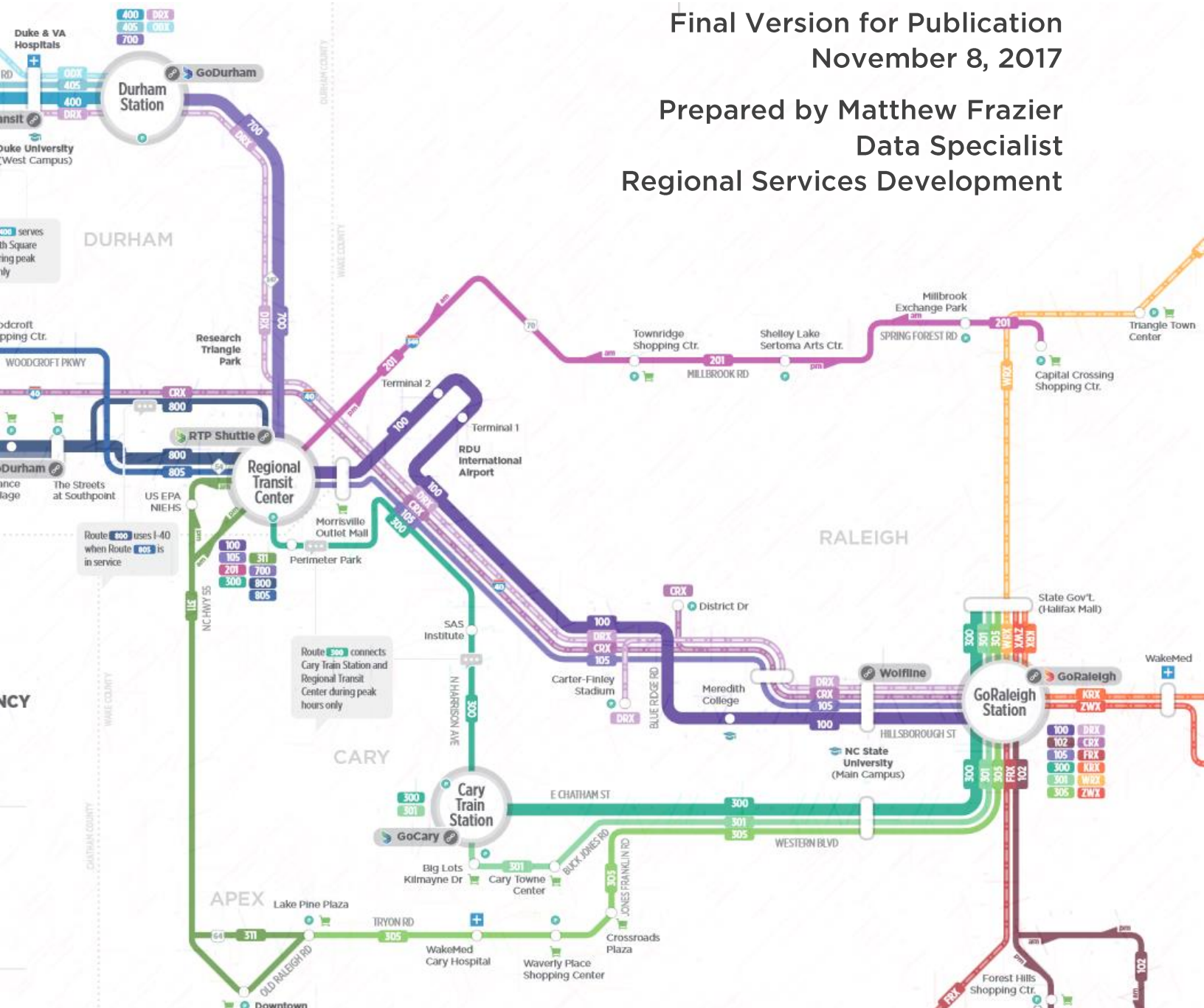




FY 2017 Annual Bus Service Performance Report

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Introduction

In September 2003, GoTriangle's Board of Trustees adopted the Regional Bus Service Standards to establish performance expectations for the agency's fixed-route services. The intent was to drive improvements in productivity by routinely and systematically evaluating bus service performance against quantifiable indicators. Since the adoption of the Standards, the annual performance reporting process has been incrementally adjusted to provide the most useful information about GoTriangle's bus service.

The key performance indicators presented in this report are:

- **Daily Boardings** – how many people are using the service provided?
- **Boardings per Revenue Hour** – how cost-effective is this service compared to others?
- **On-Time Performance** – how well is the service meeting the expectations set by the schedule?

This report provides a summary of GoTriangle's regional bus service performance during Fiscal Year 2017, with comparisons to FY 2016 and prior years to illustrate changes and trends in performance.

Key Findings

- In FY 2017, GoTriangle had a total of 1,662,758 boardings. This is a decrease of 7% from FY 2016, where there were 1,784,681 total boardings. Similarly, productivity decreased to 11.8 boardings per hour from 13.0 boardings per hour.
- The decline in ridership mirrors national trends for intercity transit authorities, and is most likely linked to decreases in gas prices and increases in car ownership in the Triangle. Services to employment centers with higher parking costs have retained more ridership.
- Peak hour ridership increased on Routes 300, 405, DRX, FRX, and ODX. Of particular note, Route 405's new service to Carrboro has attracted an average of 33 boardings per day.
- Many peak-hour services to Raleigh and the Regional Transit Center are losing ridership. Ridership on routes from Wake County towns to downtown Raleigh has decreased by 14% (excluding Fortify routes), and ridership on the RTP Shuttle routes has decreased by 26%. A new short-range transit plan is underway in FY 2018, which will provide opportunities to improve or reconsider these services.
- Ridership on midday service has decreased by 7%, and ridership on night and weekend service has decreased by 15%. However, additional frequency on Route 400 is leading to ridership growth during midday and Saturday, which will become more evident in future reports.
- GoTriangle's highest-productivity services at peak are Routes 400, 405, 420, 700, 800, 805, CRX, and DRX. In general, routes are more attractive and productive when they serve dense and walkable activity centers, operate along a direct routing, and have demand in both directions.
- Systemwide on-time performance was 86%, which is above the target of 85%. However, several routes failed to meet the target on weekdays, with Routes 102, CRX, DRX, and ZWX having the lowest on-time performance. Some of these routes have received schedule updates in FY 2017 and FY 2018, but without adding revenue hours or deleting route miles, there are limited options for responding to increased travel times.

What Changed in FY 2017

GoTriangle typically implements major service changes in August of each year. In August 2016, the primary service changes were a major restructure of service in the US 15-501 corridor:

- Route 400 received additional frequency, in order to operate every 30 minutes from the start of service to 7 PM, Monday through Saturday. Previously, service was hourly at all off-peak times.
- Route 400's local service to University Dr and SW Durham Dr was reduced to peak-only, in order to provide faster service between Durham and Chapel Hill during off-peak times. Previously, trips between Durham Station and downtown Chapel Hill took about 45 minutes by transit, compared to about 25 minutes driving. Without serving University Dr or SW Durham Dr, the transit time was reduced to 35 minutes.
- Route 405 was rerouted so that AM trips to Durham begin in Carrboro before serving downtown Chapel Hill, and reverse in the PM. This provides regional service in Carrboro for the first time.

In addition, changes were made to compensate for increasing travel times on regional highways:

- Route 105's service to the District Dr Park-and-Ride was deleted.
- Route 700's service to Lawson St, Alston Ave (NC 55), and Durham Tech was removed as part of a long-term detour. This area is also served by GoDurham Routes 8 and 12. (The initial motivation for the detour was a planned closure of the ramp from Alston Ave North to NC 147 North. This closure has since been delayed by over a year, but peak-hour traffic is still too heavy for full-time service to be restored. Service Planning will continue to monitor NC 147.)

Overall Performance

Across all services, GoTriangle had 1,662,758 customer boardings in FY 2017. This represents a 7% decline compared to FY 2016 (1,784,681).

GoTriangle increased the amount of service provided from 137,367 revenue hours in FY 2016 to 140,448 revenue hours in FY 2017. (Most of the increase was from the improved midday and Saturday frequency on Route 400.) Consequently, productivity declined from 13.0 boardings per hour to 11.8 boardings per hour – a 9% decrease.

On-time performance decreased slightly from 87% to 86%, but still meets GoTriangle's goal of 85%.

Changes in Ridership by Route

Across all service types, there is an average 7% decline in the number of daily boardings from FY 2016 to FY 2017. The decline in ridership is more significant on night and weekend services than on peak and midday services:

Boardings per Day	FY 2016	FY 2017	Change
Weekday Peak	5,324	4,995	-7%
Weekday Midday	1,086	1,012	-7%
Weeknight	300	256	-15%
Saturday	1,601	1,382	-14%
Sunday	831	717	-14%

* This table includes Route RSX (Robertson Scholars Express), but tables in the following subsections do not.

A complete table of ridership and productivity by route is included in attachment C, and each route's peak service is broken down by direction in attachment D.

Peak Services

The overall change in ridership on peak services is a 7% decline, but there is great variance between routes and destinations. The following analysis breaks down ridership on peak service based on which regional centers each route serves: Raleigh, Durham, Chapel Hill, and the RTC.

When a route connects two of these regional centers, ridership is split by direction. (For example, on Route DRX, AM trips from Raleigh to Durham and PM trips from Durham to Raleigh are reported in the “Peak Service to Durham” section.) This is marked by a “†” symbol in the tables. However, when a route has a regional center at only one end, its ridership is not split.

Peak Service to Raleigh

While a few key routes are increasing in ridership, most Raleigh-based routes are declining. Overall, ridership on peak service to Raleigh is down 6%.

All-day direct service between Raleigh and Cary on Route **300** was first introduced in January 2015, and it has continued to grow steadily in ridership since introduction.

Route **DRX** is the highest-ridership route to Raleigh, and it is continuing to grow even without investments in additional service.

Route **FRX** is the highest-ridership Fortify route, and it continued to grow in FY 2017. Its service has been reduced for FY 2018 since only hourly service is included in the Wake County Transit Plan. Careful public

outreach was undertaken to develop a schedule that would continue to serve as many riders as possible, and accordingly, Route FRX has retained over three quarters of its ridership despite retaining only eight out of eighteen trips.

Routes **CLX** and **JCX** had less ridership, and have been terminated due to the end of the Fortify project.

Other Raleigh-based routes are generally declining (or in the case of Route **KRX**, remaining at a low level of ridership). Changes are contemplated for several of these routes in the Wake County Transit Plan to improve their usefulness.

Route	From	FY 16	FY 17	Δ
300	Cary	147	157	7%
DRX	Durham †	182	191	5%
FRX	Fuquay-Varina	61	67	10%
CLX	Clayton	39	43	11%
KRX	Knightdale	34	37	8%
JCX	Johnston County	44	43	-2%
102	Garner	51	45	-13%
100	RTC/Airport †	100	92	-8%
WRX	Wake Forest	59	47	-19%
CRX	Chapel Hill †	167	154	-8%
ZWX	Zebulon/Wendell	71	56	-20%
305	Cary/Apex	128	111	-14%
301	Southeast Cary	151	130	-14%
105	RTC †	106	85	-20%

Peak Service to Durham

Overall, ridership on peak services to Durham is growing, but in FY 2017 this growth was mitigated by service changes which removed route segments also served by GoDurham. The total decrease was 1%, but on routes without service changes ridership increased by 7%.

Route	Origin	FY 16	FY 17	Δ
405	Chapel Hill/Carrboro †	182	203	11%
DRX	Raleigh †	256	269	5%
ODX	Hillsborough/Mebane	82	93	14%
400	Chapel Hill/South Sq. †	198	184	-7%
700	RTC †	137	98	-28%

Route **405** was rerouted to serve Carrboro directly in August 2016, which has increased ridership. Automated passenger counters show 33 passengers per day boarding in Carrboro.

Route **DRX** continues to grow even without investments in additional service.

Route **ODX** was introduced in August 2014, and it also continues to grow.

The loss in ridership on Routes **400** and **700** can be explained by route changes which removed service to certain areas. In Route 400's case, service to SW Durham Dr and University Dr is still present at peak, but the lack of off-peak service is likely suppressing peak trips. The removed areas are still served by GoDurham (Routes 8, 10/10A, and 12), but additional transfers are now required for regional travel.

Peak Service to Chapel Hill

Ridership to Chapel Hill remains generally stable. Routes **400**, **405**, **420**, and **CRX** had only minor fluctuations in ridership.

However, Routes **800** and **805** headed towards Chapel Hill experienced significant ridership losses. A specific cause has not been identified.

Route	Origin	FY 16	FY 17	Δ
420	Hillsborough	176	180	2%
405	Durham †	285	287	1%
CRX	Raleigh †	242	238	-2%
400	Durham/Patterson Pl. †	292	285	-2%
805	RTC/Woodcroft †	330	294	-11%
800	RTC/Southpoint †	508	455	-10%

Peak Service to RTC

Ridership to the Regional Transit Center (and the general Research Triangle Park area) has decreased on every route which serves it. Overall, ridership to the RTC is down by 12%.

It is worth noting in particular that ridership on the RTP Shuttles (Routes **42**, **46**, **47**, and **49**) has decreased by a full 26%. Given the losses in ridership and continuing low productivity, GoTriangle is planning a pilot project to launch in FY 2018 which would replace the RTP Shuttles with a demand-response service.

Route	Origin	FY 16	FY 17	Δ
800	Chapel Hill/Southpoint †	115	112	-2%
300	Cary †	125	122	-2%
311	Apex/Lake Pine	87	82	-6%
105	Raleigh †	144	133	-8%
201	North Raleigh	74	60	-20%
700	Durham †	201	184	-9%
805	Woodcroft †	133	112	-16%
100	Raleigh/Airport †	146	118	-19%
42-49	RTP Shuttles	158	117	-26%

Off-Peak Services

GoTriangle's off-peak service is limited to the core routes (100, 300, 400, 700, and 800).

Route	Midday			Night			Saturday			Sunday		
	2016	2017	Δ	2016	2017	Δ	2016	2017	Δ	2016	2017	Δ
100	232	211	-9%	77	69	-10%	432	377	-13%	253	223	-12%
300	113	119	6%				135	105	-22%			
400	231	253	10%	80	61	-24%	378	343	-9%	215	185	-14%
700	168	136	-19%	54	49	-9%	241	233	-3%	140	128	-9%
800	228	206	-10%	63	52	-17%	328	252	-23%	170	131	-23%
Total	973	925	-5%	274	231	-16%	1,513	1,310	-13%	777	666	-14%

Service changes to Route **400**'s off-peak service shortened travel times by ten minutes and doubled midday and Saturday frequency. As a result, many more passengers are using Route 400 to travel from Durham to Chapel Hill or vice versa. However, these changes required removing service to SW Durham Dr and University Dr at all off-peak times, which immediately reduced the route's overall ridership. (Most of the affected riders continue to have service on GoDurham Route 10/10A.) Ridership growth takes time, and staff expects to have a full picture of how the improved frequency is attracting more customers in FY 2018.

In August 2017, GoTriangle similarly increased midday and Saturday frequency on Routes 100, 300, 700, and 800 – providing 30-minute frequencies on all core routes until 7 PM, six days a week. The results of these changes will be presented fully in the FY 2018 annual report, but early results (described later in the “What’s Ahead?” section) are promising.

It is also worth noting that removing service to Durham Tech on Route **700** reduced its midday ridership by more than any other route. (As with Route 400, affected riders continue to have service on GoDurham Routes 8 and 12.) However, its ridership decreased by less than other routes at night and on weekends.

Robertson Scholars Express (RSX)

Route RSX (Robertson Scholars Express) is unique in that it is funded by the Robertson Scholars Foundation, which reimburses GoTriangle for the route's operating costs. It operates directly between the Duke Chapel and UNC Morehead Planetarium without making any stops in between, and provides service only during the academic year.

From FY 2016 to FY 2017, ridership decreased from 248 to 222 boardings per weekday, from 88 to 72 boardings per Saturday, and from 54 to 51 boardings per Sunday. Route RSX's ridership is generally excluded from the tables above.

Productivity by Route

GoTriangle budgets for bus services in terms of a cost per revenue hour (\$119 for FY 2018). Accordingly, the number of boardings per revenue hour answers the question, “How many passenger trips is GoTriangle providing for each dollar invested?”

The Regional Bus Service Standards indicate that a route is “high performing” if its number of customer boardings per hour is above 125% of the average for its service category. Similarly, a route is “low performing” if its number of customer boardings per hour is below 75% of the average for its service category.

Peak Services

Peak services are divided into three categories: Regional, Express, and Shuttle. The only true difference between the categories from a cost perspective is that Express routes charge a higher fare (\$3.00 per boarding rather than \$2.25). Regional routes have an average of 13.5 boardings per hour, Express routes have an average of 9.7, and Shuttle routes have an average of 6.2.

Route	Bd./Hr.	Category	Status
700 (Durham – RTC)	21.3	Regional	High Performing
405 (Durham – Chapel Hill/Carrboro)	21.1	Regional	High Performing
800 (Chapel Hill – Southpoint – RTC)	18.5	Regional	High Performing
400 (Durham – Patterson Place – Chapel Hill)	15.9	Regional	Average for Category
805 (Chapel Hill – Woodcroft – RTC)	15.3	Regional	Average for Category
420 (Hillsborough – Chapel Hill)	13.5	Regional	Average for Category
105 (Raleigh – RTC)	11.9	Regional	Average for Category
300 (Raleigh – Cary)	10.7	Regional	Average for Category
305 (Raleigh – Cary – Lake Pine)	9.4	Regional	Low Performing
100 (Raleigh – Airport – RTC)	9.0	Regional	Low Performing
301 (Raleigh – Southwest Cary)	7.6	Regional	Low Performing
102 (Raleigh – Garner)	7.4	Regional	Low Performing
201 (North Raleigh – RTC)	7.4	Regional	Low Performing
311 (Apex – RTC – EPA)	5.5	Regional	Low Performing
DRX (Durham – Raleigh Express)	18.1	Express	High Performing
CRX (Chapel Hill – Raleigh Express)	13.9	Express	High Performing
RSX (Robertson Scholars Express)	12.3	Express	High Performing
ODX (Orange – Durham Express)	8.5	Express	Average for Category
ZWX (Zebulon – Wendell – Raleigh Express)	7.9	Express	Average for Category
KRX (Knightdale – Raleigh Express)	6.5	Express	Low Performing
WRX (Wake Forest – Raleigh Express)	4.8	Express	Low Performing
FRX (Fuquay-Varina – Raleigh Express)	4.8	Express	Low Performing †
CLX (Clayton – Raleigh Express)	3.1	Express	Low Performing †
JCX (Johnston County – Raleigh Express)	3.1	Express	Low Performing †
49 (Kit Creek Shuttle)	8.8	Shuttle	High Performing †
46 (Miami/TW Alexander Shuttle)	7.0	Shuttle	Average for Category †
47 (TW Alexander/Cornwallis Shuttle)	5.8	Shuttle	Average for Category †
42 (Davis Dr/IBM Shuttle)	2.9	Shuttle	Low Performing †

† Routes CLX and JCX was eliminated, and service on Route FRX was reduced, at the end of the Fortify project. (Route FRX’s productivity for FY 2018 Q1 was 8.9 passengers per hour.)

Routes 42, 46, 47, and 49 are proposed for replacement with demand-response service.

Off-Peak Services

Off-peak services are split into categories based on the time of day. The high performers in each category are highlighted in blue, and the low performers in red. Route 700 is a high performer at all times of day, while Route RSX is a low performer at all times of day.

Route	Midday	Night	Saturday	Sunday
100 (Raleigh – Airport – RTC)	19.2	10.2	11.7	9.2
300 (Raleigh – Cary)	17.0	–	8.8	–
400 (Durham – Patterson Place – Chapel Hill)	11.7	8.8	6.9	7.9
700 (Durham – RTC)	22.4	12.2	14.7	10.8
800 (Chapel Hill – Southpoint – RTC)	17.3	7.7	8.1	5.7
RSX (Robertson Scholars Express)	7.9	3.8	5.5	4.6
Time of Day Average	15.2	8.7	9.1	7.8

Attributes of Productive Services

When considering high performing services, and services that attracted ridership in FY 2017, patterns emerge for what services will be considered attractive by customers and operate at high productivity:

- **Density and Walkability.** The most successful routes serve dense employment and activity centers like downtowns and universities.
- **Direct Routing.** Routes which take the most direct path between their key destinations are more attractive to customers and more efficient to operate.
- **Available All Day.** Routes where off-peak service is available are more attractive, as they serve a greater variety of schedules and trip purposes. (Off-peak service can be provided by a parallel route, but routes that operate the same way at all times are ideal for customers.)
- **Bidirectional Demand.** When activity centers are located at either end of a route, it is able to fill in both directions, rather than running mostly empty in one direction.

On-Time Performance

GoTriangle considers a trip on time if it arrives at its end-of-line timepoint no more than five minutes later than the scheduled time. The defined goal is for 85% of trips to arrive on time. Overall, GoTriangle met this goal, with 86% of trips arriving on time.

On weekdays, the overall on-time performance was 85% (right at the goal). The following routes did not meet the on-time performance goal:

Route	FY 16	FY 17	Change	Actions in FY 18
102 (Raleigh – Garner)	66%	64%	-2 pt	
105 (Raleigh – RTC)	87%	84%	-2 pt	Schedule updated
300 (Raleigh – Cary – RTC)	86%	83%	-3 pt	
305 (Raleigh – Cary – Lake Pine)	80%	80%	1 pt	
800 (Chapel Hill – Southpoint – RTC)	83%	81%	-2 pt	
805 (Chapel Hill – Woodcroft – RTC)	86%	80%	-7 pt	Schedule updated
CLX (Clayton – Raleigh Express)	84%	80%	-4 pt	Route deleted
CRX (Chapel Hill – Raleigh Express)	79%	70%	-8 pt	Schedule updated
DRX (Durham – Raleigh Express)	78%	78%	--	Schedule updated
FRX (Fuquay-Varina – Raleigh Express)	76%	80%	4 pt	Route change
KRX (Knightdale – Raleigh Express)	84%	84%	--	
WRX (Wake Forest – Raleigh Express)	84%	83%	-1 pt	
ZWX (Zebulon – Wendell – Raleigh Express)	87%	77%	-10 pt	
46 (Miami/TW Alexander Shuttle)	82%	81%	-1 pt	Replacement proposed

(Routes in orange met the on-time performance goal in FY 2016, but not in FY 2017.)

Routes 105, 300, 305, 700, CRX, and DRX had received schedule updates in FY 2017 to deal with on-time performance issues. Route 700's on-time performance on weekdays increased from 91% to 96% since an entire segment of local service was removed due to the long-term detour. However, on the other routes, no segments could be deleted and no vehicles could be added, so the growth in travel times outstripped the time which could be gained from schedule adjustments.

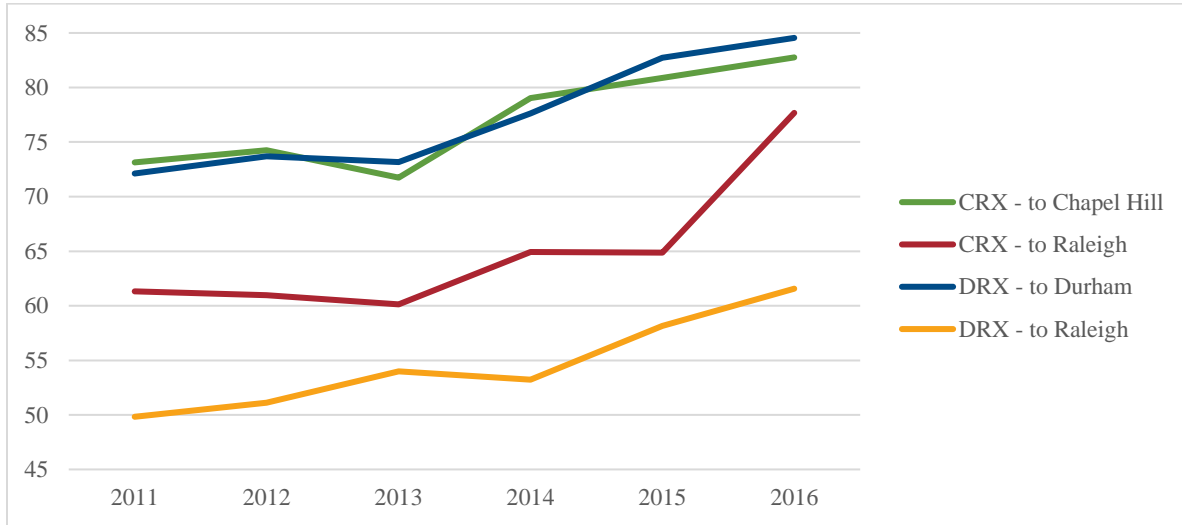
On weekends, on-time performance data for Route 300 was unavailable due to equipment issues, but all other routes met the goal of 85%. Routes 100, 400, and 800 had on-time performance less than 90% on Saturdays, but new schedules were implemented on August 6, 2017 that took updated travel times into account.

A complete table of on-time performance for each route is included in attachment E.

External Trends

Traffic

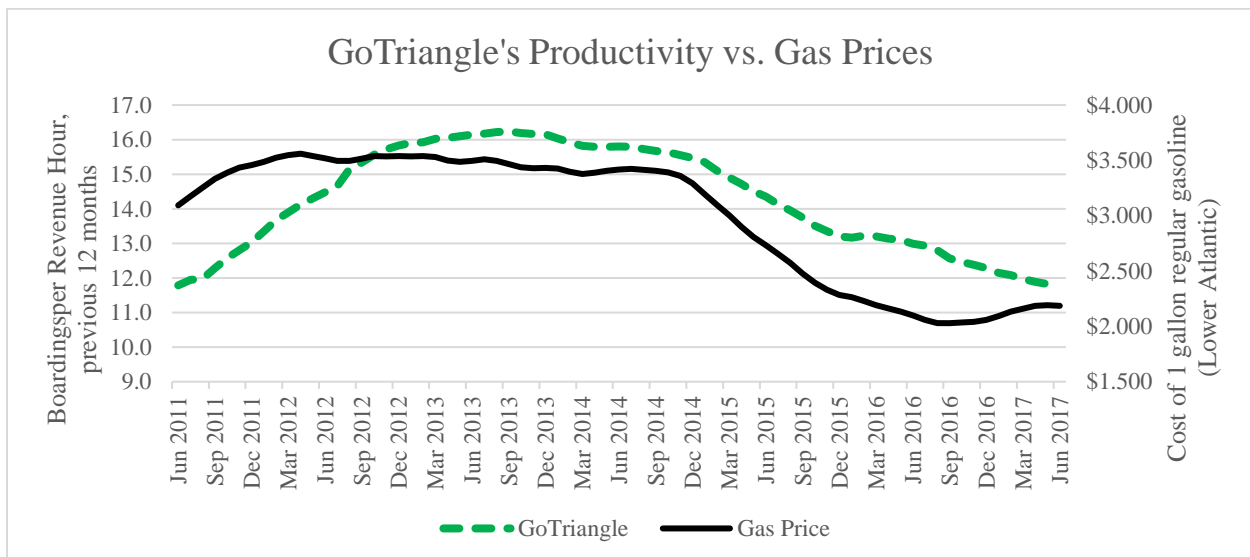
Bus travel times continued to increase in FY 2017. The following chart shows the average end-to-end travel times for the trips of Routes CRX and DRX departing at 4:30 PM, in the October of each year:



In addition to population growth, traffic flow is being adversely affected by ongoing construction projects like the East End Connector along NC 147 in Durham and the Hillsborough St Renewal Project in Raleigh. The end of these projects may abate travel times to some extent, but the broader forces of population growth and induced demand will likely continue to push traffic congestion higher.

Cost of Driving

Gasoline prices continued at the low levels to which they had dropped in FY 2016. During FY 2012, 2013, and 2014, the average price of 1 gallon of regular gasoline had remained between \$3.259 and \$3.799. However, by January 2015, the price of gasoline had dramatically decreased to \$2.119 per gallon. It fluctuated throughout FY 2015 and 2016, but in FY 2017 the price of gasoline stayed consistently between \$2.049 and \$2.299 per gallon.



The cost of fuel is only a small part of the cost of driving, but travelers perceive most of the other costs of driving (such as licensing, insurance, maintenance, and depreciation) as fixed. Fuel and parking are the primary costs that travelers consider when choosing whether to drive or not to drive for a certain trip. Parking costs and policies have not changed significantly at major Triangle employers since last year:

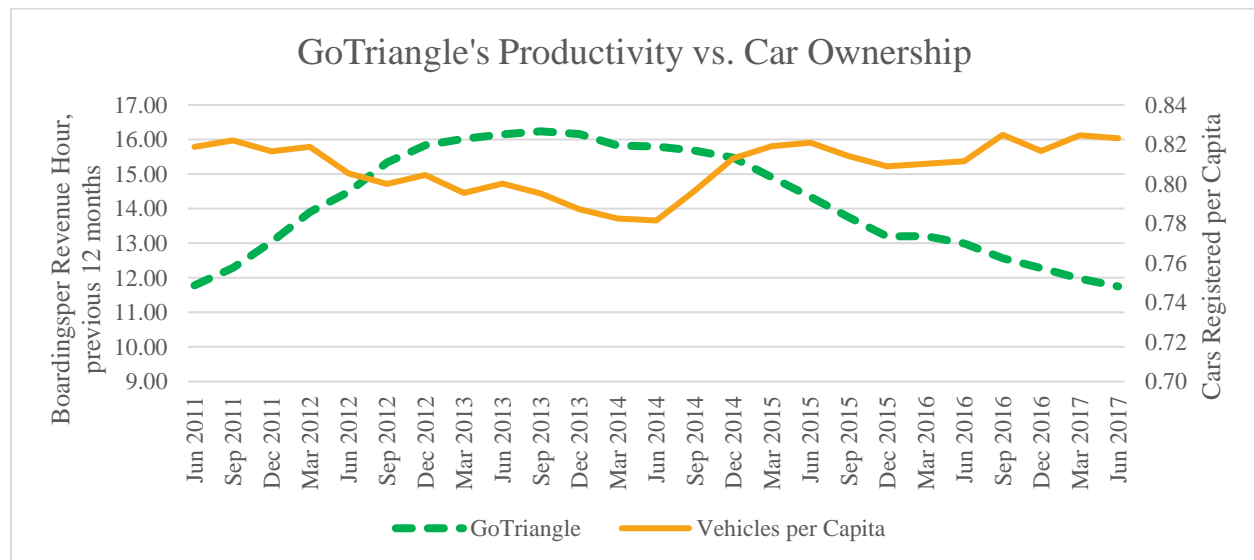
Annual Parking Prices	GoPass	Satellite	Minimum	Max Non-Assigned
UNC Chapel Hill *	\$0	\$229-394	\$444-952	\$585-1,258
Duke University	\$25	\$141	\$618	\$1,257
Durham VA Medical Center	n/a	n/a	\$474	\$474
NC State University	\$60	\$120	\$357	\$480
Meredith College **	\$0	\$0	\$0	\$125
State Government	\$25	n/a	\$120	\$180
Downtown Durham – Public Parking	n/a	n/a	\$840	\$960
Downtown Raleigh – Public Parking	n/a	n/a	\$816	\$1,380

* UNC’s employee parking prices vary with salary.

** Meredith parking is free for employees. Only commuting students must pay for parking.

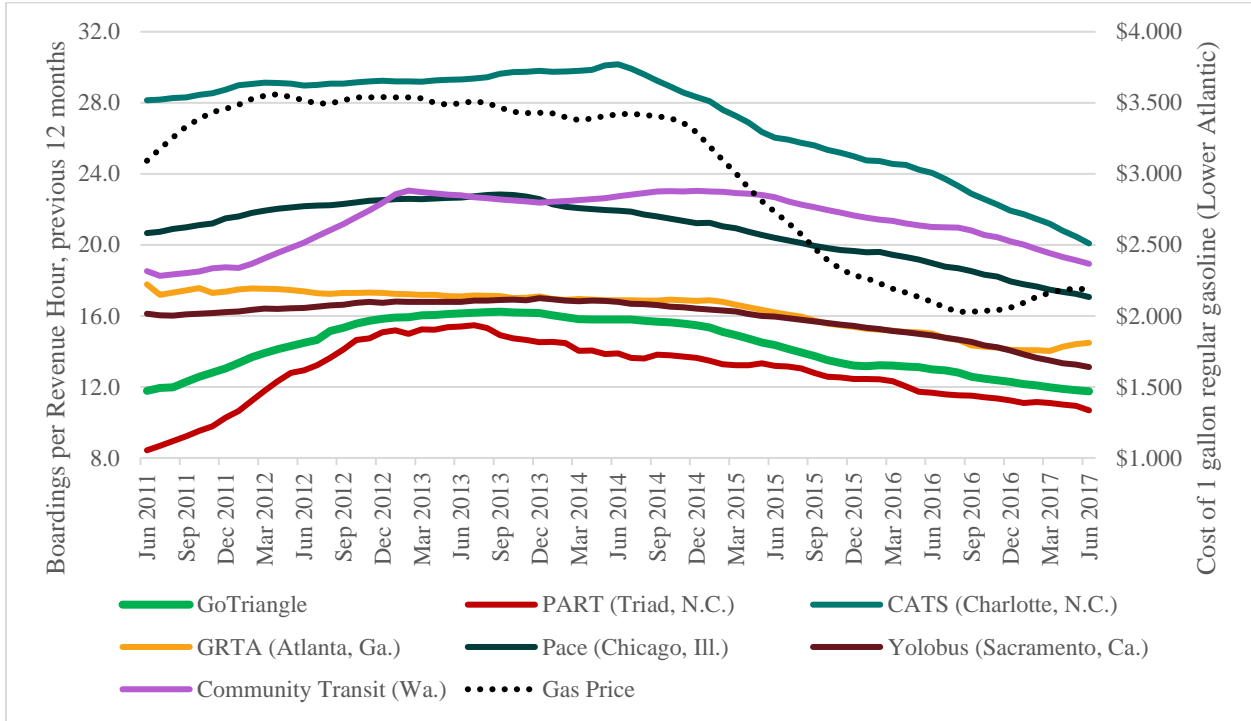
In general, schools and worksites with less parking and higher parking prices will have higher transit ridership. This naturally correlates well with dense and transit-supportive land use (with more activity, there is less room for parking, so the market drives parking prices higher), but there is also a policy component. The State Government, in particular, has artificially low parking prices since parking policy changes must be approved by the Council of State.

That being said, travelers evaluate the “fixed” costs of driving as well, and the past few years have also seen an uptick in car *ownership* in GoTriangle’s service area. The number of registered cars per capita in Wake, Durham, and Orange Counties was steadily decreasing from FY 2012 through FY 2014, but sharply increased in FY 2015. It has remained generally stable since.

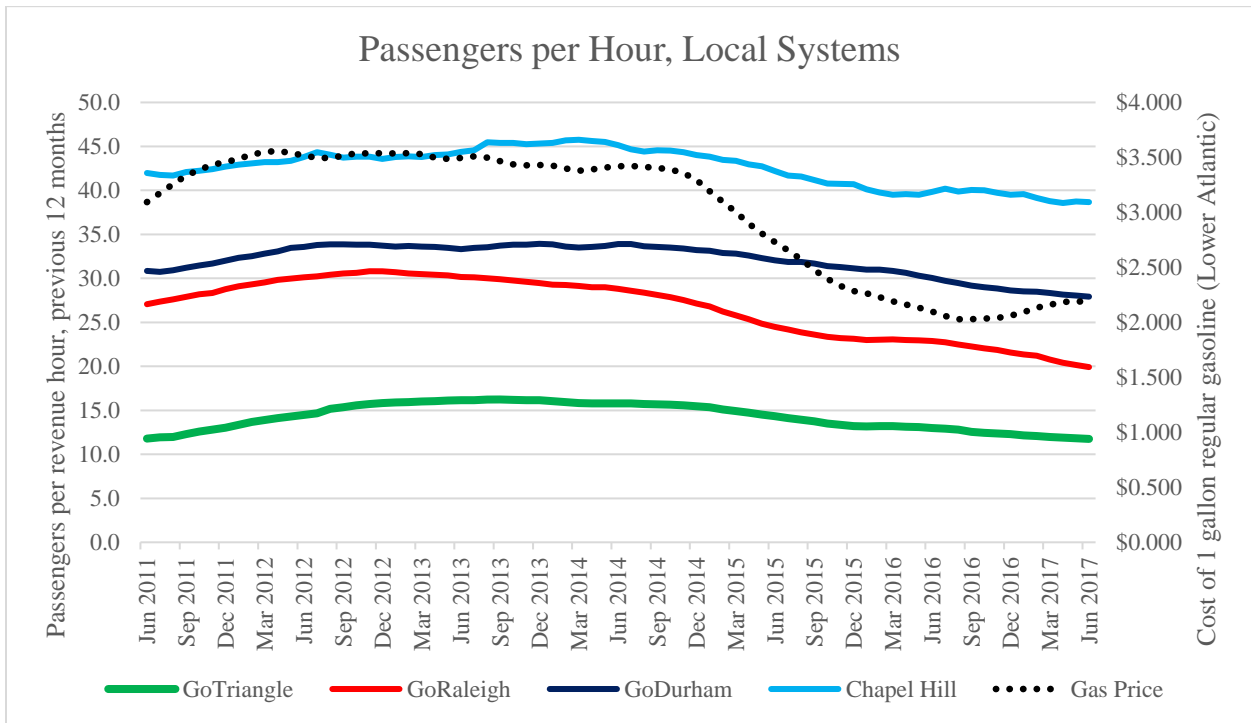


Peer Comparison

Other transit systems in the United States have been experiencing similar declines in ridership. This graph shows the trends in boardings per revenue hour (productivity) at GoTriangle and six peer intercity transit agencies from across the United States, together with gas prices:

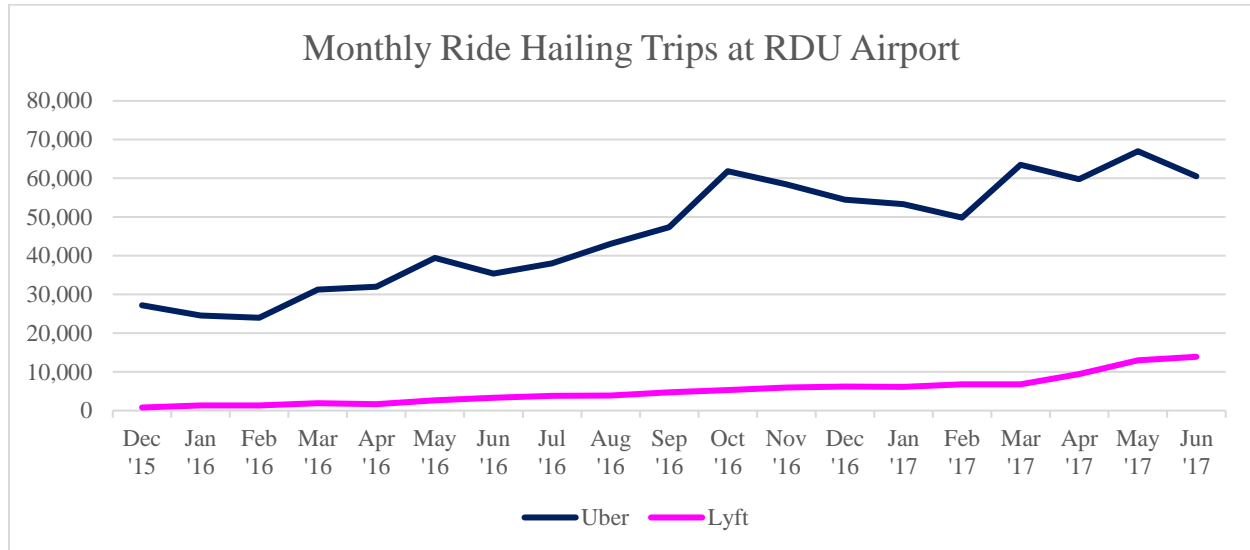


GoTriangle’s partner agencies in the Research Triangle have experienced similar declines.



App-Based Ride Hailing

Over the past few years, app-based ride hailing services (most notably Uber and Lyft) have grown in popularity. Ride hailing services advertise their lower prices and ease of use compared to taxis, and their ability to provide a one-seat ride on demand as an advantage over transit. For travelers who do not have access to their own personal car, ride hailing can be a compelling option for quick trips. The Raleigh-Durham Airport Authority monitors ride hailing usage at the airport, and they observed a doubling of ride hailing trips during FY 2017:



GoTriangle's 2016 customer satisfaction survey included questions about how our customers are also using ride hailing services. 37% of GoTriangle customers had used Uber or Lyft within the past 30 days when surveyed, and 20% had specifically used Uber or Lyft to make a trip for which they otherwise would have used transit. The survey provides a limited view into GoTriangle customers' usage of ride hailing services, so it is difficult to draw strong conclusions about how they may be affecting ridership.

What's Ahead in FY 2018

Increasing Bus Service

On August 6, 2017, GoTriangle used revenues from the Wake, Durham, and Orange County transit referenda to add off-peak and weekend trips to Routes 100, 700, 800, and 300 (between Raleigh and Cary). Now, all five core routes (100, 300, 400, 700, and 800) have half-hourly service through 7 PM on weekdays and Saturdays, plus hourly night and Sunday service.

Early ridership results from these changes are positive. Less than two months after implementation, most routes have seen a 25-40% growth in midday ridership and 20-25% growth in Saturday ridership.

Route 300 saw even more impressive growth of 68% in midday ridership and 77% in Saturday ridership.

Boardings per Day Route	Midday (Aug., Sept.)			Saturday (Aug., Sept.)		
	2016	2017	Δ	2016	2017	Δ
100 (Raleigh – Airport – RTC)	261	363	39%	579	707	22%
300 (Raleigh – Cary)	113	190	68%	106	188	77%
700 (Durham – RTC)	178	227	27%	365	457	25%
800 (Chapel Hill – Southpoint – RTC)	233	300	29%	406	493	22%

GoRaleigh and GoCary both used revenues from the Wake County transit referendum to add Sunday service to all of their regular routes. The additional local Sunday service in Raleigh has increased ridership on Route 100 from 333 boardings per Sunday to 381 (an increase of 14%), and Route 300's new Sunday service has an average of 70 boardings per day.

No additional increases in service are planned for FY 2018, but staff from all regional agencies are currently planning service improvements for implementation in early FY 2019.

On-Demand Service Pilot in RTP

Beginning on November 27, 2017, GoTriangle will replace the four RTP Shuttle routes (42, 46, 47, and 49) with an on-demand service as a pilot project. It will use on-demand, computer-based dispatch similar to Uber or Lyft (provided by TransLoc), but it will be operated by GoTriangle employees using GoTriangle vehicles. Customers can request rides using the TransLoc Rider smartphone app, a Web browser, or a phone call to GoTriangle.

The goal is to attract new transit riders to GoTriangle by providing more direct trips within the Research Triangle Park (including the possibility of eliminating transfers for trips within the RTP), by serving additional residential and retail centers, and by expanding service to operate during midday instead of during the peak period only.

Regional Bus Network Planning

GoTriangle is currently participating in county-wide transit planning efforts in Wake, Durham, and Orange Counties. While the county-level planning efforts have different focuses, each one will allow regional and local services to be coordinated and plan how to use the revenues from each county's transit referendum. The three plans will be consolidated into one short-range plan for GoTriangle.

In addition, new service standards and performance measures for GoTriangle will be created as part of the plans, which will inform the FY 2018 annual bus service report and future service planning decisions.

Technology and Fare Improvements

GoTriangle is planning a regional technology integration study which would occur in FY 2019. This study would examine fare payment technology (including using mobile phones for fare payment), scheduling software, on-board signs and voice announcements, real-time arrival information, and data collection systems. The study would include all five area transit agencies, and develop a strategy for integrating all of the on-bus technologies with each other and integrating technology across agencies.

GoTriangle and our partner agencies are also exploring changes to fare policy as part of the regional transit plans, including a regional approach to youth fare (13-18) to encourage students to ride the bus.

Bus Stop Improvements

Transit riders in the Triangle continue to request better waiting conditions at bus stops. In FY 2018, GoTriangle will begin improvements at twelve of our bus stops, including shelters and benches.

GoDurham, GoRaleigh, and GoCary are also constructing bus stops in their service areas, thanks to funding from the county transit referenda. Since many of GoTriangle's riders begin or end their trip at a local bus stop, regional collaboration is essential to providing safe and comfortable bus stops.

Marketing Initiatives

In FY 2017, GoTriangle's Marketing team focused on storytelling. Through the GoTogether video series, GoTriangle was able to tell the stories of riders who chose an alternative way to travel. These riders included a father and son who bike to work and school, siblings who get to and around their college campus by bus, and middle and high schoolers who ride transit to school. The videos encourage others to see themselves reflected in these stories and consider using an alternative to driving alone.

Moving into FY 2018, the Marketing team is looking for unique and interesting ways to educate people of all ages about alternate means of transportation. This will include a children's book series in both English and Spanish, presentations and workshops focused on seniors, and more overall campaigns focusing on the growing connectivity amongst ourselves and our partners through various transit investments.

Both existing and prospective transit riders will benefit from a new and improved www.gotriangle.org, which will launch during FY 2018. The new site will make maps, schedules, and service alerts more reliable and accessible to customers, and bring information about all of GoTriangle's services – bus, rideshare, travel demand management, transit planning, and more – to one place.

Travel Demand Management

GoTriangle's Sustainable Travel Services team is continuing to promote and improve services for smart commuters of every mode. This includes:

- The GoPerks program, which has monthly prize drawings for commuters who track carpool, vanpool, biking, walking, and transit trips in Share the Ride NC.
- The Emergency Ride Home program, which provides transportation for commuters who need to leave work early for illness or a family emergency, or stay late for unscheduled overtime.
- Individualized assistance that works directly with commuters to identify all of their options for sustainable commuting. (The Durham VA Medical Center requires all new employees to use individualized assistance, and will not issue parking passes unless the employee has no options for a more sustainable commute.)

In addition, Sustainable Travel Services is working directly with business leaders and developers to encourage developments that support sustainable transportation – which includes transit-friendly location, pedestrian-friendly design, and sustainable parking management strategies.



Attachment B: System Statistics									
	Daily Boardings			Daily Revenue Hours			Boardings per Hour		
	FY 2016	FY 2017	Δ	FY 2016	FY 2017	Δ	FY 2016	FY 2017	Δ
System							13.0	11.8	-9%
Weekday	6,711	6,263	-7%	509.2	522.3	3%	13.2	12.1	-8%
Regional Peak	3,805	3,528	-7%	261.9	262.5	0%	14.5	13.5	-7%
Express	1,361	1,350	-1%	138.9	139.1	0%	9.6	9.7	2%
Shuttles	158	117	-26%	18.8	19.0	1%	8.4	6.2	-27%
Regional Midday	1,086	1,012	-7%	58.3	70.9	22%	19.4	15.2	-22%
Regional Night	300	256	-15%	31.3	30.9	-1%	10.0	8.7	-13%
Saturday	1,601	1,382	-14%	135.8	156.3	15%	12.0	9.1	-24%
Sunday	831	717	-14%	93.9	93.5	0%	9.1	7.8	-14%

	Annual Boardings	
	FY 2016	FY 2017
System	1,784,681	1,662,758
Weekday	1,657,964	1,551,879
Regional Peak	955,027	885,618
Express	329,391	328,871
Shuttles	39,671	29,272
Regional Midday	260,922	246,191
Regional Night	72,953	61,927
Saturday	84,019	75,049
Sunday	42,698	35,830

Attachment C: Route Statistics	Boardings	Days	Daily Boardings			Daily Revenue Hours			Boardings per Hour		
Route	FY 2017		FY 16	FY 17	Δ	FY 16	FY 17	Δ	FY 16	FY 17	Δ
System Total	1,662,758	357							13.0	11.8	📉 -9%
Weekday System Total	1,551,879	251	6,711	6,263	📉 -7%	509.2	522.3	--	13.2	12.1	📉 -8%
Weekday Peak Services	1,243,761	251	5,324	4,995	📉 -6%	419.6	420.5	--	12.6	11.9	📉 -6%
Weekday Peak - Regional Routes	885,618	251	3,805	3,528	📉 -7%	261.9	262.5	--	14.5	13.5	📉 -7%
100 Raleigh-Airport-RTC	52,662	251	245	210	📉 -15%	23.4	23.3	--	10.5	9.0	📉 -14%
102 Raleigh-Garner	11,215	251	51	45	📉 -13%	6.0	6.0	--	8.6	7.4	📉 -13%
105 Raleigh-RTC	54,583	251	250	217	📉 -13%	18.8	18.3	--	13.4	11.9	📉 -11%
201 North Raleigh-RTC	14,948	251	74	60	📉 -20%	7.8	8.0	--	9.5	7.4	📉 -22%
300 Raleigh-Cary-RTC	70,156	251	239	280	📈 17%	26.0	26.1	--	9.8	10.7	📈 9%
301 Raleigh-Southeast Cary	32,616	251	173	130	📉 -25%	17.1	17.0	--	9.2	7.6	📉 -17%
305 Raleigh-Cary-Lake Pine	27,824	251	128	111	📉 -14%	11.7	11.8	--	10.9	9.4	📉 -14%
311 Apex-Lake Pine-RTC-EPA	20,508	251	87	82	📉 -6%	14.8	14.8	--	5.9	5.5	📉 -6%
400 Durham-Patterson Place-Chapel Hill	117,623	251	490	469	📉 -4%	29.7	29.5	--	16.5	15.9	📉 -4%
405 Durham-Chapel Hill	123,064	251	467	490	📈 5%	22.3	23.4	--	20.9	21.1	📈 1%
420 Hillsborough-Chapel Hill	45,267	251	176	180	📈 2%	13.7	13.7	--	12.9	13.5	📈 5%
700 Durham-RTC	70,828	251	338	282	📉 -17%	13.8	13.2	--	24.7	21.3	📉 -14%
800 Chapel Hill-Southpoint-RTC	142,468	251	622	568	📉 -9%	30.5	30.8	--	20.4	18.5	📉 -10%
805 Chapel Hill-Woodcroft-RTC	101,856	251	463	406	📉 -12%	26.4	26.6	--	17.6	15.3	📉 -13%
Weekday Peak - Express Routes	328,871	251	1,361	1,350	📉 -1%	138.9	139.1	--	9.6	9.7	📈 2%
CLX Clayton-Raleigh Express (Fortify)	10,820	251	39	43	📈 11%	14.0	14.0	--	2.8	3.1	📈 11%
CRX Chapel Hill-Raleigh Express	98,387	251	409	392	📉 -4%	28.1	28.3	--	14.7	13.9	📉 -6%
DRX Durham-Raleigh Express	115,527	251	438	460	📈 5%	25.5	25.5	--	17.5	18.1	📈 3%
FRX Fuquay-Varina-Raleigh Express (Fortify)	16,761	251	61	67	📈 10%	13.8	13.8	--	4.4	4.8	📈 10%
JCX Johnston County Express (Fortify)	10,789	251	44	43	📉 -2%	14.0	14.0	--	3.1	3.1	📉 -2%
KRX Knightdale-Raleigh Express	9,172	251	34	37	📈 8%	5.6	5.6	--	6.0	6.5	📈 8%
ODX Orange-Durham Express	23,389	251	82	93	📈 14%	10.9	10.9	--	7.5	8.5	📈 14%
RSX Robertson Scholars Express	17,991	161	118	112	📉 -5%	10.0	10.0	--	12.9	12.3	📉 -5%
WRX Wake Forest-Raleigh Express	11,878	251	59	47	📉 -19%	9.8	9.8	--	6.0	4.8	📉 -19%
ZWX Zebulon-Wendell-Raleigh Express	14,157	251	71	56	📉 -20%	7.2	7.2	--	9.9	7.9	📉 -20%
Weekday Peak - RTP Shuttles	29,272	251	158	117	📉 -26%	18.8	19.0	--	8.4	6.2	📉 -27%
42 Davis Dr/IBM Shuttle	3,398	251	25	14	📉 -47%	4.8	4.7	--	5.3	2.9	📉 -45%
46 Miami/TW Alexander Shuttle	8,120	251	27	32	📈 22%	4.5	4.6	--	5.9	7.0	📈 19%
47 TW Alexander/Cornwallis Shuttle	7,120	251	44	28	📉 -35%	4.7	4.9	--	9.3	5.8	📉 -38%
49 Kit Creek Shuttle	10,634	251	62	42	📉 -32%	4.8	4.8	--	13.1	8.8	📉 -32%
Weekday Midday - Regional Routes	246,191	251	1,086	1,012	📉 -7%	58.3	70.9	📈 22%	19.4	15.2	📉 -22%
100 Raleigh-Airport-RTC	53,033	251	232	211	📉 -9%	11.0	11.0	--	20.9	19.2	📉 -8%
300 Raleigh-Cary	29,903	251	113	119	📈 6%	7.0	7.0	--	16.2	17.0	📈 5%
400 Durham-Patterson Place-Chapel Hill	63,592	251	231	253	📈 10%	10.3	22.9	📈 122%	22.5	11.7	📉 -48%
700 Durham-RTC	34,222	251	168	136	📉 -19%	6.1	6.1	--	27.6	22.4	📉 -19%
800 Chapel Hill-Southpoint-RTC	51,582	251	228	206	📉 -10%	11.9	11.9	--	19.2	17.3	📉 -10%
RSX Robertson Scholars Express	13,859	161	104	86	📉 -17%	12.0	12.0	--	9.4	7.9	📉 -17%
Weeknights - Regional Routes	61,927	251	300	256	📉 -15%	31.3	30.9	--	10.0	8.7	📉 -13%
100 Raleigh-Airport-RTC	17,423	251	77	69	📉 -10%	6.8	6.8	--	11.4	10.2	📉 -11%
400 Durham-Patterson Place-Chapel Hill	15,346	251	80	61	📉 -24%	7.8	6.8	📉 -12%	10.3	8.8	📉 -14%
700 Durham-RTC	12,271	251	54	49	📉 -9%	4.0	4.0	--	13.4	12.2	📉 -9%
800 Chapel Hill-Southpoint-RTC	13,112	251	63	52	📉 -17%	6.8	6.8	--	9.4	7.7	📉 -18%
RSX Robertson Scholars Express	3,775	158	27	24	📉 -10%	6.0	6.5	--	4.3	3.8	📉 -10%
Saturday - Regional Routes	75,049	55	1,601	1,382	📉 -14%	135.8	156.3	📈 15%	12.0	9.1	📉 -24%
100 Raleigh-Airport-RTC	20,724	55	432	377	📉 -13%	32.1	32.1	--	13.4	11.7	📉 -13%
300 Raleigh-Cary	5,780	55	135	105	📉 -22%	11.9	11.9	--	11.1	8.8	📉 -21%
400 Durham-Patterson Place-Chapel Hill	18,885	55	378	343	📉 -9%	31.7	52.3	📈 65%	11.9	6.9	📉 -42%
700 Durham-RTC	12,804	55	241	233	📉 -3%	15.9	15.8	--	15.1	14.7	📉 -3%
800 Chapel Hill-Southpoint-RTC	13,858	55	328	252	📉 -23%	31.2	31.2	--	10.5	8.1	📉 -23%
RSX Robertson Scholars Express	2,236	31	88	72	📉 -18%	13.0	13.0	--	6.9	5.5	📉 -19%
Sunday - Regional Routes	35,830	51	831	717	📉 -14%	93.9	93.5	--	9.1	7.8	📉 -14%
100 Raleigh-Airport-RTC	11,359	51	253	223	📉 -12%	24.1	24.1	--	10.5	9.2	📉 -12%
400 Durham-Patterson Place-Chapel Hill	9,426	51	215	185	📉 -14%	23.7	23.4	--	9.1	7.9	📉 -13%
700 Durham-RTC	6,521	51	140	128	📉 -9%	11.9	11.8	--	11.8	10.8	📉 -8%
800 Chapel Hill-Southpoint-RTC	6,682	51	170	131	📉 -23%	23.2	23.2	--	7.3	5.7	📉 -23%
RSX Robertson Scholars Express	1,566	31	54	51	📉 -6%	11.0	11.0	--	4.9	4.6	📉 -6%

Attachment D: Commute Market Statistics	Daily Boardings			Daily Revenue Hours			Boardings per Hour		
Route Origin	FY 16	FY 17	Δ	FY 16	FY 17	Δ	FY 16	FY 17	Δ
To Raleigh	1,048	1,258	↑ 20%				10.3	7.9	↓ -23%
100 * From RTC/Airport	100	92	↓ -8%	11.4	11.4	--	8.7	8.1	↓ -8%
102 From Garner	51	45	↓ -13%	6.0	6.0	--	8.6	7.4	↓ -13%
105 From RTC	106	85	↓ -20%	8.3	8.3	--	13.0	10.2	↓ -21%
300 From Cary (direct trip, 2015)	147	157	↑ 7%	13.6	13.7	--	10.8	11.4	↑ 6%
301 * From Southeast Cary	151	130	↓ -14%	17.1	17.0	--	8.8	7.6	↓ -13%
305 * From Cary/Apex	128	111	↓ -14%	11.7	11.8	--	10.9	9.4	↓ -14%
CLX From Clayton (2015)	39	43	↑ 11%	14.0	14.0	--	2.8	3.1	↑ 11%
CRX From Chapel Hill	167	154	↓ -8%	12.8	13.0	--	13.2	11.9	↓ -10%
DRX From Durham	182	191	↑ 5%	12.6	12.6	--	14.7	15.2	↑ 4%
FRX From Fuquay-Varina (2015)	61	67	↑ 10%	13.8	13.8	--	4.4	4.8	↑ 10%
JCX From Johnston County (2014)	44	43	-2%	14.0	14.0	--	3.1	3.1	↓ -2%
KRX From Knightdale	34	37	↑ 8%	5.6	5.6	--	6.0	6.5	↑ 8%
WRX From Wake Forest	59	47	↓ -19%	9.8	9.8	--	6.0	4.8	↓ -19%
ZWX From Zebulon/Wendell	71	56	↓ -20%	7.2	7.2	--	9.9	7.9	↓ -20%
To Durham	855	848	-1%				14.9	15.0	↓ 1%
400 * From Chapel Hill	198	184	↓ -7%	15.4	13.6	↓ -12%	12.9	13.5	↑ 5%
405 From Chapel Hill/Carrboro (2016)	182	203	↑ 11%	11.3	12.1	--	16.0	16.9	↑ 5%
700 * From RTC	137	98	↓ -28%	7.0	7.0	--	19.7	14.0	↓ -29%
DRX From Raleigh	256	269	↑ 5%	12.9	12.9	--	20.2	20.8	↑ 3%
ODX From Hillsborough/Mebane (2014)	82	93	↑ 14%	10.9	10.9	--	7.5	8.5	↑ 14%
To Chapel Hill	1,832	1,740	↓ -5%				21.0	19.5	↓ -7%
400 From Durham/Patterson Place	292	285	-2%	14.3	15.9	↑ 11%	20.4	17.9	↓ -12%
405 From Durham	285	287	1%	10.9	11.4	--	26.0	25.4	↓ -2%
420 From Hillsborough	176	180	2%	13.7	13.7	--	12.9	13.5	↑ 5%
800 * From RTC/Southpoint	508	455	↓ -10%	18.4	18.4	--	27.6	24.8	↓ -10%
805 From RTC/Woodcroft	330	294	↓ -11%	14.9	14.9	--	22.2	19.8	↓ -11%
CRX From Raleigh	242	238	-2%	15.3	15.3	--	16.0	15.6	↓ -3%
To RTC	1,025	922	↓ -10%				11.7	10.5	↓ -10%
100 * From Raleigh/Airport	146	118	↓ -19%	12.0	11.8	--	12.1	9.9	↓ -18%
105 From Raleigh	144	133	↓ -8%	10.6	10.0	--	13.7	13.2	↓ -4%
201 From North Raleigh	74	60	↓ -20%	7.8	8.0	--	9.5	7.4	↓ -22%
300 * From Cary	125	122	-2%	12.4	12.4	--	10.1	9.9	↓ -2%
311 From Apex/Lake Pine	87	82	↓ -6%	14.8	14.8	--	5.9	5.5	↓ -6%
700 * From Durham	201	184	↓ -9%	6.8	6.2	--	30.0	29.6	↓ -1%
800 * From Chapel Hill/Southpoint	115	112	-2%	12.1	12.4	--	9.5	9.1	↓ -4%
805 From Woodcroft	133	112	↓ -16%	11.5	11.7	--	11.6	9.5	↓ -18%
RTP Shuttles	158	117	↓ -26%				8.4	6.2	↓ -27%
42 Davis Dr/IBM Shuttle	25	14	↓ -47%	4.8	4.7	--	5.3	2.9	↓ -45%
46 Miami/TW Alexander Shuttle	27	32	↑ 22%	4.5	4.6	--	5.9	7.0	↑ 19%
47 TW Alexander/Cornwallis Shuttle	44	28	↓ -35%	4.7	4.9	--	9.3	5.8	↓ -38%
49 Kit Creek Shuttle	62	42	↓ -32%	4.8	4.8	--	13.1	8.8	↓ -32%

This table shows peak-hour trips from Origin to Destination in the AM, and back in the PM.

* indicates that passengers commonly do not ride all the way to the final destination.

Attachment E: On-Time Performance		Did not meet target (85%) in FY 2016 or 2017				
Percent of trips on time at end of route		Met target FY 2016, but not FY 2017				
Route	Description	Hours of Operation	FY 2016	FY 2017	Δ	
Weekdays						
100	Raleigh-Airport-RTC	6:40 AM - 11:25 PM	89%	87%	-2 pt	▲
102	Raleigh-Garner	<i>Peak only</i>	66%	64%	-2 pt	
105	Raleigh-RTC	<i>Peak only</i>	87%	85%	-2 pt	▲
201	North Raleigh-RTC	<i>Peak only</i>	91%	89%	-2 pt	
300	Raleigh-Cary-RTC	6:00 AM - 7:25 PM	86%	83%	-3 pt	
301	Raleigh-SW Cary	<i>Peak only</i>	89%	88%	--	
305	Raleigh-Cary-Lake Pine	<i>Peak only</i>	80%	80%	1 pt	
311	Apex-Lake Pine-RTC-EPA	<i>Peak only</i>	90%	88%	-3 pt	
400	Durham-Patterson Place-Chapel Hill	6:15 AM - 10:55 PM	90%	88%	-2 pt	▲
405	Durham-Chapel Hill	<i>Peak only</i>	87%	86%	-1 pt	▲
420	Hillsborough-Chapel Hill	<i>Peak only</i>	86%	86%	-1 pt	▲
700	Durham-RTC	6:00 AM - 10:55 PM	91%	96%	5 pt	▲
800	Chapel Hill-Southpoint-RTC	6:00 AM - 11:10 PM	83%	81%	-2 pt	▲
805	Chapel Hill-Woodcroft-RTC	<i>Peak only</i>	86%	80%	-7 pt	
CLX	Clayton-Raleigh Express	<i>Peak only</i>	85%	80%	--	✗
CRX	Chapel Hill-Raleigh Express	<i>Peak only</i>	79%	70%	-8 pt	▲
DRX	Durham-Raleigh Express	<i>Peak only</i>	78%	78%	--	▲
FRX	Fuquay-Varina-Raleigh Express	<i>Peak only</i>	76%	80%	4 pt	▲
JCX	Johnston County Express	<i>Peak only</i>	91%	90%	-2 pt	✗
KRX	Knightdale-Raleigh Express	<i>Peak only</i>	84%	84%	--	
ODX	Orange-Durham Express	<i>Peak only</i>	94%	91%	-3 pt	
RSX	Robertson Scholars Express	7:30 AM - 11:28 PM	79%	94%	15 pt	▲
WRX	Wake Forest-Raleigh Express	<i>Peak only</i>	84%	83%	-1 pt	
ZWX	Zebulon-Wendell-Raleigh Express	<i>Peak only</i>	87%	77%	-10 pt	
42	Davis Dr/IBM Shuttle	<i>Peak only</i>	94%	90%	-4 pt	
46	Miami/TW Alexander Shuttle	<i>Peak only</i>	82%	81%	-1 pt	
47	TW Alexander/Cornwallis Shuttle	<i>Peak only</i>	96%	94%	-2 pt	
49	Kit Creek Shuttle	<i>Peak only</i>	90%	88%	-2 pt	
Saturday						
100	Raleigh-Airport-RTC	6:40 AM - 11:12 PM	95%	89%	-6 pt	▲
300	Raleigh-Cary	7:00 AM - 6:55 PM	78%	unavailable		
400	Durham-Patterson Place-Chapel Hill	7:00 AM - 10:55 PM	89%	85%	-4 pt	▲
700	Durham-RTC	7:00 AM - 10:55 PM	97%	100%	3 pt	
800	Chapel Hill-Southpoint-RTC	6:45 AM - 11:20 PM	84%	88%	4 pt	▲
RSX	Robertson Scholars Express	12:00 PM - 12:28 AM	90%	90%	--	
Sunday						
100	Raleigh-Airport-RTC	6:40 AM - 7:12 PM	98%	96%	-2 pt	
400	Durham-Patterson Place-Chapel Hill	7:00 AM - 6:55 PM	93%	96%	3 pt	
700	Durham-RTC	7:00 AM - 6:55 PM	99%	100%	1 pt	
800	Chapel Hill-Southpoint-RTC	6:45 AM - 7:20 PM	91%	96%	5 pt	▲
RSX	Robertson Scholars Express	12:00 PM - 10:28 PM	93%	91%	-2 pt	
Weekday Total			86%	85%	-1 pt	
Saturday Total			91%	90%	-1 pt	
Sunday Total			95%	96%	1 pt	
System Total			87%	86%	-1 pt	

▲ Schedule changes implemented August 2017. ✗ Route deleted at end of FY 2017.