



N.C. Department of Transportation

S-LINE

TRANSIT-ORIENTED
DEVELOPMENT STUDY

S-Line TOD Study Final Report

EXECUTIVE SUMMARY

JULY 2023



Integrated Mobility Division
N.C. DEPARTMENT OF TRANSPORTATION

WHAT IS THE S-LINE?

Imagine being able to travel from Raleigh to Washington, DC by train in 4 hours. The S-Line rail corridor is a key missing link within the larger vision for passenger rail service in the Southeast Corridor. This corridor has the opportunity to introduce new passenger rail service to the existing freight corridor.

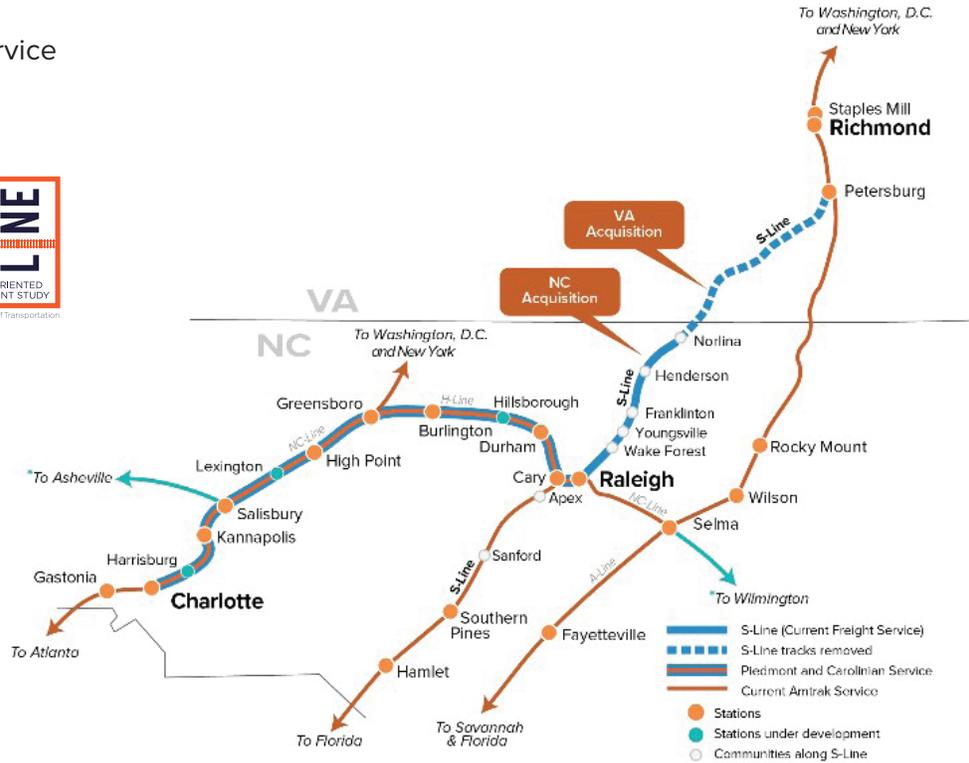
S-Line Passenger Rail

The S-Line is exploring passenger rail service options, as opposed to light rail.

Inter-city service generally travels longer distances with fewer stops and less frequent trains, connecting large metropolitan areas and cities in between.

Commuter service generally connects suburban areas to a central city core, with trains serving riders traveling to and from work during morning and afternoon rush hours.

Light rail service generally operates within metropolitan areas as part of a regional rapid transit network, with more closely spaced stops and more frequent trains.



The S-Line Corridor also tells a complex story of different needs and opportunities across its communities' unique contexts. It connects regional economic engines to each other and areas of the state that have seen substantial residential growth. It is also a diverse corridor with the opportunity to provide passenger rail service to a mix of populations who will benefit from the service directly as well as the intangible, quality-of-life benefits that come from additional infrastructure and amenities being built through new development leveraging the transit investment.



JOB CORRIDOR

With almost 440,000 jobs, the S-Line corridor is an economic engine for the region.



POPULATION GROWTH

More than 888,000 residents live along the corridor today. Over the past two decades, the corridor has experienced rapid growth, seeing a 61% growth rate (336,000 new residents) between 2000 and 2020.



DIVERSE CORRIDOR

- 42% of residents identify as a racial minority.
- 14% of residents are 65-years old and older.
- 14% of residents live in low-income households.

Statistics shown here are based on a 5-mile buffer of the S-Line corridor between Sanford and Norlina.

Why is the S-Line important?

For S-Line communities, passenger rail service is an important part of their past. Many of these communities were born and grew around a historic station. The potential of passenger rail service could enhance the expected growth and development in these communities by connecting them to regional hubs.

The overall vision for the S-Line program is to leverage the transportation connectivity benefits of rail service to improve access, mobility, quality of life and economic vitality in each community. This makes the corridor ripe for Transit-Oriented Development (TOD) opportunities, which would center new development and transportation infrastructure towards the mobility hub in a way that supports walkable, vibrant communities.

VISION FOR REGIONAL MOBILITY

The vision for Transit-Oriented Development (TOD) along the S-Line developed through this study provides context-sensitive guidance for future TOD development and infrastructure. The visions respond to the unique context of each S-Line community and study area. **The development and infrastructure associated with each vision seeks to support the communities' individual goals around achieving the key outcomes defined to the right.**

KEY OUTCOMES OF TRANSIT-ORIENTED DEVELOPMENT (TOD)



1 Improve Mobility & Access: Maintain or improve multimodal access and infrastructure within the study area.



2 Increase and diversify housing: Provide for a variety of housing typologies based on the local context and market within each community.



3 Support downtown vibrancy: Support or create vibrant, walkable station areas that enhance local business opportunities, especially in downtown environments.



4 Create workforce opportunities: Support development scenarios that support new business opportunities in study areas.



5 Maintain equitable access to opportunities: Consider how existing communities will be able to access new development and employment opportunities created by the S-Line.



6 Support opportunities for upward mobility: Develop scenarios that support access to employment and minimize involuntary displacement.

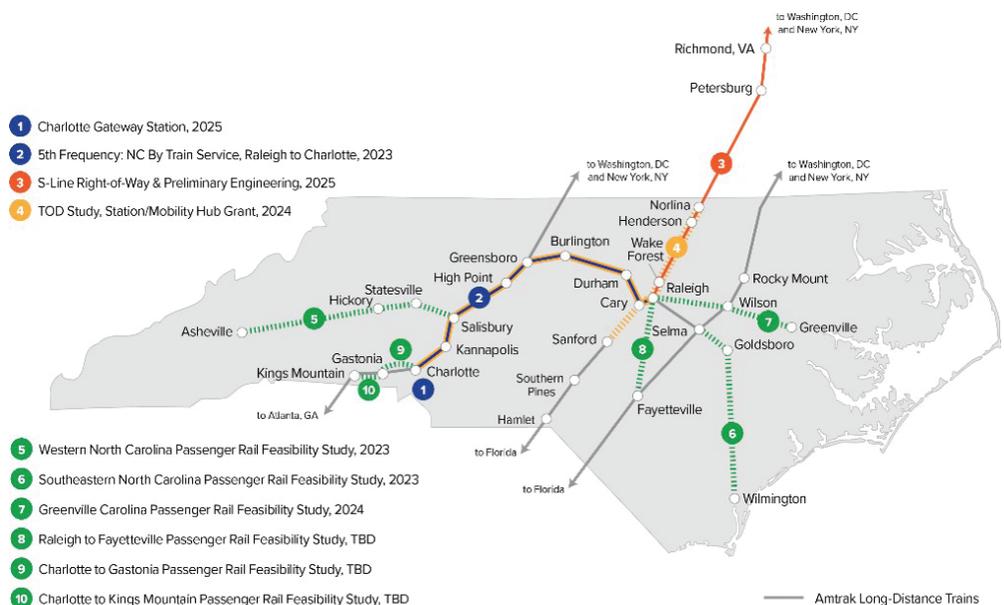
NC INTERCITY PASSENGER RAIL SERVICE

Ridership 2018-2022



Highest ridership in 32-year history

STATE RAIL PROJECTS ACROSS NORTH CAROLINA



What is Transit-Oriented Development?

"TRANSIT-ORIENTED DEVELOPMENT (TOD) CREATES COMPACT, MIXED-USE COMMUNITIES NEAR TRANSIT WHERE PEOPLE ENJOY EASY ACCESS TO JOBS AND SERVICES." (USDOT/FTA)

TOD is centered around mobility hubs, like transit stations, that offer connections to multiple modes of transportation. Mobility hubs are a place of connectivity where different travel options come together. TOD typically includes a mix of housing, office space, retail, civic spaces, and neighborhood amenities within walking distance of a mobility hub.

TOD offers a broad range of health, environmental and economic benefits. It allows for more transportation choices, reduces the need for driving and preserves rural/natural areas by supporting more compact, walkable communities.

Successful TOD also improves quality of life for all people, regardless of age, ability, race, gender, income, and background. When implemented with thoughtful supporting strategies, mobility hubs and associated TOD can provide affordable and equitable access to opportunity for all kinds of communities. Supporting strategies for equitable TOD typically include:

- Tailoring TOD to meet varying community needs, from metropolitan centers to historic small-towns (see inset, at right).
- Investing in multimodal connections to mobility hubs/transit stations.
- Preserving housing affordability and minimize displacement of legacy residents.
- Acknowledging, preserving and integrating community history and culture.
- Ensuring that marginalized groups have input and ownership in decision-making processes.

TAILORING TOD TO MEET COMMUNITY NEEDS

Transit-oriented development looks different in different places.

The character, urban context, land use, and TOD potential along the S-Line corridor varies significantly between the 13 study areas. Some study areas are located in dense, urban, metropolitan settings; others are set within historic small-town centers; still others occupy industrial/warehouse and highway commercial areas.

TOD along the 95-mile S-Line corridor requires a deep understanding of the different contexts and values of each community. These factors shape each partner community's goals. High-density development may be an appropriate tool to achieve TOD goals in some areas, but not appropriate or desired in other areas. For many areas, preserving the small-town feel and character is vital. Other areas may have priorities like protecting rural areas, celebrating history, supporting dense urban cores, or transforming underutilized or industrial sites. By tailoring goals and recommendations to individual communities, this plan provides a community-driven vision for TOD.



PURPOSE OF THE STUDY

The S-Line corridor is ready for transit-oriented development (TOD). To better prepare communities along the S-Line for the possibility of future rail service, this study evaluated potential TOD opportunities in Sanford, Apex, Raleigh, Wake Forest, Franklinton, Henderson, and Norlina. The S-Line TOD Planning Study evaluated market conditions, affordable housing considerations, multi-modal transportation opportunities, and regulatory conditions in the various jurisdictions. The study delivers a vision for future TOD that is responsive to the communities' individual needs and contexts.



7 engaged and excited NC communities

- Norlina
- Henderson
- Franklinton
- Wake Forest
- Raleigh
- Apex
- Sanford



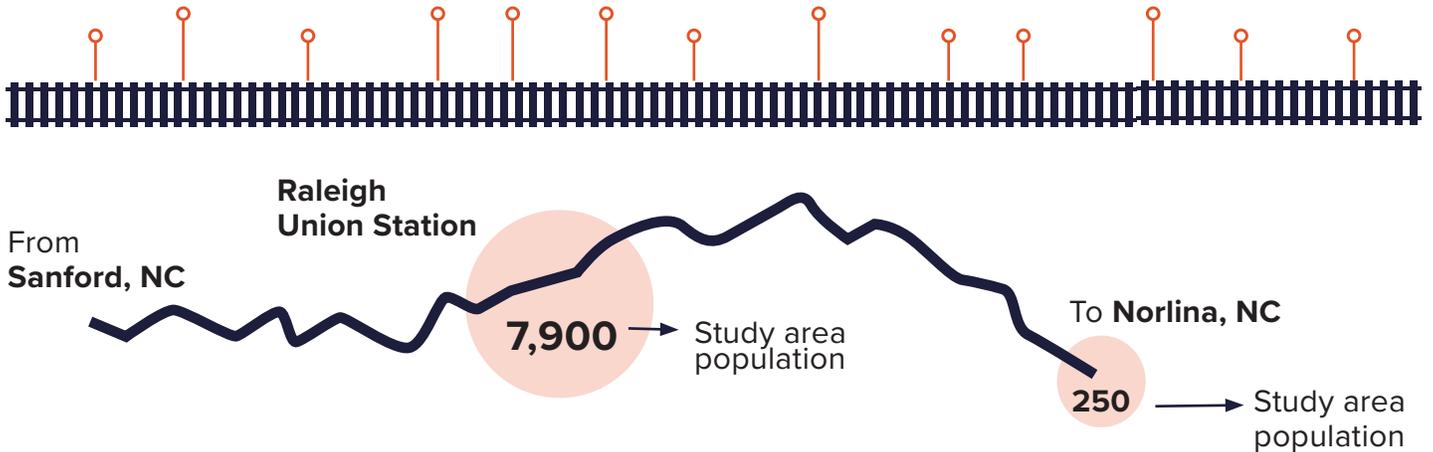
2021 Community Engagement:
450 in-person interactions

1,402 survey responses



“TRANSIT-ORIENTED DEVELOPMENT (TOD) CREATES COMPACT, MIXED-USE COMMUNITIES NEAR TRANSIT WHERE PEOPLE ENJOY EASY ACCESS TO JOBS AND SERVICES.”
USDOT/FTA

13 unique TOD study areas



The S-Line corridor is an **economic engine**

TODAY: **888,000** residents*



439,000 jobs*



**2020 pop. and 2019 jobs within 5-miles of the Norlina-to-Sanford study corridor*

Future Development Potential in the TOD Study Areas



175,000

Sq. ft. of new retail



over
3,500
new multifamily
residential units



1.4M sq. ft.

of new office
development

These are aggregate market projections of new development that may occur over the next 20 years within the 13 TOD study areas as a result of the S-Line. These are projections for additional development that may occur, on top of anticipated trendline development.

“OUR COMMUNITY IS READY FOR RAIL, AND WE’RE THRILLED THAT NCDOT IS WORKING TO MAKE THAT A REALITY ON THE S-LINE.”

VIVIAN JONES-MAYOR, TOWN OF WAKE FOREST

Implementation

IMPLEMENTATION FRAMEWORK

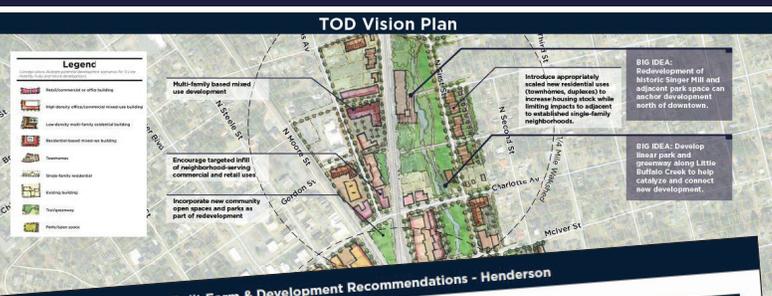
There are many components to implementing the S-Line passenger rail project and TOD vision. The table below summarizes the key elements to implementation and NCDOT's and the communities' expected roles in the partnership.

		NCDOT	COMMUNITY
Development around station and along S-Line	• Plan and implement Public-Private Partnership (P3) opportunities on NCDOT properties	Lead	Partner
	• Guide developments along S-Line to be transit supportive and align with S-Line Vision	Partner	Lead
	• Negotiate and coordinate with developers; review development plans	Partner	Lead
Station and Station Area	• Plan, design, and construct station platform and Mobility Hub	Lead	Partner
	• Plan, design, and construct station platform amenities (waiting area, landscaping, public space, etc.)	Lead	Partner
	• Plan, design, and construct station building and/or TOD (uses and amenities beyond the platform)	Partner	Lead
Operations & Maintenance	• Operate and maintain rail corridor, including station platforms and amenities	Lead	Partner
	• Operate and maintain mobility hub and station building (beyond station platform)	Partner	Lead
	• Identify/coordinate transit service/future passenger rail service	Lead	Partner
Multimodal Infrastructure	• Design and construct S-Line rail and station platforms	Lead	Partner
	• Advance multimodal infrastructure on state facilities connecting to stations in alignment with S-Line TOD vision	Lead	Partner
	• Advance multimodal infrastructure on local facilities connecting to stations in alignment with S-Line TOD vision	Partner	Lead
Policy Refinements	• Develop and implement complete streets policies on State roads	Lead	Partner
	• Develop and implement complete streets policies on local roads	Partner	Lead
	• Update land use plans, zoning codes, and land development regulations to support transit and TOD	Partner	Lead
	• Develop and implement affordable housing strategies and policies	Partner	Lead
Securing Funding	• Secure grants & funding to implement S-Line rail and station platforms	Lead	Partner
	• Secure grants and funding to implement S-Line TOD	Partner	Lead
	• Provide grant administration support for TOD grants available to local partners	Lead	Partner
	• Fund capital improvements for local infrastructure	Partner	Lead
Outreach & Communication	• Initial organization of S-Line Coalition	Lead	Partner
	• Provide dedicated, leadership participation to the “S-Line Coalition”	Partner	Lead
	• Continued championing and community engagement along S-Line communities	Partner	Lead

BUILDING AN S-LINE COALITION

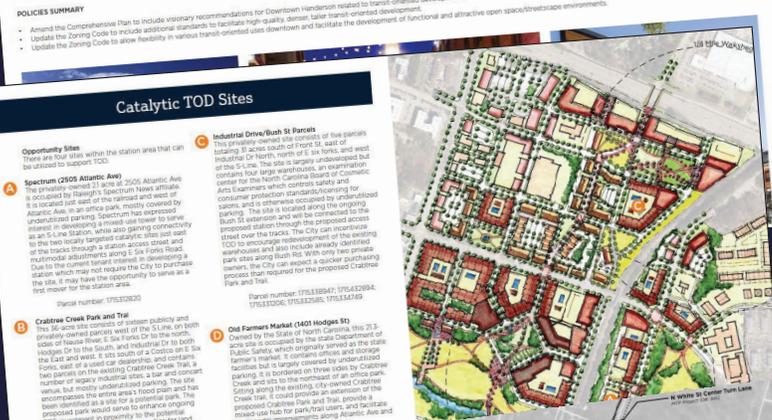
As part of the implementation framework, it is recommended that a multi-agency and multi-jurisdictional S-Line coalition is developed among the communities and NCDOT to continue the momentum started with this Study and to facilitate the continuous partnership and communication needed for implementation. The Coalition would be formed to have an organized body that has the following characteristics and charges:

- Act as an avenue for future coordination and outreach.
- Create a more seamless communication channel between NCDOT and the participating communities.
- Include a body of members that is empowered to provide updates on the S-Line program to its communities.



Built Form & Development Recommendations - Henderson

Built Form Needs	Recommendations & Parking	Status	Policy Recommendation/Action Item
Provide an efficient, secure parking or storage in the vicinity of the mobility hub, specifically along central street, Wheeler Street, Montgomery Street, and other east-west aligned streets.		✓	Update Zoning Code guidelines
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COMMUNITY PLAYBOOKS

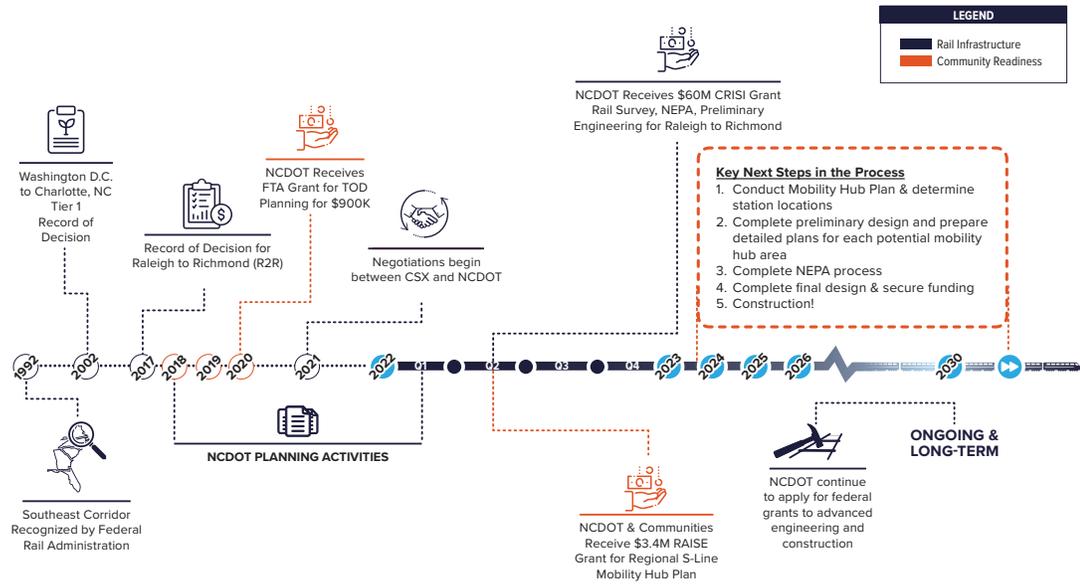
To assist with executing the proposed implementation framework for the TOD elements, a community playbook for the TOD vision plan was prepared for each community to provide detailed guidance on immediate and long-term implementation of:

- New or modified policies that impact the potential for development outlined in the vision.
- Potential sites for catalytic TOD opportunities and actions to promote and catalyze that development.
- Critical infrastructure projects to support future TOD and a future S-Line Mobility Hub.

These playbooks provide guiding principles and detailed action items that the communities can start to implement at the conclusion of the study. These recommendations were vetted through a collaborative process between NCDOT staff and technical staff at the implementing agencies within the participating communities.

Future of the S-Line

With over 30 years of planning work complete, the S-Line is in prime position to maximize the opportunities for unprecedented federal funding levels available for passenger rail. As the TOD study is complete, the collaboration and partnership between NCDOT and the local communities is anticipated to continue through the implementation framework.



As the program moves forward towards passenger rail service, the immediate next steps include building on the TOD visions through the Mobility Hub Plan and further refining station locations through the design process.

Process for Planning, Designing and Constructing Mobility Hubs & S-Line Stations



NCDOT will work with local municipalities and jurisdictions to engage in the project process and determine if, when and how the rail corridor and mobility hub along the S-Line will be constructed and service will be provided. The below process outlines how implementation of an S-Line Mobility Hub, along with rail infrastructure and service planning, is executed towards construction and how communities can enter and contribute to the process of successfully implementing passenger rail and TOD along the S-Line.

