	698.6	15.7	714.3	0.9%

Fiscal Year	Compound Annual Average Growth Rate (CAAGR)					
2000 - 2008	6.6%	14.9%	6.4%		6.4%	
2008 - 2013	7.6%	6.5%	7.7%		8.2%	
2013 - 2020	3.6%	4.1%	3.6%	3.6%	3.6%	
2020 - 2030	3.5%	3.9%	3.4%	3.4%	3.4%	
2030 - 2040	2.4%	2.9%	2.4%	2.4%	2.4%	

Notes:
A - Systemwide toll rate increase.
B - Actual FY system toll revenues provided by the Authority and are audited. System toll revenues will not equal the sum of the system plaza group revenues presented in Table 1-9 due to recovered revenues from toll violations and account adjustments. These adjustments occur periodically throughout the FY but are not tied to the collected revenue at a particular plaza group. In FY 2010 through 2013 these recovered revenues were reported separately.
C - Unpaid Toll Notice. The revenue recaptured from the UTNs as of December 31, 2013. It comprised 2.4 percent and 2.2 percent of the System Revenues less E-PASS discount in FY 2012 and FY 2013 respectively. From FY 2014 through FY 2043, the estimated revenue recaptured from the UTNs is assumed to comprise 2.25 percent of the System Revenue Less the E-PASS Discount.



1.7.3 NON-SYSTEM REVENUES

The Goldenrod Road Extension is a toll facility operated by OOCEA. It was constructed as an extension of the existing Goldenrod Road (S.R. 551) to provide an additional north-south facility operated by OOCEA as a Non-System project in the vicinity of the OIA. The existing Goldenrod Road is a four-lane state-maintained facility that currently terminates at Narcoosee Road. The Goldenrod Road Extension continues the roadway south from the current terminus at Narcoosee 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. South of the existing terminal building, Heintzelman Boulevard interchanges with the Airport South Access Road. 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 OOCEA, Orange County, the City of Orlando, GOAA and private developers, with OOCEA 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 OOCEA's System revenues. Revenues generated by this non-System roadway are 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.





1.8 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 OOCEA. CDM Smith also relied upon the reasonable assurances of independent parties and is not aware of any material facts that would make such information misleading.

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

All estimates and projections reported herein are based on CDM Smith's experience and judgment and on a review of information obtained from multiple agencies, including OOCEA. These estimates and projections may not be indicative of actual or future values, and are therefore subject to substantial uncertainty. Future developments 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.

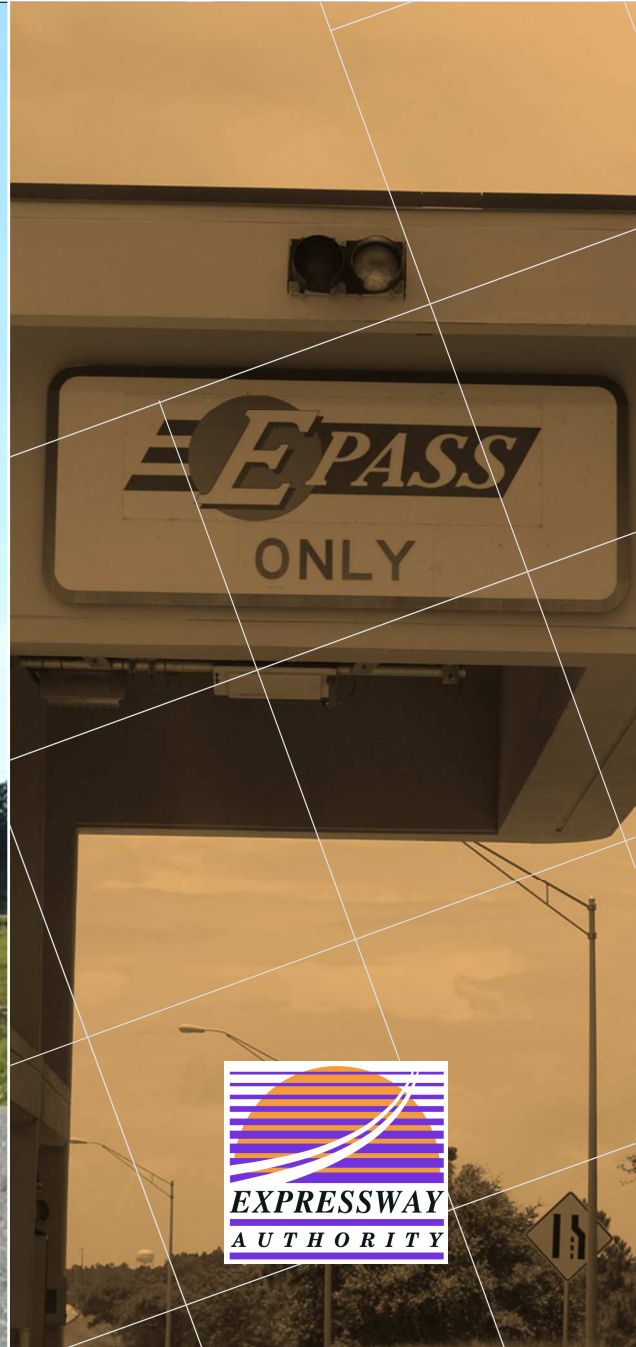
While CDM Smith believes that the projections and other forward-looking statements contained within the report are based on reasonable assumptions as of the date of the report, such forward-looking statements involve risks and uncertainties that may cause actual results to differ materially from the 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 OOCEA and does not owe a fiduciary duty pursuant to Section 15B of the Exchange Act to OOCEA with respect to the information and material contained in this report. CDM Smith is not recommending and has not recommended any action to OOCEA. OOCEA 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.



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Chapter 2
Economic Indicators





ECONOMIC INDICATORS

Regional travel demand is driven by the levels, growth rates, and location of socioeconomic activity, such as population, housing and employment. Economic activity is also reflected in measures of retail sales, tourism, and the housing market. Socioeconomic growth is a major factor in determining future utilization of toll roads and bridges. Other important growth factors specific to the Central Florida area include enplanement activity at the Orlando International Airport (OIA), enrollment statistics at the University of Central Florida (UCF) and area attraction attendance. These factors can all be fundamentally traced to underlying socioeconomic variables, so it is important to understand the socioeconomic conditions in which the OOCEA facilities have operated. This chapter presents the socioeconomic factors that are relevant to OOCEA and includes comparative data (historical and forecast) for the counties within the study area and the State of Florida.



2.1 POPULATION

2.1.1 HISTORICAL TRENDS

The historical population trend for the seven counties in the study area as well as for the State of Florida from 1990 through 2012 is included in Table 2-1. The corresponding population compound average annual growth rates (CAAGR) for the same years are included in Table 2-2. As shown, the population in the study area has more than doubled since 1980 from approximately 1.7 million to nearly 3.9 million in 2012, or equivalent to a compound average annual growth rate of 2.7 percent per year. Over the years, the long-term historical population growth has decelerated from 3.8 percent per year in the 1980s to 2.2 percent per year between 2000 and 2010. Since 1980, Osceola County has been the fastest growing county in the study area, with average growth of 5.7 percent per year. Polk and Volusia Counties have experienced the slowest relative growth of 2.1 percent per year from 1980 to 2012. Nearly one third of the total study area population is located in Orange County, which is home to over 1.2 million residents. The State's total population has grown from 9.7 million in 1980 to 19.3 million in 2012, or an increase of 2.2 percent per year on average. The State of Florida is still recovering from the recent recession, but is expected to gradually return to normal levels of growth over the next few years. Historically, population growth in the study area has outpaced the State of Florida over the last three decades, as shown in Table 2-2.



**TABLE 2-1
POPULATION – HISTORICAL TREND
1980 – 2012**

Area	Levels				
	1980	1990	2000	2010	2012
Brevard County	272,959	398,978	476,230	543,376	547,307
Lake County	104,870	152,104	210,527	297,052	303,186
Orange County	470,865	677,491	896,344	1,145,956	1,202,234
Osceola County	49,287	107,728	172,493	268,685	287,416
Polk County	321,652	405,382	483,924	602,095	616,158
Seminole County	179,752	287,521	365,199	422,718	430,838
Volusia County	258,762	370,737	443,343	494,593	496,950
Area Total	1,658,147	2,399,941	3,048,060	3,774,475	3,884,089
Florida (Statewide)	9,746,959	12,938,071	15,982,378	18,801,310	19,317,568

Source: U.S. Census Bureau

**TABLE 2-2
POPULATION – HISTORICAL GROWTH RATES (CAAGR)
1980 – 2012**

Area	Compound Average Annual Growth Rate (Percent)				
	1980 - 1990	1990 - 2000	2000 - 2010	2010 - 2012	1980 - 2012
Brevard County	3.9%	1.8%	1.3%	0.4%	2.2%
Lake County	3.8%	3.3%	3.5%	1.0%	3.4%
Orange County	3.7%	2.8%	2.5%	2.4%	3.0%
Osceola County	8.1%	4.8%	4.5%	3.4%	5.7%
Polk County	2.3%	1.8%	2.2%	1.2%	2.1%
Seminole County	4.8%	2.4%	1.5%	1.0%	2.8%
Volusia County	3.7%	1.8%	1.1%	0.2%	2.1%
Area Total	3.8%	2.4%	2.2%	1.4%	2.7%
Florida (Statewide)	2.9%	2.1%	1.6%	0.3%	2.2%

Source: U.S. Census Bureau



Regional school enrollment is another indicator of activity in Central Florida. Table 2-3 summarizes the school population by year and by county in the study area, including the total percent change and CAAGR by county and total area. As shown, school population in Osceola County has experienced the most overall growth since 2004 at an average pace of 2.2 percent annually. School population has declined in Brevard, Seminole and Volusia Counties between 0.5 percent, 0.4 percent, and 0.8 percent per year, respectively over the eight year period. Overall, the study area school population has grown 0.6 percent per year on average since 2004. These numbers are not directly comparable to total population due to the number of families in the study area without school-age children.

**TABLE 2-3
HISTORICAL SCHOOL POPULATION BY COUNTY
2004 – 2012**

County	2004	2005	2006	2007	2008	2009	2010	2011	2012	2004 - 2012 Total % Change	2004 - 2012 CAAGR
Brevard	74,345	75,160	74,791	74,364	73,076	72,402	71,866	71,786	71,217	-4.2%	-0.5%
Lake	35,949	38,052	39,566	40,708	40,996	41,099	41,110	41,315	41,478	15.4%	1.8%
Orange	172,357	175,307	175,155	174,033	172,028	173,021	175,986	179,989	183,021	6.2%	0.8%
Osceola	47,325	49,779	51,881	52,752	51,955	52,142	53,466	54,776	56,369	19.1%	2.2%
Polk	86,057	89,483	92,873	94,165	94,716	94,577	95,178	96,034	96,943	12.6%	1.5%
Seminole	66,336	67,473	66,349	65,390	64,933	64,460	64,228	64,335	64,368	-3.0%	-0.4%
Volusia	65,011	65,599	65,867	64,570	63,065	62,329	61,559	61,524	61,054	-6.1%	-0.8%
Area Total	547,380	560,853	566,482	565,982	560,769	560,030	563,393	569,759	574,450	4.9%	0.6%

Source: U.S. Department of Education

The University of Central Florida (UCF) opened in Orlando in 1968 with less than 2,000 enrolled students. As shown in Table 2-4, annual enrollment has continued to increase over the years to become a large-scale university with nearly 60 thousand students in 2013. In fact, long-term annual growth has averaged 4.8 percent per year from 1980 to 2013. This continued growth is due to opening of new programs, campus facilities, and the increasing number of transfer students. Annual enrollment is expected to increase by 1.8 percent per year through 2040. While the enrollment numbers are significant, many students only attend part-time. Part-time students typically attend classes on-line and do not travel to the main campus in NE Orlando. The increasing popularity of on-line classes and on-line degrees may have an impact on OOCEA facilities.

**TABLE 2-4
HISTORICAL UCF ENROLLMENT
1980 – 2013**

Area	Levels				
	1980	1990	2000	2010	2013
UCF Enrollment	12,820	21,376	33,453	56,337	59,740

Source: UCF



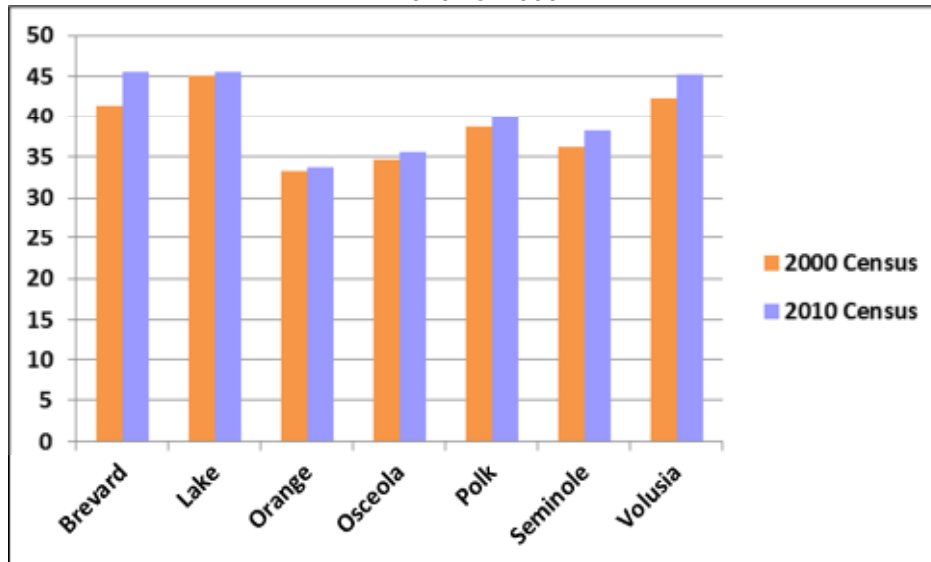
The age distribution comparison of the study area for 2000 and 2010 is shown in Table 2-5. A majority of the 2010 population (59 percent) is made up of the working age group, ages 20 to 64, who typically make the majority of commuter and business-related trips. The 2000 population data reflects the same overall age group trends. The median ages for the study area counties in years 2010 and 2000 are shown in Figure 2-1. Lake County has the highest median age in both years reflecting the presence of retirement communities located there, however Brevard and Volusia Counties both have had significant increases in median ages. All counties had higher median age in 2010 than in 2000.

**TABLE 2-5
HISTORICAL POPULATION BY AGE
2010 vs. 2000**

Age Group	2010 Census		2000 Census	
	Total	Percent	Total	Percent
0-4	221,562	5.9%	184,700	6.1%
5-19	732,041	19.4%	615,697	20.2%
20-24	264,847	7.0%	185,459	6.1%
25-34	473,023	12.5%	405,961	13.3%
35-44	490,323	13.0%	486,110	15.9%
45-54	552,868	14.6%	395,565	13.0%
55-64	453,437	12.0%	289,212	9.5%
65-74	318,580	8.4%	262,234	8.6%
75+	267,794	7.1%	223,120	7.3%
Total Study Area Population	3,774,475	100.0%	3,048,058	100.0%

Source: U.S. Census Bureau

**FIGURE 2-1
MEDIAN AGE BY COUNTY
2010 vs. 2000**



Source: U.S. Census Bureau



2.1.2 PROJECTIONS

University of Florida's Bureau of Economic and Business Research (BEBR) annually prepares forecasts of population within Florida. These population forecasts are presented as three scenarios: low, medium, and high projections. Medium-level BEBR population projections are typically used as a base point in the development of county-wide control totals. Table 2-6 summarizes the 2013 BEBR medium forecasts. Future long-term population growth for the study area is projected to average 1.3 percent, which is higher than the 1.0 percent projected growth for the State of Florida. Over the forecast period from 2010 through 2040, Osceola County is projected to experience the fastest population growth rate of 2.3 percent per year. Volusia County is expected to have the lowest growth rate of only 0.6 percent through the forecast period.

TABLE 2-6
POPULATION – PROJECTED GROWTH RATES (CAAGR)
2010 - 2040

Area	Compound Average Annual Growth Rate (Percent)			
	2010 - 2020	2020 - 2030	2030 - 2040	2010 - 2040
Brevard County	0.8%	0.8%	0.6%	0.7%
Lake County	1.9%	1.8%	1.2%	1.6%
Orange County	1.8%	1.6%	1.1%	1.5%
Osceola County	2.9%	2.3%	1.6%	2.3%
Polk County	1.4%	1.4%	1.0%	1.3%
Seminole County	1.0%	0.9%	0.6%	0.8%
Volusia County	0.7%	0.7%	0.4%	0.6%
Area Total	1.5%	1.4%	1.0%	1.3%
Florida (Statewide)	1.2%	1.1%	0.8%	1.0%

Source: BEBR 2013 – Population Studies, Vol. 46, Bulletin 165; and CDM Smith calculations

2.2 HOUSING UNITS

2.2.1 HISTORICAL TRENDS

The number of housing units is another key measure used in the travel demand models. As indicated in Table 2-7, the number of housing units in the study area has expanded nearly two and a half times from 700 thousand in 1980 to over 1.7 million in 2010. Orange County has the largest concentration of housing units in the seven-county study area with nearly 490 thousand in 2010. The corresponding CAAGRs are shown in Table 2-8 for the same years. Long-term, the number of housing units grew from 1980 to 2010 by an average of 3.1 percent annually. Historical housing unit growth slowed down from 4.4 percent per year in the 1980s to 2.7 percent per year from 2000 to 2010. This is the same trend seen in long-term population growth rates. Osceola County has experienced the most growth in housing units with an average of 5.8 percent annually while Polk County has been the slowest with only 2.4 percent annual growth between 1980 and 2010. Overall, the study area historical housing unit growth has outpaced the State of Florida.



**TABLE 2-7
HOUSING UNITS – HISTORICAL TREND
1980 – 2010**

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

Source: U.S. Census Bureau

**TABLE 2-8
HOUSING UNITS – HISTORICAL GROWTH RATES (CAAGR)
1980 – 2010**

Area	Compound Average Annual Growth Rate (Percent)			
	1980 - '90	1990 - '00	2000 - '10	1980 - 2010
Brevard County	5.0%	1.8%	2.0%	2.9%
Lake County	4.1%	3.1%	3.5%	3.6%
Orange County	4.3%	2.5%	3.0%	3.3%
Osceola County	7.2%	4.2%	5.9%	5.8%
Polk County	3.3%	2.0%	2.2%	2.5%
Seminole County	5.6%	2.2%	2.1%	3.3%
Volusia County	3.8%	1.6%	1.8%	2.4%
Area Total	4.4%	2.2%	2.7%	3.1%
Florida (Statewide)	3.4%	1.8%	2.1%	2.4%

Source: U.S. Census Bureau



2.2.2 PROJECTIONS

Table 2-9 summarizes the long-term housing growth forecasts as published by Moody's Analytics for 2010 through 2040. Future long-term housing growth for the study area is projected to average 1.6 percent annually through 2040. Orange County is forecasted to experience the most growth in housing units with an average rate of 2.2 percent annually while Volusia County is expected to have the slowest growth of 0.9 percent per year. The Moody's forecasts for housing units presented here are not consistent with the BEBR population forecasts for some counties. Due to this discrepancy, the Moody's forecasts were adjusted to line up with the BEBR population forecasts. The BEBR forecasts were used in the development of the future year single-family and multi-family housing unit control totals. Due to local growth management policies, Seminole County growth rates were adjusted down.

TABLE 2-9
HOUSING UNITS – PROJECTED GROWTH RATES (CAAGR)
2010 – 2040

Area	Compound Average Annual Growth Rate (Percent)			
	2010 - 2020	2020 - 2030	2030 - 2040	2010 - 2040
Brevard County	1.1%	1.7%	1.7%	1.5%
Lake County	0.8%	1.3%	1.3%	1.1%
Orange County	1.9%	2.4%	2.1%	2.2%
Osceola County	1.6%	2.3%	2.1%	2.0%
Polk County	0.9%	1.5%	1.2%	1.2%
Seminole County	1.5%	1.8%	1.6%	1.6%
Volusia County	0.7%	1.1%	0.9%	0.9%
Area Total	1.3%	1.8%	1.7%	1.6%

Source: Moody's Analytics, 2013

2.3 EMPLOYMENT

2.3.1 HISTORICAL TRENDS

The employment numbers reported below are different than numbers reported in the FY 2012 report, because the Bureau of Economic Analysis (BEA) no longer reports latest historical employment series at the county level. As a result, the figures presented in Tables 2-10 and 2-11 are from the Bureau of Labor Statistics (BLS), which due to definitional differences are traditionally lower than the BEA reports. Orange County dominates the regional employment base with over 33 percent of the seven-county total. Table 2-11 presents the CAAGR for the counties in the study area and also for the State of Florida. Long-term employment growth in the study area averaged 1.8 percent per year. This growth was strong between 1990 and 2000 with an area growth of 2.5 percent per year, but decelerated between 2000 and 2010 to only 1.1 percent per year, with strongest growth rates in Osceola and Lake Counties. Since 2010 employment growth has increased to 2.2 percent, with Lake, Orange, Osceola and Seminole Counties averaging over two percent per



year. Historically, the study area employment base growth outpaced the State of Florida, except for the past three years.

TABLE 2-10
TOTAL EMPLOYMENT – HISTORICAL TREND
1990 – 2013

Area				
	1990	2000	2010	2013
Brevard County	194,026	223,587	238,064	248,173
Lake County	61,236	89,959	112,010	121,565
Orange County	370,961	484,369	548,834	599,677
Osceola County	56,041	86,639	119,234	131,254
Polk County	181,090	221,751	243,351	247,767
Seminole County	160,338	206,218	211,886	228,193
Volusia County	160,069	202,623	223,036	234,156
Area Total	1,183,761	1,515,146	1,696,415	1,810,784
Florida (Statewide)	6,060,994	7,569,406	8,130,849	8,775,443

Source: Bureau of Labor Statistics

TABLE 2-11
TOTAL EMPLOYMENT – HISTORICAL GROWTH RATES (CAAGR)
1990 – 2013

Area				
	1990 - 2000	2000 - 2010	2010 - 2013	1990 - 2010
Brevard County	1.4%	0.6%	1.4%	1.0%
Lake County	3.9%	2.2%	2.8%	3.1%
Orange County	2.7%	1.3%	3.0%	2.0%
Osceola County	4.5%	3.2%	3.3%	3.8%
Polk County	2.0%	0.9%	0.6%	1.5%
Seminole County	2.5%	0.3%	2.5%	1.4%
Volusia County	2.4%	1.0%	1.6%	1.7%
Area Total	2.5%	1.1%	2.2%	1.8%
Florida (Statewide)	2.2%	0.7%	2.6%	1.5%

Source: Bureau of Labor Statistics

2.3.2 PROJECTIONS

Employment in the study area is projected to grow by an average of 1.6 percent per year through 2040 as shown in Table 2-12, which on average is about the same as the projected statewide annual growth rate. Osceola County’s total employment is forecasted to increase the fastest at 2.5 percent per year while Brevard County is forecasted with the slowest annual growth of only 1.0 percent through 2040.



TABLE 2-12
TOTAL EMPLOYMENT – PROJECTED GROWTH RATES (CAAGR)
2010 – 2040

Area	Compound Average Annual Growth Rate (Percent)			
	2010 - 2020	2020 - 2030	2030 - 2040	2010 - 2040
Brevard County	1.0%	1.1%	1.1%	1.0%
Lake County	2.0%	2.0%	1.9%	2.0%
Orange County	1.8%	1.7%	1.6%	1.7%
Osceola County	2.6%	2.5%	2.4%	2.5%
Polk County	1.2%	1.3%	1.3%	1.3%
Seminole County	1.7%	1.9%	1.9%	1.8%
Volusia County	1.1%	1.1%	1.1%	1.1%
Area Total	1.6%	1.6%	1.6%	1.6%
Florida (Statewide)	1.6%	1.6%	1.6%	1.6%

Source: Woods & Poole Economics, Inc.¹, 2014; and CDM Smith calculations

Tables 2-13 through 2-15 show the employment projections by major sector employment including the industrial, commercial and service industries. Future long-term employment growth for the study area is projected to average 1.8 percent annually for the commercial sector, 1.6 percent annually for the service sector and 1.0 percent for the industrial sector through 2040. The growth in jobs in the commercial and service sectors reflects the strength of the Central Florida tourism industry. The industrial sector is expected to experience slower short and long-term growth.

TABLE 2-13
INDUSTRIAL EMPLOYMENT – PROJECTED GROWTH RATES (CAAGR)
2010 – 2040

Area	Compound Average Annual Growth Rate (Percent)			
	2010 - 2020	2020 - 2030	2030 - 2040	2010 - 2040
Area Industrial Employment	0.9%	1.1%	1.1%	1.0%

Source: Woods & Poole Economics, Inc., 2014; and CDM Smith calculations

TABLE 2-14
COMMERCIAL EMPLOYMENT – PROJECTED GROWTH RATES (CAAGR)
2010 – 2040

Area	Compound Average Annual Growth Rate (Percent)			
	2010 - 2020	2020 - 2030	2030 - 2040	2010 - 2040
Area Commercial Employment	1.9%	1.7%	1.7%	1.8%

Source: Woods & Poole Economics, Inc., 2014; and CDM Smith calculations

¹Woods & 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 2-15
SERVICE EMPLOYMENT – PROJECTED GROWTH RATES (CAAGR)
2010 – 2040

Area	Compound Average Annual Growth Rate (Percent)			
	2010 - 2020	2020 - 2030	2030 - 2040	2010 - 2040
Area Service Employment	1.6%	1.7%	1.6%	1.6%

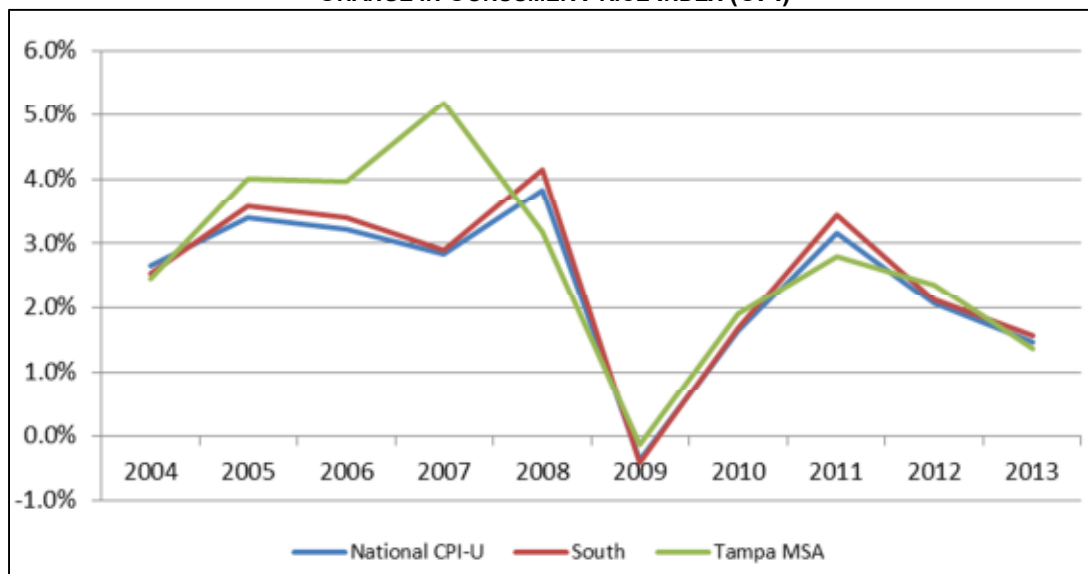
Source: Woods & Poole Economics, Inc., 2014; and CDM Smith calculations

2.4 CONSUMER PRICE INDEX AND INCOME

2.4.1 CONSUMER PRICE INDEX

The Consumer Price Index (CPI) is used to measure the change in the cost of an average basket of goods and services compared to a fixed base period. The historical change in the CPI for the United States for 2004 through 2013 is shown in Figure 2-2. The relatively sharp increase in CPI in 2008 can be attributed to the high increases in the cost of gasoline prices during the second half of the year. In 2009, the CPI sharply declined for the first time since 1954 due to the start of the severe economic recession. Since 2009, the CPI has increased every year including a 1.5 percent change in 2013 over the prior year. Other indices reported are for the Tampa MSA (note that Orlando MSA is not separately tracked by the BLS) and the South Region (Southeastern U.S. States). CPI for the Tampa MSA showed a 5 percent change in 2007, which was over 2 percentage points higher than the increases at the national and the South region geographies. Both the Tampa MSA and the South trends mirror the trend for the U.S. since 2007, with the South region being slightly higher with a 1.6 percent increase in CPI in 2013.

FIGURE 2-2
CHANGE IN CONSUMER PRICE INDEX (CPI)



Source: Bureau of Labor Statistics, January 2014

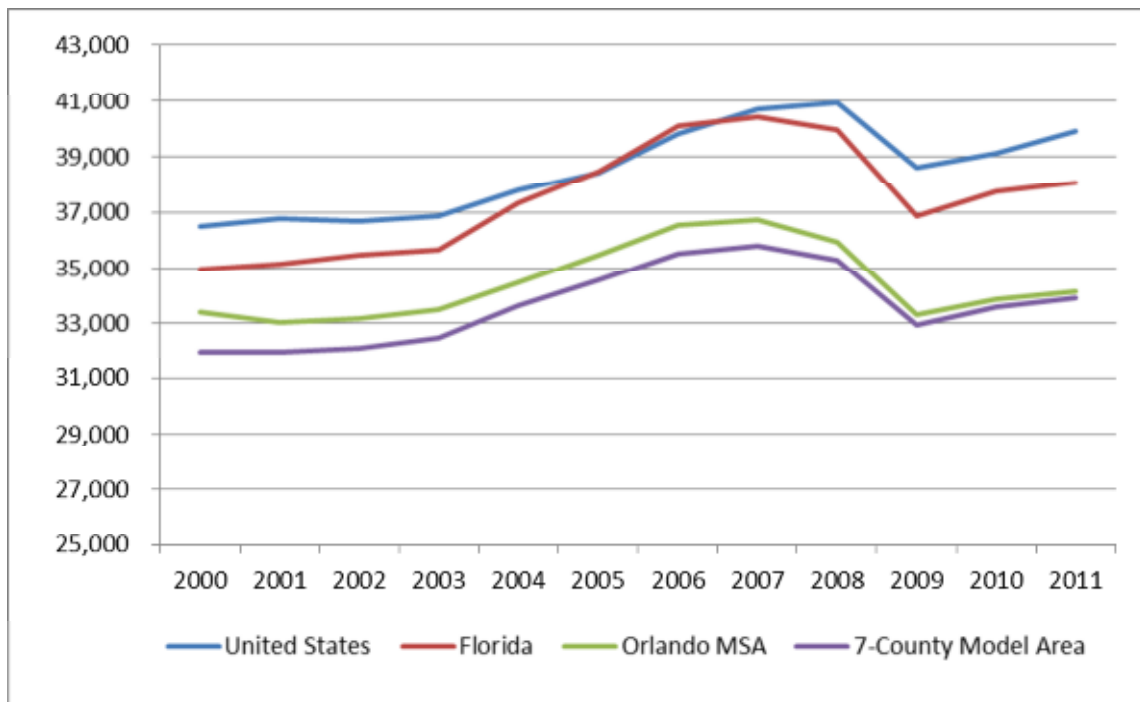


2.4.2 INCOME

Travel demand on a toll facility is sensitive to, among other things, the amount of disposable income available in a household. A reliable indicator of an individual's propensity to pay tolls in exchange for travel time savings on other toll-free alternatives is their personal income. This is a key input into the assessment of the value of time for a motorist as there is typically a relationship between income, value of time, and the motorists' willingness to pay tolls.

The historical per capita income trend since 2000 for the U.S., Florida, the Orlando MSA and the seven-county study area are shown in Figure 2-3. The levels of real personal income per capita for all the geographies shown were still below their respective pre-recession levels as of 2011 – the last year of historical data. The core counties of the region – Orange County and Seminole County - have observed very slight increases in the personal per capita income in the period from 2000 through 2011, with CAGRs of only about 0.3. These are the prime counties responsible for generating traffic on the OOCEA System.

FIGURE 2-3
TOTAL REAL PERSONAL INCOME PER CAPITA: 2000 - 2011
(IN 2009 DOLLARS)



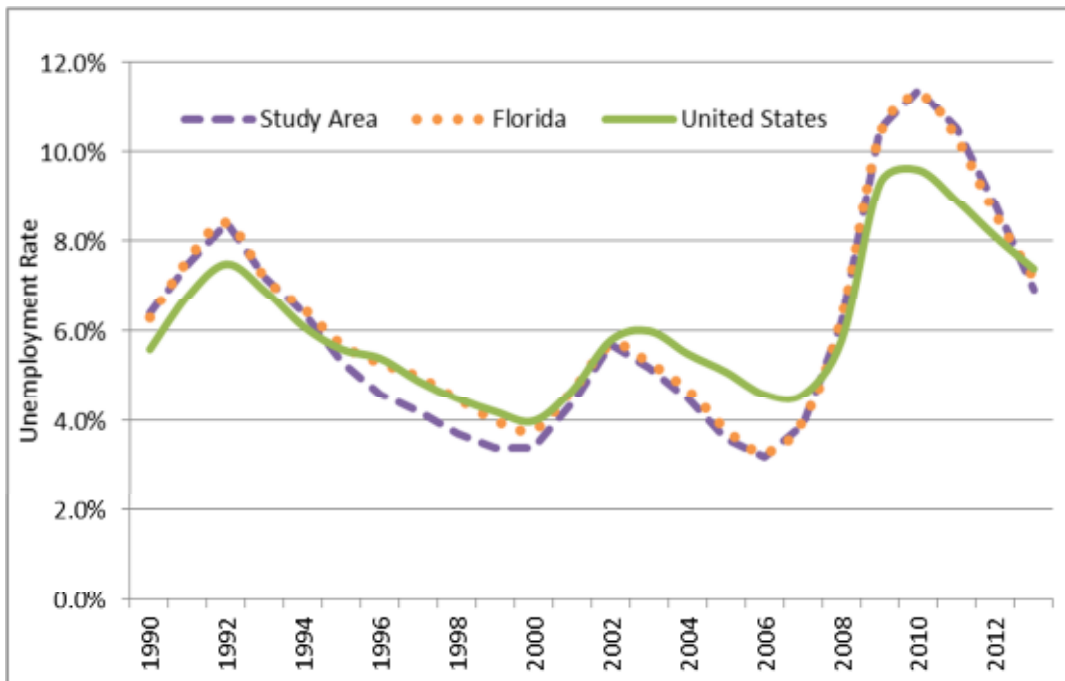
Source: Woods and Poole Economics, Inc., 2014; and CDM Smith calculations



2.5 UNEMPLOYMENT

The unemployment rate in the study area has been lower than in other parts of the State and the national rates since 1994. However, in 2008 the study area had an unemployment rate of 6.2 percent, which was higher than the United States rate for the first time in fifteen years. Between 2009 and 2012, the unemployment rate in the study area exceeded the unemployment rates in both Florida and the United States. Figure 2-4 shows the historical unemployment rates for the study area, Florida and the United States from 1990 through 2013. The study area's unemployment rate has ranged from a low of 3.2 percent in 2006 to a high of 11.4 percent in 2010. In 2013 the study area unemployment rate decreased again to an average of 6.9 percent, and has dropped below the national average. In fact it has dropped 4.5 percent since the high in 2010. While the study area's unemployment rate has historically been quite close to the Florida average, in 2013 it has performed better than the statewide unemployment rate of 7.2 percent.

FIGURE 2-4
HISTORICAL UNEMPLOYMENT RATE COMPARISON
1990 – 2013



Source: Bureau of Labor Statistics



2.6 REGIONAL TOURISM

As shown in Table 2-16, Orlando hosted a record 57.2 million visitors in 2012, which was an increase of 2.3 percent from 55.2 million visitors in 2011. Year 2010 was the first year that the total number of visitors to Orlando topped 50 million. Tourism had stagnated after the September 11th terrorist attacks, but 2010 and 2011 both showed strong increases of 9 percent and 7 percent per year, respectively. Approximately 4.3 million visitors in 2012 were from other countries, particularly the United Kingdom and Canada, and more recently the emerging South American markets. Also in 2012, the Orlando area hosted over 10 million business travelers, with the majority traveling from other areas within Florida.

**TABLE 2-16
TOURISM – ORLANDO VISITORS (000)
2004 – 2012**

Visitor Type	2004	2005	2006	2007	2008	2009	2010	2011	2012	2004-2012 CAAGR
Domestic	45,166	46,649	45,114	45,907	45,515	43,319	47,780	51,365	52,889	1.99%
Leisure	35,162	36,224	34,490	35,334	35,282	33,992	38,263	41,432	42,828	2.50%
Florida	17,672	18,265	17,492	17,988	17,954	17,622	20,041	21,490	22,262	2.93%
Non-Florida	17,491	17,959	16,998	17,345	17,328	16,370	18,221	19,943	20,566	2.05%
Business	10,004	10,425	10,624	10,574	10,233	9,326	9,517	9,933	10,061	0.07%
Florida	6,077	6,337	6,425	6,504	6,316	5,843	5,974	6,164	6,227	0.31%
Non-Florida	3,928	4,088	4,198	4,070	3,917	3,483	3,543	3,769	3,834	-0.30%
International	2,582	2,673	2,686	2,838	3,343	3,264	3,675	3,803	4,269	6.49%
Overseas	1,951	2,016	1,993	2,055	2,433	2,399	2,715	2,788	3,184	6.31%
Canada (est.)	631	657	693	783	910	865	960	1,015	1,085	7.01%
Total	47,748	49,322	47,800	48,745	48,858	46,583	51,455	55,168	57,158	2.27%

Source: Visit Orlando

In 2012, the Metro Orlando area hotel occupancy rate was 71.0 percent, an increase of 2.2 percent over 2011. Room night demand also increased from 29.3 million in 2011 to 30.1 million in 2012, showing steady growth in tourism. The average daily room rate has increased steadily over the past three years up to \$101.53 from its low of \$90.76 in 2010. This data is shown in Table 2-17. The majority of these lodging units are concentrated around Walt Disney World, International Drive (near Universal Studios, SeaWorld, and the Orange County Convention Center), and in the Kissimmee area.

**TABLE 2-17
METRO ORLANDO AREA LODGING
2004 – 2013**

Metro Orlando	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Occupancy Rate	70.9%	70.8%	67.7%	67.9%	65.8%	59.5%	63.9%	67.6%	68.8%	71.0%
Average Daily Rate	\$86.80	\$92.00	\$101.65	\$105.84	\$105.83	\$93.34	\$90.76	\$94.11	\$96.88	\$101.53
Number of Rooms	112,981	111,564	112,156	111,348	111,551	114,109	115,199	115,413	117,396	116,499
Room Night Demand (in millions)	29.1	29.0	27.5	27.6	26.9	24.3	26.7	28.5	29.3	30.1

Source: Visit Orlando



The Orlando International Airport (OIA) saw an increase of over 6 million enplanements from 1990 to 2000, or an increase of approximately 5.4 percent per year. The enplanements totaled 17.2 million for 2012, or 16.8 percent above the 2000 total. Since 1990, total enplanements at OIA have nearly doubled at 3.1 percent per year. The United States Department of Transportation Federal Aviation Administration (U.S. DOT FAA) has projected that OIA enplanements will grow by an average of 2.0 percent per year through 2040. Enplanements are an indicator of tourism and economic growth. The historical and projected enplanements for OIA are shown in Tables 2-18 and 2-19.

**TABLE 2-18
HISTORICAL OIA ENPLANEMENTS
1990 – 2012**

Area	Levels				
	1990	2000	2010	2011	2012
OIA Enplanements	8,683,491	14,683,594	16,651,359	17,264,997	17,244,532

Source: U.S. DOT FAA TAF, 2014

**TABLE 2-19
PROJECTED OIA ENPLANEMENTS
2010-2040**

Area	Compound Average Annual Growth Rate (Percent)			
	2010 - 2020	2020 - 2030	2030 - 2040	2010 - 2040
OIA Enplanements	1.7%	2.3%	2.1%	2.0%

Source: U.S. DOT FAA TAF, 2014; and CDM Smith calculations

The Metro Orlando area is home to seven of the ten largest theme parks in the nation, which will continue to contribute to the growth in Central Florida. This growth is due to new and future attractions these theme parks have planned to attract tourists to the area. For example, Walt Disney World recently expanded the Fantasyland area of Magic Kingdom, which was completed in December 2012 (FY 2013). Universal Studios at Universal Orlando is planning on opening another Harry Potter themed attraction, Diagon Alley, in the summer of 2014. Downtown Disney is also being transformed with new shopping, dining and entertainment choices to be opened in phases with final completion in 2016. As shown in Table 2-20, the Magic Kingdom attracted an estimated 17.5 million visitors in 2012, which had the highest attendance compared to other Orlando area theme and water parks. Islands of Adventure at Universal Orlando had the highest growth in 2012 with a 4.0 percent increase in attendance over 2011.



**TABLE 2-20
CENTRAL FLORIDA ATTRACTION ATTENDANCE
2011-2012**

Theme Parks	2011	2012	Growth
Disney's Magic Kingdom	17,142,000	17,536,000	2.3%
Disney's Epcot Center	10,825,000	11,063,000	2.2%
Disney's Animal Kingdom	9,783,000	9,998,000	2.2%
Disney's Hollywood Studios	9,699,000	9,912,000	2.2%
Islands of Adventure at Universal Orlando	7,674,000	7,981,000	4.0%
Universal Studios at Universal Orlando	6,044,000	6,195,000	2.5%
Seaworld Orlando	5,202,000	5,358,000	3.0%
Busch Gardens Tampa Bay	4,284,000	4,348,000	1.5%
Water Parks			
Typhoon Lagoon	2,058,000	2,100,000	2.0%
Blizzard Beach	1,891,000	1,929,000	2.0%
Aquatica	1,500,000	1,538,000	2.5%
Wet 'n Wild	1,223,000	1,247,000	2.0%

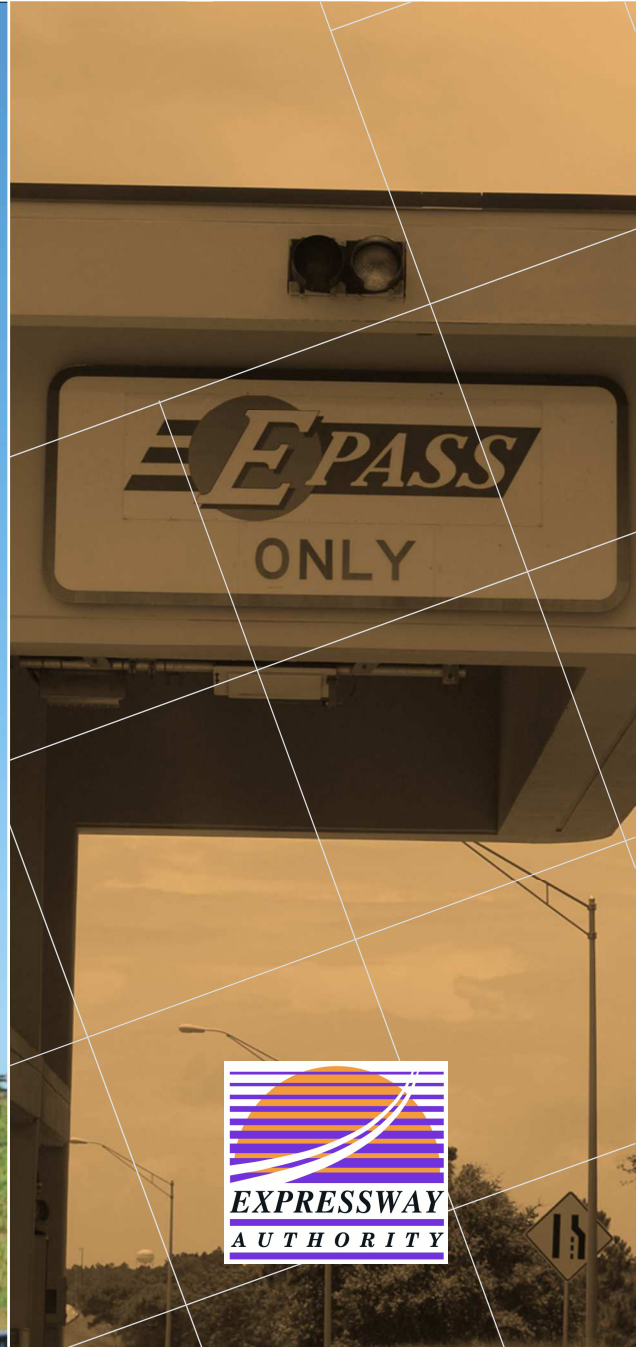
Source: Visit Orlando – Themed Entertainment Association (TEA) and AECOM.
Note: All figures are estimates.





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Chapter 3
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 the Brevard County coastal area. The Beachline Expressway is owned, maintained and operated by three agencies, the OOCEA, FTE, and the FDOT. OOCEA 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 toll plazas including the Airport Main, Beachline Main and the Dallas Main. Ramp tolls are located at the International Corporate Park (ICP) 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. FDOT is responsible for the 15-mile portion of S.R. 528 from S.R. 520 east to Interstate 95 known as the Beachline East Expressway with tolled ramps to and from the east at S.R. 520. A map of the OOCEA portion of S.R. 528 including the FY 2013 toll rates for the mainline and ramp toll plazas is shown in Figure 3-1.



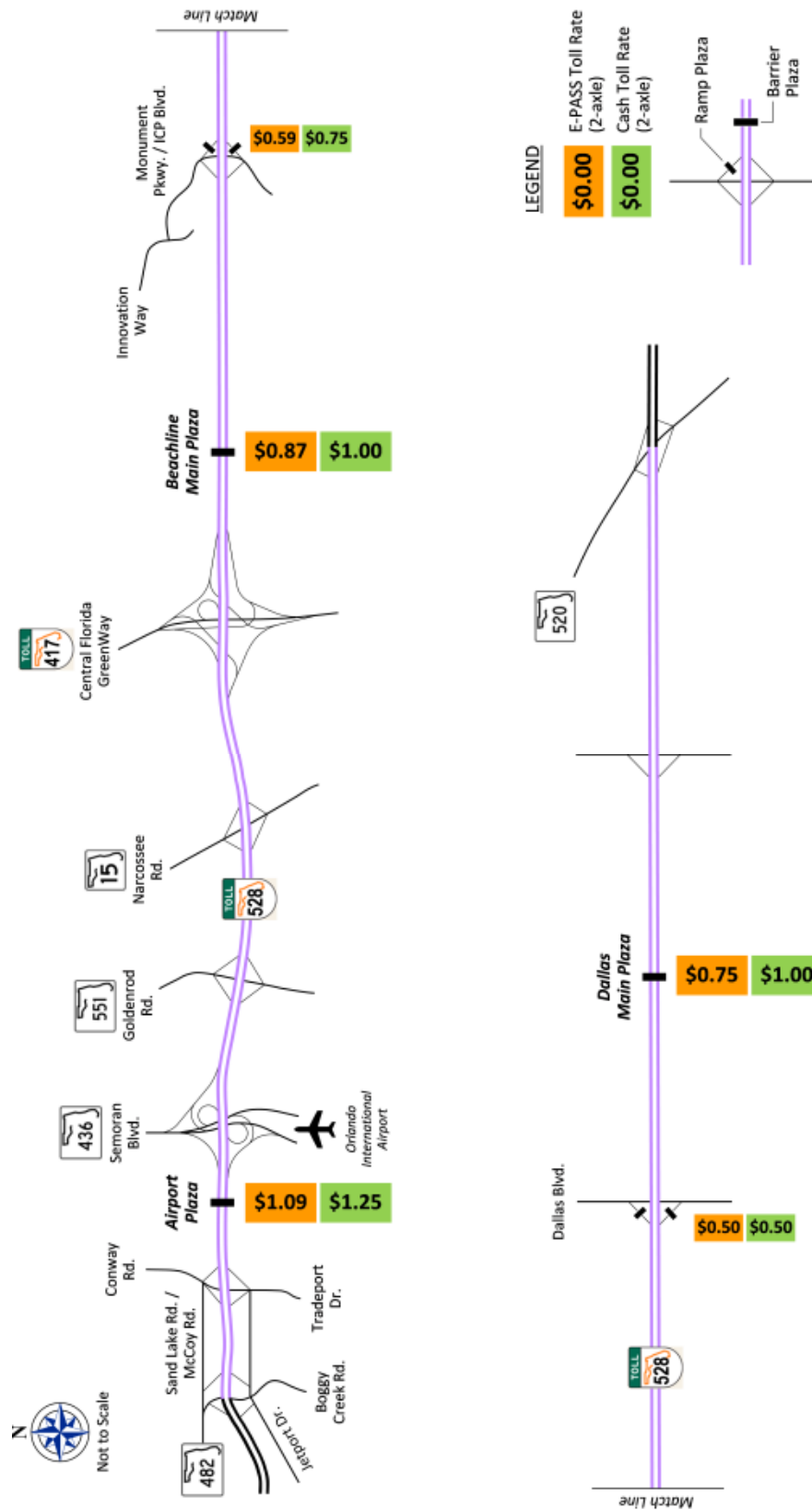
S.R. 528 includes three plaza groups. The first consists of the Airport Main plaza group, the second is the Beachline Main plaza group with the Monument Parkway/ ICP Boulevard interchange and the third is the Dallas Main plaza group which includes the Dallas Boulevard interchange.

The original segment of S.R. 528 opened in 1967 as the Bee Line Expressway. It provided a direct route from Orlando 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 is a six-lane, limited-access expressway with frontage roads extending from an interchange with Boggy Creek 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 allow electronic customers to continue through the mainline toll collection point



**FIGURE 3-1
S.R. 528 FACILITIES AND TOLL RATES MAP**





at highway speeds without having to stop or slow down. This provides a more efficient means of toll collection, greatly reducing delays to customers and increasing throughput at the toll plaza. Automatic coin and manual cash customers are diverted off the roadway to an adjacent traditional toll plaza and are required to merge back into traffic after paying the toll.

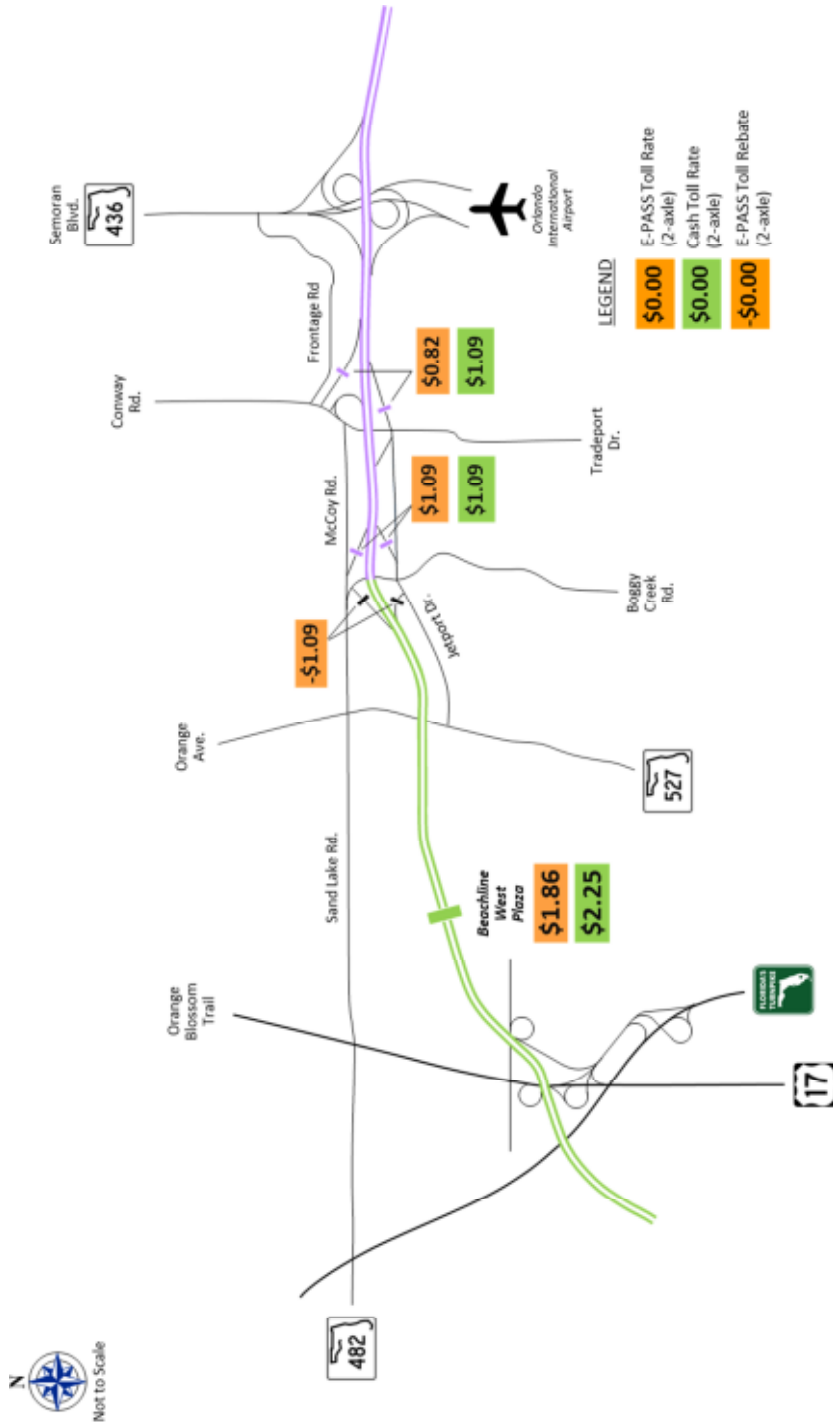
In May 2010, a roadway connection called Monument Parkway was completed between the S.R. 528/International Corporate Park (ICP) interchange and the southern extension of Alafaya Trail/Innovation Way in east Orange County. This connection allowed traffic from Innovation Way to access S.R. 528 via the ICP interchange, which reduced travel times to S.R. 528. Previously, traffic on Innovation Way wanting to go south or west would have to access S.R. 417 at the Curry Ford Road interchange and head south. The opening of this connection resulted in traffic diversion from the S.R. 417 Curry Ford plaza group to the S.R. 528 Beachline Main plaza. 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.

Throughout FY 2013, S.R. 528 has been the center of discussions for the alignment of an intercity passenger rail service, known as All Aboard Florida (AAF). In November of 2013, OOCEA entered into a contract of sale to purchase a 200 foot wide strip of land along the southern boundary of the S.R. 528 right-of-way. This land will be used for the future expansion of S.R. 528, future utility needs and the south 100 feet is reserved for AAF. The contract of sale to purchase the right-of-way includes a provision for the modification and construction of the S.R. 528/Innovation Way interchange with programming in the draft FY 2014 – 2018 Five-Year Work Program. OOCEA entered into an additional contract of sale and purchase of rail line easements with AAF. Completed under a separate report, AAF agreed to compensate OOCEA for the net present value of the estimated reduction in toll revenues over the 99 year term of the easement agreement. Currently OOCEA is working with Orange County and Suburban Land Reserve (SLR) to amend the 2006 agreement to construct the S.R. 528/Innovation Way interchange.

Starting in FY 2015, OOCEA will begin removal of the Airport Main Plaza. The removal is due to several factors including on-going concerns that S.R. 528 customers heading west from the Orlando International Airport encounter two mainline toll plazas, one being OOCEA's Airport Main Plaza and the other being FTE's Beachline West Main Plaza. In addition, the Airport Main Plaza is close in proximity to the S.R. 436 exit which causes operational issues for E-Pass customers having to weave across cash lanes to reach the exit. It was determined that an open road tolling plaza would not be a feasible option with the existing right-of-way at the same location. After all options were considered, OOCEA and FTE agreed that the best solution is to consolidate toll collection at the Beachline West Main Plaza. The OOCEA toll will be collected at the FTE plaza, and new ramp plazas will be installed at the Conway Road and Boggy Creek Road Interchanges with tolls collected to and from the east. In addition, ETC customers who use the ramps to and from the west at Boggy Creek Road will receive a rebate for the OOCEA toll amount as it is collected at the Beachline West Main Plaza. The revised tolling scheme, shown in Figure 3-2, will begin after the project is complete. Project completion is currently scheduled for January 2016 (FY 2016).



FIGURE 3-2
S.R. 528 FUTURE TOLLING SCHEME (FY 2016)





3.2 HISTORICAL TRANSACTIONS AND TOLL REVENUES

3.2.1 ANNUAL TRANSACTION AND TOLL REVENUE TRENDS

S.R. 528 annual historical transactions at the Beachline Main, Airport Main and Dallas Main plaza groups from FY 1994 to FY 2013 are presented in the top half of Table 3-1. Annual historical toll revenues are also summarized and totaled in the bottom half of the table. The S.R. 528 annual transaction and revenue trends including annual growth are also presented visually in Figures 3-3 and 3-4. As shown, total transactions on S.R. 528 in FY 2013 increased by 10.1 million, or 21.3 percent, over FY 2012. This is primarily due to the first full year of toll collection at the Dallas Main plaza, which opened in March 2012. Facility transactions and revenues have increased annually over the past twenty years with the exception of FY 2002 and FY 2009. Annual transaction and toll revenue trends by plaza group are also presented in the table.

Over the past twenty years there have been two prior annual decreases in transactions and revenues on S.R. 528. The FY 2002 decrease in transactions of 4.0 percent at the Airport Main plaza group was caused by the reduction of tourism travel in Florida as a result of the September 11th terrorist attack because of the plaza's close proximity to the airport. Revenues also declined at this plaza group by 3.2 percent. The impact at the Beachline Main plaza group was less with no growth during the year.

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

In FY 2009, transactions at the Airport Main and Beachline Main plaza groups decreased by 9.2 percent and 9.0 percent, respectively. Revenues also declined by 2.3 percent at the Airport Main plaza group and by 6.1 percent at the Beachline Main plaza group. FY 2009 transactions and revenues were affected by the economic recession and then by the Systemwide toll rate increase. The toll rate increase in April 2009 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.

Transactions continued to decline on 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 increase. In FY 2010, revenues on the Airport Main and Beachline Main plaza groups increased significantly due to the additional revenue collected from the Systemwide toll rate increase. The toll rate increase impacted growth during the first nine months of the fiscal year. Transactions and revenue at the Beachline Main plaza group had a slightly higher growth rate than the Airport Main plaza group, which may be attributable to the opening of the Monument Parkway connection between Innovation Way and S.R. 528/International Corporate Park interchange, which provided a much needed alternative access in this area of east Orange County.

In FY 2011 and FY 2012, transactions at both the Airport Main and Beachline Main plaza group increased compared to the prior year. In FY 2012, the Dallas Main plaza opened to traffic to create



TABLE 3-1
S.R. 528 PLAZA GROUPS – HISTORICAL TRANSACTIONS AND TOLL REVENUES
FY 1994 – FY 2013

Fiscal Year	Airport Main	Beachline Main	Dallas Main	TOTAL	Airport Main	Beachline Main	Dallas Main	TOTAL
TRANSACTIONS (millions)				PERCENT CHANGE				
1994	12.0	6.8		18.8				
1995	12.2	8.0		20.2	1.7%	17.6%		7.4%
1996	13.2	8.8		22.0	8.2%	10.0%		8.9%
1997	14.5	9.2		23.7	9.8%	4.5%		7.7%
1998	15.4	9.8		25.2	6.2%	6.5%		6.3%
1999	16.7	10.6		27.3	8.4%	8.2%		8.3%
2000	18.9	11.9		30.8	13.2%	12.3%		12.8%
2001	19.8	12.6		32.4	4.8%	5.9%		5.2%
2002 ^A	19.0	12.6		31.6	-4.0%	0.0%		-2.5%
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 ^B	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 ^C	28.2	16.6		44.8	1.4%	-0.6%		0.7%
2009 ^D	25.6	15.1		40.7	-9.2%	-9.0%		-9.2%
2010 ^E	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 ^F	26.8	16.4	4.3	47.5	2.3%	0.6%		11.8%
2013 ^G	26.4	16.7	14.5	57.6	-1.4%	1.8%	237.4%	21.3%
TOLL REVENUES (millions)				PERCENT CHANGE				
1994	\$9.4	\$8.0		\$17.4				
1995	\$9.4	\$8.7		\$18.1	0.0%	8.7%		4.0%
1996	\$10.3	\$9.4		\$19.7	9.6%	8.0%		8.8%
1997	\$11.4	\$9.8		\$21.2	10.7%	4.3%		7.6%
1998	\$12.1	\$10.5		\$22.6	6.1%	7.1%		6.6%
1999	\$13.1	\$11.5		\$24.6	8.3%	9.5%		8.8%
2000	\$14.8	\$12.9		\$27.7	13.0%	12.2%		12.6%
2001	\$15.5	\$13.7		\$29.2	4.7%	6.2%		5.4%
2002 ^A	\$15.0	\$13.7		\$28.7	-3.2%	0.0%		-1.7%
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 ^B	\$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 ^C	\$22.1	\$18.0		\$40.1	1.4%	-1.1%		0.3%
2009 ^D	\$21.6	\$16.9		\$38.5	-2.3%	-6.1%		-4.0%
2010 ^E	\$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 ^F	\$27.5	\$19.0	\$2.2	\$48.7	1.9%	-11.2%		0.6%
2013 ^G	\$30.9	\$16.0	\$7.6	\$54.5	12.4%	-15.8%	243.9%	11.8%

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.



FIGURE 3-3
S.R. 528 HISTORICAL TRANSACTIONS AND ANNUAL GROWTH
FY 1994 – FY 2013

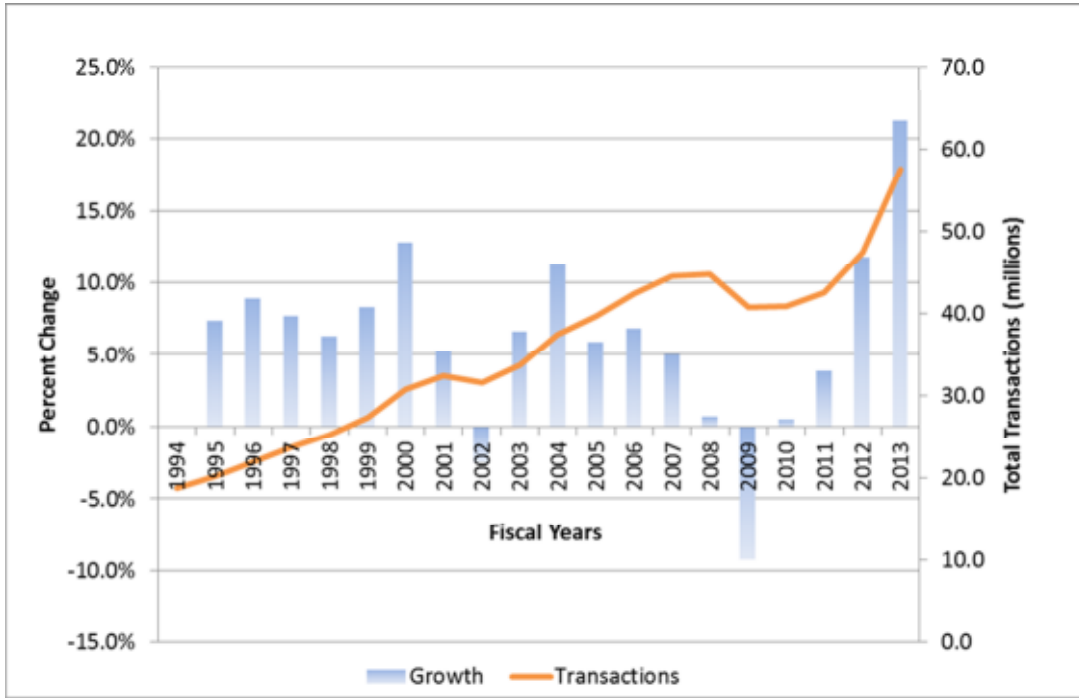
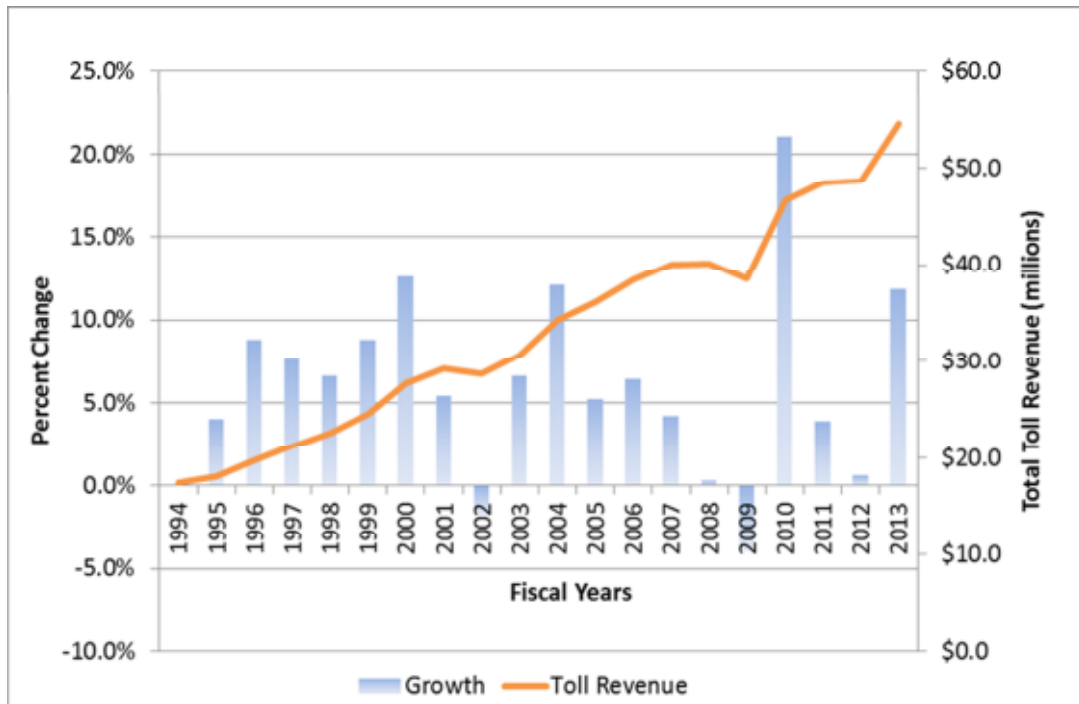


FIGURE 3-4
S.R. 528 HISTORICAL TOLL REVENUE AND ANNUAL GROWTH
FY 1994 – FY 2013





toll equity for customers on S.R. 528. 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, transactions at the Airport Main plaza group declined by 1.4 percent, while revenues increased by 12.4 percent over FY 2012. This was expected due to the recent systemwide toll rate increase that went into effect on July 1, 2012 (FY 2013). The Beachline Main plaza group experienced an increase of 1.8 percent in traffic 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 increase. In FY 2013, transactions at the Dallas Main plaza increased by 237.4 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.

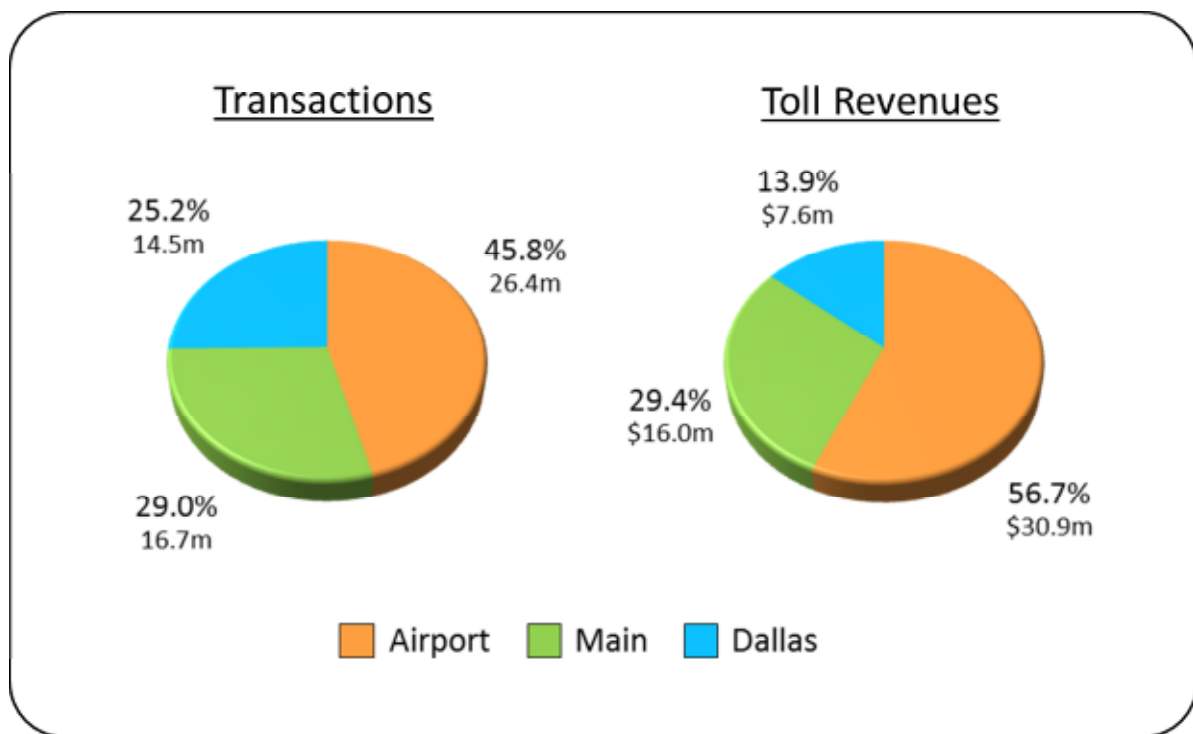




The transactions and toll revenues by plaza group and as a percentage of total S.R. 528 transactions and toll revenues for FY 2013 are shown in Figure 3-5. The Airport Main plaza group represented 26.4 million transactions or 45.8 percent of total S.R. 528 transactions. The Beachline Main plaza group carried 16.7 million or 29.0 percent of total transactions on the facility. Finally, the Dallas Main plaza group represented 14.5 million or 25.2 percent of total S.R. 528 transactions in FY 2013 during its first full year of operation.

The annual totals and percentages for toll revenues differ from those reported for annual transactions because of toll rates. As shown, the Airport Main plaza group represented \$30.9 million in toll revenues or 56.7 percent of total S.R. 528 toll revenues. The Beachline Main plaza group carried \$16.0 million or 29.4 percent of total transactions on the facility. Finally, because of the lower toll, the Dallas Main plaza group represented \$7.6 million or 13.9 percent of total S.R. 528 transactions in FY 2013 during its first full year of operation.

FIGURE 3-5
S.R. 528 TRANSACTIONS AND TOLL REVENUES BY PLAZA GROUP
FY 2013





3.2.2 MONTHLY TRANSACTION SEASONAL VARIATION

In Table 3-2, monthly total traffic volumes are normalized to average number of 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. Being a commuter facility, the seasonal factor may change from year to year based on the number of weekdays in a given month.

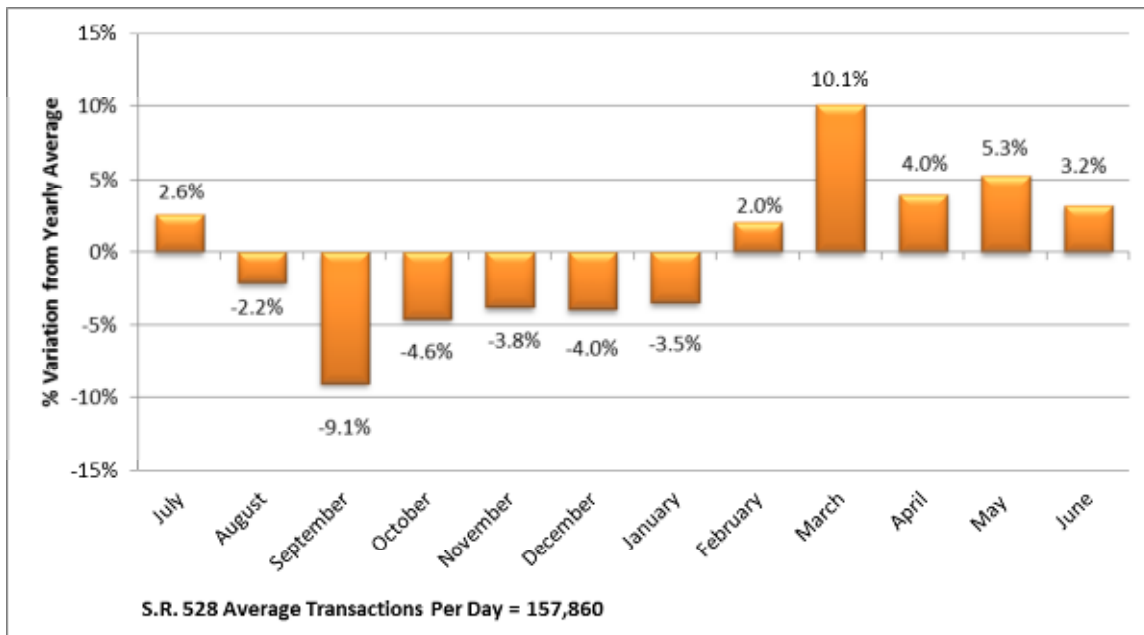
As presented in Table 3-2, average transactions per day in FY 2013 on S.R. 528 ranged from a high of 173,794 in March 2013 to a low of 143,556 in September 2012. March is typically the month with the highest average number of transactions per day due to an extra number of tourists in the area during the spring peak season. Historically, September has been the month with the lowest average number of transactions per day. This data is presented in a graphical format in Figure 3-6. The transactions for each month appear as a percentage of the average for the fiscal year. As shown in the figure, March transactions were 10.1 percent above average and September transactions were 9.1 percent below average for the facility. The increase in transactions during the spring months is also due to tourists in the area.

TABLE 3-2
S.R. 528 – MONTHLY SEASONAL VARIATION IN TOLL-PAYING TRAFFIC
FY 2013

Month	Number of Days in Month	Total Toll Paying Transactions	Average Transactions/day	Seasonal Factor
July	31	5,021,266	161,976	1.026
August	31	4,787,215	154,426	0.978
September	30	4,306,665	143,556	0.909
October	31	4,668,345	150,592	0.954
November	30	4,553,842	151,795	0.962
December	31	4,699,752	151,605	0.960
January	31	4,721,539	152,308	0.965
February	28	4,509,823	161,065	1.020
March	31	5,387,613	173,794	1.101
April	30	4,923,600	164,120	1.040
May	31	5,152,513	166,210	1.053
June	30	4,886,571	162,886	1.032
Average		4,801,562	157,860	1.000
Total Year	365	57,618,744		



FIGURE 3-6
S.R. 528 VARIATION IN TRANSACTIONS PER DAY, BY MONTH
FY 2013



3.2.3 TRANSACTIONS BY VEHICLE CLASS

The distribution of transactions at each of the S.R. 528 plaza groups by vehicle class (number of axles) for FY 2013 is shown in Table 3-3. Overall, 98.5 percent of all transactions on S.R. 528 were made by 2-axle vehicles, with little variation among the three plaza groups. The next most frequent vehicle class was the 3-axle classification, which typically includes delivery and service vehicles. These vehicles accounted for 0.9 percent of all transactions on the facility. Four-axle vehicles represented the smallest category with only 0.2 percent of facility transactions. Trucks with five or more axles represented 0.4 percent of total transactions.

TABLE 3-3
S.R. 528 PERCENT OF TOTAL TRANSACTIONS BY VEHICLE CLASS
FY 2013

Vehicle Class	Airport Main	Beachline Main	Dallas Main	S.R. 528 Total
2-Axle	98.8%	98.3%	98.3%	98.5%
3-Axle	0.8%	1.0%	1.1%	0.9%
4-Axle	0.1%	0.2%	0.2%	0.2%
5 or More Axles	0.3%	0.5%	0.4%	0.4%
Total	100.0%	100.0%	100.0%	100.0%

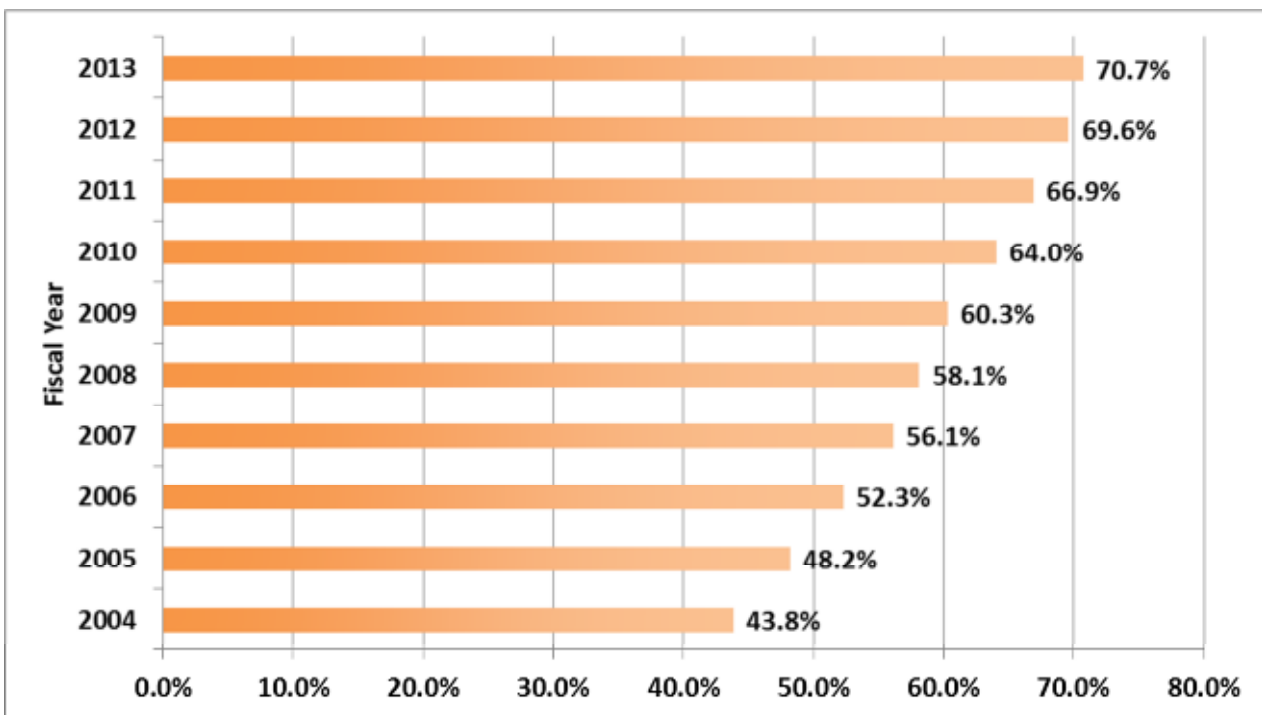
Source: Unaudited lane transaction data – January 2013



3.3 E-PASS USAGE

The percent of revenues generated from electronic transactions over the past ten fiscal years on S.R. 528 are shown in Figure 3-7. E-PASS revenues have steadily increased on the facility since FY 2004. In FY 2004, E-PASS revenues represented 43.8 percent of total revenues on the facility. By the end of FY 2013, E-PASS revenues reached nearly 71 percent. The increase in the participation rate observed in FY 2013 is due in part to the implementation of the toll rate differential. The usage of E-PASS will continue to increase as customers shift from cash to E-PASS to take advantage of the convenience of paying tolls electronically and the lower ETC toll rate.

FIGURE 3-7
S.R. 528 PERCENT OF TOLL REVENUE FROM ELECTRONIC TRANSACTIONS
FY 2004 – FY 2013



Source: OOCEA Statistical Report June 2013

3.4 FORECASTED TRANSACTIONS AND TOLL REVENUES

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.

Facility improvements, such as the S.R. 417 widening from S.R. 528 to Curry Ford, and feeder road improvements, such as Narcoossee Road, positively impact the T&R growth on S.R. 528 in the near term. The removal of the Airport Main toll plaza and changes in toll plan in FY 2015 will have a positive impact on toll revenues. The construction of All Aboard Florida passenger rail service along the S.R. 528 corridor has a minor impact to T&R forecasts, assumed to be completed in FY 2017.



TABLE 3-4
S.R. 528 - KEY TRANSPORTATION IMPROVEMENTS

Facility	From	To	Model Horizon Year	Jurisdiction	Improvement
Boggy Creek Road	Jetport Drive	S.R. 417	2018	City of Orlando	Widen 2-4 lanes
S.R. 417/Greenway	S.R. 528	Curry Ford Road	2018	OOCEA	Widen 4-6 lanes
Narcoossee Road	S.R. 528	Goldenrod Road	2018	City of Orlando	Widen 2-4 lanes
Innovation Way	S.R. 528	Dowden Road/S.R. 417	2018	Orange County	New 4-lane
Innovation Way Interchange			2018	OOCEA	Modified Interchange
Boggy Creek Road	Dowden Road	Landstreet Road	2023	Orange County	Widen 4-6 lanes
Boggy Creek Road (SIS Connector)	Landstreet Road	Sand Lake Road	2023	Orange County	Widen 4-6 lanes
S.R. 528/Beachline Expressway	Narcoossee Road	International Corporate Park Boulevard	2023	OOCEA	Widen 4-6 lanes
Conway Road	McCoy Road	Judge Road	2028	Orange County	Widen 4-6 lanes
Conway Road	Judge Road	Hoffner Avenue	2028	Orange County	Widen 4-6 lanes
Goldenrod Road	North of S.R. 528	Narcoossee Road	2033	Orange County	Widen 4-6 lanes
Lee Vista Boulevard	Semorran Boulevard	Narcoossee Road	2033	City of Orlando	Widen 4-6 lanes

Competing road improvements, such as the construction of Innovation Way, have negative impacts to forecasted T&R. The planned S.R. 528 improvement from Narcoossee Road to International Corporate Boulevard positively impacted traffic growth and revenue in the forecast year between FY 2019 and FY 2023 with growth rates above the 2.5% mark. The growth rates for the remainder of the forecast period are moderate and steady.

Total transactions on S.R. 528 are projected to decrease during the forecast period from the actual of 57.6 million in FY 2013 to 55.9 million in FY 2043. During the FY 2014 through FY 2043 forecast period, S.R. 528 is expected to be the third-largest contributor to total revenues of the five existing expressways. Total revenues on S.R. 528 are projected to increase during the forecast period from the actual \$54.5 million in FY 2013 to \$132.3 million in FY 2043. Transactions are forecasted to decrease an average of 3.7 percent per year from FY 2013 to FY 2020 due to the closing of the Airport Main plaza and opening of the new ramp plazas in FY 2016. Tolls will be collected for OOCEA at the Turnpike plaza upon closing of the Airport Main plaza, however the associated transactions are not included in the forecast. Revenues during the same period are forecasted to increase an average of 3.7 percent per year. Transactions and revenues are forecasted to increase an average of 1.7 and 3.8 percent per year from FY 2020 to FY 2030, and 0.5 and 2.4 percent per year from FY 2030 to FY 2040, respectively.

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 Tables 3-5 and 3-6. The forecasts assume toll rate indexing at 3% per year, implemented every fifth year. Due to the toll rate adjustments every fifth year, there are noticeable decreases in transactions and increases in revenues every fifth year.



**TABLE 3-5
S.R. 528 PLAZA GROUPS – TRANSACTION PROJECTIONS (MILLIONS)
FY 2014 – FY 2043**

Fiscal Year	Airport Main		Beachline Main		Dallas Main		TOTAL		Percent Annual Change
	Actual ^A	Projected	Actual ^A	Projected	Actual ^A	Projected	Actual ^A	Projected	
2000	18.9		11.9				30.8		11.7%
2001	19.8		12.6				32.4		5.2%
2002 ^B	19.0		12.6				31.6		-2.5%
2003	20.0		13.7				33.7		6.6%
2004	22.6		14.9				37.5		11.3%
2005 ^C	24.6		15.1				39.7		5.9%
2006	26.5		15.9				42.4		6.8%
2007	27.8		16.7				44.5		5.0%
2008 ^D	28.2		16.6				44.8		0.7%
2009 ^E	25.6		15.1				40.7		-9.2%
2010	25.4		15.5				40.9		0.5%
2011	26.2		16.3				42.5		3.9%
2012 ^F	26.8		16.4		4.3		47.5		11.8%
2013 ^E	26.4		16.7		14.5		57.6		21.3%
2014		26.9		16.9		14.7		58.5	1.5%
2015		27.5		16.9		15.1		59.5	1.7%
2016 ^G		9.0		17.0		15.4		41.4	-30.4%
2017		9.3		17.1		15.7		42.1	1.8%
2018 ^E		9.1		16.4		16.0		41.5	-1.4%
2019		9.5		16.8		16.7		42.9	3.4%
2020		9.8		17.3		17.3		44.3	3.2%
2021		10.1		17.7		17.9		45.7	3.1%
2022		10.5		18.1		18.5		47.1	3.0%
2023 ^E		10.3		18.2		18.8		47.3	0.4%
2024		10.6		18.6		19.0		48.3	2.0%
2025		10.9		19.1		19.2		49.2	2.0%
2026		11.2		19.6		19.4		50.2	1.9%
2027		11.5		20.1		19.5		51.1	1.9%
2028 ^E		11.5		20.1		19.3		50.9	-0.4%
2029		11.7		20.4		19.5		51.6	1.4%
2030		12.0		20.8		19.6		52.4	1.4%
2031		12.3		21.1		19.7		53.1	1.4%
2032		12.5		21.5		19.8		53.8	1.4%
2033 ^E		12.3		21.6		19.7		53.5	-0.6%
2034		12.4		21.8		19.7		53.9	0.6%
2035		12.6		22.0		19.7		54.2	0.6%
2036		12.7		22.2		19.6		54.5	0.6%
2037		12.9		22.4		19.6		54.9	0.6%
2038 ^E		12.6		22.3		19.4		54.3	-1.1%
2039		12.8		22.5		19.4		54.6	0.6%
2040		12.9		22.7		19.4		54.9	0.6%
2041		13.0		22.9		19.4		55.3	0.6%
2042		13.2		23.1		19.3		55.6	0.6%
2043		13.3		23.3		19.3		55.9	0.6%

Fiscal Year	Compound Annual Average Growth Rate (CAAGR)				
2000 - 2008	5.1%		4.2%		4.8%
2008 - 2013	-1.3%		0.1%		5.2%
2013 - 2020	-13.2%		0.5%	2.5%	-3.7%
2020 - 2030	2.1%		1.9%	1.3%	1.7%
2030 - 2040	0.7%		0.9%	-0.1%	0.5%

Notes:

- A - Actual revenue data provided by OOCEA from Monthly Statistical Reports.
- B - Effects of the events on September 11, 2001.
- C - Effects from 2004 hurricane season (4 storms with toll suspensions).
- D - First effects of national economic recession.
- E - Systemwide toll rate increase.
- F - Dallas Main plaza opened to traffic on March 19, 2012.
- G - Airport Main Plaza closes, new ramp plazas open at beginning of FY 2016.



**TABLE 3-6
S.R. 528 PLAZA GROUPS – TOLL REVENUE PROJECTIONS (MILLIONS)
FY 2014 – FY 2043**

Fiscal Year	Airport Main		Beachline Main		Dallas Main		TOTAL		Percent Annual Change
	Actual ^A	Projected	Actual ^A	Projected	Actual ^A	Projected	Actual ^A	Projected	
2000	\$14.8		\$12.9				\$27.7		11.7%
2001	15.5		13.7				29.2		5.4%
2002 ^B	15.0		13.7				28.7		-1.7%
2003	15.7		14.9				30.6		6.6%
2004	17.9		16.4				34.3		12.1%
2005 ^C	19.4		16.7				36.1		5.2%
2006	20.9		17.5				38.4		6.4%
2007	21.8		18.2				40.0		4.2%
2008 ^D	22.1		18.0				40.1		0.3%
2009 ^E	21.6		16.9				38.5		-4.0%
2010	26.2		20.4				46.6		21.0%
2011	27.0		21.4				48.4		3.9%
2012 ^F	27.5		19.0		\$2.2		48.7		0.6%
2013 ^E	30.9		16.0		7.6		54.5		11.8%
2014		\$31.4		\$15.8		\$8.0		\$55.2	1.3%
2015		32.0		15.7		8.3		56.1	1.6%
2016 ^G		35.6		15.6		8.6		59.8	6.7%
2017		36.3		15.6		8.9		60.8	1.5%
2018 ^E		39.0		17.4		10.8		67.1	10.4%
2019		39.7		17.8		11.2		68.7	2.3%
2020		40.4		18.3		11.6		70.2	2.3%
2021		41.0		18.8		12.0		71.8	2.2%
2022		41.7		19.3		12.4		73.4	2.2%
2023 ^E		46.3		21.3		13.8		81.3	10.8%
2024		47.3		21.8		13.9		83.0	2.1%
2025		48.4		22.4		14.0		84.8	2.1%
2026		49.4		22.9		14.2		86.5	2.0%
2027		50.5		23.5		14.3		88.2	2.0%
2028 ^E		55.9		26.6		16.2		98.7	11.9%
2029		56.8		27.1		16.3		100.2	1.5%
2030		57.6		27.6		16.4		101.6	1.4%
2031		58.5		28.1		16.5		103.1	1.4%
2032		59.4		28.5		16.6		104.5	1.4%
2033 ^E		63.1		30.9		17.8		111.8	7.0%
2034		64.0		31.2		17.8		113.0	1.0%
2035		64.9		31.4		17.8		114.1	1.0%
2036		65.7		31.7		17.8		115.3	1.0%
2037		66.6		32.0		17.8		116.4	1.0%
2038 ^E		72.6		35.3		18.7		126.5	8.7%
2039		73.4		35.5		18.7		127.7	0.9%
2040		74.3		35.8		18.7		128.8	0.9%
2041		75.2		36.1		18.7		130.0	0.9%
2042		76.1		36.4		18.7		131.1	0.9%
2043		77.0		36.6		18.6		132.3	0.9%

Fiscal Year	Compound Annual Average Growth Rate (CAAGR)				
2000 - 2008	5.1%		4.3%		4.7%
2008 - 2013	6.9%		-2.3%		6.3%
2013 - 2020	3.9%		2.0%	6.2%	3.7%
2020 - 2030	3.6%		4.2%	3.6%	3.8%
2030 - 2040	2.6%		2.7%	1.3%	2.4%

Notes:
A - Actual revenue data provided by OOCEA from Monthly Statistical Reports.
B - Effects of the events on September 11, 2001.
C - Effects from 2004 hurricane season (4 storms with toll suspensions).
D - First effects of national economic recession.
E - Systemwide toll rate increase.
F - Dallas Main plaza opened to traffic on March 19, 2012.
G - Airport Main Plaza closes, new ramp plazas open at beginning of FY 2016.



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Chapter 4
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 the east-west commuter traffic across the Orlando urban area and provides fast and efficient access to 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 2013 OOCEA toll rates for the mainline and ramp toll plazas is shown in Figure 4-1. S.R. 408 has four plaza groups. The Hiwassee Main plaza group includes tolled interchanges at Good Homes Road and Hiwassee Road. The Pine Hills Main plaza group includes toll interchanges at Old Winter Garden Road, John Young Parkway, U.S. 92/441 and Mills Avenue. The Conway Main plaza group includes tolled interchanges at Bumby Avenue, Conway Road and Semoran Boulevard. The fourth plaza group, Dean Main, includes tolled interchanges at Dean Road and Rouse Road.



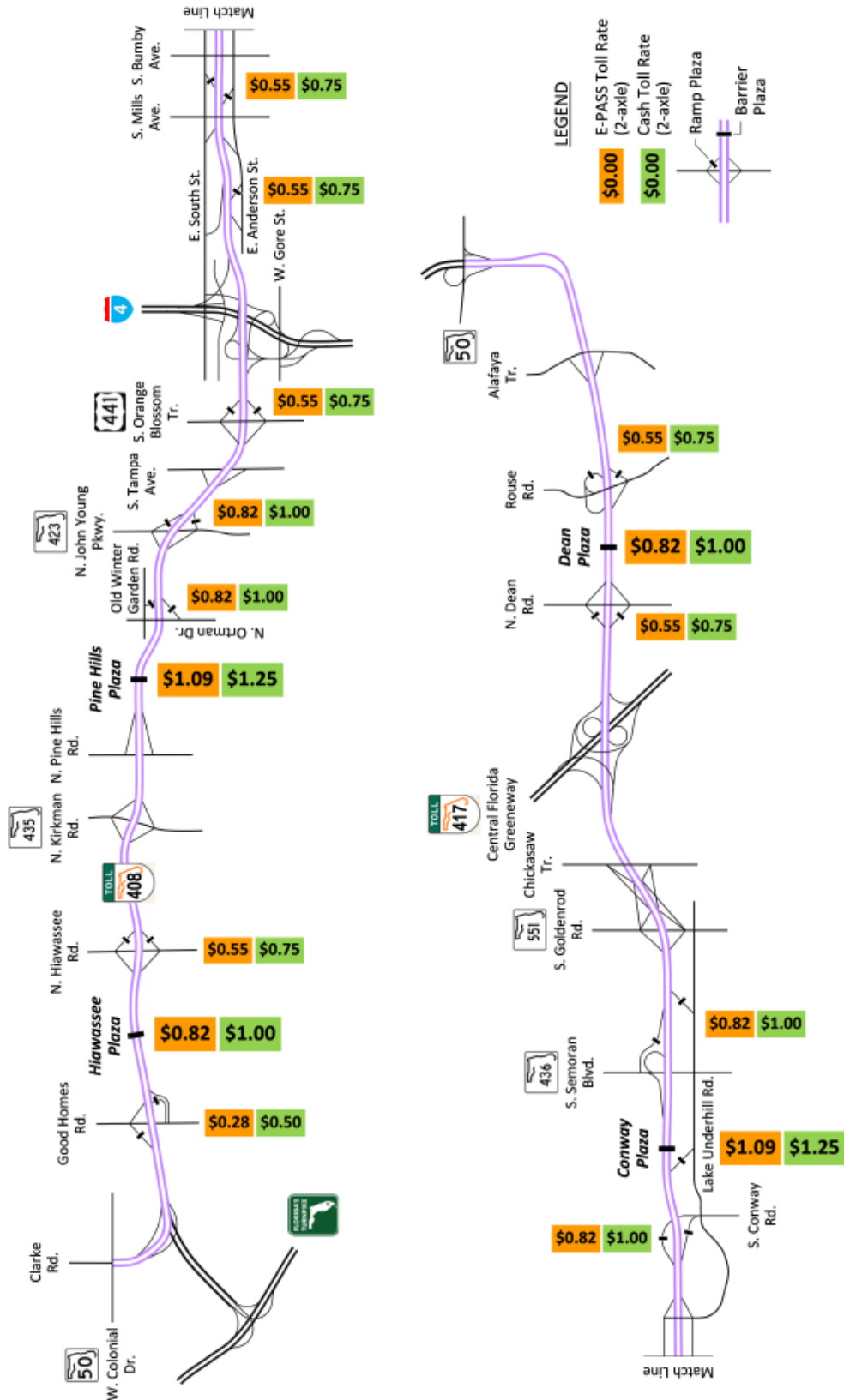
The original 13.8-mile section of S.R. 408 opened to traffic in 1973. This original section began on the west side of Orlando at an intersection with S.R. 50, west of Kirkman Road, to S.R. 50 west of Dean Road. This also included the Holland West (relocated and renamed Pine Hills in 2006) and Holland East (renamed Conway in 2008) Mainline plazas.

OOCEA completed a major expansion project in 1989 that extended S.R. 408 six miles eastward from its existing terminus near S.R. 551 to a new interchange with S.R. 50, east of 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, the OOCEA completed another expansion that extended the S.R. 408 westward five miles from its original western terminus to an interchange with Florida's Turnpike. A new connection with S.R. 50 was provided west of Good Homes Road at Clarke Road. This expansion included interchanges at Hiwassee Road, Good Homes Road and S.R. 50/Clarke Road. The Hiwassee Mainline plaza was added and located between Hiwassee 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.

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



FIGURE 4-1
S.R. 408 FACILITIES AND TOLL RATES MAP





In FY 2011, the widening of S.R. 408 began between Oxalis Avenue and S.R. 417 as well as the reconfiguration of the S.R. 408/S.R. 417 Systems interchange. This widening was completed in March 2013. In January 2013, OOCEA completed the widening of S.R. 408 between Goldenrod Road and Chickasaw Trail from four to five lanes in each direction. This project also included new ramps at Chickasaw Trail for travel to and from downtown Orlando. In January 2013, a new frontage road was completed to improve access to and from downtown Orlando for the communities in the area of Valencia College Lane and Econlockhatchee Trail.

4.2 HISTORICAL TRANSACTIONS AND TOLL REVENUES

4.2.1 ANNUAL TRANSACTION AND TOLL REVENUE TRENDS

A comprehensive historical record of facility transactions and toll revenues on S.R. 408 at the Hiawasse Main, Pine Hills Main, Conway Main and Dean Main plaza groups from FY 1994 to FY 2013 is presented in Table 4-1. The facility data and annual growth are also presented visually in Figures 4-2 and 4-3. As shown, total transactions on S.R. 408 in FY 2013 decreased by approximately 2.7 million, or 2.1 percent, compared to FY 2012. FY 2013 total revenues increased by 10.8 percent compared to FY 2012. The decrease in transactions and increase in revenues was expected due to the FY 2013 toll rate increase. Customers have an elastic response to rate increases in which the rate increase forces some trips to leave the facility, which typically impacts traffic for only a short period. Early indications for FY 2014 show positive transaction growth. Annual transaction and toll revenue trends by plaza group are also presented in the table.

FY 2007 was the first year with a revenue decline 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. This plaza opened in November 2006 and included express lanes for E-PASS 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, transactions decreased at the Conway Main plaza group by 2.3 percent and revenues decreased by 2.4 percent. 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 economic 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 as a result of the continuing impacts of the economic recession and the implementation of a Systemwide toll rate increase. The toll rate increase impacted growth during the last three months of FY 2009. The largest 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.



TABLE 4-1
S.R. 408 PLAZA GROUPS – HISTORICAL TRANSACTIONS AND TOLL REVENUES
FY 1994 – FY 2013

Fiscal Year	Hiawasse Main	Pine Hills Main	Conway Main	Dean Main	TOTAL	Hiawasse Main	Pine Hills Main	Conway Main	Dean Main	TOTAL
	TRANSACTIONS (millions)					PERCENT CHANGE				
1994	6.2	13.0	26.0	6.9	52.1					
1995	7.1	14.0	27.5	7.8	56.4	14.5%	7.7%	5.8%	13.0%	8.3%
1996	8.4	15.6	30.4	9.0	63.4	18.3%	11.4%	10.5%	15.4%	12.4%
1997	10.0	17.5	32.6	10.2	70.3	19.0%	12.2%	7.2%	13.3%	10.9%
1998	11.8	20.2	35.5	11.9	79.4	18.0%	15.4%	8.9%	16.7%	12.9%
1999	13.7	22.5	38.2	13.8	88.2	16.1%	11.4%	7.6%	16.0%	11.1%
2000	15.5	24.4	41.0	16.7	97.6	13.1%	8.4%	7.3%	21.0%	10.7%
2001	17.1	25.7	42.5	19.1	104.4	10.3%	5.3%	3.7%	14.4%	7.0%
2002 ^A	18.7	26.7	43.8	20.9	110.1	9.4%	3.9%	3.1%	9.4%	5.5%
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 ^B	22.7	30.8	49.1	25.2	127.8	3.2%	3.0%	1.2%	3.7%	2.5%
2006 ^C	24.1	32.2	51.8	27.3	135.4	6.2%	4.5%	5.5%	8.3%	5.9%
2007 ^D	25.7	32.5	51.9	28.2	138.3	6.6%	0.9%	0.2%	3.3%	2.1%
2008 ^E	27.2	33.7	50.7	27.4	139.0	5.8%	3.7%	-2.3%	-2.8%	0.5%
2009 ^F	25.2	30.9	49.3	25.9	131.3	-7.4%	-8.3%	-2.8%	-5.5%	-5.5%
2010 ^F	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 ^F	22.5	27.6	48.9	24.5	123.5	-2.5%	-3.0%	-2.3%	-0.5%	-2.1%
	TOLL REVENUES (millions)					PERCENT CHANGE				
1994	\$2.9	\$9.7	\$18.4	\$3.0	\$34.0					
1995	\$3.3	\$10.4	\$19.6	\$3.4	\$36.7	13.8%	7.2%	6.5%	13.3%	7.9%
1996	\$3.9	\$11.6	\$21.6	\$4.0	\$41.1	18.2%	11.5%	10.2%	17.6%	12.0%
1997	\$4.7	\$13.0	\$23.2	\$4.6	\$45.5	20.5%	12.1%	7.4%	15.0%	10.7%
1998	\$5.6	\$14.8	\$25.4	\$5.5	\$51.3	19.1%	13.8%	9.5%	19.6%	12.7%
1999	\$6.5	\$16.4	\$27.3	\$6.4	\$56.6	16.1%	10.8%	7.5%	16.4%	10.3%
2000	\$7.4	\$17.8	\$29.3	\$7.8	\$62.3	13.8%	8.5%	7.3%	21.9%	10.1%
2001	\$8.2	\$18.7	\$30.4	\$8.9	\$66.2	10.8%	5.1%	3.8%	14.1%	6.3%
2002 ^A	\$9.1	\$19.5	\$31.3	\$9.8	\$69.7	11.0%	4.3%	3.0%	10.1%	5.3%
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 ^B	\$11.2	\$22.5	\$35.0	\$11.7	\$80.4	3.7%	3.2%	0.9%	2.6%	2.2%
2006 ^C	\$11.8	\$23.6	\$36.9	\$12.8	\$85.1	5.4%	4.9%	5.4%	9.4%	5.8%
2007 ^D	\$12.7	\$23.5	\$37.0	\$13.3	\$86.5	7.6%	-0.4%	0.3%	3.9%	1.6%
2008 ^E	\$13.0	\$24.0	\$36.1	\$13.0	\$86.1	2.4%	2.1%	-2.4%	-2.3%	-0.5%
2009 ^F	\$13.3	\$23.7	\$37.6	\$13.7	\$88.3	2.3%	-1.3%	4.2%	5.4%	2.6%
2010 ^F	\$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 ^F	\$18.0	\$29.3	\$51.9	\$20.1	\$119.3	12.4%	9.6%	10.0%	13.2%	10.8%

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. Hiawassee 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. Conway Main plaza converted to open road tolling in Nov 2008.



FIGURE 4-2
S.R. 408 HISTORICAL TRANSACTIONS AND ANNUAL GROWTH
FY 1994 – FY 2013

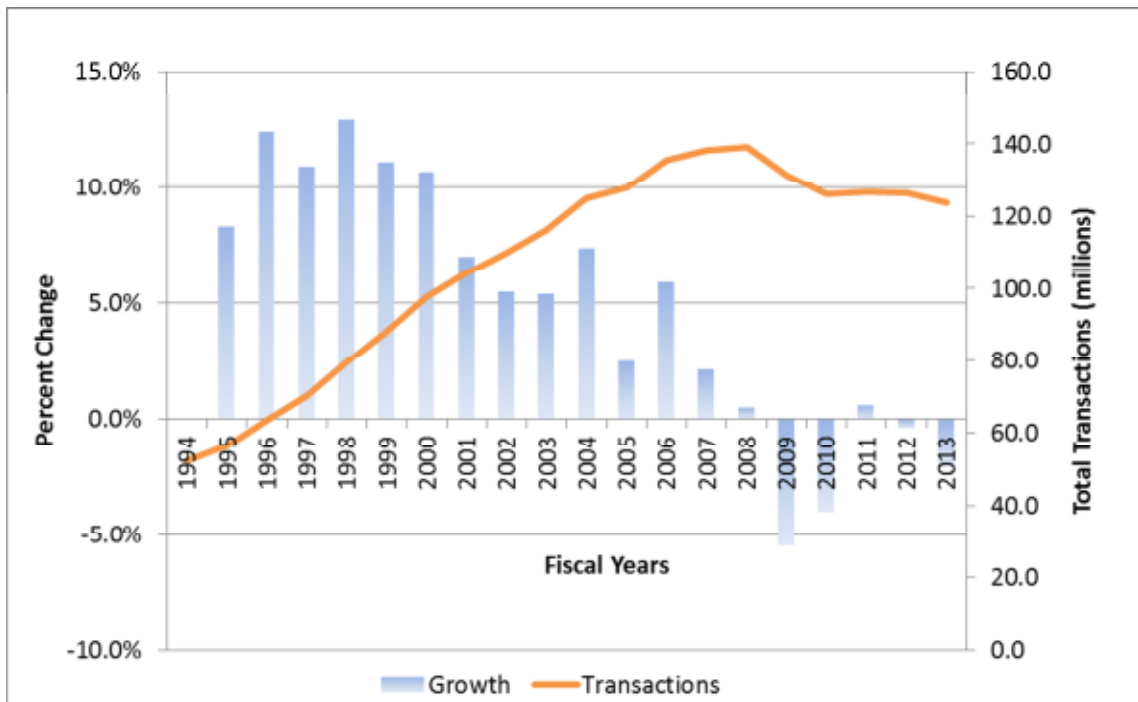
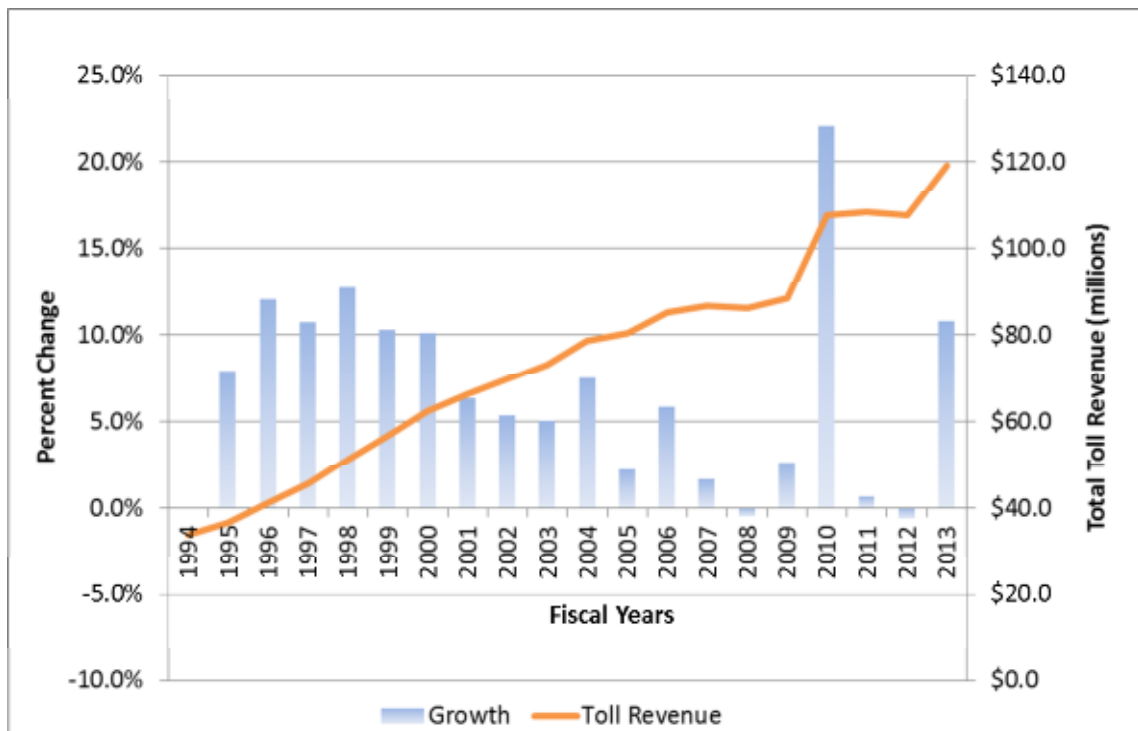


FIGURE 4-3
S.R. 408 HISTORICAL TOLL REVENUE AND ANNUAL GROWTH
FY 1994 – FY 2013





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

FY 2011 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.

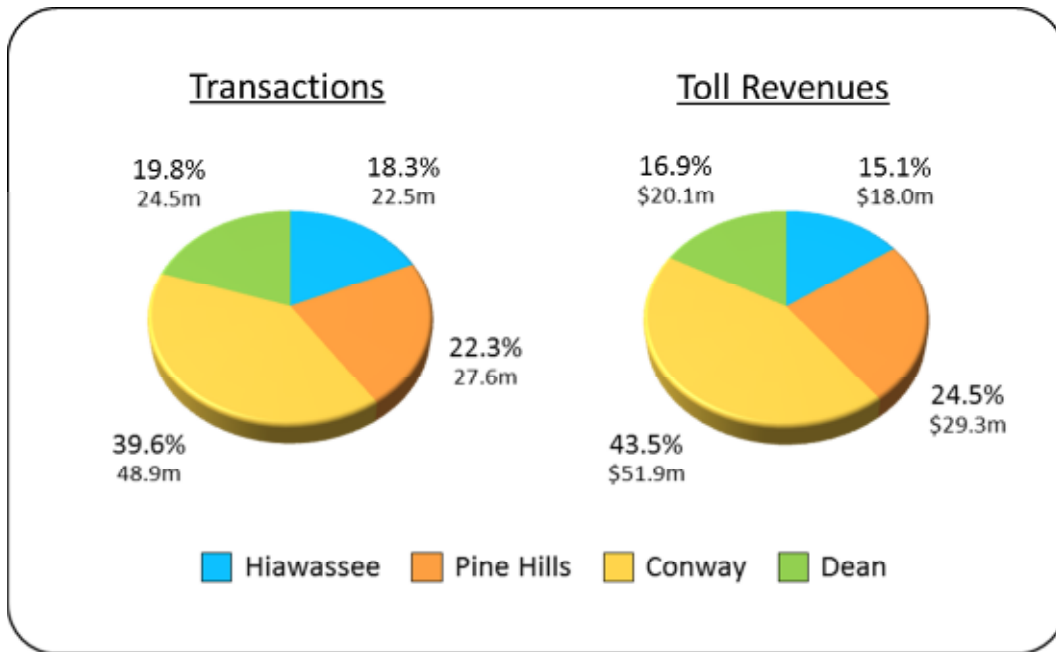
Transactions declined while revenues increased at all four plaza groups in FY 2013, due to the toll rate increase that went into effect on July 1, 2012. The transactions and toll revenues by plaza groups and as a percentage of total S.R. 408 transactions and toll revenues for FY 2013 are presented in Figure 4-4. The majority of the transactions on S.R. 408 during FY 2013 were reported at the Conway Main plaza group, with 48.9 million or 40 percent. The Pine Hills Main, Dean Main and Hiawassee Main plaza groups reported 27.6, 24.5 and 22.5 million transactions and each contributed approximately 20 percent of total S.R. 408 transactions for FY 2013.

The annual totals and percentages for toll revenues are similar to the trends reported for annual transactions. As shown, the Conway Main plaza group represented \$51.9 million in toll revenues or 43.5 percent of total S.R. 408 toll revenues. The Pine Hills Main plaza group represented \$29.3 million or 24.5 percent of total revenues on the facility. The Dean Main plaza group was the next highest with \$20.1 million or 16.9 percent of the total and the Hiawassee Main plaza group represented \$18.0 million or 15.1 percent in FY 2013. The tolls are lower at the Dean and Hiawassee mainline toll plazas.





FIGURE 4-4
S.R. 408 TRANSACTIONS AND TOLL REVENUES BY PLAZA GROUP
FY 2013



4.2.2 MONTHLY TRANSACTION SEASONAL VARIATION

In Table 4-2, monthly total traffic volumes are normalized to average number of 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. Being a commuter facility, the seasonal factor may change from year to year based on the number of weekdays in a given month.

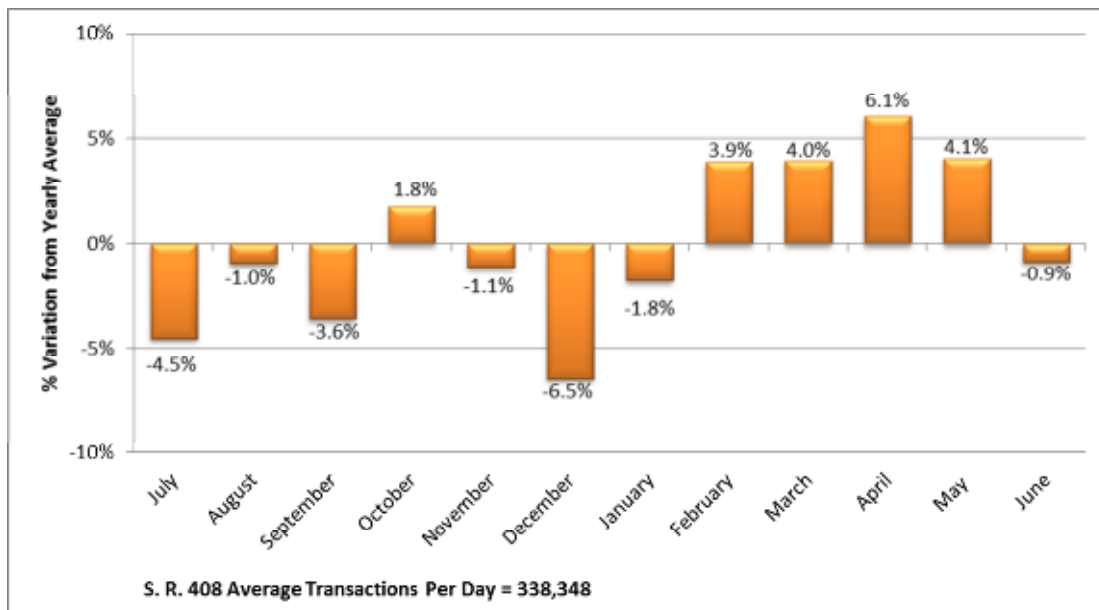
The average number of transactions per day in FY 2013 on S.R. 408 ranged from a high of 358,840 in April 2013 to a low of 316,414 in December 2012. Historically, the winter months (December and January) have been the months with the lowest average number of transactions per day. This data is presented in a graphical format in Figure 3-5. The transactions for each month appear as a percentage of the average for the fiscal year. As shown in the figure, April transactions were 6.1 percent above average and December transactions were 6.5 percent below average for the facility. S.R. 408 volumes do not fluctuate as much as other facilities due to the higher monthly volume and the usage of the highway as a commuter facility. The transactions only deviate 5 to 6 percent from the annual average.



TABLE 4-2
S.R. 408 – MONTHLY SEASONAL VARIATION IN TOLL-PAYING TRAFFIC
FY 2013

Month	Number of Days in Month	Total Toll Paying Transactions	Average Transactions/day	Seasonal Factor
July	31	10,012,257	322,976	0.955
August	31	10,389,068	335,131	0.990
September	30	9,785,161	326,172	0.964
October	31	10,673,884	344,319	1.018
November	30	10,035,072	334,502	0.989
December	31	9,808,833	316,414	0.935
January	31	10,300,785	332,283	0.982
February	28	9,844,842	351,602	1.039
March	31	10,906,733	351,830	1.040
April	30	10,765,211	358,840	1.061
May	31	10,914,263	352,073	1.041
June	30	10,060,769	335,359	0.991
Average		10,291,407	338,348	1.000
Total Year	365	123,496,878		

FIGURE 4-5
S.R. 408 VARIATION IN TRANSACTIONS PER DAY, BY MONTH
FY 2013





4.2.3 TRANSACTIONS BY VEHICLE CLASS

The distribution of transactions at each of the S.R. 408 plaza groups by vehicle class (number of axles) for FY 2013 is presented in Table 4-3. Overall, 99.2 percent of all transactions on S.R. 408 were made by 2-axle passenger vehicles, with little variation among the three plaza groups. The next most frequent vehicle class was the 3-axle classification, which typically includes delivery and service vehicles. These vehicles accounted for 0.5 percent of all transactions on the facility. Four-axle vehicles and trucks with five or more axles represented the smallest categories with only 0.1 and 0.2 percent of facility transactions.

TABLE 4-3
S.R. 408 PERCENT OF TOTAL TRANSACTIONS BY VEHICLE CLASS
FY 2013

Vehicle Class	Hiawassee Main	Pine Hills Main	Conway Main	Dean Main	S.R. 408 Total
2-Axle	98.9%	99.0%	99.4%	99.5%	99.2%
3-Axle	0.6%	0.6%	0.3%	0.3%	0.5%
4-Axle	0.1%	0.1%	0.1%	0.1%	0.1%
5 or More Axles	0.4%	0.3%	0.2%	0.1%	0.2%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Unaudited lane transaction data – January 2013

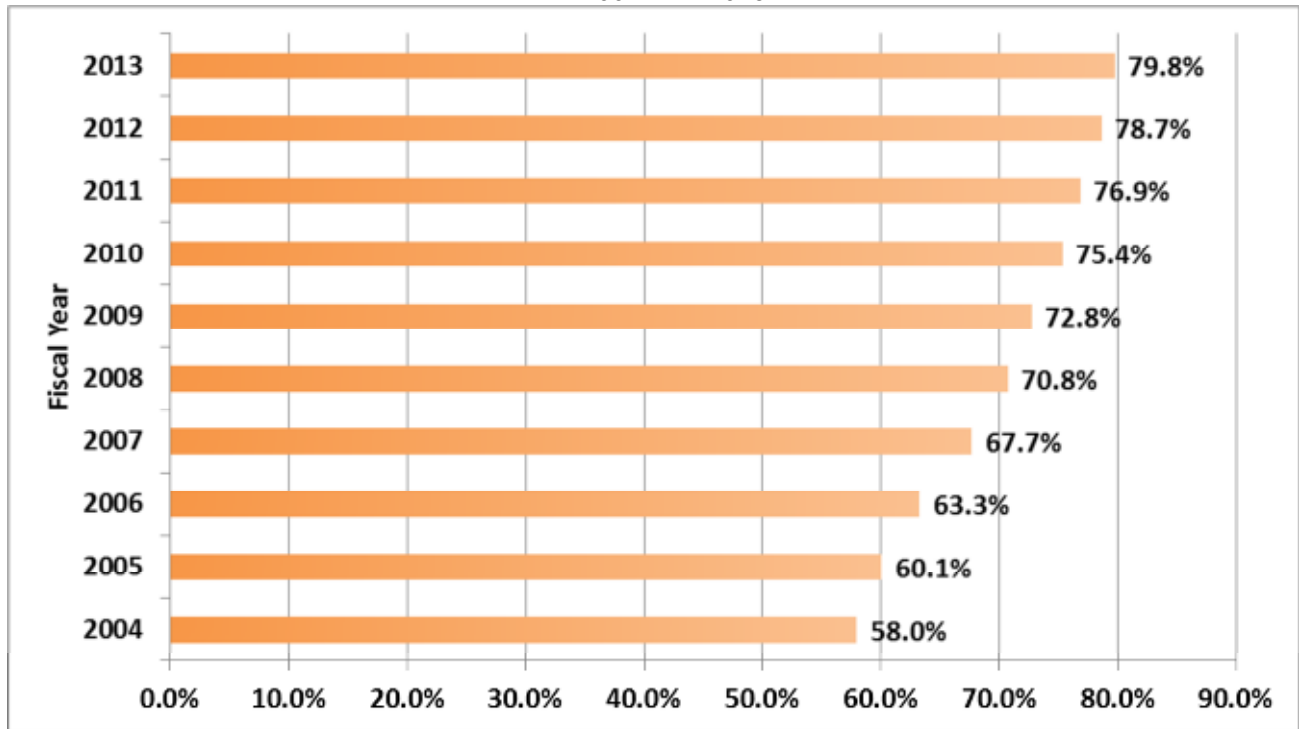
4.3 E-PASS USAGE

The percent of revenues generated from electronic transactions over the past ten fiscal years on S.R. 408 is shown in Figure 4-6. As shown, E-PASS revenues have steadily increased on the facility since FY 2004. In FY 2004, E-PASS revenues totaled 58 percent of total revenues on the facility. By the end of FY 2013, E-PASS revenues reached nearly 80 percent. The usage of E-PASS will continue to increase as customers shift from cash to E-PASS to take advantage of the convenience of paying tolls electronically and the lower toll rate. The increase in E-PASS participation was not as great as on other System facilities because the S.R. 408 customers are primarily commuters who already understand the benefits of E-PASS.





FIGURE 4-6
S.R. 408 PERCENT OF TOLL REVENUE FROM ELECTRONIC TRANSACTIONS
FY 2004 – FY 2013



Source: OOCEA Statistical Report June 2013

4.4 FORECASTED TRANSACTIONS AND TOLL REVENUES

Future transportation improvements that could influence the T&R forecasts for S.R. 408 include the projects listed in Table 4-4, assumed completed in each model horizon year.

Even with major improvements to competing facilities, such as S.R. 50 in east and west Orange County, and Lake Underhill Road, growth rates in the near term are above 2.5% per year. System improvements, such as the S.R. 408 widening from S.R. 417 to Alafaya Trail, through the Hiawasse Road Interchange, and S.R. 417 widening from S.R. 408 to Curry Ford Road, as well as feeder road improvements, such as Alafaya Trail and John Young Parkway, positively impact the T&R growth on S.R. 408 throughout the forecast horizon.



TABLE 4-4
S.R. 408 - KEY TRANSPORTATION IMPROVEMENTS

Facility	From	To	Model Horizon Year	Jurisdiction	Improvement
Interstate 4	S of Kirkman	N of S.R. 434	2018	FDOT	Ultimate Interchange Improvement
S.R. 417/Greenway	Curry Ford	S.R. 408	2018	OOCEA	Widen 4-6 lanes
Lake Underhill Road	Dean Road	Rouse Road	2018	Orange County	Widen 2-4 lanes
Lake Underhill Road	Goldenrod Road	Chickasaw Trail	2018	Orange County	Widen 2-4 lanes
Lake Underhill Road	Chickasaw Trail	Dean Road	2018	Orange County	Widen 2-4 lanes
S.R. 50	U.S. 27	Hancock Road	2018	FDOT	Widen 4-6 lanes
S.R. 50	Hancock Road	Turnpike	2018	FDOT	Widen 4-6 lanes
S.R. 50	Good Homes Road	Kirkman Road	2018	FDOT	Widen 4-6 lanes
S.R. 50	Turnpike	S.R. 429/ Western Expressway	2018	FDOT	Widen 4-6 lanes
S.R. 50	Semorán Boulevard	Dean Road	2018	FDOT	Widen 4-6 lanes
S.R. 408/East-West Expressway	S.R. 417	Alafaya Trail	2023	OOCEA	Widen 4-6 lanes
S.R. 408/East-West Expressway	Dorscher Road	Powers Drive	2023	OOCEA	Widen 4-6 lanes
Interstate 4	at S.R. 408		2023	OOCEA	Ultimate Interchange Improvement
Alafaya Trail	Curry Ford Road	Avalon Park Boulevard	2028	Orange County	Widen 4-6 lanes
Apopka-Vineland Road/ C.R. 435	Conroy-Windermere Road	Old Winter Garden Road	2028	Orange County	Widen 4-6 lanes
Apopka-Vineland Road/ C.R. 435	S.R. 50/Colonial Drive	Balboa Drive	2028	Orange County	Widen 4-6 lanes
Apopka-Vineland Road/ C.R. 435	Sand Lake Road	Conroy-Windermere Road	2028	Orange County	Widen 4-6 lanes
John Young Parkway	S.R. 50	S.R. 426	2028	Orange County	Widen 4-6 lanes

The forecasts are based on the completion of the ultimate improvements to Interstate 4, especially the completion of the I-4/S.R. 408 Interchange Ultimate improvements. While these improvements provide congestion relief on I-4, there are no discernible impacts to S.R. 408 T&R forecasts. The growth rates for the remainder of the forecast period are moderate and steady. Transactions on S.R. 408 are expected to grow 2.0 percent per year through FY 2020, 0.8 percent per year between FY 2020 and FY 2030 and 0.5 percent per year from FY 2030 and FY 2040. Total revenues on S.R. 408 are projected to increase significantly over the forecast period, from the FY 2013 actual of \$119.3 million to \$260.1 million in FY 2043. Currently the largest contributor to System revenue, S.R. 408 revenues are forecasted to increase an average of 3.3 percent per year through FY 2020, 3.2 percent per year from FY 2020 to FY 2030, and 2.2 percent per year from FY 2030 to FY 2040.

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 forecasts assume toll rate indexing at 3% per year, implemented every fifth year. Due to the toll rate adjustments every fifth year, there are decreases in transactions and increases in revenues.



TABLE 4-5
S.R. 408 PLAZA GROUPS – TRANSACTION PROJECTIONS (MILLIONS)
FY 2014 – FY 2043

Fiscal Year	Hiwassee Main		Pine Hills Main		Conway Main		Dean Main		TOTAL		Percent Annual Change
	Actual ^A	Projected	Actual ^A	Projected	Actual ^A	Projected	Actual ^A	Projected	Actual ^A	Projected	
2000	15.5		24.4		41.0		16.7		97.6		11.7%
2001	17.1		25.7		42.5		19.1		104.4		7.0%
2002 ^B	18.7		26.7		43.8		20.9		110.1		5.5%
2003	20.2		28.0		45.5		22.4		116.1		5.4%
2004	22.0		29.9		48.5		24.3		124.7		7.4%
2005 ^C	22.7		30.8		49.1		25.2		127.8		2.5%
2006 ^D	24.1		32.2		51.8		27.3		135.4		5.9%
2007 ^E	25.7		32.5		51.9		28.2		138.3		2.1%
2008 ^F	27.2		33.7		50.7		27.4		139.0		0.5%
2009 ^G	25.2		30.9		49.3		25.9		131.3		-5.5%
2010	23.3		28.4		49.0		25.3		126.0		-4.0%
2011	23.2		28.4		50.0		25.1		126.7		0.6%
2012	23.1		28.4		50.1		24.6		126.2		-0.4%
2013 ^G	22.5		27.6		48.9		24.5		123.5		-2.1%
2014		23.5		28.2		50.2		25.0		126.8	2.7%
2015		24.3		28.8		51.4		26.1		130.6	2.9%
2016		25.1		29.3		52.7		27.2		134.3	2.9%
2017		25.9		29.8		54.0		28.3		138.0	2.8%
2018 ^G		25.9		29.9		52.4		28.9		137.1	-0.7%
2019		26.4		30.1		53.0		30.1		139.6	1.8%
2020		26.8		30.3		53.7		31.2		142.0	1.8%
2021		27.3		30.6		54.3		32.4		144.5	1.7%
2022		27.7		30.8		54.9		33.5		146.9	1.7%
2023 ^G		27.5		30.9		52.7		33.9		145.0	-1.3%
2024		27.8		31.2		53.5		34.5		147.0	1.4%
2025		28.0		31.4		54.3		35.2		149.0	1.4%
2026		28.3		31.7		55.1		35.9		150.9	1.3%
2027		28.5		31.9		55.9		36.6		152.9	1.3%
2028 ^G		27.9		31.7		54.3		36.6		150.5	-1.6%
2029		28.2		32.3		55.0		36.8		152.3	1.2%
2030		28.5		32.9		55.7		37.0		154.2	1.2%
2031		28.8		33.6		56.4		37.2		156.0	1.2%
2032		29.1		34.2		57.2		37.4		157.8	1.2%
2033 ^G		28.9		34.6		56.1		36.8		156.4	-0.9%
2034		29.3		34.8		56.4		37.1		157.6	0.8%
2035		29.7		35.0		56.6		37.4		158.8	0.8%
2036		30.1		35.3		56.9		37.8		160.0	0.8%
2037		30.5		35.5		57.2		38.1		161.3	0.8%
2038 ^G		30.3		35.4		55.9		37.7		159.3	-1.2%
2039		30.7		35.6		56.2		38.1		160.5	0.8%
2040		31.0		35.8		56.5		38.4		161.7	0.8%
2041		31.4		36.1		56.8		38.7		163.0	0.8%
2042		31.8		36.3		57.0		39.0		164.2	0.7%
2043		32.2		36.5		57.3		39.4		165.4	0.7%

Fiscal Year	Compound Annual Average Growth Rate (CAAGR)						
2000 - 2008	7.3%		4.1%		2.7%		4.5%
2008 - 2013	-3.7%		-3.9%		-0.7%		-2.3%
2013 - 2020	2.5%		1.4%		1.3%		2.0%
2020 - 2030	0.6%		0.8%		0.4%		0.8%
2030 - 2040	0.9%		0.8%		0.1%		0.5%

Notes:

- A - Actual transaction data provided by OOCEA from Monthly Statistical Reports.
- B - Effects of the events on September 11, 2001.
- C - Effects from 2004 hurricane season (4 storms with toll suspensions).
- D - Mills Avenue on-ramp to westbound S.R. 408 permanently closed.
- E - Holland West plaza was relocated and named Pine Hills plaza on November 10, 2006.
- F - First effects of national economic recession.
- G - Systemwide toll rate increase.



TABLE 4-6
S.R. 408 PLAZA GROUPS – TOLL REVENUE PROJECTIONS (MILLIONS)
FY 2014 – FY 2043

Fiscal Year	Hiwassee Main		Pine Hills Main		Conway Main		Dean Main		TOTAL		Percent Annual Change
	Actual ^A	Projected	Actual ^A	Projected	Actual ^A	Projected	Actual ^A	Projected	Actual ^A	Projected	
2000	\$7.4		\$17.8		\$29.3		\$7.8		\$62.3		11.7%
2001	8.2		18.7		30.4		8.9		66.2		6.3%
2002 ^B	9.1		19.5		31.3		9.8		69.7		5.3%
2003	9.9		20.3		32.5		10.5		73.2		5.0%
2004	10.8		21.8		34.7		11.4		78.7		7.5%
2005 ^C	11.2		22.5		35.0		11.7		80.4		2.2%
2006 ^D	11.8		23.6		36.9		12.8		85.1		5.8%
2007 ^E	12.7		23.5		37.0		13.3		86.5		1.6%
2008 ^F	13.0		24.0		36.1		13.0		86.1		-0.5%
2009 ^G	13.3		23.7		37.6		13.7		88.3		2.6%
2010	16.4		26.8		46.1		18.4		107.7		22.0%
2011	16.2		26.8		47.1		18.2		108.3		0.6%
2012	16.0		26.7		47.2		17.8		107.7		-0.6%
2013 ^G	18.0		29.3		51.9		20.1		119.3		10.8%
2014		\$18.6		\$30.0		\$53.0		\$20.4		\$122.0	2.2%
2015		19.0		30.6		54.1		21.3		125.1	2.5%
2016		19.5		31.1		55.2		22.2		128.1	2.5%
2017		20.0		31.7		56.4		23.2		131.2	2.4%
2018 ^G		22.0		35.3		60.9		26.2		144.4	10.1%
2019		22.7		35.6		61.5		27.3		147.1	1.8%
2020		23.3		35.8		62.1		28.4		149.7	1.8%
2021		24.0		36.1		62.7		29.6		152.4	1.8%
2022		24.6		36.3		63.4		30.7		155.0	1.7%
2023 ^G		28.1		41.4		69.4		35.1		174.0	12.3%
2024		28.4		41.7		70.4		35.8		176.3	1.3%
2025		28.7		42.0		71.3		36.5		178.5	1.3%
2026		29.0		42.3		72.3		37.2		180.8	1.3%
2027		29.2		42.6		73.2		37.9		183.0	1.2%
2028 ^G		31.4		47.4		79.7		41.4		200.0	9.3%
2029		31.7		48.0		80.7		41.7		202.1	1.1%
2030		32.0		48.7		81.7		41.9		204.3	1.1%
2031		32.3		49.3		82.6		42.2		206.4	1.0%
2032		32.6		50.0		83.6		42.4		208.6	1.0%
2033 ^G		35.9		54.7		89.5		46.2		226.2	8.4%
2034		36.3		55.1		90.0		46.7		228.0	0.8%
2035		36.7		55.4		90.5		47.2		229.9	0.8%
2036		37.1		55.8		91.1		47.7		231.7	0.8%
2037		37.5		56.2		91.6		48.2		233.5	0.8%
2038 ^G		40.0		61.3		98.4		51.3		250.9	7.5%
2039		40.4		61.7		99.0		51.8		252.8	0.7%
2040		40.8		62.0		99.5		52.3		254.6	0.7%
2041		41.2		62.4		100.1		52.7		256.5	0.7%
2042		41.6		62.8		100.6		53.2		258.6	0.8%
2043		42.0		63.2		101.2		53.7		260.1	0.6%

Fiscal Year	Compound Annual Average Growth Rate (CAAGR)						
2000 - 2008	7.3%		3.8%		2.6%	6.6%	4.1%
2008 - 2013	6.7%		4.1%		7.5%	9.2%	6.7%
2013 - 2020	3.8%		2.9%		2.6%	5.0%	3.3%
2020 - 2030	3.2%		3.1%		2.8%	4.0%	3.2%
2030 - 2040	2.5%		2.5%		2.0%	2.2%	2.2%

Notes:

- A - Actual revenue data provided by OOCEA from Monthly Statistical Reports.
- B - Effects of the events on September 11, 2001.
- C - Effects from 2004 hurricane season (4 storms w ith toll suspensions).
- D - Mills Avenue on-ramp to westbound S.R. 408 permanently closed.
- E - Holland West plaza w as relocated and named Pine Hills plaza on November 10, 2006.
- F - First effects of national economic recession.
- G - Systemw ide toll rate increase.



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Chapter 5
S.R. 417
(Central Florida Greenway)





S.R. 417 (CENTRAL FLORIDA GREENEWAY)

5.1 FACILITY DESCRIPTION

S. R. 417, also known as the Central Florida Greenway, is a 55-mile expressway that serves as an eastern beltway around Orlando and provides a connection from the residential areas northeast, east and southeast of Orlando in Orange and Seminole 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. OOCEA built and operates the 33 miles extending east and north from International Drive to S.R. 426 (Aloma Avenue) at the Orange-Seminole County line. The FTE has extended S.R. 417 west from International Drive to provide a connection to I-4 in the vicinity of the attractions and also extended S.R. 417 north and west from the Orange-Seminole County line to I-4. A map of OOCEA's portion of S.R. 417 including the FY 2013 OOCEA toll rates for the mainline and ramp toll plazas is shown in Figure 5-1.

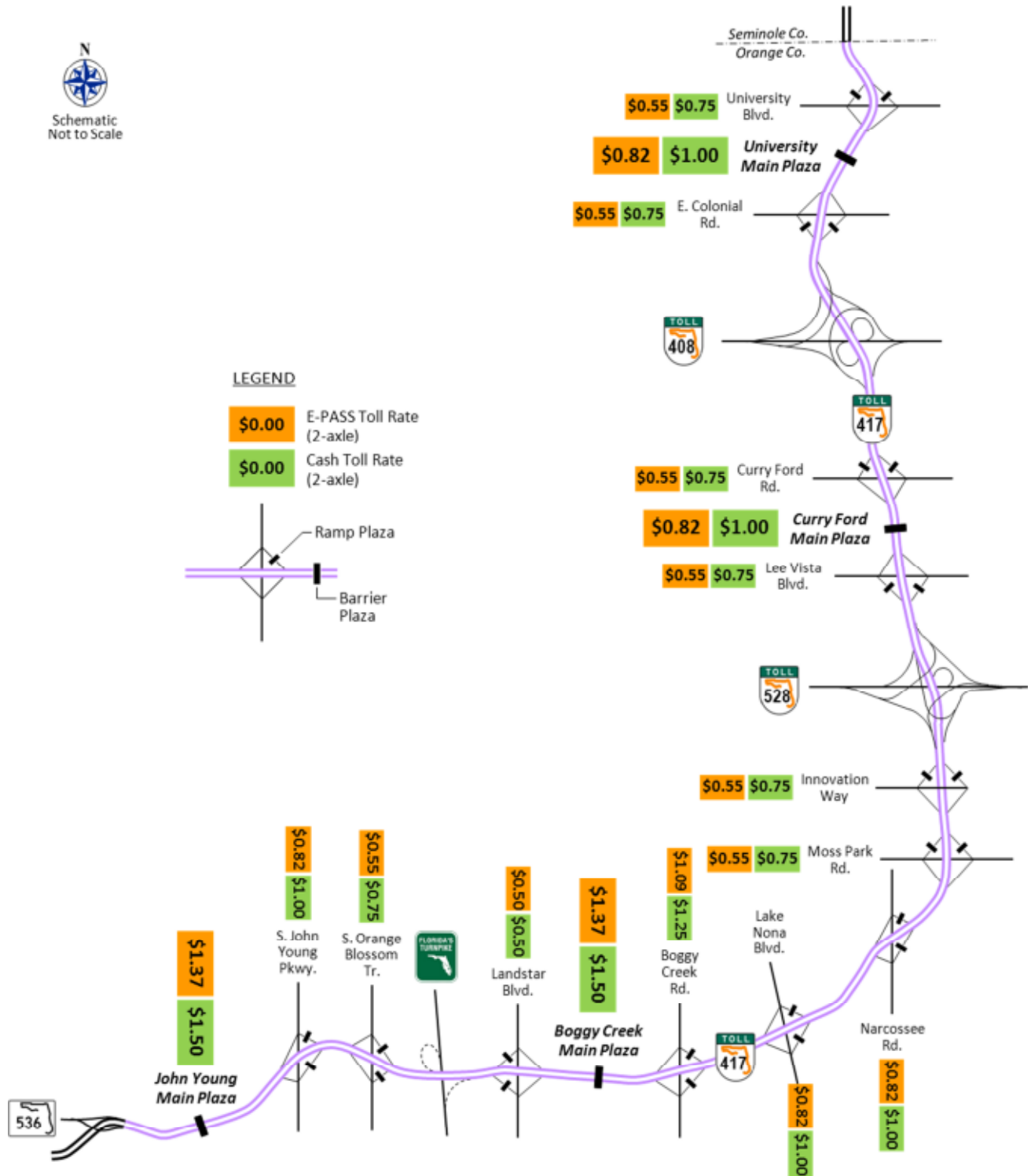


The first section of S.R. 417 to be constructed was from S.R. 408 to the Orange-Seminole County line including the University Mainline plaza. This section opened to traffic in December 1988 and toll collection began at the plaza in January 1989. The University Main plaza group included interchanges at S.R. 408, Valencia College Lane, S.R. 50 and University Boulevard. The Curry Ford Mainline plaza section, extending from S.R. 528 to S.R. 408, 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 Boggy Creek and John Young Parkway Mainline plaza sections of S.R. 417, extending from International Drive to S.R. 528, were 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, while the John Young Main plaza group includes interchanges at John Young Parkway, U.S. 441/Orange Blossom Trail and Landstar Boulevard. The 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 express lanes. OOCEA chose this plaza for the first conversion due to its heavy traffic and extensive E-PASS 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 MAP





In January 2012, OOCEA 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 travel times. Also, in January 2013, OOCEA completed work on the modified S.R. 408/S.R. 417 Interchange project. As part of the interchange improvement project, 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 improves access and mobility to those working in east Orange County.

In addition to completed projects, OOCEA has other projects that are planned or currently underway including:

- S.R. 417/Boggy Creek Road interchange improvement – the \$65 million improvement, started in February 2013, provides better access to and from OIA for customers in South Orange and Osceola Counties.
- S.R. 417 widening from Curry Ford Road to Lake Underhill Drive – This \$103 million project will improve this section of S.R. 417 from four to six lanes and includes improvements to the southbound off ramp to Curry Ford Road and the Curry Ford Road on ramp to northbound S.R. 417. Construction is estimated to start in early 2014 and be completed by the summer of 2015.
- S.R. 417/Florida's Turnpike - A new partial interchange between S.R. 417 and Florida's Turnpike is also planned with construction starting in FY 2014. This \$30M interchange will provide access to Florida's Turnpike to and from the south to S.R. 417 to and from the east.





5.2 HISTORICAL TRANSACTIONS AND TOLL REVENUES

5.2.1 ANNUAL TRANSACTION AND TOLL REVENUE TRENDS

S.R. 417 annual historical transactions at the John Young Main, Boggy Creek Main, Curry Ford Main and University Main plaza groups from FY 1994 to FY 2013 are presented in the top half of Table 5-1. Annual historical 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 Figures 5-2 and 5-3. Annual transaction and toll revenue trends by plaza group are presented in the table.

With the decreasing transactions and revenues across the System in FY 2008 and 2009, and the threat of an economic recession, OOCEA instituted a Systemwide toll rate increase. Transactions decreased at all four plaza groups in FY 2009 due to both the Systemwide toll rate increase and the economic downturn. The April 2009 toll rate increase impacted the last three months of FY 2009. During the same year, revenues at the John Young Main plaza group and Boggy Creek Main plaza group decreased by 3.6 and 5.7 percent, respectively. Revenues at the Curry Ford Main and University Main plaza groups remained relatively unchanged from FY 2008. FY 2009 transactions and revenues were also impacted by Tropical Storm Fay in August 2008.

FY 2010 transactions continued to decline at all four plaza groups as a result of the toll rate increase, which impacted the first nine months of the fiscal year, and the continued economic downturn. However, toll revenues increased significantly at all plaza groups due to the higher toll rates. The University Main plaza group reported the largest increase on S.R. 417 in revenues of 29.1 percent, or \$4.6 million and Curry Ford Main plaza group's revenue increased by 27.3 percent, or \$3.8 million.

As shown, Curry Ford Main was the only plaza group with a decline in transactions and revenues in FY 2011. The losses in transactions and revenues can be attributed to the S.R. 417 widening activities 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.

Again in FY 2013, University Main plaza group experienced a decline in transactions, a decrease of 7 percent as compared to FY 2012. All other plaza groups experienced an increase in transactions. Revenues increased at all plaza groups in FY 2013 due to the July 2013 toll rate increase. Overall, FY 2013 transactions on S.R. 417 declined by 400,000, or 0.5 percent, over FY 2012. Total revenues on S.R. 417 increased to \$91.2 million, an increase of \$10.7 million, or 13.3 percent, over FY 2012. As previously mentioned, this significant increase in revenues is due to the July 2013 toll rate increase. Boggy Creek Main and John Young Main plaza group's growth in transactions can be attributed to Medical City and Lake Nona developments along these sections of S.R. 417.



TABLE 5-1
S.R. 417 PLAZA GROUPS – HISTORICAL TRANSACTIONS AND TOLL REVENUES
FY 1994 – FY 2013

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
	TRANSACTIONS (millions)					PERCENT CHANGE				
1994	4.6	3.2	5.0	8.3	21.1					
1995	7.0	4.8	6.5	11.7	30.0	52.2%	50.0%	30.0%	41.0%	42.2%
1996	7.4	5.6	7.6	13.7	34.3	5.7%	16.7%	16.9%	17.1%	14.3%
1997	9.0	7.1	9.0	15.2	40.3	21.6%	26.8%	18.4%	10.9%	17.5%
1998	10.4	8.0	10.1	16.6	45.1	15.6%	12.7%	12.2%	9.2%	11.9%
1999	11.6	8.9	11.7	18.7	50.9	11.5%	11.3%	15.8%	12.7%	12.9%
2000	13.4	10.1	13.6	20.8	57.9	15.5%	13.5%	16.2%	11.2%	13.8%
2001	14.5	10.8	14.8	22.2	62.3	8.2%	6.9%	8.8%	6.7%	7.6%
2002 ^A	14.5	11.0	15.7	23.7	64.9	0.0%	1.9%	6.1%	6.8%	4.2%
2003	15.7	12.3	17.9	25.4	71.3	8.3%	11.8%	14.0%	7.2%	9.9%
2004 ^B	17.1	13.5	20.4	28.6	79.6	8.9%	9.8%	14.0%	12.6%	11.6%
2005 ^C	18.9	15.2	22.9	30.2	87.2	10.5%	12.6%	12.3%	5.6%	9.5%
2006 ^D	20.8	17.3	25.7	32.4	96.2	10.1%	13.8%	12.2%	7.3%	10.3%
2007 ^E	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 ^F	21.5	18.4	24.9	30.0	94.8	-8.9%	-9.4%	-9.8%	-9.1%	-9.3%
2010	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 ^G	20.6	18.8	23.1	28.2	90.7	2.5%	1.1%	-0.4%	-2.8%	-0.2%
2013 ^H	21.0	19.7	23.4	26.2	90.3	1.8%	4.6%	1.3%	-7.0%	-0.5%
	TOLL REVENUE (millions)					PERCENT CHANGE				
1994	\$3.8	\$3.1	\$2.6	\$3.7	\$13.2					
1995	\$5.8	\$4.6	\$3.3	\$5.1	\$18.8	52.6%	48.4%	26.9%	37.8%	42.4%
1996	\$6.3	\$5.5	\$3.9	\$6.1	\$21.8	8.6%	19.6%	18.2%	19.6%	16.0%
1997	\$7.8	\$7.0	\$4.7	\$6.9	\$26.4	23.8%	27.3%	20.5%	13.1%	21.1%
1998	\$9.1	\$7.9	\$5.3	\$7.7	\$30.0	16.7%	12.9%	12.8%	11.6%	13.6%
1999	\$10.0	\$8.7	\$6.1	\$8.6	\$33.4	9.9%	10.1%	15.1%	11.7%	11.3%
2000	\$11.6	\$9.9	\$7.1	\$9.7	\$38.3	16.0%	13.8%	16.4%	12.8%	14.7%
2001	\$12.7	\$10.6	\$7.7	\$10.3	\$41.3	9.5%	7.1%	8.5%	6.2%	7.8%
2002 ^A	\$12.7	\$10.8	\$8.1	\$11.0	\$42.6	0.0%	1.9%	5.2%	6.8%	3.1%
2003	\$13.6	\$12.0	\$9.2	\$11.7	\$46.5	7.1%	11.1%	13.6%	6.4%	9.2%
2004 ^B	\$14.6	\$13.1	\$10.5	\$13.4	\$51.6	7.4%	9.2%	14.1%	14.5%	11.0%
2005 ^C	\$16.0	\$14.7	\$11.7	\$14.3	\$56.7	9.6%	12.2%	11.4%	6.7%	9.9%
2006 ^D	\$17.4	\$16.6	\$13.2	\$15.4	\$62.6	8.7%	12.9%	12.8%	7.7%	10.4%
2007 ^E	\$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 ^F	\$19.0	\$18.1	\$13.9	\$15.8	\$66.8	-3.6%	-5.7%	0.0%	0.6%	-2.5%
2010	\$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 ^G	\$22.1	\$20.8	\$17.3	\$20.3	\$80.5	2.3%	1.0%	0.0%	-1.5%	0.5%
2013 ^H	\$25.3	\$24.3	\$19.8	\$21.8	\$91.2	14.3%	16.9%	14.5%	7.5%	13.3%

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.



FIGURE 5-2
S.R. 417 HISTORICAL TRANSACTIONS AND ANNUAL GROWTH
FY 1994 – FY 2013

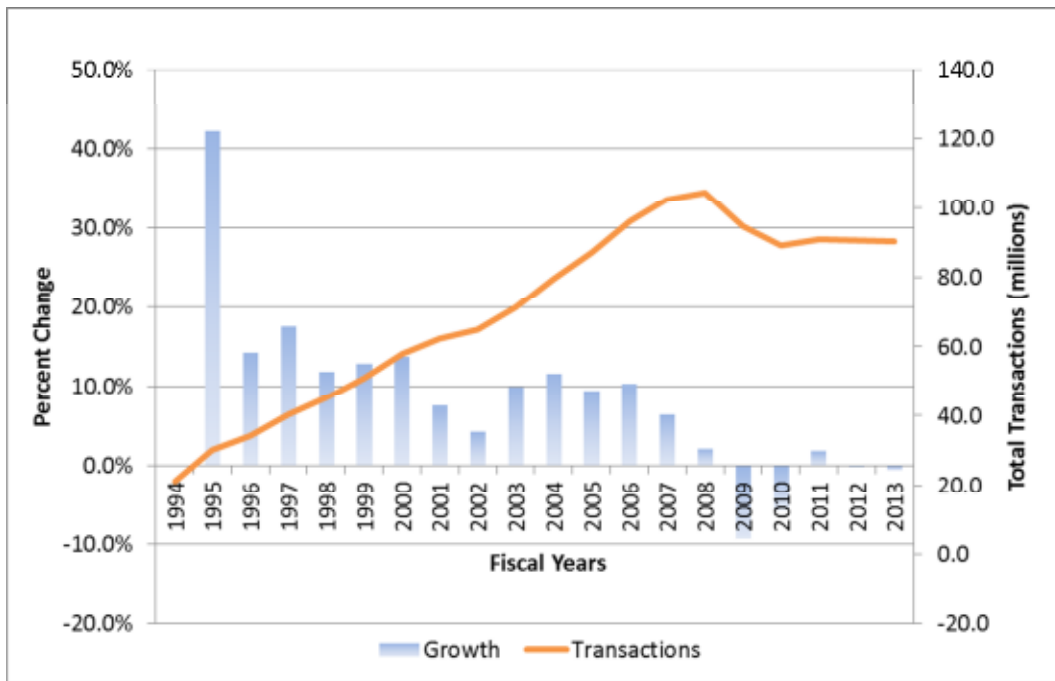
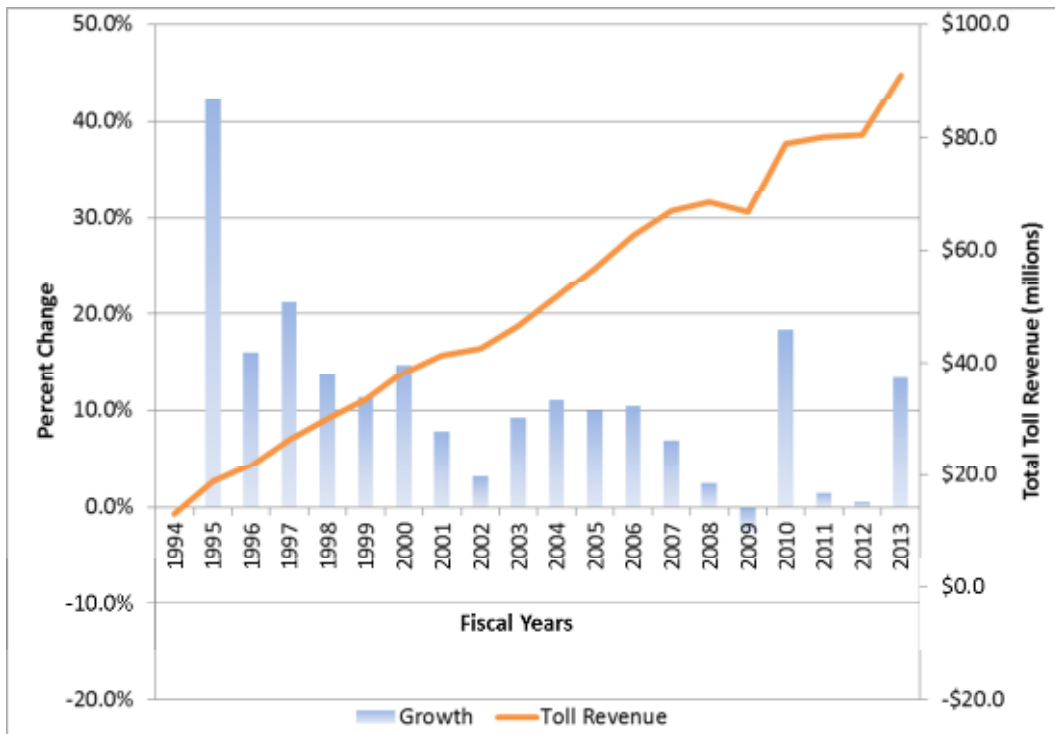


FIGURE 5-3
S.R. 417 HISTORICAL TOLL REVENUE AND ANNUAL GROWTH
FY 1994 – FY 2013

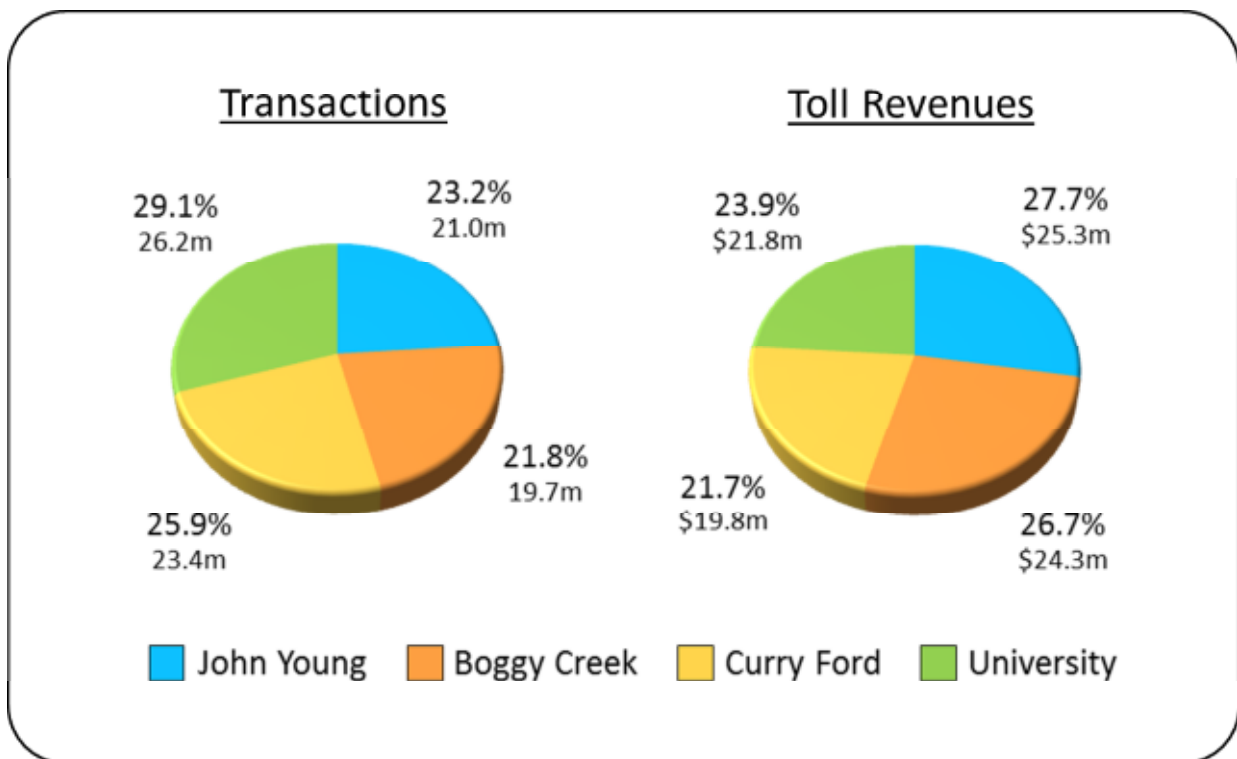




The transactions and toll revenues by plaza group and as a percentage of total S.R. 417 transactions and toll revenues for FY 2013 are presented in Figure 5-4. As shown, the University Main plaza group represented 26.2 million transactions or 29.1 percent of total S.R. 417 transactions. The Curry Ford Main plaza group had the second highest amount of transactions at 23.4 million or 25.9 percent. The John Young Main and Boggy Creek Main plaza groups followed with 21.0 and 19.7 million transactions, respectively.

The annual totals and percentages for toll revenues are also presented below. As shown, the John Young Main and Boggy Creek Main plaza groups had the highest amounts of revenue despite the lower transaction totals. This is due to the fact that these two plaza groups have longer distances between plazas resulting in higher toll amounts. The John Young Main plaza group reported the highest revenues of \$25.3 million or 27.7 percent of total S.R. 417 revenues. The Curry Ford Main plaza group represented the lowest amount of revenues on S.R. 417 with \$19.8 million or 21.7 percent of total revenues.

FIGURE 5-4
S.R. 417 TRANSACTIONS AND TOLL REVENUES BY PLAZA GROUP
FY 2013





5.2.2 MONTHLY TRANSACTION SEASONAL VARIATION

In Table 5-2, monthly total traffic volumes are normalized to average number of 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. Being a commuter system, the seasonal factor may change from year to year based on the number of weekdays in a given month.

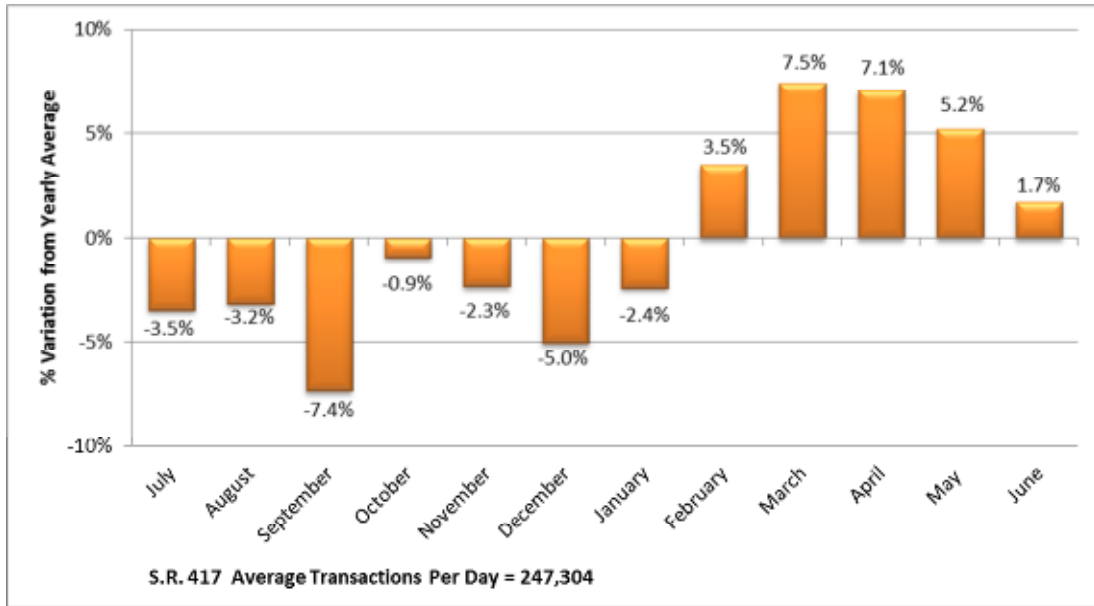
Average number of transactions per day in FY 2013 on S.R. 417 ranged from a high of 265,744 in March 2013 to a low of 229,117 in September 2012. Historically, the winter months have been the months with the lowest average number of transactions per day. This data is presented in a graphical format in Figure 5-5. The transactions for each month appear as a percentage of the average for the fiscal year. March transactions were 7.5 percent above average and September transactions were 7.4 percent below average for the facility. The S.R. 417 transactions remained flat and below the average for the first two quarters of FY 2013 through January. February through June the transactions were above average for the facility.

TABLE 5-2
S.R. 417 – MONTHLY SEASONAL VARIATION IN TOLL-PAYING TRAFFIC
FY 2013

Month	Number of Days in Month	Total Toll Paying Transactions	Average Transactions/day	Seasonal Factor
July	31	7,400,465	238,725	0.965
August	31	7,423,244	239,459	0.968
September	30	6,873,501	229,117	0.926
October	31	7,595,908	245,029	0.991
November	30	7,245,482	241,516	0.977
December	31	7,279,530	234,824	0.950
January	31	7,480,556	241,308	0.976
February	28	7,166,946	255,962	1.035
March	31	8,238,076	265,744	1.075
April	30	7,945,482	264,849	1.071
May	31	8,068,341	260,269	1.052
June	30	7,548,460	251,615	1.017
Average		7,522,166	247,304	1.000
Total Year	365	90,265,991		



FIGURE 5-5
S.R. 417 VARIATION IN TRANSACTIONS PER DAY, BY MONTH
FY 2013



5.2.3 TRANSACTIONS BY VEHICLE CLASS

The distribution of transactions at each of the S.R. 417 plaza groups by vehicle class (number of axles) for FY 2013 is presented in Table 5-3. Facility-wide, 98.9 percent of all transactions were made by 2-axle passenger vehicles, with little variation among the three plaza groups. The next most frequent vehicle class was the 3-axle classification, which typically includes delivery and service vehicles. These vehicles accounted for 0.8 percent of all transactions on the facility. Four-axle vehicles represented the smallest category with only 0.1 percent of facility transactions. Trucks with five or more axles represented 0.2 percent of total transactions. University Main had the lowest number of multi-axle transactions.

TABLE 5-3
S.R. 417 PERCENT OF TOTAL TRANSACTIONS BY VEHICLE CLASS
FY 2013

Vehicle Class	John Young Main	Boggy Creek Main	Curry Ford Main	University Main	S.R. 417 Total
2-Axle	98.7%	98.7%	98.8%	99.3%	98.9%
3-Axle	1.0%	1.1%	0.8%	0.5%	0.8%
4-Axle	0.1%	0.1%	0.1%	0.1%	0.1%
5 or More Axles	0.2%	0.1%	0.3%	0.1%	0.2%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

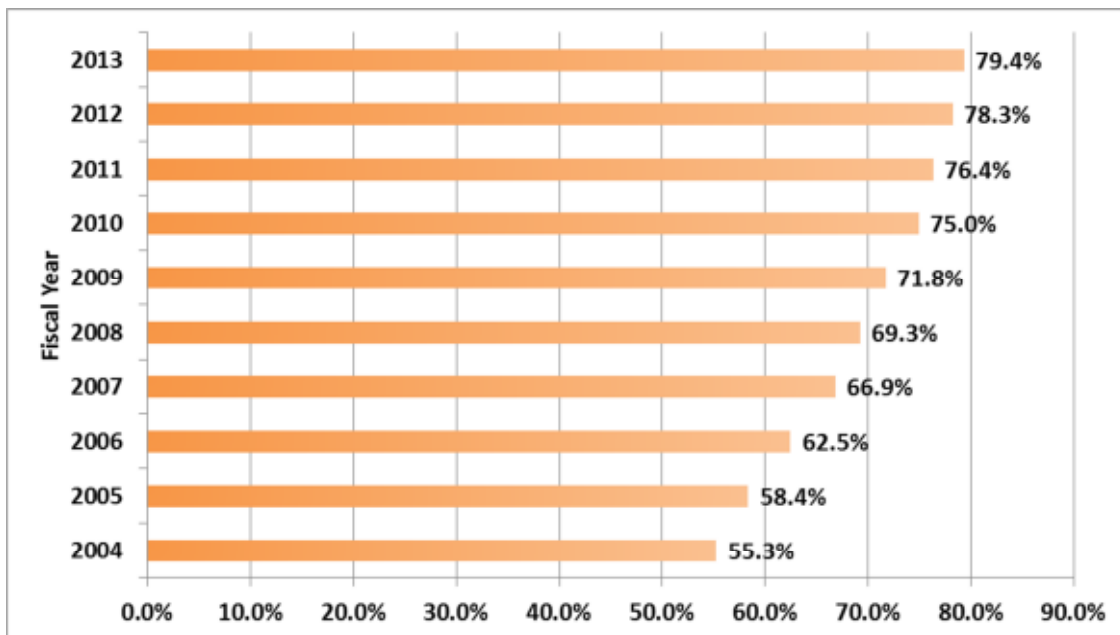
Source: Unaudited lane transaction data – January 2013



5.3 E-PASS USAGE

The percent of revenues generated from electronic transactions over the past ten fiscal years on S.R. 417 is shown in Figure 5-5. E-PASS revenues have steadily increased on the facility since FY 2004. In FY 2004, E-PASS revenues totaled 55.3 percent of total revenues on the facility. By the end of FY 2013, E-PASS revenues reached 79.4 percent. E-PASS usage will continue to increase as customers shift from cash to E-PASS to take advantage of the convenience of paying tolls electronically and the lower ETC toll rate.

FIGURE 5-5
S.R. 417 PERCENT OF TOLL REVENUE FROM ELECTRONIC TRANSACTIONS
FY 2004 – FY 2013



Source: OOCEA Statistical Report June 2013

5.4 FORECASTED TRANSACTIONS AND TOLL REVENUES

Future transportation improvements that could influence the T&R forecasts for S.R. 417 include the projects listed in Table 5-4, assumed completed in each model horizon year. In the near term, major improvements to S.R. 417 including the widening from S.R. 408 to Curry Ford Road and from Curry Ford Road to S.R. 528 contribute greatly to the growth in transactions and revenue. Even with improvements to competing facilities, such as Econlockhatchee Trail, growth rates remain high on S.R. 417. Growth rates remain above 2% per year through 2022 due to additional system improvements on S.R. 417 between Econlockhatchee Trail and the Seminole County Line and modifications to the interchange with Boggy Creek Rd.





TABLE 5-4
S.R. 417 - KEY TRANSPORTATION IMPROVEMENTS

Facility	From	To	Model Horizon Year	Jurisdiction	Improvement
S.R. 417/Greenway	Curry Ford	S.R. 408	2018	OOCEA	Widen 4-6 lanes
S.R. 417/Greenway	At Florida's Turnpike		2018	OOCEA	New Partial Interchange
Boggy Creek Road	Osceola County Line	S.R. 417	2018	Orange County	Widen 2-4 lanes
Boggy Creek Road	Osceola Pkwy	E Boggy Creek Road	2018	Osceola County	Widen 2-4 lanes
Boggy Creek Road	Hilliard Isle	Osceola Parkway	2018	Osceola County	Widen 2-4 lanes
Econlockhatchee Trail	Dowden Road	Lee Vista Drive	2018	City of Orlando	New 4-lane
Econlockhatchee Trail	Lee Vista Drive	S.R. 50	2018	Orange County	Widen 2-4 lanes
Narcoossee Road	S.R. 417	S.R. 528	2018	City of Orlando	Widen 4-6 lanes
S.R. 417/Greenway	Econlochatchee Trail	Seminole County Line	2018	OOCEA	Widen 4-6 lanes
Landstar Boulevard	Osceola County Line	Wetherbee Road	2023	Orange County	Widen 4-6 lanes
S.R. 417/Greenway	Econlochatchee Trail	Seminole County Line	2023	OOCEA	Widen 4-6 lanes
Tuskawilla Road	S.R. 426	Dike Road	2023	Seminole County	Widen 4-6 lanes
Tuskawilla Road	Red Bug Lake Road	Lake Drive	2023	Seminole County	Widen 4-6 lanes
Young Pine Road	Lamberton Road	Lee Vista Boulevard	2023	Orange County	Widen 2-4 lanes
International Drive South	Osceola County Line	S.R. 535/Vineland Road	2028	Orange County	Widen 6-8 lanes
Osceola Parkway	Interstate 4	S.R. 417/ Greenway	2028	Osceola County	Widen 6-8 lanes
Osceola Parkway (toll)	S.R. 417/Greenway	John Young Parkway	2028	Osceola County	Widen 4-6 lanes
Osceola Parkway	John Young Parkway	U.S. 441/Orange Blossom Trail	2028	Osceola County	Widen 6-8 lanes
S.R. 426	Tuskawilla Road	S.R. 417/Greenway	2028	FDOT	Widen 4-6 lanes
Boggy Creek Road/C.R. 530	Osceola Parkway	Orange County Line	2033	Osceola County	Widen 4-6 lanes
Boggy Creek Road/C.R. 530	Orange County Line	Narcoossee Road	2033	Osceola County	Widen 2-4 lanes
Tradeport Drive	Boggy Creek Road	Jetport Drive	2033	City of Orlando	Widen 4-6 lanes

Feeder road improvements, such as Narcoossee Road and Landstar Street, also positively impact the forecasted T&R growth on S.R. 417 through 2028. The growth rates for the remainder of the forecast period are moderate and steady. Continued investment and growth in the Medical City area and Lee Vista DRI area will only ensure positive transaction and revenue growth on S.R. 417.

Total transactions on S.R. 417 are projected to increase during the forecast period from the actual of 90.3 million in FY 2013 to 151.3 million in FY 2043. Total revenues on S.R. 417 are projected to increase during the forecast period from the actual \$91.2 million in FY 2013 to \$237.0 million in FY 2043. Transactions and revenues are forecasted to increase an average of 3.3 and 4.3 percent per year through FY 2020, 1.3 and 3.6 percent per year from FY 2020 to FY 2030, and 1.1 and 2.7 percent per year from FY 2030 to FY 2040, respectively.

Transaction and toll revenue projections for each toll plaza group and for all of S.R. 417 are summarized in Tables 5-5 and 5-6. The forecasts assume toll rate indexing at 3% per year, implemented every fifth year. Due to the toll rate adjustments every fifth year, there are decreases in transactions and increases in revenues.



TABLE 5-5
S.R. 417 PLAZA GROUPS – TRANSACTION PROJECTIONS (MILLIONS)
FY 2014 – FY 2043

Fiscal Year	John Young Main		Boggy Creek Main		Curry Ford Main		University Main		TOTAL		Percent Annual Change
	Actual ^A	Projected	Actual ^A	Projected	Actual ^A	Projected	Actual ^A	Projected	Actual ^A	Projected	
2000	13.4		10.1		13.6		20.8		57.9		11.7%
2001	14.5		10.8		14.8		22.2		62.3		7.6%
2002 ^B	14.5		11.0		15.7		23.7		64.9		4.2%
2003	15.7		12.3		17.9		25.4		71.3		9.9%
2004	17.1		13.5		20.4		28.6		79.6		11.6%
2005 ^C	18.9		15.2		22.9		30.2		87.2		9.5%
2006	20.8		17.3		25.7		32.4		96.2		10.3%
2007	22.3		19.1		27.5		33.5		102.4		6.4%
2008	23.6		20.3		27.6		33.0		104.5		2.1%
2009 ^D	21.5		18.4		24.9		30.0		94.8		-9.3%
2010	19.6		17.5		23.6		28.6		89.3		-5.8%
2011	20.1		18.6		23.2		29.0		90.9		1.8%
2012 ^E	20.6		18.8		23.1		28.2		90.7		-0.2%
2013 ^D	21.0		19.7		23.4		26.2		90.3		-0.5%
2014		22.7		20.9		25.3		26.8		95.7	6.1%
2015		24.8		21.3		27.5		26.7		100.3	4.7%
2016		26.9		21.7		29.6		26.5		104.8	4.5%
2017		29.1		22.0		31.8		26.4		109.3	4.3%
2018 ^D		29.7		21.6		32.6		25.1		108.9	-0.3%
2019		30.9		22.5		32.0		25.8		111.2	2.1%
2020		32.2		23.3		31.4		26.6		113.5	2.0%
2021		33.4		24.1		30.8		27.4		115.7	2.0%
2022		34.7		24.9		30.3		28.1		118.0	2.0%
2023 ^D		34.3		25.1		28.9		28.2		116.5	-1.3%
2024		34.6		25.9		29.7		28.6		118.9	2.0%
2025		34.9		26.8		30.5		29.0		121.3	2.0%
2026		35.1		27.7		31.4		29.5		123.6	2.0%
2027		35.4		28.5		32.2		29.9		126.0	1.9%
2028 ^D		35.2		28.9		31.7		29.1		124.8	-0.9%
2029		35.7		29.2		32.5		29.7		127.1	1.8%
2030		36.2		29.5		33.4		30.3		129.4	1.8%
2031		36.7		29.8		34.2		31.0		131.7	1.8%
2032		37.2		30.1		35.0		31.6		133.9	1.7%
2033 ^D		36.6		30.0		35.2		31.2		133.1	-0.6%
2034		36.7		30.6		36.3		31.6		135.2	1.6%
2035		36.7		31.3		37.3		32.1		137.3	1.6%
2036		36.8		31.9		38.3		32.5		139.4	1.5%
2037		36.9		32.5		39.3		32.9		141.5	1.5%
2038 ^D		36.4		32.6		39.1		32.6		140.8	-0.5%
2039		36.5		33.2		40.1		33.1		142.9	1.5%
2040		36.6		33.8		41.1		33.5		145.0	1.5%
2041		36.6		34.4		42.1		33.9		147.1	1.5%
2042		36.7		35.0		43.1		34.4		149.2	1.4%
2043		36.8		35.6		44.2		34.8		151.3	1.4%

Fiscal Year	Compound Annual Average Growth Rate (CAAGR)						
2000 - 2008	7.3%		9.1%		9.2%	5.9%	7.7%
2008 - 2013	-2.3%		-0.6%		-3.2%	-4.5%	-2.9%
2013 - 2020	6.3%		2.4%		4.3%	0.2%	3.3%
2020 - 2030	1.2%		2.4%		0.6%	1.3%	1.3%
2030 - 2040	0.1%		1.4%		2.1%	1.0%	1.1%

Notes:

A - Actual transaction data provided by OOCEA from Monthly Statistical Report.

B - Effects of the events on September 11, 2011.

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

D - Systemwide toll rate increase.

E - Widening of S.R. 417 between S.R. 408 and S.R. 528. Valencia College Lane ramps closed.



TABLE 5-6
S.R. 417 PLAZA GROUPS – TOLL REVENUE PROJECTIONS (MILLIONS)
FY 2014 – FY 2043

Fiscal Year	John Young Main		Boggy Creek Main		Curry Ford Main		University Main		TOTAL		Percent Annual Change
	Actual ^A	Projected	Actual ^A	Projected	Actual ^A	Projected	Actual ^A	Projected	Actual ^A	Projected	
2000	\$11.6		\$9.9		\$7.1		\$9.7		\$38.3		11.7%
2001	12.7		10.6		7.7		10.3		41.3		7.8%
2002 ^B	12.7		10.8		8.1		11.0		42.6		3.1%
2003	13.6		12.0		9.2		11.7		46.5		9.2%
2004	14.6		13.1		10.5		13.4		51.6		11.0%
2005 ^C	16.0		14.7		11.7		14.3		56.7		9.9%
2006	17.4		16.6		13.2		15.4		62.6		10.4%
2007	18.7		18.2		14.0		16.0		66.9		6.9%
2008	19.7		19.2		13.9		15.7		68.5		2.4%
2009 ^D	19.0		18.1		13.9		15.8		66.8		-2.5%
2010	21.0		19.9		17.7		20.4		79.0		18.3%
2011	21.6		20.6		17.3		20.6		80.1		1.4%
2012 ^E	22.1		20.8		17.3		20.3		80.5		0.5%
2013 ^D	25.3		24.3		19.8		21.8		91.2		13.3%
2014		\$26.6		\$26.0		\$20.8		\$22.1		\$95.6	4.8%
2015		28.4		26.6		22.0		21.8		98.8	3.4%
2016		30.1		27.3		23.2		21.4		102.0	3.3%
2017		31.9		27.9		24.4		21.1		105.3	3.2%
2018 ^D		36.3		31.2		27.1		22.0		116.5	10.7%
2019		37.6		32.2		27.0		22.7		119.4	2.5%
2020		38.9		33.3		26.8		23.4		122.4	2.4%
2021		40.2		34.3		26.7		24.0		125.3	2.4%
2022		41.6		35.3		26.6		24.7		128.2	2.3%
2023 ^D		45.4		39.4		29.2		28.3		142.3	11.0%
2024		45.9		40.6		30.1		28.7		145.3	2.1%
2025		46.4		41.8		30.9		29.1		148.3	2.1%
2026		47.0		43.0		31.7		29.6		151.2	2.0%
2027		47.5		44.2		32.5		30.0		154.2	2.0%
2028 ^D		53.0		49.6		35.4		32.1		170.1	10.3%
2029		53.5		49.8		36.2		32.7		172.1	1.2%
2030		53.9		49.9		37.0		33.3		174.2	1.2%
2031		54.4		50.1		37.8		33.9		176.3	1.2%
2032		54.9		50.3		38.6		34.5		178.3	1.2%
2033 ^D		59.4		54.9		42.9		38.1		195.3	9.5%
2034		59.7		55.8		44.0		38.7		198.2	1.5%
2035		60.0		56.8		45.1		39.2		201.1	1.5%
2036		60.3		57.7		46.2		39.8		204.0	1.4%
2037		60.6		58.6		47.3		40.4		206.9	1.4%
2038 ^D		65.2		63.9		50.5		42.9		222.5	7.5%
2039		65.5		64.8		51.6		43.5		225.4	1.3%
2040		65.8		65.7		52.7		44.1		228.3	1.3%
2041		66.1		66.7		53.8		44.7		231.2	1.3%
2042		66.4		67.6		54.9		45.3		234.1	1.3%
2043		66.7		68.5		56.0		45.9		237.0	1.2%

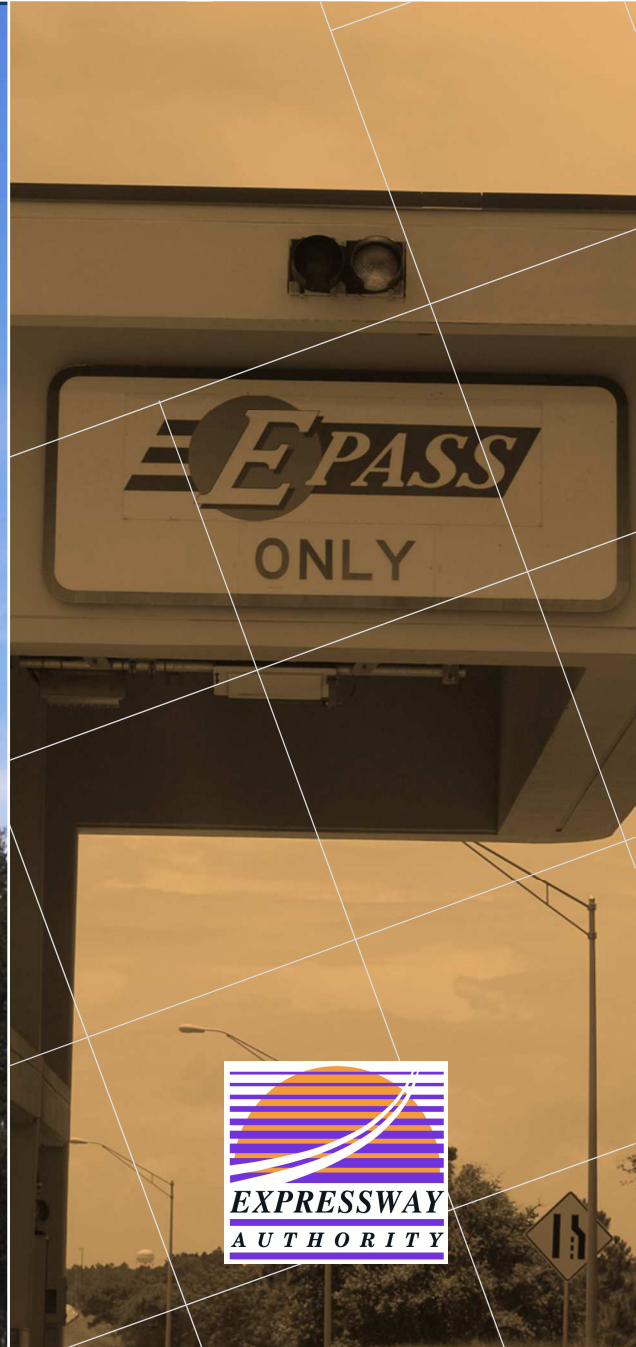
Fiscal Year	Compound Annual Average Growth Rate (CAAGR)					
	2000 - 2008	6.8%	8.6%	8.8%	6.2%	7.5%
2008 - 2013	5.1%	4.8%	7.3%	6.8%	5.9%	
2013 - 2020	6.4%	4.6%	4.4%	1.0%	4.3%	
2020 - 2030	3.3%	4.1%	3.3%	3.6%	3.6%	
2030 - 2040	2.0%	2.8%	3.6%	2.9%	2.7%	

- Notes:
- A - Actual revenue data provided by OOCEA from Monthly Statistical Report.
 - B - Effects of the events on September 11, 2011.
 - C - Effects from 2004 hurricane season (4 storms with toll suspensions).
 - D - Systemwide toll rate increase.
 - E - Widening of S.R. 417 between S.R. 408 and S.R. 528. Valencia College Lane ramps closed.



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Chapter 6
S.R. 429
(Daniel Webster
Western Beltway)





S.R. 429 (DANIEL WEBSTER WESTERN BELTWAY)

6.1 FACILITY DESCRIPTION

S.R. 429, also known as the Daniel Webster Western Beltway, is a 34-mile expressway that extends east 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, OOCEA and FTE. OOCEA is responsible for the 22-mile portion of S.R. 429 from Seidel Road to U.S. 441 and FTE is responsible for the 11-mile segment of S.R. 429 from I-4 north to Seidel Road. On the OOCEA portion there are two mainline toll plazas, the Independence Main Plaza and the Forest Lake Main Plaza. Ramp tolls associated with the Independence Main plaza group are located at the New Independence Parkway and Winter Garden Vineland Road interchanges. Ramp tolls associated with the Forest Lake Main plaza group are located at the East Plant Street (S.R. 438), the West Road, and the Ocoee-Apopka Road interchanges. A map of OOCEA's portion of S.R. 429 including the FY 2013 OOCEA toll rates for the mainline and ramp toll plazas is shown in Figure 6-1.

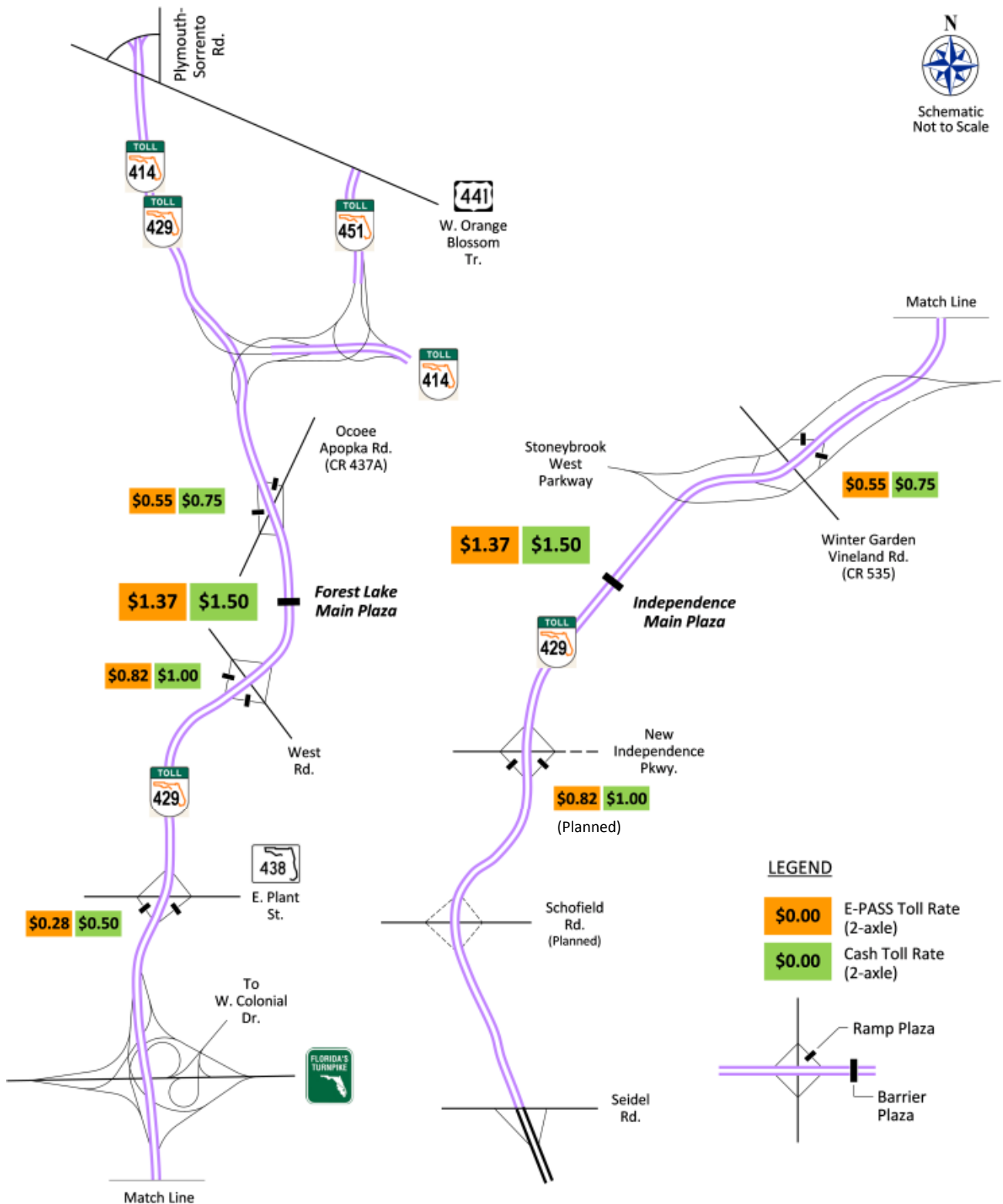


The original 10-mile segment of S.R. 429, known as Part A, opened to traffic in July of 2000 from S.R. 50 to U.S. 441, with the connection to Florida's Turnpike opening in November 2001. It was the first expressway on the OOCEA System to have an open road tolling style toll plaza for E-PASS customers, providing a direct route 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. OOCEA'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 in December of 2006.

In June of 2010, construction work 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 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 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.



FIGURE 6-1
S.R. 429 FACILITIES AND TOLL RATES MAP





6.2 HISTORICAL TRANSACTIONS AND TOLL REVENUES

6.2.1 ANNUAL TRANSACTION AND TOLL REVENUE TRENDS

S.R. 429 annual historical transactions for the Forest Lake Main plaza group from FY 2001 to FY 2013 are presented in the top half of Table 6-1. Similar historical transactions for the Independence Main plaza group from the partial opening in FY 2003 to FY 2013 are also shown. Annual historical toll revenues are also summarized and totaled in the bottom half of the table. In FY 2013 S. R. 429 transactions increased by 3.2 percent over FY 2012 in spite of the toll rate increase and revenues increased by 18.1 percent. The large revenue growth is an expected outcome of the toll rate adjustment in FY 2013.

TABLE 6-1
S.R. 429 PLAZA GROUPS – HISTORICAL TRANSACTIONS AND TOLL REVENUES
FY 2001 – FY 2013

Fiscal Year	Forest Lake Main ^A	Independence Main	TOTAL	Forest Lake Main ^A	Independence Main	TOTAL
TRANSACTIONS (millions)			PERCENT CHANGE			
2001	3.5		3.5			
2002 ^B	5.8		5.8	65.7%		65.7%
2003 ^C	8.0	1.5	9.5	37.9%		63.8%
2004	9.5	4.3	13.8	18.8%	186.7%	45.3%
2005 ^D	10.8	5.6	16.4	13.7%	30.2%	18.8%
2006 ^E	12.8	7.4	20.2	18.5%	32.1%	23.2%
2007 ^F	14.1	10.3	24.4	10.2%	39.2%	20.8%
2008 ^G	14.2	12.4	26.6	0.7%	20.4%	9.0%
2009 ^H	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 ^I	14.2	13.0	27.2	4.7%	1.6%	3.2%
TOLL REVENUE (millions)			PERCENT CHANGE			
2001	\$3.3		\$3.3			
2002 ^B	\$5.1		\$5.1	54.5%		54.5%
2003 ^C	\$6.8	\$0.4	\$7.2	33.3%		41.2%
2004	\$8.1	\$1.1	\$9.2	19.1%	175.0%	27.8%
2005 ^D	\$9.1	\$1.4	\$10.5	12.3%	27.3%	14.1%
2006 ^E	\$10.7	\$2.8	\$13.5	17.6%	100.0%	28.6%
2007 ^F	\$11.8	\$5.6	\$17.4	10.3%	100.0%	28.9%
2008 ^G	\$11.9	\$7.1	\$19.0	0.8%	26.8%	9.2%
2009 ^H	\$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 ^I	\$17.1	\$12.3	\$29.4	20.6%	14.6%	18.1%

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.



Since its opening, S.R. 429 had only two years of negative growth in transactions, which occurred in FY 2009 and 2010 as a result of the recession and the toll rate increase in April 2009. Revenues on the other hand, have never had a year of negative growth, except for FY 2009 where revenues had a year of no growth. That year, Forest Lake Main plaza group had negative growth of 4.2 percent, but Independence Main plaza group had positive growth of 7 percent. 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 increase. The toll rate increase impacted transactions during the last three months of FY 2009 and the first nine months of FY 2010. With the toll rate increase, revenues in FY 2010 recovered with a growth of 23.7 percent, or \$4.5 million for the facility, while transactions only decreased by 0.4 percent.

In FY 2011 and 2012, the growth in transactions and revenue at Independence Main plaza group outpaced those at Forest Lake Main plaza group, with transaction growth at 2.4 percent and revenue growth at 3.9 percent for the Independence Main plaza group. Forest Lake Main plaza group had a slower growth year with only a 1.5 percent increase in transactions and a 0.7 percent increase in revenue. This changed again in FY 2013 with Forest Lake Main transactions increasing by 4.7 percent to Independence Main's increase of 1.7 percent over FY 2012. Annual revenue growth was also higher at Forest Lake Main than at Independence Main with 20.6 percent and 14.6 percent respectively.

The facility data and annual growth are also presented visually in Figures 6-2 and 6-3. As shown, transactions and revenue have increased rapidly between FY 2001 and FY 2009, with ramp-up growth rates in the first three years. The economic downturn is also represented with a dip in the annual transactions and revenue, but it also shows that over the last two years the facility is recovering and continuing to grow. In Figure 6-3, the total toll revenue chart has the distinct step-up pattern as expected of a toll rate increase.





FIGURE 6-2
S.R. 429 HISTORICAL TRANSACTIONS AND ANNUAL GROWTH
FY 2001 – FY 2013

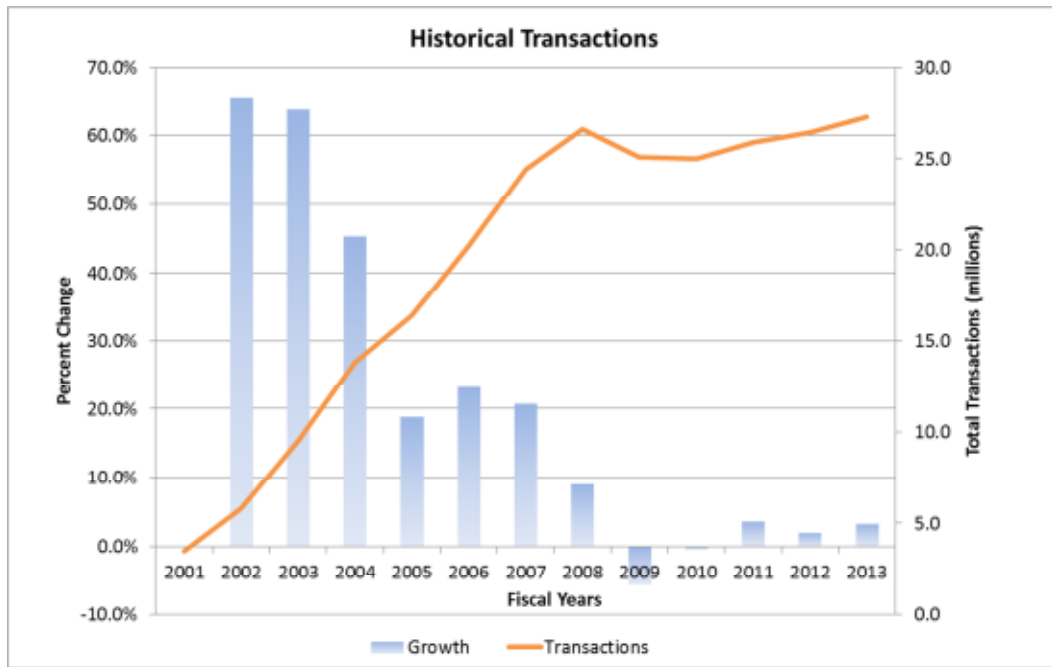
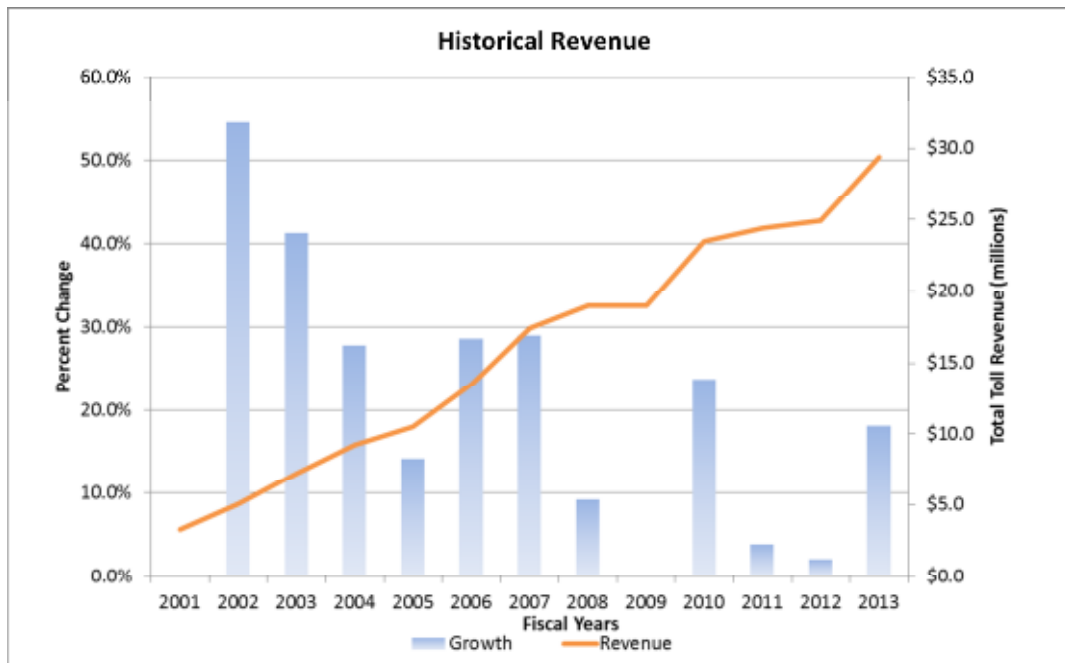


FIGURE 6-3
S.R. 429 HISTORICAL TOLL REVENUE AND ANNUAL GROWTH
FY 2001 – FY 2013

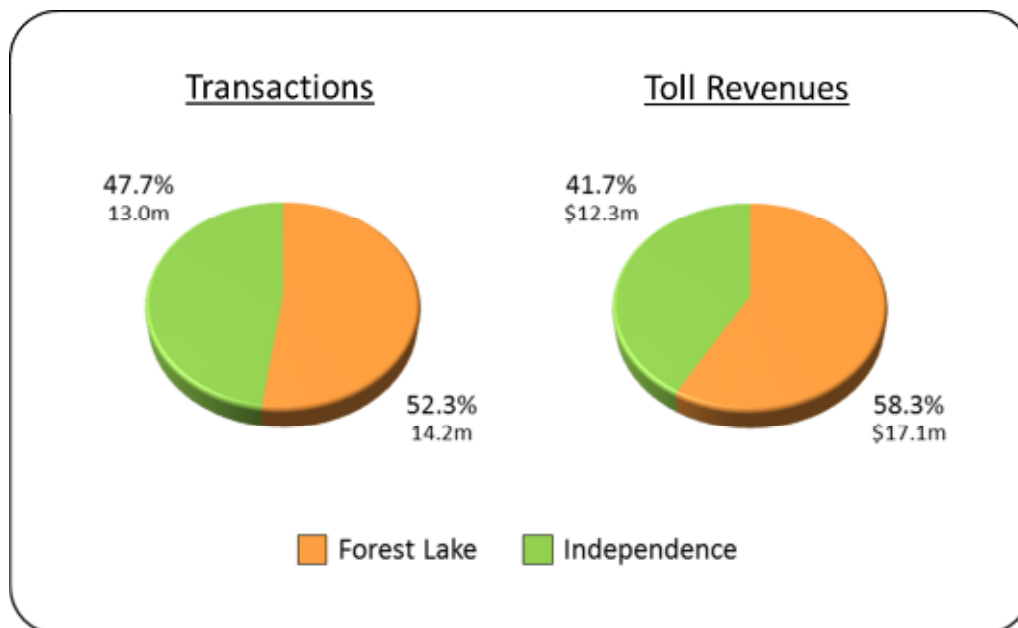




The transactions and toll revenues by plaza group and as a percentage of total S.R. 429 transactions and toll revenues for FY 2013 are presented in Figure 6-4. As shown, the Forest Lake Main plaza group represented 14.2 million transactions or 52.3 percent of total S.R. 429 transactions. Independence Main plaza group carried the remaining 13.0 million or 47.7 percent of total transactions on the facility.

The annual totals and percentages for toll revenues are similar to the trends reported for annual transactions. Having more ramp toll plazas, the Forest Lake Main plaza group represented \$17.1 million in toll revenues or 58.3 percent of total S.R. 429 toll revenues. Independence Main plaza group carried the remaining \$12.3 million or 41.7 percent of total revenue on the facility.

FIGURE 6-4
S.R. 429 TRANSACTIONS AND TOLL REVENUES BY PLAZA GROUP
FY 2013



6.2.2 MONTHLY TRANSACTION SEASONAL VARIATION

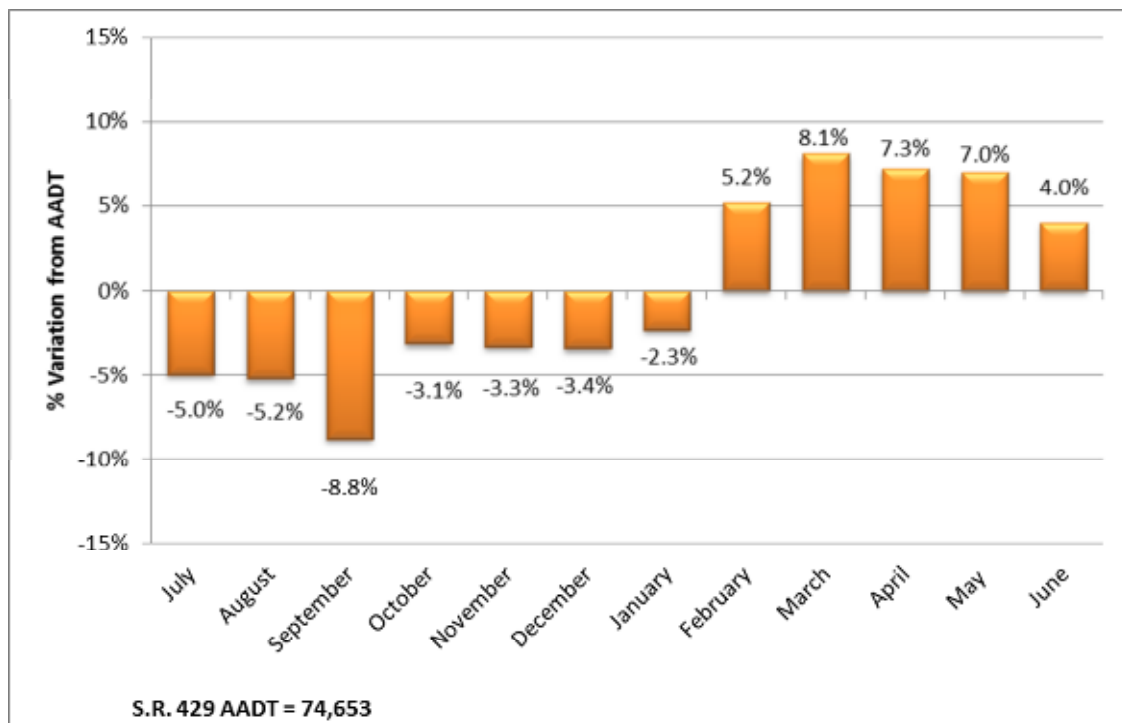
As presented in Table 6-2, average transactions per day in FY 2013 on S.R. 429 ranged from a high of 80,733 in March 2013 to a low of 68,108 in September of 2012. Historically, September has been the month with the lowest average transactions per day. This data is presented in a graphical format in Figure 6-5. Each month's average daily transactions appear as a percentage of the average for the fiscal year. As shown in the figure, March transactions were 8.1 percent above average and September transactions were 8.8 percent below average for the facility. For FY 2013, the transactions were lower than average for the first half of the FY and higher than average for the second half of the FY. This is a normal pattern for seasonal variation, with the spring months being the peak season, due to an extra number of tourists in the area. The seasonal factor may change from year to year based on the number of weekdays in a given month.



TABLE 6-2
S.R. 429 – MONTHLY SEASONAL VARIATION IN TOLL-PAYING TRAFFIC
FY 2013

Month	Number of Days in Month	Total Toll Paying Transactions	Average Transactions/day	Seasonal Factor
July	31	2,198,611	70,923	0.950
August	31	2,193,101	70,745	0.948
September	30	2,043,244	68,108	0.912
October	31	2,242,406	72,336	0.969
November	30	2,165,903	72,197	0.967
December	31	2,235,763	72,121	0.966
January	31	2,260,586	72,922	0.977
February	28	2,198,692	78,525	1.052
March	31	2,502,712	80,733	1.081
April	30	2,402,064	80,069	1.073
May	31	2,476,895	79,900	1.070
June	30	2,328,423	77,614	1.040
Average		2,270,700	74,653	1.000
Total Year	365	27,248,400		

FIGURE 6-5
S.R. 429 VARIATIONS IN TRANSACTIONS PER DAY, BY MONTH
FY 2013





6.2.3 TRANSACTIONS BY VEHICLE CLASS

The distribution of transactions at each of the S.R. 429 plaza groups by vehicle class (number of axles) for FY 2013 is shown in Table 6-3. Overall, 98.3 percent of all transactions on S.R. 429 were made by 2-axle passenger vehicles, with little variation among the two plaza groups. The next most frequent vehicle class was the 3-axle classification, which typically includes delivery and service vehicles. These vehicles accounted for 1.0 percent of all transactions on the facility. Four-axle vehicles represented the smallest category with only 0.3 percent of facility transactions. Trucks with five or more axles represented 0.4 percent of total transactions.

TABLE 6-3
S.R. 429 PERCENT OF TOTAL TRANSACTIONS BY VEHICLE CLASS
FY 2013

Vehicle Class	Forest Lake Main	Independence Main	S.R. 429 Total
2-Axle	98.3%	98.4%	98.3%
3-Axle	1.1%	1.0%	1.0%
4-Axle	0.2%	0.3%	0.3%
5 or More Axles	0.4%	0.3%	0.4%
Total	100.0%	100.0%	100.0%

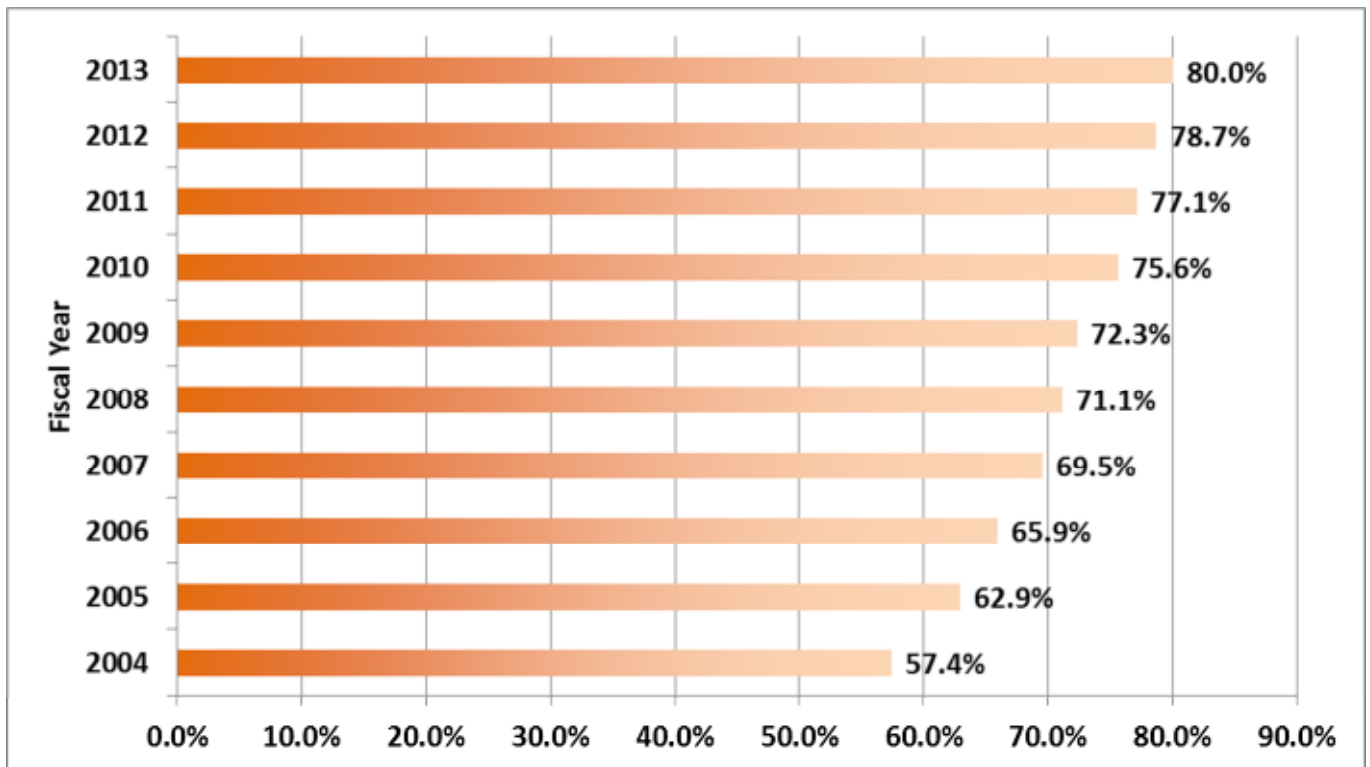




6.3 E-PASS USAGE

The percent of revenues generated from electronic transactions over the past ten fiscal years on S.R. 429 is shown in Figure 6-6. E-PASS revenues have steadily increased on the facility since FY 2004. In FY 2004, E-PASS revenues totaled 57.4 percent of total revenues. By the end of FY 2013, E-PASS revenues reached 80 percent. The usage of E-PASS will continue to increase as customers shift from cash to E-PASS to take advantage of the convenience of paying tolls electronically and the lower ETC toll rate.

FIGURE 6-6
S.R. 429 PERCENT OF TOLL REVENUE FROM ELECTRONIC TRANSACTIONS
FY 2004 – FY 2013



Source: OOCEA Statistical Report June 2013



6.4 FORECASTED TRANSACTIONS AND TOLL REVENUES

Future transportation improvements that could influence the T&R forecasts for S.R. 429 include the projects listed in Table 6-4, assumed completed in each model horizon year.

TABLE 6-4
S.R. 429 - KEY TRANSPORTATION IMPROVEMENTS

Facility	From	To	Model Horizon Year	Jurisdiction	Improvement
S.R. 451/U.S. 441	U.S. 441	Vick Road	2018	OOCEA	Intersection Improvements
Avalon Road/C.R. 545	Tilden Road	S.R. 50/Colonial Drive	2023	Orange County	Widen 2-4 lanes
Avalon Road/C.R. 545	U.S. 192	Tilden Road	2023	Orange County	Widen 2-4 lanes
McCormick Road	Ocoee-Apopka Road	Ingram Road	2023	Orange County	Widen 2-4 lanes
Ocoee-Apopka Road	West Road	Binion Road	2023	Orange County	Widen 2-4 lanes
Ocoee-Apopka Road	Fullers Cross Road	West Road	2023	Orange County	Widen 4-6 lanes
Plymouth-Sorrento Road/ C.R. 437	Kelly Park Road	U.S. 441/Orange Blossom Trail	2023	Orange County	Widen 2-4 lanes
Roberson Road	Windermere Road	Maguire Road	2023	Orange County	Widen 2-4 lanes
S.R. 429/Western Beltway	Schofield Road		2023	OOCEA	New Interchange
Tilden Road	Avalon Road	Winter Garden-Vineland Road	2023	Orange County	Widen 2-4 lanes
Warrior Road	Windermere Road West	Windermere Road East	2023	Orange County	Widen 2-4 lanes
Windemere Road	Marshall Farms Road	Warrior Road	2023	Orange County	Widen 2-4 lanes
Windermere Road/Tomyn Road	Roberson Road	Maguire Road	2023	Orange County	Widen 2-4 lanes
Binion Road	Ocoee-Apopka Road	Lust Road	2028	Orange County	Widen 2-4 lanes
Ocoee-Apopka Road	Binion Road	Bradshaw Road	2028	Orange County	Widen 2-4 lanes
Rock Springs Road/Park Avenue - Apopka	U.S. 441/Orange Blossom Trail	Welch Road	2028	Orange County	Widen 4-6 lanes
Seidel Road	Avalon Road	Lake Hancock Road	2028	Orange County	Widen 2-4 lanes
Clarcona-Ocoee Road	West Road	Adair Street	2033	Orange County	Widen 4-6 lanes
Mt. Plymouth Road	Kelly Park Road	Lake County Line	2033	Orange County	Widen 2-4 lanes
Ocoee-Apopka Road	S.R. 438/Silver Star Road	Fullers Cross Road	2033	Orange County	Widen 4-6 lanes

Several important growth areas in the Orlando metropolitan areas are along S.R. 429. Development in Horizon West in SW Orange County slowed down during the recession, but housing construction activity has picked back up again. Roadway improvements in this area include the 4-lane widening projects to county roads including Avalon Road (C.R. 545), Roberson Road, Warrior Road, Tilden Road, and Windermere Road. Avalon Road is a competing facility, but the other facilities serve as feeder roads and positively impact T&R in the near term. A new interchange at Schofield Road will also contribute positively to the T&R forecasts. Growth in SW Orange County is reflected in the T&R forecast for Independence Plaza Group which surpasses the Forest Lake Plaza group for transactions in 2032 and revenue in 2036.



OCEA System improvements including the Apopka Expressway extension and S.R. 414/S.R. 429 interchange and the Ocoee-Apopka Road Interchange reconstructions have improved access and the potential for growth in NW Orange County. The growth potential is also demonstrated by the planned improvements to the local street system. Many facilities including Ocoee-Apopka Road, Clarcona-Ocoee Road, Plymouth-Sorrento Road, Rock Springs Road and Binion Road, serve as feeder roads to S.R. 429 and positively impact T&R in the near term and long term forecasts. The proposed construction of the Wekiva Parkway is also a positive sign for the growth potential along S.R. 429, although the Wekiva Parkway was not considered as part of this forecast. An update to the investment Grade traffic and revenue study is being prepared under separate cover.

Transaction and toll revenue forecasts for S.R. 429 are summarized in Tables 6-5 and 6-6. The forecasts assume toll rate indexing at 3 percent per year, implemented every fifth year. Due to the toll rate adjustments every fifth year, there are decreases in transactions and increases in revenues.

Total revenues on S.R. 429 are projected to increase over the forecast period from the FY 2013 actual of \$29.4 million to \$79.8 million in FY 2043. Revenues are forecasted to increase an average of 5.6 percent per year through FY 2020, 3.8 percent per year from FY 2020 to FY 2030, and 2.3 percent per year from FY 2030 to FY 2040.





TABLE 6-5
S.R. 429 PLAZA GROUPS – TRANSACTION PROJECTIONS (MILLIONS)
FY 2014 – FY 2043

Fiscal Year	Forest Lake Main		Independence Main		TOTAL		Percent Annual Change
	Actual ^A	Projected	Actual ^A	Projected	Actual ^A	Projected	
2001 ^B	3.5				3.5		
2002 ^C	5.8				5.8		65.7%
2003 ^D	8.0		1.5		9.5		63.8%
2004	9.5		4.3		13.8		45.3%
2005 ^E	10.8		5.6		16.4		18.8%
2006 ^F	12.8		7.4		20.2		23.2%
2007	14.1		10.3		24.4		20.8%
2008 ^G	14.2		12.4		26.6		9.0%
2009 ^H	12.9		12.2		25.1		-5.6%
2010	13.0		12.0		25.0		-0.4%
2011	13.4		12.5		25.9		3.6%
2012	13.6		12.8		26.4		1.9%
2013 ^H	14.2		13.0		27.2		3.2%
2014		15.5		13.6		29.1	6.9%
2015		16.1		13.8		29.9	2.6%
2016		16.7		14.0		30.7	2.6%
2017		17.3		14.1		31.4	2.5%
2018 ^H		17.1		13.6		30.8	-2.2%
2019		17.4		14.1		31.5	2.5%
2020		17.7		14.6		32.3	2.4%
2021		18.0		15.0		33.0	2.3%
2022		18.3		15.5		33.8	2.3%
2023 ^H		17.6		15.7		33.2	-1.6%
2024		17.9		16.1		34.0	2.2%
2025		18.2		16.5		34.7	2.2%
2026		18.5		17.0		35.4	2.1%
2027		18.8		17.4		36.2	2.1%
2028 ^H		18.2		17.5		35.7	-1.5%
2029		18.4		17.9		36.3	1.7%
2030		18.6		18.3		36.9	1.6%
2031		18.8		18.7		37.4	1.6%
2032		19.0		19.1		38.0	1.6%
2033 ^H		18.4		18.9		37.3	-1.9%
2034		18.4		19.3		37.7	1.0%
2035		18.3		19.7		38.1	1.0%
2036		18.3		20.2		38.4	1.0%
2037		18.2		20.6		38.8	1.0%
2038 ^H		17.4		20.5		37.9	-2.4%
2039		17.4		20.9		38.3	1.0%
2040		17.3		21.4		38.7	1.0%
2041		17.3		21.8		39.0	1.0%
2042		17.2		22.2		38.6	-1.1%
2043		17.1		22.6		39.8	3.0%

Fiscal Year				
2000 - 2008	22.1%		52.6%	33.6%
2008 - 2013	0.1%		1.0%	0.5%
2013 - 2020	3.2%		1.6%	2.4%
2020 - 2030	0.5%		2.3%	1.3%
2030 - 2040	-0.7%		1.6%	0.5%

Notes:

- A - Actual transaction data provided by OOCEA from Monthly Statistical Reports.
- B - Forest Lake Main plaza opened to traffic on July 8, 2000. Toll collection began one week after facility opened to traffic.
- C - Interchange ramps to/from existing S.R. 429 at Florida's Turnpike opened in November 2001.
- D - Interchange ramps to/from C.R. 535 opened in December 2002.
- E - Effects from 2004 hurricane season (4 storms with toll suspensions).
- F - Independence Main plaza opened in December 2005.
- G - First effects of national recession.
- H - Systemwide toll rate increase.



TABLE 6-6
S.R. 429 PLAZA GROUPS – TOLL REVENUE PROJECTIONS (MILLIONS)
FY 2014 – FY 2043

Fiscal Year	Forest Lake Main		Independence Main		TOTAL		Percent Annual Change
	Actual ^A	Projected	Actual ^A	Projected	Actual ^A	Projected	
2001 ^B	\$3.3				\$3.3		
2002 ^C	5.1				5.1		54.5%
2003 ^D	6.8		\$0.4		7.2		41.2%
2004	8.1		1.1		9.2		27.8%
2005 ^E	9.1		1.4		10.5		14.1%
2006 ^F	10.7		2.8		13.5		28.6%
2007	11.8		5.6		17.4		28.9%
2008 ^G	11.9		7.1		19.0		9.2%
2009 ^H	11.4		7.6		19.0		0.0%
2010	13.7		9.8		23.5		23.7%
2011	14.1		10.3		24.4		3.8%
2012	14.2		10.7		24.9		2.0%
2013 ^H	17.1		12.3		29.4		18.1%
2014		\$18.7		\$13.3		\$32.0	8.8%
2015		19.5		13.7		33.3	4.0%
2016		20.3		14.2		34.5	3.9%
2017		21.1		14.7		35.8	3.7%
2018 ^H		24.0		16.3		40.3	12.5%
2019		24.4		17.2		41.6	3.2%
2020		24.8		18.1		42.9	3.1%
2021		25.2		19.0		44.2	3.0%
2022		25.6		19.9		45.5	3.0%
2023 ^H		27.3		22.2		49.6	8.8%
2024		27.8		23.1		50.9	2.7%
2025		28.3		23.9		52.2	2.6%
2026		28.8		24.7		53.5	2.5%
2027		29.3		25.5		54.8	2.5%
2028 ^H		31.7		28.6		60.3	10.0%
2029		32.0		29.2		61.2	1.5%
2030		32.4		29.7		62.1	1.5%
2031		32.8		30.2		63.0	1.4%
2032		33.1		30.7		63.9	1.4%
2033 ^H		35.8		33.4		69.2	8.3%
2034		35.7		34.1		69.8	1.0%
2035		35.6		34.9		70.5	1.0%
2036		35.6		35.6		71.2	0.9%
2037		35.5		36.3		71.8	0.9%
2038 ^H		37.3		39.2		76.5	6.5%
2039		37.2		39.9		77.1	0.9%
2040		37.2		40.6		77.8	0.9%
2041		37.1		41.3		78.5	0.9%
2042		37.0		42.1		79.1	0.8%
2043		37.0		42.8		79.8	0.8%

Fiscal Year				
2000 - 2008	20.1%		77.8%	28.4%
2008 - 2013	7.6%		11.6%	9.1%
2013 - 2020	5.4%		5.7%	5.6%
2020 - 2030	2.7%		5.1%	3.8%
2030 - 2040	1.4%		3.2%	2.3%

Notes:

- A - Actual revenue data provided by OOCEA from Monthly Statistical Reports.
- B - Forest Lake Main plaza opened to traffic on July 8, 2000. Toll collection began one week after facility opened to traffic.
- C - Interchange ramps to/from existing S.R. 429 at Florida's Turnpike opened in November 2001.
- D - Interchange ramps to/from C.R. 535 opened in December 2002.
- E - Effects from 2004 hurricane season (4 storms with toll suspensions).
- F - Independence Main plaza opened in December 2005.
- G - First effects of national recession.
- H - Systemwide toll rate increase.



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Chapter 7
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 6-mile expressway that extends east from S.R. 429 to Maitland Boulevard at U.S. 441. This long-awaited expressway improves access to S.R. 429, I-4 and employment centers such as Maitland Center. While relieving congestion on U.S. 441 and many local roads in the greater Apopka area, it is the first new, major east-west corridor built in Central Florida in many years. S.R. 414 includes one mainline toll plaza, Coral Hills Main plaza, and the plaza group has two interchange ramp toll plazas at Keene Road and Hiawassee Road. All three toll locations are included in the Coral Hills plaza group. Other existing interchanges include S.R. 429 and U.S. 441/Orange Blossom Trail. A map of S.R. 414 including the FY 2013 OOCEA toll rates for the mainline and ramp toll plazas is shown in Figure 7-1.

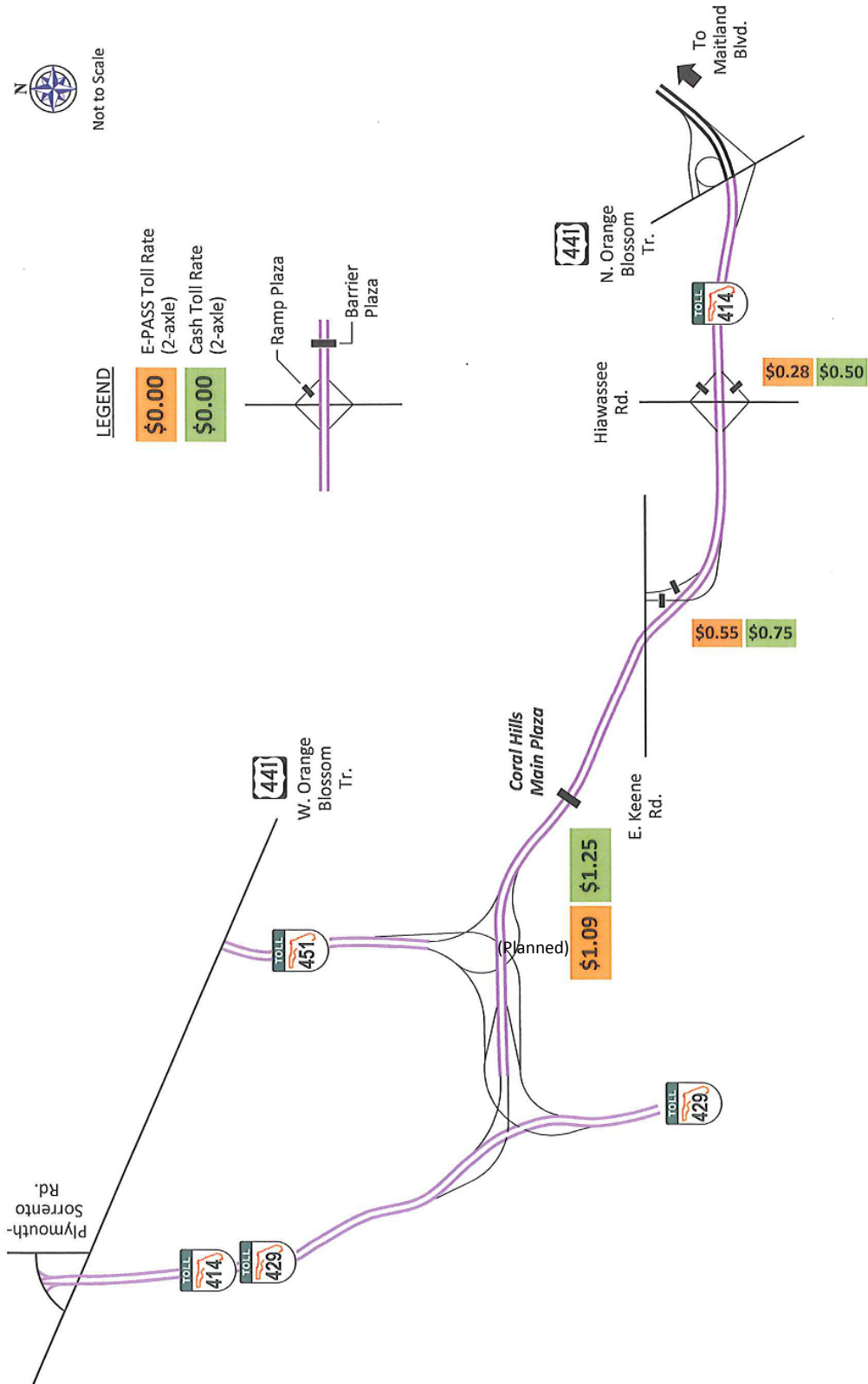


OOCEA began construction on the first phase of the S.R. 414 in January 2007. On February 14, 2009, because construction was ahead of schedule, OOCEA was able to partially open the new expressway to electronic toll collection customers from S.R. 429 to Hiawassee Road. The entire length of phase one was opened to all 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. The new interchange, which was completed in October 2012, helps improve traffic flow between S.R. 429 and S.R. 414, accommodates future growth in west Orange County and provides improved access to I-4 and the attractions. The new extension of S.R. 429/S.R. 414 to U.S. 441 near Plymouth Sorrento Road opened in January 2013. The new expressway features sections with up to six travel lanes (three in each direction) and a new connector road to allow 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 re-designated S.R. 451.



FIGURE 7-1
S.R. 414 FACILITIES AND TOLL RATES MAP





7.2 HISTORICAL TRANSACTIONS AND TOLL REVENUES

7.2.1 ANNUAL TRANSACTION AND TOLL REVENUE TRENDS

S.R. 414 annual historical transactions for the Coral Hills Main plaza group from FY 2009 to FY 2013 are presented in the top half of Table 7-1. Annual historical 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 Figures 7-2 and 7-3. As shown, total transactions on S.R. 414 in FY 2013 increased by 1 million transactions, or 13.1 percent, over FY 2012. Toll revenues increased by \$2 million, or 35.4 percent, in FY 2013. Traffic and revenue are still ramping-up. The facility has only been open for a few 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 increase went into effect, however tolls did increase during the July 2012 Systemwide toll rate increase. This facility is expected to continue experiencing growth due to the recent opening of the northwest extension and S.R. 429/S.R. 414 systems interchange in FY 2013.



TABLE 7-1
S.R. 414 PLAZA GROUPS – HISTORICAL TRANSACTIONS AND TOLL REVENUES
FY 2009 – FY 2013

Fiscal Year	Coral Hills Main	
	TRANSACTIONS (millions)	PERCENT CHANGE
2009 ^A	0.6	
2010	5.3	783.3%
2011	6.5	22.6%
2012	7.3	12.3%
2013 ^B	8.3	13.1%
	TOLL REVENUE (millions)	PERCENT CHANGE
2009 ^A	\$0.6	
2010	\$4.2	600.0%
2011	\$5.1	21.4%
2012	\$5.7	11.8%
2013 ^B	\$7.7	35.4%

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 opens in January 2013.



FIGURE 7-2
S.R. 414 HISTORICAL TRANSACTIONS AND ANNUAL GROWTH
FY 2009 – FY 2013

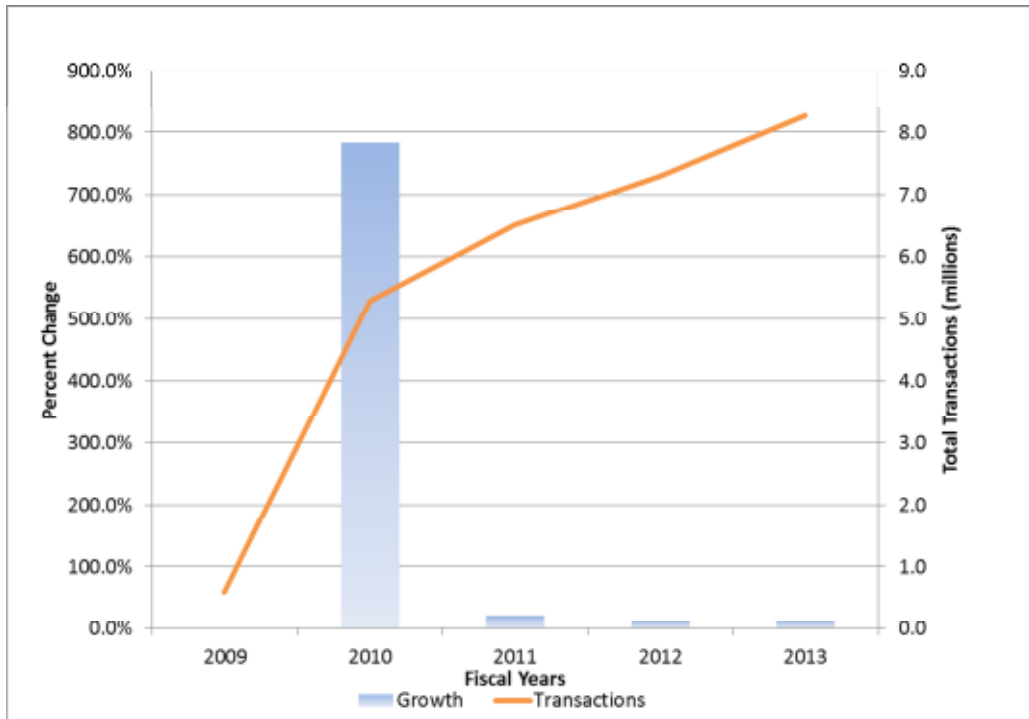
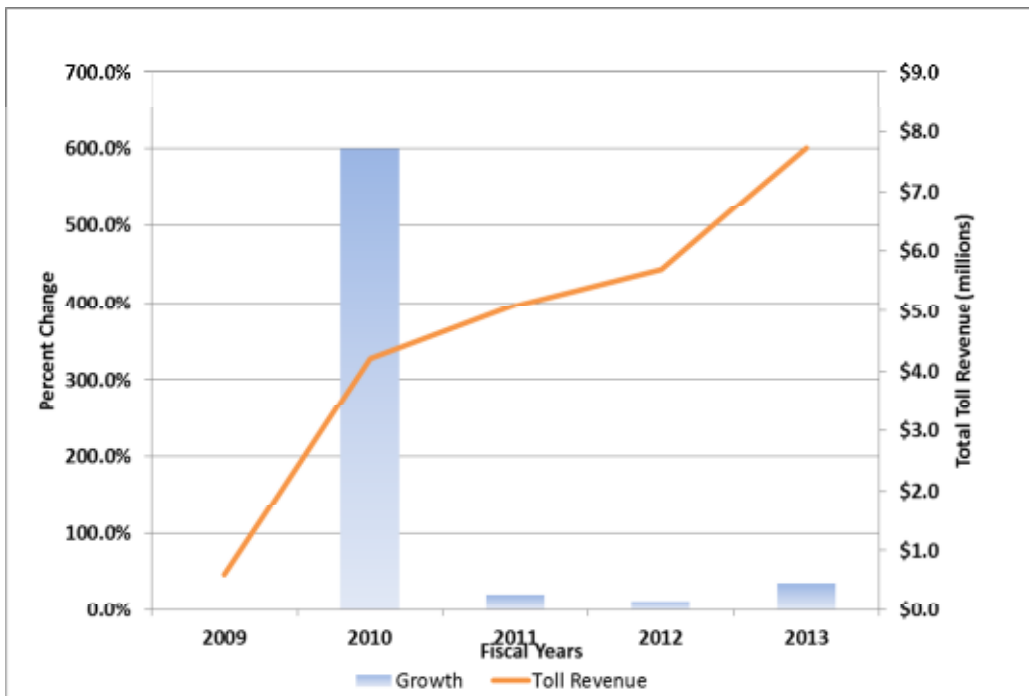


FIGURE 7-3
S.R. 414 HISTORICAL TOLL REVENUE AND ANNUAL GROWTH
FY 2009 – FY 2013





7.2.2 MONTHLY TRANSACTION SEASONAL VARIATION

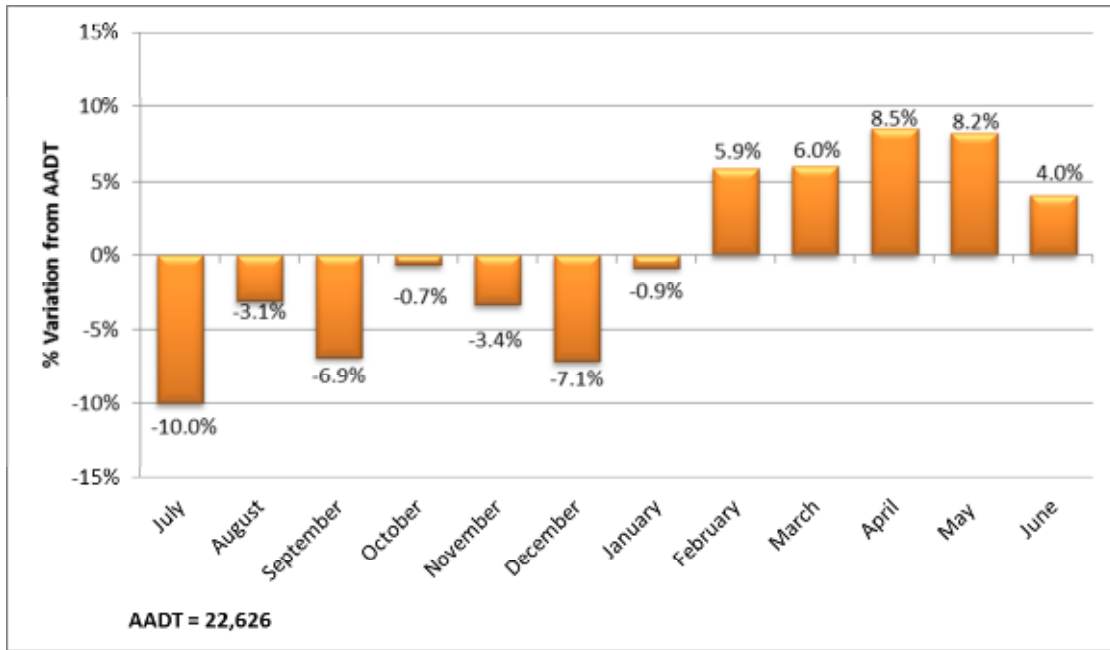
As presented in Table 7-2, average transactions per day in FY 2013 on S.R. 414 ranged from a high of 24,559 in April 2013 to a low of 20,366 in July of 2012. It is difficult to determine a seasonal traffic pattern on this facility since it is still experiencing significant growth as a result of the facility only being open for a few years. Also, more tourists in the area during the second half of the fiscal year could also be the reason for higher number of transactions per day during those months. This data is presented in a graphical format in Figure 7-4. Each month's average transactions per day appear as a percentage of the average for the fiscal year. April transactions were 8.5 percent above average and July transactions were 10.0 percent below average for the facility. These numbers reflect a combination of continued growth and seasonal variation.

TABLE 7-2
S.R. 414 – MONTHLY SEASONAL VARIATION IN TOLL-PAYING TRAFFIC
FY 2013

Month	Number of Days in Month	Total Toll Paying Transactions	Average Transactions/day	Seasonal Factor
July	31	631,344	20,366	0.900
August	31	679,406	21,916	0.969
September	30	632,235	21,075	0.931
October	31	696,850	22,479	0.993
November	30	655,833	21,861	0.966
December	31	651,403	21,013	0.929
January	31	695,318	22,430	0.991
February	28	670,683	23,953	1.059
March	31	743,748	23,992	1.060
April	30	736,782	24,559	1.085
May	31	758,917	24,481	1.082
June	30	706,153	23,538	1.040
Average		688,223	22,626	1.000
Total Year	365	8,258,672		



FIGURE 7-4
S.R. 414 VARIATION IN DAILY TRANSACTIONS, BY MONTH (AADT)
FY 2013



7.2.3 TRANSACTIONS BY VEHICLE CLASS

The distribution of transactions at the Coral Hills Main plaza group by vehicle class (number of axles) for FY 2013 is presented in Table 7-3. Overall, 98.7 percent of all transactions were made by 2-axle passenger vehicles. The next most frequent vehicle class was the 3-axle classification, which typically includes delivery and service vehicles. These vehicles accounted for 0.9 percent of all transactions. Four-axle vehicles and trucks with five or more axles represented the smallest categories with only 0.2 percent of transactions.

TABLE 7-3
S.R. 414 PERCENT OF TOTAL TRANSACTIONS BY VEHICLE CLASS
FY 2013

Vehicle Class	Coral Hills Main	S.R. 414 Total
2-Axle	98.7%	98.7%
3-Axle	0.9%	0.9%
4-Axle	0.2%	0.2%
5 or More Axles	0.2%	0.2%
Total	100.0%	100.0%

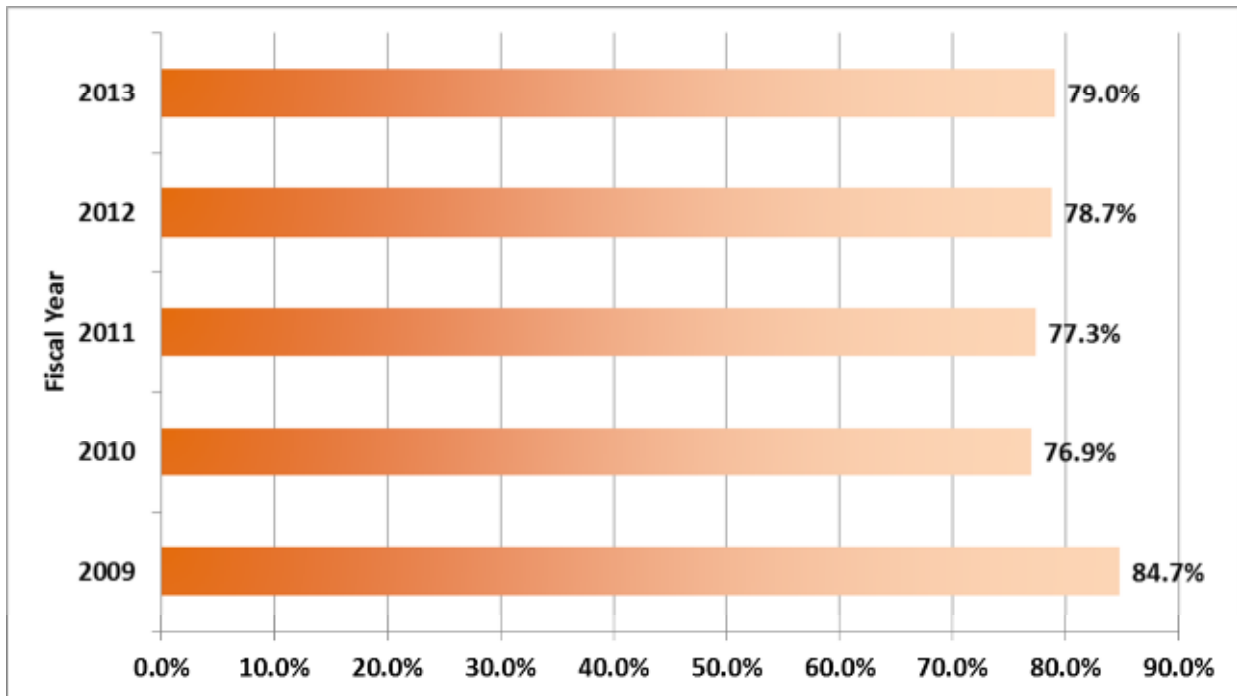
Source: Unaudited lane transaction data – January 2013



7.3 E-PASS USAGE

The percent of revenues generated from electronic transactions over the past four fiscal years on S.R. 414 is shown in Figure 7-5. E-PASS revenues were the highest during FY 2009. This was an anomaly since the facility opened to electronic customers only until May 2009. By the end of FY 2013, E-PASS revenues reached 79 percent. The usage of E-PASS will continue to increase as customers shift from cash to E-PASS to take advantage of the toll rate differential between cash and electronic toll rates.

FIGURE 7-5
S.R. 414 PERCENT OF TOLL REVENUE FROM ELECTRONIC TRANSACTIONS
FY 2009 – FY 2013



Source: OOCEA Statistical Report June 2013

7.4 FORECASTED TRANSACTIONS AND TOLL REVENUES

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.

The intersection 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.



TABLE 7-4
S.R. 414 - KEY TRANSPORTATION IMPROVEMENTS

Facility	From	To	Horizon Year	Jurisdiction	Improvement
S.R. 451/U.S. 441	U.S. 441	Vick Road	2018	OOCEA	Intersection Improvements
Clarcona - Ocoee Road	Clarke Road	Hiawassee Road	2023	Orange County	Widen 4-6 lanes
Clarcona Road	Clarcona-Ocoee Road	Keene Street	2023	Orange County	Widen 4-6 lanes
McCormick Road	Ocoee-Apopka Road	Ingram Road	2023	Orange County	Widen 2-4 lanes
Ocoee-Apopka Road	West Road	Binion Road	2023	Orange County	Widen 2-4 lanes
Ocoee-Apopka Road	Fullers Cross Road	West Road	2023	Orange County	Widen 4-6 lanes
Plymouth-Sorrento Road/ C.R. 437	Kelly Park Road	U.S. 441/Orange Blossom Trail	2023	Orange County	Widen 2-4 lanes
Roberson Road	Windermere Road	Maguire Road	2023	Orange County	Widen 2-4 lanes
Binion Road	Ocoee-Apopka Road	Lust Road	2028	Orange County	Widen 2-4 lanes
Ocoee-Apopka Road	Binion Road	Bradshaw Road	2028	Orange County	Widen 2-4 lanes
Rock Springs Road/Park Avenue - Apopka	U.S. 441/Orange Blossom Trail	Welch Road	2028	Orange County	Widen 4-6 lanes
Hiawassee Road	Clarcona-Ocoee Road	Apopka Boulevard	2028	Orange County	Widen 4-6 lanes
Pine Hills Road	Clarcona-Ocoee Road	Beggs Road	2028	Orange County	Widen 4-6 lanes
Clarcona-Ocoee Road	West Road	Adair Street	2033	Orange County	Widen 4-6 lanes
Ocoee-Apopka Road	S.R. 438/Silver Star Road	Fullers Cross Road	2033	Orange County	Widen 4-6 lanes
Thompson Road	Semorán Boulevard	Welch Road	2033	Orange County	Widen 2-4 lanes

Recent OOCEA System improvements including the Apopka Expressway extension and S.R. 414/S.R. 429 interchange re-construction have improved the potential for growth in NW Orange County and S.R. 414. The growth potential is also demonstrated by the planned improvements to the local street system. Many facilities including Hiawassee Road, Pine Hills Road, Clarcona Road, Ocoee-Apopka Road, Clarcona-Ocoee Road, Plymouth-Sorrento Road, Rock Springs Road and Binion Road, serve as feeder roads to S.R. 414 and positively impact T&R in the near term and long term forecasts. The prospect of the construction of the Wekiva Parkway is also a positive sign for the growth potential along S.R. 414, although the Wekiva Parkway was not considered as part of this forecast.

Historical and projected transactions and toll revenues for S.R. 414 are summarized in Tables 7-5 and 7-6. The forecasts assume toll rate indexing at 3 percent per year, implemented every fifth year. Due to the toll rate adjustments every fifth year, there are noticeable decreases in transactions and increases in revenues.

Total transactions on S.R. 414 are projected to increase during the forecast period from the actual of 8.3 million in FY 2013 to 10.5 million in FY 2043. Total revenues on S.R. 414 are projected to increase during the forecast period from the actual \$7.7 million in FY 2013 to \$18.3 million in FY 2043. S.R. 414 is expected to be the smallest contributor to total revenues of the five existing expressways. Transactions and revenues are forecasted to increase an average of 1.3 and 4.0 percent per year through FY 2020, 0.4 and 2.9 percent per year from FY 2020 to FY 2030, and 0.7 and 2.6 percent per year from FY 2030 to FY 2040, respectively.



**TABLE 7-5
S.R. 414 PLAZA GROUPS – TRANSACTION PROJECTIONS (MILLIONS)
FY 2014 – FY 2043**

Fiscal Year	Coral Hills Main		Percent Annual Change
	Actual ^A	Projected	
2009 ^B	0.6		
2010	5.3		783.3%
2011	6.5		22.6%
2012	7.3		12.3%
2013 ^C	8.3		13.1%
2014		8.7	5.6%
2015		8.8	1.2%
2016		8.9	1.1%
2017		9.0	1.1%
2018 ^C		8.7	-3.4%
2019		8.9	1.9%
2020		9.0	1.8%
2021		9.2	1.8%
2022		9.4	1.8%
2023 ^C		9.1	-2.6%
2024		9.2	0.8%
2025		9.3	0.8%
2026		9.4	0.8%
2027		9.4	0.8%
2028 ^C		9.1	-3.2%
2029		9.3	1.5%
2030		9.4	1.4%
2031		9.5	1.4%
2032		9.7	1.4%
2033 ^C		9.5	-1.8%
2034		9.6	1.4%
2035		9.8	1.3%
2036		9.9	1.3%
2037		10.0	1.3%
2038 ^C		9.8	-1.9%
2039		9.9	1.3%
2040		10.1	1.3%
2041		10.2	1.3%
2042		10.3	1.3%
2043		10.5	1.3%

Fiscal Year		
2009 - 2013	92.6%	
2013 - 2020	1.3%	
2020 - 2030	0.4%	
2030 - 2040	0.7%	

Notes:

A - Actual transaction data provided by OOCEA from Monthly Statistical Reports.

B - Opened to electronic traffic on February 14, 2009 and to all traffic on May 15, 2009.

C - Systemwide toll rate increase.



**TABLE 7-6
S.R. 414 PLAZA GROUPS – TOLL REVENUE PROJECTIONS (MILLIONS)
FY 2014 – FY 2043**

Fiscal Year	Coral Hills Main		Percent Annual Change
	Actual ^A	Projected	
2009 ^B	\$0.6		
2010	4.2		600.0%
2011	5.1		21.4%
2012	5.7		11.8%
2013 ^C	7.7		35.4%
2014		\$8.3	7.9%
2015		8.6	2.8%
2016		8.8	2.7%
2017		9.0	2.6%
2018 ^C		9.7	7.6%
2019		9.9	2.3%
2020		10.2	2.3%
2021		10.4	2.2%
2022		10.6	2.2%
2023 ^C		11.6	9.5%
2024		11.8	1.2%
2025		11.9	1.2%
2026		12.1	1.2%
2027		12.2	1.2%
2028 ^C		13.1	7.0%
2029		13.3	1.9%
2030		13.6	1.9%
2031		13.8	1.9%
2032		14.1	1.8%
2033 ^C		14.8	4.8%
2034		15.0	1.9%
2035		15.3	1.8%
2036		15.6	1.8%
2037		15.9	1.8%
2038 ^C		16.9	6.9%
2039		17.2	1.6%
2040		17.5	1.6%
2041		17.8	1.6%
2042		18.1	1.6%
2043		18.3	1.5%

Fiscal Year		
2009 - 2013	89.4%	
2013 - 2020	4.0%	
2020 - 2030	2.9%	
2030 - 2040	2.6%	

Notes:

A - Actual revenue data provided by OOCEA from Monthly Statistical Reports.

B - Opened to electronic traffic on February 14, 2009 and to all traffic on May 15, 2009.

C - Systemwide toll rate increase.

Appendix A
Traffic Profiles
CY 2013 - CY 2038



S.R. 528 - Average Two-Way Daily Revenue Traffic

Cross Street	Daily Volume			
	2013	2018	2028	2038
To S.R. 528 (FL Turnpike)				
Boggy Creek Road	63,100	65,600	78,800	84,400
	-	-	-	-
	24,700	25,700	30,900	33,100
	87,800	91,300	109,700	117,500
Tradeport Drive / Conway Road	16,400	17,100	20,600	22,100
	4,300	4,500	5,400	5,800
<i>Airport Main</i>	75,700	78,700	94,500	101,200
Semorán Boulevard	34,800	36,200	43,500	46,600
	23,800	24,800	29,800	31,900
	64,700	67,300	80,800	86,500
Goldenrod Road	3,500	3,700	4,500	4,900
	5,600	5,900	7,100	7,600
	66,800	69,500	83,400	89,200
Narcoossee Road	18,800	19,600	23,600	25,300
	5,300	5,600	6,800	7,300
	53,300	55,500	66,600	71,200
S.R. 417	24,700	25,700	30,900	33,100
	16,000	16,700	20,100	21,600
<i>Beachline Main</i>	44,600	46,500	55,800	59,700
International Corporate Park	6,100	6,400	7,700	8,300
	1,100	1,200	1,500	1,700
	39,600	41,300	49,600	53,100
Dallas Boulevard	3,200	3,400	4,100	4,400
	-	-	-	-
<i>Dallas Main</i>	36,400	37,900	45,500	48,700
S.R. 520	7,600	8,000	9,600	10,300
	-	-	-	-
	28,800	29,900	35,900	38,400
To S.R. 528 (FDOT)				

Notes:

- Airport Mainline Plaza to be removed in 2016 and merged with Turpike Mainline Plaza west of Boggy Creek Rd.
- New ramp plazas to be installed in 2016.












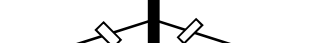



S.R. 408 - Average Two-Way Daily Revenue Traffic

Cross Street	Daily Volume			
	2013	2018	2028	2038
Turnpike Spur	41,000	45,500	50,300	53,500
	41,000	45,500	50,300	53,500
S.R. 50 West	-	-	-	-
	8,900	9,900	10,900	11,600
	49,900	55,400	61,200	65,100
Good Homes Road	7,200	8,000	8,800	9,400
	8,600	9,600	10,600	11,300
<i>Hiwassee Main</i>	51,300	57,000	63,000	67,000
Hiwassee Road	4,100	4,600	5,100	5,500
	8,100	9,000	9,900	10,500
	55,300	61,400	67,800	72,000
Kirkman Road	5,900	6,600	7,300	7,800
	10,400	11,600	12,800	13,600
	59,800	66,400	73,300	77,800
Pine Hills Road	-	-	-	-
	4,800	5,400	6,000	6,400
<i>Pine Hills Main</i>	64,600	71,800	79,300	84,200
Old Winter Garden Rd	-	-	-	-
	3,200	3,600	4,000	4,300
	67,800	75,400	83,300	88,500
John Young Parkway	6,500	7,300	8,100	8,600
	7,900	8,800	9,700	10,300
	69,200	76,900	84,900	90,200
Tampa Avenue	1,700	1,900	2,100	2,300
	-	-	-	-
	67,500	75,000	82,800	87,900
Orange Blossom Trail	4,800	5,400	6,000	6,400
	6,100	6,800	7,500	8,000
	68,800	76,400	84,300	89,500
Interstate-4	16,000	17,800	19,600	20,800
	53,100	59,000	64,900	68,800
	105,900	117,600	129,600	137,500
Orange Avenue/ Rosalind Avenue	11,200	12,500	13,800	14,700
	17,100	19,000	20,900	22,200

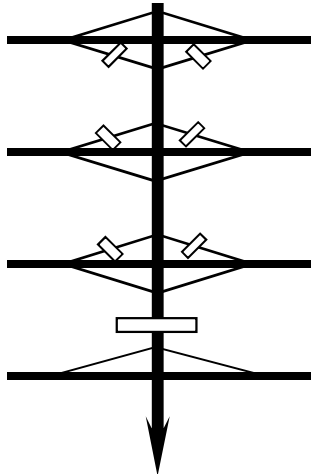
Cross Street	Daily Volume			
	2013	2018	2028	2038
	111,800	124,100	136,700	145,000
Mills Avenue	1,000	1,200	1,400	1,500
	8,400	9,400	10,400	11,100
	119,200	132,300	145,700	154,600
Bumby Avenue/ Crystal Lake Drive	9,900	11,000	12,100	12,900
	8,900	9,900	10,900	11,600
	118,200	131,200	144,500	153,300
Conway Road	10,200	11,400	12,600	13,400
	-	-	-	-
<i>Conway Main</i>	108,000	119,800	131,900	139,900
Yucatan Drive	8,600	9,600	10,600	11,300
	-	-	-	-
	99,400	110,200	121,300	128,600
Semoran Boulevard	9,900	11,000	12,100	12,900
	7,700	8,600	9,500	10,100
	97,200	107,800	118,700	125,800
Goldenrod Road	19,600	21,800	24,000	25,500
	8,600	9,600	10,600	11,300
	86,200	95,600	105,300	111,600
Valencia College Chickasaw Trail	-	-	-	-
	6,000	6,700	7,400	7,900
	92,200	102,300	112,700	119,500
S.R. 417	39,000	43,300	47,700	50,600
	17,000	18,900	20,800	22,100
	70,200	77,900	85,800	91,000
Dean Road	10,000	11,100	12,300	13,100
	2,200	2,500	2,800	3,000
<i>Dean Main</i>	62,400	69,300	76,300	80,900
Rouse Road	7,500	8,300	9,300	10,100
	900	2,000	3,000	4,000
	55,800	63,000	70,000	74,800
Alafaya Trail	24,200	26,000	29,300	31,600
	-	-	-	-
	31,600	37,000	40,700	43,200
S.R. 50	20,600	22,200	25,000	27,000
	-	-	-	-
	11,000	14,800	15,700	16,200

To Challenger Parkway

S.R. 417 - Average Two-Way Daily Revenue Traffic

Cross Street	Daily Volume				
	2013	2018	2028	2038	
To S.R. 417 (FL Turnpike)					
					
University Boulevard		49,600	59,900	69,100	78,300
		5,500	6,700	7,800	8,900
		18,800	22,800	26,300	29,800
<i>University Main</i>		62,900	76,000	87,600	99,200
S.R. 50		5,200	6,300	7,300	8,300
		6,300	7,700	8,900	10,100
		64,000	77,400	89,200	101,000
S.R. 408		25,700	31,100	35,800	40,500
		30,400	36,800	42,400	48,000
		68,700	83,100	95,800	108,500
Curry Ford Road		7,000	8,500	9,800	11,100
		7,700	9,400	10,900	12,400
<i>Curry Ford Main</i>		69,400	84,000	96,900	109,800
Lee Vista Boulevard		4,300	5,300	6,100	6,900
		2,400	3,000	3,500	4,000
		67,500	81,700	94,300	106,900
S.R. 528		32,600	39,500	45,500	51,500
		8,100	9,900	11,400	12,900
		43,000	52,100	60,200	68,300
Dowden Road		1,100	1,400	1,700	2,000
		400	500	600	700
		42,300	51,200	59,100	67,000
Moss Park Road		5,100	6,200	7,200	8,200
		1,500	1,900	2,200	2,500
		38,700	46,900	54,100	61,300
Narcoossee Road		7,100	8,600	9,900	11,200
		5,600	6,800	7,900	9,000
		37,200	45,100	52,100	59,100
Lake Nona Road		2,200	2,700	3,200	3,700
		3,200	3,900	4,500	5,100
		38,200	46,300	53,400	60,500
Boggy Creek Road		5,400	6,600	7,600	8,600
		5,100	6,200	7,200	8,200
<i>Boggy Creek Main</i>		37,900	45,900	53,000	60,100

Cross Street	Daily Volume			
	2013	2018	2028	2038
Landstar Boulevard	6,100	7,400	8,600	9,800
	6,300	7,700	8,900	10,100
	38,100	46,200	53,300	60,400
Orange Blossom Trail	5,500	6,700	7,800	8,900
	7,500	9,100	10,500	11,900
	40,100	48,600	56,000	63,400
John Young Parkway	7,200	8,800	10,200	11,600
	8,100	9,900	11,400	12,900
	41,000	49,700	57,200	64,700
John Young Main International Drive	18,200	22,100	25,500	28,900
	-	-	-	-
	22,800	27,600	31,700	35,800



To S.R. 417
(FL Turnpike)

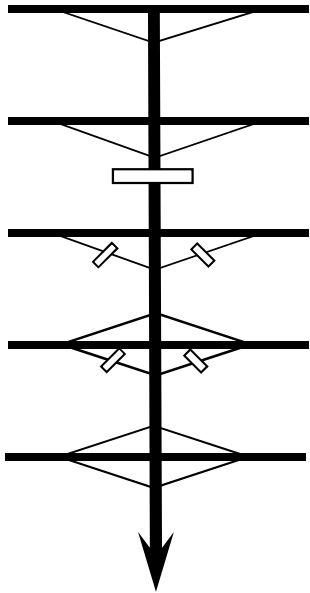
S.R. 429 - Average Two-Way Daily Revenue Traffic

Cross Street	Daily Volume			
	2013	2018	2028	2038
U.S. 441	13,800	18,600	23,300	24,600
S.R. 414	1,200 15,000	1,600 15,200	2,000 16,000	2,400 17,300
C.R. 437A	-	1,000	1,200	1,200
Forest Hills Main	2,400	2,800	3,300	3,500
West Road	30,000	34,000	39,400	41,800
S.R. 438	1,100 5,000	1,300 5,700	1,600 6,700	1,700 7,200
S.R. 50	33,900	38,400	44,500	47,300
Florida's Turnpike	2,500 6,800	2,900 7,700	3,400 9,000	3,700 9,600
C.R. 535	38,200	43,200	50,100	53,200
Independence Main	6,500	7,400	8,600	9,200
New Independence Pkwy	4,600	5,200	6,100	6,500
Seidel Road	36,300	41,000	47,600	50,500
	22,300 18,800	25,200 21,300	29,300 24,800	31,100 26,300
	32,800	37,100	43,100	45,700
	22,000 4,200	24,900 4,800	28,900 5,600	30,700 6,000
	15,000	17,000	19,800	21,000
	1,700 1,000	2,000 1,200	2,400 1,400	2,600 1,500
	14,300	16,200	18,800	19,900
	-	2,600	3,100	3,300
	-	2,600	2,800	3,000
	14,300	16,200	18,500	19,600

↓
To S.R. 429
(FL Turnpike)

S.R. 414 - Average Two-Way Daily Revenue Traffic

Cross Street	Daily Volume			
	2013	2018	2028	2038
S.R. 429	15,000	16,200	17,000	18,200
	15,000	16,200	17,000	18,200
US 441 via SR 451	-	-	-	-
	5,500	5,600	5,900	6,400
<i>Coral Hills Main</i>	20,500	21,800	22,900	24,600
Keene Road / C.R. 435	-	-	-	-
	3,800	4,100	4,400	4,800
	24,300	25,900	27,300	29,400
Hiawasse Road	3,100	3,300	3,500	3,800
	4,200	4,500	4,800	5,200
	25,400	27,100	28,600	30,800
U.S. 441	3,400	3,700	3,900	4,200
	-	-	-	-
	22,000	23,400	24,700	26,600



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