



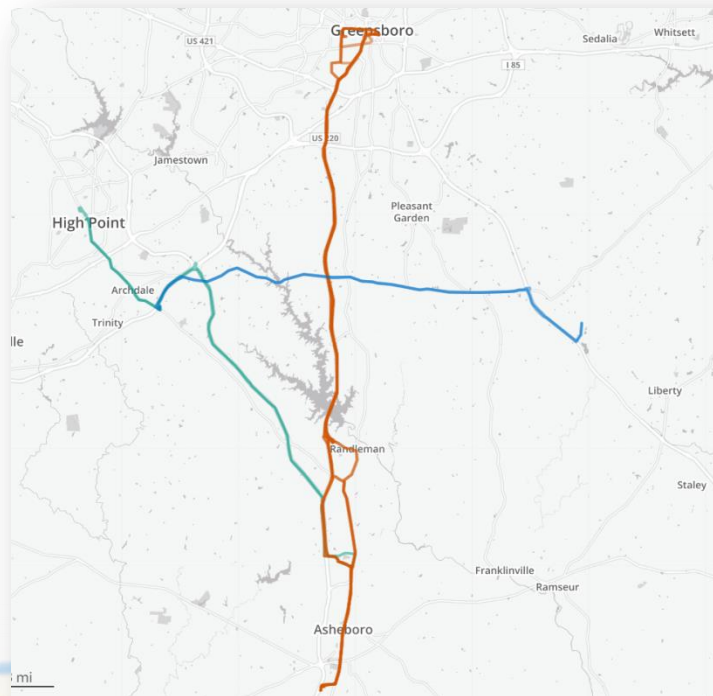
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# Route 10 Randolph County Express Route Analysis



Randolph County Proposed	
Mega Site	
Randolph - All Day (6 Round Trips)	
Randolph - All Day (8 Round Trips)	
Randolph AM & PM	
Randolph Mid-Day	
US 311	
6 lines & 6 buses	
\$1.42 million / yr	
38.83 hours / day	



“Transportation is not an end in and of itself, but a means to providing access to opportunity.”

Source: LivingCities.org



# Background

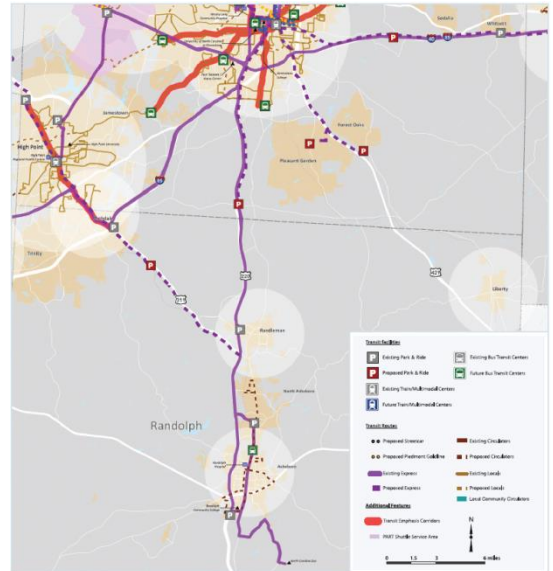
PART consistently monitors the ridership and efficiency of its transit service. Beginning in 2015 we started detailed analyses of existing and future service by route and county. Each analysis consists of an in depth study of PART’s service and a high level view of all transit service in a county. This is a summary of the analysis for Randolph County.

The 2010 Regional Transit Development Plan (RTDP) made the following recommendations for Randolph County:

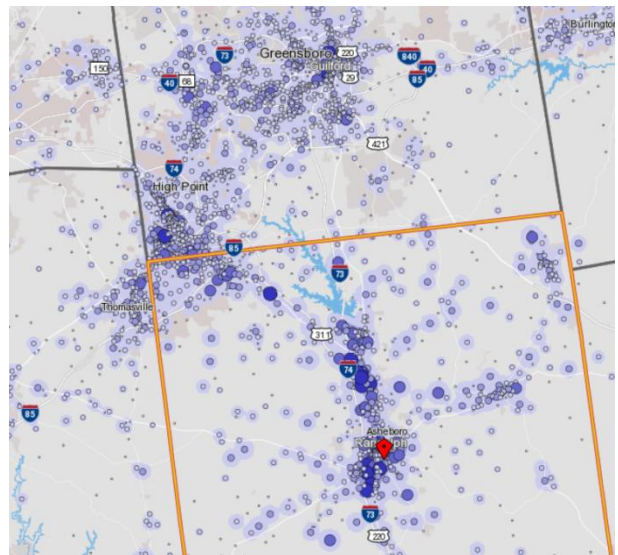
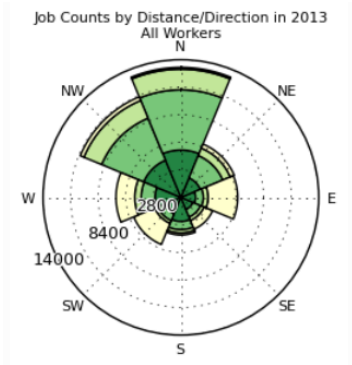
- More Frequency on Route 10
- Service in US 311 Corridor
- Continue Zoo Service
- Establish an Asheboro and Randleman Circulator

Since adoption of the RTDP the following changes have occurred:

- Zoo Service Discontinued
- Express Service Reduced – Ridership is poor
- Greensboro – Randolph Megaspine
- Archdale Park & Ride no longer served by Route 9: Davidson Business 85



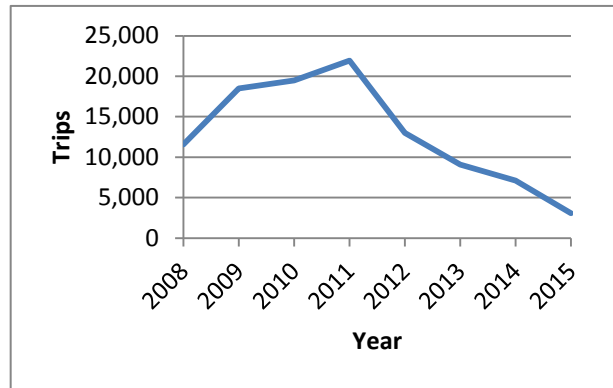
Approximately 20,000 people commute daily from Randolph County to Guilford County. 54% head north toward Greensboro and 46% northwest to High Point. The map to the right, shows where Randolph County residents work; the chart below shows the direction residents travel to work.



One revelation from this analysis is that the 20,000 Randolph commuters are not all heading into Greensboro via US 220. Many of them are heading to High Point via US 311. From the data we also know that a third of the commuters traveling to the northwest commute less than 10 miles to get to their work--most of them living in the Archdale and Trinity area.

An analysis of PART ridership indicates that trip frequency is the primary consideration for increasing ridership. The second most significant consideration is the destination or the nature of the “last mile.”

Prior to a service reduction in 2012 the monthly ridership on Route 10 Randolph County was 1,828 monthly and 21,930 annually. Currently ridership is 425 monthly and 4,680 annually. Below is a chart showing the effect of reducing trip frequency.



## Recommendations for Commuter Express Service

Based upon the analysis above the following two options for expanding public transit service in Randolph County are recommended.

### Increased Frequency on existing Route 10

- Increase from 4 one way trips to 6 two way trips
- Increase from 1,401 to 2,394 annual revenue hours
- No changes to the route

### New Service in US 311 Corridor

- New Service with 3 two-way trips
- Service would connect with Route 10 at the North Asheboro Park and Ride Lot and make other stops at the Archdale Park and Ride Lot, High Point Campus of GTCC, High Point Regional Hospital and High Point Transit Terminal.
- 882 annual revenue hours

## Ridership Projections

Using a methodology developed by PART, potential and projected ridership are shown below for the two recommended routes. Other PART routes are included for comparison purposes.

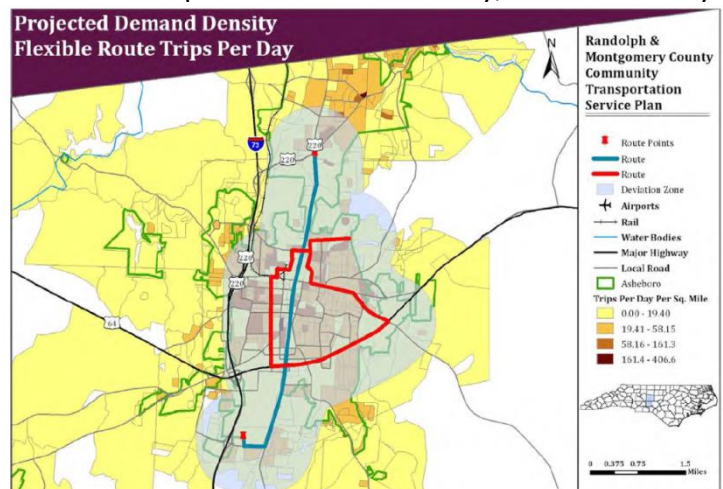
Corridor	Potential Monthly	Annual	Projected Monthly	Annual	Current Monthly	Annual
US 220	2,342	28,101	1,012	12,252	425	5,100
US 311	812	9,628	N/A	N/A	0	0
<b>For Comparison</b>						
Surry	-	-	-	-	2,733	32,796
Davidson US 52	-	-	-	-	243	2,916
Davidson B-85	8,268	99,216	930	11,160	469	5,154
Alamance	5,446	65,352	689	8,268	1,832	21,984

### Asheboro Circulators (supplied by Roger King, Transit Director for RCATS)

In 2012 RCATS completed a Community Transportation Services Plan. PART has reviewed that plan and believes that the recommendation for fixed route service should be strongly considered.

The idea of developing a public transportation fixed or flex route service for the City of Asheboro is a concept that has been under study for quite some time. The idea of a shopping loop route was proposed and briefly placed into service. RCSAA/RCATS actually ran a loop route for about a year beginning in 1999, primarily from the downtown area out to the Mall on Highway 64 East. The route was discontinued due to the lack of adequate funding to cover operating costs, and the inability of finding a funding partner to provide the local match funding required to pursue additional state and federal operating funds.

The proposal to provide fixed route service was put forward as an unmet need during Randolph County community stakeholders’ meetings in advance of the development of the RCATS Locally Coordinated Public and Human Services Transportation Plan (LCP) in 2011. In 2012, RCSAA/RCATS, in collaboration with the NCDOT-Public Transportation Division, commissioned a new transportation services study, the Community Services Transportation Plan (CTSP). NCDOT has had a long-standing requirement that community transportation programs in North Carolina prepare periodic plans outlining a multi-year program for coordination of public and human services transportation, provision of public transit services, and providing a short-range financial and capital improvements plan. RLS and Associates, a DOT consulting firm contractor, completed the study and presented the Final Report in 2013.



The Plan includes an assessment of RCATS services, identifies unmet transportation needs in their our service area, and presents strategies for addressing those needs. Providing flexible (deviated) route services for the City of Asheboro is identified as an alternative delivery strategy for RCATS. Two potential routes, based on the locations of existing top-ranked destinations of travel, emerged: (1) a north-south linear route traveling Fayetteville St., connecting via a short spur with Randolph Community College, and ending at the Randolph County Department of Social Services, and (2) a loop route connecting shopping along U.S. Hwy 64 with residential areas and other top destinations of travel. The routes were designed as deviated fixed routes, meaning the customer can request that a vehicle deviate from the route path up to ¼ mile from either side of the route and end points. For the purposes of planning, a 12-hour schedule was formulated for the Fayetteville Street route while the loop route, more focused on shopping, began later in the day and would operate on a nine hour service plan.

Based on the projected demand during the first year of service, both routes are projected to exceed a flexible route goal of 5.0 passengers per hour. Thus, consideration of both services is deemed feasible from a transit productivity standpoint. A previously prepared fully allocated cost analysis, developed as a part of this study, was used as a basis for generating preliminary cost estimates for this service. Fares should be set so as to create some incentive to use this service as opposed to the regular demand response services currently provided by RCATS.

The full deviated route proposal is available as part of the current RCATS Community Transportation Services Plan. As a regional Community Transportation Program provider, RCATS is eligible to pursue Federal 5311 Program Operating funds, which could assist in providing some of the funding required to operate these routes. Federal 5310 program funds, if available, could possibly be utilized. However, each of these funding streams require significant local matching funds. Herein lies the reason these services are not yet available for the citizens of Asheboro and Randolph County. A local funding partner or a dedicated local funding stream has not been identified or made available.

Route	Service Area Pop	Operating Hours		Daily		Annual		Daily Ridership Projection
		Start	End	Route Length	Hours <sup>2</sup>	Rev. Miles <sup>1</sup>	Rev. Hours <sup>2</sup>	
<b>Fayetteville Street</b>	13,726	6:00 am	6:00 pm	4.826	12:25	37,643	3,228	178
<b>Loop Route</b>	13,810	9:00 am	6:00 pm	8.081	9:25	23,637	2,448	180
Combined Routes	17,673			12.907	21:50	61,280	5,677	230

**Notes:**

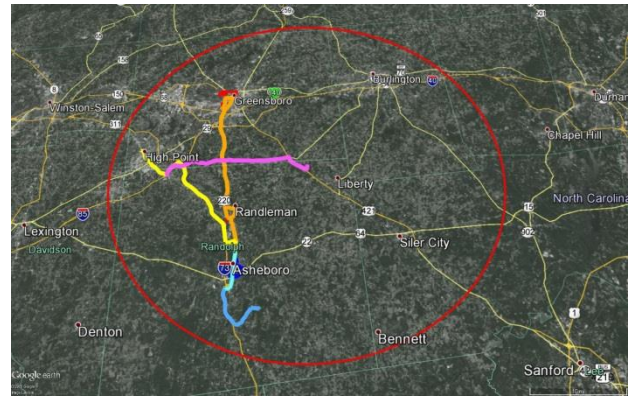
- (1) Route distance equals route length plus 25 percent to account for route deviations.
- (2) Route hours consist of schedule time plus 10 minutes report time plus 15 minutes turn-in time.

Source: RLS & Associates, Inc., July 2012.



## Transit Service to the Greensboro-Randolph Mega Site

In the USA, most “mega sites” serving a single plant do not have connections to fixed route public transit systems. This is due to the isolated location where they are often built. The Greensboro-Randolph Mega Site presents challenges to planning for a public transit connection. In addition to the location, there is not enough information to make a ridership projection until a tenant or tenants are identified. What we do know is that jobs will held by people living within a 25 to 30 mile radius of the mega site in all directions.



With what is known at this time two options have been identified:

**Option #1:** Establish a shuttle service originating from the Archdale P&R that travels east along NC 62 and intersecting Route 10 at US 220. Persons living in the Asheboro, Randleman and Greensboro would ride Route 10 and transfer to the shuttle at NC 62 and US 220. The service would consist of 3 two-way trips one during the AM, one mid-day, and one PM.

Estimated cost:        Service = \$91,000 annually  
                                  Park & Ride Lot = \$500,000 One-time  
                                  P&R Lot Maintenance = \$3,500 Annually

**Option #2:** Establish several van pools to originate in Asheboro, High Point and Greensboro with pickup points in Archdale and Randleman. While this could be publically funded it is more likely that the mega site tenant(s) would provide employees with a van pool stipend or incentive, making the option free to employees. This would be provided as a commuter benefit program.

Estimated cost:        For a 50 mile Round Trip a  
                                  7 Passenger van is \$675 monthly and  
                                  15 Passenger is \$747 monthly

Annual Cost of Van Pool Subsidy			
	Number of Vans		
Van Type	5	10	15
7 Passenger	\$ 40,500	\$ 81,000	\$ 121,500
15 Passenger	\$ 44,820	\$ 89,640	\$ 134,460

## Cost Benefit Analysis – Shuttle vs. Van Pool

### Shuttle w/ Full Sized Bus

Passengers drive, walk or bike to P & Lot. Greensboro, Asheboro and Randleman residents ride Route 10 to NC 62/US 220 P & R.

Capacity: 48

Cost:	One-time	Park & Ride Lot = \$ 500,000
	Annual	Service = \$ 91,000 P&R Lot Maintenance = \$3,500 Total Annual Cost = \$ 122,319

Funding Source: Typically public funds

### Van Pool w/ 10 15-passenger vans

Passengers drive, walk or bike to P & Lot or pickup location.

Capacity: 150

Cost: Annual subsidy to pay for van pools = \$ 89,640

Funding Source: Typically private funds

Recommendation: A van pool program subsidized by the meg-site tenant(s) provides the greatest capacity at the lowest cost.

## Shuttle to the NC Zoo

PART provided a shuttle to the NC Zoo for 12 months in 2010. The service provided two trips from the South Asheboro Park and Ride lot to the zoo. Ridership overall was light. It mainly served groups and peaked along with trends in zoo attendance. One weakness in the route was that no mid-day trip was provided; people using the shuttle had to commit to a full day at the zoo.

If the service was revived it could be provided by PART or RCATS. Service could start at the South Asheboro Park & Ride Lot but ideally would start downtown. Zoo goers could access shopping and dining opportunities downtown as part of their trip to Randolph County. This would require the identification of parking spaces for zoo patrons. The service would be seasonal, April through September (6 months) matching the zoo's peak attendance months. The route should also include hotels along US 64 and the park & ride lot. Two buses would be needed if the headway was 50 minutes and the service ran from 8:00 AM until 6:00PM. The estimated cost would be \$252,000. Using one bus and making a morning, mid-day and evening round trip would cost \$72,000 annually.

Given the potential cost and more pressing transit needs in the county it is not recommend to revive this service. However, it is recommended that additional stakeholders such as the city, tourism bureau and hotel operators should be included in conversations to explore interest and discuss details of a zoo shuttle.



## Recommendations

Based on the analysis, PART recommends the following transit service enhancements;

1. Implement Asheboro Circulators as described in the RCAT's Coordinated Transportation Plan
2. Increased Frequency on existing Route 10
  - a. Increase from 4 one way trips to 6 two way trips
  - b. Increase from 1,401 to 2,394 annual revenue hours
  - c. No changes to the route
3. New Service in US 311 Corridor
  - a. New Service with 3 two-way trips
  - b. Route would serve the North Asheboro Park and Ride Lot, the Archdale Park and Ride Lot, High Point Campus of GTCC, High Point Regional Hospital and High Point Transit Terminal.
  - c. 882 annual revenue hours
4. Implement a van pool subsidy for mega-site transportation.

Below is a summary of cost for each recommendation and a chart illustrating the amount of funds that could be raised through additional vehicle registration fees. All the recommendations could be funded with an additional \$3 to \$4.

Individual Routes	Rev. Hrs	Cost / Rev. Hr	Route Cost	Fare Box		Net Cost	
				Recovery (1)			
Randolph Express	2,394	\$ 147.00	\$ 351,918	\$ 34,347.20	\$ 317,570.80	Increase from 4 one-way trips to 6 round trips	
US 311 Express	882	\$ 147.00	\$ 129,654	\$ 12,654.23	\$ 116,999.77	New service w/ 3 round trips (AM, mid-day, PM)	
Asheboro Circulators	5,677	\$ 20.70	\$ 117,514	\$ 11,469.36	\$ 106,044.54	New service operating 12 hours a day	
Mega Site Accessibility			\$ 86,040		\$ 86,040.00	Van Pool Subsidy for ten 15-passenger vans	
All Routes	8,953		\$ 685,126		\$ 626,655		
(1) Fare box recovery assumed to be 9.76%							
Existing Service	1403		\$ 293,830	\$ 11,606	\$ 282,224	2 AM Asheboro to Greensboro, 2 PM Greensboro to Asheboro	
Additional Funding Needed					\$ 344,431		

\$ Veh. Reg.	# Veh. Proj. FY 16	Generated Revenue
1	140000	\$ 140,000
2	140000	\$ 280,000
3	140000	\$ 420,000
4	140000	\$ 560,000
5	140000	\$ 700,000
6	140000	\$ 840,000
7	140000	\$ 980,000
8	140000	\$ 1,120,000