

Project Name: New Bern Avenue Transit Corridor Project

Location of Project:

State: North Carolina
County: Wake County
Cities: Raleigh, NC
District: 13th Congressional District



Description of Services/Service Area:

Capital Area Transit (CAT) operates 28 public transit routes to serve the City of Raleigh and three regional routes for Triangle Transit, the regional provider. CAT also provides two contracted transit routes; these routes are funded by Wake Technical Community College for a route to their campus in Southern Wake County and by the Town of Wake Forest for a local town circulator. Service is available Monday through Friday from 4:30 a.m. to Midnight. Most CAT routes operate approximately every 30 minutes during peak hours. During off-peak hours, including evenings and Saturdays, buses operate approximately every 60 minutes. Limited 60-minute Sunday service is available from 8:00 a.m. to 8:00 p.m. CAT carries approximately 6.5 million passengers annually. With a fleet of 85 revenue vehicles, CAT serves the major commercial, employment, educational centers, and medical centers within the City of Raleigh.

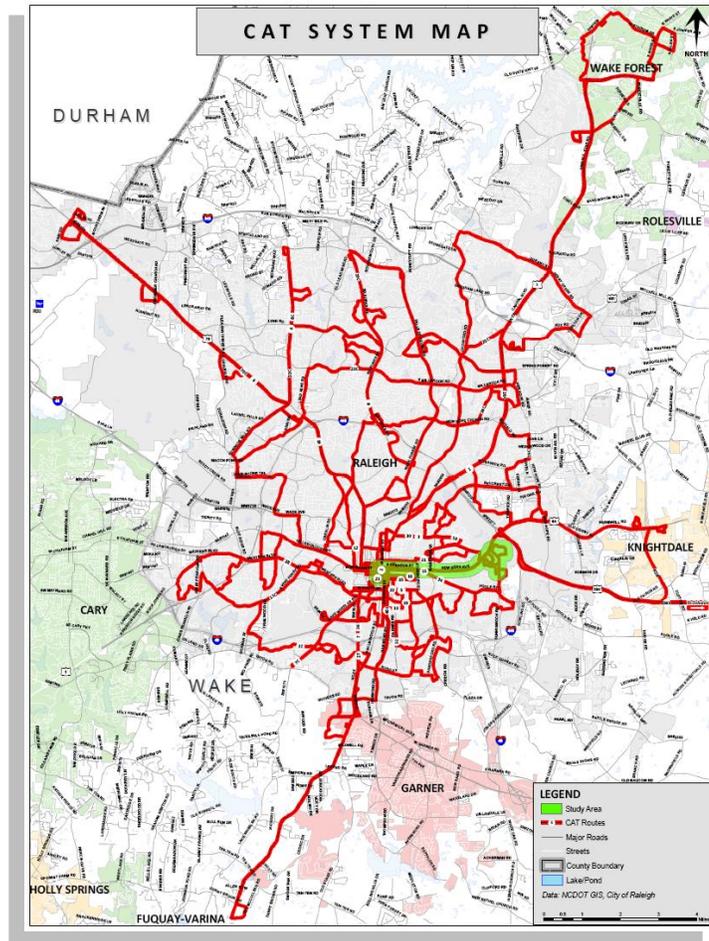


CAT also provides connections to other transit systems that enable residents to travel across the Triangle area of Raleigh, Durham, and Chapel Hill. Raleigh residents with disabilities who are unable to drive a car and/or use regular CAT services may apply for eligibility under the Accessible Raleigh Transportation (ART) Program. The ART Program provides subsidized curb-to-curb transportation service through approximately 40 participating taxi companies and one prime shared ride contractor. ART performs approximately 350,000 passenger trips per year.

CAT also operates the R-Line, a Downtown Raleigh Circulator route, which operates with hybrid-electric buses. The R-Line operates from 7:00 a.m. to 11:00 p.m., Monday through Wednesday; 7:00 a.m. to 2:15 a.m., Thursday through Saturday; and 1:00 p.m. to 8:00 p.m. on Sundays.

As will be discussed later in further detail, the proposed New Bern Avenue Transit Corridor Project is of significance for a number of reasons for CAT and the City of Raleigh.

- First, it is the initial element of a proposed Transit Corridor network that would improve and enhance mobility throughout the service area. The proposed Transit Corridor Project is proposed to begin downtown and initially extend to WakeMed. It will likely be extended further to the east and west in the future and will be part of a network of services identified in the Wake County Transit Plan.
- Further, the project reinforces the importance of connectivity to the greater WakeMed area, which is not only important from a customer access to services perspective, but is also one of the region’s primary employment centers. The New Bern Avenue Transit Corridor Project will thus enhance the existing local and express services and will facilitate the development of two major transfer facilities in East Raleigh.



Project Information

A. Scope of Project

It is envisioned that the New Bern Avenue Transit Corridor Project could develop over time in three phases. The development of the project in phases will allow incremental funding of the project’s capital and operating costs. The emphasis of this report concentrates on Phase I; however, Phases II and III have been briefly described to provide a full context for future opportunities and the projects importance to the overall transit bus network.

Phase I

Phase I of the New Bern Avenue Transit Corridor Project, shown on the following page, is a 7.5-mile roundtrip transit route connecting downtown Raleigh with WakeMed and Wake Technical Community College.

Phase I of the New Bern Avenue Transit Corridor Project is based on the study completed in 2011 in which nine high bus frequency transit corridors were defined within the Raleigh area. The remaining corridors identified within the plan include Capital Boulevard, Fall of Neuse Road, Six Forks Road, Rock Quarry Road, South Saunders Street, Avent Ferry Road, Hillsborough Street, and Glenwood Avenue.

- The project is a corridor-based bus project
- 12 substantial transit stations are identified within Phase I of the corridor
- Signal priority is included to support the frequent services
- BRT-style hybrid vehicles are planned for the corridor. The City currently operates the R-Line with these vehicles. The new service will complement the current services
- The service will have a special branding and marketing scheme
- The service will operate 10-minute headways during peak hours and 15 to 30 minute headways during off-peak hours
- Service will be available from 6:00 a.m. to midnight during weekdays.



The current Route 15 which operates along New Bern Avenue provides 15-minute peak service and 30-minute off-peak service. Route 15 may continue to provide local service, depending upon funding, to Raleigh residents, including the ability to transfer to the proposed BRT. The BRT service will operate with limited stops for quicker travel times than existing local service. Twelve stations are planned along the corridor during the development of Phase I.

CAT currently operates Route 15 – WakeMed along the New Bern Avenue corridor. The route has consistently been one of the highest performing routes systemwide, both in terms of ridership and farebox recovery. In FY2011, average ridership was approximately 2,027 average weekday passenger trips. In FY2012, ridership was 2,080 average weekday daily passenger trips. The 2011 farebox recovery ratio was reported at 24%, the highest recovery rate within the CAT system. In FY2012, the farebox recovery decreased slightly to 21%. The average passenger per service hour for Route 15 in FY2011 was 43.5 for weekday service; in FY2012, Route 15 had 41.3 average weekday passengers per service hour. Saturday productivity in FY2011 was similar with 42.5 passengers per service hour, and 43.7 for Saturday in FY2012.

Key connections in downtown Raleigh allow residents to travel to destinations around the region. In addition, residents are able to transfer at WakeMed to two additional CAT routes and to Triangle Transit service.

The New Bern Avenue Corridor Project includes the procurement of fuel efficient, hybrid-electric vehicles. Six peak vehicles will be used for the corridor service. The project also includes improvements for pedestrian connectivity along the service corridor by installing

new curb and gutter, sidewalks, crosswalks, and pedestrian signals where they currently do not exist. The section of New Bern Avenue East of Raleigh Boulevard to WakeMed will be constructed as a median based busway. In this segment of the project, buses will travel between the East and Westbound lanes of vehicular travel and patrons will board buses in median based transit stations. This was recommended within the New Bern Avenue Corridor Plan completed in January of 2012. These necessary improvements will provide a safe, healthy, walkable environment for the corridor. In addition, residents will have direct connections to CAT service, as well as other businesses and services along the corridor.



Typical layout between stations



Typical layout at station

Photos by Chicago Transit Authority



Photo by Kansas City Area Transit Authority

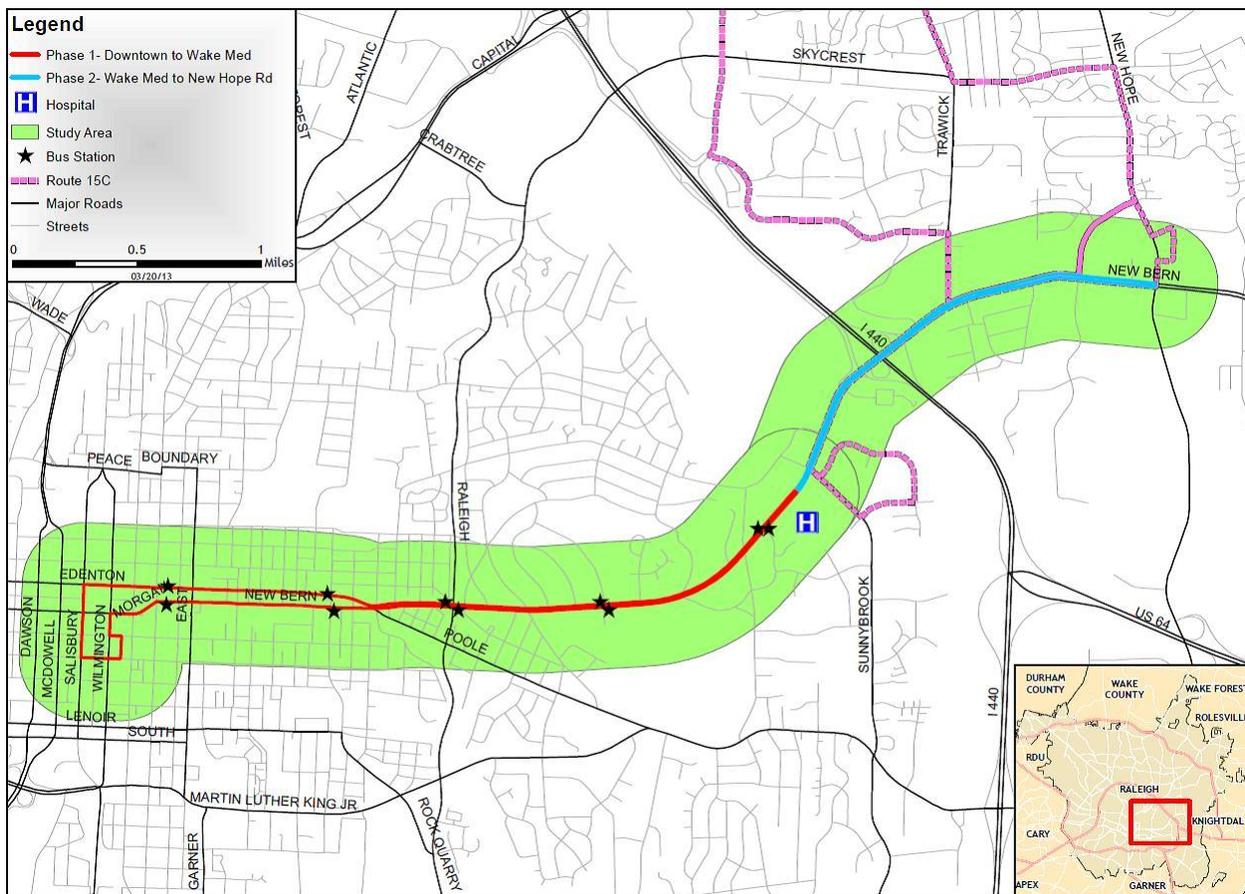
The New Bern Avenue Corridor Project includes modal improvements for roadways, transit, bicyclists, and pedestrians. The improvements are specifically focused on supporting the vision for a livable, healthy community. Projects range from upgrading paving, adding bus stations, curb and gutter, sidewalk improvements, signal timing preference/ prioritization, and real-time bus information. The improvements to these facilities enhance the livability within the Raleigh community. Residents living in the area have mobility options to travel anywhere in town or to other connecting destinations. Residents living outside the corridor have multiple options when traveling into downtown Raleigh or to the WakeMed area – not just a single occupant vehicle! Frequent transit service is available; bike routes and neighborhood trails are available. These numerous options promote future economic growth linked to an increase in jobs and services for the study area.

Existing levels of service for alternative transportation modes will certainly be improved as new supportive infrastructure is constructed. Transit patrons will see fewer stops but overall improved amenities and headways. Existing vehicular traffic service levels may see a slight decrease in service but will maintain a more than adequate level of service through the defined corridor.

Phase II

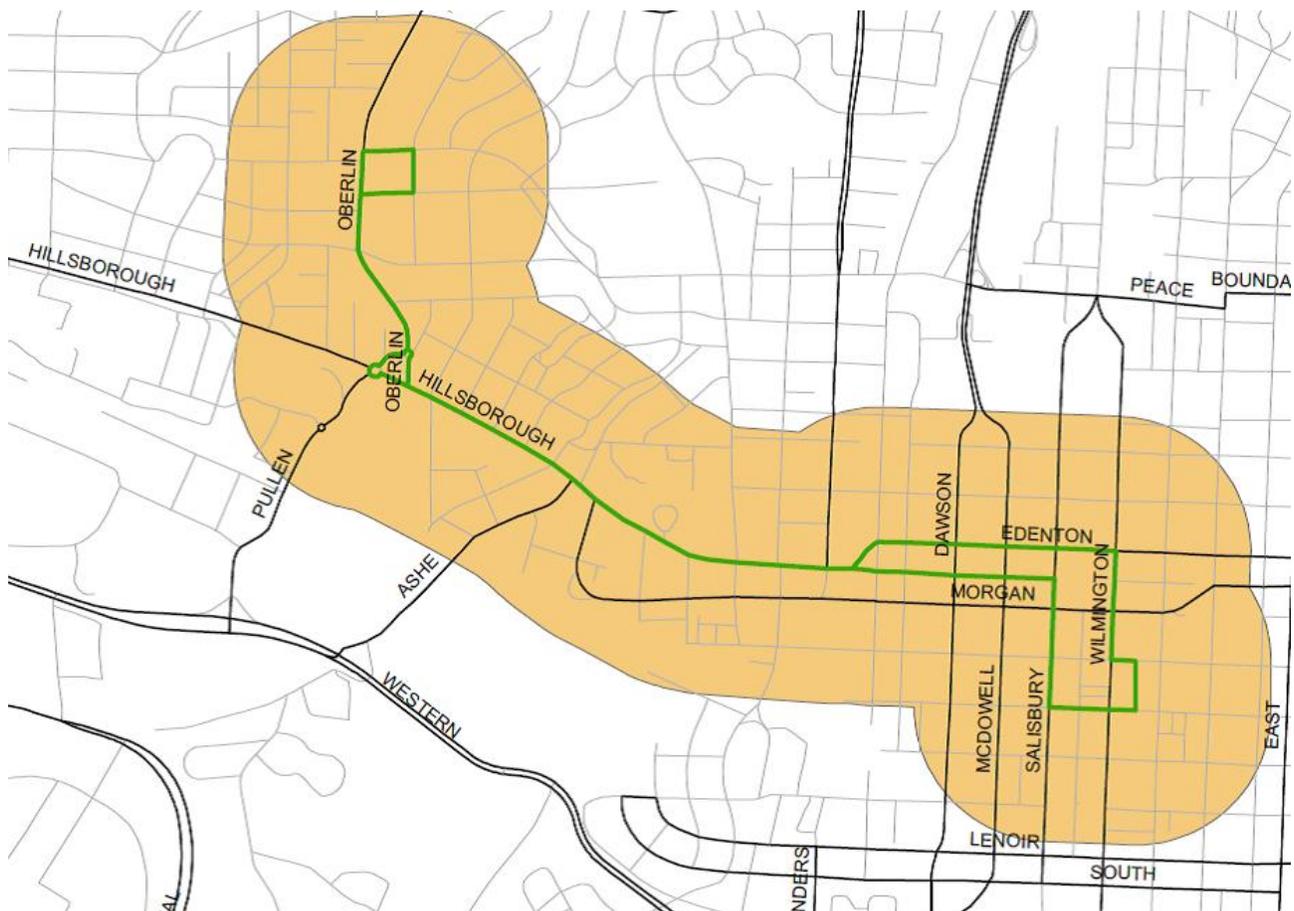
Phase II of the project would extend the route across I-440 to New Hope Road. Phase II of the project will provide connections to existing and programmed transit services defined within the Wake County Transit Plan. These services will provide connections to southern destinations located on Poole Road and Rock Quarry Road. To the north and west, major trip generators such as Triangle Town Center and Crabtree Valley Mall will be accessible. A major transit center is also programmed at the routes Phase II terminus located at the intersection of New Bern Avenue and New Hope Road.

While defined as Phase II, this section of New Bern Avenue could be programmed in the initial phase of development of the New Bern Avenue Transit Corridor Project if federal financial participation is sought. The addition of the section of New Bern Avenue East of I-440 to New Hope Road could improve the projects scores and improve the likelihood of the project receiving funding from the Federal Transit Administration.



Phase III

Phase III of the project, while not fully vetted, could link major trip generators from the east and downtown Raleigh to North Carolina State University and Cameron Village via Hillsborough Street. Phase III of the project could provide a high frequency connection to the eastern edge of North Carolina State University’s campus. The Cameron Village area’s increasing density and mixed uses make the location a perfect terminus for this high frequency service. While the route for Phase III has not yet been determined, an example of how the route could service the North Carolina State University Campus and the growing area of Cameron Village can be found below.



B. Project Funding – Capital & Operating

The New Bern Avenue Transit Corridor Project has two primary alternatives for capital funding, a dedicated local funding or the development of a Federal Transit Administration Small Starts project. Each alternative has existing pros and cons, these are described further below.

Local Funding:

The New Bern Avenue Transit Corridor Project could be financed with local funds for capital infrastructure. This infrastructure would include roadway improvements, dedicated bus lanes, passenger stations, sidewalks, vehicle priority infrastructure, and vehicle and pedestrian signal upgrades. The use of local funds could expedite the project but would result in the full burden of the project being funded with local expenditures. While local funding could be used to fund major capital improvements, the annual cost associated with the service would need an annual recurring funding source.

The use of local funding would exempt the project from the many requirements found within the new Small Starts federal legislation; thereby, allowing the project to move forward at a much accelerated pace. Most notably, the use of local funds would allow the New Bern Avenue Corridor Project to use existing transit services in the corridor; this could save up to \$850,000 annually in operating costs by using existing service levels to meet a 10 minute peak headway. A detailed analysis of the annual operating cost for the service is discussed later in this report.

Small Starts Project:

The project could also seek funding through newly revamped Federal Transit Administration “Small Starts” project funding. While this scenario could secure up to 50% in Federal Funds for the project and possibly up to 25% in state funding, a large number of federal requirements would need to be met in order to be favorably considered. Small Starts projects, just as New Starts projects, are competitive projects and are funded by a weighted scoring system. Those projects which receive the highest scoring are selected for funding.

As with the use of local funds, Small Starts Project funding can only be used for capital infrastructure, the annual operating cost for the service must be financed by the local jurisdiction. Under the Small Starts Program, the projects annual operating cost cannot exceed 5% of the transit systems annual budget. The project must also be implemented without significantly decreasing any existing levels of service; for example, a new high frequency transit service on New Bern Avenue would complement but not replace existing local bus service. The use of Small Starts funding would require the use of a contracted consultant with a great degree of experience navigating the Small Starts Project process. This alternative could require additional time and resources in order to successfully implement a project; however, the returns on capital infrastructure costs could be up to 75% of the project’s cost. A streamlined Alternatives Analysis and an Environmental Assessment would be needed to secure federal funding; these initiatives could add two or three years to the projects implementation.

A copy of the Federal Transit Administration’s New Starts and Small Starts Policy Guidance has been provided as an Attachment A to this report.

Capital Funding:

The figures shown below represent the itemized project costs for the New Bern Avenue Transit Corridor Project.

The total capital cost for the project is \$39,018,000. Under a Small Starts proposal a 25% local match commitment of \$9,754,500 from the City of Raleigh would be required.

- Corridor Preparation - \$12,493,000: Includes Engineering, Design, Construction Management, roadway rehabilitation/reconstruction along New Bern Avenue.
- Key Project Elements – 4,350,000: Includes sidewalks, signals, curb and gutter, bike lanes, utility relocation, landscaping.
- Transit Improvements – 22,175,000: Construction of Median based BRT lane, Hybrid buses, transit stations, signal priority.

Annual Operating Costs:

In today's funding environment, the recurring annual operating cost of any new service will be the single biggest financial challenge. While local, state, and federal options are available for capital expenditures, operating funding must be allocated from locally generated sources. Unfortunately, the much talked about ½ cent Wake County transit sales tax has not progressed to a referendum as hoped. This funding source would ultimately be the revenue source for recurring operating funds.

The Wake County Transit Plan defines the number of bus hours that would be funded within Wake County and specifically within each local jurisdiction if the proposed ½ cent sales tax were passed. The New Bern Avenue Corridor Transit Project is listed within the Wake County Plan; however, it is not designated for funding at a Small Starts level of service (10 Minute Peak Headways). It is anticipated that the revenue needed to operate the New Bern Avenue Corridor Transit Project at a Small Starts level of service would eventually be funded with the ½ cent sales tax, when approved. This will require an amendment to the existing Wake County Transit Plan in order to fund the project within the existing Wake County Transit Plan's financial allocation authority.

The fully allocated operating costs associated with a local funded project option and a federally funded (Small Starts) project has been provided below. The primary difference between the two proposals is that the locally funded project can utilize existing transit services in the corridor. The federally funded project would require the allocation of all new service hours in the corridor. The annual operating cost is as follows:

*Local Funded Project (No Federal Participation)		
Annualized Operating Cost (Fully Allocated)		
	Annual Costs	Annual Hours
Weekday:	\$1,385,000	17,313
Saturday:	\$89,000	1,112
Sunday:	\$76,000	950
Total:	\$1,550,000	
**Small Starts Funded Project (75% Federal/State Participation)		
Annualized Operating Cost (Fully Allocated)		
	Annual Costs	Annual Hours
Weekday:	\$2,131,000	26,638
Saturday:	\$156,000	1,950
Sunday:	\$113,000	1,412
Total:	\$2,400,000	
*A Project funded with local funds can utilize existing CAT service in the corridor		
**Federally funded projects must be developed to complement existing corridor services		

Both funding strategies would provide the following levels of service in the corridor:

Weekday: 10 Minute Peak Headways	(5:30 AM to 10:00 AM) (3:00 PM to 7:00 PM)
15 Minute Off-Peak Headways	(10:00 AM to 3:00 PM) (7:00 Pm to 12:00 AM)
Saturday: 30 Minute Headways	(5:30 AM to 12:00 AM)
Sunday: 30 Minute Headways	(8:00 AM to 8:30 PM)

C. Project Summary

The New Bern Avenue Transit Corridor Project can be utilized to showcase a high quality transit service not yet available in Wake County or the Triangle Area. While the capital and operating cost of the service are higher than existing levels, this project is achievable with existing funding resources and is eligible for future ½ cent sales tax funding when supported through a referendum in Wake County.

The transit program is ready and able to begin this project upon notification to proceed. The use of federal and state funding may extend the projects implementation; however, it could build momentum for Wake County and the Region for future transit initiatives.