

## A) Overview

### Introduction

The Research Triangle Regional Public Transportation Authority (dba GoTriangle), in partnership with the Research Triangle Foundation of North Carolina (RTF), is requesting federal funding to construct the Triangle Mobility Hub and to purchase buses to support a high-quality public transit network to connect historically disadvantaged communities burdened by NC 147 to everyday destinations including employment, healthcare, community facilities, parks, shopping, education, and workforce training via affordable and sustainable means.

The Triangle Mobility Hub is the key to unlocking fast, frequent, and reliable public transit to knit the region together – herein referred to as the “SPOKE.” ***Sustainable, Prompt transit connections to Opportunities for Knowledge and Employment*** is a transformative investment in high-quality public transportation connecting the Triangle region, with an emphasis on connecting burdened, disadvantaged communities who have advocated for improved service.

The **Triangle Mobility Hub and SPOKE project** will address burdens from NC 147, a high volume freeway that separates neighborhoods in Central Durham, by improving access, connections, and community cohesion through transit investment and services. The project will create a convenient hub to expand mobility within RTP and across the region to provide equitable and sustainable access to opportunity for all. The project will drive transformative regional connectivity with new direct connections to regional destinations and a planned passenger rail station. It will also provide critical first- and last- mile connections to workforce training programs, apprenticeships, and the 110,000 jobs in the greater RTP area.

*Refer to Appendix A – Letters of Support and Appendix B – Letter of Financial Commitment. Application materials may be viewed at [www.gotriangle.org/rtc](http://www.gotriangle.org/rtc).*

### Project Scope

The Triangle Mobility Hub and SPOKE project will foster connections through innovation, collaboration, and environmental stewardship. The Triangle Mobility Hub will significantly improve transit speed and reliability, provide new multi-modal connections, and improve rider experience through enhanced amenities by relocating GoTriangle’s deficient Regional Transit Center to a more efficient, central location in RTP. The project will connect transit riders to regional bus service, bicycle and pedestrian corridors, planned BRT and rail service, and provide critical first/last-mile connections. The purchase of 10 battery-electric buses will support the implementation of the SPOKE network. The project includes the scope elements listed below and visually depicted in Figure 1. Figure 2 shows the site location.

Transit Center	Zero Emissions	Parking/Drop-Off	Access
<ul style="list-style-type: none"> <li>Transit bays</li> <li>Waiting areas</li> <li>Customer service</li> <li>Public restrooms</li> <li>Wi-Fi</li> </ul>	<ul style="list-style-type: none"> <li>10 new battery-electric buses (BEBs)</li> <li>Bus charging</li> <li>Vehicle charging</li> </ul>	<ul style="list-style-type: none"> <li>100 parking stalls</li> <li>Bike lockers/racks</li> <li>Paratransit</li> <li>Microtransit</li> <li>Rideshare</li> </ul>	<ul style="list-style-type: none"> <li>Enhanced crossing of NC 54</li> <li>Transit priority</li> <li>Connections to planned BRT, Triangle Bikeway, and rail platforms</li> </ul>



Figure 1 – Rendering of Triangle Mobility Hub Transit Bays



Figure 2 – Triangle Mobility Hub Site

### **Burdening Facility: NC 147/Durham Freeway**

**NC 147/Durham Freeway** currently serves as a primary route through Durham County with between 60,000 and 80,000 vehicles per day. NC 147 represents a significant burden to access for many Durham residents, particularly for those without access to a vehicle as shown in Figure 3. In Census tracts 13.01, 13.03, 14.00, and 20.09 in Southeast Central Durham, 14% of households have zero vehicles available. The number of zero vehicle households is significantly higher than in Durham County as a whole (7% of households) and the state of North Carolina (5% of households). In this area, 46% of residents have household incomes less than 200% of the Federal poverty line. Southeast Central Durham lacks adequate access to everyday destinations and robust transit options. Divided by NC 147, these neighborhoods are frequently more isolated and experience increased noise and air pollution due to the freeway. Burdens include impacts to community connectivity, mobility, access, and economic opportunity. Access to employment, healthcare, and other critical destinations is limited as compared to residents that own a vehicle.

### **Community History and Character**

Durham County was established on April 17, 1881, following construction of a rail depot in 1849 and incorporation of the City of Durham in 1869. Southeast Central Durham is one of Durham's most densely populated areas. In this area, 77% of residents identify as Black or African-American. Many residents have ties to historic Hayti. The primary arterial in this neighborhood is Alston Avenue, which runs north-south and is traversed by Lawson Street running east-west (Figure 3). The area includes the neighborhoods of Grant Street, North Carolina Central University, and Plum Street.

**Grant Street – Census Tract 13.01:** Grant Street is part of the historic Hayti community. Hayti was founded as an independent African-American community after the American Civil War. In the late 1800s/early 1900s, African-Americans owned more than 200 businesses in the neighborhood. The construction of NC 147 as part of urban renewal displaced homes and businesses across approximately 200 acres now occupied by the freeway. Freeway construction impacted the social fabric of the community and many residents were displaced.

**North Carolina Central University (NCCU) – Census Tract 13.03:** NCCU is a public Historically Black University founded in 1910 by North Carolina native James E Shepard, a

prominent pharmacist. The university is part of the University of North Carolina system and is the nation's oldest state-supported liberal arts school for Black students. The university offers programs in the sciences, education, law, business, nursing, and the arts to nearly 8,000 students.

**Plum Street – Census Tracts 14.00, 20.09:** Plum Street is home to Durham Housing Authority's (DHA) McDougald Terrace and Durham Technical Community College (Durham Tech). McDougald Terrace is a multifamily community completed in 1953 as racially-segregated housing for African-American residents. DHA is currently working on a Redevelopment Plan that will a mixed-income, mixed-use community with connectivity, open space, and amenities including a new recreation center and public school. Durham Tech has strong ties to employers in RTP and offers numerous associate degrees and certificates to more than 18,000 students.

### Historic Burdens of NC 147

Historically Black communities were severely impacted by the construction of NC 147. Part of Durham's Urban Renewal program, NC 147 was built to provide a fast connection to RTP. NC 147's path through Durham destroyed well-established Black communities, including Hayti. As a result of NC 147's construction, Black businesses, homes, and places of worship were demolished and residents were permanently displaced. Many neighborhoods, including Grant Street, North Carolina Central University, and Plum Street, were severed from Downtown.

### Addressing Burdens and Harm

The Triangle Mobility Hub and SPOKE project will address burdens and harms by:	
✓	<b>Reducing disparities</b> for residents that do not have access to a car
✓	Providing <b>affordable, frequent, and reliable mobility</b> to everyday destinations
✓	Providing <b>safe non-motorized facilities</b> for bicyclists and pedestrians
✓	Providing <b>travel time-savings</b> with direct regional transit connections
✓	Increasing the <b>number of destinations</b> residents can access by transit
✓	<b>Reducing health impacts</b> (noise, emissions) through purchase of battery electric buses (BEB) and operation of buses on routes through disadvantaged neighborhoods
✓	Promoting <b>active, healthy travel options</b> including new bike and pedestrian facilities
✓	Supporting <b>equitable TOD</b> accessible to transit riders and disadvantaged communities
✓	Supporting <b>enhanced and new affordable housing</b> opportunities
✓	Providing new access to <b>training, jobs, and workforce development</b> opportunities
✓	Providing <b>contracting opportunities</b> for disadvantaged, small, minority, and women-owned businesses during design and construction
✓	<b>Avoiding displacement</b> of residents and businesses

## B) Location & Map

### Eligible Burdening Facility (NC 147)

NC 147 is a four- to six-lane divided freeway with full control of access. The burdening section of NC 147 is located in Durham County. NC 147 links NC 540 with Research Triangle Park, Downtown Durham, and Interstates 40, 85, and the recently-designated 885 (Figures 3 and 4).

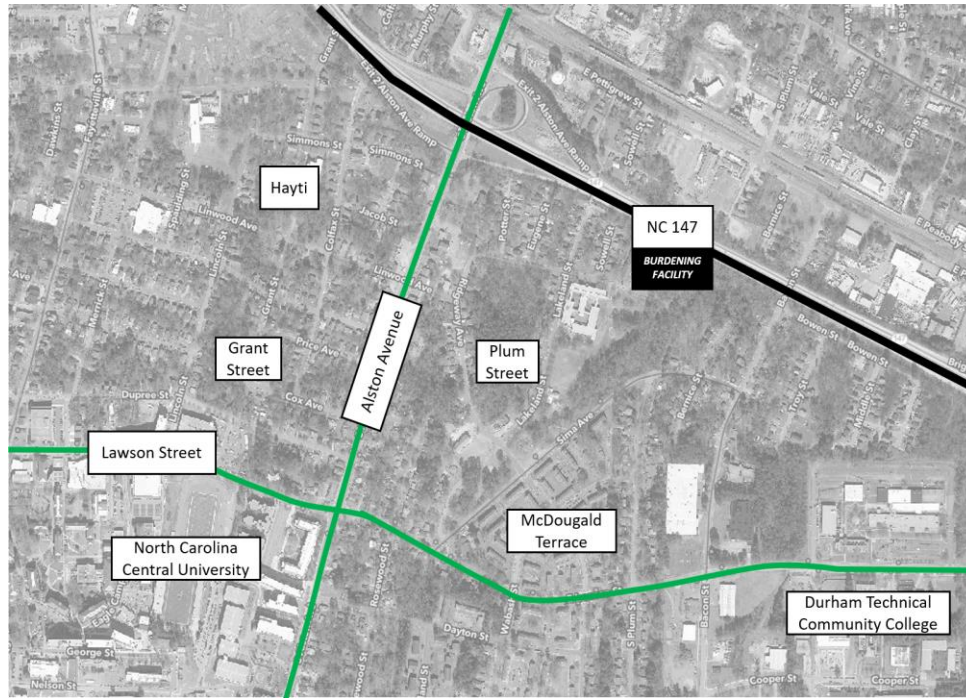


Figure 3 – Eligible Burdening Facility and Surrounding Neighborhood

### Surrounding Community

The surrounding community burdened by NC 147 is Southeast Central Durham, one of Durham's most densely populated areas. The primary arterial in the community is Alston Avenue which runs north-south and is traversed by Lawson Street running east-west (Figure 3). It is served by GoDurham bus routes 8 and 12/12B. Southeast Central Durham includes the Grant Street, North Carolina Central University, and Plum Street neighborhoods.

### Triangle Mobility Hub

The Triangle Mobility Hub will be located near the southwest quadrant of NC 54 and S Miami Boulevard near I-40 in RTP (Figure 4). The 19.4-acre site is owned by Research Triangle Foundation (RTF) and is located in Durham County, North Carolina (Durham County Parcel Identification Numbers: #0747-36-2290 and #0747-36-4637) (Figure 2). The RTF Board adopted a resolution supporting the construction of the Triangle Mobility Hub and transit-oriented development on the site (Appendix C). The site will support fast, frequent, and reliable transit through improved proximity to thoroughfares such as I-40, I-885, and NC 147. It will provide access to everyday destinations in and around RTP and connections to regional destinations.



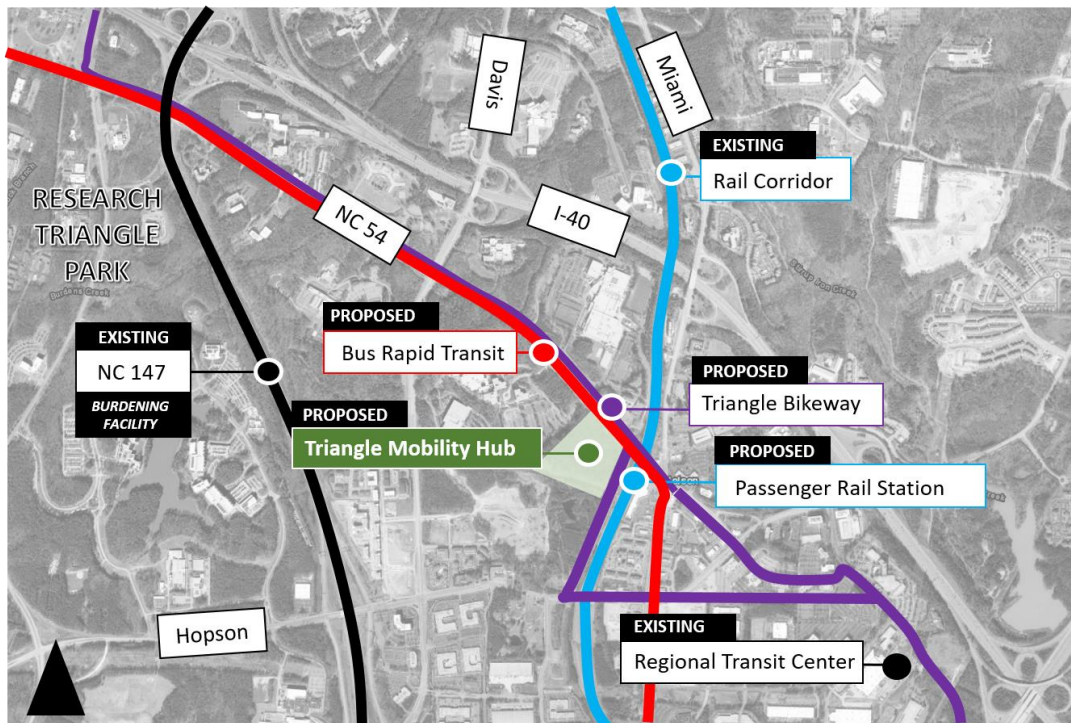


Figure 4 – Triangle Mobility Hub Vicinity Map and Multi-Modal Connections

## GoTriangle Service Area

GoTriangle is the regional public transportation provider for the Research Triangle, one of the fastest growing regions in the United States. Already home to more than 2 million people, the region is frequently cited as one of the best for families and businesses to relocate. High-quality, equitable, and accessible public transit is essential to ensuring that all are able to share in that growth and prosperity, including residents of low-wealth areas, communities of color, and those living in zero car households. High-quality regional public transit is a regional priority. Voters in Wake, Durham, and Orange counties have passed referenda to levy a half-cent sales tax to connect the region with fast, frequent, and reliable transit. The Triangle Mobility Hub and SPOKE project is integral to achieving that vision.

## C) Response to Merit Criteria

### 1. Equity and Environmental Justice

#### Analysis of harmful historic or current policies

Residential segregation, urban renewal, and development policies and patterns stemming from the early to mid-1900s and the construction of NC 147 in the 1960s created segregated land use and transportation patterns, isolated neighborhoods, and auto-centric access that persist today.

Residential segregation and “redlining” had a profound impact on Durham. The use of race-based deed restrictions and lending restrictions severely impeded the ability of Black communities – nearly 40% of Durham’s population in the 1940s – to purchase homes and build

wealth. Residential Security Maps developed by the Home Owners' Loan Corporation resulted in the “redlining” of Black neighborhoods in Durham, further restricting access to capital and home equity. Many redlined areas in Durham are still burdened by higher rates of economic and racial segregation and lower property values, rates of home ownership, and credit scores.

Voters in the City of Durham approved bonds for Urban Renewal projects including “slum clearance” in Hayti and construction of NC 147 in 1952. Voters were promised improved living conditions and economic prospects for the city; however, those promises never came to fruition for residents of Hayti and Southeast Central Durham. The construction of NC 147 itself resulted in the demolition of homes and businesses across approximately 200 acres, severing the economic and social fabric of the community. Many Black residents and businesses were directly displaced. During construction and the years that followed, remaining residents and businesses began to leave, resulting in fewer services and opportunities in the community.

### Existing socioeconomic and environmental disparities

According to the 2015 Moving to Opportunity study by Harvard University and the University of California Berkeley, Wake and Durham counties ranked among the lowest six percent in the country in upward mobility among low-income families (e.g., families in the 25th percentile).

Residents living in Southeast Central Durham continue to experience issues related to policies established in the early- to mid-1900s. Higher costs of shelter, displacement, and disinvestment impeded the ability to build generational wealth and put Black communities, including Southeast Central Durham, at a severe disadvantage relative to communities unburdened by these policies. At the same time, residents are disproportionately unable to afford the costs of a car and reap the mobility benefits provided by NC 147. They are disproportionately burdened by the lack of connectivity, noise, pollution, and persisting community disinvestment from these policies. As depicted in Figure 5, residents without a vehicle have disproportionately less access.

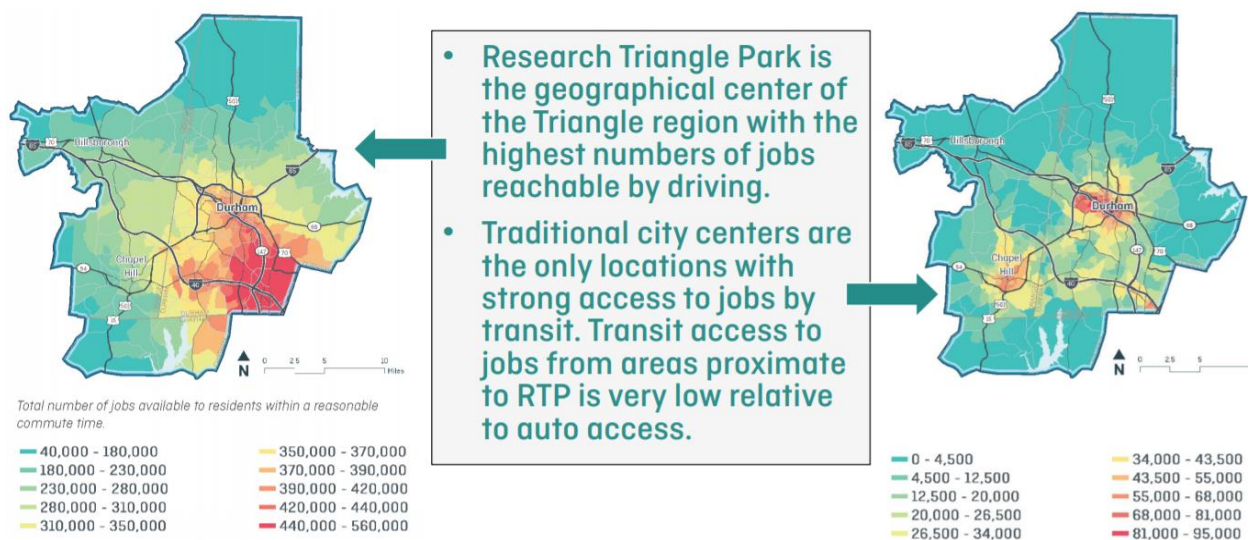


Figure 5 – Jobs Accessible by Car (left) and Transit (right). Note scale difference. DCHC MPO 2019 State of the Region Report

## Addressing community needs by equitable distribution of benefits and mitigation

The provision of affordable, sustainable, high-quality public transportation embodied in the SPOKE network will directly address well-documented community needs, ensure the equitable distribution of benefits, and mitigate community impacts. By reducing transit travel times through an optimized location and transit priority measures, the Triangle Mobility Hub will enable GoTriangle to add Route 700 service every 15 minutes on Lawson Street and Alston Avenue providing direct, frequent transit connections to Southeast Central Durham (Figure 6).

The project will build upon recent efforts, such as the Move Durham Study, Durham Transit Plan, and the Short-Range Transit Plan (Appendices D, E, F). Each demonstrated strong public support of improved regional transit access. The project will address a critical need conveyed by community anchors, including Durham Tech and NCCU, to provide direct regional transit access for students and staff. The project will complement the Reimagining Durham Freeway Study that will develop a long-term vision to identify and address barriers and injustices due to the freeway.

The affordability and frequency of the SPOKE network, connecting Southeast Central Durham to the Triangle Mobility Hub among other destinations, will ensure the equitable distribution of benefits, addressing transportation disparities. For example, residents of McDougald Terrace will be able to access 61,000 more jobs within 45 minutes— an increase of 450% (Figure 8, C3).

The Triangle Mobility Hub and SPOKE project is a critical incremental step in improving transit access and reducing transportation disparities for disadvantaged communities burdened by NC 147 (Figure 6). The use of battery-electric buses (BEBs) will mitigate potential noise and pollution impacts from high-frequency bus service. GoTriangle will work with NCDOT to ensure that buses receive signal priority. As described in Section C2, GoTriangle will ensure that bus stops are accessible and connected to safe facilities for all users.

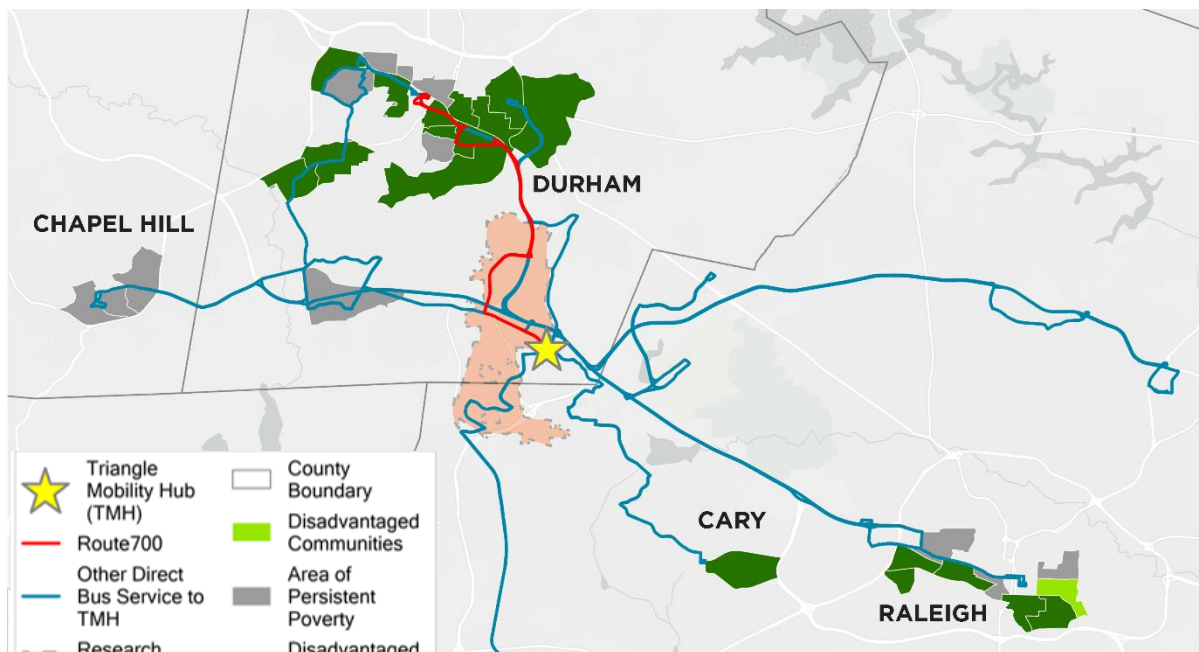


Figure 6 – SPOKE Network included in County Transit Plans, Disadvantaged Communities (CJEST) and Areas of Persistent Poverty



### **Construction avoidance, minimization and mitigation**

The proposed Triangle Mobility Hub site is undeveloped land. Therefore, there will be **no displacement of businesses or residents** due to the proposed project. Advanced notification will be provided to nearby residents, businesses, and the public for construction activities. A traffic and pedestrian plan, safety plan, and construction mitigation plan will be prepared prior to construction. Mitigation will include fencing and dust, erosion, and sediment control.

The existing Regional Transit Center will remain operational until the new facility is ready for revenue service. In addition to community outreach during project development, GoTriangle will provide awareness of bus route changes through updated service plans, equity analysis, signage, and notifications at least six (6) months in advance of opening the new facility. Customer outreach personnel will be onsite at both facilities to help guide riders and respond to questions.

## **2. Access**

### **New and improved, context-sensitive, affordable transportation options**

The Triangle Mobility Hub will anchor the regional transit network (Figure 7). It will serve high-quality public transportation linking an enhanced bus network to planned rail service, bus rapid transit (BRT), and the Triangle Bikeway. It will connect residents, especially those in disadvantaged communities and Areas of Persistent Poverty, to good paying jobs, education, and other destinations across the region via affordable and sustainable means (Figure 6, Section C1).

<b>Bus service improvements supported by the Triangle Mobility Hub and SPOKE network</b>		
<b>Route</b>	<b>Frequency</b>	<b>Destination served</b>
100	15	North Carolina State University and Raleigh
310	30	Wake Tech RTP Campus, Morrisville, Park West Village, and Cary
311	30	Southern RTP, Parkside, and Apex
700	15	Downtown Durham, NCCU, Durham Tech and Duke University – providing direct regional connections to Southeast Central Durham
700, 800	10-15	HUB RTP, Boxyard, and other major nodes in RTP
800	30	Southpoint, Chapel Hill, and UNC Chapel Hill
RDU	30	RDU Airport and RDU employment area
		Micro-transit to support first/last mile connections to all destinations in the greater RTP / RDU area not accessible from fixed route buses
		Future routes identified in transit plans: North Raleigh Express, NC 54 / South Square Crosstown, Miami Blvd/Ellis Rd, Brier Creek

### **Safe accommodation for all users**

The Triangle Mobility Hub will be accessible for all users with design that meets or exceeds ADA. Enhanced sidewalks, high visibility crosswalks, pedestrian-scale amenities, and enhanced streetscape will connect riders to community destinations. An enhanced pedestrian crossing of NC 54 will improve safety across this major corridor. Bicycle facilities, bicycle parking, and connections to the Triangle Bikeway will be provided. The transit center will minimize conflicts between buses and transit riders. Dedicated transit prioritization will separate buses from general vehicular traffic. Wayfinding signage will direct people where to go.



GoTriangle, through its existing partnerships with NCCU, Durham Tech, and DHA, will continue to improve bus stops along Lawson Street and Alston Avenue to meet the needs of transit riders in Southeast Central Durham in advance of opening the Triangle Mobility Hub.

### Seamless integration with surrounding character, context and land use

RTF is undertaking a master plan for Research Triangle Park (RTP 3.0) to guide future development in the Park. RTP 3.0 provides an exemplary opportunity to support growth in the Triangle in a sustainable and equitable way, while limiting displacement risk to existing residents. The 7,000-acre RTP is primed for conversion from a 1970s era research park with no residents to thriving mixed-use destination with integrated affordable housing.

### Encourage thriving communities by creating transportation choices

The Triangle Mobility Hub will anchor the regional transit network. It will serve high-quality public transportation linking an enhanced bus network to planned rail service, BRT, and the Triangle Bikeway. The project will unlock new and improved bus service embodied in the SPOKE network. The project will promote walking and biking as healthy and affordable transportation alternatives. A park-and-ride with electric vehicle chargers will provide access to drivers. Drop-off areas will be provided for paratransit, taxis, rideshare, and micro-transit.

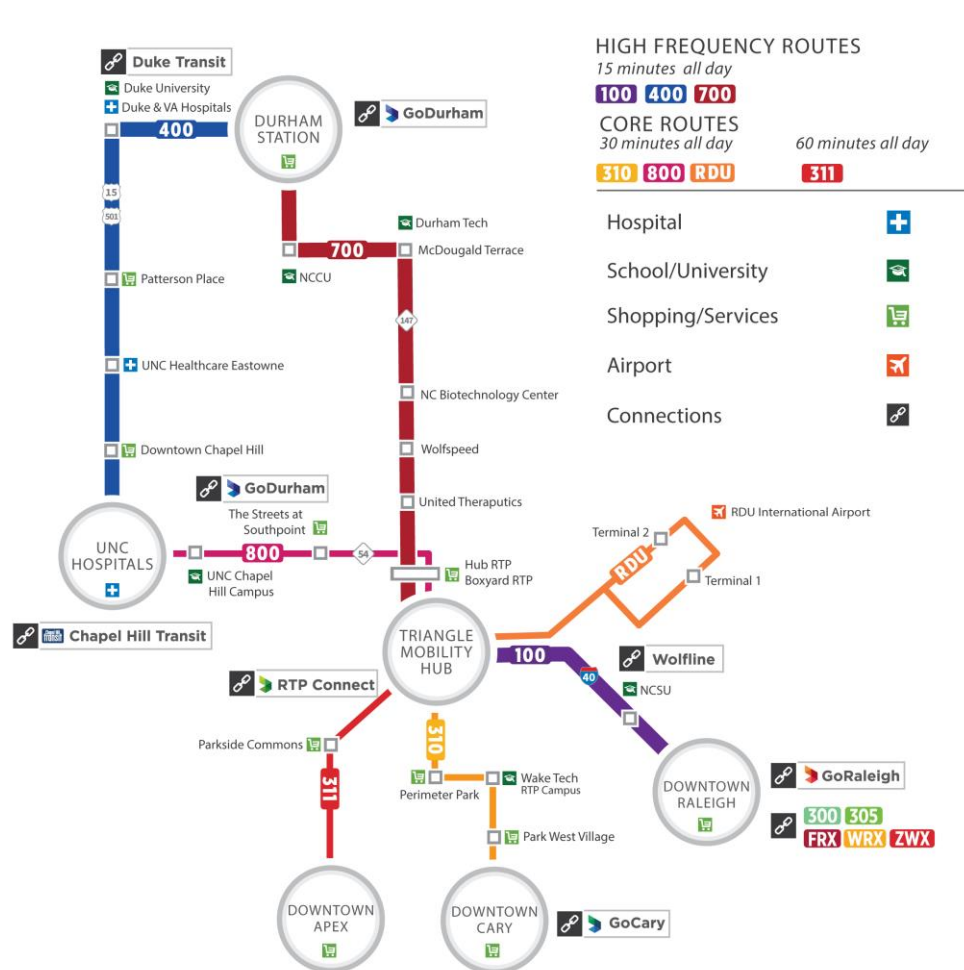


Figure 7 – Initial SPOKE network when Triangle Mobility Hub opens in 2028

The Triangle Mobility Hub will build upon the vision of RTP 3.0 as well as Hub RTP and Boxyard. The project and RTP 3.0 will transform NC 54 into a compact, walkable, and multi-modal corridor accessible by high-quality public transportation for residents of disadvantaged communities and current transit riders. It will support frequent bus service along NC 54 and serve as a central location for transit and future rail passengers to make first- and last-mile connections to access education, workforce training, and good paying jobs in and around RTP.

### **Better access to daily destinations**

The Triangle Mobility Hub will remove barriers to opportunity and expand access to essential services such as jobs, healthcare, education, and goods and services via colocation of the transit hub with enhanced first- and last-mile connections, planned BRT, and planned rail service. New bus services provided by the SPOKE network will improve access to community destinations for residents without cars. The new location will increase transportation choices by providing access to a larger variety of everyday destinations. Figure 7 depicts destinations accessible from the Triangle Mobility Hub. The improvements in multi-modal connectivity, access, and mobility will reduce transportation disparities for transit riders and residents of disadvantaged communities.

### **Planning for better access**

Planning efforts including Move Durham, the Durham Transit Plan, and the GoTriangle Short Range Plan (Appendices D, E, F) have identified a strong desire from residents and anchor institutions for improved regional transit. In 2021, GoTriangle completed the Regional Transit Center Relocation Feasibility Study that collected over 3,000 comments from transit riders pertaining to desires for facility and access improvements (Appendix G). Through a criteria driven-search process, the study identified that the Triangle Mobility Hub site will reduce transit round-trips by 7 minutes on average and enable implementation of the SPOKE network.

## **3. Facility Suitability**

### **Existing access, mobility and economic development burdens**

NC 147 is a primary route through Durham County with between 60,000 and 80,000 vehicles per day. NC 147 represents a significant burden to access for many Durham residents, particularly for those without access to a vehicle. In Census tracts 13.01, 13.03, 14.00, and 20.09 in Southeast Central Durham, 14% of households have zero vehicles available. The number of zero vehicle households in this area is significantly higher than in Durham County (7%). Households spend 24% of their income on transportation, significantly more than the 15% considered affordable.

Divided by NC 147, these neighborhoods are frequently more isolated and experience increased noise and air pollution due to the freeway. The freeway corridor and surrounding communities lack adequate access to everyday destinations and robust transit options. It creates unsafe conditions for residents without access to vehicles. Access to employment, healthcare, and other critical destinations is limited as compared to residents with cars (Figure 5). With limited access to cars, Southeast Central Durham residents are underserved by NC 147 and burdened by it.

Residents of Southeast Central Durham experience slow, unreliable transit service due to congestion and connectivity from the freeway to local streets. GoTriangle's regional bus network connects local transit hubs and regional destinations. It operates primarily along highways, many of which were built through historically disadvantaged communities. However; direct access to

regional bus service is not currently available to those communities, including Southeast Central Durham. Half-hourly local bus service is available in Southeast Central Durham; but, connections to regional destinations are infrequent, circuitous, and require multiple transfers.

### **Mitigating access, mobility and economic development burdens**

The Triangle Mobility Hub will anchor the regional transit network. It will serve high-quality public transportation linking an enhanced bus network to planned rail service, BRT, and the Triangle Bikeway, connecting more residents, especially those in historically disadvantaged communities, to good paying jobs, healthcare, educational, and destinations across the region.

The capital investment in the Triangle Mobility Hub will allow GoTriangle to realign and expand locally funded transit service more effectively through the SPOKE network. The new location and construction of transit priority infrastructure will enable GoTriangle to realign Route 700 to Lawson Street and Alston Avenue. This transformative improvement will result in direct regional connections every 15 minutes to residents of Southeast Central Durham. It will provide direct regional service to Durham Technical Community College and North Carolina Central University connecting more people to opportunities for education and workforce development. The SPOKE network will additionally provide seamless connections to local bus service.

A pair of studies from Harvard and NYU found that commuting time is the single strongest factor correlated with upward economic mobility and that the number of jobs accessible by transit within an hour is positively correlated with higher incomes and rates of employment. The SPOKE network will significantly increase the number of jobs accessible to residents of Southeast Central Durham with limited vehicle access, addressing transportation disparities. For example, today, residents of McDougald Terrace can access 17,700 jobs on transit in 45 minutes. Following project implementation, they will be able to access more than 79,000 jobs (Figure 8).

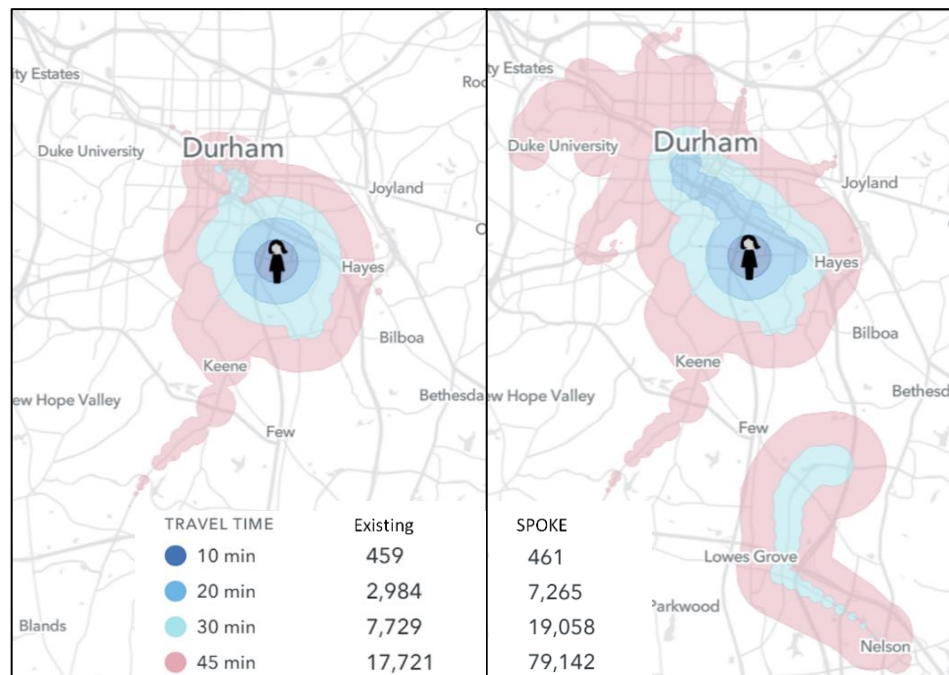


Figure 8 – Jobs Accessible by Existing Transit (left) and by the Future SPOKE Network (right) from McDougald Terrace

**The Triangle Mobility Hub will unlock the transformative improvements of the SPOKE network connecting residents to economic opportunity via affordable and sustainable options.** The Triangle Mobility Hub will save transit riders 7 minutes per round trip and improve park and ride access. The new location will provide a centrally located connection point for buses, micro-transit, micro-mobility, and planned BRT and rail service. First- and last- mile connections to destinations in RTP will be more direct, providing faster trips to major employers and other destinations in and around RTP (Section C2). The benefits of the project will accrue to residents of disadvantaged communities like Southeast Central Durham and existing transit riders. For demographic data on GoTriangle’s ridership, refer to Section C6.

#### 4. Community Engagement and Community-based Stewardship, Management, and Partnerships

The Triangle Mobility Hub and SPOKE project’s Community Participation Plan will prioritize strategies that engage community members who have been historically excluded from decision-making and ensure voices are elevated, heard, and considered. The community-center approach will engage community members in conversations aimed at developing solutions to reconnect communities and take initial, meaningful steps at addressing inequities created by the freeway.

##### Feasibility study

Public feedback was collected during the Regional Transit Center Relocation Feasibility Study (Appendix G). Outreach efforts were targeted to transit riders at the existing Regional Transit Center. The survey was paired with virtual recorded presentations, social media outreach, website updates, and email blasts, and was offered in English and Spanish, all with a focus on current transit riders. More than 3,000 comments informed priorities for the project, including transit speed and reliability, passenger experience, pedestrian access, and increased service.

The Triangle Mobility Hub and service improvements embodied in the SPOKE network were featured in the recently adopted Durham Transit Plan and Wake Transit Vision Plan Update. The robust public engagement included in these plans and the Move Durham Study demonstrated strong support for fast, frequent, and reliable transit (Figure 9, Appendices D, E, H).

Measures of effectiveness for equitable outreach	
<b>Representation</b>	Participants represent a wide range of community members, including residents in historically underserved areas
<b>Accessibility</b>	Engagement methods are available to all, including those with disabilities, limited resources, and limited English proficiency
<b>Inclusivity</b>	Marginalized and underrepresented participants feel valued
<b>Resources</b>	Resources are allocated equitably across communities
<b>Equitable Outcomes</b>	Decisions resulting from engagement are fair and equitable
<b>Decision-Making</b>	Input gathered influences decisions and policies
<b>Relationships</b>	The project builds trust and ongoing relationships
<b>Capacity Building</b>	Efforts ensure stakeholders are able to fully participate
<b>Transparency</b>	Stakeholders understand how decisions are made
<b>Equity Metrics</b>	Track progress toward goals, close gaps, and address disparities



## Schematic design

Schematic design will begin in Fall 2023. A Community Engagement and Communications Plan will include a stakeholder assessment, goals/objectives, tactics, schedule, and evaluation metrics. It will identify community partners to create awareness of the project, gather input, and ensure underserved voices in the community are central to project engagement. A Community Advisory Group will be developed with membership anticipated from Durham Housing Authority, Durham Technical Community College, North Carolina Central University, among and community organizations, to guide the process, create awareness of the project, and solicit input.



Figure 9 – Summary of Transit Comments from the Move Durham Study

Planned engagement activities include multi-modal stakeholder charrettes, small group meetings, agency coordination, community drop-in sessions, pop-ups at transit facilities and gathering places, briefings, and an online open house. GoTriangle will offer briefings to neighborhoods and community organizations and will attend community events. Materials will be written in English and Spanish. Electronic and mail-in/drop-off options will be used to gather input. Discussions around workforce development opportunities, partnerships, and job creation with employers, educational institutions, and other job creators will be held.

## Final design






Final design is anticipated to begin at the execution of the RCN grant agreement. Community engagement will build upon the momentum of prior phases. The Community Engagement and Communications Plan will be refined based on lessons learned. The project team will continue to create awareness of workforce development opportunities through agency partnerships with employers and educational opportunities. GoTriangle will conduct job fairs to create awareness of employment opportunities related to construction of the Triangle Mobility Hub with contractors and disadvantaged business enterprises (DBEs).

## Construction

Additional engagement tactics will be employed during construction. Construction opportunities will be shared with local communities, including small businesses and DBEs. Advanced notice of construction activities will be provided to properties located near the construction site as well as for those traveling through the NC 54 corridor. Construction mitigation requirements related to noise, dust, and vibration will be included in contractor agreements. Signage along construction fencing will create awareness and continue to build excitement for the project.

## Partnerships

This project is the result of a long-standing collaborative partnership between multiple agencies and organizations that consistently work closely together to solve regional public transit challenges and implement successful projects.

	Partner	Collaboration Approach
	<b>Ambassadors</b>	Partnerships with community ambassadors will support engagement by underserved and marginalized community members.
	<b>Government</b>	Collaboration with the DCHC MPO and City of Durham will support equitable engagement strategies to ensure the voices of transit riders and disadvantaged residents are represented and their needs prioritized. Coordination with CAMPO and NCDOT will ensure the project is integrated with planned BRT, Triangle Bikeway, NC 54 corridor improvements, and future rail service.
	<b>Education</b>	Partnerships with Durham Technical Community College, North Carolina Central University, and Wake Technical Community College will support development and delivery of this project, and training/workforce development opportunities.
	<b>Housing</b>	Partnering with Durham Housing Authority and Durham Technical Community College to plan and implement transit investments will support residents living in DHA communities and support planned affordable housing investments by both organizations
	<b>Employment</b>	Awareness of job opportunities will be conducted through job fairs, and direct outreach including engaging minority-owned businesses, women-owned businesses, and other historically underutilized businesses (HUBs) to plan, design, and construct GoTriangle facilities as well as operate and maintain its transit system.

## Funding (committed)

The preliminary project cost estimate and funding sources is provided in Appendix I – Cost Estimate and Funding. The below table reflects the funding sources that would be utilized to support the development of this \$58,200,000 project. The \$46,560,000 RCN grant funds being requested represent 80% of the total project cost. The balance of the project cost is committed from non-federal, local sources including the Durham, Orange, and Wake County Transit Plans. Appendix B includes a commitment of the local match from the Tax District Administrator

Funding Type	Funding Source	Funding Amount	Percentage of Total Costs
Non-Federal	Wake, Durham, and Orange Transit Plans	\$11,640,000	20%
RCN Grant	RCN Grant	\$46,560,000	80%
Other Federal	N/A		0%
Total		\$58,200,000	100%

## 5. Equitable Development

GoTriangle's partnership with RTF supports delivery of public and private investments through equitable TOD on the Triangle Mobility Hub site. It will catalyze responsible, sustainable, and equitable development opportunities along the NC 54 corridor in RTP. The Triangle Mobility Hub will encourage a thriving community by providing connections to everyday destinations, increasing access to economic opportunity and reducing household transportation costs.

### **Encouraging public and private investments near public transportation**

RTP's renowned 7,000-acre wooded research-centric campus is in the beginning stages of a transformation to a thriving live, work, and play destination centrally located between Raleigh, Durham, and Chapel Hill. Infill opportunities for new by-right housing supply, including mixed-use and mixed-income developments are abundant along the NC 54 corridor, with more than 670 acres of land identified. With the Triangle region projected to add nearly one million residents by 2050, RTP's transformation is an incredible opportunity for location-efficient and sustainable development to address the Triangle's growth while limiting displacement risk. The Triangle Mobility Hub and transit connections that it supports will ensure that all residents of the Triangle will be able to access the thriving community and economic opportunities of RTP.

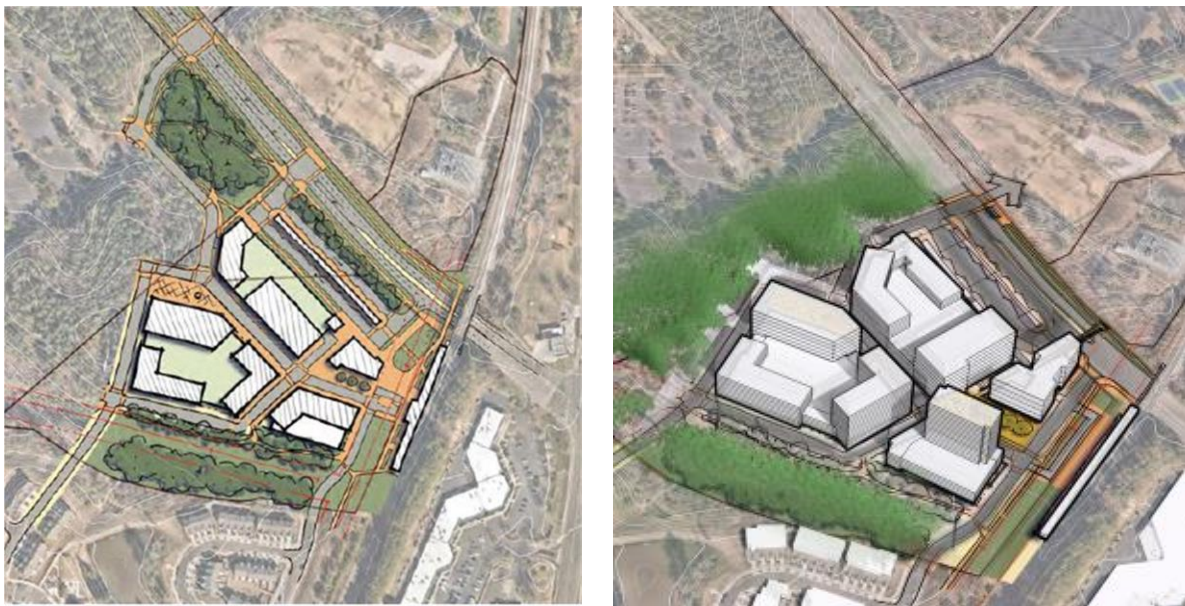


Figure 10 – Triangle Mobility Hub Site: TOD Concept, Plan View (left) and Massing Diagram (right)

The Triangle Mobility Hub and SPOKE project will serve as a catalyst for public and private investment in RTP along transit routes. The transit center will anchor the Eastern Gateway to RTP (Figure 10). It will build upon and link [Hub RTP](#), a vibrant new downtown for RTP that is under construction, to regional transit connections. The transit center will provide high-quality, frequent, and reliable transit service to connect communities to new mixed-use, mixed-income developments, educational institutions, and employment opportunities.

### **Community restoration, stabilization and anti-displacement strategies**

RTF is undertaking efforts to develop an affordable housing strategy that can be deployed within RTP to expand the supply of affordable housing units in the Triangle. This strategy will include mechanisms to create new affordable housing in the region and leverage community partnerships

to achieve its vision. The proposed Triangle Mobility Hub site is undeveloped land. Therefore, there will be no displacement of structures, businesses, or residents due to the proposed project.

The SPOKE network will provide access to location-efficient affordable housing and connect it to everyday destinations and economic opportunity. Route 700 will provide 15-minute service to DHA's McDougald Terrace mixed-use and mixed-income redevelopment, and affordable housing constructed through Durham Technical Community College's Pathways to Opportunity. Figure 11 shows existing and planned affordable housing on the SPOKE network.

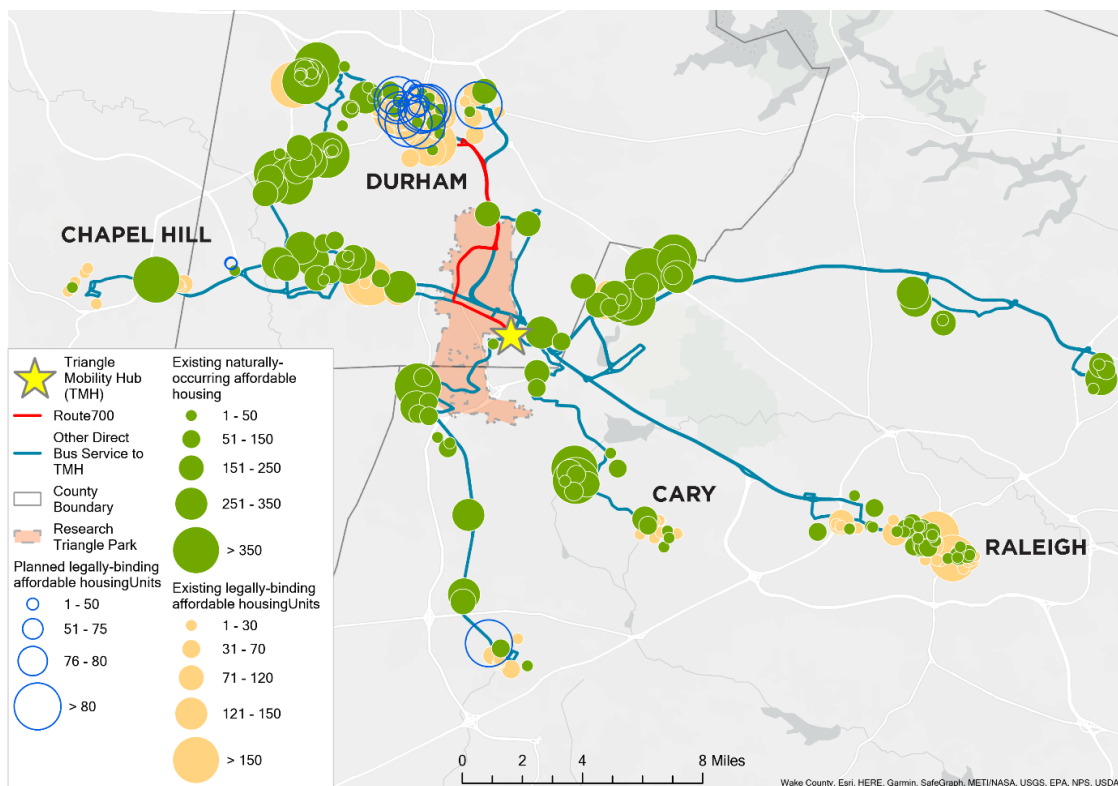


Figure 11 – SPOKE Network included in County Transit Plans, Existing and Planned Affordable Housing

## Community-wealth building activities

Improved transit and micro-mobility alternatives— together with sound development practices— is essential to providing affordable access to good-paying jobs for a greater share of the population. The Triangle Mobility Hub and SPOKE project will increase ridership in disadvantaged communities by providing transit access to opportunities for economic mobility.

The new location will also help reduce transportation cost burdens for low-income households through improved access to multiple transit and transportation modes to reach regional locations. Transportation expenses average approximately \$10,000 annually per household vehicle according to AAA. With convenient transit choices, households have the option to reduce car use, reducing car payments, fuel costs, maintenance costs, insurance, parking, registration and licensing fees. Private vehicles break down, which can incur unexpected expenses and missed work. Increased physical activity and reduced stress from driving in congestion may also lead to better health and lower healthcare costs. These savings can support the creation of capital to build community wealth.



**Boxyard RTP's HUB PopBox** is a 320-square-foot rotating shipping container backed by a micro-grant from NC IDEA and the Research Triangle Foundation. The program aims to scale up women and BIPOC-owned businesses. Durham Tech partnered with Boxyard RTP to provide technical assistance and small business counseling. Section C7 describes additional programs.

### **Creative placemaking**

As the Eastern Gateway to RTP, the Triangle Mobility Hub will include distinctive architecture, a vibrant mix of uses, and a celebration of local culture. The site will integrate land use and transportation to create seamless community, connections, and a sense of place. It will include an active pedestrian realm with street-facing buildings, street trees, and pedestrian-scale amenities. RTP will build on placemaking initiatives in place at nearby Hub RTP to continue to feature the history of the Park and North Carolina culture throughout RTP. Locally funded public art elements are being integrated and introduced at each stage of Hub RTP development. The same principles RTF has delivered at Hub RTP will be extended to the Triangle Mobility Hub site.

### **Local/regional/state equitable development plan**

The City of Durham and Durham County Comprehensive Plan guides how they will develop and provide facilities and services to support future growth. The plan was developed through a robust 3-year process that centered equitable engagement strategies, such as listening and learning sessions and Engagement Ambassadors. The plan identifies the Triangle Mobility Hub as a Transit Opportunity Area (TOA) ripe for compact, walkable, and equitable development to manage growth, support community prosperity, and reduce displacement risk (Appendix J).

### **Zoning**

RTF is working in coordination with Durham to revise the Unified Development Ordinance (UDO) to align with the vision, goals, and policies established in the Durham Comprehensive Plan and RTP 3.0 initiative. RTF expects that future zoning for this site will allow for a wide array of uses, including residential, at higher densities consistent with the TOA place type and TOD vision for the site. Hub RTP, as RTP's first district with residential uses allowed, provides an example of the initial density envisioned for RTP. RTF fully intends to take the appropriate actions and obtain the necessary approvals to modify the covenants on this parcel to support and allow for TOD in conjunction with the construction of the Triangle Mobility Hub at this location.

## **6. Climate and Environment**

### **Reducing transportation-related pollution**

The project is anticipated to result in an overall reduction in emissions through shorter trips, mode shift, reducing transit vehicle miles traveled, and electrification of the transit fleet.

GoTriangle is committed to reducing emissions and will convert 10% of its fleet to battery-electric vehicles by 2025. The Triangle Mobility Hub and SPOKE project will include the purchase of 10 new battery-electric buses to serve disadvantaged communities, including those burdened by NC 147. This will decrease emissions and reduce noise in neighborhoods located along GoTriangle's network due to conversion from diesel to electric. Charging facilities at the site will increase vehicle uptime, further reducing transit vehicle emissions.

GoTriangle analyzed project benefits during planning. Relocating the transit center to the Triangle Mobility Hub site is anticipated to result in an annual reduction of approximately

59,812 vehicle revenue miles. This results in an reduction of over 8,255 metric tons of CO<sub>2</sub> emissions saved over 30 years, among other pollutant savings. The project is also anticipated to result in a benefit of 12.6 million VMT avoided over 30 years.

### **Addressing disproportionate impacts on disadvantaged communities**

In addition to addressing burdens faced by historically disadvantaged communities, the Triangle Mobility Hub and SPOKE network will greatly benefit GoTriangle's diverse ridership base. For GoTriangle, 58% of riders identify as a person of color, including 42% of riders that identify as Black, 15% that identify as Asian, 7% as Hispanic or Latino and 1% that identify as Native American Indian.

GoTriangle's bus, paratransit, and micro-transit services provide affordable and accessible mobility options across the region. The 2023 GoTriangle Onboard Customer Survey (Appendix K) showed that 60% of riders are transit-dependent, demonstrating that GoTriangle provides critical transportation and mobility services to a population that does not have viable transportation alternatives. Further, 32% of riders earn annual incomes less than \$15,000, demonstrating the importance of GoTriangle's ability to provide accessible transit service.

The primary beneficiaries of the project are transit-dependent populations and historically disinvested and underserved communities. In expanding GoTriangle's capacity and improving the resilience of GoTriangle's operations, the most vulnerable users of this regional transportation network are prioritized through this project.

Enhancing the resilience of publicly accessible, affordable transit is a key component in solving socioeconomic inequities that still manifest today from unjust planning histories of redlining, segregation, and environmental degradation. Investments in transit advance mobility and accessibility for transit-dependent communities, which makes meaningful contributions toward advancing mobility equity and rectifying historic injustices. Through intentional, strategic, and proactive investments in transit corridors that provide access to transportation disadvantaged communities, GoTriangle will enhance access, connections, and mobility in these communities, strengthen community cohesion, and support new opportunities. GoTriangle will ensure that project implementation will not result in a disparate impact on minority or low-income populations consistent with Title VI requirements for federal funding.

### **Activating green space**

The Triangle Mobility Hub will provide enhanced connections to green space and recreational amenities, including the Hub RTP and the Triangle Bikeway – with connections to the American Tobacco Trail and local and state parks, including Jordan Lake, Umstead State Park, and Lake Crabtree. Streams and waterways that flow throughout the Park provide opportunities for preservation of natural areas while activating them as a transportation and recreation amenity for the region. The nearby Hub RTP development led by RTF provides an exemplary greenspace used to anchor a community space, as the Hub RTP plaza and splash pad are anchored on a restored stream that makes up 16 acres of greenspace throughout the site. The same principles RTF has deployed and delivered at Hub RTP will be extended to the Triangle Mobility Hub site.

### **Higher-quality choices for lower-carbon travel**

The Triangle Mobility Hub and SPOKE project will provide new and enhanced affordable, sustainable travel options. New bus routes will provide new transit access to underserved neighborhoods. The transit center will connect riders to multiple modes of transportation,

including enhanced bicycle and pedestrian infrastructure, and planned BRT, Triangle Bikeway, and rail service. Sustainable development will include new streetscape and roadway design standards, as well as urban form regulations, to create environments that promote lower-carbon travel modes, including walking and biking as well as transit and micromobility.









### Local/regional/state climate action plan

North Carolina Executive Order 80 (2018) and Executive Order 246 (2022) mandate the reduction of GHGs across North Carolina (40 percent below 2005 levels), an increase of registered zero-emissions vehicles across the state to at least 80,000, and the lowering of energy consumption in state-owned buildings (by 40 percent from 2002-2003 levels). EO80 also called for the creation of North Carolina's Risk Assessment and Resiliency Plan. The Triangle Regional Resilience Partnership calls for transitioning government fleets to be less dependent on fossil fuels. Wake, Durham, and Orange counties also have fleet electrification goals.

### Specific design elements and technologies to address climate change

The Triangle Mobility Hub will enhance transportation options and user experience while minimizing its environmental footprint. The team will explore feasibility for facility certifications such as ENVISION, Well, or LEED, to guide and validate sustainability efforts.

The project will improve air quality through reduction in vehicle miles traveled, reduction in emissions through conversion from diesel powered buses to BEBs, and mode shift to transit. The potential presence of water resources, threatened or endangered species, and other sensitive resources will be identified during environmental review. The project will avoid negative impacts to environmental resources during construction and operations. Mitigation requirements will be identified with resource and regulatory agencies and monitored for compliance.

Specific design elements and technologies to address climate change		
	<b>Accessibility</b>	Access to local and regional buses, pedestrian and bicycle infrastructure, planned BRT, and planned rail service.
	<b>Zero emissions</b>	The site will support electric buses and charging infrastructure. Ten new BEBs will operate on routes in underserved neighborhoods.
	<b>Active transportation</b>	Walking and biking will be encouraged for users of all abilities. Bike storage and bike repair facilities will be provided. Enhanced pedestrian connections, streetscape, and pedestrian-scale amenities.
	<b>Green space</b>	Green spaces will be provided on the TOD site.
	<b>Weather protection</b>	Covered boarding areas will provide refuge. The site will serve as heating/cooling centers during inclement weather.
	<b>Energy efficiency</b>	Energy-efficient lighting, heating and cooling systems, and insulation will be used. Renewable energy sources and battery storage for the facility will be explored. Use of native and drought-resistant plants, low-flow fixtures, and efficient irrigation systems will reduce water consumption.
	<b>Green building</b>	Preferences for local building materials with low environmental impacts, lower maintenance requirements, and long lifespans.
	<b>Stormwater</b>	Low-impact stormwater management options, such as rain gardens, retention ponds, swales and permeable pavement, will be explored.

## 7. Workforce Development and Economic Opportunity

GoTriangle will create awareness of opportunities during design, construction, and operations of the Triangle Mobility Hub with Disadvantaged Business Enterprises (DBEs), Minority-Owned Businesses, and Women-Owned Businesses. The agency will create awareness and connect people to entrepreneurship and inclusive economic opportunities in RTP and across the region. GoTriangle's internship program provides opportunities for students to gain valuable onsite training skills. The agency also offers paid training for bus operators, mechanics, and to transition the workforce from maintaining diesel-powered buses to battery-electric buses.

GoTriangle has established a DBE program in accordance with regulations of the U.S. Department of Transportation, 49 CFR Part 26. The DBE Goal is 13.57% for Federal Fiscal Year (FFY) October 1, 2023 through September 30, 2024. RTF is committed to inclusive economic development and entrepreneurship as a part of its mission. RTF has set an overall MWBE participation goal of 25% for its goods and service contracts. RTF's construction contracting at Hub RTP and Frontier RTP achieved 54.9% MWBE participation in FY23.

RTF maintains partnerships with Durham Tech and Wake Tech to promote workforce development programs and connect area employers with educational resources at these institutions. In 2022, Durham Tech launched its Center for Workforce Engagement in partnership with RTF on the Frontier RTP campus. The center works with new and emerging businesses on customized training and provides career services, human resources development, work-based education and apprenticeships, and a small business center.

RTF believes that diversity, equity, and inclusion are crucial to the success of the community and has partnered with companies, technical institutes, and non-profits to further talent attraction. **RTP Bio** is a unique collaboration between Wake Tech and Durham Tech offering increased biotechnology career opportunities while strengthening the talent pipeline for life science companies in the Triangle region, which is the fifth-largest biotechnology hub in the United States. Both colleges have RTP satellite campuses, located less than 10 minutes from the Triangle Mobility Hub, and will be served directly by the SPOKE network. **The Research Triangle Charitable Fund**, in partnership with the **RTP Diversity, Equity and Inclusion (DEI) Collective**, provides grant funding awarded to programs working at the intersection of STEM and diversity, equity, and inclusion.

### Technical, Legal, and Financial Capacity

There are no anticipated technical, legal, or financial barriers to the implementation of the Triangle Mobility Hub and SPOKE project. GoTriangle is a designated recipient of FTA funding and has consistently demonstrated the capacity to successfully deliver projects funded through USDOT and FTA grants. GoTriangle staff includes planning, design, construction, and operations professionals who are experienced in delivering high-quality transit improvements within scope, schedule, and budget. GoTriangle staff also includes administrative, legal, procurement and contracts, finance, and real estate professionals experienced in federal contracting, federal requirements, policies and procedures, and compliance. GoTriangle manages on-call pools of highly capable consultant teams available to help manage and deliver projects as an extension to agency staff. **Information related to D) Project Readiness and Environmental Risk is included in a separate attachment.**