



NORLINA HENDERSON FRANKLINTON WAKE FOREST APEX SANFORD RTP

NORTH CAROLINA REGIONAL S-LINE MOBILITY HUB PROGRAM

2023 RCN Grant Application

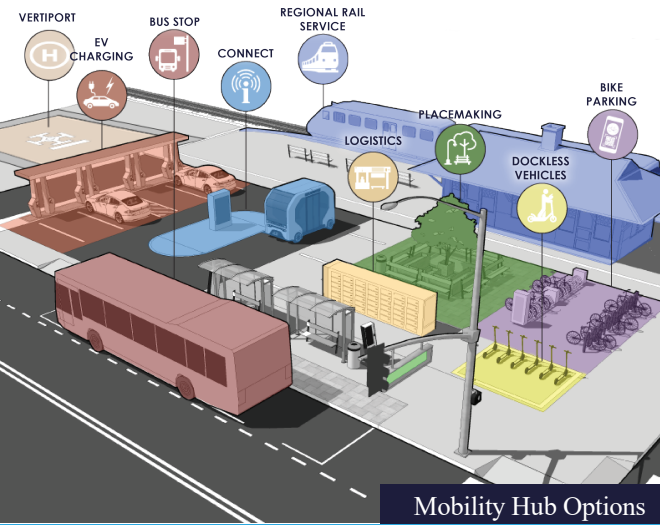


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Accessible, multimodal, & vibrant



Mobility Hub Options

The North Carolina S-Line Corridor Mobility Hub Program (“the Program”) will advance regional multimodal transportation along the S-Line corridor and surrounding areas in North Carolina – enhancing mobility options, improving social equity, increasing the resilience of the transportation network, improving the environment and spurring economic growth. This Program will advance the design and construction for infrastructure at seven hubs in the Triangle region, continuing the regional momentum developed through strong partnerships and planning activities. To date, the S-Line Corridor has had significant investment - locally, statewide, and federally. The corridor has completed a Transit-Oriented Development Study (TOD), Rail Infrastructure Development, and Mobility Hub Feasibility Studies and Preliminary Engineering. Communities will see immediate positive impacts, independent of the rail improvements, and will be set to optimize accommodation of future service.



The Triangle Region, experiencing significant growth, is blazing a path to serve vibrant communities through new and expanded mobility options. Together, regional and local partners are working to develop a robust, resilient and equitable multimodal network that embraces the future of mobility. The S-Line corridor in North Carolina, the missing link within the greater Southeast Corridor, will serve as the backbone of this service throughout the region.

Project Alignment with Merit Criteria



EQUITY & ENVIRONMENTAL JUSTICE

Provides more equitable transportation options, enhances connectivity, and reduces reliance and burden of vehicular ownership and travel in a corridor with 42% of residents identifying as a racial minority.



WORKFORCE DEVELOPMENT & ECONOMIC OPPORTUNITY

Increases affordable transportation options while creating opportunities for economic investment and job growth in a region already boasting 500,000 jobs in a 5-mile buffer of the corridor.



ACCESS

Creates an accessible, holistic, user-friendly transportation experience tailored to each community – from origin to destination in a corridor where 14% of residents live in low-income households



EQUITABLE DEVELOPMENT

Supports development opportunities, public-private partnerships, and community stewardship



CLIMATE AND ENVIRONMENT

Reduces vehicular travel and travel time, reducing carbon emissions for the 1 million people living within a 5-mile buffer of the corridor.



FACILITY SUITABILITY

Improves the mobility of people, public health, and economic growth

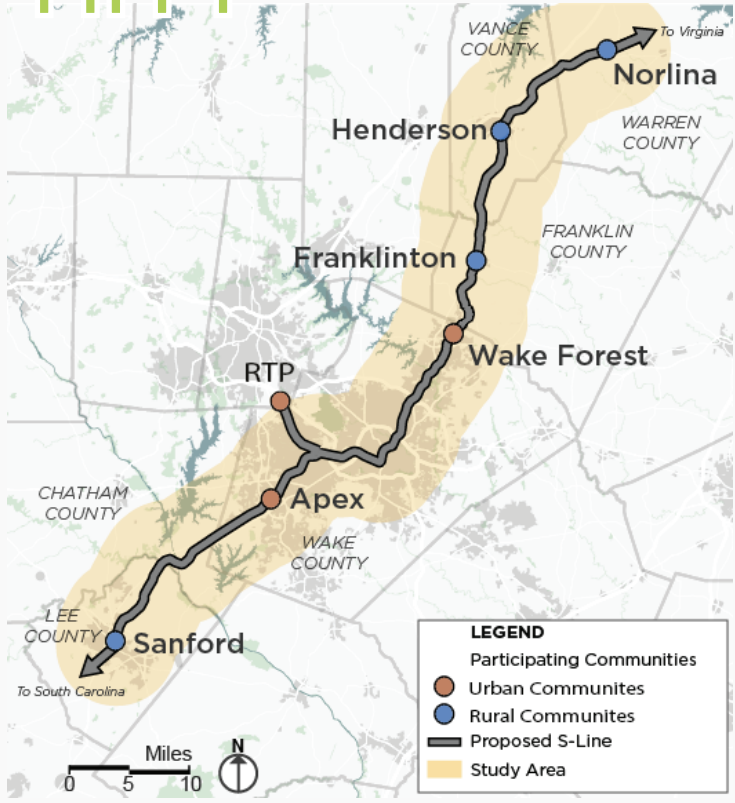


PARTNERSHIP

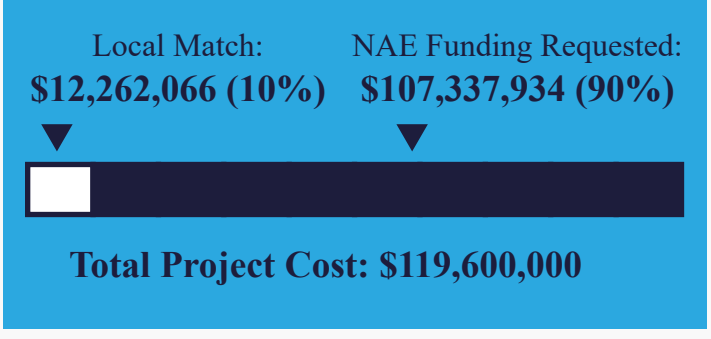
Continues years of partnerships for various mobility planning efforts, rail infrastructure development, and creative funding collaborations.



LOCATION	PRELIMINARY DESIGN	NEPA	FINAL DESIGN	ROW	CONSTRUCTION
SANFORD			+	+	+
APEX	+	+	+		
WAKE FOREST			+	+	+
FRANKLINTON	+	+	+		
HENDERSON			+	+	+
NORLINA			+	+	+
RTP					+



7 North Carolina locations along the S-Line



4 of the 7 locations identify as **Transportation Disadvantaged Communities**

Clear and significant benefits for all aspects of the project

- ✓ Moving mobility hubs to shovel-ready phase or construction
- ✓ Connections of key rural and urban communities
- ✓ Community buy-in & partnerships
- ✓ Sustainable growth for a rapidly growing region in desperate need of alternative transportation enhancement
- ✓ Supports development opportunities and economic growths
- ✓ Readiness of the region for innovative multimodal transportation investment
- ✓ Support for historically disadvantaged populations
- ✓ Advances transformational, nationally significant, passenger rail service
- ✓ Unique regional and community-specific approach that maximizes connections and access within a community's vision
- ✓ Connections of education institutions and workforce to regional innovation center (RTP)

Overview

The North Carolina Regional S-Line Mobility Hub Program (“Mobility Hub Program”) will advance regional multimodal transportation along the S-Line Rail Corridor and surrounding areas - enhancing mobility options, improving social equity, increasing the resilience of the transportation network, improving the environment, and spurring economic growth.

The Reconnecting Communities and Neighborhoods (RCN) grant is critical to advancing the connectivity, prosperity, and vibrancy of communities along the S-Line corridor. This S-Line segment is a missing link in the regional vision for high-performance passenger rail set by the Southeast Corridor Commission (SEC Commission), a partnership between North Carolina, South Carolina, Virginia, Tennessee, Georgia, Florida, and Washington, D.C.

The **Mobility Hub Program** will connect seven mobility hubs along the S-Line corridor and surrounding areas, each with the possibility of passenger rail and bus services, pedestrian and bicycle facilities, and integrated mobility technology. These hubs will improve regional access to education, jobs, and healthcare for disadvantaged populations while generating localized economic growth. The S-Line will serve as the backbone of rail connectivity for communities included in the **Mobility Hub Program** and those in more than six counties in the Triangle region.

MOBILITY HUBS

- Connect rail, pedestrian, bicycle, transit/microtransit, and shared mobility travel options.
- Integrate mobility technology services with multimodal infrastructure.
- Establish activity centers in the heart of disadvantaged communities.

Project History

The **Mobility Hub Program** builds on significant past efforts to prepare the S-Line corridor for passenger rail and other mobility options. In 1992, the Federal Railroad Administration (FRA) identified the Southeast Corridor as one of five high-performance rail corridors to support safe, efficient, and sustainable transportation across growing

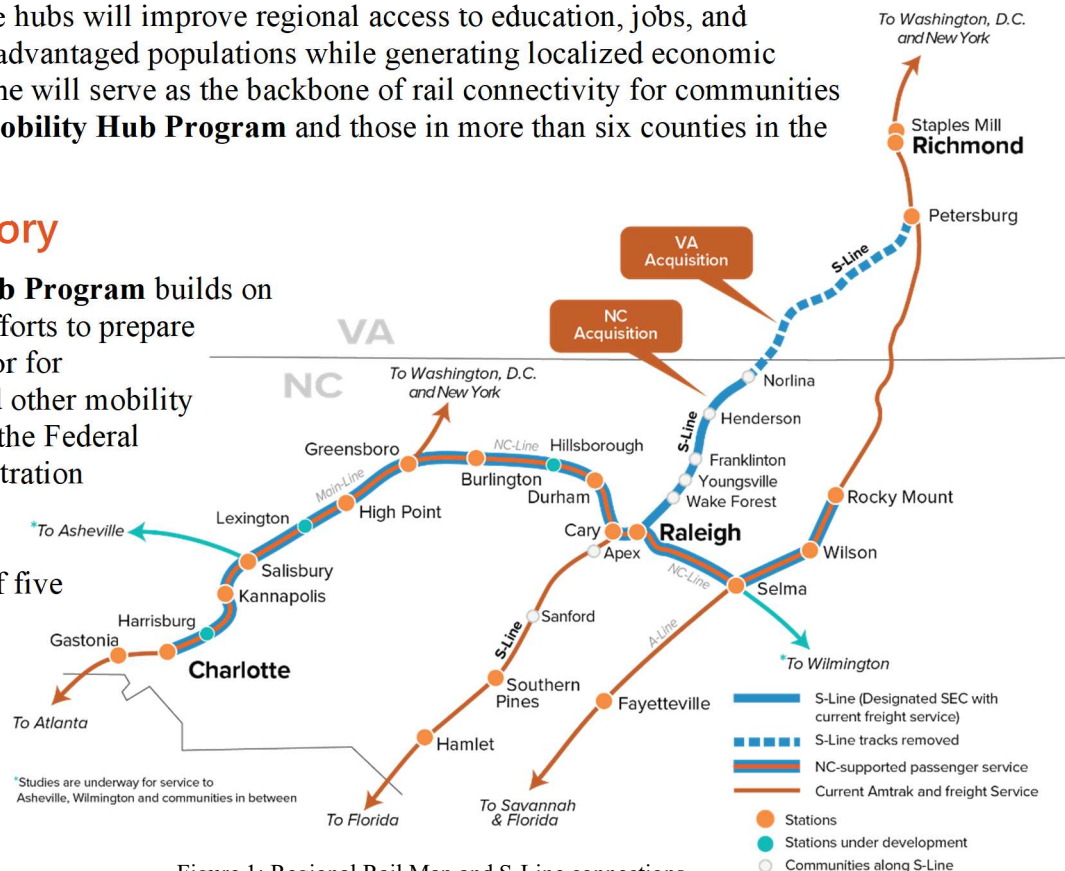


Figure 1: Regional Rail Map and S-Line connections

regions. The NCDOT's Rail Division and the Virginia Department of Rail and Public Transportation (VDRPT), in partnership with the FRA and the Federal Highway Administration (FHWA), developed a program-level Tier I Environmental Impact Statement (EIS), reviewing several route corridors from Washington, D.C. to Charlotte, with a Record of Decision (ROD) completed in 2002.¹ After extensive coordination, engineering, and public involvement, a Tier II EIS was completed for the 162-mile corridor from Richmond to Raleigh in 2015.² A 2017 ROD solidified the route, identified necessary corridor improvements, and estimated preliminary intercity passenger ridership, allowing the project to move to final design and construction once funded by federal grants.³

\$110.3M Grants Awarded for S-Line Corridor to Date

- 2020 NCDOT wins \$48M FRA CRISI grant for corridor purchase
- 2021 Communities win \$900K FTA/USDOT TOD grant
- 2022 NCDOT / VPRA win \$58M FRA CRISI grant for survey and PE
- 2022 Communities win \$3.4M USDOT RAISE grant for mobility hubs



In 2017, the SEC Commission developed the Southeast Regional Rail Plan in partnership with the FRA. The plan explored the potential for high-performance rail projects and intercity connections over a 40-year period. Subsequent reports identified growth opportunities, reported the economic benefits, and created a development strategy.⁴

NCDOT and partners have a strong grant strategy in place to realize the S-Line vision. These grant funds are helping communities along the corridor plan for transit-oriented development (TOD) in anticipation of future passenger rail service. The FTA/USDOT TOD Planning Study grant supported the evaluation of market conditions, affordable housing considerations, multimodal transportation connections, and other local policies, resulting in an actionable implementation playbook with concept designs. Each grant has been a key contributor to the evolution and development of the S-Line program overall.


The Regional Transit Center (RTC) Relocation Study project began in 2019 to evaluate opportunities for relocating the RTC to the Research Triangle Park (RTP) to provide enhanced safety and functionality, access and connectivity, and bus service reliability. GoTriangle has occupied the current RTC site since 2008 with the intention of relocating operations, and the administrative headquarters if site conditions permit, to a site more easily accessible to major transportation facilities, such as I-40, NC 54, and NC 147. The RTC will serve as the hub for the GoTriangle transit system, providing regional connections to local transit systems at Durham Station,

¹ Tier I Final Environmental Statement, 2002. <https://connect.ncdot.gov/resources/Rail-Division-Resources/Documents/SEHSR%20Tier%20I%20FEIS%20Study%20-%202002.pdf>

² Tier II Final Environment Statement, 2015. <https://connect.ncdot.gov/resources/Rail-Division-Resources/Documents/2015%20SEHSR%20FEIS%20-%20Executive%20Summary.pdf>

³ SEHSR Record of Decision, 2016. <https://connect.ncdot.gov/resources/Rail-Division-Resources/Documents/SEHSR%20Raleigh%20to%20Richmond%20Signed%20Record%20of%20Decision.pdf>

⁴ Southeast Corridor Commission, Southeast Regional Rail Plan, December 2020, <https://www.southeastcorridor-commission.org/commission-reports>



GoRaleigh Station, Cary Depot, and UNC Chapel Hill, and access to employment and other destinations in and around RTP, including Raleigh-Durham International Airport. This site will add additional connectivity to the S-Line corridor.

Addressing Transportation Burdens

As many of the communities along the S-Line were built on rail, they have experienced the separation that comes with a rail line going through an active downtown. With the decline of passenger rail, these communities are automobile-dependent, exacerbating transportation burdens and lost connections, particularly for zero-vehicle households or those that choose not to drive. With the reintroduction of passenger rail along the S-Line corridor and associated extensions, there is an opportunity to provide new connections, alleviate travel demands, address environmental concerns, and provide economic development opportunities for these communities. Thorough planning in the TOD Study, the Mobility Hub Planning work, and design and construction in this **Mobility Hub Program** will ensure that there is equitable access to multimodal transportation options and opportunity now and in the future.

The **Mobility Hub Program** has the potential to improve multimodal connections in more urban locations as well. In Raleigh, the current RTC location is remote with poor visibility, safety challenges, insufficient passenger shelter design, utility constraints, limited opportunity for expansion, and a lack of conveniently located goods and services. By relocating to RTP, GoTriangle will have the ability to modernize the facility, including five new bays to accommodate paratransit, microtransit, ride-share, and passenger drop-off. The new RTC location will increase the amount of dedicated space for passenger boarding, introduce electric transit vehicles and customer vehicle charging stations, and improve passenger and operator amenities. Through the **Mobility Hub Program**, the new RTC location will expand equitable mobility options for the entire Research Triangle region and beyond.

Most of the communities along the S-Line corridor have limited access to mobility options and include transportation disadvantaged populations, as detailed in subsequent sections. Small transit agencies exist on a county level to serve rural communities. More transit options are available in the Triangle, but many still need connectivity improvements. Micromobility options are sparse, and bicycle infrastructure is limited. The demand for multimodal options will only continue to grow with industry and population moving to the Triangle region. Vehicular travel will become more congested, limiting, and detrimental to not only the community, but to the environment itself. The **Mobility Hub Program** will design and build facilities that offer multimodal forms of transportation, alleviating the burden of owning a car, and reconnecting these communities and region with active hubs.

Location and Map

The S-Line corridor connects Virginia and rural North Carolina communities with the Triangle region, a metropolitan statistical area with 2 million people that is experiencing significant growth. While Wake Forest, Research Triangle Park (RTP), and Apex continue to urbanize, the historical rural communities of Norlina, Henderson, Franklinton, and Sanford are within a 45-minute drive of the Triangle, and many use the corridor to access workplaces and leisure destinations.

Figure 2 depicts the seven mobility hubs this program will develop. The urbanization designation for each municipality is based on definitions from the grant’s Notice of Funding Opportunity (NOFO) and data from the 2010 U.S. Census.⁵ Because most participating communities are identified as “rural,” so too is the overall **Mobility Hub Program**.

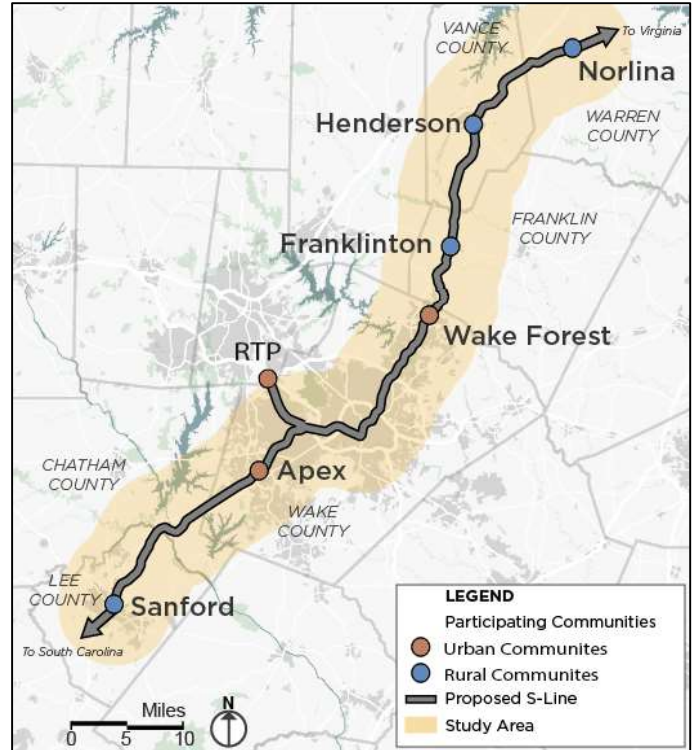


Figure 2: Mobility Hub Locations

Previous studies identified potential hub sites in each location primed for transit-oriented development. Each site will be designed to meet the needs of its surroundings: decisions about architecture, land uses, and amenities will be informed by public engagement and local plans. These hubs will be designed to be dynamic, adapting as community needs change. Figure 3

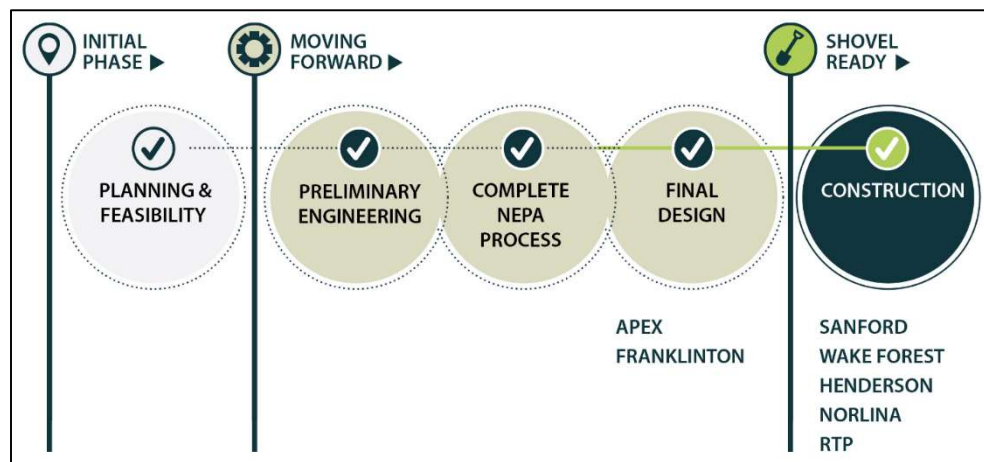


Figure 3: Mobility Hub Development Phases

shows the **Program’s** planned progression, indicating at what phase each mobility hub will be with RCN funding.

⁵ Rural America. 2010 U.S. Census Data. <https://mtgis-portal.geo.census.gov/arcgis/apps/MapSeries/index.html?appid=49cd4bc9c8eb444ab51218c1d5001ef6>



Merit Criteria

RCN MERIT CRITERIA	HOW THIS PROJECT ADDRESSES THE RCN MERIT CRITERIA
Equity and Environmental Justice	<ul style="list-style-type: none"> • Reduces transportation cost-burdens by providing mode choices • Supports equitable transit-oriented design (eTOD) principles • Supports affordable housing and reduces the burden of commuting • Brings diverse populations to the table, with significant community engagement
Access	<ul style="list-style-type: none"> • Builds thriving communities where all people can work, live, and play • Connects rural communities to job centers in the Triangle region and beyond • Provides mode choice for users of all ages, abilities, and backgrounds • Establishes 7 central multimodal hubs
Facility Suitability	<ul style="list-style-type: none"> • Sites designed and constructed to fit the needs of each individual community • Offers multimodal options, negating over-reliance on automobiles • Enhances transportation network efficiency and connectivity
Community Engagement, and Community-based Stewardship, Management, and Partnerships	<ul style="list-style-type: none"> • Builds strong partnerships between community-based organizations, state and local governments, and private stakeholders • Continues the momentum of partnerships that have successfully advanced the S-Line vision • Engages diverse populations • Develops unique, community-informed visions in each location
Equitable Development	<ul style="list-style-type: none"> • Supports growth through e-TOD practices, affordability, and employment concentration • Reduces burden of commuting • Partners public and private stakeholders
Climate and Environment	<ul style="list-style-type: none"> • Reduces auto centrality, VMT, congestion, and GHG emissions • Employs sustainable construction materials and practices • Provides electric vehicle facilities • Mitigates negative environmental impacts on disadvantaged communities • Complies with Federal Flood Risk Management Standard • Supports Mobility as a Service (MaaS)
Workforce Development and Economic Opportunity	<ul style="list-style-type: none"> • Incorporates use of Disadvantaged Business Enterprises • Encourages affordable housing and reduces the burden of commuting • Supports mixed-use employment centers • Connects rural communities to the region's urban core, a world-renowned technology center, and strengthens regional economy • Attracts tourism and destination travel between communities



Equity and Environmental Justice

HIGHLIGHTS

- Reduces transportation cost-burdens by providing mode choices
- Supports equitable transit-oriented design (eTOD) principles
- Supports affordable housing and reduces the burden of commuting
- Brings diverse populations to the table, with significant community engagement to date

With the reintroduction of passenger rail through the S-Line corridor, there will be more equitable access to jobs and development opportunities, with the mobility hubs providing robust connectivity solutions in communities with environmental justice populations. The **Mobility Hub Program** will design key infrastructure that will provide access to amenities on both sides of the tracks.

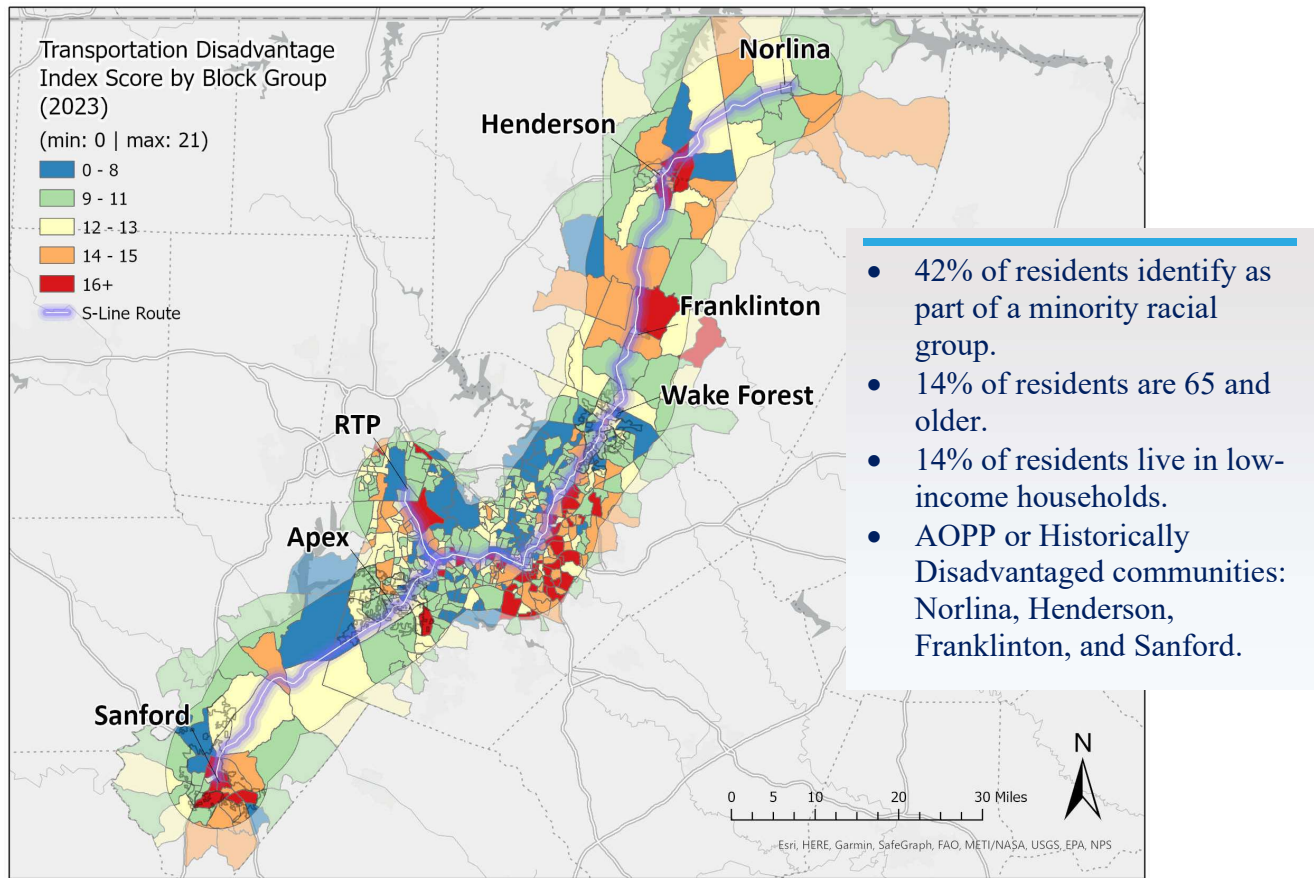


Figure 4: TDI Scores by Block Group

NCDOT has created the Transportation Disadvantaged Index (TDI)—an index based on carless households, low-income households, mobility impairments, youth, seniors, and BIPOC populations, and Limited English Proficiency—to identify the transportation disadvantaged



communities in North Carolina.⁶ This index aligns closely with the Areas of Persistent Poverty (AOPP) and goes beyond the typical Environmental Justice (EJ) indicators. A higher score for a community indicates the higher transportation disadvantage (with 21 as the maximum). The average score for the entire corridor is 11.64. Communities within this **Program** that have high TDI scores and are AOPP include Henderson, Franklinton, and Sanford. Norlina is a Historically Disadvantaged Community that also has a high TDI score. Wake Forest, RTP, and Apex all have average TDI scores. Figure 4 above shows TDI scores by block group for the communities.

Based on the work completed to date on the TOD Planning Study, the northernmost (Franklin, Vance, and Warren) counties and the southernmost county (Lee) experience the greatest equity and social vulnerability. The proposed mobility hubs would provide all transportation users with a full range of mobility options needed for daily trips as well as a place for social engagement and interaction.

Access

HIGHLIGHTS

- Builds local activity centers where local residents can work, live, and play
- Connects rural communities to job centers in the Triangle region
- Provides mode choice for users of all ages and abilities
- Establishes 7 central multimodal hubs

The mobility hubs will produce immediate connectivity benefits for their communities. The previously completed planning activities recommended location-specific strategies to support transit, non-motorized transport, and Universal Design principles.⁷

Mobility hubs are purpose-built for the safe movement of travelers between transportation modes in a single location, offering all users more affordable and accessible options than individually owned and operated automobiles (see Figure 5). By moderating vehicle speeds, separating each mode's travel patterns, and employing human-scale design, people of all ages and abilities will have safer, more reliable access to the housing, jobs, grocery stores, healthcare, schools, places of worship, recreation, greenspaces, and other destinations along the S-Line corridor.



Figure 5: Mobility Hub Mode Options

Together with the future S-Line intercity passenger rail service, these mobility hubs will continue to build a multimodal transportation system for the central North Carolina region. The hubs will link multiple communities through rail and transit travel, safer forms of transportation than the

⁶ <https://storymaps.arcgis.com/stories/7e3bbd00fe014a77b5f1620334209712>

⁷ <https://universaldesign.ie/what-is-universal-design/>



automobile.⁸ The S-Line corridor is expected to grow rapidly, so scaling safe and sustainable mode choice is a regional necessity.

Facility Suitability

HIGHLIGHTS

- Sites designed and constructed to fit the needs of each individual community
- Offers multimodal options, negating over-reliance on automobiles
- Enhances transportation network efficiency and connectivity

Each mobility hub will represent the unique vision, character, and goals of its respective community. The mobility hubs' designs will celebrate local history and culture through public art, greenspace, and recreational facilities informed by community values. Currently, no mobility hubs exist in these locations, exacerbating car dependence and limiting regional connectivity. Furthermore, many parcels in the communities' downtowns are currently used for parking, contributing to an overall lack of greenspace that causes heat island effects and regular flooding. Mobility hubs will reduce the need for personal vehicle infrastructure, replacing it with space for pedestrians, bicycles, and micromobility options. Mobility hubs will protect existing green space in the downtowns and create new greenspaces to improve environmental resilience and sense of place. If these vulnerabilities are left unimproved, community growth will overwhelm current infrastructure, raising costs to maintain failing systems and exacerbating existing environmental challenges.

Without the implementation of mobility hubs and S-Line intercity rail, the mobility of goods between the corridor and the region will not keep pace with population growth. The mobility hubs will allow for more efficient and cost-effective movement of goods by connecting that movement through more equitable multimodal infrastructure. The implementation of the rail station at some hubs can then connect the movement of goods on a regional level.

Passenger rail could become the most efficient form of travel to Raleigh's urban core from the wider region. According to the Final Environmental Impact Statement (FEIS), intercity passenger rail service could result in a 65 percent mode shift from highway to rail, more efficiently moving people and things across the region's overall transportation network.⁹ The new passenger rail services will use the S-Line. The A-Line, the CSX Transportation (CSX) primary north-south corridor, runs approximately parallel to the S-Line. The S-Line restoration also provides an additional line for freight when the A-Line has to be closed due to hurricanes and storms. However, the proposed mobility hubs must be in place in each community for these critical connections to come to fruition.

⁸ Savage, Ian. Comparing the fatality risks in United States transportation across modes and over time, 2013. <https://www.sciencedirect.com/science/article/abs/pii/S0739885912002156>

⁹ <https://connect.ncdot.gov/resources/Rail-Division-Resources/Pages/Reports-Projects.aspx>



Community Engagement, and Community-based Stewardship, Management, and Partnerships

HIGHLIGHTS

- Partners community-based organizations, state and local governments, and private stakeholders
- Continues the momentum of partnerships that have successfully advanced the S-Line vision
- Engages diverse populations
- Develops unique, community-informed visions in each location

Partnerships have been the foundation of the S-Line program, and the **Mobility Hub Program** builds from the community-centered approaches of its predecessors, consistent with DOT Order 1000.12C. The overall S-Line program has a structured plan for reaching out to communities, incorporating feedback, and ensuring updates are available to community members. This public engagement plan ensures that progress is shared at a local level, guarantees responsiveness of the project team, and includes communities at the table for important decision milestones. This coordination started in the early 2000's during the NEPA-compliance efforts for the rail infrastructure with outreach and public meetings. Communities continue to have a seat at the table, regular updates, and defined roles and responsibilities. This coordination will continue through this **Mobility Hub Program**. Other stakeholders include staff from local agencies, governments, and community organizations, many of which provided Letters of Support for this application (see supplemental materials). These stakeholders include, but are not limited to:

- Transit agencies
- Historically interested parties
- Chambers of commerce
- Economic development organizations
- Citizen advisory boards and commissions
- Housing authorities and affordable housing organizations
- Metropolitan Planning Organizations (MPOs) and Regional Planning Organizations (RPOs)
- Regional councils of government
- Stakeholders engaged in equitable community health and development
- "Main Street" organizations
- Historical development committees
- Private developers
- Railroad companies




Community Leaders at the celebration of the TOD Planning Study - May 2023.

Project Partners

NCDOT will administer the **Mobility Hub Program** project for the partners listed below. This partnership has worked successfully in completing previous phases of the S-Line program. The project partners include (see commitments in Attachment):

- NCDOT
- Warren County/ Norlina, NC
- Henderson, NC
- Franklinton, NC
- Wake Forest, NC
- Apex, NC
- Sanford, NC
- GoTriangle
- Research Triangle Foundation (RTF)

 LETTERS OF SUPPORT (see Attachment)	<ul style="list-style-type: none"> • AMTRAK • Central Pines Regional Council • Triangle Area RPO • Capital Area MPO • Durham Chapel Hill Carrboro MPO • Kerr Tar RPO • Regional Transportation Alliance • Vance County • Wake County • Warren County • Durham County • City of Raleigh • Town of Southern Pines 	<ul style="list-style-type: none"> • Town of Southern Pines • Vance County Schools • Vance-Granville Community College • Wake Forest Chamber of Commerce • Moore County Economic Development Partnership • Economic Development Partnership of North Carolina • Franklin-Vance-Warren Opportunity, Inc. • North Carolina Railroad • Norfolk Southern
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The **Mobility Hub Program** will continue to grow collaboration with regional and state parties and local community members. This outreach will include gauging community needs and desires for each mobility hub, including mode options, development intensity, use mix, and neighborhood character. Public engagement will occur at strategic times in the design and construction process. Events will be held in convenient locations in each affected neighborhood, prioritizing historically underserved populations. Coordination with local agencies and communities will be undertaken during the **Mobility Hub Program** activities to limit impacts on private property.

Equitable Development

HIGHLIGHTS
<ul style="list-style-type: none"> • Supports growth through e-TOD practices, affordability, and employment concentration • Reduces burden of commuting • Partners public and private stakeholders



The **Mobility Hub Program** supports local, regional, and state efforts for equitable development. As previously referenced, NCDOT’s TDI tool is used to implement measures for equitable transportation planning and prioritize infrastructure investments, like mobility hubs, in communities with higher transportation burdens. It is evident from the TDI mapping shown previously that the mobility hubs will support transportation options in disadvantaged communities. NCDOT is also working to develop tools and resources for improving how health and equity are integrated into transportation planning, named Health Equity Metrics in Transportation (HEMAT). These metrics would help communities identify pillars of health equity that can be incorporated into mobility hubs.

Siting affordable housing near mobility hubs will reduce housing and transportation costs. The TOD planning study provided a policy framework to implement location-efficient affordable housing, equipping communities with best zoning practices and policies to support affordable housing and mixed-use development near mobility hubs. The market assessment in the TOD planning study helped communities understand how many affordable housing units private development may be able to support. The study recommended specific sites where public agencies and non-profit developers should consider locating affordable housing projects.

By decreasing the burden of regional connections, mobility hubs can act as engines for local economic growth. The RTP mobility hub will provide access to a world-renowned research and innovation park with substantial employment opportunities. The **Mobility Hub Program** will reduce barriers to enter tourism, commerce, and land development industries, building wealth in partner communities. Some communities along the S-Line already have a strong tourism base, as they are destinations for exploring the multiple cultural amenities of the region as well as the natural attractions of Kerr Lake, Lake Gaston, and Falls Lake. The S-Line communities are also often a mid-point for beach travel on the eastern shores of North Carolina, or the Appalachian Mountains of western North Carolina. Providing enhanced mobility options for people to explore North Carolina’s rich and varied communities will enhance tourism and commerce.

Climate and Environment

HIGHLIGHTS

- Reduces autocentricity, VMT, congestion, and GHG emissions
- Employs sustainable construction materials and practices
- Provides electric vehicle facilities
- Mitigates negative environmental impacts on disadvantaged communities
- Complies with Federal Flood Risk Management Standard
- Supports Mobility as a Service (MaaS)

The mobility hubs will inherently promote multimodal transportation by providing an integrated suite of transportation services – rail service, pedestrian and bicycle facilities, transit/microtransit, and shared mobility options – in a central location, reducing vehicular use and result in shorter trips, and therefore, regional congestion and greenhouse gas emissions. By offering electric vehicle (car, e-bike, e-scooter, e-cargo bike, etc.) charging stations, pick-up/drop-off locations, and Mobility as a Service (MaaS) all on existing or planned active



transportation networks, the hubs act as natural neighborhood centers that boost mental and physical health and create places that can be used by everyone in the community.

Viable ideas for sustainable construction will be evaluated during design, and alternatives will be analyzed for their capacity to reduce risk and increase resilience against storm and flood damages in accordance with the Federal Flood Risk Management Standard (EO 13690).

TOD itself is sustainable, offering a broad range of health, environmental, climate, and economic benefits. By providing transportation choice, the **Mobility Hub Program** is building from existing TOD planning efforts to reduce the need for driving, preserve rural and natural land, and prevent suburban sprawl. Furthermore, the partners are committed to reducing emissions and working towards converting portions of their transit fleets to electric vehicles. Specifically, the programing and concept design for the RTP mobility hub will include electric vehicle charging stations for GoTriangle fleet, allowing more electric vehicles to be purchased, charged, and utilized on more regional routes.

According to the EPA, almost 60 percent of transportation sector emissions are from personal vehicles.¹⁰ Over a 30-year horizon, it was estimated that the intercity service along the S-Line would attract 51.4 million new rail passengers, approximately 1.7 million riders per year. The majority of these riders (approximately 75%) would divert to rail from highways where the average vehicle occupancy is 1.67 people per car. Therefore, over 30 years, the service would remove over 23 million cars from the highway, approximately 770,000 cars per year on average. The highway-rail grade separations proposed under the overall corridor improvements from Raleigh to Richmond would help avoid the emissions related to 52 million hours of queuing and idling at 69 current at-grade crossings. The resiliency of at-risk infrastructure will be improved through the decreased demand on current roadways due to less vehicular travel and the improvement of the existing rail line.

Workforce Development and Economic Opportunity

HIGHLIGHTS

- Incorporates use of Disadvantaged Business Enterprises
- Encourages affordable housing and reduces the burden of commuting
- Supports mixed-use employment centers
- Connects rural communities to the region's urban core
- Attracts tourism and destination travel between communities

The **Mobility Hub Program** will develop hubs that support commercial and residential growth. With improved connectivity, mobility hubs will serve as economic drivers for communities, and will be critical in maximizing the value of the S-Line corridor. Each phase of the **Mobility Hub Program** will require the utilization of Disadvantaged Business Enterprises and Small Professional Service Firms when applicable. The project area has seen more than 300,000 new residents, and growth is only expected to continue. With almost 440,000 jobs within a 5-mile buffer of the S-Line corridor between Norlina and Sanford and a mobility hub at RTP, these hubs

¹⁰ US Environmental Protection Agency. <https://www.epa.gov/greenvehicles/fast-facts-transportation-greenhouse-gas-emissions>



are part of the economic engine for the region. The North Carolina Department of Commerce projects a 9,100 job increase each year through 2028.¹¹ High-quality transit service and accessible mobility hubs would benefit the corridor’s regional commuting trips and recreational travel to and from the rural communities along the corridor. Increasing accessibility through multimodal transportation between labor markets and industries also results in benefits such as:

- Some people choosing to work longer hours because they spend less time commuting;
- People able to work while in transit;
- Some people changing to a higher paid and a more productive job, as better transportation improves the accessibility of firms and workers; and
- Greater tax revenues from increased business and employment.

In addition to supporting where people can work, mobility hubs especially support communities that are enjoyable to live and play in by creating engaging public spaces, safe and comfortable transportation choices, and equitable access to services. Most of the rural communities in the project were once robust, booming communities dependent on the rail line. Both the restoration of a passenger rail service and the creation of mobility hubs would support revitalization efforts in these communities and bridge significant gaps between the urban and rural centers.

Equal opportunity employment is also a priority to NCDOT and the applicable communities. NCDOT and applicable authorities will meet the requirements of EO 11246. High-quality workforce development programs with supportive services to train, place, and retain workers, especially joint-labor management training partnerships and registered apprenticeships are prioritized by NCDOT. This type of project can be used to train and develop workforce.

NCDOT workforce development programs

- [Business Opportunity + Workforce Development \(BOWD\)](#)
- [On-the-Job Training \(OJT\)](#)
- [Highway Construction Trade Academies \(HCTAs\)](#)

Project Readiness

Project Schedule

The **Mobility Hub Program** can begin immediately upon receipt of the RCN grant obligation notice and execution of the grant agreement. Based on the assumption that all agreements are in place by Spring 2024, the estimated schedule shows a Spring/Summer 2024 Notice to Proceed date. The TOD playbooks, work completed under the RAISE Mobility Hub Plan (feasibility studies, NEPA compliance, and preliminary engineering), and other concept planning and design provide a significant foundation for the design and construction activities associated with this **Program**. Any unexpected delays will not put the obligated grant funds at risk of expiring on September 30, 2026. The schedules below (Figure 6) demonstrate a typical timeline for implementation tasks.

¹¹ <https://www.nccommerce.com/data-tools-reports/labor-market-data-tools/employment-projections>



- NCDEQ NPDES General Permit
- Section 7 (Endangered Species Act)
- Section 106 (National Historic Preservation Act)
- NCDOT Right-of-Way (ROW) Encroachment Permit
- Local floodplain permit
- Local rezonings
- Local site plan approvals
- ROW acquisition agreements
- Railroad and Operating agreements

Environmental Risks

Based on local knowledge, coordination with the communities, and a high-level analysis, a risk register continues to be updated and reviewed to proactively identify solutions. A summary of risks identified to date and mitigation measures is shown in Table 1.

Table 1: Project Risks and Mitigation

Risk	Mitigation
Multiple Project Partners & Required Coordination	The range of partners for this project have been working together through many phases for a well-planned, technically feasible project that is ready to implement. Continued partner coordination will be prioritized as the project moves forward.
Site Conditions	Feasibility and site assessments will be completed for all communities by the end of 2024 to identify any site constraints. The schedule has built in contingency to address environmental uncertainties, such as historic properties and utility conflicts.
Federal Process Compliance	The partner communities and NCDOT have extensive experience complying with federal processes, including grants, NEPA, and permitting. Coordination efforts with agencies will continue throughout all phases of the Program .
Community Buy-in	To accomplish consensus-driven, individualized outcomes, it will be critical for community members to have a seat at the table during all phases of the Mobility Hub Program .
ROW Acquisition	Potential ROW needs will be defined by the end of 2024 and early discussions with property owners will occur.
Construction Environment & Impacts	Construction cost estimates include a contingency for escalation. Trends will be monitored and the project risk assessment will be updated as necessary. Availability of resources will also be monitored.
Schedule	The current schedule provides flexibility for unforeseen delays or potential issues to ensure funds are obligated and activities complete in compliance with the grant requirements. The team will build a schedule for each community to ensure a tailored approach that is context sensitive.



Budget

Scope of Work

The **Mobility Hub Program** is estimated to cost approximately \$119,600,000 (as shown in Table 2 below). The majority of the project costs (\$85,800,000 or approximately 72%) will be used to improve rural areas (Sanford, Franklinton, Henderson, and Norlina). The activities that will be funded as part of this project are the next steps necessary for the vision of a mobility hub to become a reality – getting each community to at least shovel-ready (final design). The costs estimated for each activity (i.e., Preliminary Design, NEPA, Final Design, Right of Way [ROW] acquisition, and Construction) are based on anticipated mobility hub components requiring standard or enhanced infrastructure improvements. Cost of the proposed improvements were estimated based on the TOD visions for each community, coordination with several industry experts, planning efforts, other mobility hub examples, and local knowledge of the communities.

In Franklinton and Apex, the NEPA phase will evaluate project alternatives and associated potential impacts in compliance with prevailing regulations. The preliminary engineering, which will be used for NEPA compliance, will include schematic design, site plan, building layout, and elevation of the proposed mobility hubs. Completion of the final design phase will result in each community’s mobility hub being at least shovel ready. Five of the communities include ROW acquisition and/or construction.

Table 2. Project Costs

Mobility Hub Location	Mobility Hub Type	Task	Cost	Total
Sanford*	Enhanced	Final Design	\$3,000,000	\$33,000,000
		ROW	\$1,500,000	
		Construction	\$28,500,000	
Apex	Standard	Preliminary Design	\$500,000	\$2,300,000
		NEPA	\$300,000	
		Final Design	\$1,500,000	
Wake Forest	Standard	Final Design	\$1,500,000	\$16,500,000
		ROW	\$750,000	
		Construction	\$14,250,000	
Franklinton*	Standard	Preliminary Design	\$500,000	\$2,300,000
		NEPA	\$300,000	
		Final Design	\$1,500,000	
Henderson*	Enhanced	Final Design**	\$4,000,000	\$34,000,000
		ROW	\$1,500,000	
		Construction	\$28,500,000	
Norlina*	Standard	Final Design	\$1,500,000	\$16,500,000
		ROW	\$750,000	
		Construction	\$14,250,000	
RTP***	Standard	Construction	\$15,000,000	\$15,000,000
Total				\$119,600,000

*Rural area pursuant to the NOFO definition.

** City of Henderson includes design activities for two bike/pedestrian crossings of the railroad to the mobility hub.

*** This Mobility Hub Program includes the construction of the rail station infrastructure only at the proposed RTP mobility hub.



Non-Federal / Local Match

An exciting partnership has been created among the communities along the S-Line corridor and regional transportation agencies, which is demonstrated in this grant application. Table 3 below illustrates each community’s committed match (see Attachments for documentation of community match commitments). While three of the mobility hub locations require a 20% local match, all communities contributed a match, understanding the importance of forward momentum with this project. The communities have contributed more than \$5 million over the required match. Several of the communities are implementing innovative funding strategies to contribute local funding. There are no conditional or time constraints on the local funding outside of compliance with the RCN grant requirements.

Innovative Match Strategies

- City of Henderson – Approved a supporting synthetic TIF district to create an annual revenue stream.
- GoTriangle and RTF are partnering to provide match for the RTP hub rail infrastructure.

Table 3. Committed Local Match

Mobility Hub Location	Total Cost	Match Required*	Community Match
Sanford	\$33,000,000	No	\$1,000,000 (3%)
Apex	\$2,300,000	Yes	\$460,000 (20%)
Wake Forest	\$16,500,000	Yes	\$3,300,000 (20%)
Franklinton	\$2,300,000	No	\$30,000 (1.3%)
Henderson	\$34,000,000	No	\$103,000 (0.30%)
Norlina	\$16,500,000	No	\$3,300,000 (20%)
RTP	\$15,000,000	Yes	\$4,069,066 (27%)
Total	\$119,600,000	Total	\$12,262,066

*Match is not required for projects in disadvantaged or underserved communities pursuant to the NOFO definition.

Based on the estimated cost for the **Mobility Hub Program** and the committed local match (both detailed above), this proposal requests **\$107,337,934** in RCN grant funding to implement the proposed activities for each mobility hub. Planning activities for all mobility hubs have been or will be completed prior to implementation of the requested design tasks. Preliminary engineering and NEPA compliance are being completed for all mobility hubs, excluding Apex and Franklinton, under other funding sources.

Other Corridor Investments

There are no other federal funds that will be used for the **Mobility Hub Program**. However, it is important to note the previously awarded RAISE grant that funded planning, preliminary design, and NEPA compliance for some communities and provided a foundation for this **Program**. As



detailed earlier in this narrative, there has been significant support for the S-Line corridor, transit efforts, and transit-oriented planning in this region through other funding commitments. This project is supporting the momentum of the communities to provide a mix of transportation options in a centralized location and accommodate future passenger rail service.

- ❖ 2019 FRA Grant (\$1,000,000) to establish Southeast Corridor Commission and fund:
 - Publication of the Southeast Regional Rail Plan
 - Preparation of the Economic Benefits Rail Report
 - Preparation of the SEC Development Strategy
- ❖ Grade separations on corridor in STIP:
 - P-5718 - NE Maynard - \$56,490,000 (State funded)
 - P-5720 - Durant Road - \$18,200,000 (State funds used to leverage Federal funding for Millbrook Road – see below)
 - P-5737 - Millbrook Road - \$25,878,000 (State and Federal funds)
 - P-5715 - New Hope Church Rd - \$18,000,000 (State funds used to leverage Federal funding)
 - P-5734 - Trinity Road - \$36,865,000 (State funds)
 - P-5707 - Rogers Road - \$24,400,000 (State funds)
- ❖ CRISI Grant from FRA (\$47,500,000) to acquire the active rail corridor of the CSX S-Line between Raleigh and Norlina
- ❖ CRISI Grant from FRA (\$58,000,000) for 30% engineering and survey

Significant regional commitments have also been made. In 2011, 2012, and 2016, voters in Durham, Orange, and Wake Counties, respectively, passed a ½ cent sales tax referendum dedicated to funding the transit plans. GoTriangle works in coordination with each of the counties and the metropolitan planning organizations to administer the county transit plans, which are updated and approved by the respective governing bodies every four years. In addition to providing transit services, coordinating with local service providers, and participating in transportation planning activities, GoTriangle is the state-designated tax district administrator for each of the three county transit plans. The GoTriangle Board is charged with adopting annual budget ordinances and maintaining multi-year operating and capital financial plans for each of the county transit plans.

NORLINA

Past success inspires future vision.



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