

95 Express Annual Operations Report: Fiscal Year 2016-2017

Executive Summary

The 95 Express Program completed its eighth full Fiscal Year of operations in June 2017. The FDOT's Fiscal Year (FY) is from July 1 through June 30. During FY 2016-2017, the 95 Express Lanes expanded its services from north of the Golden Glades Interchange (SR 826 and Florida's Turnpike facilities) in Miami-Dade County to Broward Boulevard in Broward County. This portion, called 95 Express Phase 2, began construction in 2011 and completes the 21 miles of express lanes in both directions with four new segments operated using congestion-priced tolling.

District Six, from its SunGuide® Transportation Management Center (TMC) in Miami, is responsible for tolling operations for the facility. The District Four SMART SunGuide® Center and District Six SunGuide TMC manage resources within their respective districts for incident management. Florida's Turnpike Enterprise (FTE) is responsible for consolidating the tolls collected by drivers' transponders at the six segments and billing those customers accordingly. All express lanes trip (or traffic volume) and revenue information shown herein is provided to the district from FTE SunPass® offices.

This executive summary edition of the annual report highlights facility-wide performance measures for speed, volume and revenue, as well as other facility metrics including device availability and transit ridership. Page 3 of this executive summary highlights positive performance improvements for 95 Express Phase 1 over the second half of the reported FY due to new Express Lane Marker installation.

For FY 2016-2017 and including the four new segments that began operations October 16, 2016, 95 Express serviced 43,311,679 vehicle trips; bringing the total since opening (December 5, 2008) to approximately 185.5 million trips. It had a total toll revenue of approximately \$47.5 million for the FY; bringing the total revenue to date to approximately \$198.5 million. The Program saw a nominal increase in toll exempt registered vehicles to a total of 9,070, but doubled its exempt trip total for the year, resulting in nearly 1.53 million toll exempt trips.

Table 1 outlines performance measures that the Department monitors from the SunGuide TMC and reports on its website, www.95express.com. Each segment is shown individually and, where possible, compared to the previous FY's output. Colored arrows are used to quickly identify the annual comparisons. Since this is the first year of operations for Segments 2 and 3, no arrows are shown. The values for these segments will act as the benchmark for future years' performance.

Full annual reports for each facility segment will be made available following the distribution of this executive summary on the 95express.com website.

Table 1 – 95 Express FY 2016-2017 Statistics

FY 2016-2017 Statistics	Segment 1 (7 miles)				Segment 2 (1 mile)				Segment 3 (4 miles)			
	1S		1N		2S		2N		3S		3N	
Trips (vehicles)												
- ITD Trips**	79,568,656		84,897,558		6,106,371		5,159,052		5,154,837		4,611,618	
- FY 2016-2017 Total Trips	11,541,476		10,738,325		6,106,371		5,159,052		5,154,837		4,611,618	
- FY 2016-2017 Average Monthly Trips	961,790		894,860		678,486		573,228		572,760		512,402	
- % Increase/Decrease to Previous FY	↑ 0.8%		↑ 1.7%		--		--		--		--	
- FY 2016-2017 Average Exempt Monthly Trips	37,732		35,665		22,272		19,658		16,232		13,689	
- % Increase/Decrease to Previous FY	↑ 19.8%		↑ 18.0%		--		--		--		--	
Revenue												
- ITD Revenue**	\$ 79,131,071		\$ 98,093,472		\$ 3,074,442		\$ 2,161,330		\$ 2,173,207		\$ 1,948,002	
- FY 2016-2017 Revenue	\$ 15,863,019		\$ 22,265,259		\$ 3,074,442		\$ 2,161,330		\$ 2,173,207		\$ 1,948,002	
- FY 2016-2017 Average Monthly Revenue	\$ 1,233,919		\$ 1,724,251		\$ 334,582		\$ 236,199		\$ 237,330		\$ 212,682	
Tolls (Rounded to Nearest \$0.25)												
- Range Charged for Month	\$0.00 - \$10.50		\$0.00 - \$10.50		\$0.00 - \$3.00		\$0.00 - \$3.00		\$0.00 - \$0.50		\$0.00 - \$0.50	
- Average Weekday	\$1.75		\$2.75		\$0.50		\$0.50		\$0.50		\$0.50	
- Average Peak Period*	\$2.50		\$6.75		\$1.00		\$0.50		\$0.50		\$0.50	
- Average Weekend	\$0.75		\$0.50		\$0.50		\$0.50		\$0.50		\$0.50	
- Average Off Peak	\$1.25		\$1.50		\$0.50		\$0.50		\$0.50		\$0.50	
- 85th Percentile	\$3.00		\$6.50		\$0.50		\$0.50		\$0.50		\$0.50	
- 95th Percentile	\$5.00		\$10.25		\$1.75		\$0.50		\$0.50		\$0.50	
Volume (vehicles)												
- FY 2016-2017 Average Weekday	34,747		31,990		24,603		20,757		21,268		18,994	
- % Increase/Decrease to Previous FY	↑ 1.3%		↑ 1.8%		--		--		--		--	
- FY 2016-2017 Average Peak Period*	9,156		7,395		5,083		4,749		4,186		4,398	
- % Increase/Decrease to Previous FY	↑ 2.6%		↑ 2.3%		--		--		--		--	
Speed (mph) (EL Target ≥ 45 mph)												
	EL	LL	EL	LL	EL	LL	EL	LL	EL	LL	EL	LL
- Pre-95 Express Peak Period Conditions** ¹	20	15	18	18	24	28	56	40	35	52	68	55
- FY 2016-2017 Average Weekday	64	56	64	57	65	61	66	58	69	63	68	62
- FY 2016-2017 Average Peak Period*	56	41	45	28	46	54	66	56	68	61	66	50
ITD Average Operated Above 45 MPH	99.6%		97.8%		95.4%		99.8%		99.9%		99.8%	
FY 2016-2017 Avg. Operated Above 45 MPH	98.9%		94.6%		95.4%		99.8%		99.9%		99.8%	
- % Increase/Decrease to Previous FY	↓ -0.1%		↓ -0.6%		--		--		--		--	
Remained Open to Motorists	89.8%		89.7%		99.1%		98.8%		97.0%		97.0%	
Closed due to Planned Construction	7.8%		6.2%		0.5%		1.1%		2.1%		1.6%	
Closed due to Non-recurring Events (<5% Target)	2.4%		4.1%		0.4%		0.1%		0.9%		1.4%	
- % Increase/Decrease to Previous FY	↑ 2.1%		↑ 0.7%		--		--		--		--	



Increase/Decrease vs. Previous Fiscal Year (FY) Average

EL (Express Lanes); LL (Local Lanes); ITD (Inception to Date); FY (Fiscal Year); *Peak Period = 6-9 AM (Southbound) and 4-7 PM (Northbound)

**1N Commenced Tolling on 12/5/2008; 1S on 1/15/2010; 2N, 2S, 3N and 3S on 10/16/2016

¹Sources: 1N/1S - FDOT "2008 I-95 Managed Lanes Monitoring Report"; 2N/2S; 3N/3S - FDOT "2012 I-95 Managed Lanes Monitoring Report"

All data shown is based on best available information at time of report.

Operations/Traffic Statistics – Express Lane Markers (ELMs)

Aside from the statistical improvements shown in Table 1, 95 Express Phase 1 (from just north of SR 836 to the Golden Glades Interchange) benefitted from a physical improvement to the facility: new Express Lane Markers (ELMs). ELMs are the flexible plastic tubes that create a buffer separation between the express lanes and the general use lanes. Until the fall of 2016, ELMs were placed at 10-foot spacing. As traffic volumes increased annually in the express lanes, motorists have been observed illegally crossing over the ELMs; sometimes causing crashes. This dangerous movement (defined as “lane diving”) continued to increase over time. As a result, the Department increased its Florida Highway Patrol (FHP) presence in the express lanes; ticketing those motorists making the illegal movement.

As of December 21, 2016, the Department completed installation of new ELMs which are more durable and at a new distance of five feet apart. The objective was to deter motorists from the “lane diving” movement and, in turn, improve operations of the express lanes. Table 2 shows the comparative values for specific performance criteria that are tracked monthly and compared to the performance of the facility prior to the installation.

Table 2 – Pre-, During, and Post-Installation Performance Metric Data

Performance Metric	Monthly Avg. for Six Months Before New ELM Installation	Monthly Avg. During New ELM Installation	Monthly Avg. After New ELM Installation ⁵
ELM Replacement ¹	4,030	21	329
Lane Diving (Citations + Warnings) ²	152	82	20
Crashes in Express Lanes ³	81	60	56
Vehicle Throughput ⁴	1,874,077	1,816,973	1,895,647

Through the end of FY 2016-2017, which includes the first six months since installation (January – June 2017), the new ELMs have contributed to the following average monthly improvements for 95 Express Phase 1:

- ELM replacement has decreased 92%;
- Lane diving has decreased 87%;
- Crashes within the facility have decreased by 31%; and,
- Express lanes volume has increased by 1.2%.

ELM replacement has also been analyzed additionally based on average number replaced to total number available. Prior to the new ELM installation, markers were spaced at ten feet and totaled approximately 8,400. Therefore, nearly 50% of the markers were being replaced monthly. With the current spacing of five feet, the new ELMs total approximately 16,800. With an average monthly replacement of 329 (through June 2017), replacement equates to only 2%.

For monthly performance updates on the new ELMs, please visit 95express.com

¹Data provided by Archer Western (Contractor on I-95 Pavement Rehab Project) and DBI (District Six's Asset Maintenance Contractor)

²Data provided by FHP (Though Bi-weekly Invoicing for District Six FHP Hireback Program)

³Data provided by District Six SunGuide® Center (via SunGuide® Software)

⁴Data provided by Florida's Turnpike (via Monthly Toll Gantry Reports)

⁵Through June 2017

Operations/Traffic Statistics - Speed Data

As shown in Table 1, 95 Express average speeds met or exceeded the facility's 45 MPH operational speed target for both weekdays and peak periods. The entire corridor (express lanes and general use lanes) also continues to operate at or above its pre-95 Express conditions. Charts 1 and 2 depict the monthly average speed reliability of the facility by direction. Speed reliability is the percent time the express lanes are operating above 45 MPH during the peak period (red dashed line shown is the 90% goal for the facility).

Chart 1 – 95 Express Speed Reliability - Northbound (FY 2016-2017)

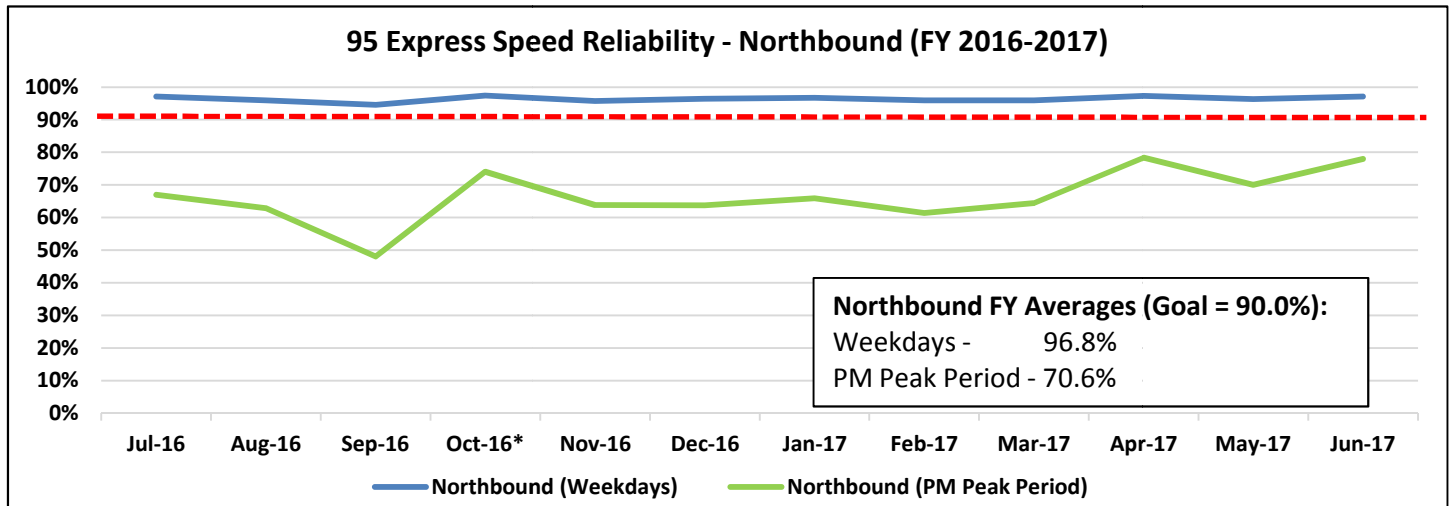
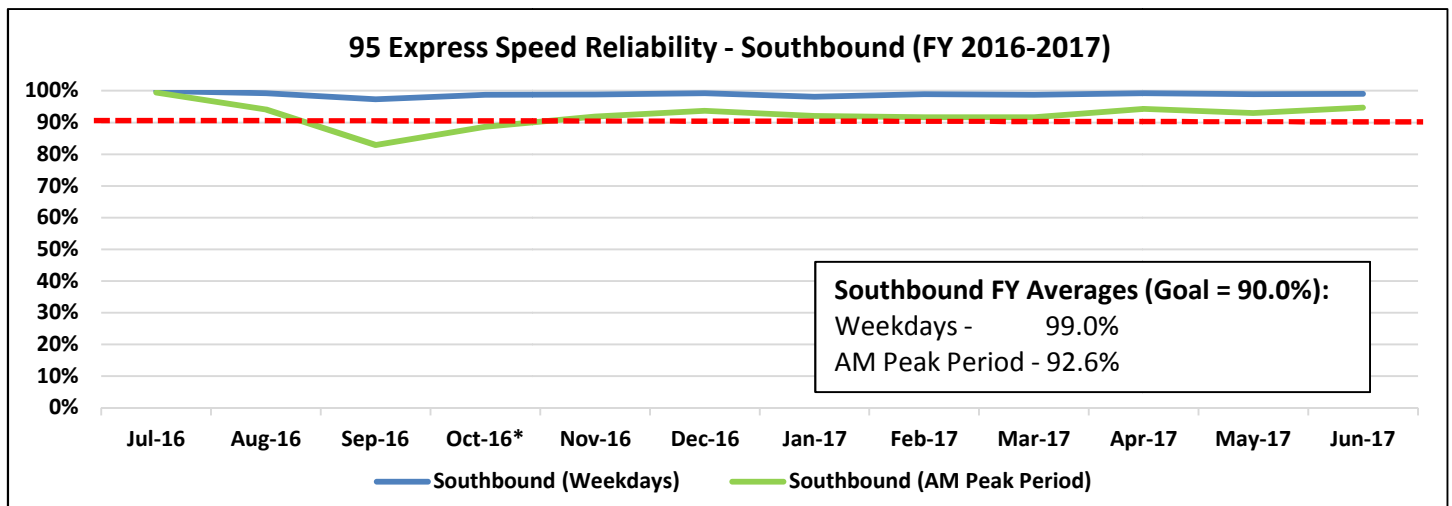


Chart 2 – 95 Express Speed Reliability - Southbound (FY 2016-2017)



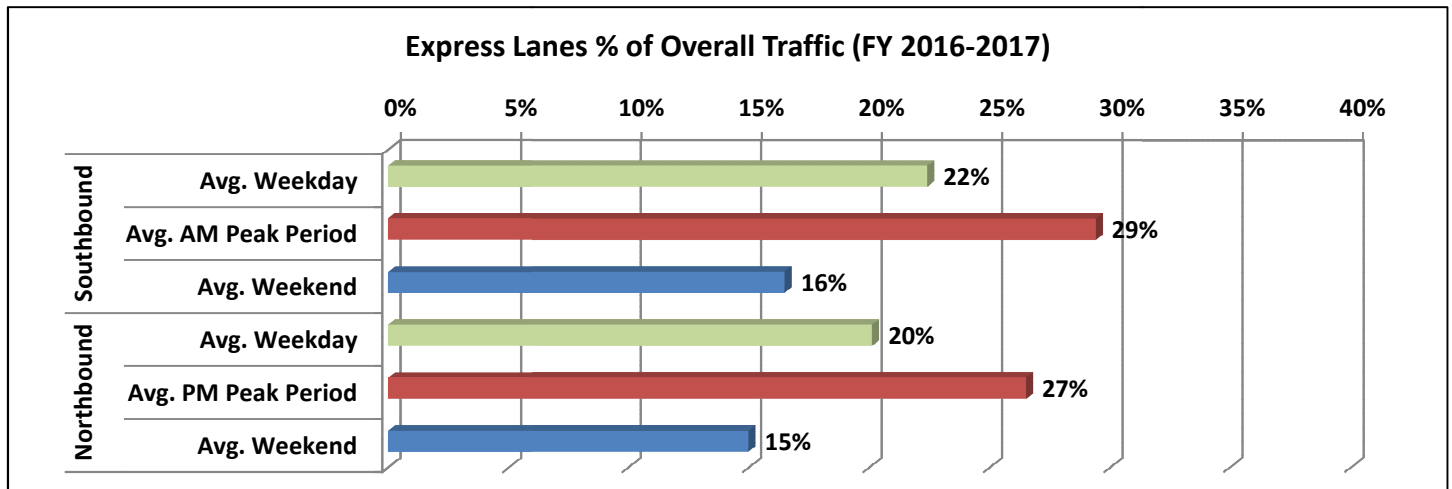
NOTES: Peak Period is from 6 AM – 9 AM in the Southbound direction and from 4 PM – 7 PM in the Northbound direction.

*October 16, 2016 is when 95 Express Phase 2 began operations.

Operations/Traffic Statistics - Volume Data

95 Express averages two express lanes and four general use lanes per direction. Chart 3 depicts the annual percent of express lanes usage compared to the overall corridor volume by direction. 95 Express experienced a 1.3% increase in average monthly volume compared to last year. 95 Express peak period volume also increased year over year by 2.5%, even though the facility is witnessing commuter behavior expanding the range of time outside of the reported traditional peak period times.

Chart 3 – 95 Express % of Overall Traffic (FY 2016-2017)

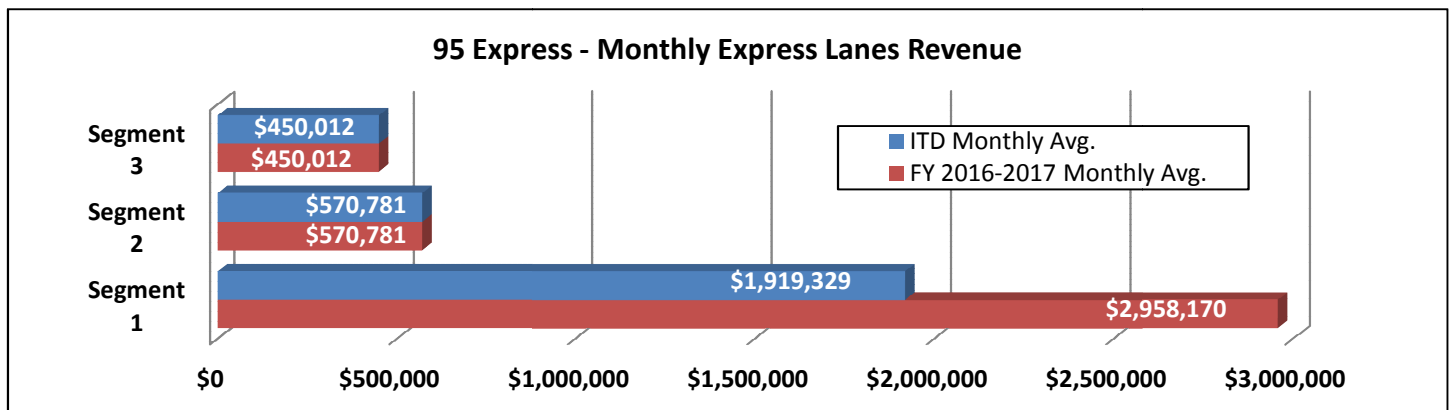


NOTE: Peak Period is from 6 AM – 9 AM in the Southbound direction and from 4 PM – 7 PM in the Northbound direction.

Revenue

95 Express collected nearly \$50 Million in revenue in FY 2016-2017; a 32% increase above the previous FY. Chart 4 shows the FY 2016-2017 average monthly revenue per segment versus its total since inception. Segments 2 and 3 values are equal due to their start of operations this FY.

Chart 4 – 95 Express Transactions by Toll Amount (FY 2016-2017)

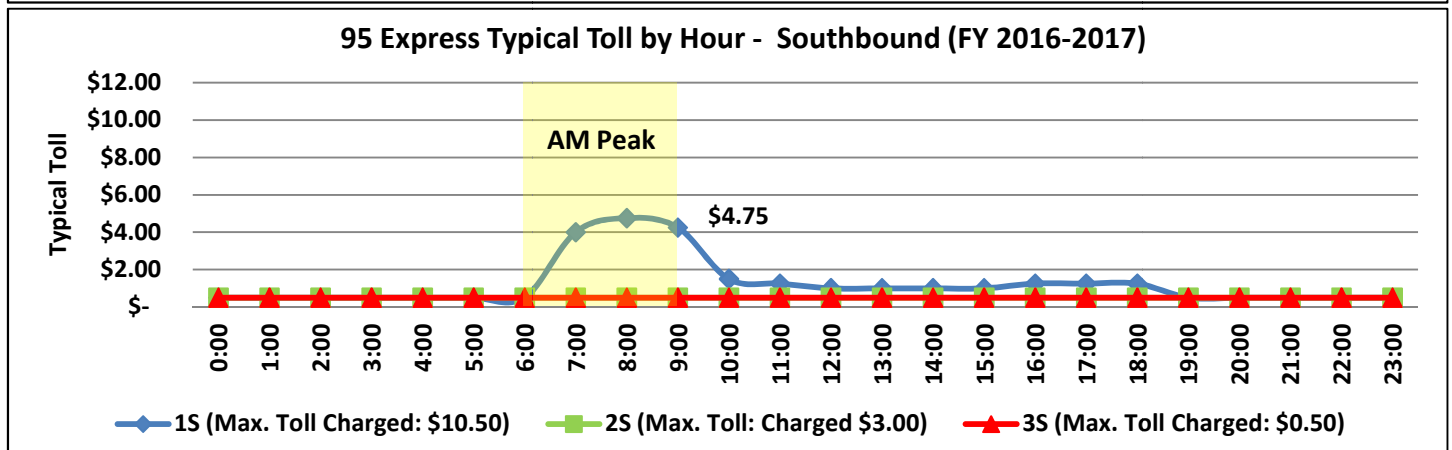
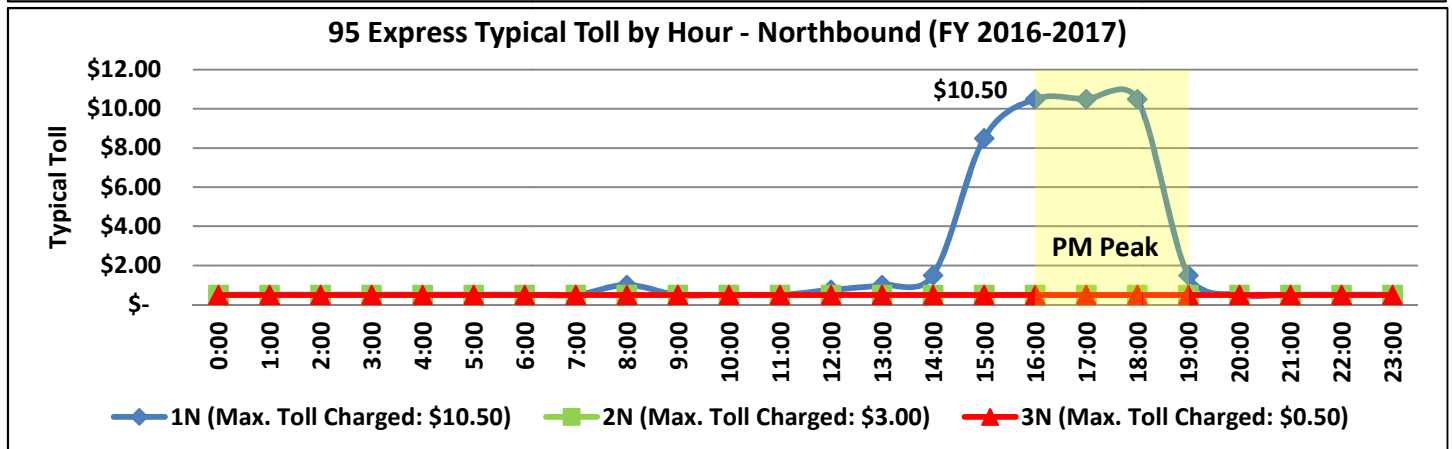
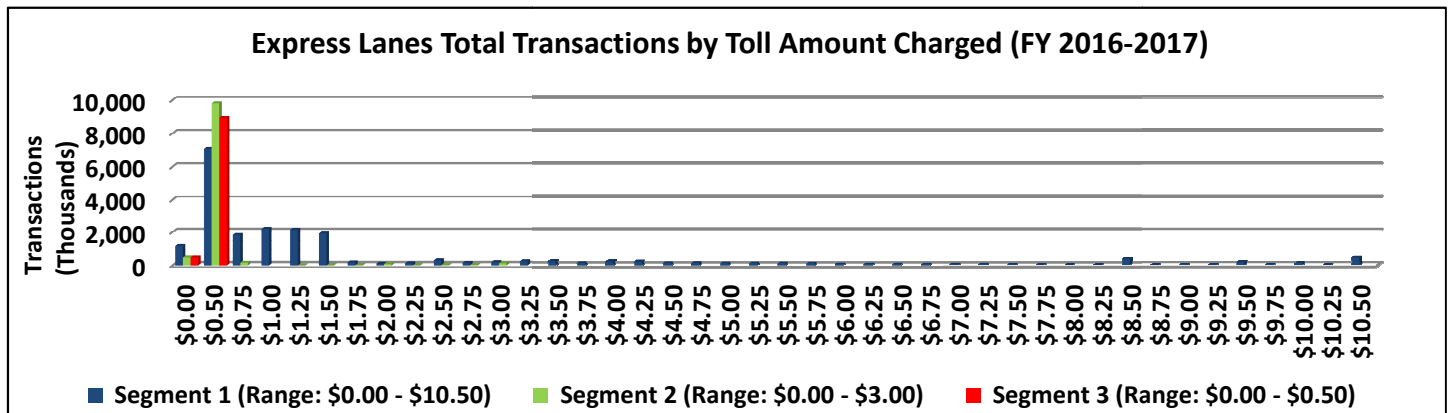


NOTE: ITD equals Inception to Date.

Tolls Statistics

Chart 5 shows the frequency of the tolls charged for each segment along with its respective toll range. The maximum segment toll within the facility was \$10.50 for segment 1, the southern Miami segment. For the year, 85% of those trips in segment 1 were charged \$3.75 or less (on average) and 95% were charged \$9.00 or less. Both values represent \$0.25 more than the previous year. The maximum toll of \$10.50 was charged to 2.0% of all trips for the year, which is equal to last year. The bottom two charts (Charts 6 and 7) depict the typical toll for each hour of the day, by direction.

Charts 5, 6, and 7 – 95 Express Transactions and Typical Tolls (FY 2016-2017)



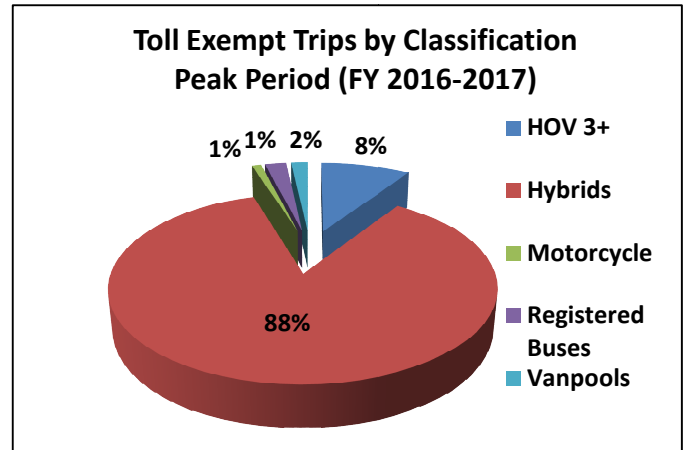
NOTE: Typical Toll represents the toll charged most frequently for each hour shown.

Registrations—Toll Exempt / Hybrid Trips

The total registrations for FY 2016-2017 increased from 9,029 to 9,070 (+0.5%). The 1.53 million Toll Exempt Trips, a 100% increase over the previous Fiscal Year, and mostly due to the four new segments added to the facility, comprised approximately 3.5% of the total trips for the year. Hybrid vehicles remained at 45% of the registrations this year, but their trip distribution increased to account for 88% of the total exempt weekday trips. In all, hybrid exempt trips accounted for 2.3% of all 95 Express trips and nearly 88% of all of these trips occurred during the peak periods.

95 Express Toll Exempt Trips - PEAK PERIOD

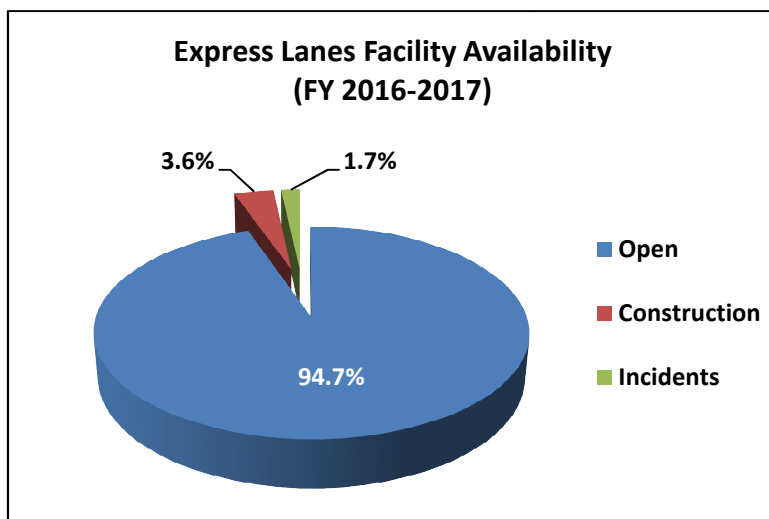
	FY2016-17 Peak Period Exempt	% of Peak Period Exempt
HOV 3+	44,984	7.6%
Hybrids	519,313	88.2%
Motorcycle	7,109	1.2%
Registered Buses	8,486	1.4%
Vanpools	9,156	1.6%
TOTALS	589,048	



NOTE: Peak Period is from 6 AM – 9 AM in the Southbound direction and from 4 PM – 7 PM in the Northbound direction.

Facility Availability

The entire 95 Express Lanes (both directions) were open to motorists 94.7% of the time, while closed 3.6% due to 350 planned construction/maintenance events. The construction/maintenance events are typically overnight and each lasted approximately five hours in duration. The non-recurring events caused the express lanes to be closed only 1.7%, below the goal of 5% per year. Non-recurring events totaled 1,266 events, averaging approximately 27 minutes per event. These annual totals equate to approximately 15 planned events and 53 incidents every month in each direction along the express lanes.



95 Express Events Causing Closure (FY 2016-2017)	
Amount Closed due to Construction	350
Average Time Closed (hours):	5.0
Amount Closed due to Incident	1,266
Average Time Closed (minutes):	27

Equipment Availability

95 Express devices are deemed by the District as the most critical, since all combine to provide accurate and timely information to the driver including toll amounts, congestion and closure information, as well as incident management messaging. Chart 8 depicts the availability of the nearly 230 devices.

Chart 8 – 95 Express Device Availability (FY 2016-2017)

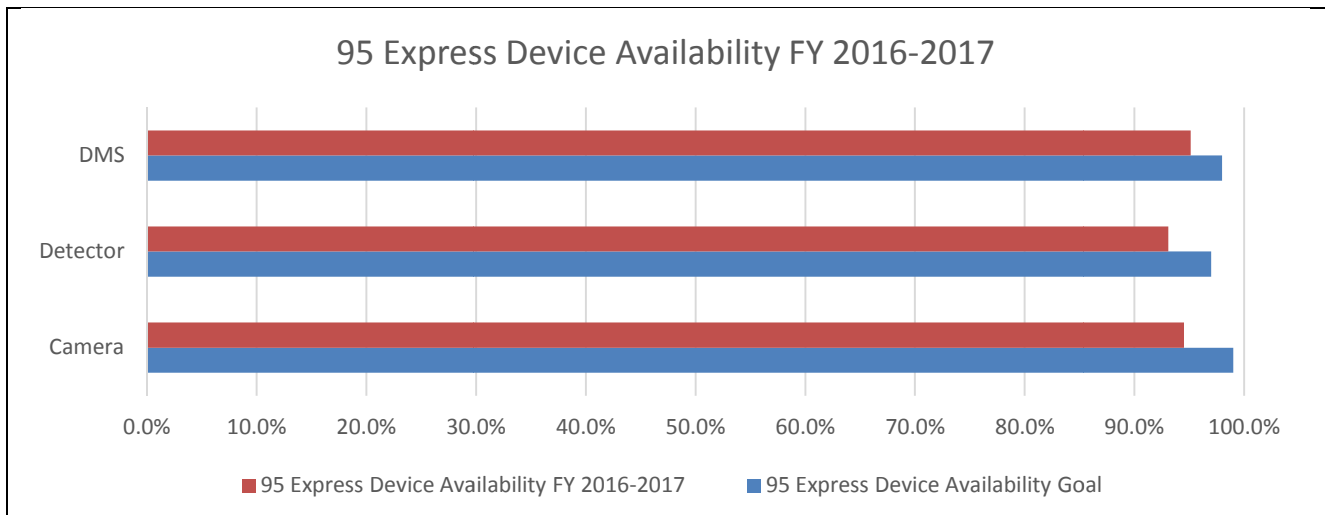
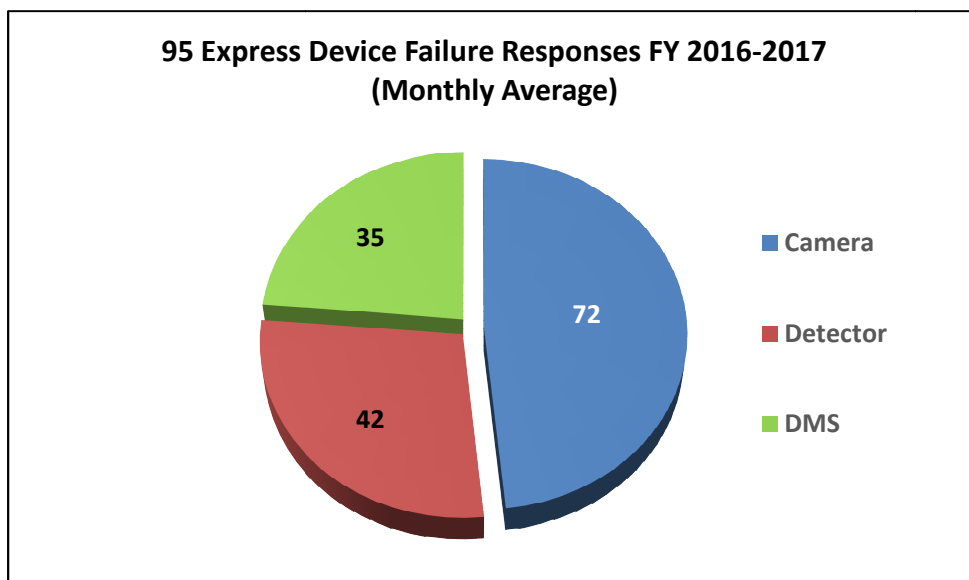


Chart 9 shows the average monthly failure responses (maintenance crews responding to a device failure ticket) for the 95 Express devices. Failures are either deemed as Critical or Non-Critical. A Critical failure is defined as a failure that creates a safety hazard to motorists or impacts the operations of several devices in the region. Since all 95 Express devices are deemed critical devices, their failures are also deemed critical. Procedures are in place between Districts Six and Four for all 95 Express devices that are operated by District Six, but owned and maintained by District Four for coordination of device failures.

Chart 9 – 95 Express Device Failure Responses (FY 2016-2017)

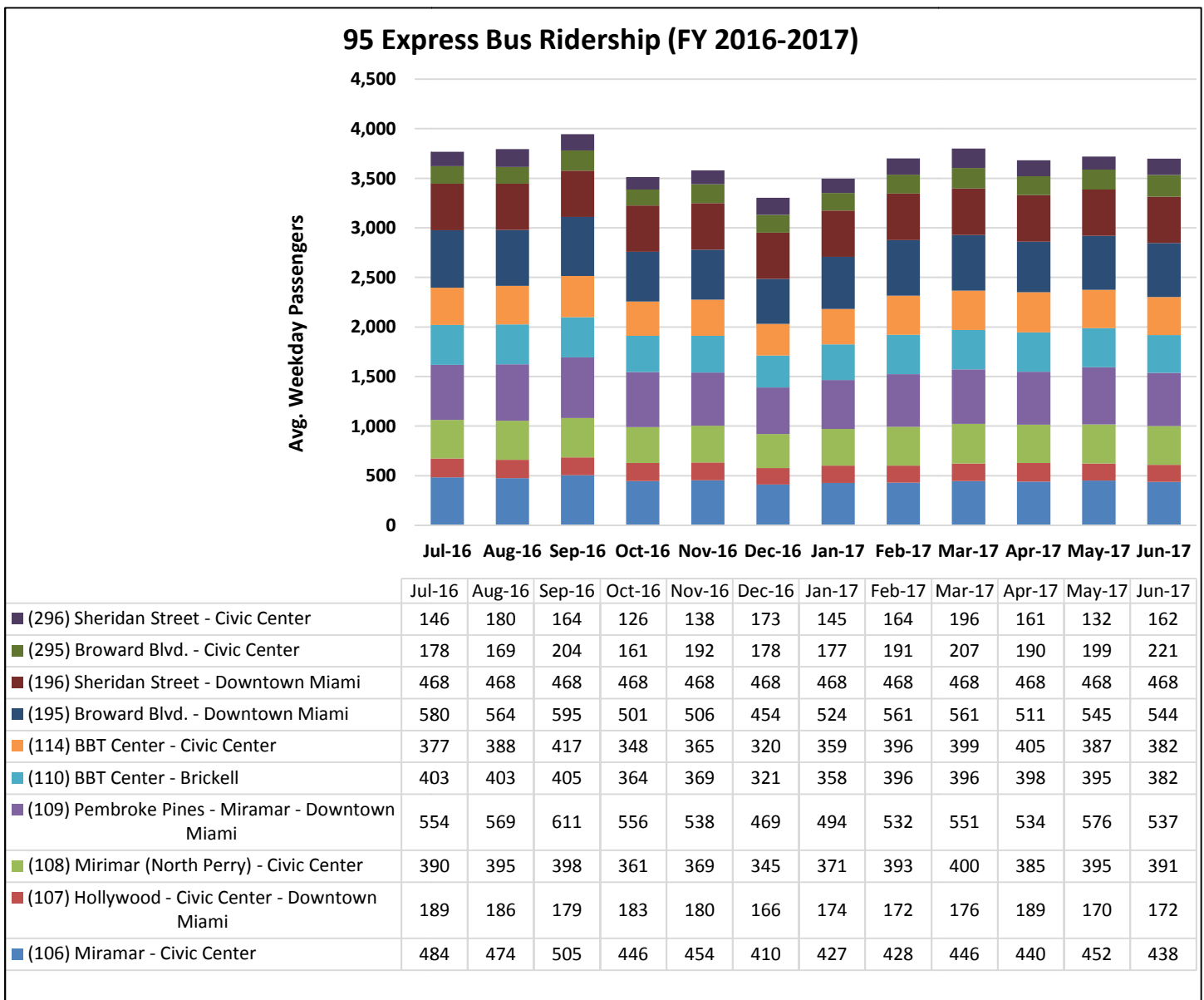


NOTE: DMS equals Dynamic Message Sign

Transit

Chart 10 shows the average weekday boardings for the Miami-Dade Transit (MDT) and Broward County Transit (BCT) express bus routes which utilize 95 Express. Average weekday boardings continue to increase year over year; rising from 3,580 boardings per day in FY 2015-2016 to 3,670 in FY 2016-2017. Not shown on the chart are the average weekday boardings from the Golden Glades Park & Ride route operated by MDT: 1,975 average weekday boardings in FY 2016-2017 (down 7% from previous year). Though this route is part of the 95 Express Bus system, it is not included as part of the Miami Urban Partnership Agreement, which is why it is excluded from Chart 10.

Chart 10 – 95 Express Bus Ridership (FY 2016-2017)



This concludes the executive summary of the 95 Express Annual Report for Fiscal Year 2016-2017. For all previous years' performance, project history and lessons learned, please visit 95Express.com.